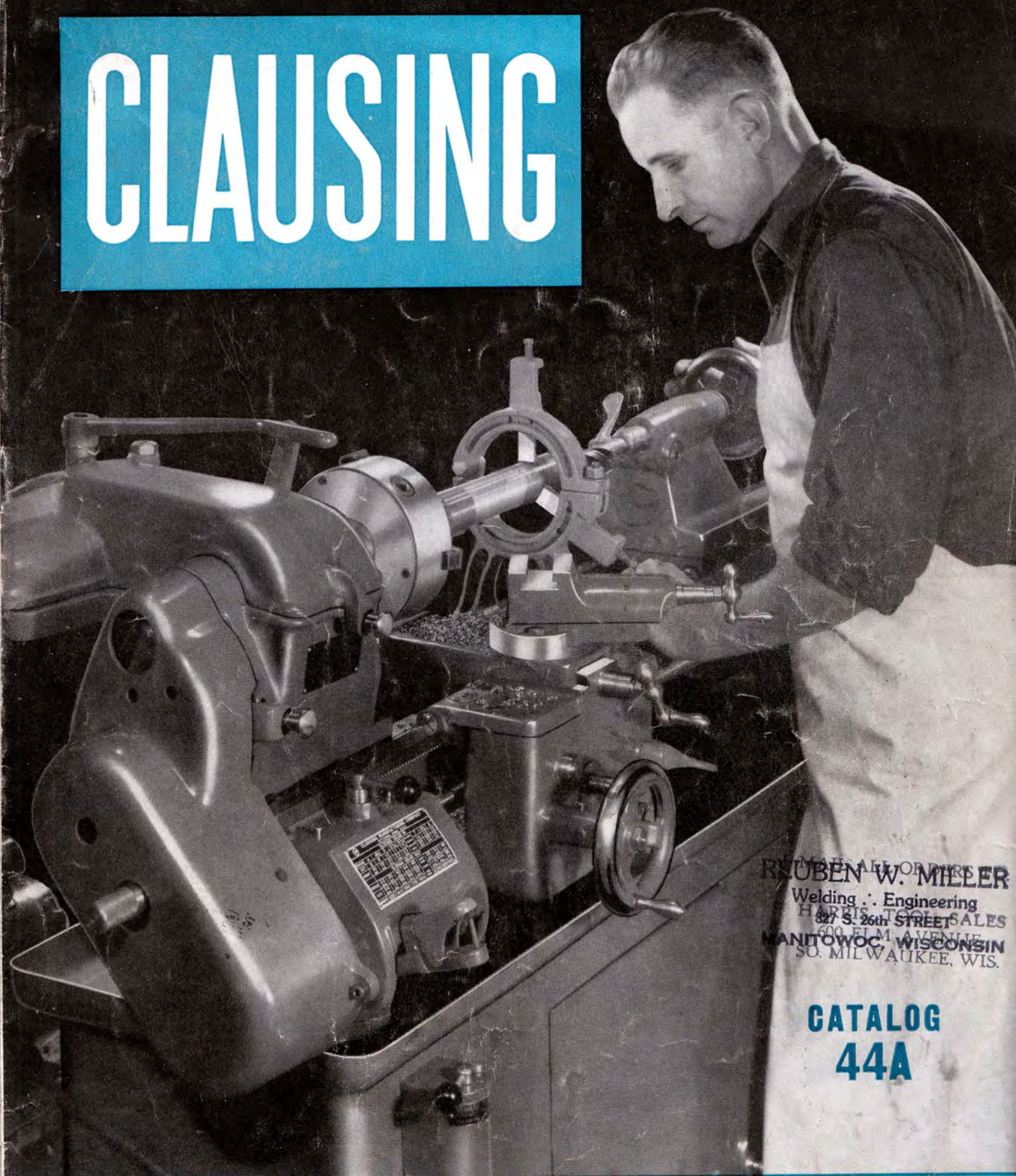


CLAUSING



MADE IN U.S.A.
RUBEN W. MILLER
Welding · Engineering
HARDY TOOL SALES
827 S. 26th STREET
600 E. M. AVENUE
MANITOWOC, WISCONSIN
SO. MILWAUKEE, WIS.

**CATALOG
44A**

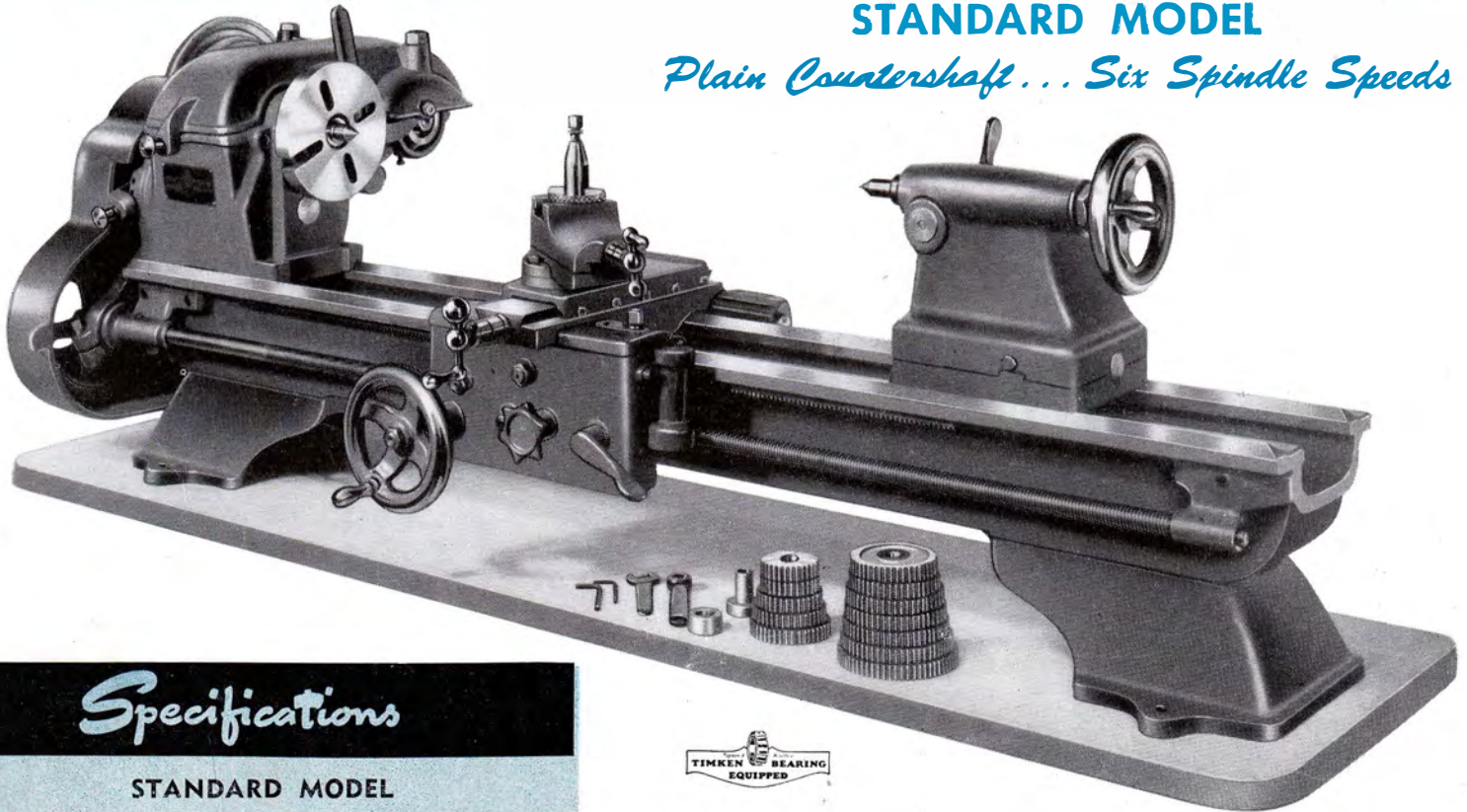
Precision

BENCH LATHES AND ACCESSORIES

CLAUSING STANDARD and DUAL

STANDARD MODEL

Plain Countershaft... Six Spindle Speeds



Specifications

STANDARD MODEL

BED	7 $\frac{3}{8}$ in. wide, 9 in. high, 55 in. long. Two vee and two flat ways.
TURNING CAPACITY	36 in. between centers. 12 in. swing over bed; 8 in. over carriage.
SPINDLE	1 $\frac{1}{2}$ in. dia., 8 threads, $\frac{3}{4}$ in. bore with No. 3 Morse taper reduced to No. 2 with sleeve.
SPINDLE BEARINGS	Two, Timken tapered roller with take-up nut for end play.
TAILSTOCK	Solid casting with keyed ram hole and cam lock. 1 in. setover.
TAILSTOCK RAM	1 $\frac{1}{8}$ in. dia., 3 in. travel. Graduated in sixteenths. No. 2 Morse.
TOOL POST	Opening $\frac{1}{2}$ x 1 in.
SPINDLE SPEEDS	50, 73, 134 back gear. 303, 437, 801 direct drive.
COUNTER-SHAFT	Compact, plain type, $\frac{3}{4}$ in. dia. Sleeve bearings. Single step pulley to motor.
THREAD RANGE	49 selections 4 to 600 threads per inch, right or left. Changes made by loose gears.
POWER LONGITUDINAL FEED	Split nut. $\frac{3}{4}$ in. Acme 8-thread lead screw. Feeds from .0016 in. per revolution of spindle and up.
POWER CROSS FEED	Bevel gears. Feeds from .0016 in. per revolution of spindle and up. Cross slide travel, 7 $\frac{1}{2}$ in.
EQUIPMENT	Change gears, headstock belt, 6 in. face-plate, two 60° centers, reducing sleeve, wrenches, motor pulley (specify bore), and instruction book.

DUAL MODEL

GENERAL CONSTRUCTION	Same as Standard except items listed below.
SPINDLE SPEEDS	Nine. Six low speeds of Standard model plus 1225, 1960, 3200 high direct drive.
COUNTER-SHAFT	$\frac{5}{8}$ in. dia., ball bearing. Fitted with friction clutch. Two step pulley to motor.

ITEMS ABOVE BROKEN LINE ARE UNIFORM ON ALL CLAUSING LATHES

BACK GEARED SCREW CUTTING LATHES WITH LOOSE CHANGE GEARS

THIS type of lathe is basic in lathe manufacture. It is ideally suited for certain types of work, especially long production runs using a fixed set-up. Change gearing, when needed for threads or power feeds, is quite simple with the Clausing four-position gear train. Two models are offered, both identical except countershaft. The Standard model has plain sleeve bearing countershaft and single drive pulley giving six spindle speeds. Dual model has ball bearing friction clutch countershaft and double pulley giving nine usable spindle speeds. Standard model is suitable for all types of metal turning; Dual offers high as well as standard low speeds, plus the convenience of a clutch which stops the spindle instantly without stopping the motor.

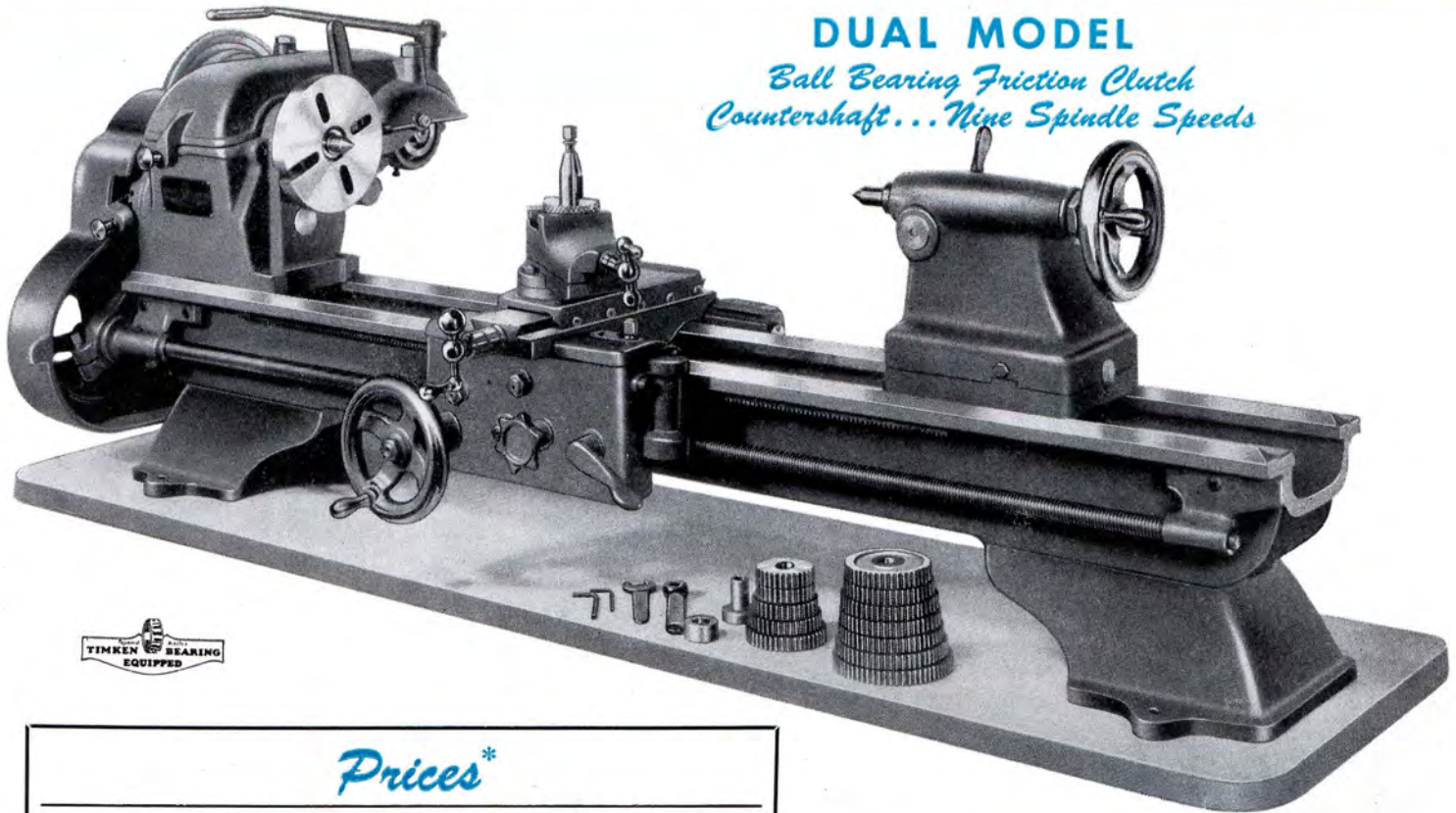
PRECISION-GROUND BED comprises two vee and two flat ways, the carriage being guided by outer vee and outer flat while the tailstock runs on inner vee and flat. The bed is a solid casting of close-grain gray iron, practically a semi-steel, made rigid by inverted U and box braces. All beds are rough milled, seasoned, and then rough and finish ground—a system which insures "stay put" accuracy.

COMPACT HEADSTOCK is one of the outstanding features of Clausing design. The countershaft is built-in; the whole headstock is a single unit without clumsy projections. Mechanically, the headstock is guaranteed to within .001 inch of absolute accuracy. Read more about the headstock on the following pages. Whatever lathe you buy—Standard, Dual or Quick Change—you get the same precision-built Clausing headstock.

12-INCH SCREW CUTTING LATHES

DUAL MODEL

*Ball Bearing Friction Clutch
Countershaft... Nine Spindle Speeds*



Prices*

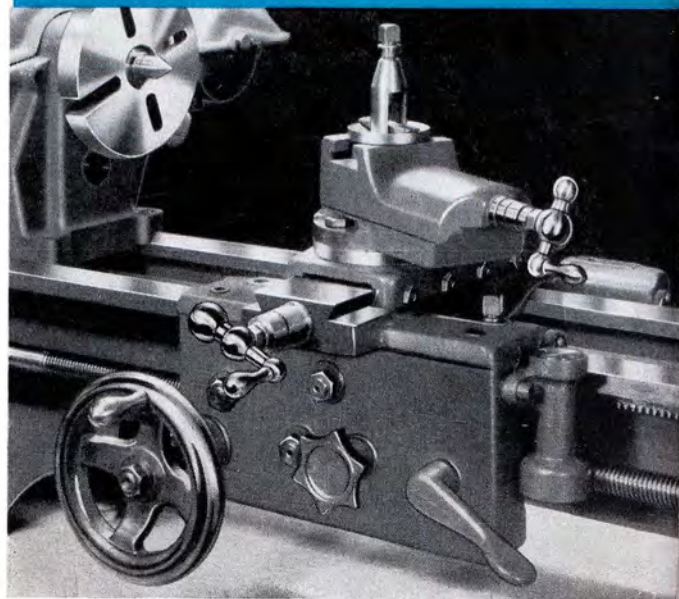
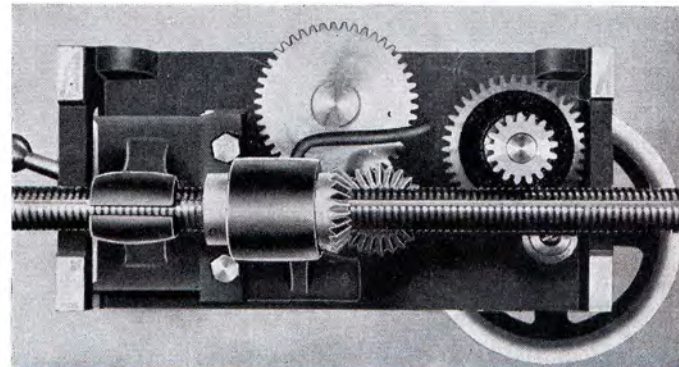
- | | | |
|----------------|--|-----------------|
| No. 102 | Standard Model lathe with plain countershaft. Includes single step motor pulley (specify bore), but does not include motor, motor drive belt or wood top..... | \$276.00 |
| No. 105 | Dual Model lathe with friction clutch countershaft. Includes two-step motor pulley (specify bore), but does not include motor, motor drive belt or wood top..... | 296.00 |

*These and all other prices in this catalog conform to government regulations. Prices are F. O. B. factory at Ottumwa. Any sales tax imposed after publication of this catalog will be additional to quoted prices.

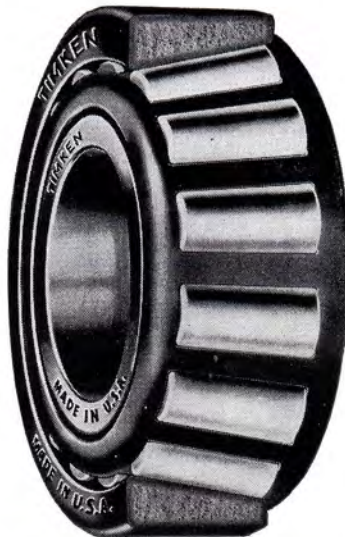
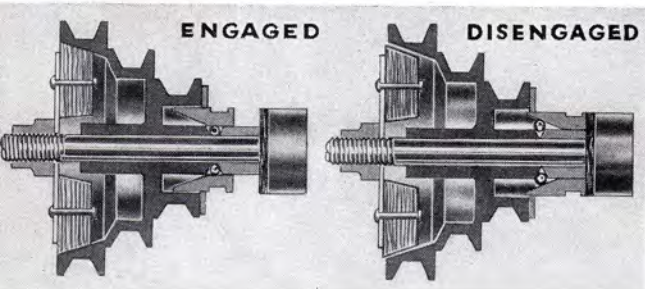
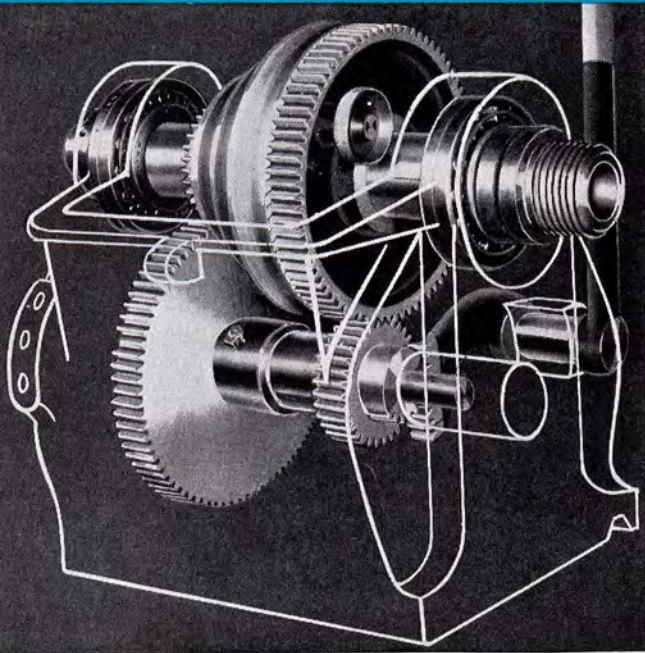
POWER CROSS FEED APRON is a simplified but thoroughly practical design. Cross feed is engaged by turning star wheel on face of apron which engages bevel gears, specially cut to mesh without hesitation. Power longitudinal feed for threading or cutting is engaged by pulling up on split nut lever. The rate of feed is the same for both long and cross travel. Both feeds can be engaged at same time for approximately 45-degree cutting. The manual long feed has a geared reduction to facilitate smooth feeding.

HUSKY CARRIAGE is gibbed back and front to prevent climbing and insure maximum rigidity. 7½-inch cross slide travel has accurate scraped ways with adjusting gib. Compound is mounted on dirt-proof circular base graduated 90 degrees on each side of center. Felt wipers, carriage clamp stop and threading dial are standard equipment.

AMPLE CAPACITY is provided in all Clausing lathes. You can swing a full 12-inch diameter on faceplate work and up to 8 inches diameter by 36 inches long on spindle work. Hole through center of spindle will pass ¾-inch stock. Top slide travel is 2½ inches. Tailstock can be set over 1 inch each way from center for taper turning.



CLAUSING LATHES HAVE TIMKEN BEARINGS



FAMOUS Timken Bearings make Clausing lathes roll smoothly with plenty of extra stamina for high speed and end thrust. The spindle itself is ample diameter— $1\frac{3}{8}$ inches at front bearing and $1\frac{1}{4}$ inches at rear, made from select machinery steel. Final machining on spindle including Morse taper and hobbing of gears is done with the spindle running on its own bearings—a system that assures a very concentric smooth-running unit. A knurled thumb wheel freezes the bull gear rigidly to cone pulley; back gears are engaged by pulling forward on lever.

ACCURACY IS GUARANTEED to within .001 inch. Expert bench men go over every lathe with dial gages and master straight edges to make sure that the spindle is concentric and in perfect alignment with the bed ways. Bearing surfaces on cross-slide, saddle and tailstock are carefully checked for 100% contact—not just a few high points which may check accurate but quickly wear out of alignment.

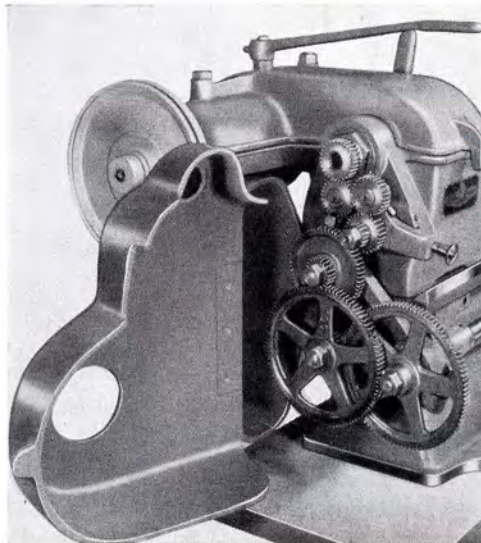
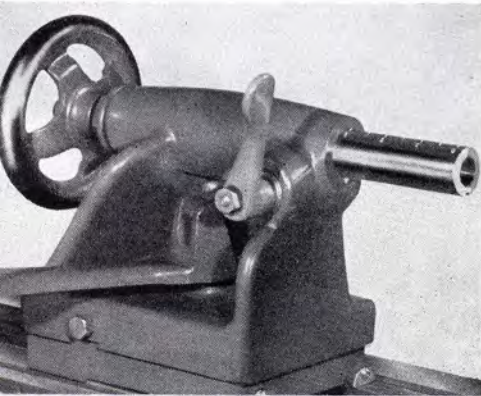
A WIDE THREAD RANGE features the gear train of Standard and Dual lathes—49 selections, right or left, including all regular machine screw threads and all pipe threads. Large easy-to-read chart printed on brass is attached to gear cover, and shows all threads and arrangement of gear train to obtain them. Gear-changing is reduced to a minimum with four basic trains. The D position is commonly used for power feeds. This gives five feeds (.0016, .0033, .0041, .005, and .0062-inch per revolution of spindle).

Friction CLUTCH

Ball-bearing friction clutch countershaft permits starting and stopping lathe spindle without stopping motor. Clutch handle is pushed to left to engage drive; when pushed to extreme right it brakes the spindle instantly. Take-up nut on shaft is easily adjusted.

GEAR TRAIN

All change gears are $\frac{1}{2}$ inch thick. Gears of 32 teeth and smaller are cut from X1335 machinery steel; larger gears are machined from iron castings. Regular equipment includes the feed gears (D position) and twelve change gears.



Keyed TAILSTOCK

With husky ram working on long key, the tailstock readily withstands torque in heavy boring operations. Tailstock body is a solid casting; there is no "wink" when the ram is locked in position. You'll like the toggle bed wrench—it's easy to work and doesn't tangle with the compound.

THREAD AND FEED CHART

Showing gear arrangements for cutting from 4 to 600 threads per inch.

THREADS PER INCH	STUD GEAR	IDLER GEAR ARRANGEMENT	SCREW GEAR
4	16	A	32
4½	16	A	36
5	16	A	40
5½	16	A	44
6	16	A	48
6½	16	A	52
7	16	A	56
7½	16	A	60
8	32	B	32
9	32	B	36
10	32	B	40
11	32	B	44
11½	32	B	46
12	32	B	48
13	32	B	52
14	32	B	56
16	32	B	64
18	16	B	36
20	16	B	40
22	16	B	44
24	16	B	48
26	16	B	52
27	16	B	54
28	16	B	56
30	16	B	60
32	16	B	64
36	32	C	36
40	32	C	40
44	32	C	44
46	32	C	46
48	32	C	48
52	32	C	52
54	32	C	54
56	32	C	56
60	32	C	60
64	32	C	64
72	16	C	36
80	16	C	40
88	16	C	44
92	16	C	46
96	16	C	48
104	16	C	52
112	16	C	56
120	16	C	60
160	60	D	100
200	48	D	100
240	40	D	100
300	32	D	100
600	16	D	100

A STUD GEAR

100T STUD GEAR
25T SCREW GEAR

B STUD GEAR

100T STUD GEAR
SCREW GEAR

C STUD GEAR

100T STUD GEAR
100T SCREW GEAR

D 60T STUD GEAR

60T STUD GEAR
20T SCREW GEAR
100T SCREW GEAR

CLAUSING MANUFACTURING CO.
OTTUMWA — IOWA — U. S. A.

MOUNTS TO SUIT EVERY INSTALLATION

A GOOD lathe deserves a good mount. All Clausing Lathes have four-point mounting and can be installed on any level wood or metal bench top of suitable size. Clearance between lathe bed and top of bench is a full 4¼ inches, making chip disposal easy. Mounts are available in three styles—steel cabinet, metal bench or floor legs.

STEEL CABINET of welded streamlined design provides plenty of room for storage as well as a substantial mount. Metal is heavy, 1/16-inch plate, reinforced at top ends to take lathe bed bolts. Doors are hung on piano type hinges and have rod catch and key lock. Steel bottom and center shelf. Cabinet is 14 inches wide by 28 inches high and will take 36-inch-between-centers lathe. Motor bracket included.
No. 127 Steel Cabinet, with motor mount but without top..... \$72.00

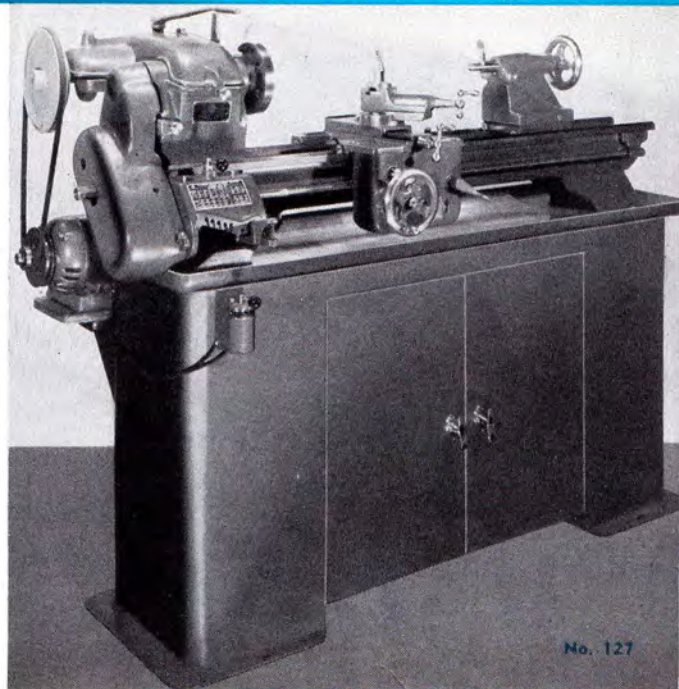
LATHE BENCH consists of two sturdy cast iron legs with steel cross members. The height is 28 inches. Length and width are matched to fit 35-inch-between-centers lathe so that lathe feet mounting holes come directly over tops of legs. Heavy, self-aligning motor mount with turnbuckle adjustment is available for this mount.
No. 136 Lathe Bench, without top or motor mount..... \$26.00
No. 138 Motor Mount, fits bench leg..... 3.50

FLOOR LEGS make the ideal mount for many types of turning, allowing chips to fall clear. This type of installation requires the removal of regular lathe bed feet, the floor legs being used in their place. No type of top can be used with floor legs since bottom of bed must be left open to permit escape of chips. Self-aligning motor mount with turnbuckle adjustment is included.
No. 137 Floor Legs, per pair, with motor mount..... \$20.00
No. 137S Floor Legs, in lieu of regular bed feet..... 15.00

WOOD TOPS are available in two sizes, both 1½ inch thick select pine. Large size is 22 inches wide by 63 inches long, providing room for mounting motor on bench top. Small size is 16 in. wide by 60 in. long and makes a more compact top when motor is mounted at rear of cabinet or bench.
No. 130 Wood top, 22" wide, for 36" centers lathe..... \$12.00
No. 143 Wood top, 16" wide, for 36" centers lathe..... 8.50

CHIP PAN is heavy 14 gauge sheet metal. Fits lathe bench or cabinet. 17 inches wide, 2 inches deep.
No. 133 Chip Pan to fit 36-inch-between-centers lathe... \$19.85

REVERSE SWITCH has Forward, Off and Reverse positions. Permits reversing lathe spindle rotation for grinding and tapping. Maximum rating ¾ hp., 220 volts. For capacitor motors, but can also be wired to D. C. and three phase.
No. 2050 Reverse Switch\$4.00

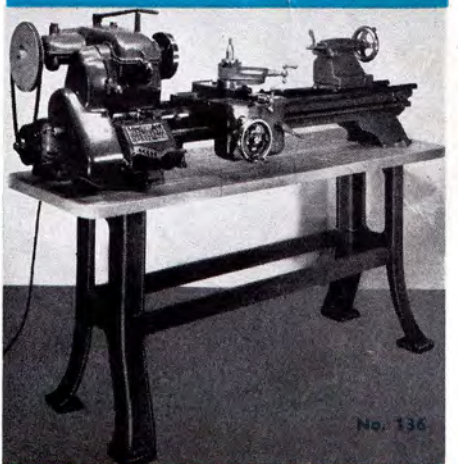


No. 127

• Various methods of mounting and driving the lathe are illustrated in these photos.



No. 137



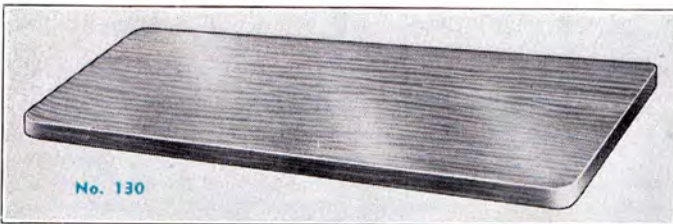
No. 136

Cord VEE BELTS			
Cat No.	Length	Installation*	Price
641	41 O. C.	Motor on bench top	\$1.00
643	43 O. C.	Floor Legs	1.00
650	50 O. C.	Cabinet, any top	1.00
652	52 O. C.	Bench with pan	1.00
654	54 O. C.	Bench with wd. top	1.00



No. 2050

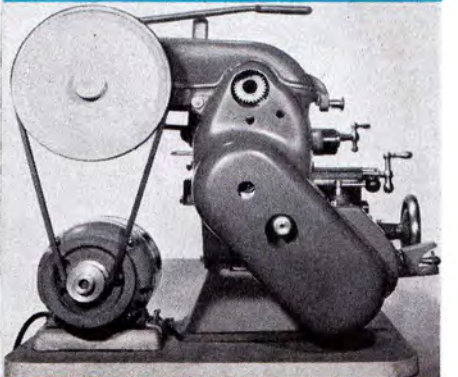
*With 6-inch frame motor



No. 130

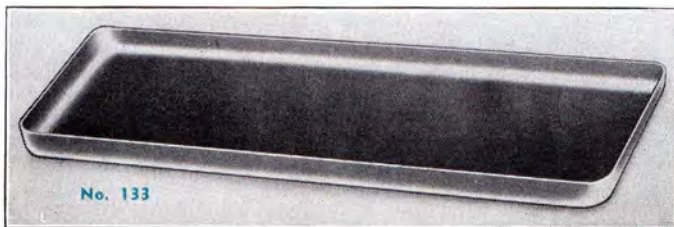


No. 138



BENCH TOPS

Wood or chip pan tops will fit either cabinet or lathe bench. Chip pan is watertight and can be used as oil pan. Two widths of wood tops, 16 and 22 inches, are available. Wide width permits mounting motor on bench top.



No. 133

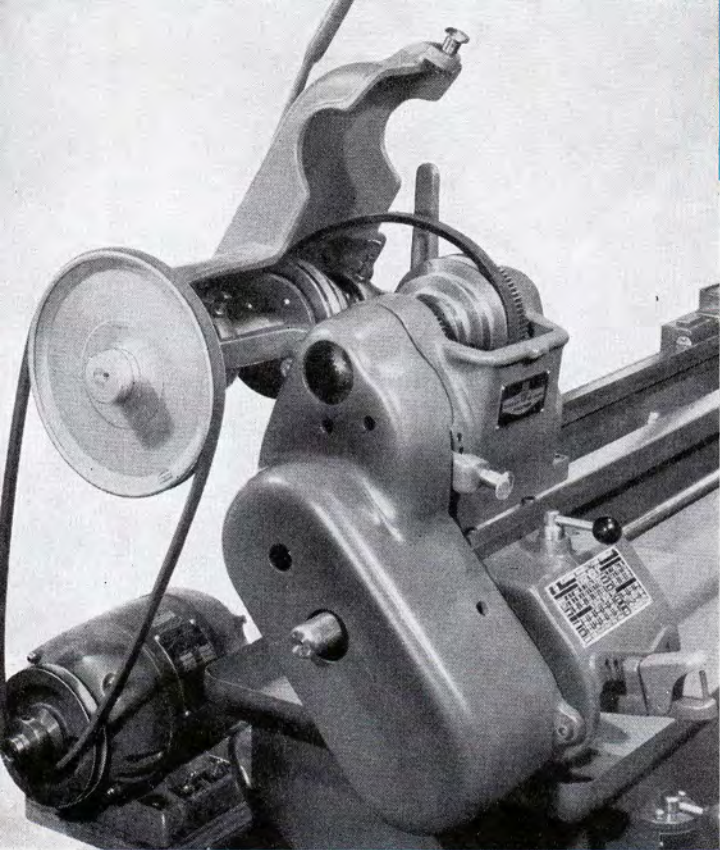
Compact DRIVE

• All Clausing lathes have built-in countershaft, making the drive compact and easy to install. No extras are needed... just mount the motor and go!

SPEED and CONVEN

◀ Hooded V-BELT DRIVE

In the selection of any Clausing lathe, you are assured a modern, efficient vee belt drive combining safety and convenience. When the hood is raised, it slacks the belt between headstock spindle and countershaft as well as between countershaft and motor, providing easy shifting. When the hood is closed, the drive is covered. The gear train is separately covered with fixed cast iron guard. Sliding gear handle projects and can be pushed in or pulled out as required. Holes in guard permit access to oiling points so that guard need never be removed except for inspection or repairs.



Synchronized GEAR BOX

HERE'S one of the neatest gear boxes that ever set a thread. Thread chart is mounted on a 45-degree plane so that you can read it without stooping. If you want to cut, say, 32 threads per inch, first find 32 on chart. Note that the sliding gear must be out, so pull gear out. Locate the hole in front of gear box directly below the column in which 32 appears. Release the tumbler lever and slide it over to engage the hole. The chart shows that clutch lever on top of gear box should be in center position, so swing clutch lever to center. You are all set to cut 32 threads, or, same position, power feed at the rate of .0046 inch per revolution of work. But—that's not all! If, while turning, you wish a finer feed, you can obtain it instantly without stopping the lathe by swinging clutch lever to left position, and, still finer, by swinging clutch lever to right position. It's smooth to work and smooth to run—ball bearing construction throughout and carefully matched gears for instant mesh and quiet operation.

Specifications

STANDARD QUICK CHANGE

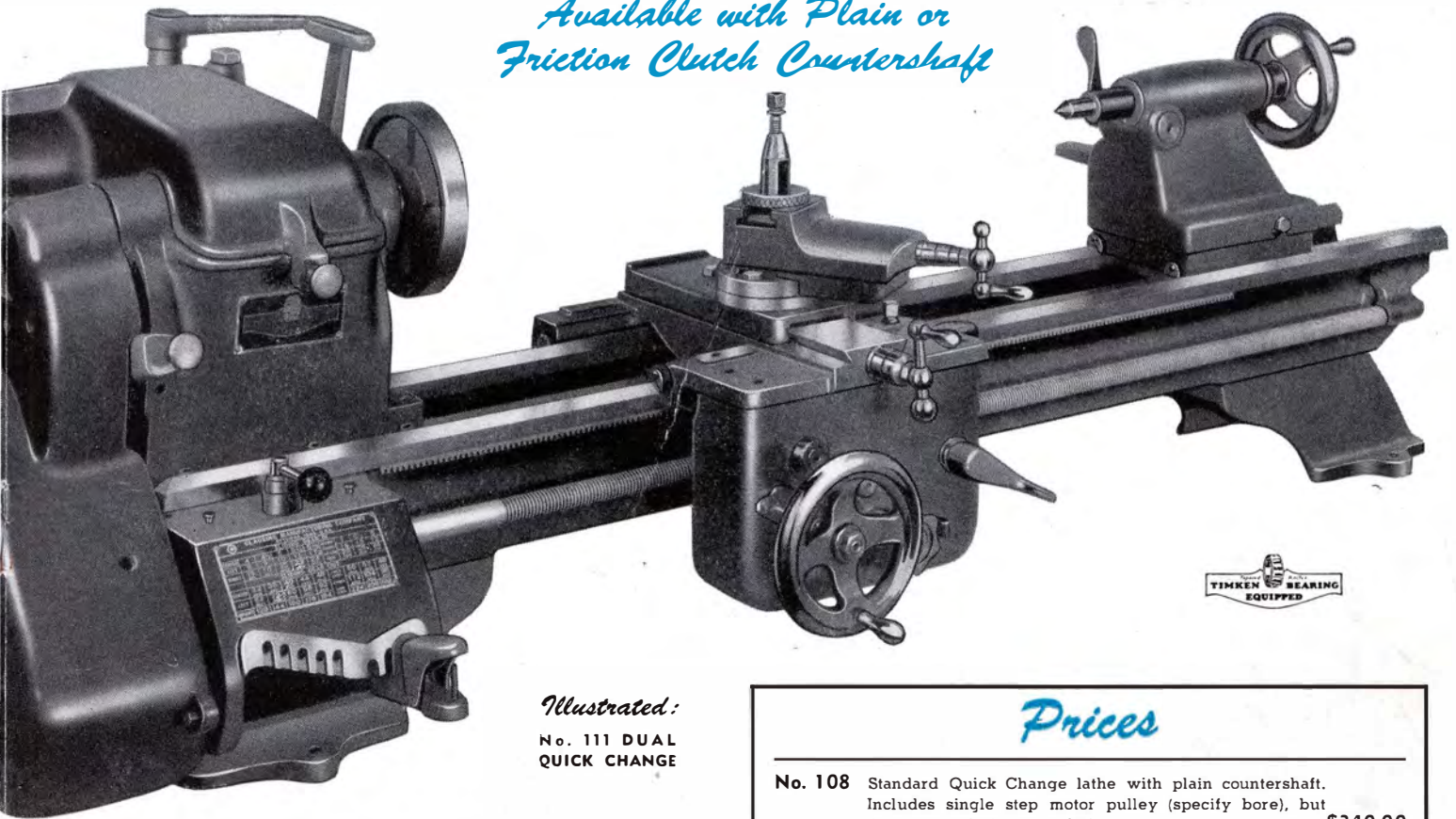
GENERAL CONSTRUCTION	Same as Standard. See top portion of specification box, page 2.
SPINDLE SPEEDS	Six. Back Geared—50, 73, 134. Direct Drive—303, 437, 801.
THREAD RANGE	48 selections, 4 to 224 threads per inch, right or left. All changes made at gear box by means of two levers.
THREAD FEED	Split nut engaged by lever. Acme 8-thread lead screw.
POWER LONGITUDINAL FEED	Worm and worm gear, engaged by friction clutch. Feeds from .0066 to .036 in. per revolution of spindle. All changes made at gear box.
POWER CROSS FEED	Worm and worm gear, engaged by friction clutch. Feeds from .0002 to .011 in. per revolution.
COUNTERSHAFT	Compact, integral with headstock. Plain type without clutch, 3/4 in. dia., sleeve bearings.
COUNTERSHAFT PULLEY	Three step, 3 1/2, 4 1/2, 5 1/2-in. diameter. 1 1/2 in. vee belt drive.
SPINDLE PULLEY	Three step, 3, 4, 5-in. diameter.
MOTOR BELT REQUIRED	Not furnished. Takes regular vee type, 1/2-in. face. See page 5.
MOTOR REQUIRED	1/4 capacitor or repulsion induction, 1725 r.p.m.
EQUIPMENT	Plain countershaft, headstock belt, 6 in. faceplate, two 60° centers, reducing sleeve, wrenches, motor pulley (specify bore), and instruction book.

DUAL QUICK CHANGE

GENERAL CONSTRUCTION	Same as Standard Quick Change except items listed below.
SPINDLE SPEEDS	Nine. Six low speeds of Standard Quick Change plus 1225, 1960, 3200 high direct drive.
COUNTERSHAFT	5/8-in. dia., ball bearing. Fitted with friction clutch. Two step pulley to motor.

CONVENIENCE with QUICK CHANGE LATHES

Available with Plain or Friction Clutch Countershaft



Illustrated:
No. 111 DUAL
QUICK CHANGE

Prices

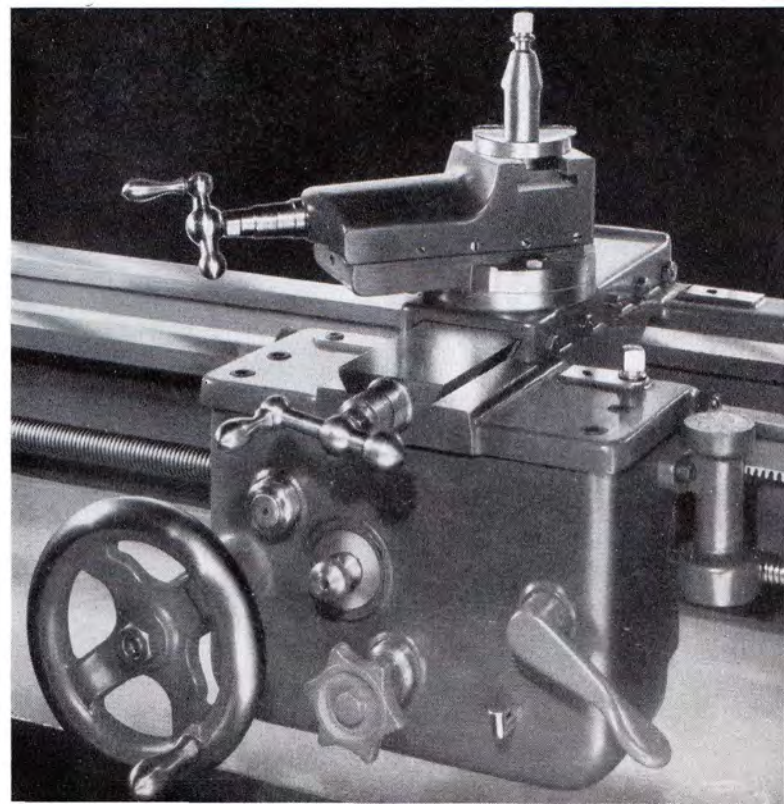
- | | | |
|---------|---|----------|
| No. 108 | Standard Quick Change lathe with plain countershaft. Includes single step motor pulley (specify bore), but does not include motor belt. | \$340.00 |
| No. 111 | Dual Quick Change lathe with friction clutch countershaft. Includes two step motor pulley (specify bore), but does not include motor belt. | 360.00 |

TOPS IN PERFORMANCE

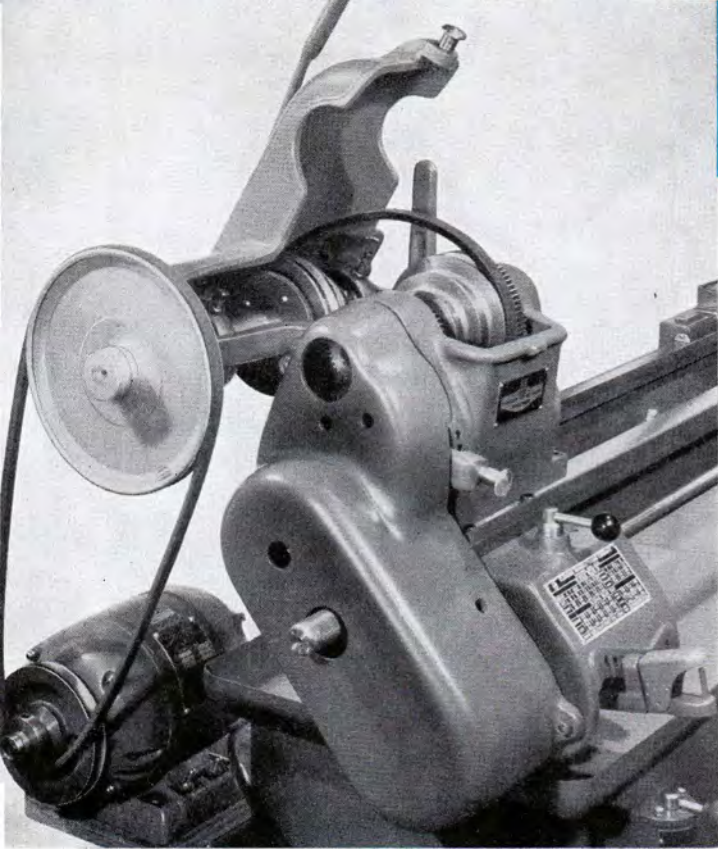
QUICK CHANGE soon pays for itself in speed and convenience on the job. There are no loose gears to change. The full thread and power feed range is available by simply positioning two levers. This means speed on threading jobs, and, equally important, the right power feed for every kind of cut and material. This lathe, like the Standard model, is offered with or without friction clutch countershaft. In all other respects the two lathes are identical. If your work embraces a wide range of set-ups and short run work, by all means buy Quick Change—it's more than worth the difference.

Automatic APRON

THE automatic apron on Quick Change lathes adds to the convenience of working. Power feeds are engaged by means of an improved friction clutch working through worm and worm gear. Shift knob on face of apron is pushed in to set cross feed and pulled out for long feed. Power feed starts and stops are made easily, instantly by turning star wheel after shift knob has been set in proper position. The apron is also fitted with conventional split-nut feed, which is used only for threading, eliminating much of the wear on lead screw. When using split-nut feed, shift knob is set at center neutral position. Foolproof construction guards every movement. Lockout devices prevent use of friction feed when split-nut is engaged and vice-versa. It is impossible to engage both cross and long feeds at the same time. When power feeds are in neutral, there is no gear drag on hand feeds. Apron is double walled for maximum support to gear shifts. Oil reservoir assures constant lubrication.



SPEED and CONVENIENCE with QUICK CHANGE LATHES



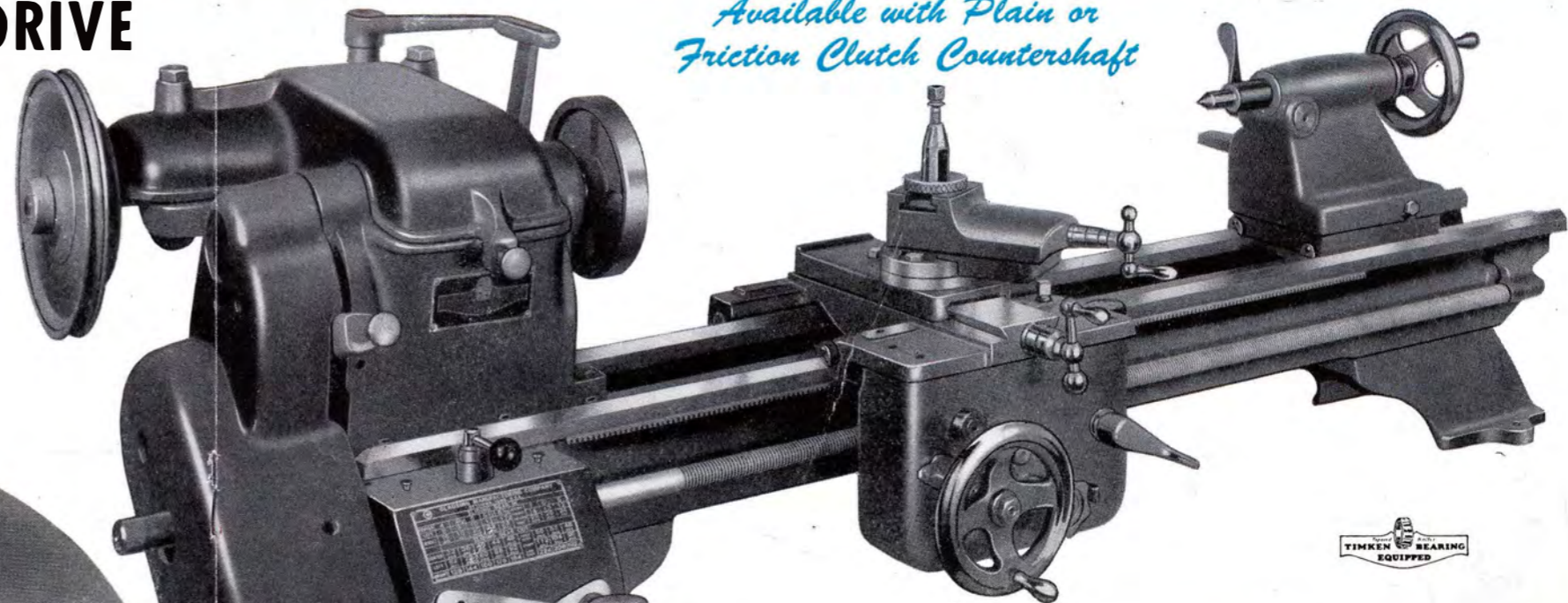
← Hooded V-BELT DRIVE

In the selection of any Clausing lathe, you are assured a modern, efficient vee belt drive combining safety and convenience. When the hood is raised, it slacks the belt between headstock spindle and countershaft as well as between countershaft and motor, providing easy shifting. When the hood is closed, the drive is covered. The gear train is separately covered with fixed cast iron guard. Sliding gear handle projects and can be pushed in or pulled out as required. Holes in guard permit access to oiling points so that guard need never be removed except for inspection or repairs.



↑ Synchronized GEAR BOX

HERE'S one of the neatest gear boxes that ever set a thread. Thread chart is mounted on a 45-degree plane so that you can read it without stooping. If you want to cut, say, 32 threads per inch, first find 32 on chart. Note that the sliding gear must be out, so pull gear out. Locate the hole in front of gear box directly below the column in which 32 appears. Release the tumbler lever and slide it over to engage the hole. The chart shows that clutch lever on top of gear box should be in center position, so swing clutch lever to center. You are all set to cut 32 threads, or, same position, power feed at the rate of .0046 inch per revolution of work. But—that's not all! If, while turning, you wish a finer feed, you can obtain it instantly without stopping the lathe by swinging clutch lever to left position, and, still finer, by swinging clutch lever to right position. It's smooth to work and smooth to run—ball bearing construction throughout and carefully matched gears for instant mesh and quiet operation.



Available with Plain or Friction Clutch Countershaft

Illustrated:
No. 111 DUAL QUICK CHANGE



Specifications

STANDARD QUICK CHANGE

GENERAL CONSTRUCTION	Same as Standard. See top portion of specification box, page 2.
SPINDLE SPEEDS	Six. Back Geared—50, 73, 134. Direct Drive—303, 437, 801.
THREAD RANGE	48 selections, 4 to 224 threads per inch, right or left. All changes made at gear box by means of two levers.
THREAD FEED	Split nut engaged by lever. Acme 8-thread lead screw.
POWER LONGITUDINAL FEED	Worm and worm gear, engaged by friction clutch. Feeds from .0026 to .036 in. per revolution of spindle. All changes made at gear box.
POWER CROSS FEED	Worm and worm gear, engaged by friction clutch. Feeds from .0002 to .011 in. per revolution.
COUNTERSHAFT	Compact integral with headstock. Plain type without clutch, 3/4 in. dia., sleeve bearings.
COUNTERSHAFT PULLEY	Three step, 3 1/2, 4 1/2, 5 1/2-in. diameter. 1 1/2 in. vee belt drive.
SPINDLE PULLEY	Three step, 3, 4, 5-in. diameter.
MOTOR BELT REQUIRED	Not furnished. Takes regular vee type, 1/2-in. face. See page 5.
MOTOR REQUIRED	1/4 capacitor or repulsion induction, 1725 r.p.m.
EQUIPMENT	Plain countershaft, headstock belt, 6 in. faceplate, two 60° centers, reducing sleeve, wrenches, motor pulley (specify bore), and instruction book.

DUAL QUICK CHANGE

GENERAL CONSTRUCTION	Same as Standard Quick Change except items listed below.
SPINDLE SPEEDS	Nine. Six low speeds of Standard Quick Change plus 1225, 1960, 3200 high direct drive.
COUNTERSHAFT	5/8-in. dia., ball bearing. Fitted with friction clutch. Two step pulley to motor.

Prices

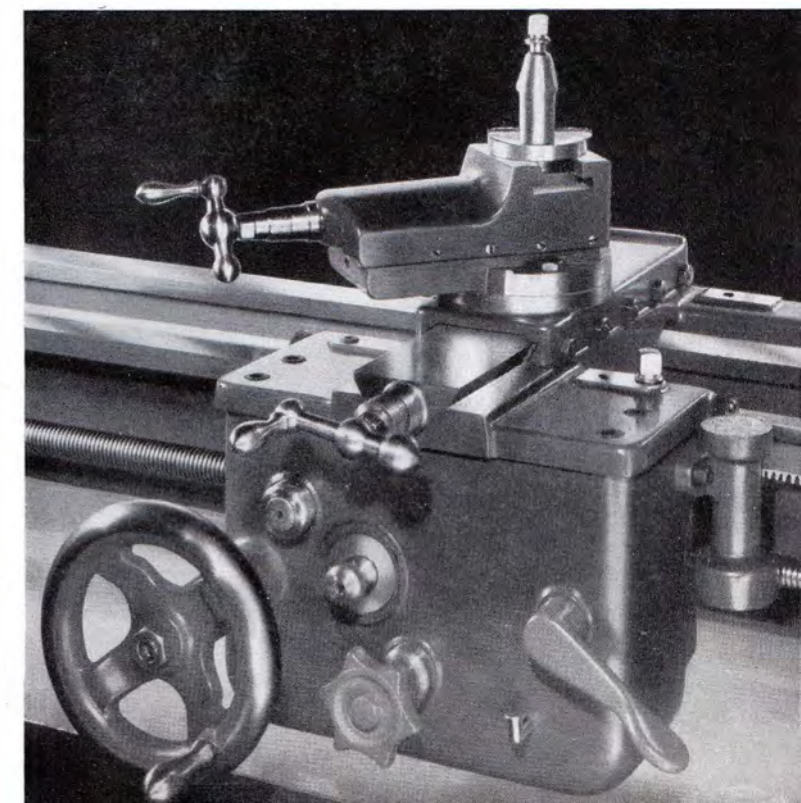
No. 108	Standard Quick Change lathe with plain countershaft. Includes single step motor pulley (specify bore), but does not include motor belt.	\$340.00
No. 111	Dual Quick Change lathe with friction clutch countershaft. Includes two step motor pulley (specify bore), but does not include motor belt.	360.00

TOPS IN PERFORMANCE

QUICK CHANGE soon pays for itself in speed and convenience on the job. There are no loose gears to change. The full thread and power feed range is available by simply positioning two levers. This means speed on threading jobs, and, equally important, the right power feed for every kind of cut and material. This lathe, like the Standard model, is offered with or without friction clutch countershaft. In all other respects the two lathes are identical. If your work embraces a wide range of set-ups and short run work, by all means buy Quick Change—it's more than worth the difference.

Automatic APRON →

THE automatic apron on Quick Change lathes adds to the convenience of working. Power feeds are engaged by means of an improved friction clutch working through worm and worm gear. Shift knob on face of apron is pushed in to set cross feed and pulled out for long feed. Power feed starts and stops are made easily, instantly by turning star wheel after shift knob has been set in proper position. The apron is also fitted with conventional split-nut feed, which is used only for threading, eliminating much of the wear on lead screw. When using split-nut feed, shift knob is set at center neutral position. Foolproof construction guards every movement. Lockout devices prevent use of friction feed when split-nut is engaged and vice-versa. It is impossible to engage both cross and long feeds at the same time. When power feeds are in neutral, there is no gear drag on hand feeds. Apron is double walled for maximum support to gear shifts. Oil reservoir assures constant lubrication.



Lathe ACCESSORIES



60 DEGREE CENTER

Made of high quality tool steel, specially hardened to withstand wear. No. 2 Morse taper shank.

No. 1103 \$1.00



CUP CENTER

Tailstock center for woodturning. Deep machined cup. Replaceable point. No. 2 Morse taper shank.

No. 1104 \$1.00



SPUR CENTER

Headstock center for woodturning. Sharp spurs make fitting easy and assure positive drive. No. 2 Morse shank.

No. 1105 \$1.00



SCREW CENTER

A useful center for small faceplate work such as wooden knobs. 2 in. diameter plate. Removable screw; can also be used as a drill pad. No. 2 Morse shank.

No. 1110 \$1.40



GRINDING WHEEL ARBOR

Threaded arbor $\frac{1}{2}$ in. diameter. Takes wheels up to 1 in. thick. No. 2 Morse taper shank.

No. 1106 \$1.15



DRILL PAD

Fits tailstock ram. $3\frac{1}{8}$ in. diameter plate gives good support for flat work in drilling. No. 2 Morse shank.

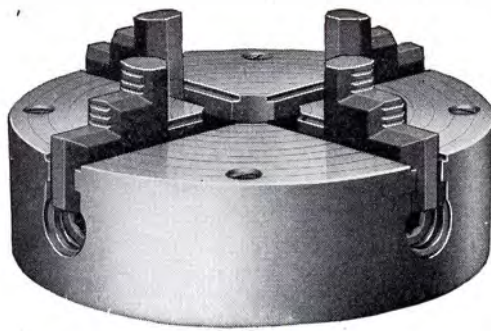
No. 1109 \$1.40



CROTCH CENTER

Fits tailstock ram. Holds round and hex shapes for drilling. 2 in. diameter plate. No. 2 Morse shank.

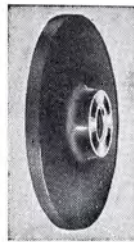
No. 1112 \$1.40



INDEPENDENT 4-JAW CHUCKS

Alloy steel body with drop forged, accurately ground jaws. Jaws are reversible. Furnished with wrench and semi-machined back.

No. 1211 4" dia... \$ 8.00 No. 1214 8" dia.. \$25.00
No. 1213 6" dia.. 15.00 No. 1215 10" dia.. 30.00



Semi-Machined BACKS

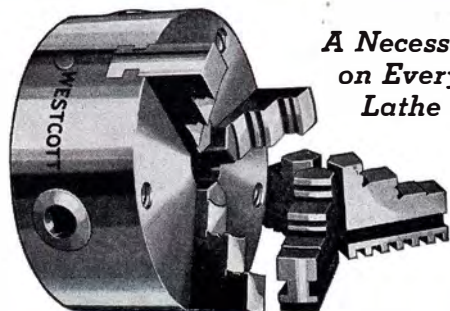
Semi-machined chuck backs have the hole bored, faced and threaded, ready to screw onto spindle nose.

No. 1203 4-in. diameter.....\$1.40
No. 1204 6-in. diameter..... 1.75
No. 1205 8-in. diameter..... 2.60
No. 1206 10-in. diameter..... 4.00

Special FITTING

When ordered at same time as lathe, we can fit 4 or 3-jaw chuck direct to headstock spindle. Fitting must be done on each lathe individually to insure accuracy. In most cases, the customer does this work himself.

No. 1218 Fitting chuck.....\$4.00

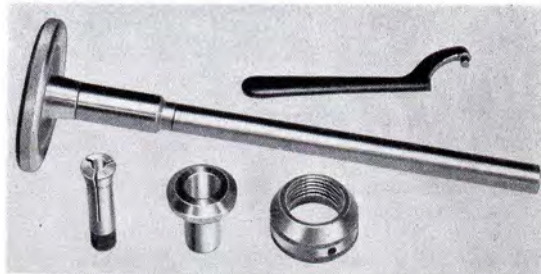


A Necessity on Every Lathe

3-JAW Geared SCROLL CHUCK

Two sets of jaws supplied for internal or external chucking. Self-centering up to the full capacity of 6 inches. Supplied with wrench and semi-machined back.

No. 1217 6-in. diameter.....\$40.00



Draw-in COLLET CHUCK

Fast and accurate. Hollow drawbar passes through spindle and threads onto collet. Supplied with hand-wheel drawbar, collet closer, wrench and spindle cap.

No. 1001 Collet Chuck, without collets.....\$26.00
No. 1100 Round Collets in 1/64 in. steps from 1/16 to 1/2 in., each..... 4.25



LIVE CENTER

Spins with the work, eliminating oiling and decreasing work drag. Precision built throughout and guaranteed to stand up under heavy thrust loads. No. 2 Morse shank.

No. 1153 \$30.00



No. 2 Morse SHANKS

Used for fitting special attachments to headstock or tailstock. No. 2 Morse shank is ground and polished.

No. 1107 1 by 1/2 inch body.....60¢
No. 1108 1 by 5 inch body.....80¢



WRENCHLESS CHUCK

An inexpensive hand operated drill chuck for drilling from either headstock or tailstock. 3-jaw, 1/2 in. capacity. No. 2 Morse shank.

No. 1231 \$2.10



Jacobs DRILL CHUCK

Tempered steel jaws. Available in four sizes. Can be used in headstock or tailstock when fitted with suitable arbor. Arbor not included.

No. 1207 0 to 1/4-in. capacity.....\$5.20
No. 1208 0 to 3/8-in. capacity..... 6.40
No. 1209 1/16 to 1/2-in. capacity.... 7.60
No. 1210 0 to 1/2-in. capacity..... 8.80
No. 1221 No. 2 Morse arbor..... .80
No. 1222 No. 3 Morse arbor..... 1.20



Jacobs HOLLOW CHUCK

Threaded nose screws directly onto spindle of any Clausung lathe. Feeds round stock through hollow body for repetition turning. Available in two sizes. No arbor required.

No. 1223 1/8 to 5/8-in. capacity....\$18.00
No. 1224 3/16 to 3/4-in. capacity.. 20.00

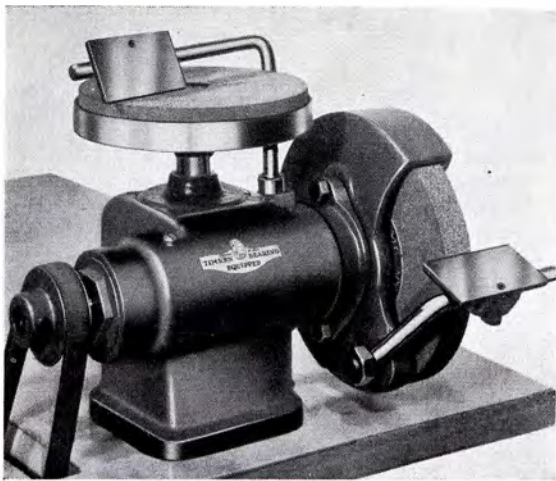


Jacobs CENTER CHUCK

Used in tailstock to support centerless shafts, armatures, etc. Self-centering bronze jaws are adjustable to take shafts from 1/4 to 3/4 in. diameter. Size is adjusted by turning large knurled collar. Forward collar locks jaws at any desired position. Requires arbor. Arbor not included and should be ordered extra.

No. 1220 1/4 to 3/4-in. capacity....\$12.00
No. 1221 No. 2 Morse arbor..... .80

CLAUSING TOOL DRESSER



Keep one of these handy tool dressers beside your lathe for sharpening tool bits and cutters. One compact inexpensive tool for both grinding and honing. The oilstone speed of 110 revolutions per minute is much faster than hand honing, yet slow enough to assure positive control on the most delicate freehand operations. Double face oilstone is instantly reversible in cup. The grinding wheel speed is 3000 r.p.m. with standard 1725 r.p.m. motor, which gives an efficient wheel speed of about 5000 f.p.m. Tool rests can be adjusted to any angle. In addition to oilstone and grinding wheel face tool rests, the unit has a tool rest and post for grinding on side of wheel. Entire mechanism is lubricated by simple splash system. Timken bearings. 3/4 inch spindle, reduced to 1/2 inch for grinding wheel.

No. 301 Tool Dresser, with mounting bolts, belt, spindle and motor pulleys, but without motor, oilstone or grinding wheel \$15.00

GRINDING WHEELS

No. 1301 6 inch dia. by 3/4 inch face, No. 80 combination grit \$1.60
 No. 1303 Best quality aluminum oxide, 3/4 x 6, No. 80 grit \$1.60

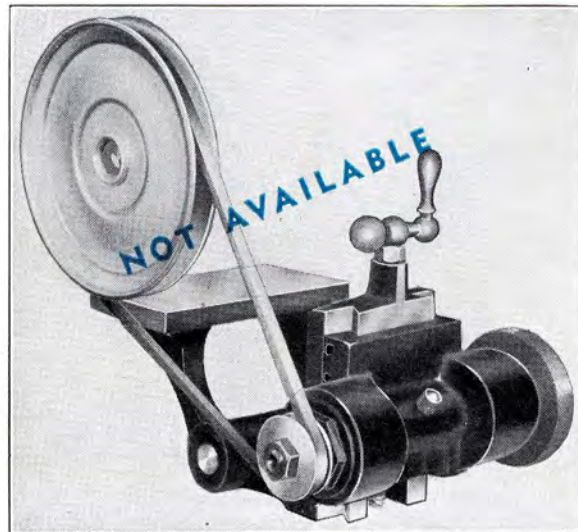
OILSTONES

No. 1302 Silicon carbide, double face \$1.80
 No. 1304 Best Carborundum, double face \$3.00
 No. 1305 Genuine India, single face \$3.40

TOOL POST GRINDER

Mounts in tee slot of compound and carries its own motor. Shaft runs on sealed ball bearings and will take grinding wheels 1/2 in. thick, 1/2 in. hole and up to 3 in. diameter. Dovetailed gibbed ways provide height adjustment; angular adjustment and feed is obtained from lathe slide rest. Arbor can be fitted with a chuck to permit use of very small wheels. Supplied with motor pulley and belt, but without motor.

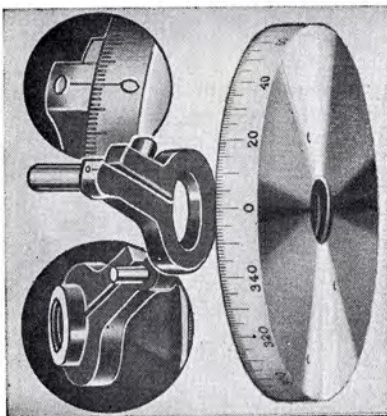
No. 201 \$26.00



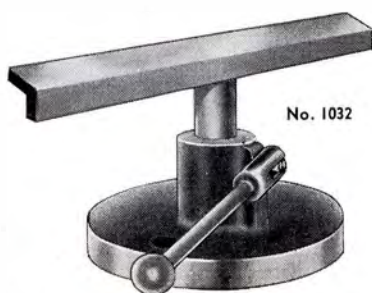
GRADUATED FACE PLATE

The Graduated Face Plate provides a system for dividing circular work into any number of parts. The 6 in. diameter plate is accurately stamped in 1 degree graduations from zero to 360 degrees. The plate is threaded on spindle nose and can be set and locked at any position when used with any Clausing lathe. The face plate can be used without clamping attachment for general woodturning.

No. 1004 \$4.80



WOODTURNING TOOL RESTS

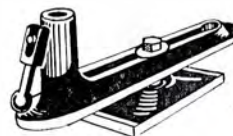


No. 1032

No. 1032 A convenient type of tool rest with circular base which bolts to slide rest after removing compound. This mounting permits all slide rest adjustments, and unit can be used anywhere without clamping. Supplied with one 4-in. and one 8-in. tool rest with 3/8-in. shanks, tool base and toggle lever. \$2.50

No. 1031 Clamps direct to bed. Tool rests not furnished. Takes 5/8-in. shank 1.00

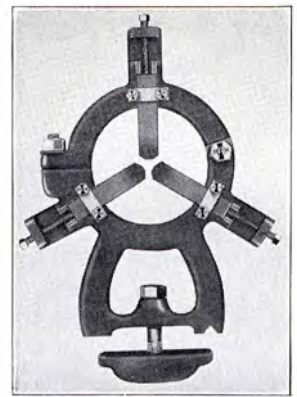
No. 1030 Angle rest has 3 and 6-in. arms, 5/8-in. shank. Specify whether for No. 1032 or 1031.. 1.00



No. 1031



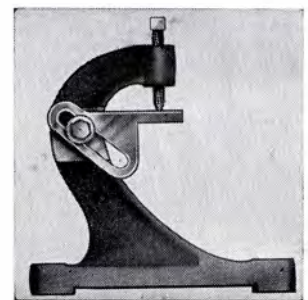
No. 1030



STEADY REST

Used for supporting slender turnings and for end boring. Clamps direct to lathe bed. Heat-treated jaws are adjustable from 3/16 to 3 1/2 inch. dia.

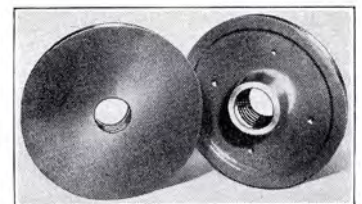
No. 1002 \$7.20



FOLLOWER REST

Follower Rest bolts to either side of carriage and follows up the cut when making slender turnings. The work is supported at top and back by the right angle bracket.

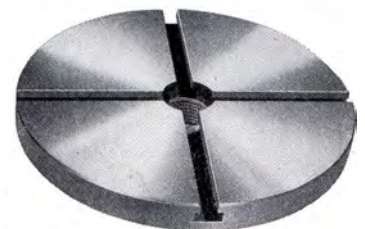
No. 1003 \$4.00



PLAIN FACE PLATE

This plate is 6-in. diameter. The hole is faced, bored and threaded, ready to screw onto spindle nose of any Clausing lathe.

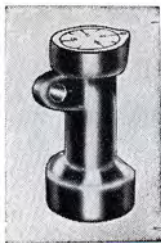
No. 1113 90c



TEE SLOT FACE PLATE

Ideal for mounting odd-shaped pieces or angle plate. Heavy duty, 10 in. diameter. Slots 7/8 by 3/4 with 1/2 in. wide opening permits use of various standard bolts for mounting work.

No. 1005 \$15.00



THREAD DIAL

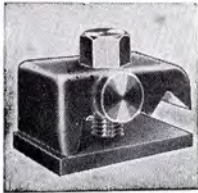
Regular equipment on all Clausing lathes, the Threading Dial is offered separately for those having older lathes. It will fit any lathe having a lead screw of eight threads to the inch. Insures perfect engagement when threading.

No. 1035\$5.00

CARRIAGE STOP

Clamps to lathe bed and enables operator to machine up to a certain point each time on repeat work. Useful for facing and boring.

No. 1036\$1.60



LATHE DOGS

Best quality drop-forged Lathe Dogs with square head set screw. Available in four sizes to fit work from 1/2 to 1 1/2-in. diameter.

No. 1125 1/2-in.\$.60
 No. 1126 3/4-in.\$.80
 No. 1127 1-in.1.00
 No. 1128 1 1/2-in.1.20



TOOL BITS

1/4-in. square, high speed steel. Set includes six shapes: (1) left hand turning, (2) round nose, (3) right hand turning, (4) left hand side, (5) right hand side, (6) threading. Sharpened ready to use.



No. 1130 Set of 6\$1.50

No. 1132 1/4-in. square blanks, not sharpened. Price each20c

ROUND BORING BARS

Solid forged boring bars. Any of three sizes can be used in No. 1119 boring tool.

No. 1155 1/8 inch dia. boring bar40c
 No. 1156 3/16 inch dia. boring bar50c
 No. 1157 1/4 inch dia. boring bar60c
 No. 1158 Set of 3 bars, as above\$1.50

CUT OFF BLADES

3/8 by 3/8 by 5-inch cut off blades to fit cut off tool holders.

No. 1111 Cut off blade, each60c



KEYWAY CUTTERS

Best quality, high speed steel Woodruff Keyseat Cutters for use on lathe with milling attachment. 1/2-in. shanks.

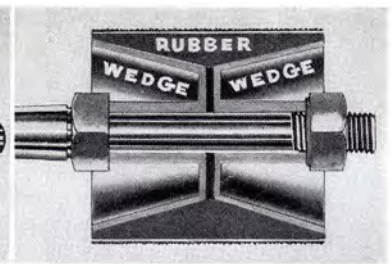
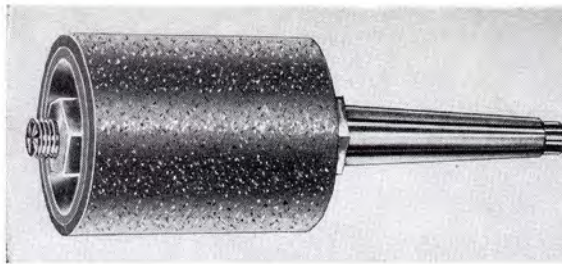
No. Dia. Wd. Each
 1133 1/2 1/16 \$2.80
 1134 1/2 3/32 2.80
 1135 1/2 1/8 2.80
 1136 5/8 5/32 2.80



BORING BAR

A sturdy Boring Bar. 7 in. long by 3/4 in. square tapered to 5/8 in. diameter. Takes 1/4 in. round tool bit which is held in place by set screw from end. Fits open side tool post; will not fit regular tool post. High speed tool bit included.

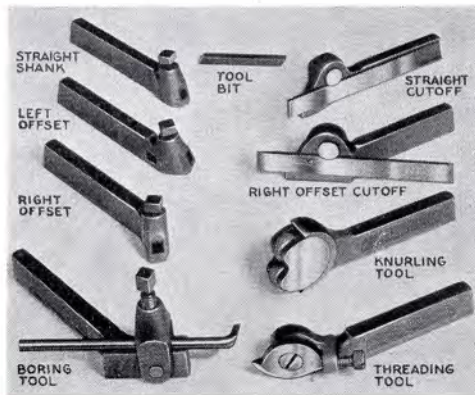
No. 1114\$1.60
 No. 1139 Tool bit only, each20c



IMPROVED *Rubber Cushion* SANDING DRUMS

Distinctly better—a sanding drum that wears absolutely even. Steel wedges when pressed together expand rubber sleeve to hold abrasive in place. Two sizes—3 and 1 3/4 in. diameter. One arbor with No. 2 Morse shank takes both sizes. Sleeves are available in fine, medium and coarse grit.

No. 1140 Arbor only\$1.35
 No. 1141 Sanding Drum, 3 x 3 in.2.25
 No. 1145 Sanding Drum, 1 3/4 x 2 1/2-in.1.50
 No. 1142 Fine garnet sleeve, 3 x 316
 No. 1143 Medium garnet sleeve, 3 x 316
 No. 1144 Coarse garnet sleeve, 3 x 316
 No. 1145 Fine garnet sleeve, 1 3/4 x 2 1/216
 No. 1147 Medium garnet sleeve, 1 3/4 x 2 1/216
 No. 1148 Coarse garnet sleeve, 1 3/4 x 2 1/216



TOOL HOLDERS

These holders are drop-forged, carefully machined and heat-treated. All shanks are 3/8 x 3/4-inch to fit tool post slot. Turning tools take 1/4 inch square tool bits. Knurling tool is fitted with set of medium knurls made from tempered tool steel. A high speed tool bit and wrench is supplied with each holder.

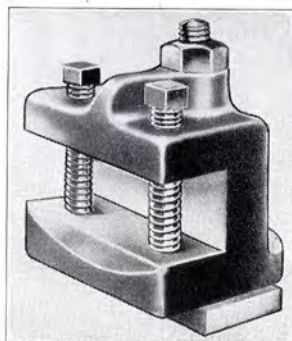
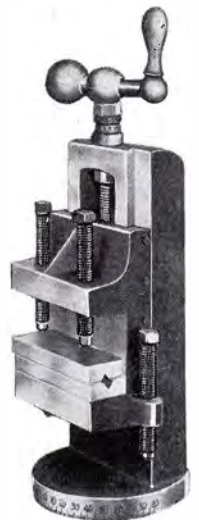
No. 1116 Straight Shank Turning Tool\$1.60
 No. 1117 Right Offset Turning Tool1.60
 No. 1118 Left Offset Turning Tool1.60
 No. 1119 Boring Tool3.60
 No. 1120 Straight Shank Cut-off Tool1.60
 No. 1121 Right Offset Cut-off Tool1.60
 No. 1122 Knurling Tool4.00
 No. 1123 Threading Tool3.20

No. 1124 Complete set of eight Tool Holders, each complete with cutter and wrench, packed in neat metal case\$16.00

Light-Duty MILLING ATTACHMENT

The Milling Attachment is a useful accessory for cutting keyways, squaring shaft ends, slotting and other jobs. As used on the lathe, any attachment of this kind is confined to light work, and is not intended to take the place of a milling machine. Our unit is particularly rigid because it stands squarely upright without overhangs except the vise jaws. This construction eliminates much of the vibration and tendency to chatter. Mounting is made by removing compound slide and substituting milling attachment. The circular base is graduated 90 degrees each way from center for accurate miter work. Work opening is 1 in. deep by 2 in. high by 3 in. wide and is fitted with vee-groove steel jaws for holding round work. 3 inch vertical travel is controlled by steel ballcrank with micrometer sleeve. Slide ways are precision dovetailed and fitted with gib and set screws for take-up.

No. 1010\$20.00



Open Side TOOL POST

A very useful accessory, the Open Side or English Tool Post permits the use of large tool bits or special turning tools. Excellent for boring with No. 1114 boring bar, or for working in close quarters. Gives maximum rigidity for heavy cutting. Mounting is made by clamping in tee slot of compound in place of regular tool post. Throat opening measures 1 inch deep, 1 inch high and 2 1/2 inches long.

No. 1115\$1.80

Marathon MOTORS

- BUILT TO HIGH STANDARDS
- ONE YEAR GUARANTEE
- A TYPE FOR EVERY JOB

MOTORS

Sleeve Bearing SINGLE SHAFT CAPACITOR

A 1/4 or 1/3 H. P. motor of this type makes an excellent motor for average duty on the lathe. Motors are supplied with single shaft and sleeve bearings, and without cord or switch. Extras

can be ordered, as listed in right hand columns. The switch commonly used with this type of motor is a drum reversing switch (see page 5), which makes the motor electrically reversible.

Catalog Number	H. P.	R. P. M.	Volts	Cycles	Size in Inches		Price	EXTRAS		
					Frame	Shaft		B.B.	Cd. & Plug	Dbl. Shaft
2000	1/4	1725	110	60	6	1/2 or 5/8	\$17.50	\$3.00	\$.50	\$1.00
2001	1/4	1725	220	60	6	1/2 or 5/8	17.50	3.00	.50	1.00
2002	1/4	1425	110	50	6	1/2 or 5/8	18.00	3.00	.50	1.00
2003	1/4	1425	220	50	6	1/2 or 5/8	18.00	3.00	.50	1.00
2004	1/4	1425	110	25	6	1/2 or 5/8	22.00	3.00	.50	1.00
2005	1/4	1425	220	25	6	1/2 or 5/8	22.00	3.00	.50	1.00
2010	1/3	1725	110	60	6	1/2 or 5/8	23.00	3.00	1.00	1.00
2011	1/3	1425	110	50	6	1/2 or 5/8	24.00	3.00	1.00	1.00
2012	1/3	1425	110	25	8 1/2	3/4	32.00	4.00	1.00	1.50
2020	1/2	1725	110	60	8 1/2	3/4	28.00	4.00	1.00	1.50
2021	1/2	1425	110	50	8 1/2	3/4	27.50	4.00	1.00	—
2022	1/2	1425	110	25	8 1/2	3/4	36.00	4.00	1.00	—
2030	3/4	1725	110	60	8 1/2	3/4	33.00	4.00	1.00	1.50
2031	3/4	1425	110	50	8 1/2	3/4	34.00	4.00	1.00	1.50
2032	3/4	1425	110	25	8 1/2	3/4	48.00	4.00	1.00	1.50

Sleeve Bearing SINGLE SHAFT THREE PHASE

Supplied without switch, cord or plug as motor must be connected in conduit by electrician.

Sleeve bearings, single shaft. Motors supplied with ball bearings or double shaft as listed.

2026	1/2	1725	220	60	6	3/4	\$26.00	\$3.00	—	\$1.00
2027	1/2	1425	220	50	6	3/4	26.00	3.00	—	1.00
2028	1/2	1425	220	25	8 1/2	3/4	37.50	4.00	—	1.50
2036	3/4	1725	220	60	8 1/2	3/4	33.50	4.00	—	1.50
2037	3/4	1425	220	50	8 1/2	3/4	33.50	4.00	—	1.50
2038	3/4	1425	220	25	8 1/2	3/4	47.50	4.00	—	1.50

Sleeve Bearing SINGLE SHAFT DIRECT CURRENT

Price list is for bare motor without switch or cord. Extras can be ordered as listed in right

hand columns. All of these motors electrically reversible by using drum reversing switch.

2006	1/4	1725	32	—	6	1/2 or 5/8	\$22.00	\$3.00	\$.50	\$1.00
2007	1/4	1725	115	—	6	1/2 or 5/8	22.00	3.00	.50	1.00
2008	1/4	1725	230	—	6	1/2 or 5/8	22.00	3.00	.50	1.00
2013	1/3	1725	32	—	6	1/2 or 5/8	30.00	3.00	1.00	1.00
2014	1/3	1725	115	—	6	1/2 or 5/8	30.00	3.00	1.00	1.00
2015	1/3	1725	230	—	6	1/2 or 5/8	30.00	3.00	1.00	1.00
2023	1/2	1725	32	—	8 1/2	3/4	32.50	4.00	1.00	1.50
2024	1/2	1725	115	—	8 1/2	3/4	32.00	4.00	1.00	1.50
2025	1/2	1725	230	—	8 1/2	3/4	32.00	4.00	1.00	1.50
2033	3/4	1725	32	—	8 1/2	3/4	41.50	4.00	1.00	1.50
2034	3/4	1725	115	—	8 1/2	3/4	40.00	4.00	1.00	1.50
2035	3/4	1725	230	—	8 1/2	3/4	40.00	4.00	1.00	1.50

Sleeve Bearing SINGLE SHAFT SPLIT PHASE

An inexpensive motor for all light duty applications. Price is for bare motor. Extras should

be ordered as needed as shown in right hand columns.

Catalog Number	H. P.	R. P. M.	Volts	Cycles	Size in Inches		Price	EXTRAS		
					Frame	Shaft		B.B.	Cd. & Plug	On-Off Sw.
3070	1/4	1725	110	60	6	1/2 or 5/8	\$ 7.50	\$3.00	\$.50	\$.70
3071	1/4	1425	110	50	6	1/2 or 5/8	9.00	3.00	.50	.70
3072	1/4	1425	110	25	6	1/2 or 5/8	12.00	3.00	.50	.70
3073	1/4	1725	220	60	6	1/2 or 5/8	8.60	3.00	.50	.70
3074	1/4	1425	220	50	6	1/2 or 5/8	9.50	3.00	.50	.70
3075	1/4	1425	220	25	6	1/2 or 5/8	12.00	3.00	.50	.70

B. B. REPULSION-INDUCTION

Equipped with cord and plug, on-off switch and double end shaft. Can be used on either 110 or 220 volts, but normally supplied connected for 110. Sealed ball bearings require no lubrication. This type of motor cannot be made electrical reversing with use of drum switch.

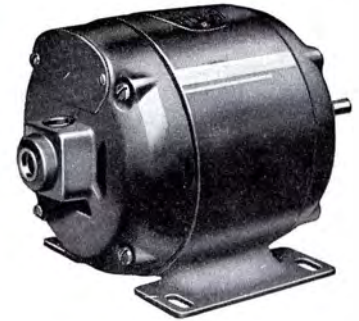
Cat. No.	H.P.	R.P.M.	Volts	Cyc.	Size—Ins.		Price
					Fr.	Shaft	
3106	1/3	1725	110-220	60	6	1/2 or 5/8	\$22.00
3107	1/3	1425	110-220	50	6	1/2 or 5/8	23.00
3108	1/2	1725	110-220	60	8 1/2	3/4	32.00
3109	1/2	1425	110-220	50	8 1/2	3/4	33.00
3110	3/4	1725	110-220	60	9 1/2	3/4	40.00
3111	3/4	1425	110-220	50	8 1/2	3/4	40.00
3112	1	1725	110-220	60	8 1/2	3/4	45.00
3113	1	1425	110-220	50	8 1/2	3/4	45.00

NOTE . . . We can supply almost any type of motor in a wide variety of voltages and frequencies, together with special switches, etc. If you do not find a suitable motor in this list, state your requirements. All 1/4 and 1/3 H. P. motors can be supplied with either 1/2 or 5/8-in. shaft. In all cases where motor is ordered at same time as lathe we bore motor pulley to fit.

THREE PHASE

These motors are supplied without switch, cord or plug as motor must be connected in conduit by electrician. Sleeve bearings; single shaft.

Cat. No.	H.P.	R.P.M.	Volts	Cyc.	Size—Ins.		Price
					Fr.	Shaft	
3041	1/4	1725	220	60	6	1/2 or 5/8	\$17.50
3042	1/3	1140	220-440	60	8 1/2	3/4	31.50
3043	1/3	1725	220	60	6	1/2 or 5/8	20.00
3044	1/2	1140	220-440	60	8 1/2	3/4	38.00
3045	1/2	1725	220-440	60	6	1/2 or 5/8	25.00
3046	3/4	1140	220-440	60	8 1/2	3/4	41.50
3047	1	1140	220-440	60	8 1/2	3/4	44.00
3048	1	1725	220-440	60	8 1/2	3/4	37.50
3049	1 1/2	1140	220-440	60	10 1/2	1	50.00
3050	1 1/2	1725	220-440	60	10 1/2	1	45.00
3051	2	1140	220-440	60	10 1/2	1	60.00
3052	2	1725	220-440	60	10 1/2	1	55.00
3054	3	1725	220-440	60	10 1/2	1	60.00



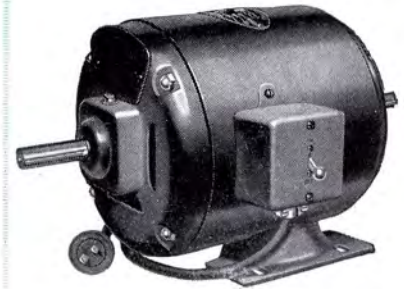
SPLIT PHASE

This is least expensive type of alternating current motor. These motors draw a heavy starting current. Not suitable for starting heavy loads; excellent for light duty.



CAPACITOR

Heavier starting winding connected in series with a condenser thereby decreasing starting current and increasing ability to start under load. Excellent as an electrical reversing motor with use of reversing switch.



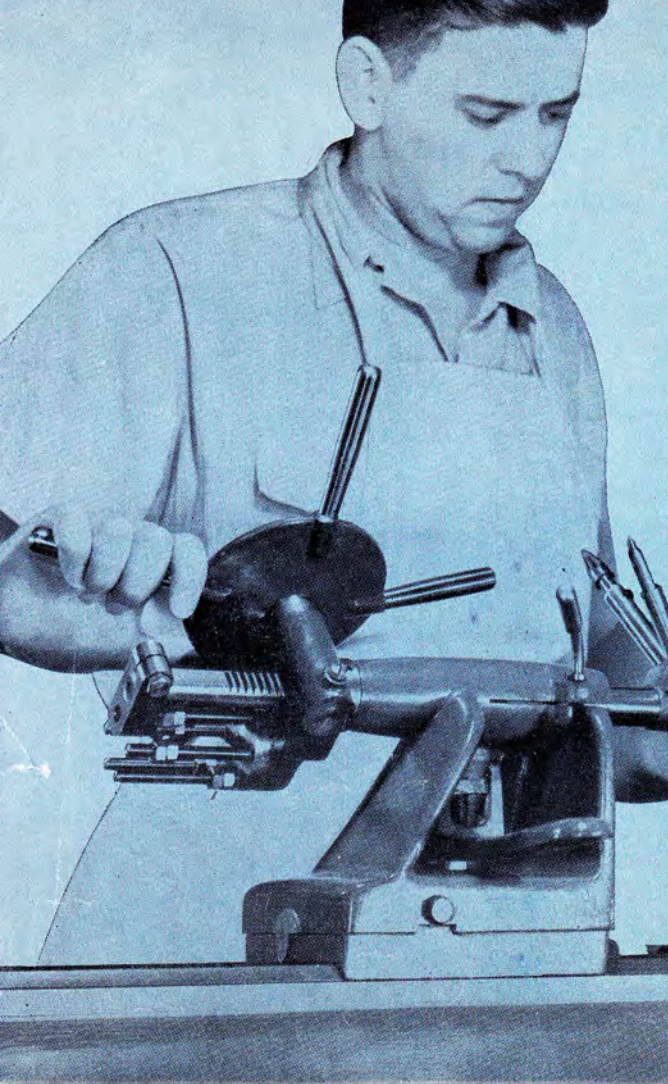
REPULSION-INDUCTION

Most expensive, but the best A. C. motor for heavy duty. Low starting current, and maximum ability to start under load.



THREE PHASE

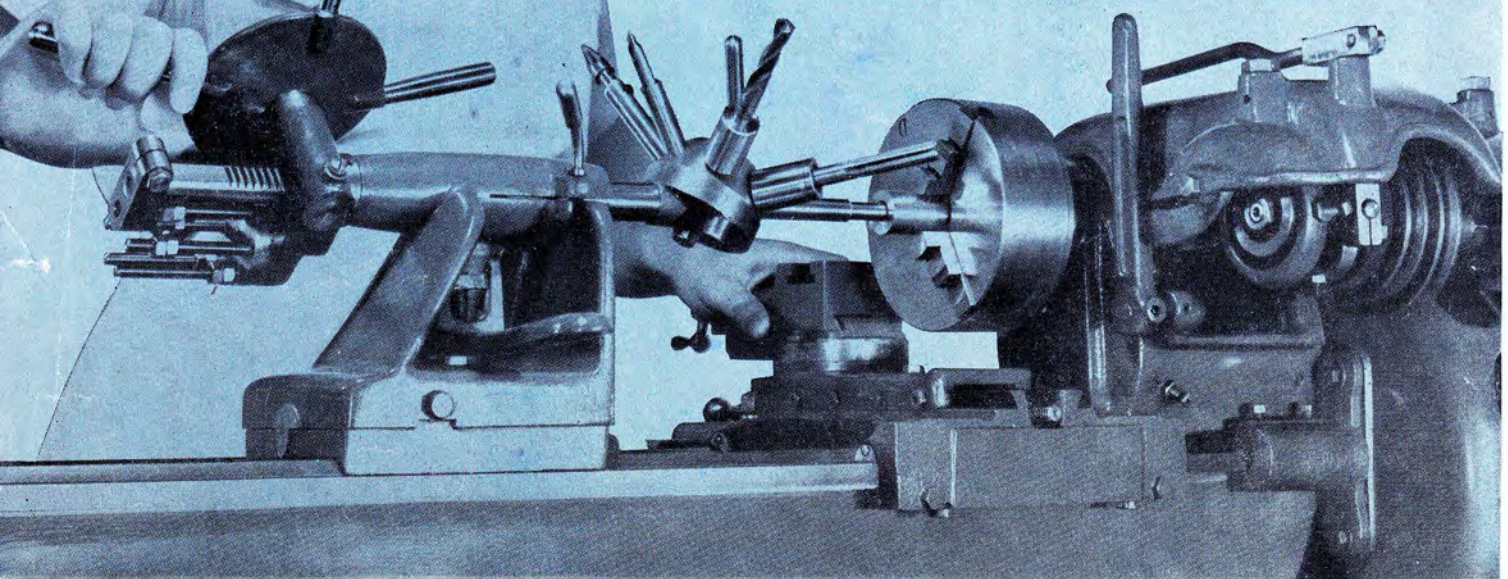
Most foolproof and efficient of all motors and should be used wherever three phase current is available.



Convert Your Lathe for Production Work



**FOUR TO TEN OPERATIONS
AT ONE SETTING WITH
TAILSTOCK AND TOOL POST
TURRET ATTACHMENTS**



MAIL ALL ORDERS TO:

HARRIS TOOL SALES
600 ELM AVENUE
SO. MILWAUKEE, WIS.



TAILSTOCK and tool post turrets can convert your Clausing Bench Lathe into a real production machine. The tailstock turret is a six-position tool holder worked by pilot wheel. Rotating tool head has $\frac{5}{16}$ -inch diameter holes. Tool positions are accurately indexed by a hardened steel pin under spring tension, which engages slots ground on underside of rotating head. A half turn of the clamp handle permits changing stations. Six independent travel stops coupled to an indexing disk can be set to permit any travel less than the maximum of $3\frac{1}{2}$ inches.

THE TOOL POST TURRET is a quick indexing, four-position tool holder. Any one of four tools may be instantly brought into position for performing its operation. The tool block takes $\frac{5}{16}$ -inch square tool bits, which are ground as required. Quick indexing requires only a half turn of the clamp handle. Four hardened steel balls under spring tension insure accurate indexing and are self-compensating for wear. All parts are precision machined and hardened—this is a quality product throughout and should not be confused with cheap tool blocks cut from soft steel.

No. 402	Tool Post Turret to fit compound of Clausing lathes. Without tools bits	\$30.00
No. 1138	Tool Block only, guaranteed interchangeable on tool post turret base	18.00
No. 1137	$\frac{5}{16}$ -inch high speed tool blanks, each35
No. 403	Tailstock Turret Attachment to fit Clausing tailstock. Specify for old or new tailstock, or, give diameter of tailstock ram	76.00

CLAUSING MFG. CO. LILLIAN AND KEOTA STREETS
OTTUMWA, IOWA

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