

LATHES

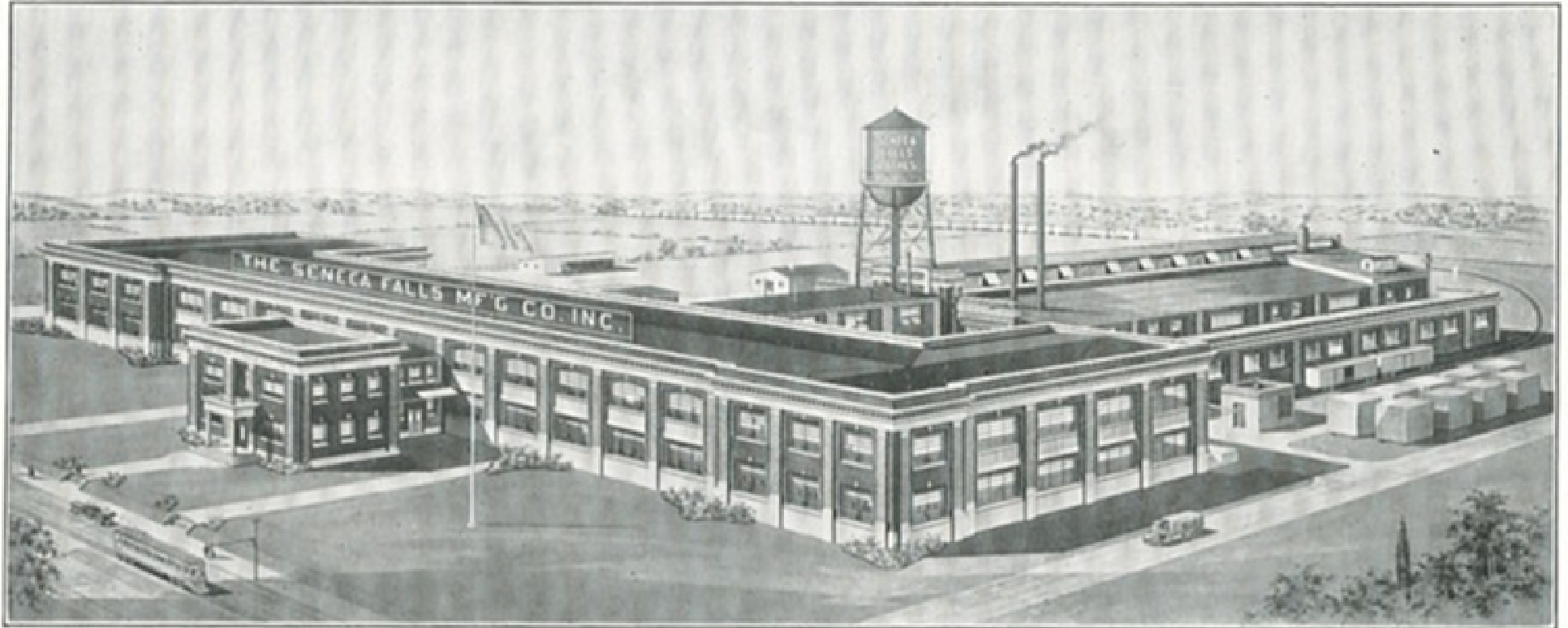
QUALITY

PRECISION

The Seneca
Falls Mfg. Co. Inc.



Seneca Falls
New York · U.S.A.



THE SENECA FALLS MANUFACTURING CO., INC.
SENECA FALLS, N. Y., U. S. A.

FOREWORD



The opposite page shows the new home of SENECA FALLS "STAR" LATHES. They have been completely built and assembled under one roof for the past thirty-five years. PRECISION, QUALITY and PERFECTED LATHE DESIGN has ever been our motto and the success our product has attained is fully demonstrated by the long list of satisfied users to whom we are privileged to refer. Small lathes have been our specialty, built in large lots to jigs, fixtures and gauges, guaranteeing that most desirable feature, interchangeable parts, which in the past few years has come to be the standard of perfection. Rigid inspection of individual parts and the assembled product is maintained, which alone elevates the workmanship. Every mechanic in our shops thoroughly understands that all his work must be his best possible production.

OUR GUARANTEE

We positively guarantee, without exception, the workmanship and materials which enter into the manufacture of SENECA FALLS "STAR" LATHES, and should any parts prove defective in that respect, we shall be pleased at all times to replace such parts free of charge at factory, it being understood that parts so claimed must be returned to us for inspection.

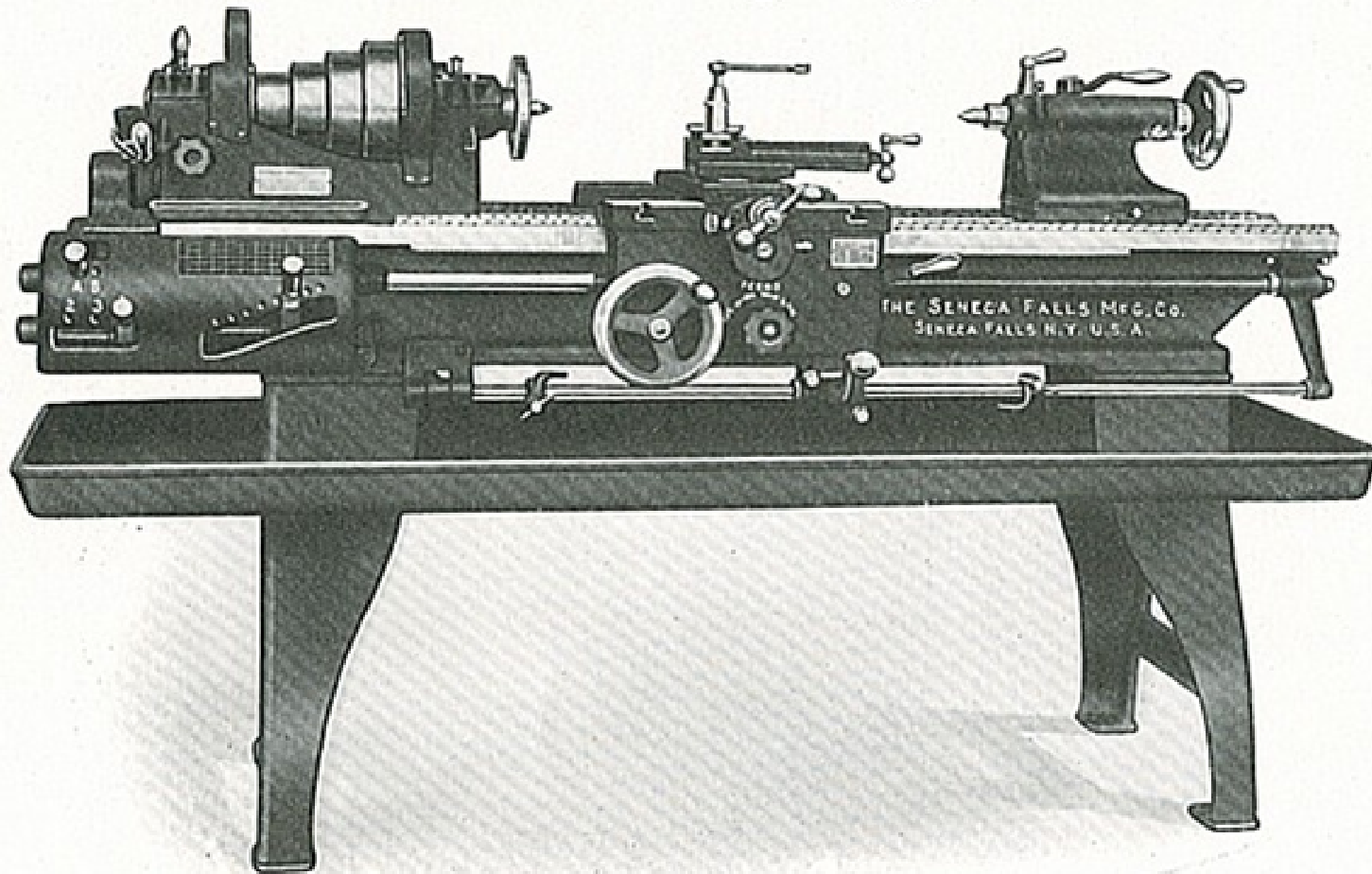
THE SENECA FALLS MANUFACTURING CO., INC.

CATALOG No. 27, Second Edition

SENECA FALLS, NEW YORK, U. S. A.



12-Inch Quick Change
"Star" Screw-Cutting Engine Lathes



Style II, 12" x 6 ft. "Star" Tool Room Lathe.

12-Inch Quick Change "Star" Screw-Cutting Engine Lathes



12-Inch "Star" Quick Change Lathes have an actual swing of $14\frac{1}{8}$ inches. The designing and perfecting of these new lathes covers a long period of exhaustive experimental preparation, careful study and rigid test of various special and unique features.

Quick change gears have 48 combinations instantly available. Reverse device in headstock conveniently operated from apron, controls lead-screw, cross and longitudinal feeds. Automatic stop for carriage in either direction, when actuated by friction or screw feeds. Automatic safety device in apron prevents engaging opposing feeds. Longitudinal hand feed wheel is stationary under screw feed. Micrometer stop is entirely different from

any other stop device upon the market and has a wide range for profitable use.

High standard of manufacturing, combined with weight and rigid construction, produces lathes suitable for both the finest toolroom work and the heavy service of the machine shop.

"Star" Quick Change Lathes are protected by the following patents, viz.: Aug. 2, 1904, May 21, 1907, Aug. 13, 1907, May 18, 1909, Jan. 11, 1910, June 20, 1911, Feb. 4, 1913, Feb. 9, 1915, others pending.

Headstock—Web pattern, well ribbed, heavy and rigid, with long bearing on bed, hollow spindle made from

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		Spindle Speeds:							
Back Gear	← Shifter Counter 125 R.P.M.				Shifter Counter → 165 R.P.M.				
	In.	40	24	15	10	53	32	20	13
Out.	357	214	137	88	471	282	181	118	GE-1012

Plate for 12" Lathe, showing spindle speeds, r. p. m.



12-Inch Quick Change

“Star” Screw-Cutting Engine Lathes

60-65 carbon crucible steel revolving in large bearings, provided with oil-rings and large oil-wells, insuring constant and thorough lubrication. Cone has 4 steps, of large diameters, for wide belt; back gears and two forward speeds from countershaft give 16 spindle speeds. The cone is finished inside and outside, perfectly balanced, is locked to head-gear by push-pin and may be secured or released instantly, without using wrench.

Tailstock—Curved, off-set pattern, massive, with long bearing on bed and base, is clamped to bed by bolts extending to the top in convenient position for wrench. Has side adjustment for turning taper. The spindle is of large diameter with long movement.

Carriage—Is wide and heavy, has full-length, solid bearings on V ways, is securely gibbed front and rear, a new (patented) binding device, for securing plain and compound rests to cross slide, facilitates adjustments and changing rests, and by omitting the usual slots for binder bolts, the cross slide is not weakened. The cross slide is graduated 180 degrees for adjusting compound rest. “T” slots are provided for clamping work to carriage.

Felt wipers remove dirt and chips from the ways and spread oil as carriage moves. All carriages are arranged

for taper attachment, which can be affixed at any time. The cross-feed screw has collar graduated to read in thousandths of an inch. The collar can be readily set to any position and may also be used in connection with the Micrometer Cross-Feed Stop. (See next paragraph).

Micrometer Cross-Feed Stop—(Patented). Is a device, which gives a positive stop for hand feed, capable of cutting a given depth to a certainty. It has a micrometer adjustment with graduations reading .00025 inch. The graduations are about $\frac{1}{32}$ inch apart and minute adjustments are easily made.

This stop is invaluable for all kinds of outside and inside work; it saves time because it eliminates guessing at the depth of cut; it saves making several trial cuts to obtain a desired dimension; it saves stopping lathe to caliper work; it insures uniformity in making duplicate parts. The depth of cut cannot be varied by crowding the tool. The stop is positive and may be used in connection with taper attachment.

To set stop for outside work, push down engagement lever (on right hand side of case) feed tool up to work or starting point, turn spur-gear (see opening on right hand

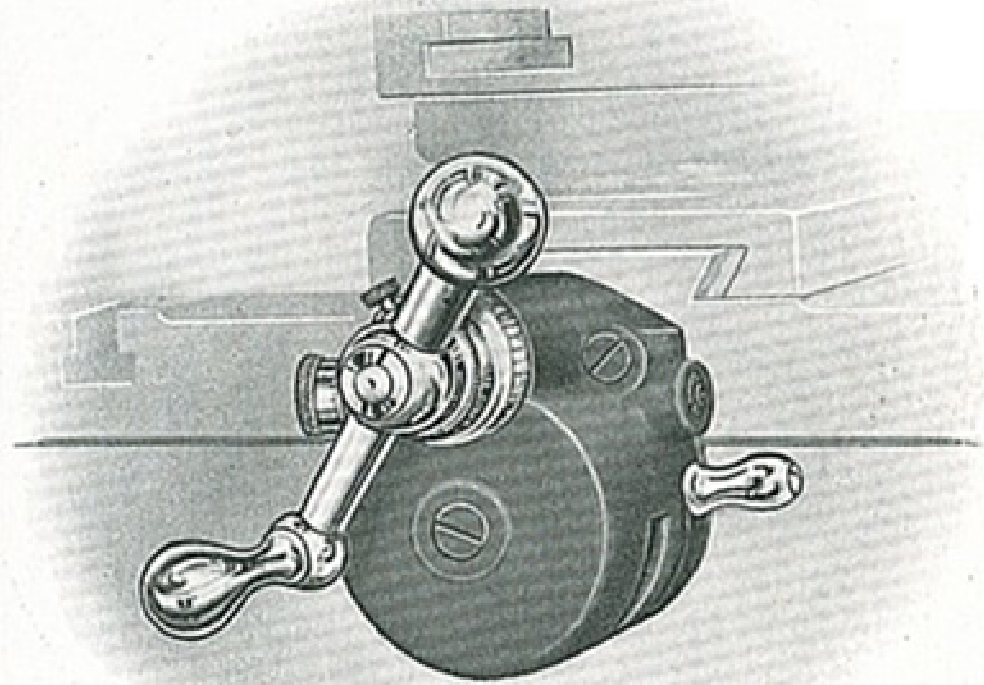
12-Inch Quick Change “Star” Screw-Cutting Engine Lathes



side of case) to right until it comes to a stop with a click, and turn knurled disc to right until it comes to a stop, then pull up engagement lever, engaging stop mechanism with cross-feed screw. By turning the knob on micrometer barrel from you, the relative positions of the stop mechanism are changed, and allow the tool to advance inward. To set stop for inside work, push down engagement lever, feed tool to the starting point, turn spur gear to the left until it comes to a stop with a click, and turn knurled disc to left until it comes to a stop, then pull up engagement lever. By turning knob on micrometer barrel toward you, the tool is allowed to feed outward.

The tool may be fed away from the work as far as desired and when returned will stop at position indicated by micrometer graduations. When through using, push down engagement lever, disconnecting the stop mechanism; while the stop is intended for use *only* with hand feed, it is not liable to break if it should carelessly be left in engagement, when using power cross-feed.

Apron—Is heavy and well ribbed. The gears are strong, having wide face and coarse pitch, the studs are large diameter and well supported in apron casting.



View of Micrometer Cross-Feed Stop.



12-Inch Quick Change

“Star” Screw-Cutting Engine Lathes

An automatic safety device (patented) precludes possibility of engaging opposing feeds; one feed automatically disengages when another is thrown in. When cutting screws the feed gearing is disengaged and the longitudinal hand wheel does not revolve as the carriage travels.

Powerful friction cross and longitudinal feeds are thrown in and out of contact by single hand knob on apron which operates a double friction clutch (patented) in connection with worm gear; turn knob to right for longitudinal feed and to left for cross-feed. The worm gear is actuated by worm on lead-screw, which is splined and acts as feed rod, without any wear on threads except when actually cutting screws. An oil pocket and drip pan provide constant and positive lubrication for worm and worm gear. The split nut for lead-screw is accurately fitted to guides and firmly held by gib straps.

Cross and longitudinal feeds and lead-screw are reversed by lever mounted on side of apron; this works in connection with automatic stop for longitudinal feed and lead-screw, when feeding either to right or left. (See following paragraphs.)

Reversing Device—(Patented), for carriage is operated by lever mounted on side of apron, which controls the travel of carriage and cross slide, when feeding in either direction, or throws the feed gearing entirely out of contact. This reversing device also controls the lead-screw. The mechanism consists of a set of spur gears and clutch in headstock operated through lever connected by reversing rod to hand lever on apron. This device is very convenient and greatly reduces the time required to turn out a piece of work in a standard engine lathe and does away with reverse belt on countershaft, thereby permitting two forward speeds of countershaft.

Automatic Carriage Stop—(Patented), operates either right or left and may be used when cutting screws as well as for longitudinal feed. Easily set and adjusted, and will be found invaluable when working to a shoulder or making duplicate parts. It is very accurate and will stop the carriage in the same place every time.

12-Inch Quick Change

“Star” Screw-Cutting Engine Lathes



Quick Change Gear Mechanism is simple and powerful; all gears are made from steel, the cage casting is heavy and strongly braced, all parts are made to withstand excessive overload. 48 changes for screw-cutting and feeds may be had without removing a single gear. All standard threads from $1\frac{1}{2}$ to 92, including $11\frac{1}{2}$ per inch, and feeds per revolution of spindle are

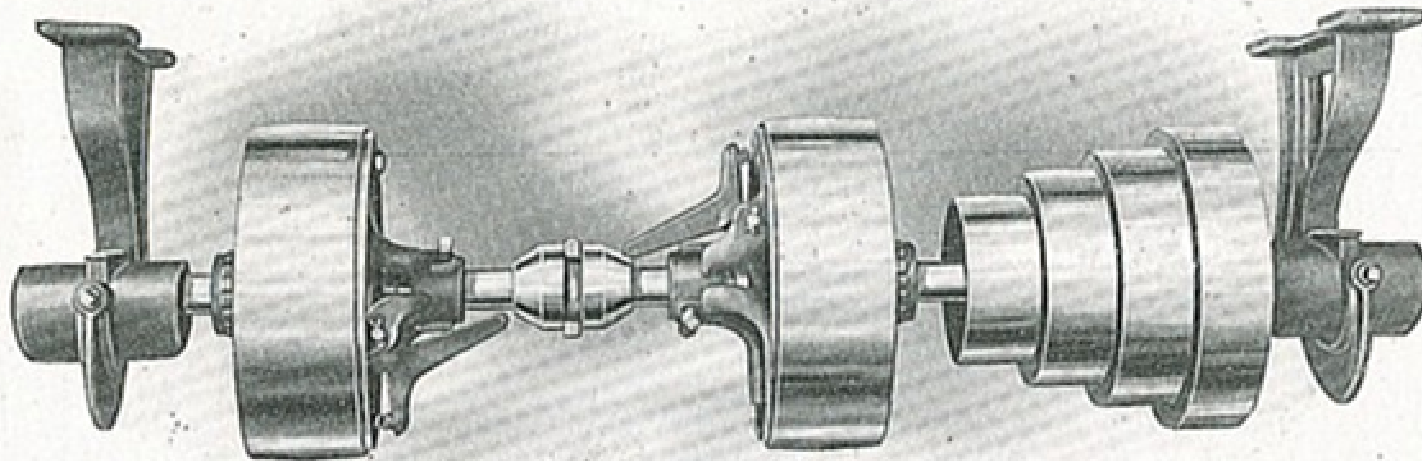
given on index plate, clearly showing how to instantly and conveniently obtain desired thread or feed. Extra gears may be used in the train to obtain any thread not given on index plate. Transposing gears and index plate for cutting metric threads .25 mm. to 16 mm. can be furnished at an extra price.

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Lever Up and Knob A	Knob 1	Thread Feed	$2\frac{7}{8}$.074	$2\frac{3}{4}$.077	$2\frac{1}{2}$.085	$2\frac{1}{4}$.094	2 .106	$1\frac{3}{4}$.122	$1\frac{5}{8}$.131	$1\frac{1}{2}$.142
	Knob 2	Thread Feed	$5\frac{3}{4}$.0371	$5\frac{1}{2}$.0388	5 .0427	$4\frac{1}{2}$.0474	4 .0534	$3\frac{1}{2}$.061	$3\frac{1}{4}$.0657	3 .0712
	Knob 3	Thread Feed	$11\frac{1}{2}$.0185	11 .0194	10 .0213	9 .0237	8 .0267	7 .0305	$6\frac{1}{2}$.0328	6 .0356
Lever Down and Knob B	Knob 1	Thread Feed	23 .0092	22 .0097	20 .0106	18 .0118	16 .0133	14 .0152	13 .0164	12 .0178
	Knob 2	Thread Feed	46 .0046	44 .0048	40 .0053	36 .0059	32 .0066	28 .0076	26 .0082	24 .0089
	Knob 3	Thread Feed	92 .0023	88 .0024	80 .0026	72 .0029	64 .0033	56 .0038	52 .0041	48 .0044

Index Plate for 12" Quick Change Lathe showing threads per inch and feeds per revolution of spindle.



12-Inch Quick Change “Star” Screw-Cutting Engine Lathes



Countershaft—Has improved friction clutch pulleys (patented) with large friction surface on rim of pulley. Wear on friction parts, when pulley is running idle, is eliminated; pulleys have extra long hub with large wearing surface on shaft, so that the usual countershaft troubles are minimized. The pulleys may be oiled without throwing off belts. Hangers have large ring-oiling shaft bearings, adjustable for alignment.

12-Inch Quick Change “Star” Screw-Cutting Engine Lathes



Lead-Screw—Is made from special high carbon lead-screw steel, is cut on special lathe with master screw, which is frequently tested to insure accuracy.

Bed—Is extremely broad, deep and heavy, thoroughly braced by cross webs and is correctly proportioned throughout. The ends are cut-under to shorten leg base and increase stability.

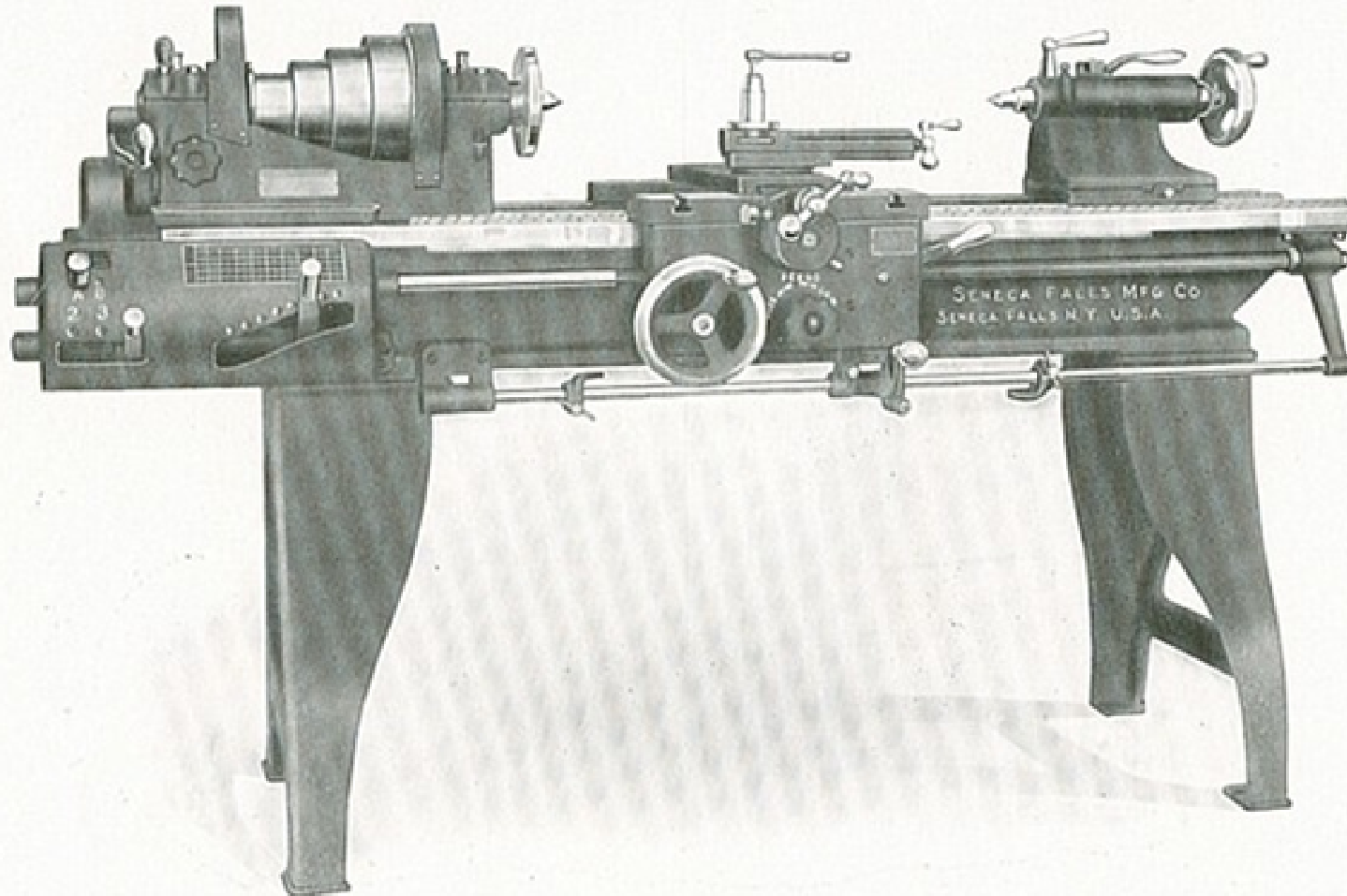
Detached Parts—Each lathe is furnished with compound rest, center rest, follower rest, large and small face plates, two point centers, hardened and ground, friction countershaft and necessary wrenches.

Finish—Each lathe receives five coats of filler and oil-proof paint, leaving a smooth, easily cleaned surface. Inside of beds are painted and the unpainted parts are polished, leaving nothing to be desired in appearance.

Extra Attachments. (See pages 26 to 30) Motor Drive, Transposing Gears for cutting metric threads, Thread-Chasing Dial, Plain Rest, European Tool-Post, Oil Pan, Oil Pump, Taper Attachment, Draw-in Chuck, Hand Lever Draw-in Chuck, Double Tool Block, Turret Tool-Post, Automatic Turret on Bed, Carriage Stop, with four adjustable rods, Milling and Gear-Cutting Attachment, Countershaft with 3 friction pulleys to give high speed, Hand Rests, Screw Chuck, Cup and Spur Centers, Square, Female and Crotch Centers, Drill Pad, Semi-Finished Chuck Face Plates 3" to 9" diameter, hub faced true and threaded, ready to screw on head spindle will be furnished at additional price. Slightly delayed shipments are sometimes unavoidable, when attachments are ordered.



12-Inch Quick Change
"Star" Screw-Cutting Engine Lathes



Style E, 12" x 6 ft. Quick Change "Star" Screw-Cutting Engine Lathe.

12-Inch Quick Change "Star" Screw-Cutting Engine Lathes



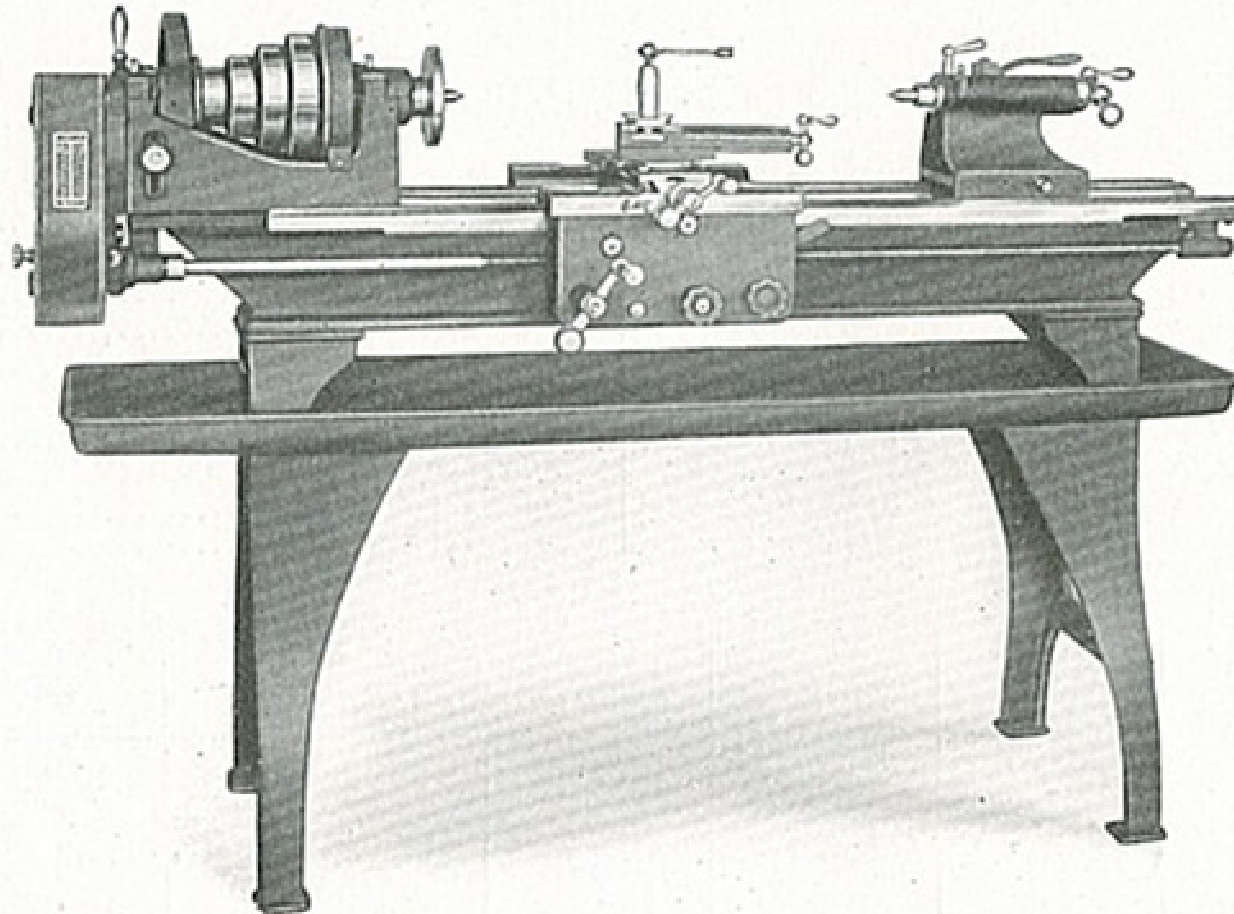
Specifications

Swing over bed, actual.....	14 $\frac{1}{8}$ "	Travel of tail spindle.....	5 $\frac{1}{2}$ "
Swing over carriage.....	8 $\frac{1}{8}$ "	Taper of centers.....	No. 3 Morse
Hole through head spindle.....	1 $\frac{1}{8}$ "	Length of carriage on bed.....	16 $\frac{1}{2}$ "
Diameter spindle nose.....	2"	Compound rest travels.....	5"
Threads on spindle nose.....	8 per inch	Size of lathe tools.....	$\frac{1}{2}$ "x1"
Front bearing of spindle.....	2"x3 $\frac{1}{2}$ "	Cuts threads per inch.....	1 $\frac{1}{2}$ to 92
Back bearing of spindle.....	1 $\frac{3}{16}$ "x2 $\frac{1}{4}$ "	Feeds per revolution of head spindle.....	.0023" to .142"
Cone pulley diameters.....	3 $\frac{1}{2}$ ", 5", 6 $\frac{1}{2}$ ", 8"	Capacity of center rest.....	4 $\frac{1}{4}$ "
Width of belt.....	2"	Size of pulleys on countershaft.....	9 $\frac{1}{2}$ "x2 $\frac{3}{4}$ "
Ratio of back gearing.....	8.84 to 1	Speeds of countershaft.....	125 and 165
Diameter of tail spindle.....	1 $\frac{5}{8}$ "	Speeds of head spindle.....	10 to 471

Rated Swing and Length of Bed	Actual Swing Over Bed	Distance Between Centers	Floor Space Over All	Style E With Long Legs and Countershaft			Style H With Oil Pan and Countershaft		
				Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word
12" x 5 ft.	14 $\frac{1}{8}$ "	24"	32" x 74"	1325 lbs.	50	Coaly	1415 lbs.	60	Cogue
12" x 6 ft.	14 $\frac{1}{8}$ "	36"	32" x 86"	1400 lbs.	58	Cobra	1500 lbs.	67	Cokes
12" x 8 ft.	14 $\frac{1}{8}$ "	60"	32" x 110"	1550 lbs.	68	Cocoa	1670 lbs.	79	Colin
12" x 10 ft.	14 $\frac{1}{8}$ "	84"	32" x 134"	1765 lbs.	82	Codex			



9, 11 and 13-Inch
"Star" Screw-Cutting Engine Lathes



Style H, 11" swing, 5 ft. bed; compound rest, oil-pan and countershaft. Oil-pan can be furnished with 9", 11" and 13" lathes, see specifications pages 21, 23 and 25.

9, 11 and 13-Inch "Star" Screw-Cutting Engine Lathes



"Star" Lathes are made in three sizes, rating 9", 11" and 13" swing; in design and construction they conform to the highest type of standard engine lathe practice, and for rated capacity are unsurpassed; they are furnished with floor legs, bench legs, or mounted on oil-pan, for belt or direct connected motor drive; also with floor legs for foot power, and a full line of conventional attachments. They have wide range for exacting service and are exceptionally desirable for use in the laboratory, scientific instrument shops, tool room, experimental departments, and for light, accurate commercial work generally.

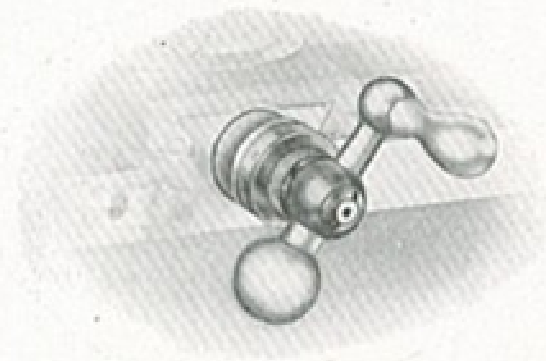
"Star" Lathes are protected by the following patents, viz.: Aug. 13, 1895, March 17, 1903, May 18, 1909, Jan. 11, 1910, Nov. 14, 1916, others pending.

Headstock. Web pattern, hollow spindle made from 60-65 carbon crucible steel, accurately ground to size, revolving in ample hand-scraped ring-oiling bearings, nose is threaded part way only to facilitate changing chucks and face plates without damaging threads and to insure perfect fit.

All spindles have large hole suitable for draw-in chuck. Cone is finished inside and outside, perfectly balanced for high speeds, is locked to head-gear by improved push-pin and may be secured or released instantly without using wrench, all gears are fully guarded.

Tailstock. Curved, off-set pattern, with long bearing on bed and base, large spindle with self-discharging center, side adjustment for taper turning, oil well and center oiler.

Carriage. Has substantial bearing on ways, is gibbed front and rear; a convenient locking device secures carriage to bed when using cross-feed. Cross-feed screw is supplied with micrometer collar graduated to read in thousandths of an inch, secured by friction spring and readily set to any position. An adjustable stop for cross slide is provided for screw-cutting, etc.

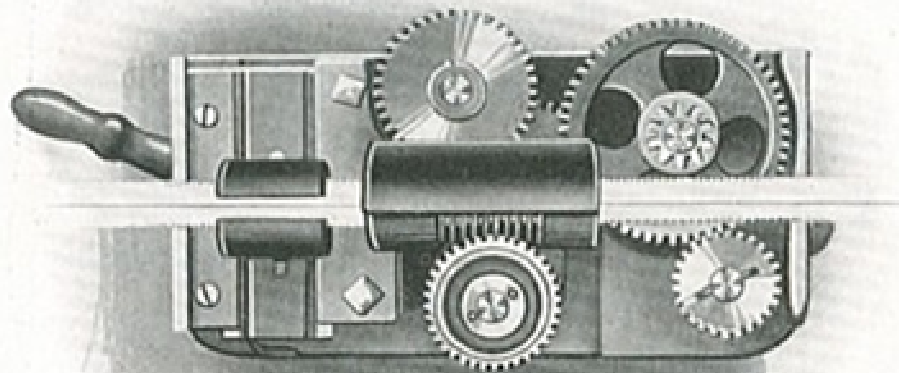


Micrometer Collar on Cross-Feed Screw.
Note absence of protruding nut to injure the knuckles.



9, 11 and 13-Inch

“Star” Screw-Cutting Engine Lathes



Inside view of Apron for “Star” Lathes.

Cross-feed screw and ways are efficiently protected from chips and dirt by a guard full length of slide. All carriages are arranged for taper attachment which can be affixed at any time. On request we will drill and tap four $\frac{7}{16}$ " holes in top of carriage of 9" lathe for clamping work. T-slots are provided on all 11" and 13" lathe carriages.

Rest. Compound rest is furnished with all lathes; a patented binding device rigidly binds the rest to cross slide, which is graduated 180 degrees. Plain rest may be ordered with lathe or at any future time.

Tool-Post. Has patented collar and shoe, which exclude all dirt and chips, and admit of quick, easy and secure adjustment of tool. If desired, European Tool-Post will be furnished in place of regular tool-post without extra charge.

Apron. A new safety device is provided so that opposing feeds: Long feed and split nut cannot be engaged at the same time.

Feeds. Our improved power cross and longitudinal feeds are actuated by worm, receiving power from head spindle through spur gears and lead-screw, which is splined, and acts as a feed rod; the only wear on threads of lead-screw is when actually cutting screws. Feeds may be thrown in or out by turning hand knob on apron, which operates friction clutch, shifting reverse lever in headstock will feed in or out, right or left, or throw

9, 11 and 13-Inch "Star" Screw-Cutting Engine Lathes



**The Seneca Falls Mfg. Co.
Seneca Falls, N.Y., U.S.A.**

Thread	Stud	Inter ^a	Screw	Thread	Stud	Inter ^a	Screw
3	96	46	24	16	24	96	32
3¼	96	24/48	52	18	24	96	36
3½	96	24/48	56	20	24	60	40
4	96	46	32	22	24	60	44
4½	96	46	36	24	24	60	48
5	96	46	40	26	24	60	52
5½	96	46	44	27	32	96/48	36
6	96	46	48	28	24	60	56
6½	96	46	52	30	24	56	60
7	96	46	56	32	24	96/48	32
8	48	60	32	36	24	96/48	36
9	48	60	36	40	24	96/48	40
10	48	60	40	42	32	96/48	56
11	48	60	44	44	24	96/48	44
11½	48	60	46	48	24	56	96
12	48	60/40	32	56	24	96/48	56
13	48	60	52	60	24	96/48	60
14	48	60	56	64	36	48/24	96
15	48	46	60	72	32	48/24	96

Feeds 7.26 Times Threads Per Inch.

8-609-2

Cut shows 9" Index Plate. Similar Plate furnished with 11" and 13" "Star" Lathes, giving correct speeds and feeds.

entirely out of engagement. The automatic power cross-feed is indispensable for good work, it insures accurate results and smooth surfaces when facing and other similar service.

Screw-Cutting. Extremely wide range, cutting all standard threads, right and left from 3 to 72 per inch, including 11½ and 27. When desirable to cut both standard and metric threads, can furnish (for slight advance in price) transposing gears and index for cutting International Standard Metric threads from 0.5 mm. to 8 mm.

Lead-Screw. Is carefully cut in special lathe with master screw, which is frequently tested. If desirable to cut only metric threads, can supply metric lead-screw and index, for standard metric threads, in place of regular, without extra charge.

Bed. Box section, correctly proportioned and thoroughly braced by cross webs. Rack is one piece of steel accurately cut.

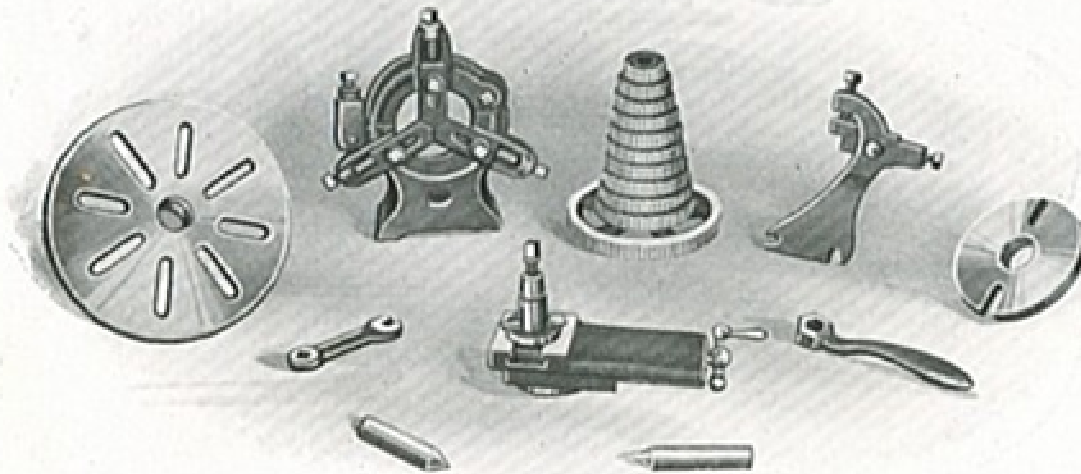
Finish. Each lathe receives five coats of filler and oil-proof paint, leaving a smooth, easily cleaned surface. Inside of beds painted and unpainted parts polished, leaving nothing to be desired in appearance.



9, 11 and 13-Inch

"Star" Screw-Cutting Engine Lathes

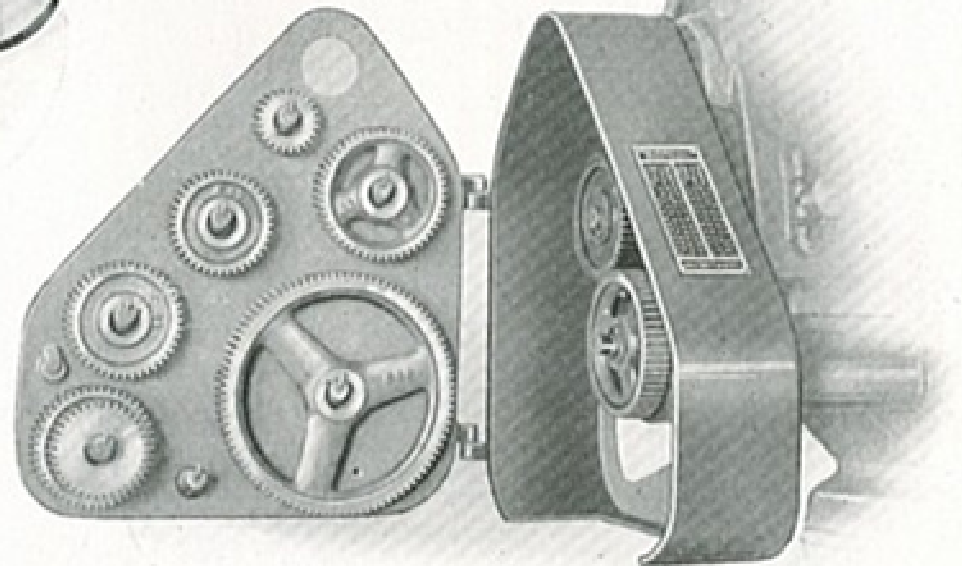
hands. Split spring washers hold change gears in place and facilitate quick shifting. All adjusting screws have uniform size heads to fit tool-post wrench. Screws, nuts and small parts liable to become bruised, are case-hardened. Cylindrical surfaces are ground, sliding surfaces hand-scraped to perfect bearing and ample facilities are provided to compensate for wear.



Detached Parts furnished with all 9", 11" and 13" "Star" Lathes.

Detached Parts. Each lathe is regularly furnished with countershaft and compound rest, large and small face plates, center rest, follow rest, two point centers hardened and ground, center oiler, full set of change gears and drop forged tool-post wrench.

In General. All gears are fully guarded. The door of change gear guard has pegs for holding loose gears. Change gears have rounded edges to avoid injury to



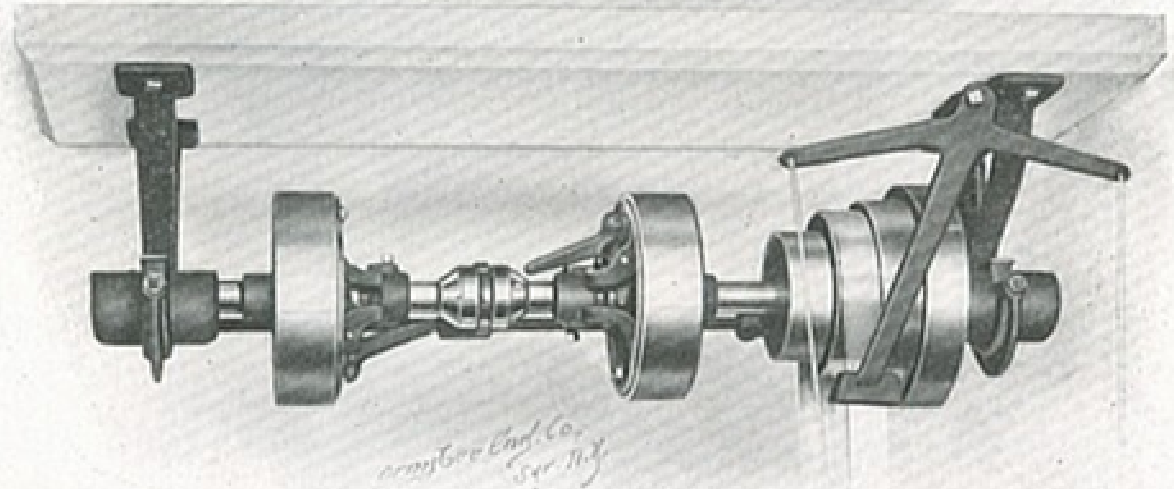
Guard for change gears on all 9", 11" and 13" "Star" Lathes also provides place to keep loose gears.

9, 11 and 13-Inch "Star" Screw-Cutting Engine Lathes



Countershaft. Has improved clutch pulleys (patented) with large friction surface on rim of pulley, wear on friction parts when pulley is running idle is eliminated and the usual countershaft troubles are minimized. Hangers have large ring-oiling shaft bearings, adjustable for alignment. The cone belt shifter for 9" and 11" "Star" Lathe has quick action and will be found very convenient, especially with high ceilings. The cone belt shifter is not furnished with 13" "Star" Lathes.

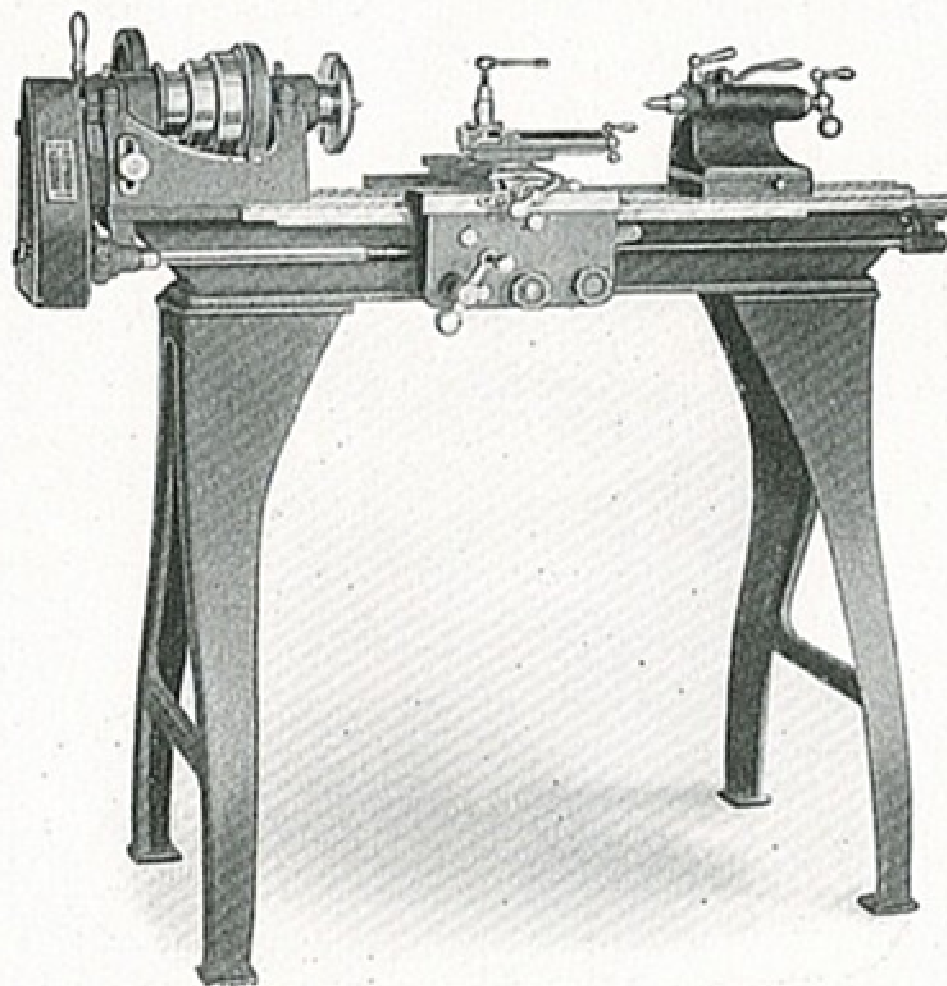
Extra Attachments. (See pages 26 to 39) Motor Drive, Foot Power, Transposing Gears for cutting metric threads, Thread-Chasing Dial, Plain Rest, European Tool-Post, Oil Pan, Oil Pump, Bench Legs, Blocking, Taper Attachment, Draw-in Chuck, Hand Lever Draw-in Chuck, Double Tool Block, Turret Tool-Post, Automatic Turret on Bed, Carriage Stop, with four adjustable rods, Automatic Carriage Stop, Milling and Gear-Cutting Attachment, Countershaft with 3 friction pulleys to give high speed for wood turning, Hand Rests, Screw Chuck, Cup and Spur Centers, Square, Female and Crotch Cen-



ters, Drill Pad, Semi-Finished Chuck Face Plates 3" to 8" diameter, hub faced true and threaded, ready to screw on head spindle will be furnished at additional price. Slightly delayed shipments are sometimes unavoidable, when attachments are ordered.



9-Inch
"Star" Screw-Cutting Engine Lathes



Style E, 9" swing, 4 ft. bed, has compound rest, long legs and countershaft.

9-Inch "Star" Screw-Cutting Engine Lathes



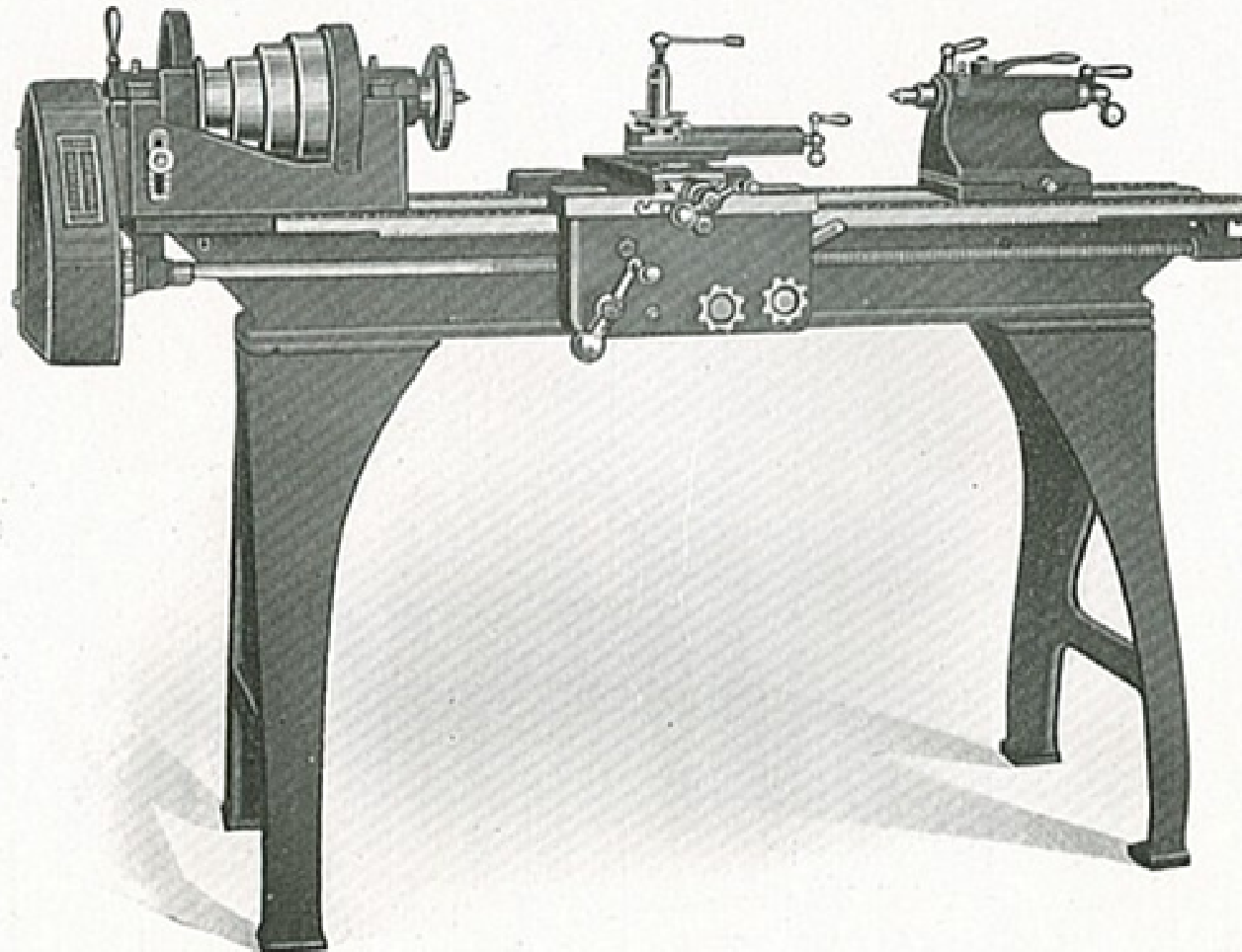
Specifications

Swing over bed, actual	10 $\frac{1}{8}$ "	Diameter of tail spindle	1 $\frac{1}{8}$ "
Swing over carriage	5 $\frac{3}{8}$ "	Travel of tail spindle	2 $\frac{3}{4}$ "
Hole through head spindle	$\frac{3}{8}$ "	Length of carriage on bed	10 $\frac{3}{8}$ "
Diameter spindle nose	1 $\frac{1}{16}$ "	Compound rest travels	3 $\frac{7}{16}$ "
Threads on spindle nose	12 per inch	Size of lathe tools	$\frac{3}{8}$ " x $\frac{3}{4}$ "
Front bearing of spindle	1 $\frac{1}{16}$ " x 2 $\frac{3}{4}$ "	Cuts threads per inch	3 to 72
Back bearing of spindle	1 $\frac{1}{16}$ " x 1 $\frac{3}{4}$ "	Feed times threads per inch	7.26
Cone pulley diameters	3 $\frac{1}{16}$ ", 4 $\frac{1}{16}$ ", 5 $\frac{1}{16}$ "	Capacity of center rest	3"
Width of belt	1 $\frac{1}{4}$ "	Size of pulleys on countershaft	6" x 1 $\frac{3}{4}$ "
Ratio of back gearing	7 to 1	Speed of countershaft	175
Taper of centers	No. 2 Morse	Speeds of head spindle	18 to 340

Rated Swing and Length of Bed	Actual Swing Over Bed	Distance Between Centers	Floor Space Over All	Style E With Long Legs and Countershaft			Style H With Oil Pan and Countershaft			Style K With Bench Legs and Countershaft		
				Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word
9" x 4 ft.	10 $\frac{1}{8}$ "	24"	25" x 55 $\frac{1}{2}$ "	405 lbs.	18	Bacon	455 lbs.	21	Bafta	340 lbs.	13	Bahar
9" x 5 ft.	10 $\frac{1}{8}$ "	36"	25" x 67 $\frac{1}{2}$ "	435 lbs.	22	Banal	495 lbs.	25	Basin	370 lbs.	16	Bayou



11-Inch "Star" Screw-Cutting Engine Lathes



Style E, 11" swing, 5 ft. bed, has compound rest, long legs and countershaft.

11-Inch "Star" Screw-Cutting Engine Lathes



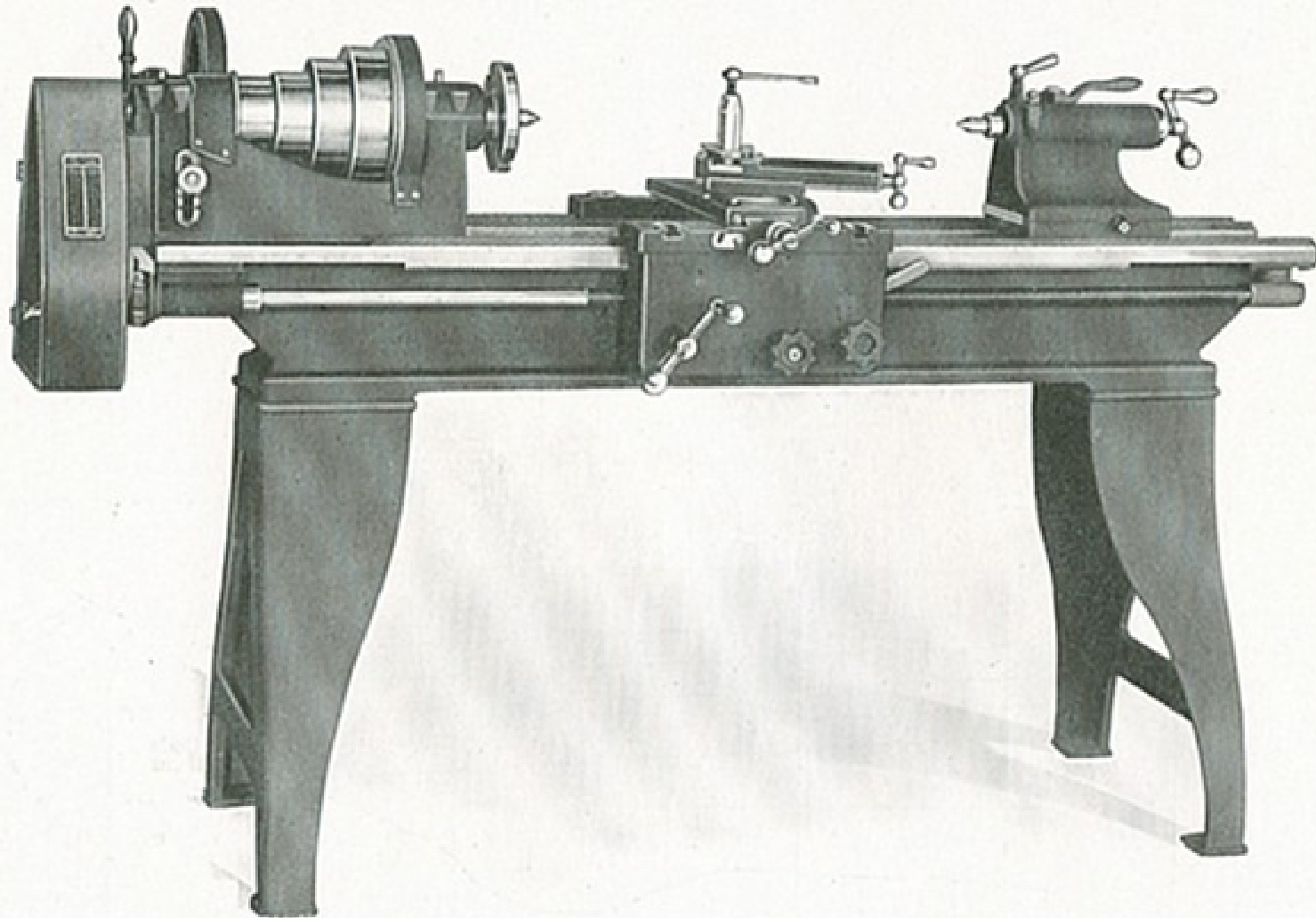
Specifications

Swing over bed, actual	12 $\frac{1}{8}$ "	Diameter of tail spindle.....	1 $\frac{3}{8}$ "
Swing over carriage.....	7 $\frac{1}{8}$ "	Travel of tail spindle.....	4 $\frac{1}{8}$ "
Hole through head spindle.....	1"	Length of carriage on bed.....	13 $\frac{1}{2}$ "
Diameter spindle nose.....	1 $\frac{1}{16}$ "	Compound rest travels.....	4 $\frac{1}{4}$ "
Threads on spindle nose.....	10 per inch	Size of lathe tools.....	$\frac{1}{2}$ " x $\frac{3}{8}$ "
Front bearing of spindle.....	1 $\frac{1}{16}$ " x 3 $\frac{1}{4}$ "	Cuts threads per inch.....	3 to 72
Back bearing of spindle.....	1 $\frac{1}{16}$ " x 2 $\frac{1}{8}$ "	Feed times threads per inch.....	8.56
Cone pulley diameters.....	3 $\frac{1}{4}$ ", 4 $\frac{1}{2}$ ", 5 $\frac{3}{4}$ ", 7"	Capacity of center rest.....	3 $\frac{3}{8}$ "
Width of belt	1 $\frac{1}{2}$ "	Size of pulleys on countershaft	8" x 2 $\frac{1}{4}$ "
Ratio of back gearing.....	8.5 to 1	Speed of countershaft.....	165
Taper of centers.....	No. 2 Morse	Speeds of head spindle.....	15 to 445

Rated Swing and Length of Bed	Actual Swing Over Bed	Distance Between Centers	Floor Space Over All	Style E With Long Legs and Countershaft			Style H With Oil Pan and Countershaft			Style K With Bench Legs and Countershaft		
				Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word
11" x 4 ft.	12 $\frac{1}{8}$ "	24"	27" x 64"	690 lbs.	26	Abbey	775 lbs.	29	Abele	610 lbs.	21	Abide
11" x 5 ft.	12 $\frac{1}{8}$ "	36"	27" x 76"	730 lbs.	28	Abray	835 lbs.	32	Abysm	650 lbs.	21	Acerb
11" x 6 ft.	12 $\frac{1}{8}$ "	48"	27" x 88"	770 lbs.	27	Adcem	895 lbs.	31	Admix	690 lbs.	24	Adrad
11" x 7 ft.	12 $\frac{1}{8}$ "	60"	27" x 100"	810 lbs.	30	Afire	955 lbs.	35	Agent	730 lbs.	28	Agile



13-Inch
"Star" Screw-Cutting Engine Lathes



Style E, 13" swing, 6 ft. bed, has compound rest, long legs and countershaft.

13-Inch "Star" Screw-Cutting Engine Lathes



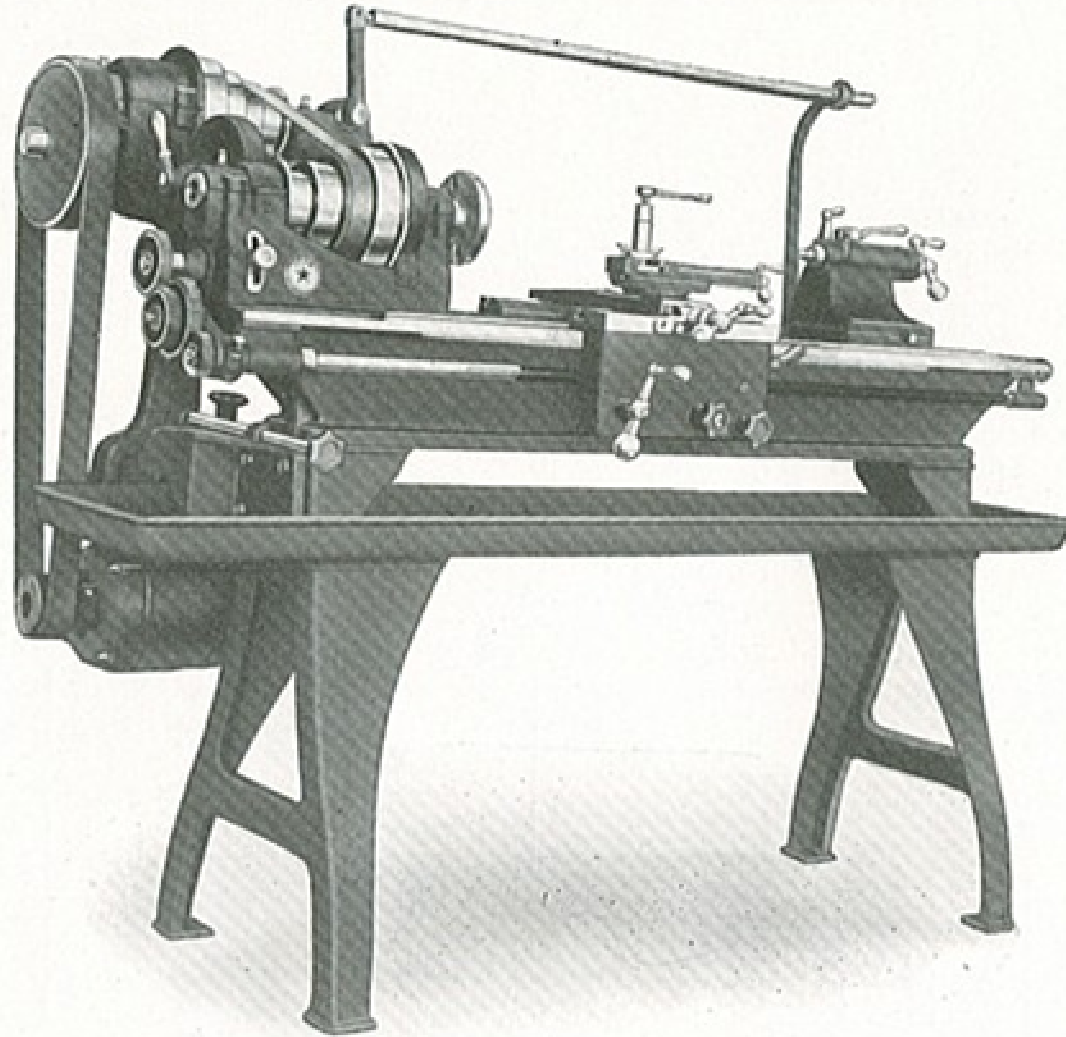
Specifications

Swing over bed, actual	14 $\frac{1}{8}$ "	Diameter of tail spindle	1 $\frac{5}{8}$ "
Swing over carriage	8 $\frac{1}{8}$ "	Travel of tail spindle	5 $\frac{1}{8}$ "
Hole through head spindle	1 $\frac{1}{8}$ "	Length of carriage on bed	15 $\frac{1}{2}$ "
Diameter spindle nose	2"	Compound rest travels	5"
Threads on spindle nose	8 per inch	Size of lathe tools	$\frac{1}{2}$ " x 1"
Front bearing of spindle	2" x 4"	Cuts threads per inch	3 to 72
Back bearing of spindle	1 $\frac{3}{8}$ " x 2 $\frac{3}{4}$ "	Feed times threads per inch	5.61
Cone pulley diameters	3 $\frac{1}{2}$ ", 5", 6 $\frac{1}{2}$ ", 8"	Capacity of center rest	4 $\frac{1}{4}$ "
Width of belt	2"	Size of pulleys on countershaft	9 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ "
Ratio of back gearing	9.29 to 1	Speed of countershaft	150
Taper of centers	No. 3 Morse	Speeds of head spindle	11 $\frac{1}{2}$ to 428

Rated Swing and Length of Bed	Actual Swing Over Bed	Distance Between Centers	Floor Space Over All	Style E With Long Legs and Countershaft			Style H With Oil Pan and Countershaft		
				Net Weight	Cubic Feet of Boxes	Code Word	Net Weight	Cubic Feet of Boxes	Code Word
13" x 5 ft.	14 $\frac{1}{8}$ "	24"	29" x 73"	1195 lbs.	43	Cable	1285 lbs.	50	Caddy
13" x 6 ft.	14 $\frac{1}{8}$ "	30"	29" x 85"	1260 lbs.	46	Cadet	1360 lbs.	57	Caged
13" x 8 ft.	14 $\frac{1}{8}$ "	60"	29" x 109"	1415 lbs.	60	Caked	1535 lbs.	72	Calmy
13" x 10 ft.	14 $\frac{1}{8}$ "	84"	29" x 133"	1640 lbs.	74	Cameo			



Motor Drive for 9, 11, 12 and 13-Inch "Star" Screw-Cutting Engine Lathes



"Star" Lathe, 11" swing, 5 ft. bed, with Electric Motor Drive showing Gear Guard removed.
Can furnish this motor drive for 9", 11", 12" and 13" "Star" Lathes on long legs or oil-pan.

Motor Drive for 9, 11, 12 and 13-Inch "Star" Screw-Cutting Engine Lathes



Electric Motor Drive for 9", 11" and 13" "Star" Lathes and 12" "Star" Quick Change Lathes embodies new and individual features, is well proportioned, rigid, and powerful; not liable to damage or disarrangement, main shaft bearings are lubricated by ring oilers.

Power is transmitted from motor to drive shaft pulley, which runs constantly in one direction, and from drive cone to spindle cone by belts amply large to drive lathe to full capacity. Provision is made for quickly tightening belts, and they may be kept at proper tension until worn out, without shortening. By this method sufficient power is transmitted to drive lathe to the full capacity that work or tool will endure, and will prevent damage to both lathe and motor that is sometimes chargeable to less flexible gear or chain drive connections.

Starting, stopping and reverse rotation of lathe spindle is controlled by shifting bar placed horizontally above lathe, within easy reach of operator. Moving shifting bar to left imparts forward motion to lathe spindle and to right reverses; bringing shifting bar to center position

stops lathe. The reverse speed is faster than that of forward motion.

Any make of motor for direct or alternating current, constant or variable speed, may be used; with a constant speed motor,—preferably running between 1200 and 1800 R.P.M.—the 9" lathe has six spindle speeds, the 11", 13" and 12" lathes have eight speeds each; if more spindle speeds are desired, variable speed motor may be used to good advantage.

When the motor is furnished by customer, it should be sent without sliding base, arranged to mount with the feet upward and run counter clock-wise when facing the pulley end.

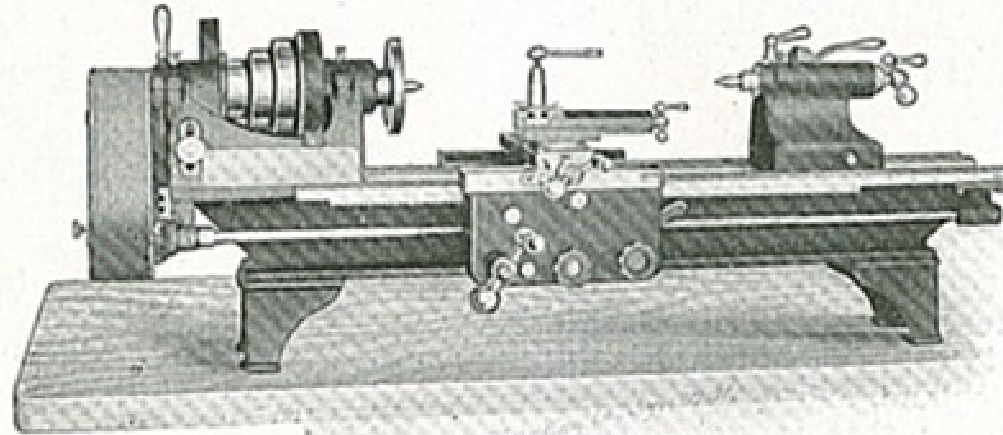
When lathes are ordered with motors mounted, they are belted ready for use. The motor drive attachment is fitted to lathe in lieu of furnishing countershaft. Motors are not included in regular equipment, prices of motors will be quoted on application, stating whether direct or alternating current is to be used; if direct, give voltage; if alternating, give voltage, phase and cycles.

Size of motor recommended
 Size of pulley on drive shaft
 Speed of pulley on drive shaft
 Speeds of head spindle

<i>9" Lathe</i>	<i>11" Lathe</i>	<i>12" and 13" Lathe</i>
$\frac{1}{2}$ H.P.	$\frac{3}{4}$ H.P.	$1\frac{1}{2}$ H.P.
$8\frac{1}{2} \times 1\frac{5}{8}$ "	$10 \times 1\frac{3}{8}$ "	$12 \times 2\frac{5}{8}$ "
460 R.P.M.	550 R.P.M.	505 R.P.M.
18 to 366	14 to 560	$11\frac{1}{2}$ to 557



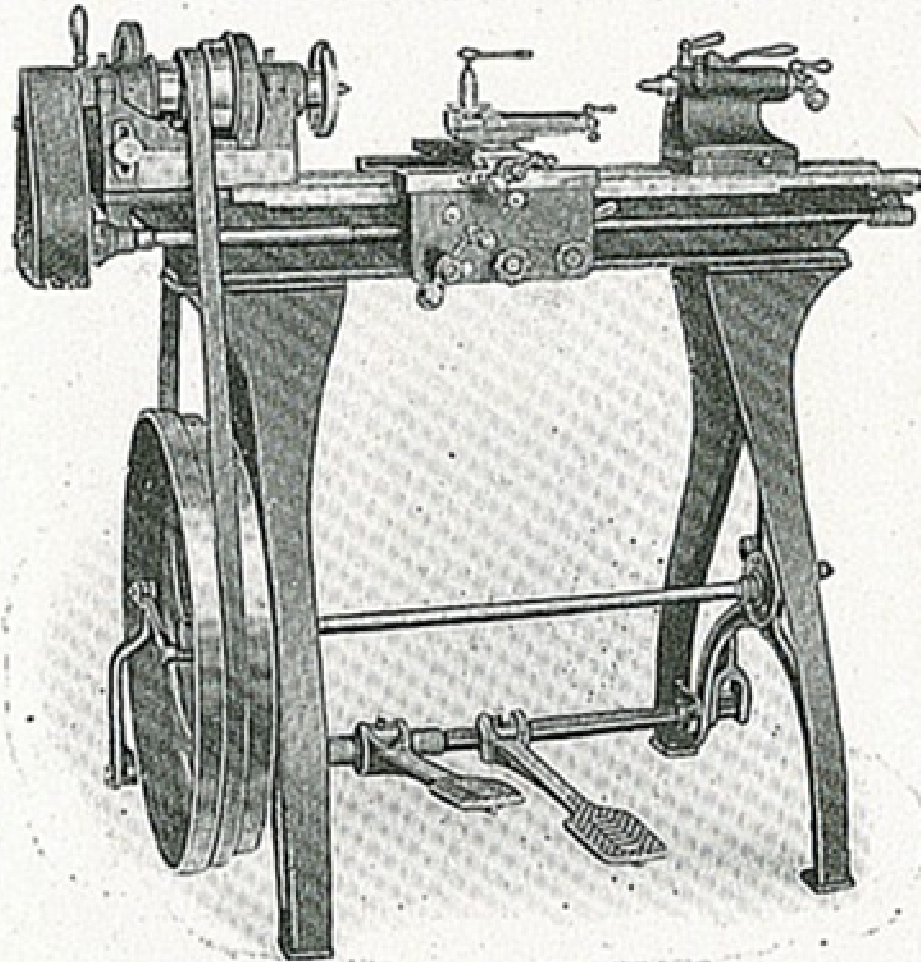
9 and 11-Inch "Star" Screw-Cutting Engine Lathes



Style K, 9" swing, 4 ft. bed, has compound rest, bench legs and countershaft.

11" lathes are also mounted on bench legs, see specifications, page 23, but 12" and 13" lathes are not furnished in this style.

9 and 11-Inch
"Star" Screw-Cutting Engine Lathes



Style P, 9" swing, 4 ft. bed, has compound rest, floor legs
and foot power.
11" lathes can be furnished with foot power but 13" lathes can not.

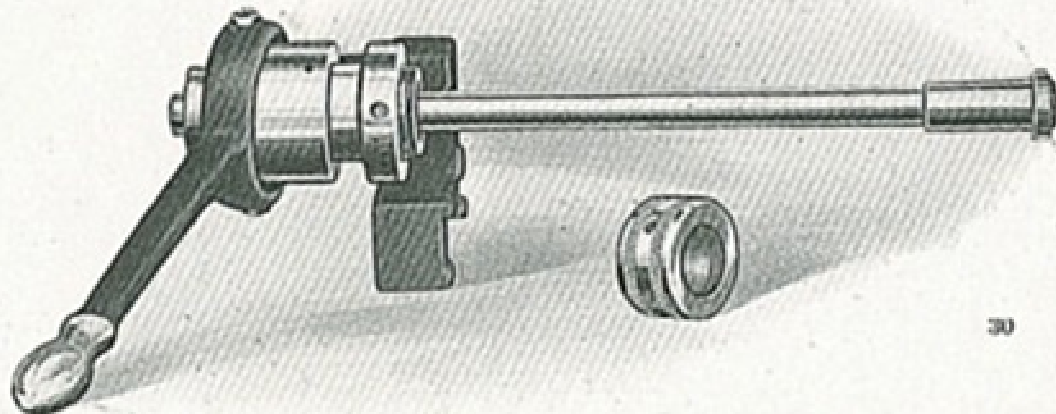
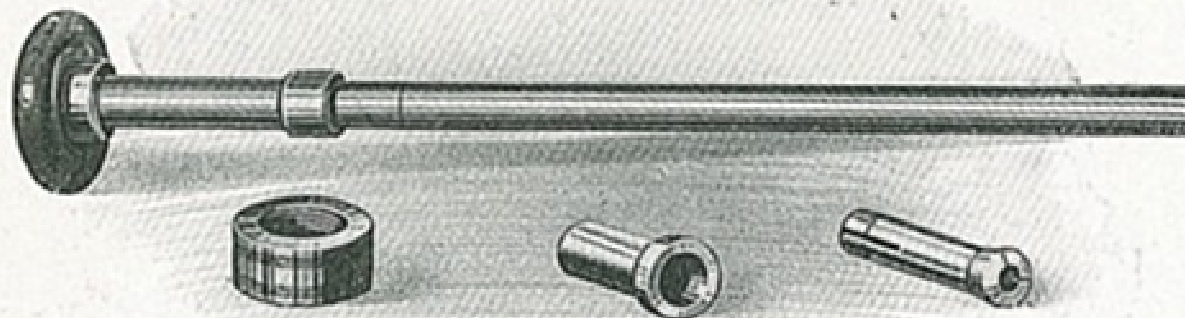
Foot-Power. Furnished in place of counter-shaft when desired. (For 9" and 11" "Star" Lathes only). Consisting of double tread with walking motion. The treadles are adjustable and work alternately, being connected at opposite ends of the driving-wheel shaft, producing a strong, positive and continuous power. Can be started or stopped instantly and may be operated with both feet, (sitting), or one foot, (standing), as desired. This arrangement overcomes the objection of operator being confined to a single position. The 13" "Star" Lathes are not furnished with foot power.



Attachments for 9, 11, 12 and 13-Inch "Star" Screw-Cutting Engine Lathes

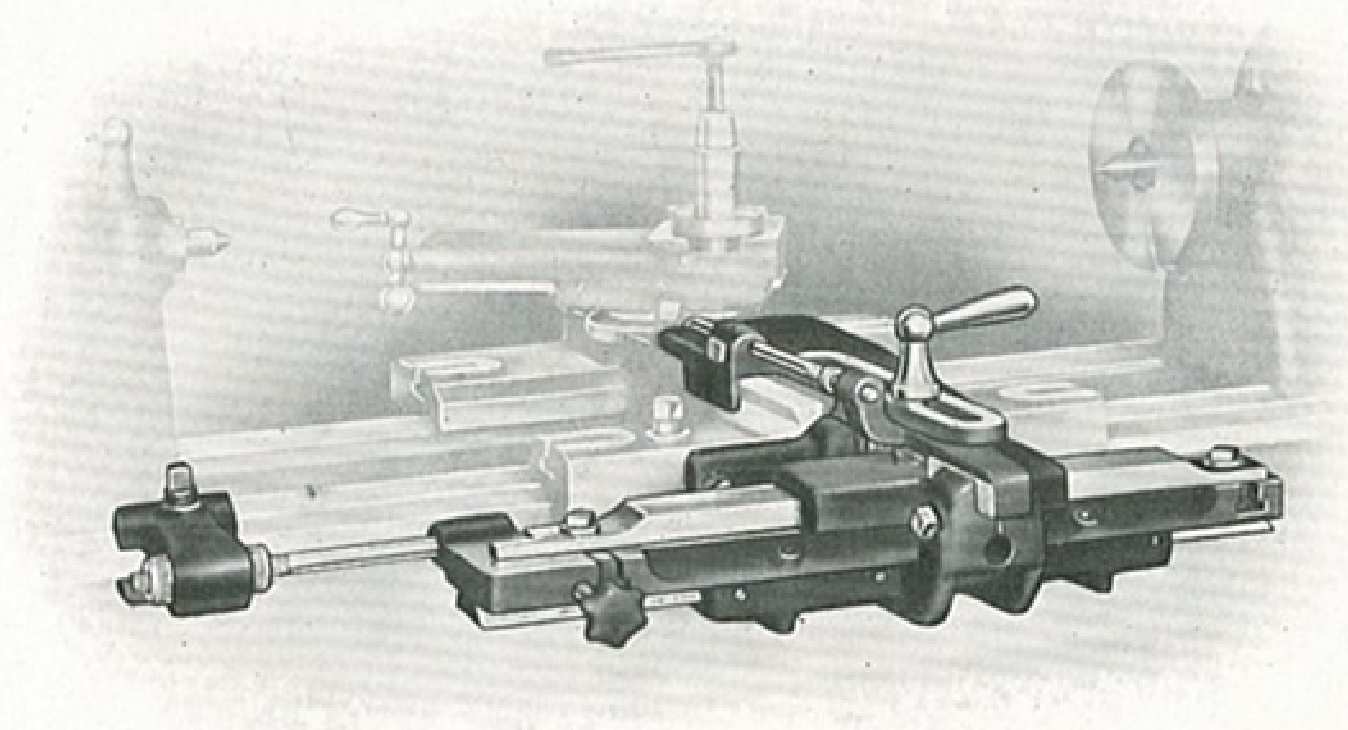
Draw-in Chuck Attachment for 9", 11", 12" and 13" "Star" Lathes. The regular equipment consists of draw-in tube with handle attached, bushing for collets, guard for nose of spindle and one round split collet. The bushing and collets are made from tool steel, hardened and ground.

No. 2 Split collets $\frac{1}{16}$ " to $\frac{9}{16}$ " may be used on 9" and 11" "Star" Lathes also collets $\frac{37}{64}$ " to $\frac{5}{8}$ " counterbored allowing work to be inserted 2" from front end. 12" and 13" "Star" Lathes will take No. 3 collets $\frac{1}{16}$ " to $\frac{3}{4}$ ". Collets with square and hexagon holes and step chucks can be furnished, prices given on application, stating sizes wanted.



Hand Lever Draw-in Chuck For 9", 11" and 13" "Star" Lathes and 12" Quick Change Lathe. This attachment is especially useful on small work. The operator by the use of hand lever can release the work or tighten the chucks without stopping the lathe. The same collet equipment is used as that furnished with the regular draw-in chuck attachment.

Attachments for 9, 11, 12 and 13-Inch
"Star" Screw-Cutting Engine Lathes



Taper Attachment for 9", 11", 12" and 13" "Star" Lathes, is secured to back of carriage, travels with it, is always in position ready for use and is available full length of bed; can be used with plain and compound rests. The swivel guide bar is graduated in degrees and inches, facilitating quick and accurate adjustments from 0 to 3 inches taper per foot and 0 to 7 degrees each way

from center line. The cross-feed stop may be used on taper work.

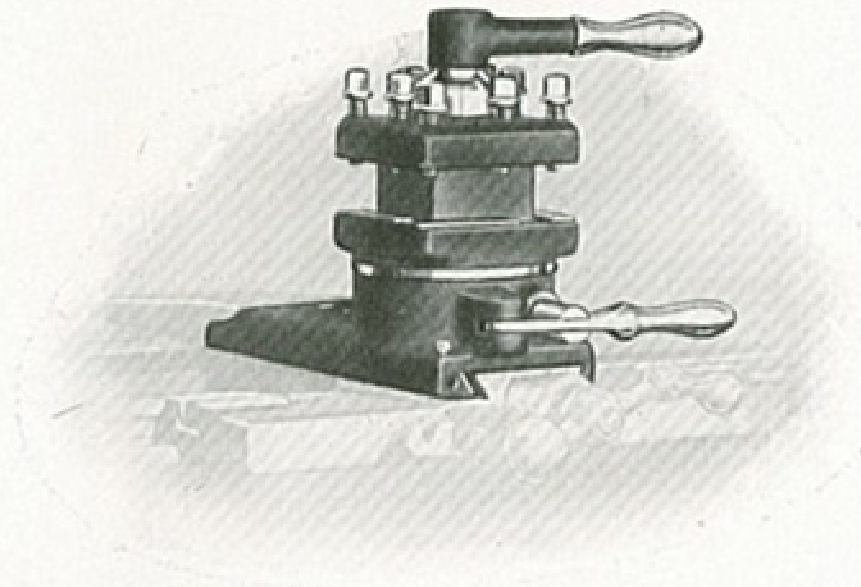
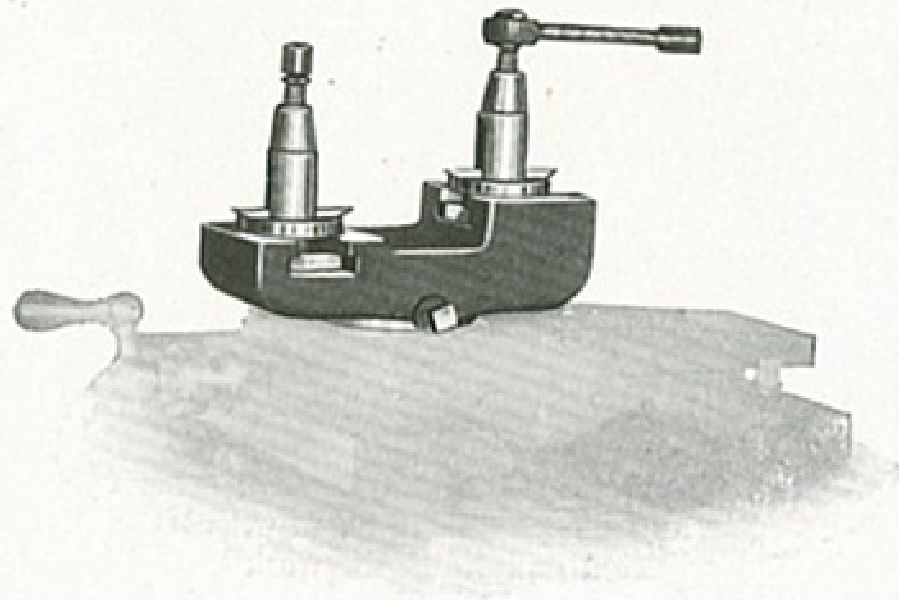
All carriages are fitted so that taper attachment may be ordered at any time; when ordered with lathe it will be properly adjusted and ready for work before leaving the factory.



Attachments for 9, 11, 12 and 13-Inch "Star" Screw-Cutting Engine Lathes

Turret Tool-Post (for 9", 11", 13" "Star," and 12" Quick Change Lathes). Is used on cross slide of lathe and easily interchanges with plain and compound rests, has binding screws for four regular lathe tools and provision is made for adjusting the tools to proper height. This attachment may be ordered with lathe or at any later time.

	9" <i>Lathe</i>	11" <i>Lathe</i>	12" & 13" <i>Lathe</i>
Size of Lathe Tools	$\frac{3}{8}'' \times \frac{3}{4}''$	$\frac{1}{2}'' \times \frac{3}{8}''$	$\frac{1}{2}'' \times 1''$



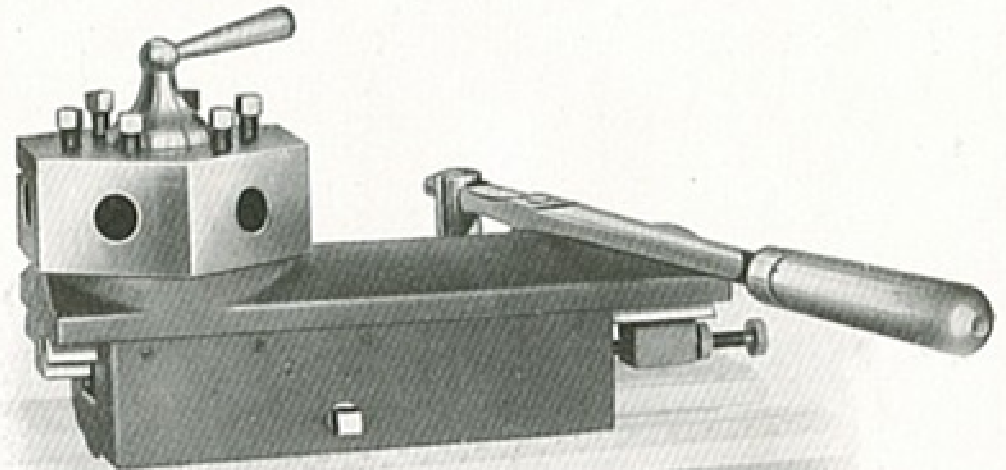
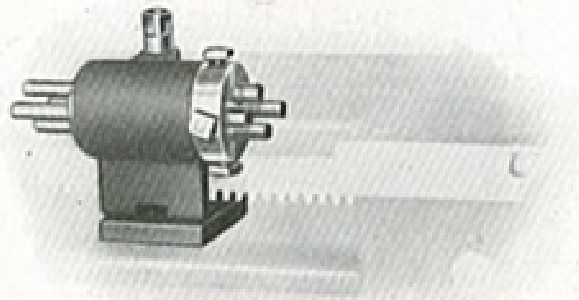
Double Tool Block or cutting off and forming slide (for 9", 11", 13" "Star," also 12" Quick Change Lathes). Attaches to cross slide and easily interchanges with plain and compound rest, is furnished with one tool-post only as the regular tool-post sent with lathe may be used. The tool in rear tool-post is used inverted.

Attachments for 9, 11, 12 and 13-Inch “Star” Screw-Cutting Engine Lathes



Automatic Turret Attachment (For 9," 11", 13" "Star" and 12" Quick Change Lathes). Hexagon Turret Head revolves automatically and is quick in action. The face may be tapped for bolting on special tools. A hole through turret post permits bar to run through head when machining long pieces, an adjustable stop is provided at rear end of slide. Hand wheel is furnished on 12" and 13" sizes in place of feed lever. This attachment may be ordered with lathe or at any later time.

	9" <i>Lathe</i>	11" <i>Lathe</i>	12" & 13" <i>Lathe</i>
Diameter of turret.....	5¼"	6¼"	7¾"
Face of turret.....	3"x2¼"	3½"x2¾"	4½"x3"
Diameter of holes in turret.....	¾"	1"	1½"
Center of hole to top of slide.....	1⅝"	1¾"	2"
Travel of slide.....	3¼"	5¼"	6¾"



Carriage Stop with four adjustable rods. (For 9", 11", 13" "Star," and 12" Quick Change Lathes). Is clamped to bed, has revolving cylinder with four adjustable stop rods, the cylinder is revolved by hand and held in position by detent spring and ball. This attachment is a great time saver when facing and turning duplicate pieces; it insures uniform dimensions, without measuring of each operation.

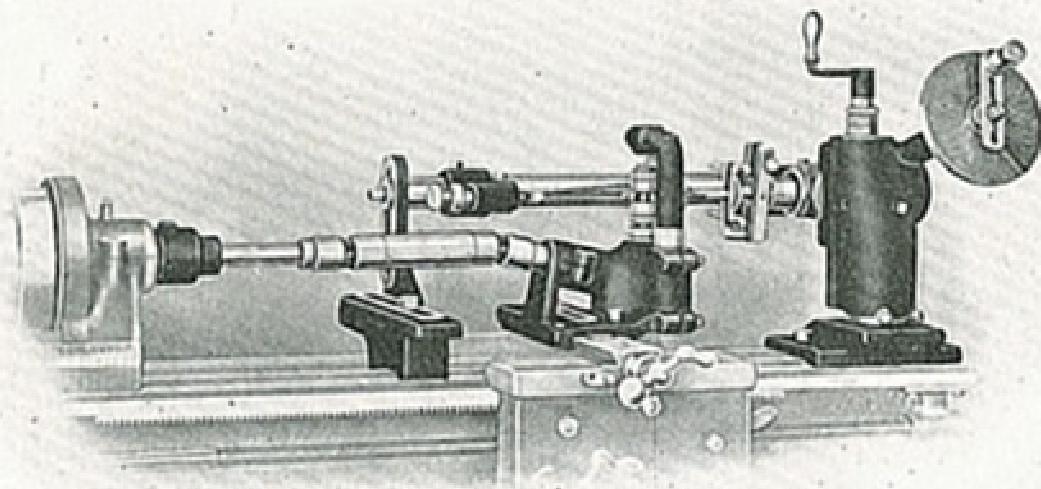
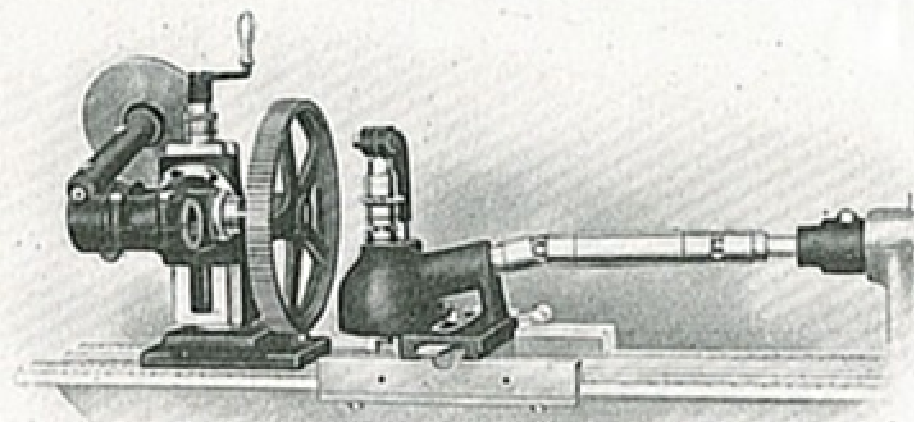


"Star" Milling and Gear-Cutting Attachment

For 9", 11", 13" "Star" Lathes and
12" Quick Change Lathes

This attachment (Patented) can be conveniently secured to lathe and is suitable for a wide range of work, including all kinds of milling operations, except spiral cuts.

The cutter block is mounted on lathe carriage and is fed in either direction, longitudinal or cross, by hand or automatic power feed of lathe. The cutter spindle may be rotated in either direction, receiving power from driving collar, (clamped on head spindle of lathe), a sliding shaft, universal joints and bevel gears. The cutter spindle has a Morse taper hole and screw for holding and dis-



charging cutter arbor which is supported on outer end by an overhanging arm. An arbor $\frac{7}{8}$ " diam. is regularly furnished, and arbors $\frac{5}{8}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ " and 1" diam. may be furnished at extra price.

The universal head is clamped to inside ways of lathe bed, base is offset and reversible to accommodate large and small work; the vertical column carries a slide on which may be mounted the dividing head and vise; a graduated collar on feed screw reads in thousandths of an inch; vertical column swivels on base; dividing head and vise swivel on vertical slide; graduations 180 degrees facilitate quick and accurate adjustment to any desired angle. The index plate has 18 rows of holes, and index is furnished giving all divisions from 1 to 50 and nearly all up to 400.

"Star" Milling and Gear-Cutting Attachment

For 9", 11", 13" "Star" Lathes and 12" Quick Change Lathes



The index stem swings on end of bearing for indexing spindle, is graduated and may be adjusted for side cut on bevel gear teeth, etc. The overhanging bar carries an adjustable tail center, the outer end of bar has an adjustable support insuring rigidity on long work. The indexing spindle has a large hole for draw-in chuck which can be furnished to use regular collets on the dividing head and spindle nose is a duplicate of headstock spindle so that chucks, centers, etc., are interchangeable. The point center has face plate for driving dog on work between centers.

The vertical slide column with vise (or dividing head) may be attached to cross slide of carriage and the milling cutter used in headstock spindle for surface milling, cutting keyways, milling ends of shafts, etc. The vertical slide column and vise, (see Fig. 104), are included with complete attachment but sold separately when desired.

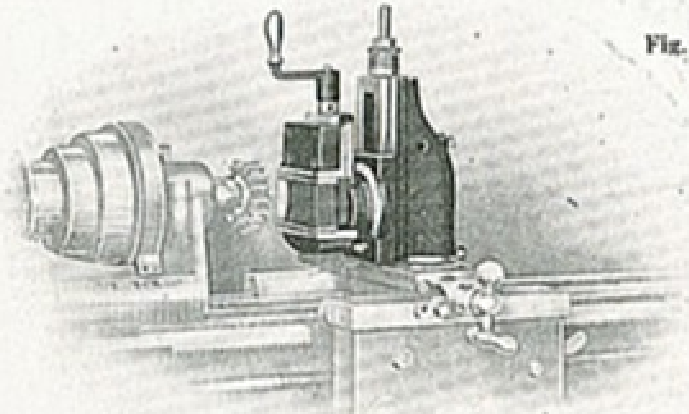
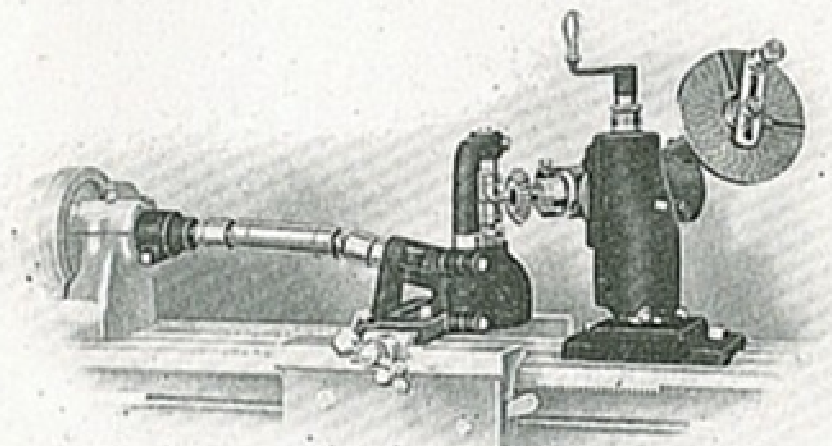


Fig. 101



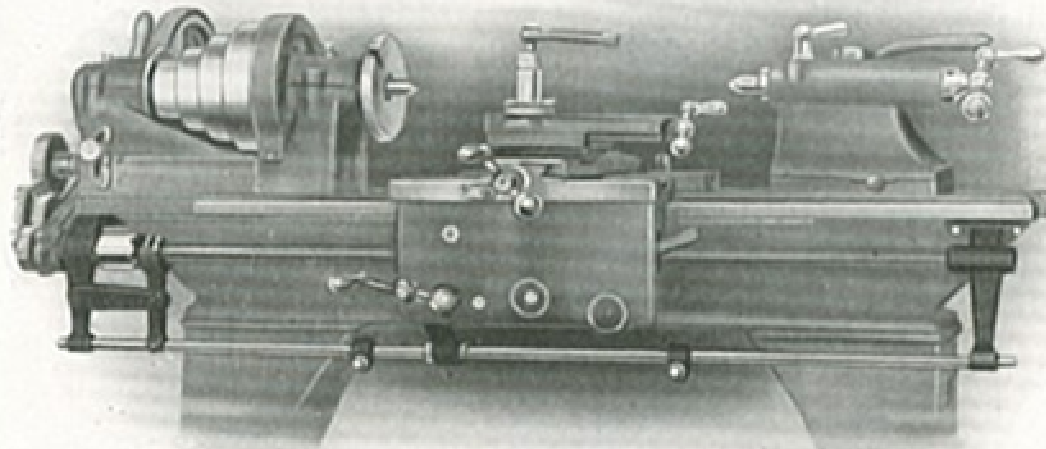
Standard milling cutters may be used, but we do not furnish cutters.

Swing of Lathe.....	9"	11"	12" & 13"
Longitudinal feed.....	7"	8"	11"
Cross feed.....	5"	6"	8"
Vertical feed.....	3 1/4"	4 1/4"	5 1/4"
Swing on centers of overhanging arm....	4 1/2"	4 1/2"	6 1/4"
Distance between centers of overhanging arm.....	11"	13"	15"
Diam. largest gear can be cut.....	12"	13 1/4"	15"
Distance between vise jaws.....	2"	2 1/4"	3 1/2"
Size of vise jaws.....	3/4" x 3 3/4"	1" x 4 1/4"	1 1/4" x 4 3/4"
Diam. of hole in index spindle.....	1 1/4"	1"	1 1/4"
Taper of center for index spindle.....	No. 2 Morse	No. 2 Morse	No. 3 Morse
Taper of shank of cutter arbor.....	No. 2 Morse	No. 2 Morse	No. 3 Morse
Diam. of cutter arbor (regular).....	3/4"	1"	1 1/4"
Diam. of cutter arbors (extra).....	5/8"-3/4"-1"	5/8"-3/4"-1"	5/8"-3/4"-1"
Space between arbor shoulder and nut ..	1 3/4"	1 3/4"	2 1/4"

*Longitudinal feed on 11" x 4 ft. lathe is 5"; on 12" x 5 ft. and 13" x 5 ft. lathe is 7 1/4".



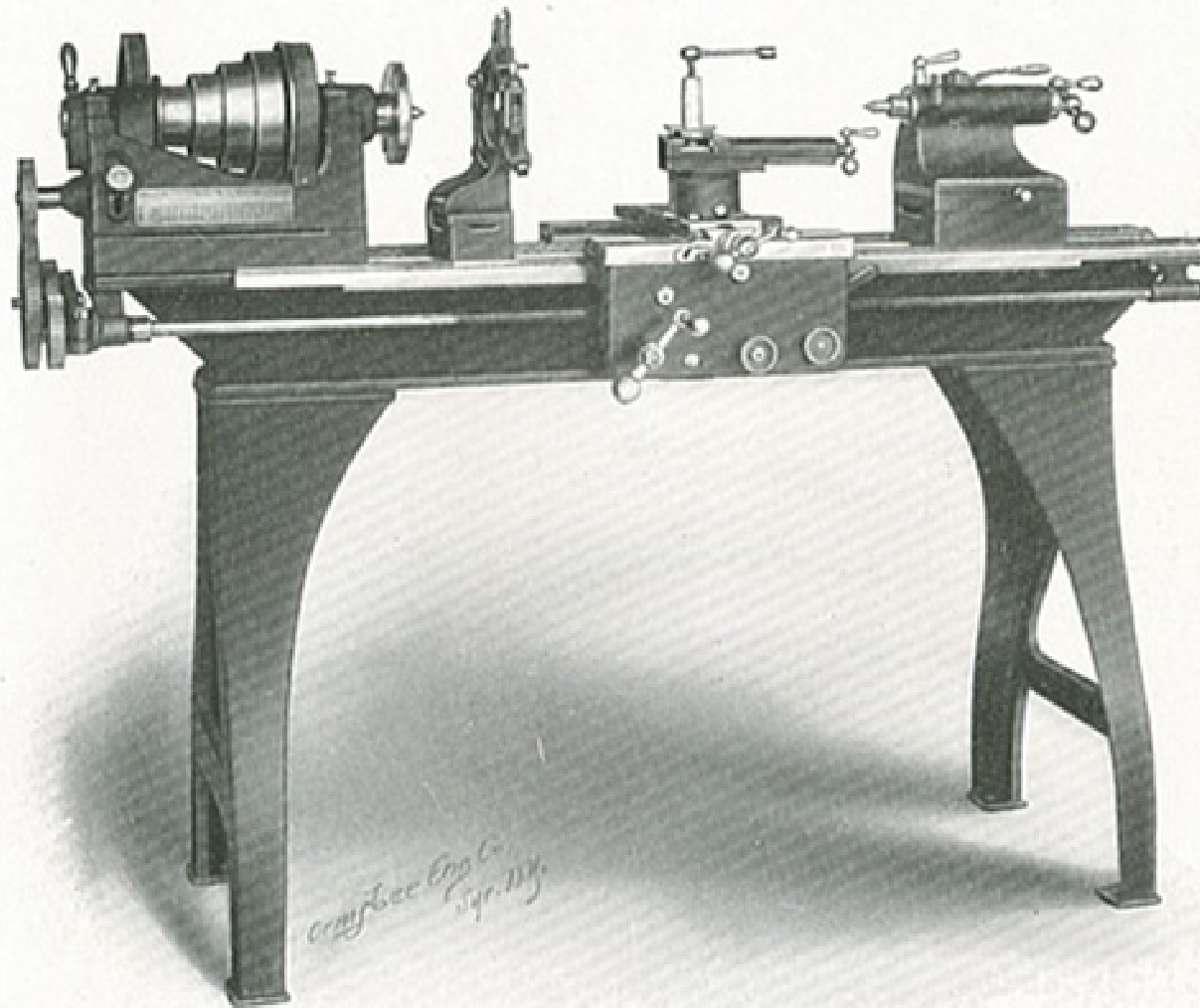
Attachments for 9, 11 and 13-Inch “Star” Screw-Cutting Engine Lathes



Automatic Carriage Stop Attachment for 9", 11" and 13" "Star" Lathes may be used in connection with the power longitudinal feed, automatically stopping the carriage when operating in either direction by disengaging

a positive clutch. It has a much wider range of usefulness than other makes, which operate in one direction only. This attachment should be put on lathe before leaving the factory.

Attachments for 9, 11 and 13-Inch
"Star" Screw-Cutting Engine Lathes



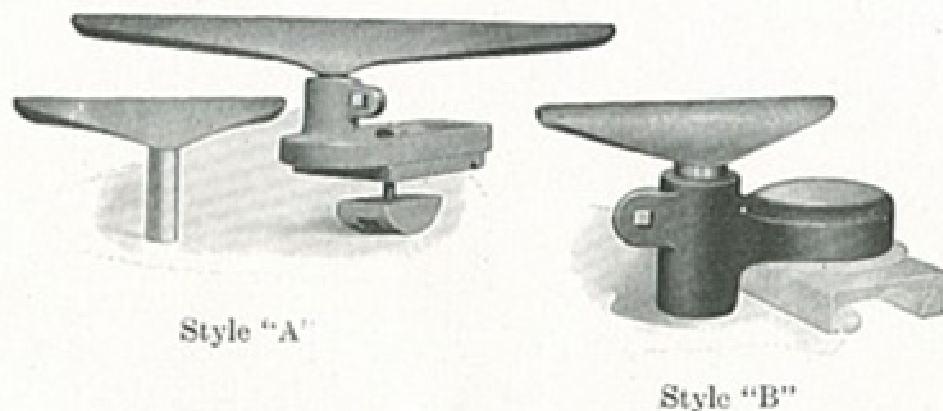
Blocking. (For 9", 11" and 13" "Star" Lathes). For raising head and tail stocks, plain, compound and center rests to increase the swing of lathe. A lathe blocked for large work has every working advantage of the gap lathe, with the additional advantage of increased swing the full length of bed and of being a standard machine when blocking is removed. The blocking can be easily and conveniently put on or removed from these small lathes. Blocking should be fitted to lathe at the factory.

Blocking 2 inches high for 9" and 11" Lathes increases swing 4 inches.

Blocking 3 inches high for 13" Lathe increases swing 6 inches.

2' Blocking on "Star" Lathe (11" x 5 ft.) increasing the swing 4 inches, showing Gear Guard removed.

"Star" Hand-Rests For Wood Turning



Style "A"

Style "B"

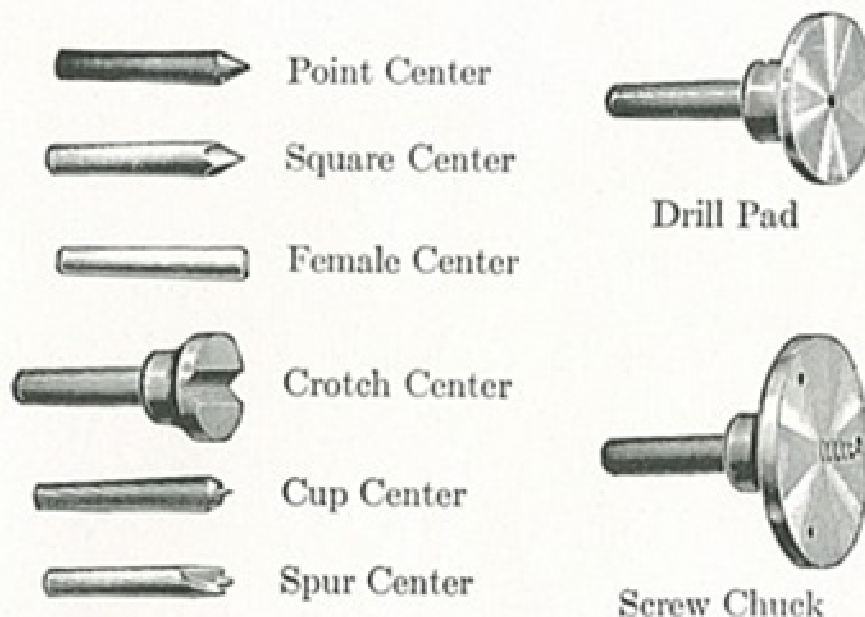
While the 9-inch and 11-inch "Star" Engine Lathes are especially designed for working metals, they can be speeded high enough for wood-turning by using a 3 speed countershaft. To do this work successfully a hand-rest is desirable. We furnish either style as shown, complete with one each short and long T-Rests.

Style "A" is clamped to the bed and Style "B" is secured to the cross-slide in place of tool-block.

We can also furnish Style "B" Hand-Rest for 12" and 13" Lathes.

Centers, Drill Pads and Screw Chucks

For 9, 11, 12 and 13-inch "Star" Engine Lathes.



Point Center

Square Center

Female Center

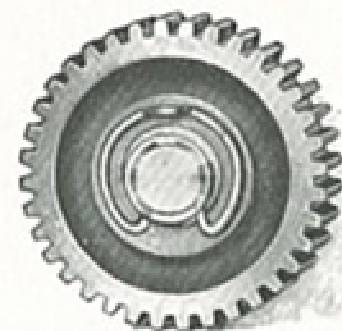
Crotch Center

Cup Center

Spur Center

Drill Pad

Screw Chuck



Split Spring Washers for holding change gears.

Code Words for Attachments On "Star" Lathes



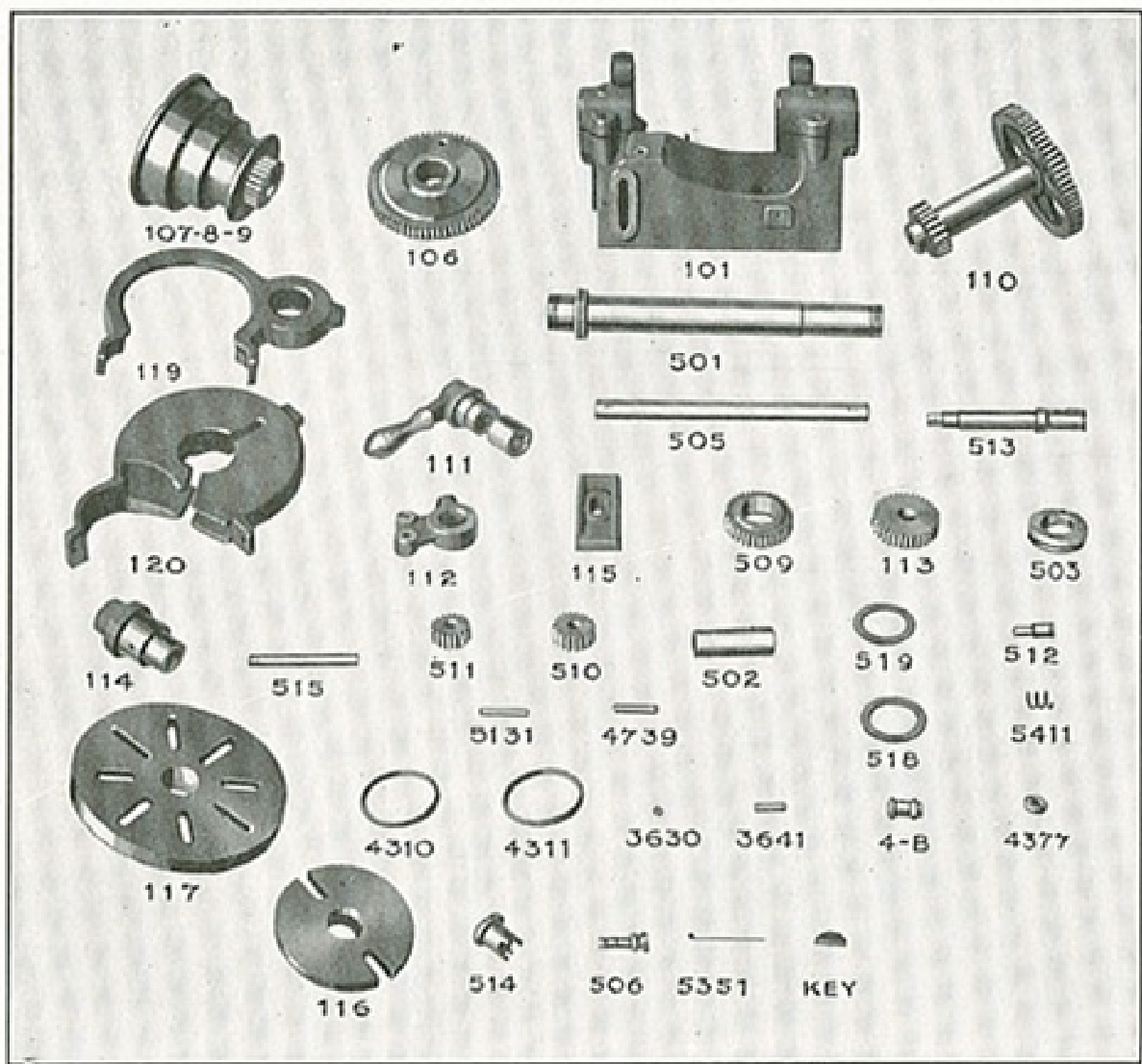
Attachments	9"	11"	13"	17"
Motor Drive (not including motor).....	Bedew	Agony	Calyx	Coomb
Transposing Gears (for cutting metric threads).....	Beech	Agrin	Camis	Color
Thread Chasing Dial.....	Beefy	Abold	Campa	Colly
European Tool Post.....	Befog	Agush	Caped	Caned
Blocking.....	Begren	Ahead	Canal	
Taper Attachment.....	Besah	Ahull	Canpo	Corset
Draw-in Chuck (including one split collet).....	Belay	Aider	Candy	Conch
Draw-in Chuck with Hand Lever with one collet.....	Birth	Amber	Canon	Congo
Draw-in Tube (only) for milling attachment.....	Belle	Aimer	Canes	Canes
Split Collets, round.....	Biset	Amice	Chape	Chape
Split Collets, square.....	Bland	Amort	Chard	Chard
Split Collets, hexagon.....	Blast	Amour	Chasm	Chasm
Double-Tool Block (with one tool post).....	Bandy	Aisle	Capel	Capel
Turret Tool Post.....	Berbe	Aitoh	Carac	Carac
Automatic Turret on bed.....	Besot	Aknce	Casal	Casal
Oil Pump and Piping.....	Betal	Aknow	Cases	Copal
Carriage Stop (4 points adjustable).....	Beton	Aback	Cater	Cater
Automatic Carriage Stop.....	Bever	Aiban	Caulk	
Milling and Gear Cutting Attachment, complete.....	Bewig	Aicos	Cavil	Cavil
Cutter Arbor for Milling Attachment.....	Bisac	Ampul	Chita	
Vertical Feed Column and Vise.....	Bewit	Aibee	Cawed	Cawed
Hand Rest style A.....	Berel	Alday		
Hand Rest style B.....	Bhang	Alier		
Point Center.....	Bibbe	Alrak	Ceres	Ceres
Square Center.....	Bicbo	Alfet	Cetio	Cetio
Female Center.....	Biddy	Algal	Chuck	Chuck
Crotch Center.....	Bidet	Alien	Chain	Chain
Cup Center.....	Bield	Alley	Chafe	Chafe
Spur Center.....	Bigam	Alman	Chair	Chair
Screw Chuck.....	Bijou	Aloft	Champ	Champ
Drill Pad.....	Bibo	Alpha	Chant	Chant
Compound Rest.....	Binal	Altar	Camel	Costa
Countershaft with 2 friction pulleys.....	Biped	Alure	Cedar	Corve
Countershaft with 3 friction pulleys.....	Binary	Altos	Cento	
Chuck Face Plates (semi-finished, drilled, tapped and hub faced true).....	Bireh	Alway	Caxon	Coral
Plain Rest.....	Bison	Awend	Ceryl	Cowry
Fitting Chuck with face plate to lathe.....				
Fitting Drill Chuck with taper plug to lathe.....				
Revolving Attachment.....				



"Star" Lathe Parts List

Headstock Group

- 101—Headstock Frame
- 501—Head Spindle
- 502—Centre Bushing
- 503—Spindle Thrust Nut
- 107-8-9—Cone Pulley, Flange and Gear
- 111—Back Gear Shaft Lever (2 pieces)
- 505—Back Gear Shaft
- 112—Reverse Gear Yoke
- 115—Headstock Binder Plate
- 119—Head Gear Guard
- 120—Back Gear Guard
- 106—Head Gear
- 110—Back Gear
- 509—Spindle Feed Gear
- 510—Reverse Gear (large)
- 511—Reverse Gear (small)
- 113—Feed Stud Gear
- 518—Front Bearing Fibre Washer $1\frac{1}{2}$ I. D.
- 519—Back Bearing Fibre Washer $1\frac{1}{8}$ I. D.
- 506—Head Gear Pull Pin
- 514—Reverse Yoke Knob
- 515—Reverse Yoke Knob Stud
- 4377—Reverse Yoke Knob Nut
- 512—Reverse Gear Stud
- 513—Feed Stud
- 114—Feed Stud Bushing
- 116—Small Face Plate
- 117—Large Face Plate
- 4739—Pin for Cone and Cone Gear
- 5131—Tumbler Gear Oil Tube
- 4311—Front Bearing Oil Ring
- 4310—Back Bearing Oil Ring
- 5351—Pull Pin Spring
- 5411—Reverse Knob Spring
- 3630—Spindle Thrust Collar Screw
- 3641—Reverse Tumbler Stop Screw
- $\frac{1}{2}$ x $\frac{1}{8}$ Woodruff Key
- $\frac{7}{8}$ x $\frac{1}{8}$ Woodruff Key
- 4-B—Oil Cup



NOTE—In ordering Repair Parts for "Star" Lathes always give Serial Number of Lathe on top of Bed, between the Ways, at Tailstock End.

“Star” Lathe Parts List

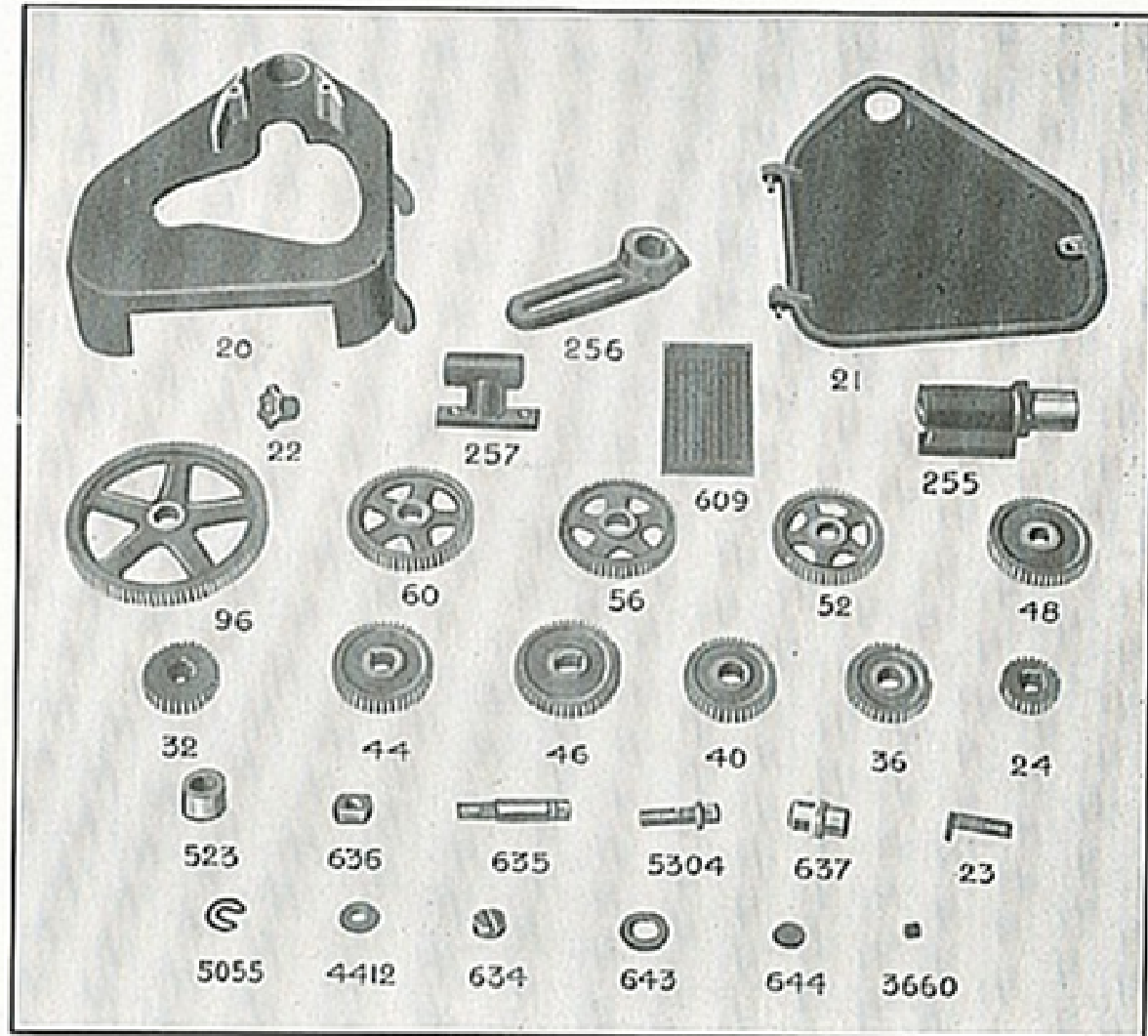
Change Gear Group



- 21—21-Tooth Change Gear
- 32—32-Tooth Change Gear
- 36—36-Tooth Change Gear
- 40—40-Tooth Change Gear
- 44—44-Tooth Change Gear
- 46—46-Tooth Change Gear
- 48—48-Tooth Change Gear
- 52—52-Tooth Change Gear
- 56—56-Tooth Change Gear
- 60—60-Tooth Change Gear
- 96—96-Tooth Change Gear
- 256—Change Gear Yoke
- 635—Inter. Feed Stud on Yoke
- 637—Compounding Sleeve for Stud
- 20—Guard Frame
- 21—Guard Door
- 22—Guard Door Knob
- 23—Guard Door Latch
- 609—Index Plate
- 636—Inter. Stud Nut
- 523—Feed Stud Collar
- 5055—Spring Washer
- 3660—Screw for Door Knob and Latch
- 5304—Change Gear Yoke Screw
- 4412—Inter. Stud Washer

Bed Group

- 255—Head Lead Screw Bracket
- 257—Tail Lead Screw Bracket
- 634—Lead Screw Thrust Screw
- 643—Fibre Washer for Lead Screw
- 644—Fibre Washer for Lead Screw Thrust

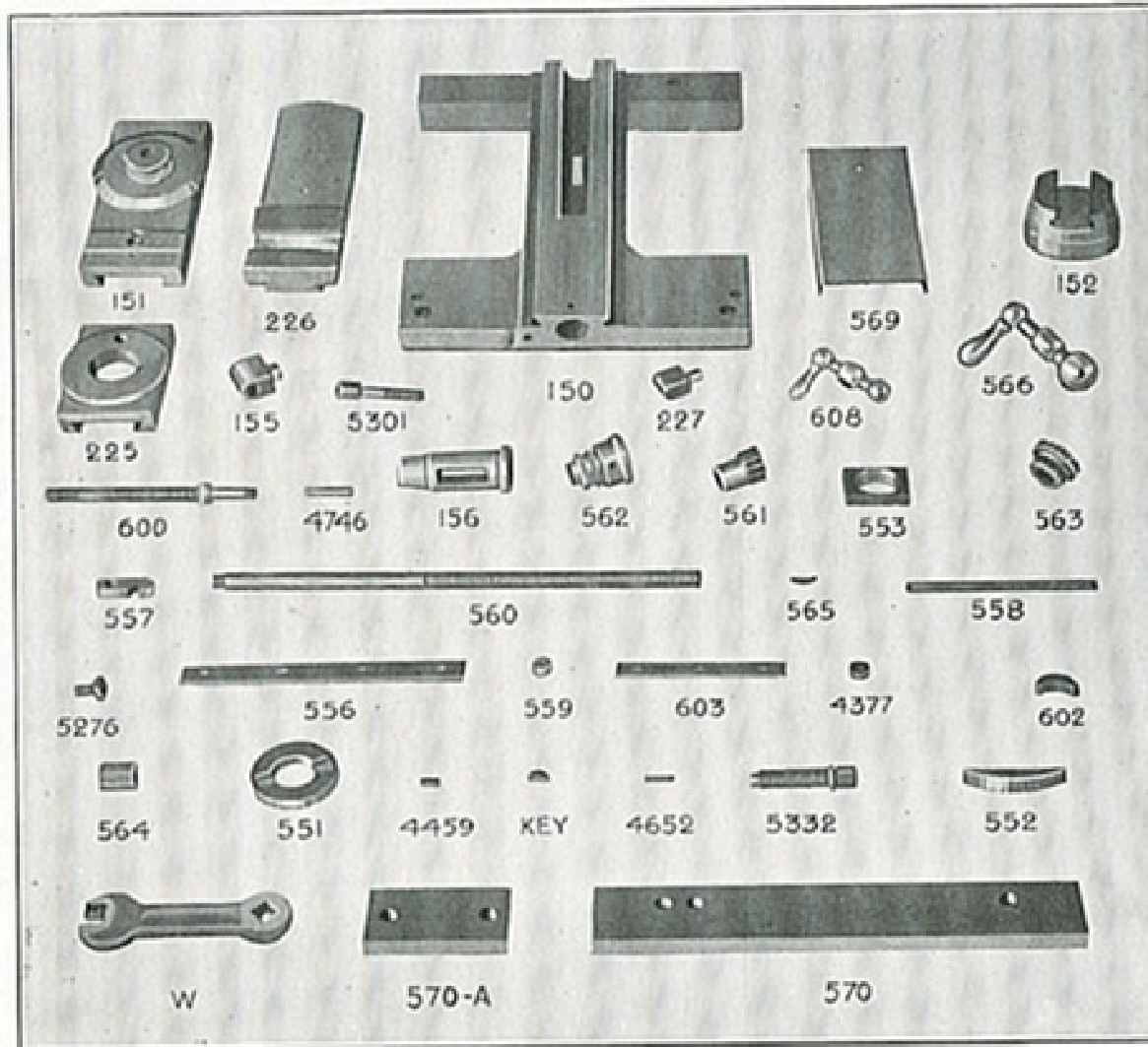


NOTE—In ordering Repair Parts for “Star” Lathes always give Serial Number of Lathe on top of Bed, between the Ways, at Tailstock End.



"Star" Lathe Parts List

Carriage Group



- 150—Saddle
- 570—Carriage Back Gib
- 151—Cross Slide Block
- 556—Cross Slide Block Gib
- 155—Cross Feed Nut
- 600—Cross Feed Screw
- 566—Cross Feed Screw Crank
- 562—Cross Feed Screw Bushing
- 563—Cross Feed Micrometer Collar
- 152—Tool Block
- 156—Tool Post
- 5332—Tool Post Screw
- 551—Tool Post Collar
- 552—Tool Post Shoe
- 553—Tool Post Square Washer
- W—Tool Post Wrench
- 557—Cross Feed Stop Latch
- 558—Cross Feed Stop Rod
- 569—Cross Feed Screw Guard
- 561—Cross Feed Screw Pinion
- 564—Micrometer Collar Bushing
- 4746—Dowel Pin Apron to Carriage
- 4652—Cross Feed Gear Pin
- 570A—Carriage Front Gib
- 4459—Cross Feed Crank Key
- 565—Micrometer Collar Spring
- 602—Tool Block Binder Key
- 559—Knurled Nut for Stop Rod
- 5276—Stop Rod Binder Screw
- 5301—Collar Screw to Bind Carriage

Compound Rest Group

- 226—Compound Rest Top
- 225—Compound Rest Base
- 227—Feed Screw Nut
- 603—Compound Rest Top Gib
- 566—Feed Screw Crank
- 600—Feed Screw
- 4377—Crank Feed Screw Nut.

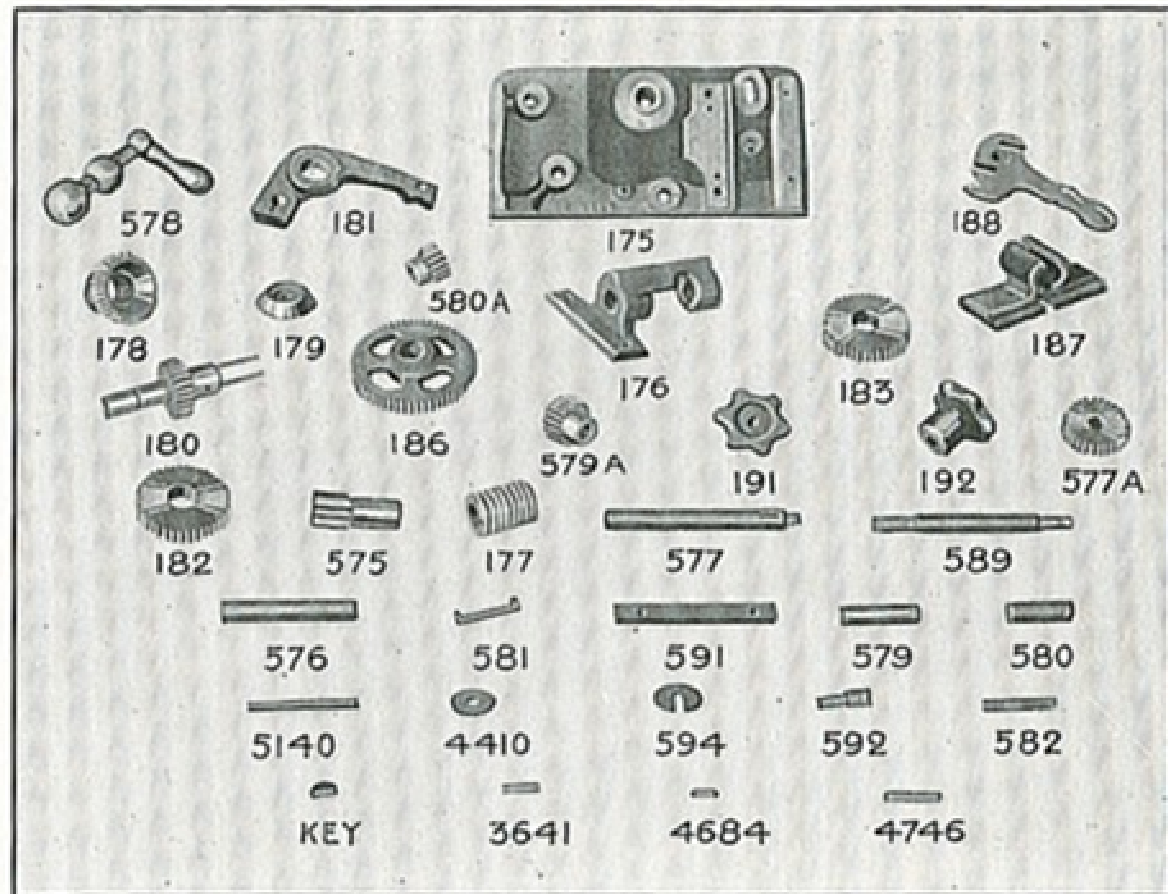
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"Star" Lathe Parts List

Apron Group



- 175—Apron Body
- 176—Worm Bracket
- 589—Friction Stem
- 191—Friction Stem Knob
- 179—Friction Disc
- 181—Cross Feed Tumbler
- 192—Change Feed Tumbler Knob
- 577—Long Feed Hand Crank Shaft
- 578—Long Feed Hand Crank
- 187—Split Nut
- 188—Split Nut Cam Lever
- 591—Split Nut Gib
- 177—Worm
- 178—Worm Gear
- 180—Friction Gear
- 182—Change Feed Tumbler Gear
- 183—Cross Feed Inter. Gear
- 186—Rack Gear
- 575—Rack Pinion
- 581—Key for Worm
- 582—Change Feed Tumbler Stud
- 580—Change Feed Tumbler Gear Stud
- 579—Cross Feed Inter. Gear Stud
- 576—Rack Pinion and Gear Stud
- 592—Cam Lever Stud
- 5140—Oil Tube for Worm Gear
- 4410—Cross Feed Binder Stud Washer
- 594—Slotted Nut for Worm Gear
- 3641—Screw for Split Nut
- 4684—Worm Bracket Pin
- 4746—Split Nut Pin
- 577A—Long Feed Crank Gear
- 579A—Cross Feed Inter. Pinion
- 580A—Cross Feed Tumbler Gear

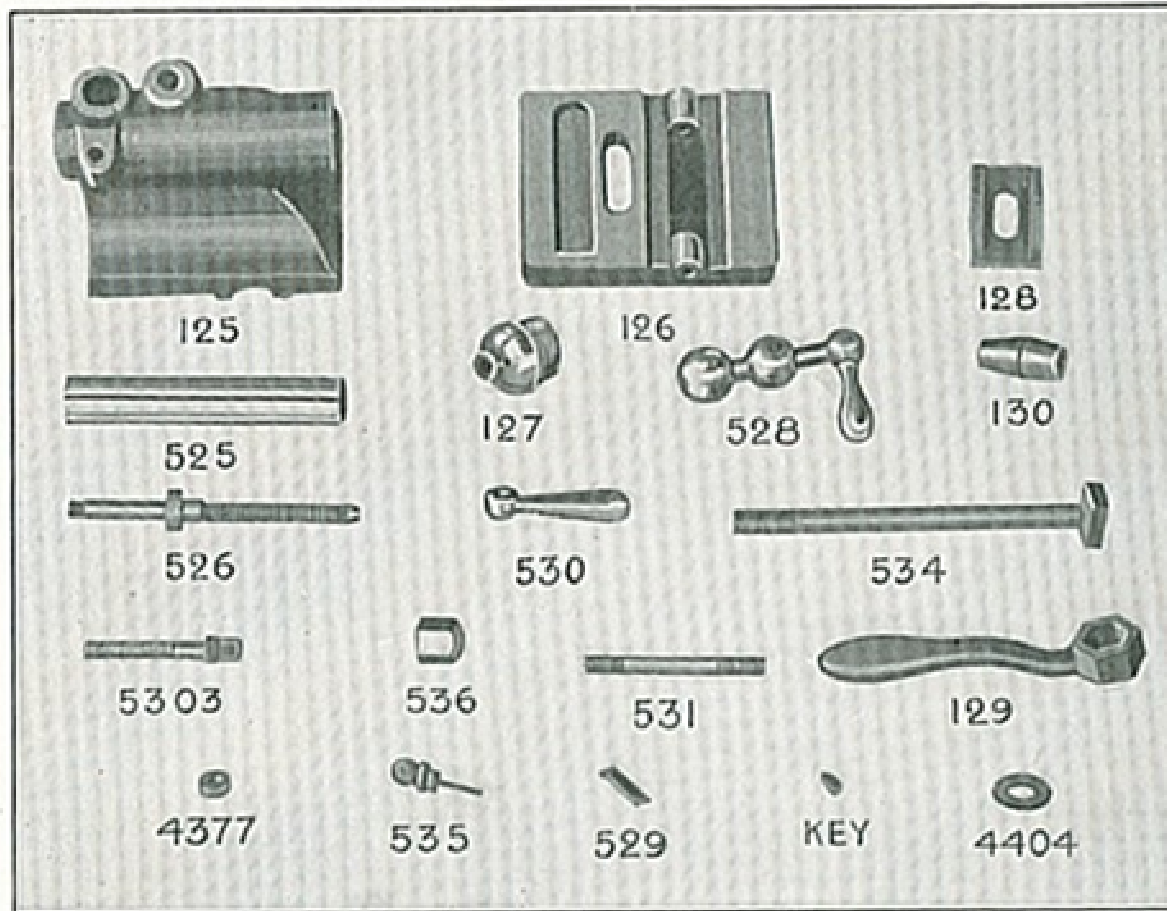


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“Star” Lathe Parts List

Tailstock Group



- 125—Tailstock Top Piece
- 126—Tailstock Bottom Piece
- 127—Feed Screw Bushing
- 128—Binder Plate
- 129—Binder Bolt Wrench
- 525—Tailstock Spindle
- 130—Spindle Binder Plug
- 530—Spindle Binder Lever
- 526—Spindle Feed Screw
- 528—Feed Screw Hand Crank
- 534—Bolt for Binding Tailstock to Bed
- 5303—Side Adjusting Screw
- 536—Binder Bolt Nut
- 531—Spindle Binder Stud
- 529—Spindle Key
- 4377—Feed Screw Hand Crank Nut
- 535—Knob in Oil Well
- 4404—Binder Bolt Washer
- Woodruff Key

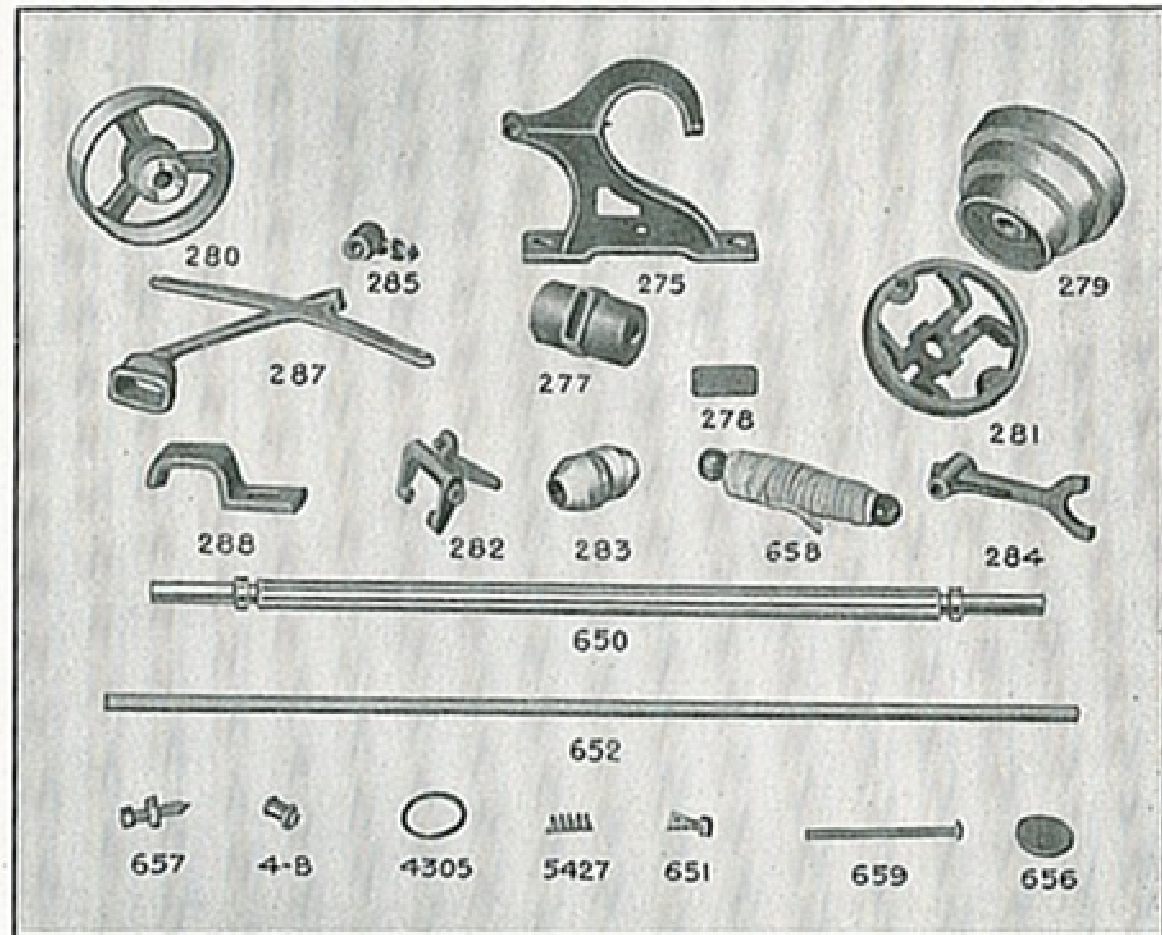
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"Star" Lathe Parts List

Countershaft Group



- 275—Hanger Frame only
- 277—Bearing Box
- 278—Bearing Box Cover
- 650—Shaft
- 279—Cone Pulley
- 280—Friction Pulley
- 281—Friction Disc
- 282—Friction Lever
- 283—Taper Friction Sleeve
- 284—Shipper Fork
- 287—Cone Belt Shifter Lever
- 288—Cone Belt Shifter Bracket
- 5427—Friction Lever Spring
- 652—Shipper Rod
- 658—Belt Shifter Handle and Cord
- 285—Shipper Rod Swivel
- 4305—Oil Ring
- 656—Dirt Guard
- 651—Friction Disc Taper Bolt
- 659—Friction Lever Hinge Rivet
- 657—Set Screw for Bearing in Hanger
- 4-B—Oil Cup



NOTE—In ordering Repair Parts for "Star" Lathes always give Serial Number of Lathe on top of Bed, between the Ways, at Tailstock End.



List of A Few Users of "Star" Lathes

THE UNITED STATES GOVERNMENT.....EVERYWHERE
 THE SPLITDORF MFG. Co.....NEWARK, N. J.
 PRECISION TOOL & INSTRUMENT Co.....NEW YORK CITY
 GRAY & DAVIS.....BOSTON, MASS.
 BROWN-LIPE-CHAPIN Co.....SYRACUSE, N. Y.
 CROWN OPTICAL Co.....ROCHESTER, N. Y.
 MEASUREGRAPH COMPANY.....ST. LOUIS, MO.
 BARTLETT-HAYWARD COMPANY.....BALTIMORE, MD.
 NIAGARA SEARCHLIGHT COMPANY.....NIAGARA FALLS, N. Y.
 GREENFIELD TAP & DIE Co.....GREENFIELD, MASS.
 GENERAL ELECTRIC Co.....SCHENECTADY, N. Y.
 PULLMAN FREE SCHOOL.....KENSINGTON, ILL.
 EASTMAN KODAK Co.....ROCHESTER, N. Y.
 WEST & DODGE.....BOSTON, MASS.
 EUGENE DIETZGEN Co.....CHICAGO, ILL.
 COLUMBIA FASTENER Co.....CHICAGO, ILL.
 GEO. S. JOHNSTON Co.....CHICAGO, ILL.
 YALE UNIVERSITY.....NEW HAVEN, CONN.
 MARSHFIELD LAMP & BRASS MFG. Co.....CHICAGO, ILL.
 CHAS. H. ELTING & Co.....CHICAGO, ILL.
 B. C. ALLEN MACHINERY Co.....CHICAGO, ILL.
 WM. E. SLAUGHTER Co.....CHICAGO, ILL.
 GRAND RAPIDS GRINDING MACHINE Co...GRAND RAPIDS, MICH.
 SIMPLEX ADDING MACHINE Co.....CHICAGO, ILL.

CAMDEN FORGE Co.....CAMDEN, N. J.
 CHICAGO CABINET LOCK Co.....CHICAGO, ILL.
 WISCONSIN ELECTRIC Co.....RACINE, WIS.
 THE MOTORCYCLE Co.....PHOENIX, ARIZ.
 Y. M. C. A. AUTO SCHOOL.....LOS ANGELES, CAL.
 PASS & SHEYMOUR Co.....SOLVAY, N. Y.
 THE NATIONAL TOY Co.....BOSTON, MASS.
 OSWALD ACETYLENE Co.....NEWARK, N. J.
 Y. M. C. A.....BROOKLYN, N. Y.
 EAGLE PENCIL Co.....NEW YORK CITY
 CO-OPERATIVE TOOL Co.....MERIDEN, CONN.
 LINEATIME MFG. Co.....ROCHESTER, N. Y.
 SYMINGTON MACHINE CORP.....ROCHESTER, N. Y.
 HILTON UNIVERSAL PUMP Co.....KEENE, N. H.
 STERLING MOTOR CAR Co.....BROCKTON, MASS.
 THE BLACK & DECKER MFG. Co.....BALTIMORE, MD.
 THE CLEVELAND DENTAL MFG. Co.....CLEVELAND, O.
 S. W. CARD MFG. Co.....MANSFIELD, MASS.
 CHICOPEE SCHOOL.....CHICOPEE FALLS, MASS.
 NEW ENGLAND WESTINGHOUSE Co.....CHICOPEE FALLS, MASS.
 AUBURN BUTTON WORKS.....AUBURN, N. Y.
 SAVAGE ARMS Co.....UTICA, N. Y.
 FAY & BOWEN.....GENEVA, N. Y.
 NEW PROCESS GEAR CORP.....SYRACUSE, N. Y.

List of A Few Users Of "Star" Lathes

Continued



UNION TWIST DRILL Co.....ATHOL, MASS.
 REMINGTON ARMS COMPANY.....UTICA, N. Y.
 FRANTZ PREMIER ELECTRIC Co.CLEVELAND, OHIO
 CHELSEA HIGH SCHOOL CHLSEA, MASS.
 C. G. CONN ELKHART, IND.
 ELKHART MFG. COMPANYELKHART, IND.
 MINNET & GERMAN.....ROCHESTER, N. Y.
 ONEIDA STEEL PULLEY Co.....ONEIDA, N. Y.
 CRANDAL, STONE & Co.....BINGHAMTON, N. Y.
 VOCATIONAL SCHOOL.....ELMIRA, N. Y.
 THE J. & B. MFG. Co.....PITTSFIELD, MASS.
 A. P. McCULLOCK MACH. Co.....BOSTON, MASS.
 M. J. WOHL & Co.....BROOKLYN, N. Y.
 MARCONI WIRELESS TELEGRAPH Co.....ROSELLE PARK, N. J.
 STATE TRADE SCHOOL.....SO. MANCHESTER, CONN.
 INDUSTRIAL MFG. Co.....CAMDEN, N. J.
 STERLING TOOL & MACHINE Co.....NEW YORK CITY
 PROTECTO SAFETY APPLIANCE Co.NEWARK, N. J.
 CROCKER-WHEELER Co.....AMPERE, N. J.
 CHAS. H. DITSON & Co.....NEW YORK CITY
 INDEPENDENT LAMP & WIRE Co.WEEHAWKEN, N. J.
 ELECTRICAL INDUSTRIES MFG. Co.....NEW YORK CITY
 DELONG HOOK & EYE Co.....PHILADELPHIA, PA.
 FRANKLIN MACHINE & TOOL Co.....SPRINGFIELD, MASS.

MONROE CALCULATING MACHINE Co.....ORANGE, N. J.
 BUTTER SERVING MACHINE Co.ROCHESTER, N. Y.
 TAYLOR INSTRUMENT Co.....ROCHESTER, N. Y.
 ALUMINUM CASTING Co.....DETROIT, MICH.
 AMERICAN LIGHTING Co.....CHICAGO, ILL.
 DOMINION CARTRIDGE Co.....LACHUTE, QUEBEC
 AUTOMATIC MACH. & TOOL Co.....NEW YORK CITY
 MARVEL ACCESSORIES MFG. Co.....CLEVELAND, O.
 ARNOLD ELECTRIC Co.....RACINE, WIS.
 INTERNATIONAL BURR CORP.WATERTOWN, N. Y.
 WOODSTOCK TYPEWRITER Co.....WOODSTOCK, ILL.
 CHAMPION IGNITION COMPANYFLINT, MICH.
 BOSCH MAGNETO Co.....CHICAGO, ILL.
 S. F. BOWSER & Co.....FORT WAYNE, IND.
 REMY ELECTRIC Co.....ANDERSON, IND.
 HAMILTON-BEACH MFG. COMPANY.....RACINE, WIS.
 WESTERN ELECTRIC Co.ST. LOUIS, MO.
 AMERICAN SEPARATOR Co.....BAINBRIDGE, N. Y.
 CAMERON ELECTRIC COMPANYANSONIA, CONN.
 SARGENT & COMPANY.....NEW HAVEN, CONN.
 LANE MFG. COMPANYWATERBURY, CONN.
 H. E. HARRIS ENGINEERING Co.BRIDGEPORT, CONN.
 GEOMETRIC TOOL COMPANY.....NEW HAVEN, CONN.
 MARLIN ARMS CORPORATION.....NEW HAVEN, CONN.
 WESTERN CARTRIDGE Co.....ALTON, ILL.

LATHES

QUALITY

PRECISION

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Falls Mfg. Co. Inc.



Seneca Falls
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