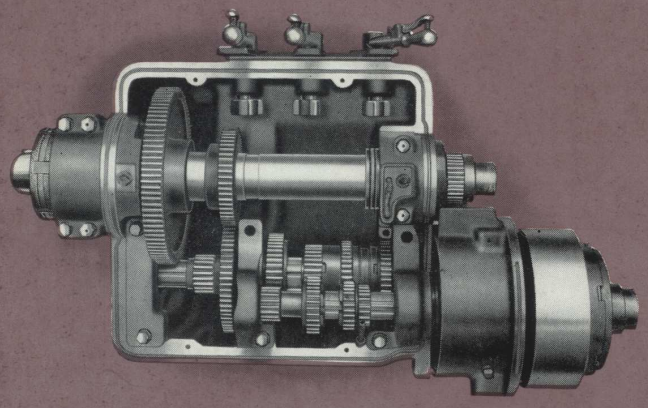
24 SPEEDS

18 TO 1080 R.P.M.

L&S LATHES

THE LODGE & SHIPLEY
MACHINE TOOL COMPANY

CINCINNATI - OHIO



HEADSTOCK

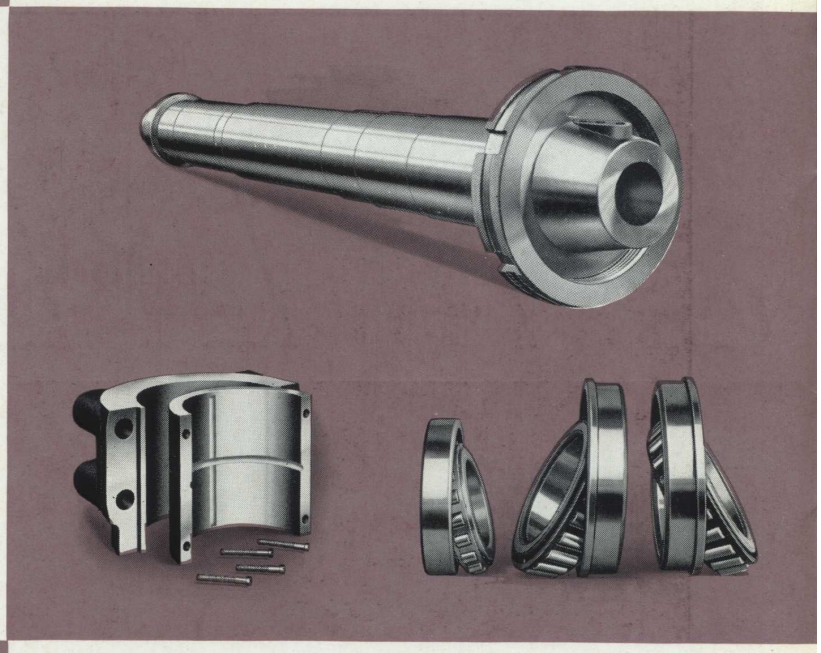
More speeds with fewer gears and operating mechanisms is the outstanding feature of the Selective Headstock. Only twelve gears with two shafts and sleeves are used for the full range of mechanical speed changes. Neither back gears nor high-speed spindle gears are engaged when not in use. There are no sliding or revolving gears, sleeves or clutches on the main spindle. These headstocks are "Designed For High-Speed Service."

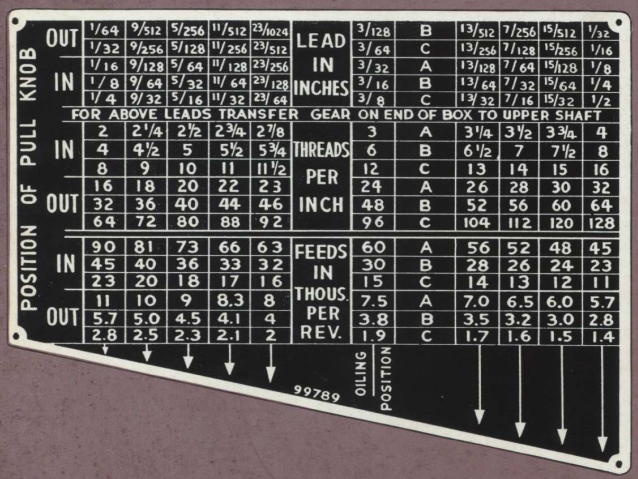
A 14″ lathe with Standard Selective Headstock has been operating continuously on test for the past several years in our shop on regular production work at spindle speeds from 750 to 1800 R.P.M. without any repairs, replacements or adjustments. Lodge & Shipley Lathes are "Built To Stand It."

SPINDLE AND BEARINGS

The headstock spindle is made from a one-piece forging of high-grade heat-treated alloy steel. The spindle nose and driving key are hardened to Rockwell 50 to 55 on the C scale. For perfect performance and extreme rigidity the spindle nose is the Key Drive Tapered Type, the nose that has won immediate acceptance by lathe users everywhere.

Spindle bearings are optional. The performance records established by White Metal Spindle Bearing and Roller Bearing Mountings in use on Lodge & Shipley lathes are such that either type of mounting is unhesitatingly recommended.





POSITION OF PULL KNOB													
OUT	1/64	9/512	5/256	11/512	23/1024	LEAD IN INCHES	3/128	B	13/512	7/256	15/512	1/32
	1/32	9/256	5/128	11/256	23/512		3/64	C	13/256	7/128	15/256	1/16
IN	1/16	9/128	5/64	11/128	23/256		3/32	A	13/128	7/64	15/128	1/8
	1/8	9/64	5/32	11/64	23/128		3/16	B	13/64	7/32	15/64	1/4
	1/4	9/32	5/16	11/32	23/64		3/8	C	13/32	7/16	15/32	1/2
FOR ABOVE LEADS TRANSFER GEAR ON END OF BOX TO UPPER SHAFT												
IN	2	2 1/4	2 1/2	2 3/4	2 7/8	THREADS PER INCH	3	A	3 1/4	3 1/2	3 3/4	4
	4	4 1/2	5	5 1/2	5 3/4		6	B	6 1/2	7	7 1/2	8
	8	9	10	11	11 1/2		12	C	13	14	15	16
OUT	16	18	20	22	23		24	A	26	28	30	32
	32	36	40	44	46		48	B	52	56	60	64
	64	72	80	88	92		96	C	104	112	120	128
IN	90	81	73	66	63	FEEDS IN THOUS. PER REV.	60	A	56	52	48	45
	45	40	36	33	32		30	B	28	26	24	23
	23	20	18	17	16		15	C	14	13	12	11
OUT	11	10	9	8.3	8		7.5	A	7.0	6.5	6.0	5.7
	5.7	5.0	4.5	4.1	4		3.8	B	3.5	3.2	3.0	2.8
	2.8	2.5	2.3	2.1	2		1.9	C	1.7	1.6	1.5	1.4

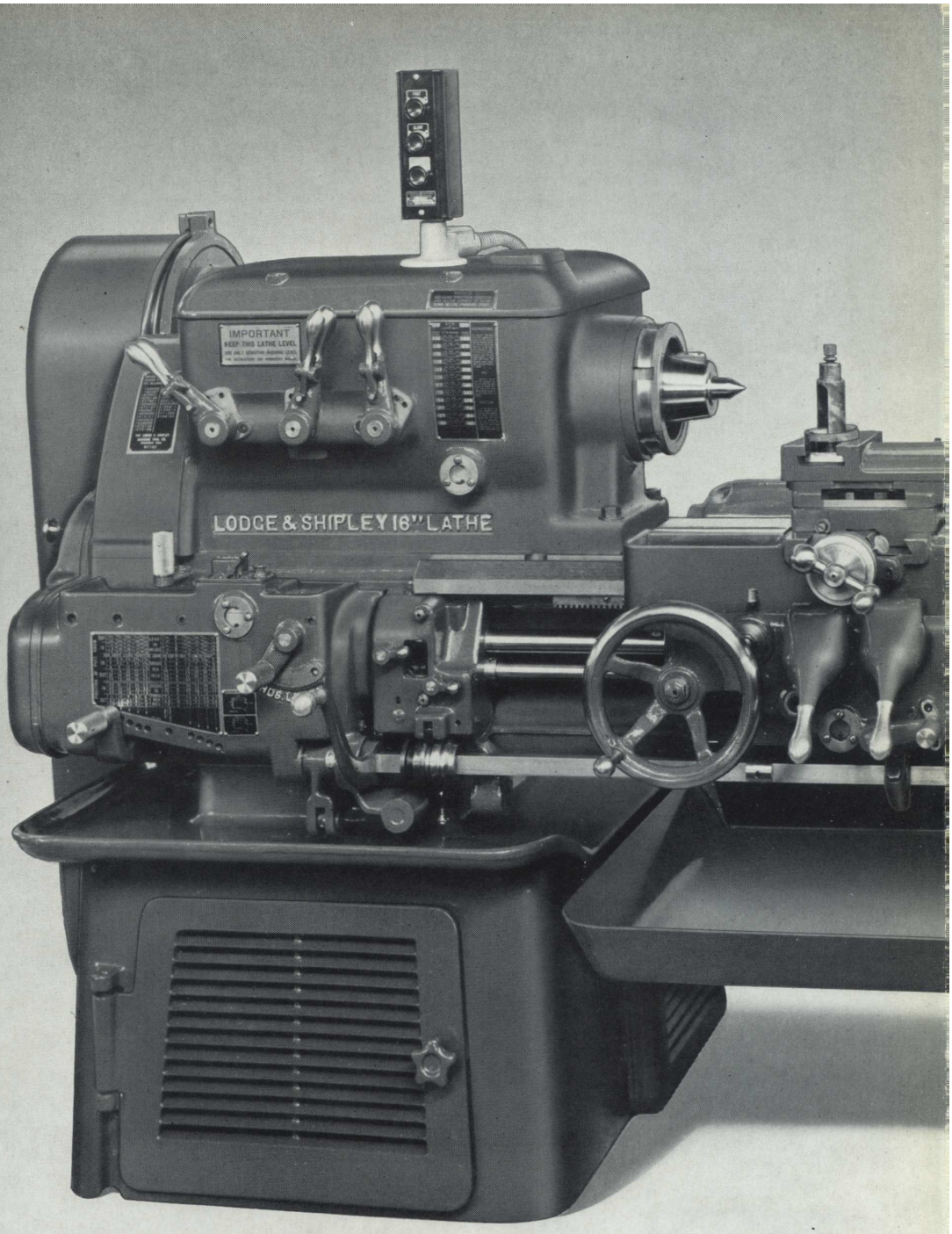
OILING POSITION

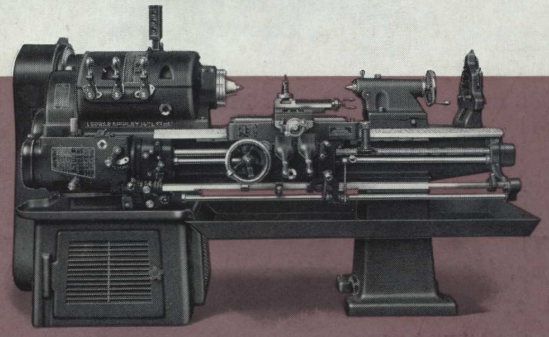
99789

WIDE FEED RANGE

The exceptionally wide range and multiplicity of thread and feed changes is another proof of the adaptability of these lathes for high and low spindle speed work. Feeds as fine as .0014″ are necessary for efficient use of carbide cutting tools while the coarse feed of .090″ is more than sufficient for high speed steel tools. Every feed change is made by the Quick Change Method without taking off, putting on or transposing a single gear.

Increased production, perfect finish and more satisfactory work are the inevitable result of being able to select the exact feed required for every job.

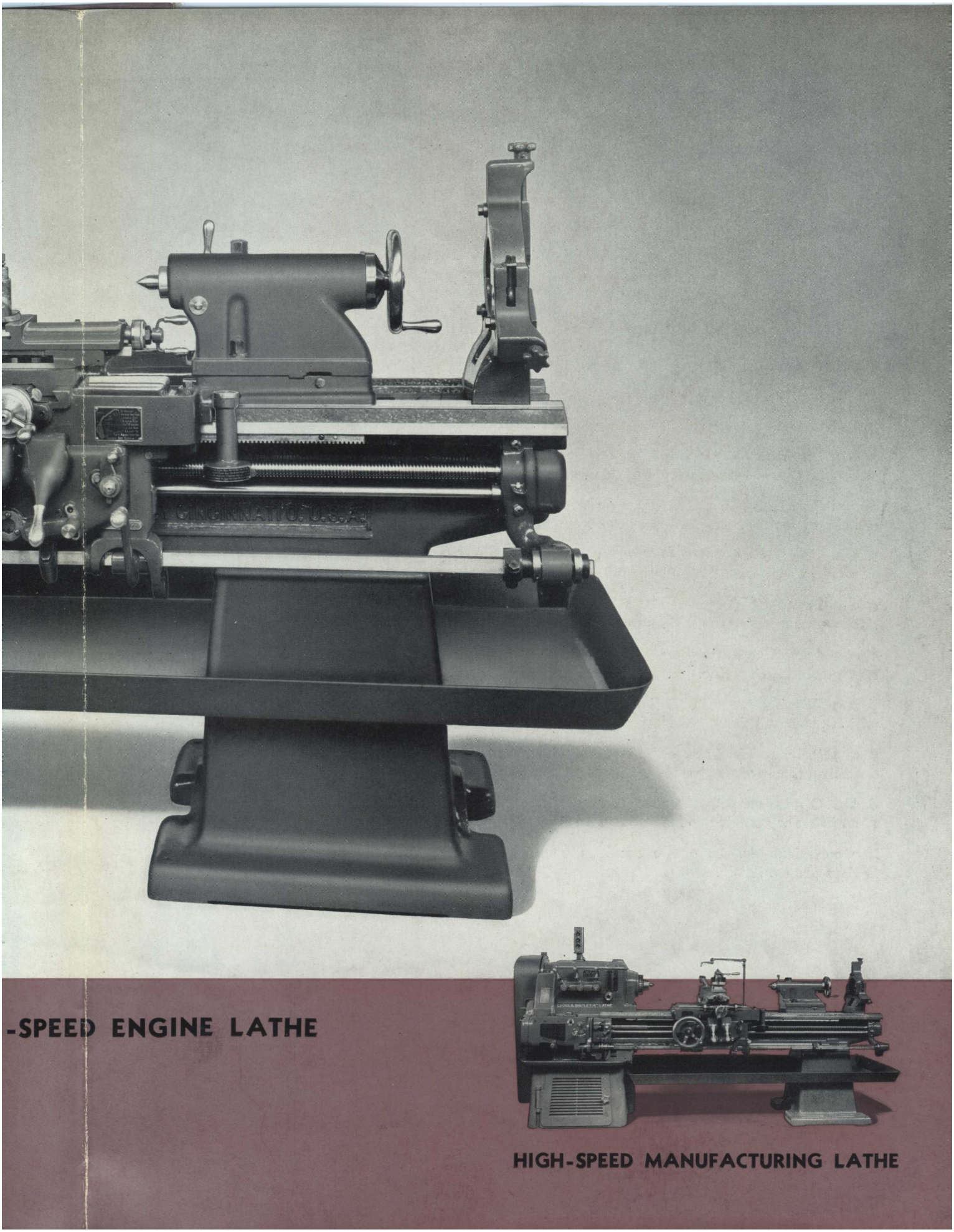




HIGH-SPEED TOOLROOM LATHE

HIGH-SPEED

L&S LATHES



-SPEED ENGINE LATHE

HIGH-SPEED MANUFACTURING LATHE

DESIGNED FOR HIGH-SPEED SERVICE

• • • BUILT TO STAND IT

Designed and built essentially for High-Speed Service, these Lodge & Shipley 12-Speed Selective Head Lathes powered by Two-Speed Constant Horsepower Motors provide 24 spindle speeds from 18 to 1080 R.P.M. This ideal combination of mechanical and electrical efficiency is the solution to the problem of utilizing both high speed steel and the newer carbide cutting tools to the limit of their possibilities, while, at the same time, maintaining a simplified construction that insures years of trouble-free service. Furnished in Engine, Tool Room and Manufacturing Lathe types, these machines are profitable investments in versatility.

For high or low speed service • • • Check the following features for a comparison of lathe values:

• • • Simplified design of the powerful Selective Headstock which is the most vital consideration for a lathe operating at high speeds.

• • • Key Drive Tapered Type Spindle Nose which absolutely prevents backing off of chucks or face plates at high speeds.

• • • Over-all substantial construction, evidenced by weights and dimensions, which prevents vibration at high speeds and absorbs the thrusts of heavy work at low speeds.

• • • Elliptical girths of the wide, deep beds which maintain the built-in rigidity and accuracy necessary for satisfactory high speed lathe work.

• • • Complete simplification of Quick Change Gearing and Apron which insures years of trouble-free service.

• • • Elimination of "Oil Can" lubrication methods by automatic and one-shot systems which prevent "Operator Neglect."

• • • "Finger Tip Control" through central Push Button Station which enables instant doubling the low range or halving the high range spindle speeds.

• • • Craftsmanship of Lodge & Shipley Lathe Builders which has long been the guarantee of satisfactory service to lathe users the world over.

For complete details • • • catalogs covering Engine, Tool Room and Manufacturing Lathes are available.

L & S LATHES

SPECIFICATIONS

SIZE OF LATHE	12″	14″	16″
Swing over Bed and Carriage Wings	14½″	16½″	18½″
Swing over Cross Slide	8½″	10½″	11¾″
Distance between Centers, 6′ Bed	30″	30″	30″
White Metal Bearing Spindle Mounting:			
Front Spindle Bearing	3⅝″x4¼″	3⅞″x4⅜″	4⅜″x4½″
Rear Spindle Bearing	2 11/16″x3 11/16″	2 13/16″x3 11/16″	2 15/16″x3 11/16″
Roller Bearing Spindle Mounting:			
Front mounting—two Timken precision tapered roller bearings:			
Radial load rating at 100 R.P.M	15970 lbs.	15970 lbs.	15970 lbs.
Thrust load rating at 100 R.P.M	6915 lbs.	6915 lbs.	6915 lbs.
Rear mounting—one Norma Hoffmann precision cylindrical roller bearing:			
Radial load rating at 100 R.P.M	6180 lbs.	6180 lbs.	6180 lbs.
There are no thrust loads on rear bearing.			
Hole through spindle	1¾″	1¾″	1¾″
Morse Taper of centers	No. 4	No. 4	No. 4
Spindle Nose: No. 1 Key Drive Tapered Type.			
Number of spindle speeds with Two-speed motor	24	24	24
Range of Spindle Speeds, R.P.M	18 to 1080	18 to 1080	16 to 970 or 18 to 1080
Tailstock spindle diameter	2¼″	2¼″	2⅝″
Tailstock spindle travel, dead center	5¾″	5¾″	7½″
Tailstock spindle travel, built-in revolving center	4″	4″	5½″
Number of thread and feed changes	55	55	55
Range of threads per inch	2 to 128	2 to 128	2 to 128
Range of feeds per R.P.M. of spindle	.0014″ to .090″	.0014″ to .090″	.0014″ to .090″
Leadscrew diameter	1 5/16″	1 5/16″	1 5/16″
Leadscrew threads per inch	4	4	4
Steady Rest capacities: Standard	⅜″ to 4″	⅜″ to 5″	⅜″ to 6″
No. 1 Oversize	4″ to 8″	4″ to 8″	5½″ to 10″
Size of tool: Round tool post	⅝″x1″	⅝″x1″	⅝″x1¼″
High duty tool block	⅝″x1″	⅝″x1″	¾″x1″
Four-way tool block	⅝″x1″	⅝″x1″	¾″x1″
Taper Attachment:			
Maximum amount of taper per foot	4″	4″	4″
Length at one setting	16″	16″	24″
Two-speed Constant Horsepower Motor and Fully Magnetic Push Button Operated Control Recommended.			
Horsepower	5 to 7½	7½	7½
R.P.M	900 and 1800	900 and 1800	900 and 1800
Weight, 30″ centers lathe, arranged for Motor in Leg Drive exclusive of Pan, attachments and electrical equipment	4,200 lbs.	4,500 lbs.	5,300 lbs.
Extra for each additional 24″ between centers	275 lbs.	300 lbs.	340 lbs.

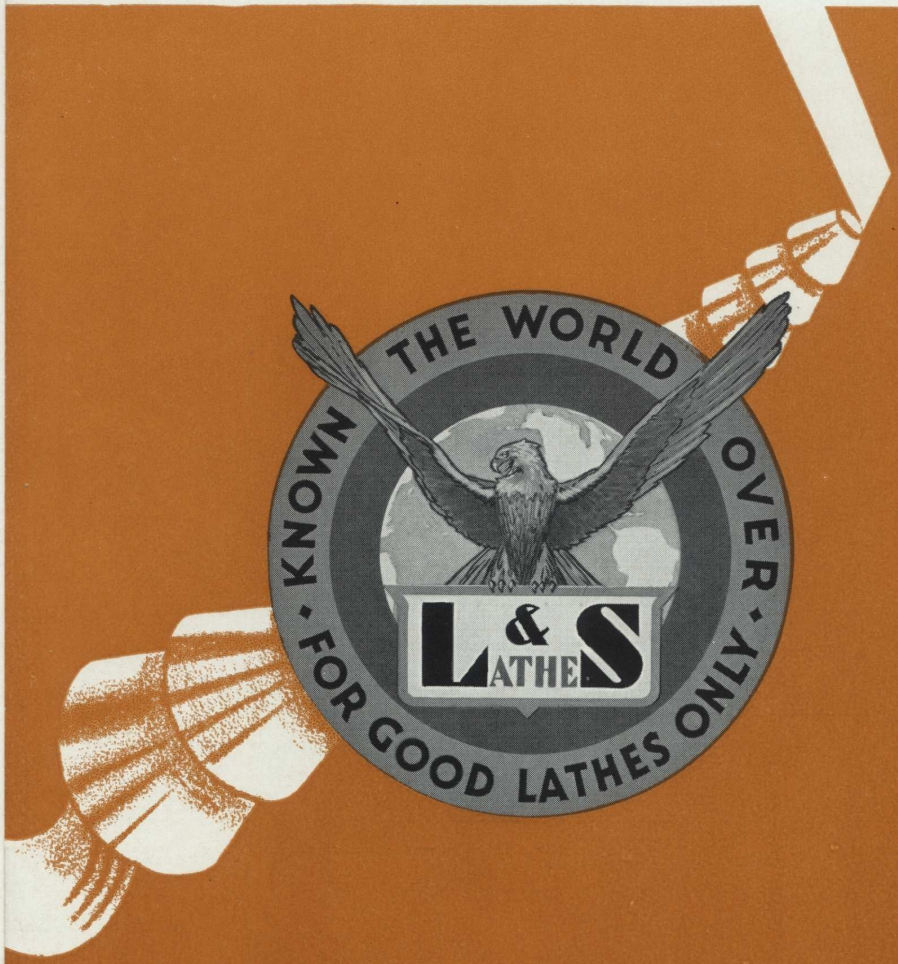
Refer to bulletins covering Engine, Tool Room and Manufacturing Lathes for full specifications and regular equipment supplied with each type machine.

Publication No. 502—BO—640

PRINTED IN UNITED STATES OF AMERICA

Accuracy for Profits

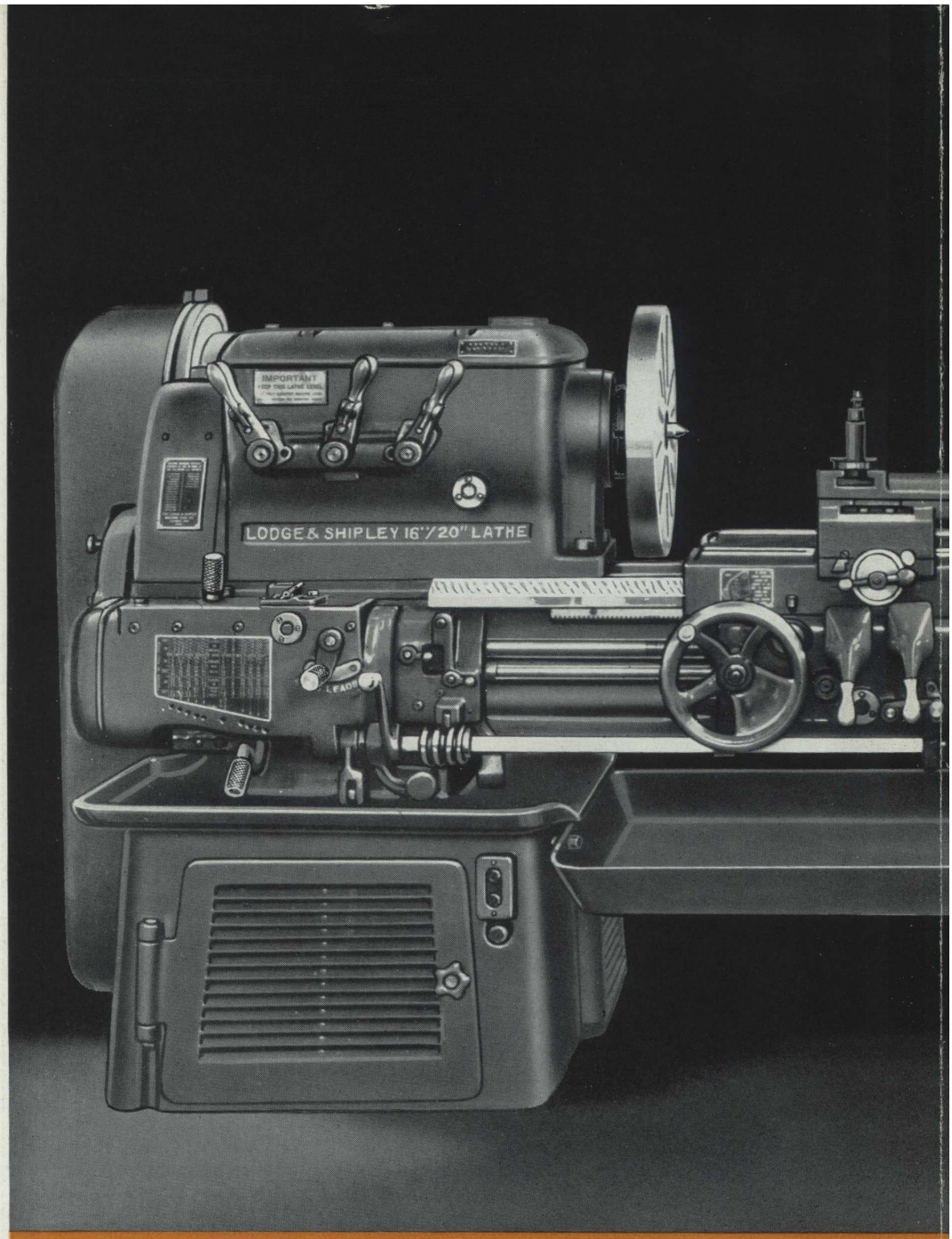
16"/20"
SELECTIVE HEAD LATHE
WITH
ROLLER BEARING SPINDLE MOUNTING



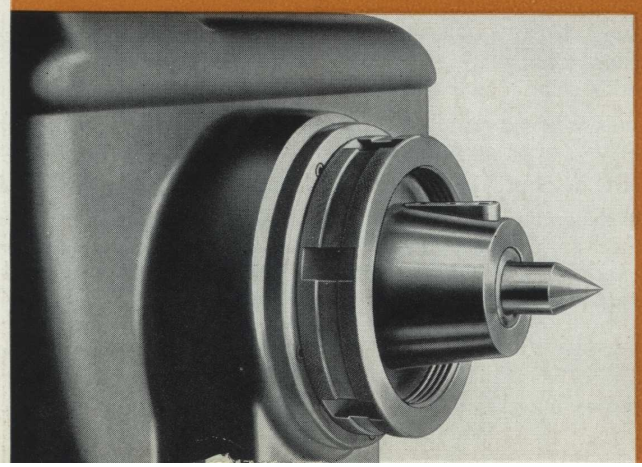
THE LODGE & SHIPLEY MACHINE TOOL CO.

CINCINNATI, OHIO

Accuracy for Profits



16"/20" Selective Head Lathe with Roller Bearing



See Our LATHE F

No. 477-T for Full De

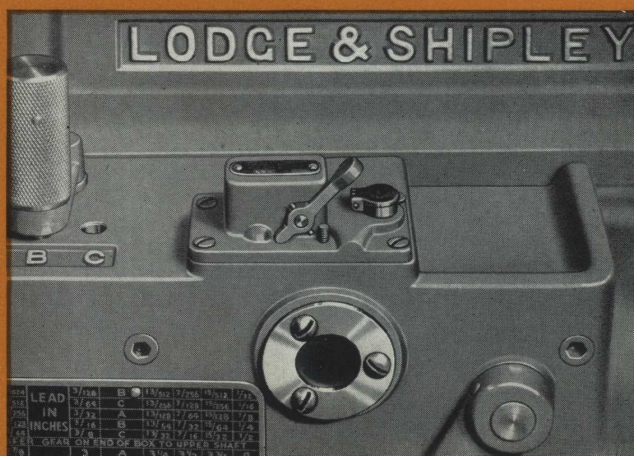
The New Spindle Nose is the No. 1 Standard, Key Drive, Tapered Type.

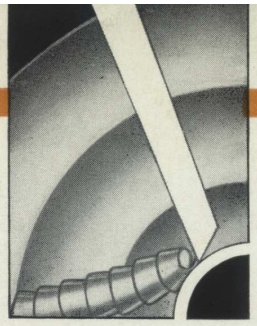
Lathe with Roller Bearing Spindle Mounting, Motor Drive in Leg and Pan

See Our LATHE FEATURES Booklet No. 477-T for Full Details of Construction

The New Spindle Nose is the No. 1 Standard, Key Drive, Tapered Type.

The New One-Shot Lubrication System for Quick Change and End Gearing.





SPECIFICATIONS

16″ / 20″ x 6′

Selective Head Lathe with Roller Bearing Spindle Mounting

Swing over bed and carriage wings.....22½″
Swing over cross slide with chip cover in place 15½″
Swing over cross slide when connected rear rest is furnished.....13″
Swing through Gap if Gap Bed is ordered.....32″
Maximum diameter that can be turned or faced through Gap.....29″
Distance from end of Spindle Nose to end of Gap.....12″
Distance between centers, 6′ bed:
- Tailstock flush.....30″
- Tailstock overhung.....34″
- Minimum length of bed furnished.....6′
- Longer beds furnished in increments of.....2′

Front spindle bearing—Double Row Zero Type Timken Roller Bearing
Rear spindle bearing—Single Norma Hoffman Roller Bearing
Hole through spindle.....1¾″
Taper of centers.....No. 4 Morse
Spindle Nose, No. 1 Standard, Key Drive, Taper Type
Tailstock spindle travel.....7½″
Tailstock spindle diameter.....2⅝″
Number of spindle speeds.....12
Normal range of spindle speeds.....16-485
Alternate range of spindle speeds.....32-970
Driving pulley diameter.....12″
R. P. M. of driving pulley.....450 or 900
Width of belt.....3½″
Number of threads and feed changes.....55
Lathe cuts the following threads per inch:
2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 3¾, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 7½, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, 26, 28, 30, 32, 36, 40, 44, 46, 48, 52, 56, 60, 64, 72, 80, 88, 92, 96, 104, 112, 120, 128.
Lathe also cuts an additional range of threads expressed in inches lead as follows:
9/512, 5/256, 11/512, 23/1024, 3/128, 13/512, 7/256, 15/512, 9/256, 5/128, 11/256, 23/512, 3/64, 13/256, 7/128, 15/256, 9/128, 5/64, 11/128, 23/256, 3/32, 13/128, 7/64, 15/128, 9/64, 5/32, 11/64, 23/128, 3/16, 13/64, 7/32, 15/64, 9/32, 5/16, 11/32, 23/64, 3/8, 13/32, 7/16, 15/32.
Feeds in thousandths per R. P. M. of spindle.....0014″ to .090″
Feeds are 5½ times finer than threads.
Leadscrew diameter.....1 5/16″
Leadscrew threads per inch.....4
Steady rest capacities:
- Standard.....⅜″ to 6″
- No. 1 oversize.....5½″ to 10″

Size of tool:
- Round tool post.....⅝″ x 1¼″
- High-duty tool block.....¾″ x 1″
- Four-way tool block.....¾″ x 1″

Weight on skids, 6′ bed crated, belt driven, lbs. (approx.).....4500
Weight on skids, 6′ bed crated, with Motor Drive on Head arrangement, lbs. (approx.) 4900
Weight on skids, 6′ bed crated, with Motor Drive in Leg arrangement, lbs. (approx.).5200
Each additional 2′ of bed, lbs. (approx.).....340
Floor space with taper, 6′ bed....4′1½″x8′7½″
Floor space without taper, 6′ bed...3′7½″x8′7½″
Taper Attachment:
- Maximum amount of taper.....4″
- Length at one setting.....24″

H. P. of motor recommended.....5 to 10
R. P. M. of motor, Flat Belt Motor Drive, normal spindle speed (constant speed).....1200
R. P. M. of motor, Multi-Vee Belt Motor Drive, normal spindle speed (constant speed).....1800
R. P. M. of motor for higher range of spindle speed (constant speed).....1800
R. P. M. of two-speed, constant horse-power motor for both ranges.....900-1800

EQUIPMENT

Unless otherwise specified, lathe is regularly furnished with large and small face plates, standard steady rest, two centers, round tool post, necessary wrenches and motor drive arrangement without electrical equipment. Only roller bearing spindle mounting can be supplied.

Construction details of this lathe are described in Publication No. 477-T, when ordered as an Engine Lathe, or by Publication No. 488-I, when supplied as a Tool Room Lathe.

Flat Belt or Multi-Vee Belt Motor Drive on Head or Multi-Vee Belt Motor Drive in Leg is optional.

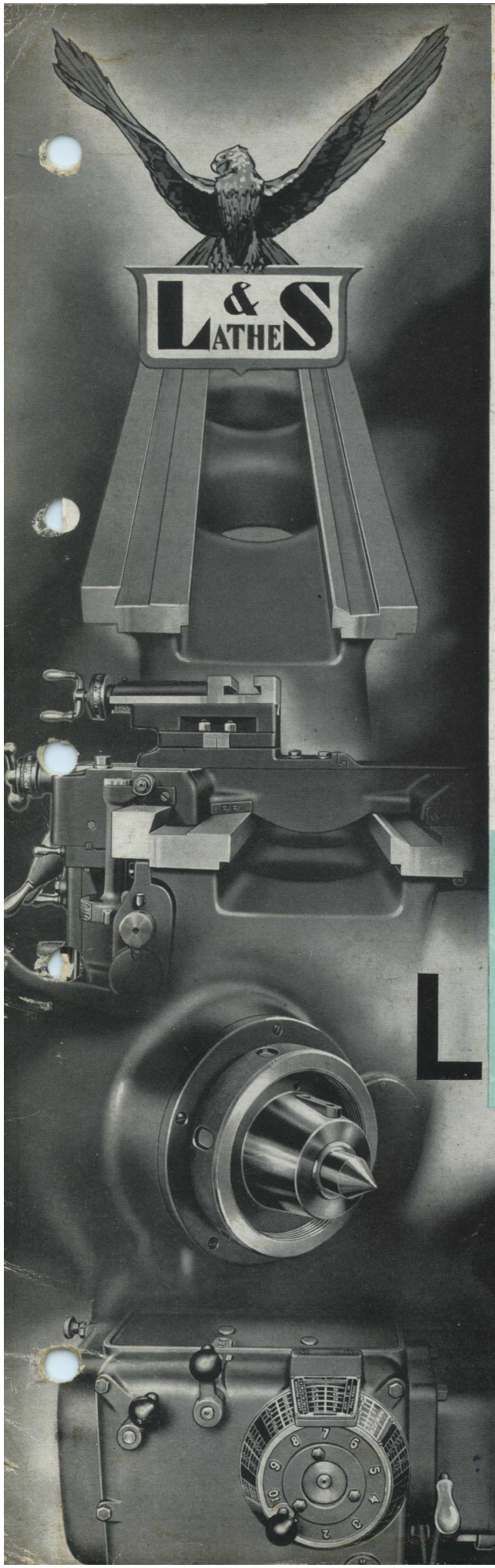
A complete line of attachments and accessories can be supplied with this machine. These are considered as extras and are furnished only when ordered. This lathe is our nominal 16″ lathe raised in sand to swing 22½″ over bed. Ten inches is the maximum diameter that can be turned or faced using Multiple Diameter Stops. Multiple Diameter Stops cannot be furnished on Gap Lathes.

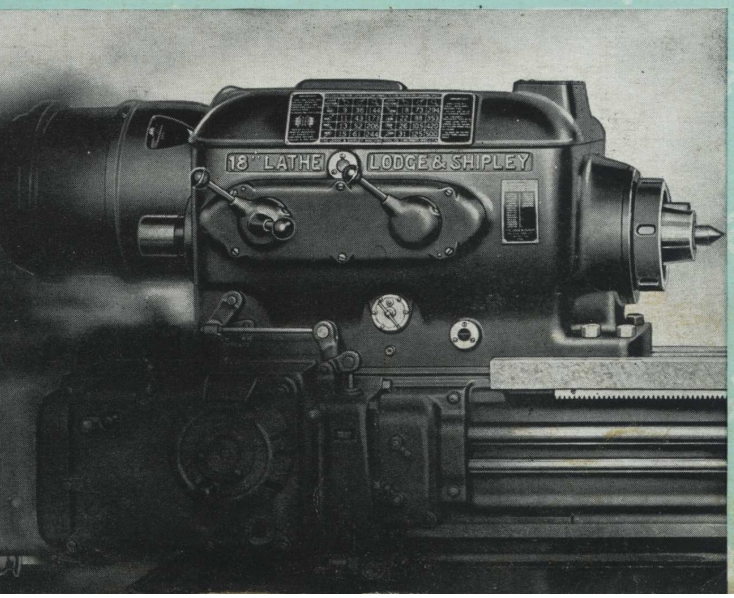
ENGINE LATHES

18" & 20" SELECTIVE HEAD

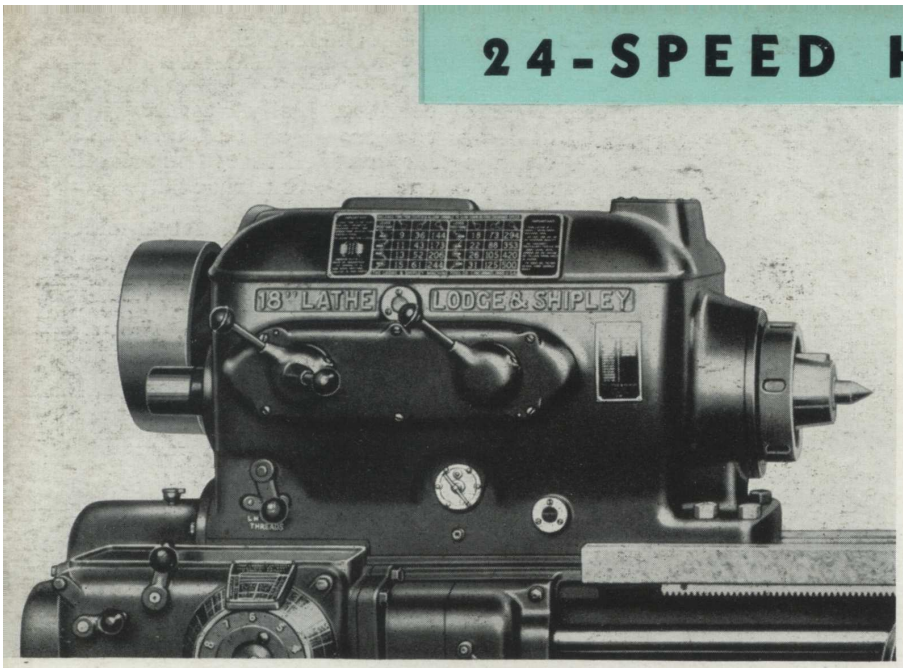
NEW BED . . . NEW HEADSTOCK . . . NEW AUTOMATIC LUBRICATION
NEW CARRIAGE . . . NEW FEEDS . . . NEW TAILSTOCK
NEW SPINDLE SPEEDS . . . NEW QUICK CHANGE GEARING . . . NEW APRON
NEW CARRIAGE . . . NEW SPINDLE NOSE . . . NEW FEEDS

LODGE & SHIPLEY





24-SPEED HEADSTOCK



To provide the usually unobtainable in-between spindle speeds that insure profitable production, the new headstock provides twenty-four speeds from 9 to 500 R.P.M.

A new conception of headstock performance is introduced by the Lodge & Shipley twenty-four speed Selective Headstock. A powerful double friction clutch controlling the twenty-four forward and reverse spindle speeds and a positive mechanical brake are built into the headstock as integral parts of the mechanism.

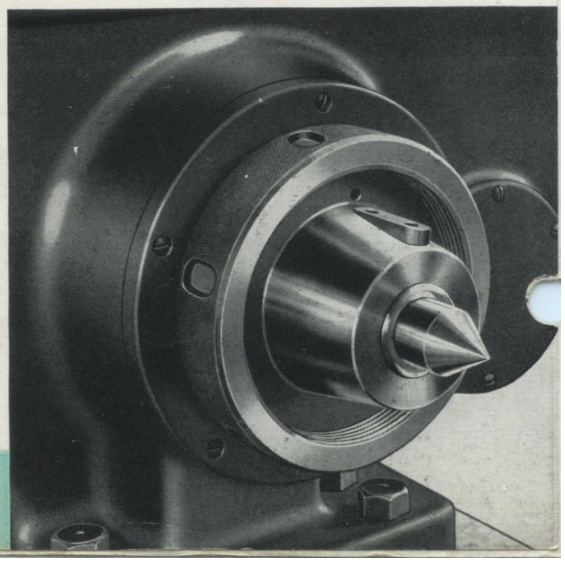
A pump automatically lubricates all of the headstock mechanism with filtered oil. A laminated plate type filter, mounted in the front of the headstock, extracts all foreign matter from the oil. Following former Lodge & Shipley design, all of the mechanism is mounted in the headstock base and is supported by brackets cast integral with the base.

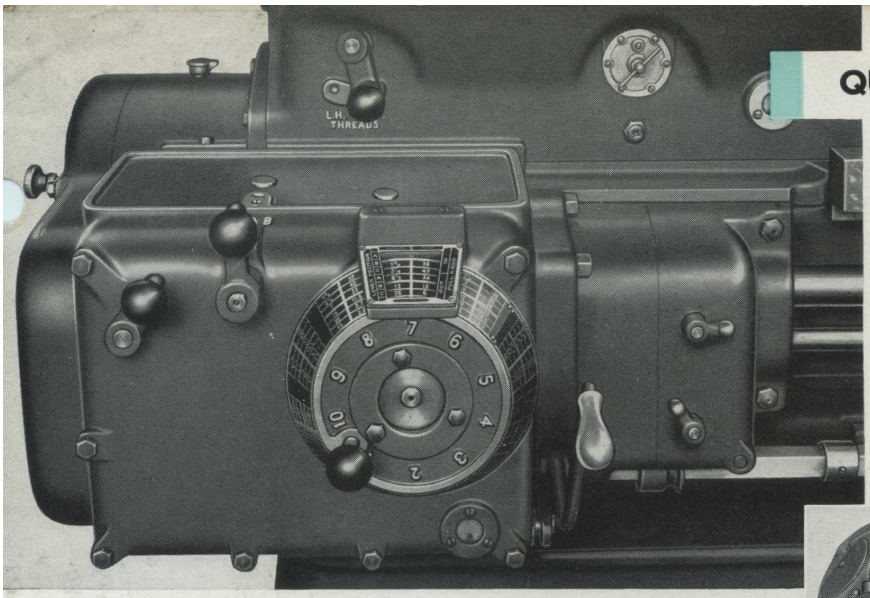
All gears in the headstock are of alloy steel and are hardened after machining. The bores are ground and the gear teeth are then ground for form and spacing to remove any distortion from the hardening process. All the multi-spline shafts carrying the gears are hardened and ground.

Three easy shifting levers mounted on the front of the headstock control the selection of spindle speeds. An index plate showing the position of the levers for each spindle speed enables quick selection of the proper speed.

All of the mechanism is mounted on anti-friction bearings. The large heat-treated spindle with its hardened nose is carried on roller bearings. This combination of anti-friction bearings, fully automatic lubrication and perfect tooth contour and tooth spacing insures smooth, quiet operation.

The new spindle nose is the No. 2 Standard, Key Drive, Taper Type. Adapter plates are not used for mounting chucks. Chucks should be ordered from the Chuck manufacturer suitable for application to the No. 2 Standard, Key Drive, Taper Type Lathe Spindle Nose.

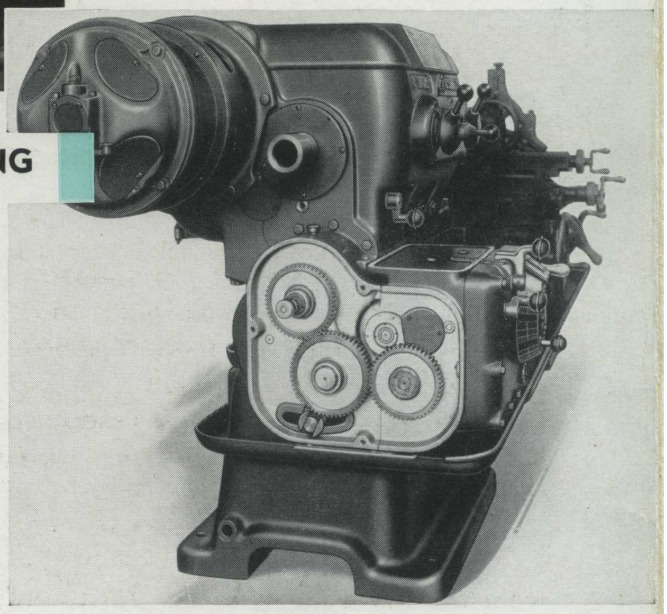




QUICK CHANGE GEAR BOX

A direct reading, easily operated index dial on the front of the new quick change gear box facilitates the selection of any of the fifty-five threads and feeds.

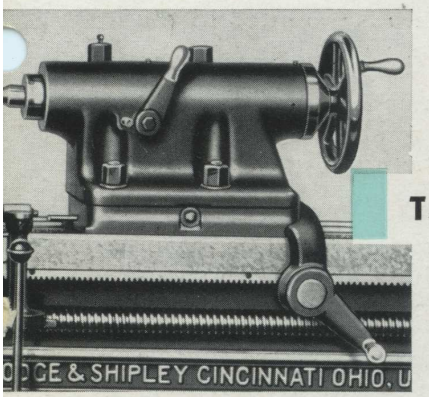
The new gear box is completely enclosed and the gears run in oil with all chips and dirt excluded by the enclosed design. A pump delivers oil to all shaft bearings which are anti-friction throughout.



END GEARING

The end gearing has been greatly simplified and all revolving shafts and gears are carried on anti-friction bearings. Automatic lubrication is provided from the pump in the quick change gear box.

Provision is made for applying extra gears to obtain special ranges of threads, leads and feeds.

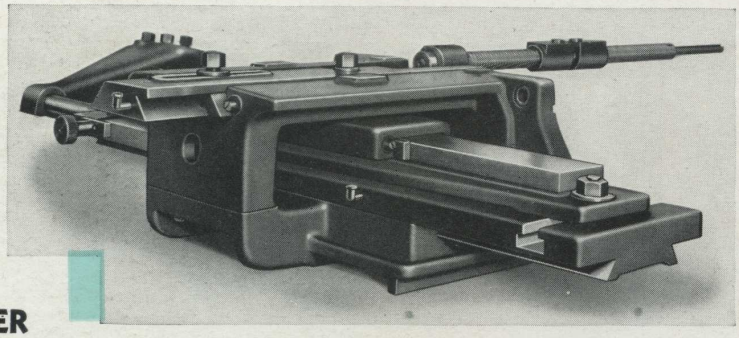


TAILSTOCK

The large diameter tailstock spindle is equipped with ball bearing end thrust. An innovation for these sizes of lathes is the rack and pinion arrangement for easy movement of the tailstock along the bed. Automatic lubrication and shear wipers for bearing ways on bed is provided.

MOTOR DRIVES

The motor may be mounted at rear of head end leg as shown above or mounted on top of headstock and connected to the driving sheave by multi-vee belts. Alternatively a direct connected flange type motor may be used.



TAPER ATTACHMENT

Completely new in design and construction the carriage type taper attachment fulfills the strictest requirements for all classes of taper turning. The micrometer dial on the telescopic type cross feed screw can be used for setting the depth of cut while the taper attachment is in service.

Designed for your

Designed and manufactured to set up new standards of accuracy, production and smooth operation, the new 18″ and 20″ Selective Head Lodge & Shipley Lathes represent the ultimate of modern machine tool design.

Completely new from the headstock to the tailstock, no effort has been spared in making these lathes as accurate and powerful as can possibly be conceived. Believing that the aim of every lathe is profitable production, every effort has been made to facilitate the operation of these units and increase their production capabilities and consequent profit for the user.

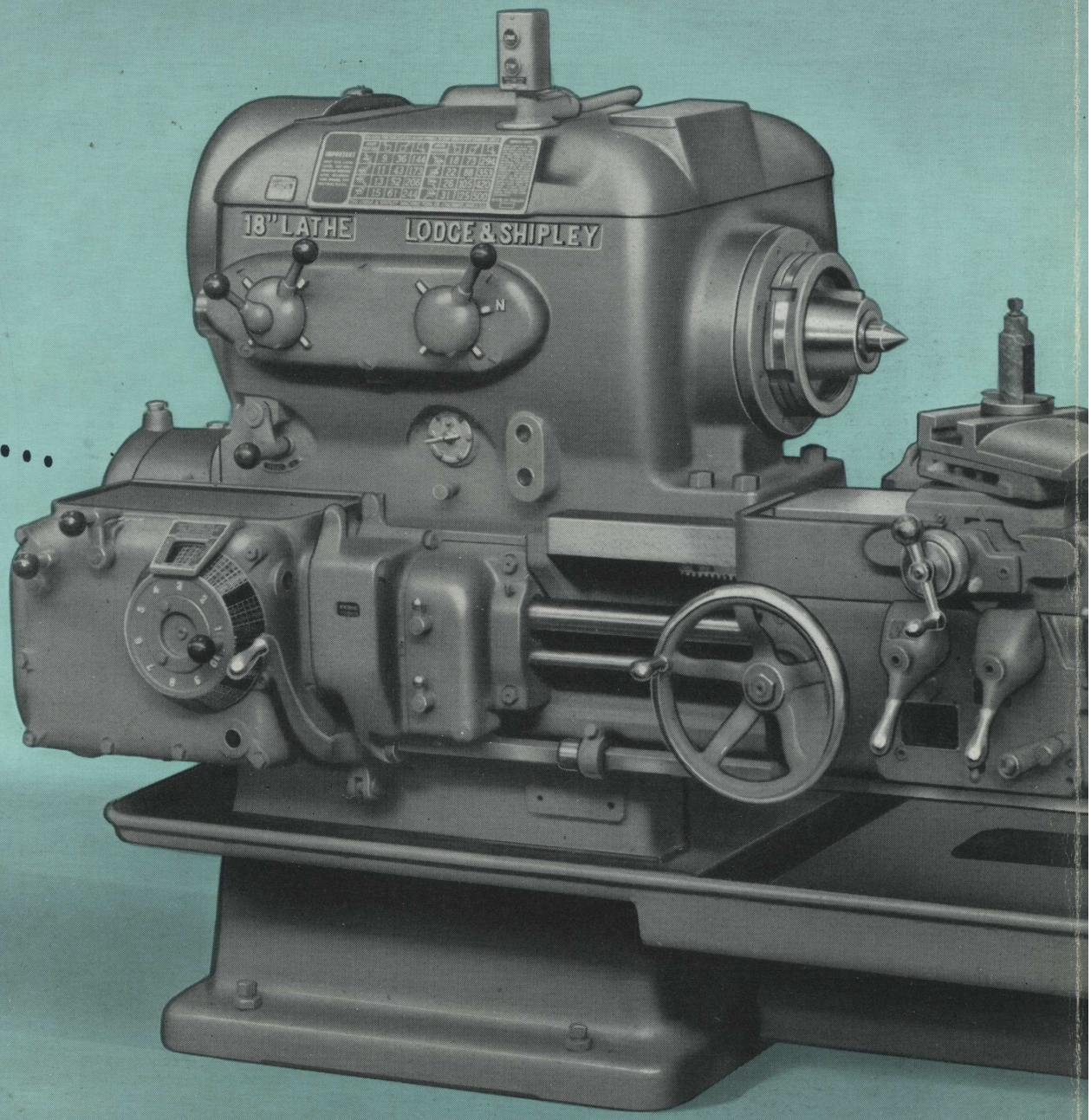
A multiplicity of spindle speeds assures the user of a full realization of the maximum cutting possibilities of all type tools. The equally comprehensive range of instantly selected threads and feeds greatly increases the versatility of the lathe.

Automatic lubrication and the use of anti-friction bearings throughout the lathe reduce friction and cut wear to the vanishing point. The reduction of friction makes operation of the lathe easier and faster for the operator.

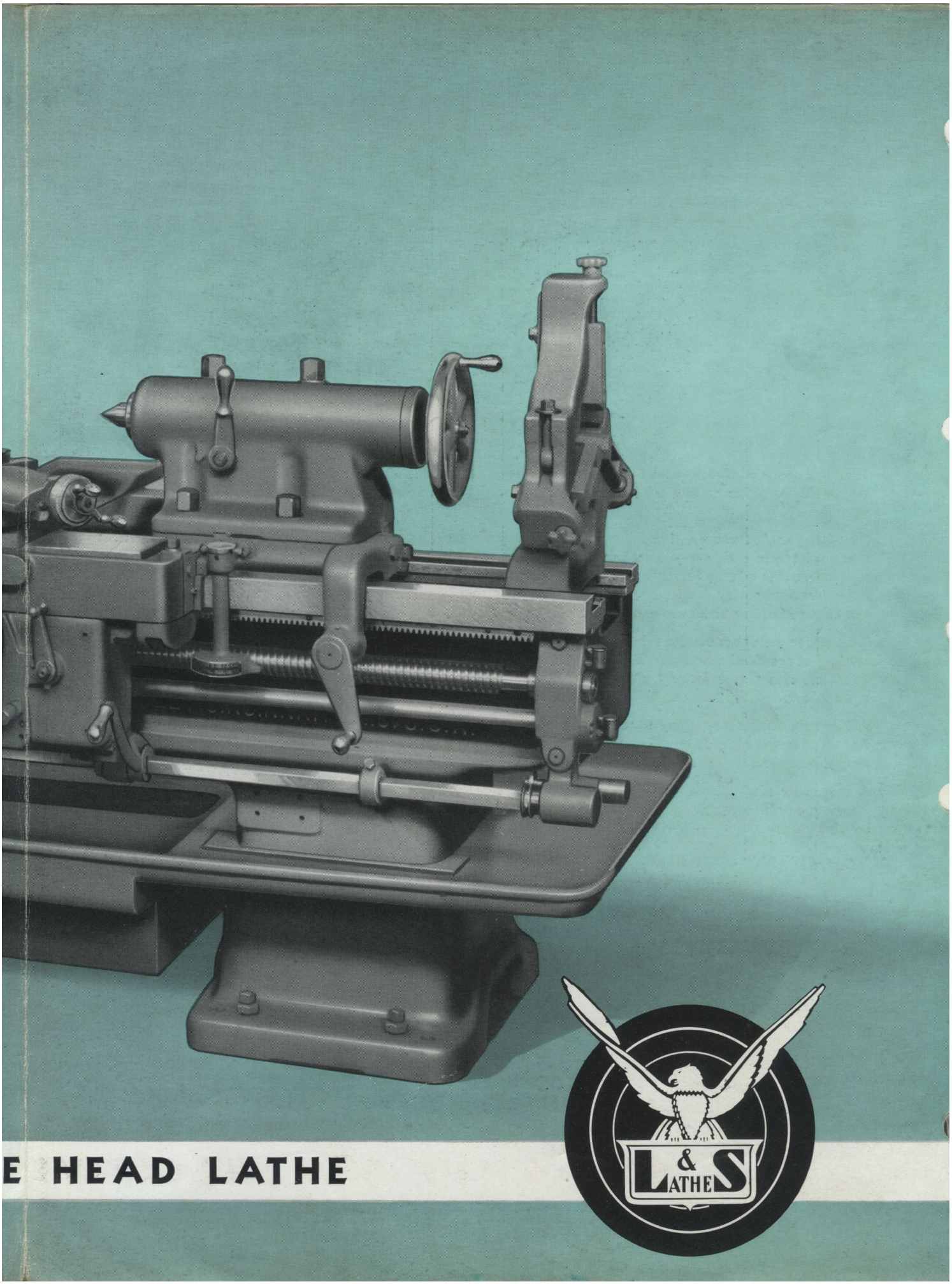
The lathe is designed throughout to provide an unusually fine machine possessing tremendous strength, and retaining phenomenal accuracy. Truly new in every part, the machine represents the experience gained by Lodge & Shipley since 1893 in the specialized manufacture of fine lathes.

Lathes *Good*
Lathes only !

Profit...

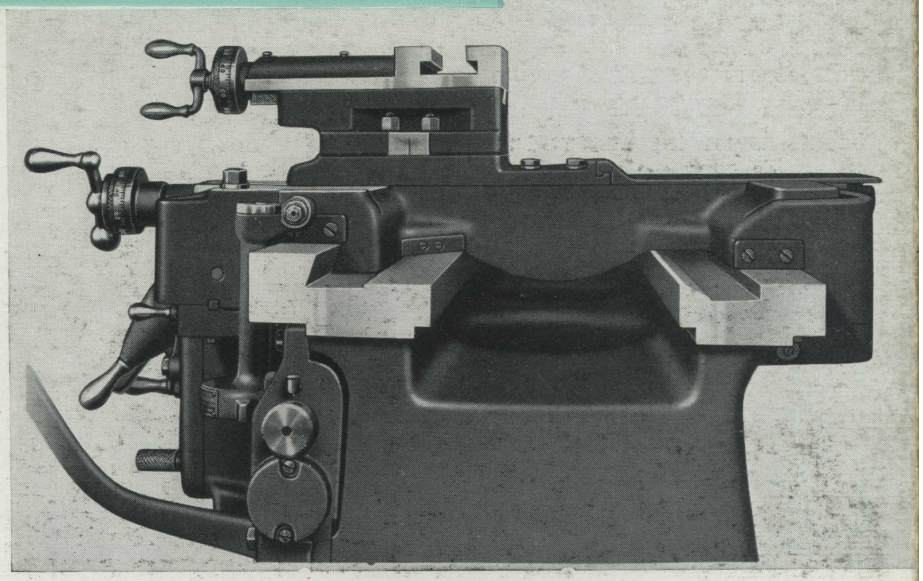


★ THE 18" SELECTIVE



E HEAD LATHE

BED, CARRIAGE AND APRON



Designed for permanent accuracy under the heaviest service, the new carriage and apron reflect the stamina of the entire lathe.

A new degree of rigidity and strength has been built into the carriage for the heavier cuts that naturally will be taken with this new lathe. The wide bridge and added depth typify its sturdiness.

The long and narrow guide formed by the front bearing prevents twisting and the combination flat and taper guideway construction prevents lifting. The supplementary bearing taken on the inner flat of the front bed way, combined with the usual front and rear bearings, results in an extraordinarily large area of bearing surface, minimizing wear, assuring long life and greatly reducing the unsupported span of the bridge.

The cross feed screw has ball bearing end thrust in both directions. The double compensating cross feed nuts are adjustable to take up wear and backlash. The Micrometer Ball Stop on the Cross Feed Screw provides an adjustable depth stop for turning and threading operations. Micrometer Dials are graduated in .001″.

All apron shafts are alloy steel and hardened and are carried on anti-friction bearings. The apron gears are made of alloy steel and heat-treated. All controls are conveniently located for easy operation.

A reservoir and pump in the apron automatically lubricates, under forced feed, all carriage bearing surfaces. All apron bearings are automatically lubricated from reservoirs replenished by the pump.

Adjustable automatic stops are furnished for arresting the longitudinal feed of the carriage in either direction at any desired position along the bed.

The new Lodge & Shipley Lathe Bed is a radical departure from conventional design. Retaining the rigid elliptical girth construction, the new bed has flat type bearing ways that completely prevent lift or twist of the carriage.

SPECIFICATIONS

18″ & 20″ SELECTIVE HEAD LATHES

SIZE OF LATHE	18″ x 30″ Between Centers	20″ x 48″ Between Centers
Swing over bed and carriage wings	20½″	22½″
Swing over cross slide	13½″	15″
Swing over connected rear rest (if ordered)	10⅝″	11½″
Swing over carriage with Power Rapid Traverse	12¾″	14″
Distance between centers, base length:		
Tailstock flush	30″	48″
Tailstock overhung	34″	53″
Longer Beds furnished in 2′ increases		
Front Spindle Mounting: Two Timken Tapered Roller Bearings		
Rear Spindle Mounting: One Norma Hoffman Straight Roller Bearing		
Hole through spindle	2½″	2½″
Morse taper of centers	No. 5	No. 5
Spindle Nose, No. 2 Standard Key Drive, Taper Type		
Number of Forward Spindle Speeds	24	24
Range of Forward Spindle Speeds: 9, 11, 13, 15, 18, 22, 26, 31, 36, 43, 52, 61, 73, 88, 105, 125, 144, 173, 206, 244, 294, 353, 420 and 500 R.P.M.		
Number of Reverse Spindle Speeds	16	16
Range of Reverse Spindle Speeds: 9, 11, 13, 15, 18, 22, 26, 31, 36, 43, 52, 61, 73, 88, 105 and 125 R.P.M.		
For higher spindle speeds we recommend increasing the above range up to 50%.		
Number of thread and feed changes	55	55
Threads per inch—Right or left-hand: 1, 1⅛, 1¼, 1⅜, 1 7/16, 1½, 1⅝, 1¾, 1⅞, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 3¾, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 7½, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, 26, 28, 30, 32, 36, 40, 44, 46, 48, 52, 56, 60 and 64		

SIZE OF LATHE	18″ x 30″ Between Centers	20″ x 48″ Between Centers
Leads: .0156, .0176, .0195, .0215, .0225, .0234, .0254, .0273, .0293, .0312, .0351, .0391, .0430, .0449, .0469, .0508, .0547, .0586, .0625, .0703, .0781, .0859, .0898, .0937, .1016, .1094, .1172, .125, .1406, .1562, .1719, .1797, .1875, .2031, .2187, .2344, .250, .2812, .3125, .3437, .3594, .375, .4062, .4375, .4687, .500, .5625, .625, .6875, .7187, .750, .8125, .875, .9375, 1		
Range of feeds per revolution of spindle	.0025″ to .160″	.0025″ to .160″
Leadscrew diameter	1 15/16″	1 15/16″
Leadscrew threads per inch	2 Acme	2 Acme
Tailstock spindle diameter	3½″	4″
Tailstock spindle travel	10″	11″
Steady rest capacity:		
Standard	¾″ to 7″	¾″ to 7½″
No. 1 oversize	6½″ to 12″	7″ to 14″
Size of tool:		
Round tool post	¾″ x 1½″	⅞″ x 1¾″
High duty tool block—Square	1⅛″	1½″
Four-way tool block—Square	1⅛″	1½″
Taper attachment:		
Maximum taper per foot	4″	4″
Length at one setting	24″	24″
Motor recommendations:		
H.P.	7½-10-15	7½-10-15
Speed of motor on head or at rear of leg—R.P.M.	1800	1800
Speed of flange motor—R.P.M.	1200	1200
Maximum overall diameter of flange motor	20″	20″
Approximate domestic shipping weight, base length of bed	7500 lbs.	8500 lbs.
Extra for each additional 2 ft. of bed	550 lbs.	600 lbs.
Approximate floor space (Base Centers)	10′3″ x 5′6″	12′3″ x 5′7″

ENGINE LATHE EQUIPMENT

Standard equipment regularly furnished with the above machine includes Mechanical Apron Control for twenty-four forward and sixteen reverse spindle speeds; a positive mechanical brake; small face plate; two centers; two adjustable automatic length stops, one for each direction of carriage travel, operable when feeding only; round tool post; thread indicator; necessary wrenches and motor drive arrangement exclusive of electrical equipment. Thread indicator is not supplied for metric leadscrew lathes.

The motor may be direct connected flange type or it may be mounted at rear of headstock end leg and connected to driving sheave by multi-vee belts. Lathe can also be arranged for single pulley drive from lineshaft. Motor at rear of leg is supplied unless otherwise specified on order.

Flange type motors cannot be larger than NEMA frame 365, must have dynamically balanced armature, NEMA Style "B" end flange mounting and condulet box on right-hand side facing shaft end.

THE LODGE & SHIPLEY COMPANY

CINCINNATI, OHIO, U. S. A.

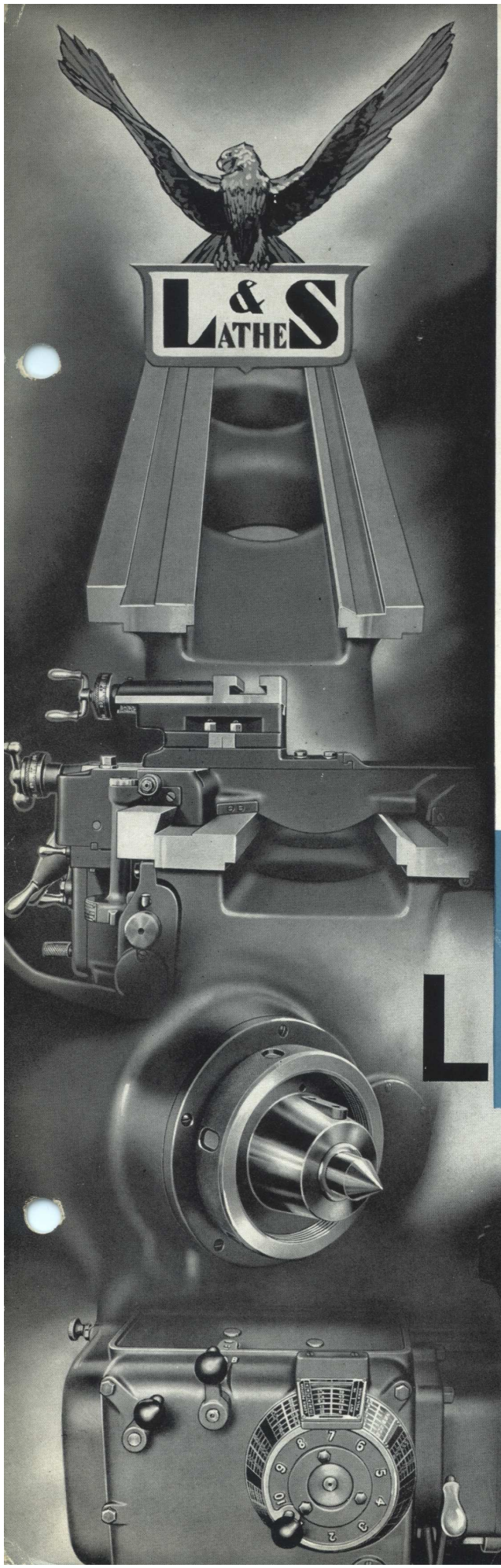
Publication No. 646-BO-246

Supersedes Pub. No. 503-BO-1245

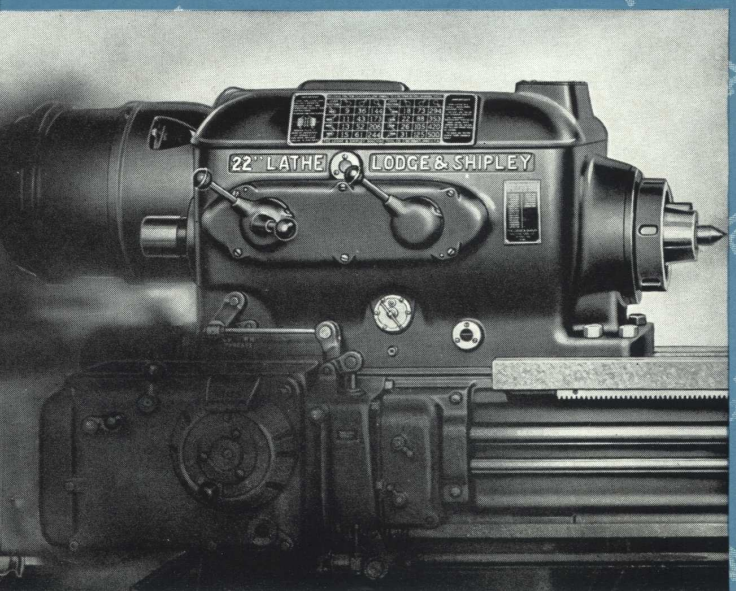
PRINTED IN U. S. A.

22" SELECTIVE HEAD ENGINE LATHE

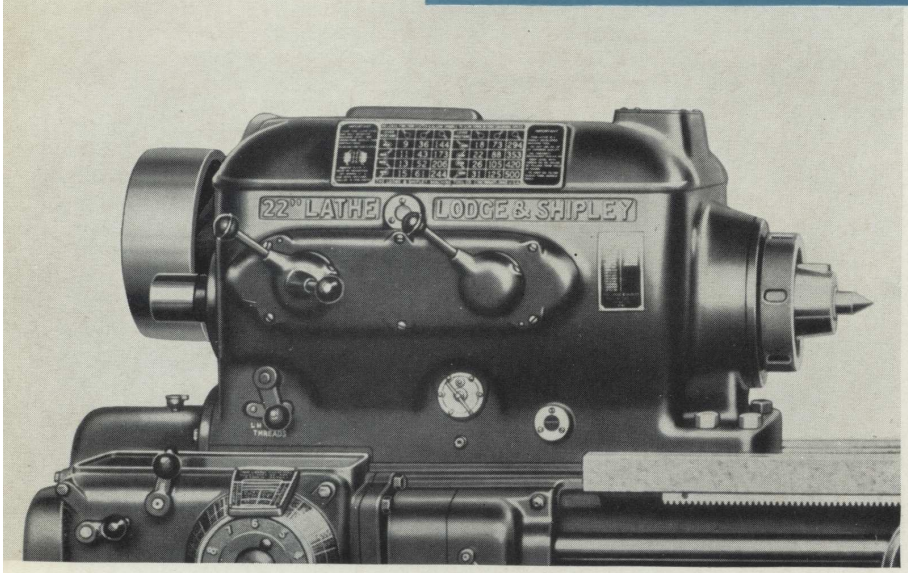
NEW BED . . . NEW HEADSTOCK . . . NEW AUTOMATIC LUBRICATION . . . NEW CARRIAGE . . . NEW FEEDS . . . NEW TAILSTOCK . . . NEW SPINDLE SPEEDS . . . NEW QUICK CHANGE GEARING . . . NEW APRON . . . NEW CARRIAGE . . . NEW SPINDLE NOSE . . . NEW FEEDS . . . NEW CARRIAGE . . . NEW FEEDS . . . NEW SPINDLE . . . NEW FEEDS



LODGE & SHIPLEY



24-SPEED HEADSTOCK



To provide the usually unobtainable in-between spindle speeds that insure profitable production, the new headstock provides twenty-four speeds from 9 to 500 R.P.M.

A new conception of headstock performance is introduced by the Lodge & Shipley twenty-four speed Selective Headstock. A powerful double friction clutch controlling the twenty-four forward and reverse spindle speeds and a positive mechanical brake are built into the headstock as integral parts of the mechanism.

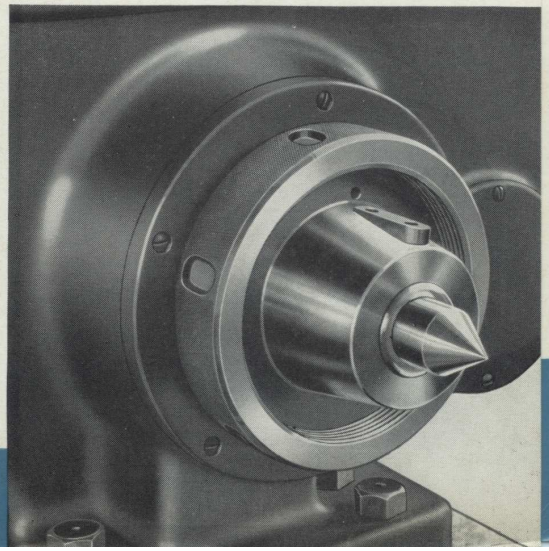
A pump automatically lubricates all of the headstock mechanism with filtered oil. A laminated plate type filter, mounted in the front of the headstock, extracts all foreign matter from the oil. Following former Lodge & Shipley design, all of the mechanism is mounted in the headstock base and is supported by brackets cast integral with the base.

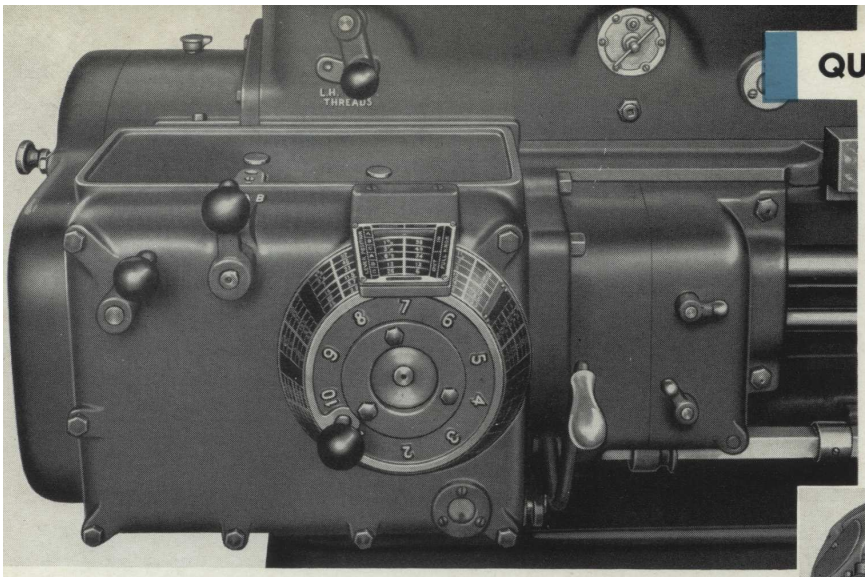
All gears in the headstock are of alloy steel and are hardened after machining. The bores are ground and the gear teeth are then ground for form and spacing to remove any distortion from the hardening process. All the multi-spline shafts carrying the gears are hardened and ground.

Three easy shifting levers mounted on the front of the headstock control the selection of spindle speeds. An index plate showing the position of the levers for each spindle speed enables quick selection of the proper speed.

All of the mechanism is mounted on anti-friction bearings. The large heat-treated spindle with its hardened nose is carried on roller bearings. This combination of anti-friction bearings, fully automatic lubrication and perfect tooth contour and tooth spacing insures smooth, quiet operation.

The new spindle nose is the No. 2 Standard, Key Drive, Taper Type. Adapter plates are not used for mounting chucks. Chucks should be ordered from the Chuck manufacturer suitable for application to the No. 2 Standard, Key Drive, Taper Type Lathe Spindle Nose.

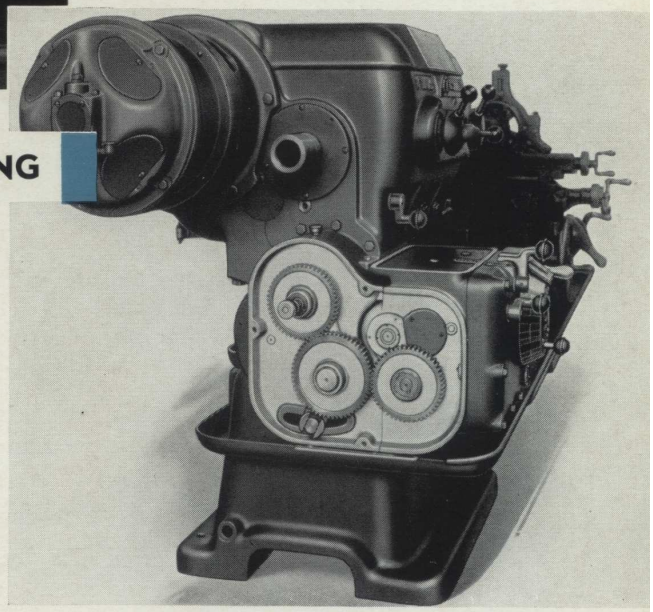




QUICK CHANGE GEAR BOX

A direct reading, easily operated index dial on the front of the new quick change gear box facilitates the selection of any of the fifty-five threads and feeds.

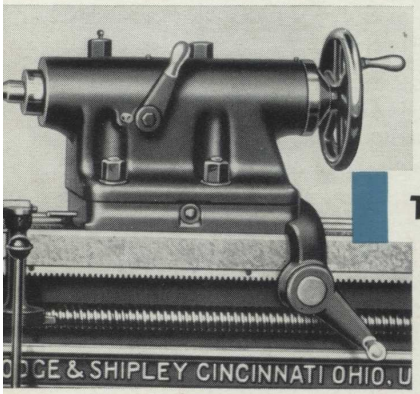
The new gear box is completely enclosed and the gears run in oil with all chips and dirt excluded by the enclosed design. A pump delivers oil to all shaft bearings which are anti-friction throughout.



END GEARING

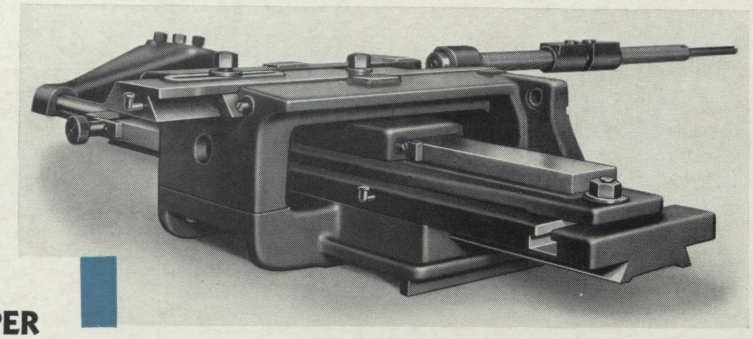
The end gearing has been greatly simplified and all revolving shafts and gears are carried on anti-friction bearings. Automatic lubrication is provided from the pump in the quick change gear box.

Provision is made for applying extra gears to obtain special ranges of threads, leads and feeds.



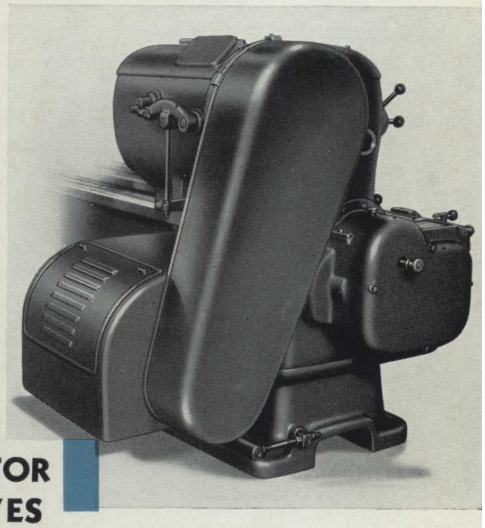
TAILSTOCK

The large diameter tailstock spindle is equipped with ball bearing end thrust. A rack and pinion arrangement is provided for easy movement of the tailstock along the bed.



TAPER ATTACHMENT

Completely new in design and construction the carriage type taper attachment fulfills the strictest requirements for all classes of taper turning. The micrometer dial on the telescopic type cross feed screw can be used for setting the depth of cut while the taper attachment is in service.



MOTOR DRIVES

The motor may be mounted at rear of head end leg as shown above or mounted on top of headstock and connected to the driving sheave by multi-vee belts. Alternatively a direct connected flange type motor may be used.

DESIGNED for your PROFIT!

DESIGNED and manufactured to set up new standards of accuracy, production and smooth operation, the new 22″ Selective Head Lodge & Shipley Lathes represent the ultimate of modern machine tool design.

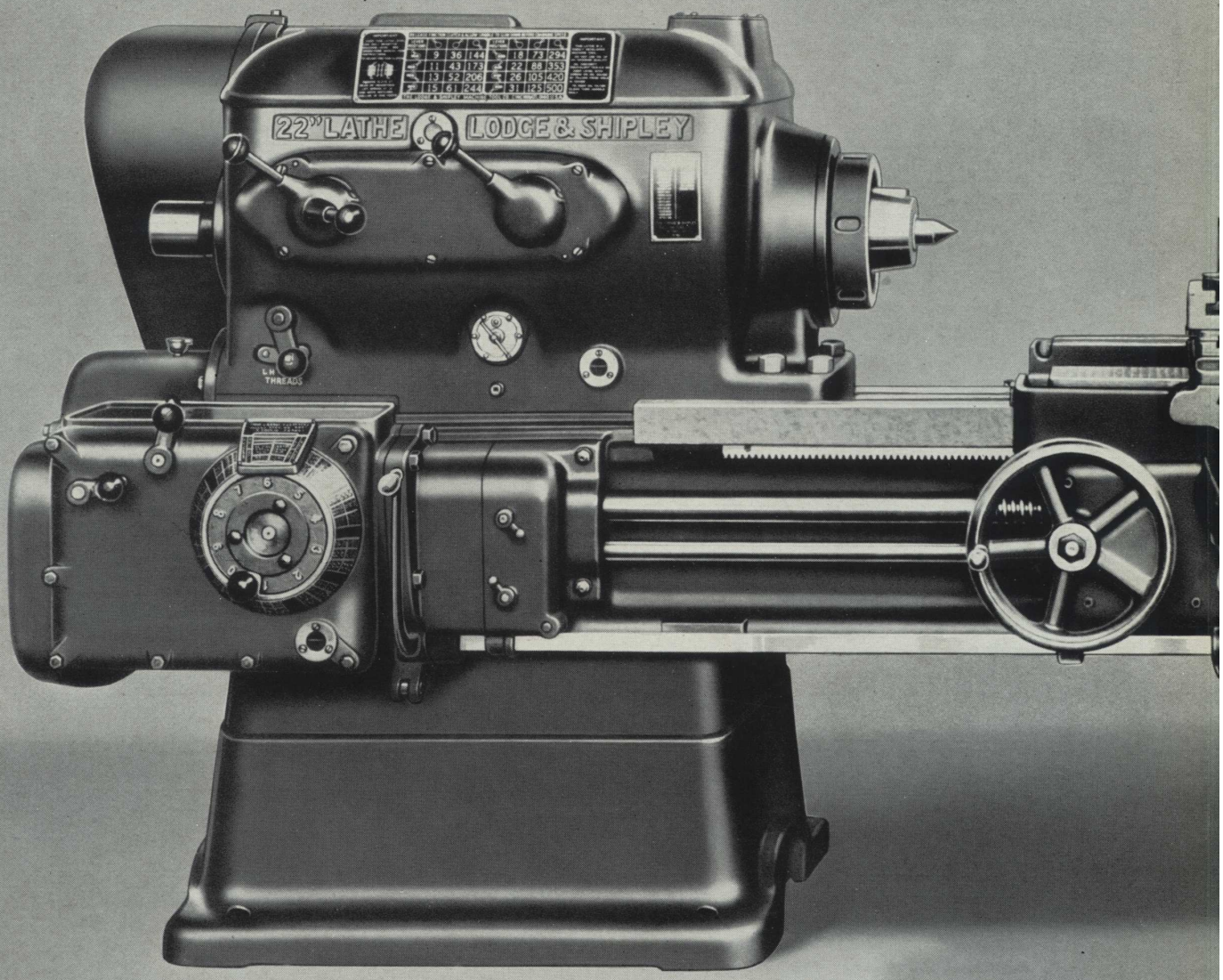
Completely new from the headstock to the tailstock, no effort has been spared in making these lathes as accurate and powerful as can possibly be conceived. Believing that the aim of every lathe is profitable production, every effort has been made to facilitate the operation of these units and increase their production capabilities and consequent profit for the user.

A multiplicity of spindle speeds assures the user of a full realization of the maximum cutting possibilities of all type tools. The equally comprehensive range of instantly selected threads and feeds greatly increases the versatility of the lathe.

Automatic lubrication and the use of anti-friction bearings throughout the lathe reduce friction and cut wear to the vanishing point. The reduction of friction makes operation of the lathe easier and faster for the operator.

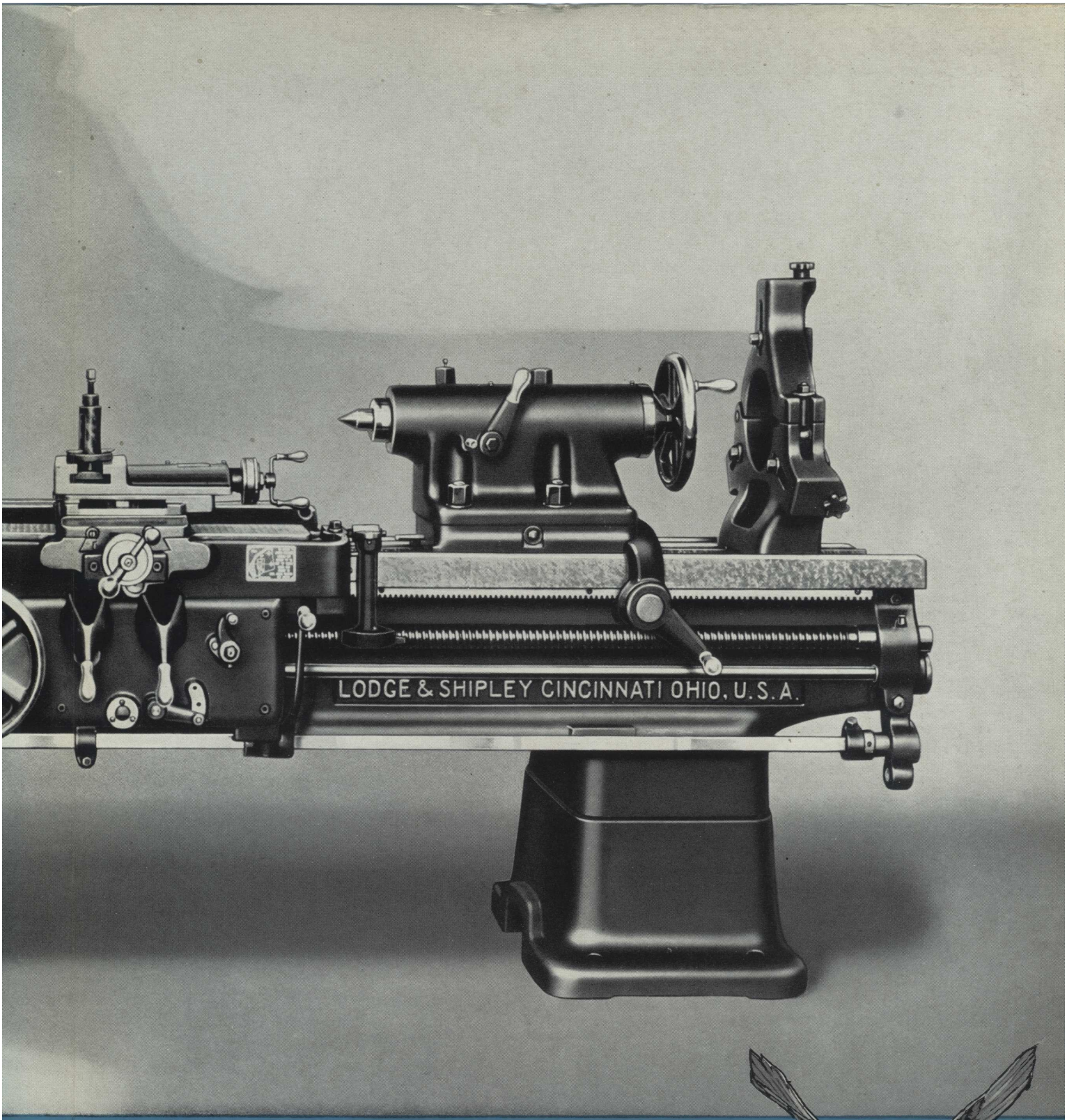
The lathe is designed throughout to provide an unusually fine machine possessing tremendous strength, yet retaining phenomenal accuracy. Truly new in every part, the machine represents the experience gained by Lodge & Shipley since 1893 in the specialized manufacture of fine lathes.

LATHES *Good* LATHES ONLY



The 22" Selective Hea

With Motor Drive at Rear o

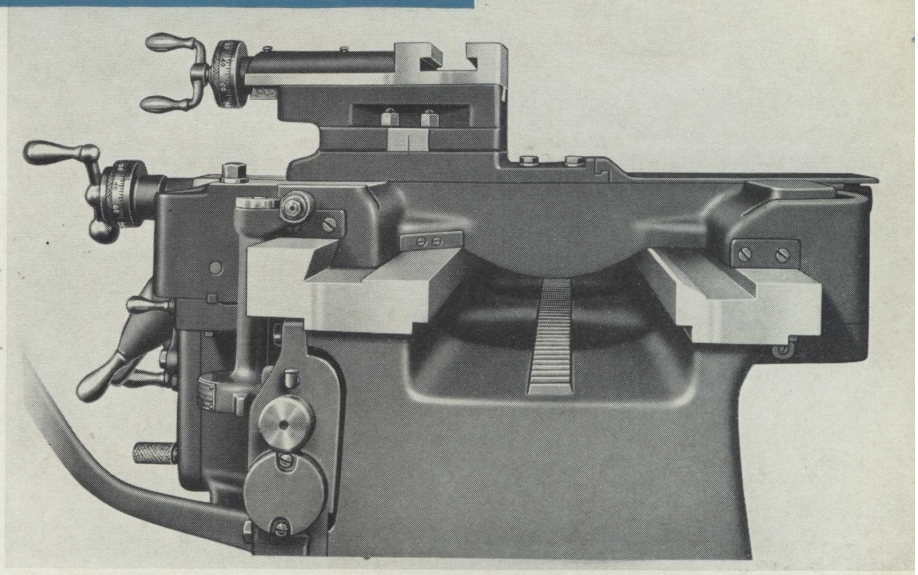


Head Lathe

ear of Leg

L&S LATHES

BED, CARRIAGE AND APRON



Designed for permanent accuracy under the heaviest service, the new carriage and apron reflect the stamina of the entire lathe.

A new degree of rigidity and strength has been built into the carriage for the heavier cuts that naturally will be taken with this new lathe. The wide bridge and added depth typify its sturdiness.

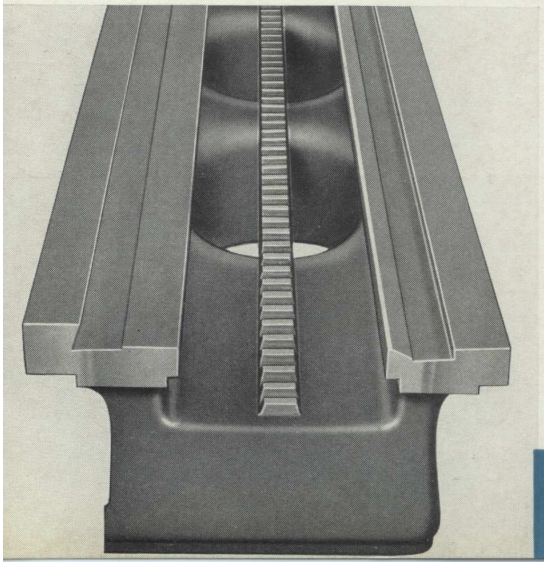
The long and narrow guide formed by the front bearing prevents twisting and the combination flat and taper guideway construction prevents lifting. The supplementary bearing taken on the inner flat of the front bed way, combined with the usual front and rear bearings, results in an extraordinarily large area of bearing surface, minimizing wear, assuring long life and greatly reducing the unsupported span of the bridge.

The cross feed screw, chromium plated to resist wear, has ball bearing end thrust in both directions. The double compensating cross feed nuts are adjustable to take up wear and backlash. The Micrometer Ball Stop on the Cross Feed Screw provides an adjustable depth stop for turning and threading operations. Micrometer Dials are graduated in .001″

All apron shafts are alloy steel and hardened and are carried on anti-friction bearings. The apron gears are made of alloy steel and heat-treated. All controls are conveniently located for easy operation.

A reservoir and pump in the apron automatically lubricates, under forced feed, all carriage bearing surfaces. All apron bearings are automatically lubricated from reservoirs replenished by the pump.

Adjustable automatic stops are furnished for arresting the longitudinal feed of the carriage in either direction at any desired position along the bed.



The new Lodge & Shipley Lathe Bed is a radical departure from conventional design. Retaining the rigid elliptical girth construction, the new bed has chilled flat type bearing ways that completely prevent lift or twist of the carriage.

SPECIFICATIONS

22″ SELECTIVE HEAD LATHE

SIZE OF LATHE	22″ x 48″ Between Centers
Swing over bed and carriage wings	24½″
Swing over cross slide	17¼″
Swing over connected rear rest (if ordered)	13⅜″
Distance between centers, base length:	
Tailstock flush	48″
Tailstock overhung	53″
Front Spindle Mounting: Two Timken Tapered Roller Bearings	
Rear Spindle Mounting: One Norma Hoffman Straight Roller Bearing	
Hole through spindle	2⅛″
Morse taper of centers	No. 5
Spindle Nose, No. 2 Standard Key Drive, Taper Type	
Number of spindle speeds	24
Spindle Speeds: 9, 11, 13, 15, 18, 22, 26, 31, 36, 43, 52, 61, 73, 88, 105, 125, 144, 173, 206, 244, 294, 353, 420 and 500 R.P.M. For higher spindle speeds we recommend increasing the above range up to 50%.	
Number of thread and feed changes	55
Threads per inch—Right or left-hand: 1, 1⅛, 1¼, 1⅜, 1 7/16, 1½, 1⅝, 1¾, 1⅞, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 3¾, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 7½, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, 26, 28, 30, 32, 36, 40, 44, 46, 48, 52, 56, 60 and 64.	

SIZE OF LATHE	22″ x 48″ Between Centers
Range of feeds per revolution of spindle	.0025″ to .160″
Leadscrew diameter	1 15/16″
Leadscrew threads per inch	2 Acme
Tailstock spindle diameter	4″
Tailstock spindle travel	11″
Steady rest capacity:	
Standard	¾″ to 7½″
No. 1 oversize	7″ to 14″
Size of tool:	
Round tool post	⅞″ x 1¾″
High duty tool block—Square	1½″
Four-way tool block—Square	1½″
Taper Attachment:	
Maximum taper per foot	4″
Length at one setting	24″
Motor recommendations:	
H. P.	10-15-20
Speed of motor on head or at rear of leg—R.P.M.	1800
Speed of flange motor—R.P.M.	1200
Maximum overall diameter of flange motor	20″
Approximate domestic shipping weight, base length of bed	9500 lbs.
Extra for each additional 24″ between centers	650 lbs.

EQUIPMENT

Standard equipment regularly furnished with the 22″ Selective Head Lathe includes Mechanical Apron Control for twenty-four forward and reverse spindle speeds, a positive mechanical brake, large and small face plates, standard steady rest, round tool post, two centers, thread indicator, necessary wrenches and motor drive arrangement exclusive of electrical equipment.

The motor may be direct connected flange type or it may be mounted on top of head or at rear of headstock end leg and connected to driving sheave by multi-vee belts. Lathe can also be arranged for single pulley drive from lineshaft.

When ordering Flange Type Motors, specify ball bearing type complete with bells, splash guards and dynamically balanced armature and with check machined on front bell perfectly concentric and square with motor shaft. Dimension print should be sent to Lodge & Shipley for approval before order is placed.

THE LODGE & SHIPLEY MACHINE TOOL CO.
CINCINNATI, OHIO, U. S. A.

Publication No. 471–Z–136

PRINTED IN U. S. A.

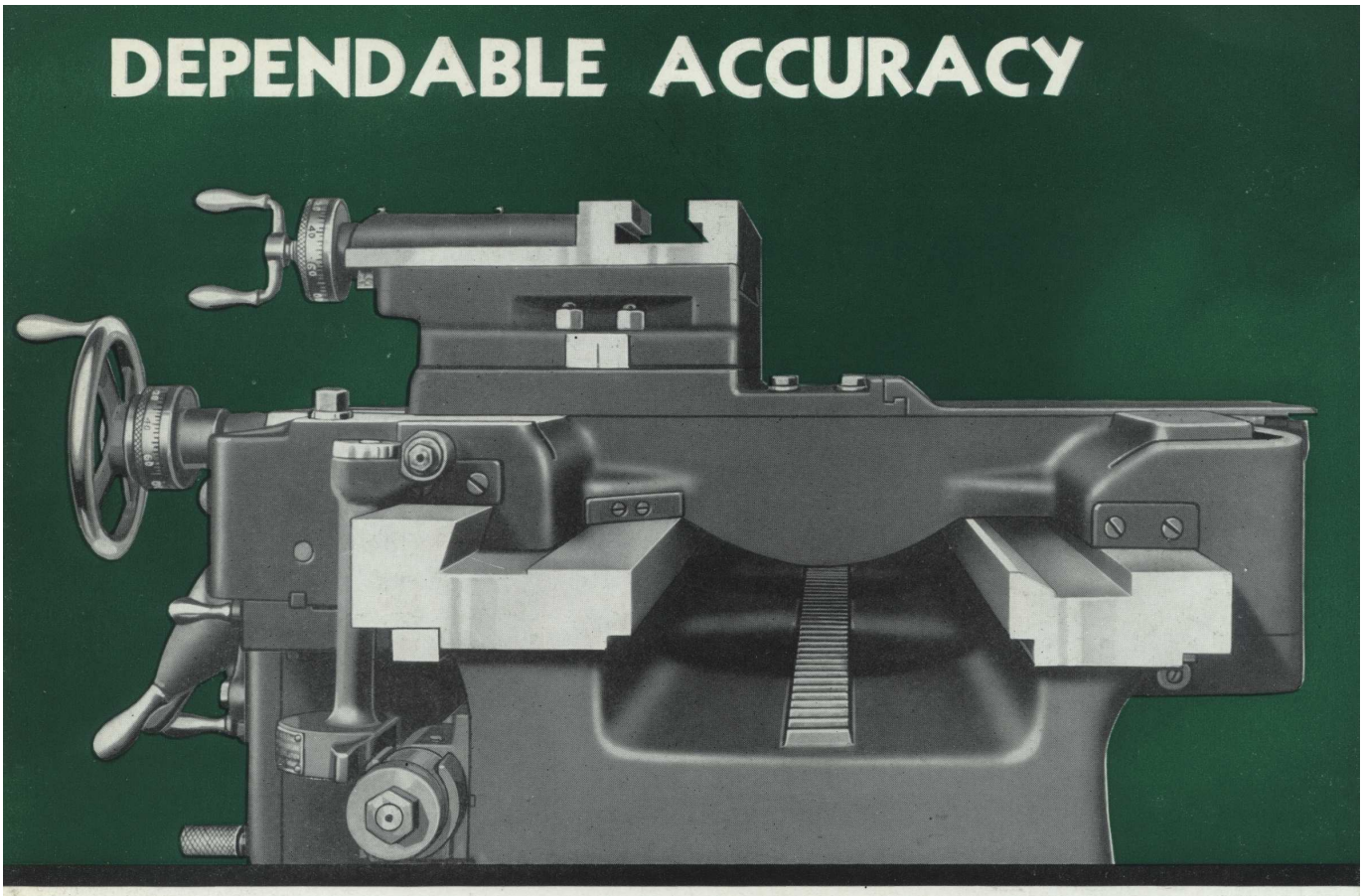
24"-27"

SELECTIVE HEAD LATHES

L&S LATHES

LODGE & SHIPLEY

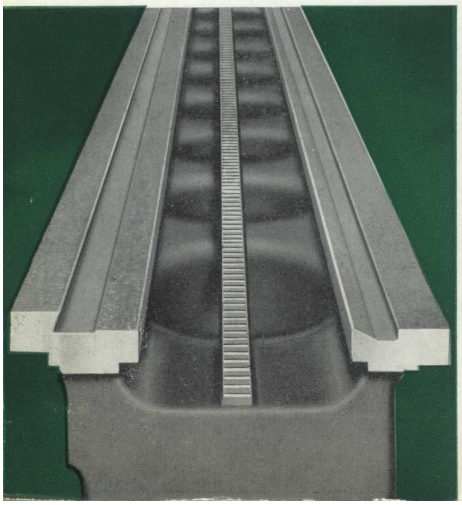
DEPENDABLE ACCURACY



Taking full advantage of the rock-like base provided by the new bed, the carriage is wider and deeper and brings a new degree of rigidity and strength.

All lift or twist of the carriage is positively prevented by the combination flat and taper guide way construction of the long, narrow guide formed by the front bearing way of the bed. The rack is directly in line with narrow guide way and further prevents the carriage twisting on the bed. Not only does the carriage bear on the usual front and rear bearing, but it takes a supplementary bearing on the inner flat of the front bed way. The unsupported span of the bridge is greatly reduced and wear is held to a minimum by this extremely large bearing area.

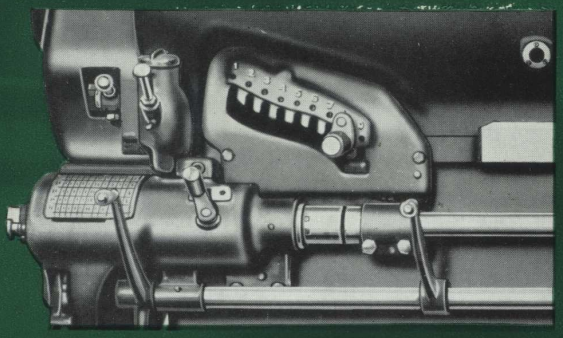
Automatic lubrication, plus a supplementary one-shot system for the carriage, apron and top slide, guarantee a gliding movement of the carriage along the bed and a consequent reduction of wear on all bearing surfaces.



Chromium plated to eliminate wear, the cross feed screw has ball-bearing end thrusts in both directions. Double compensating cross feed nuts are adjustable to take up back lash. For convenience in turning and threading operations an adjustable depth stop is provided by the micrometer ball stop on the cross feed screw. All dials are graduated in .001″.

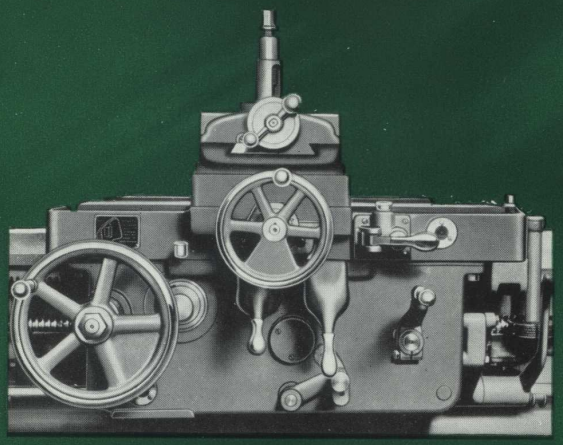
Braced by rigid elliptical girth construction, the bed has the new bearing ways that completely prevent lift or twist of the carriage. Possessing the strength to resist the heaviest hogging cut and retaining the accuracy which permits the most exacting operation, the new bed is a fit foundation for these lathes.

65 THREAD AND FEED CHANGES



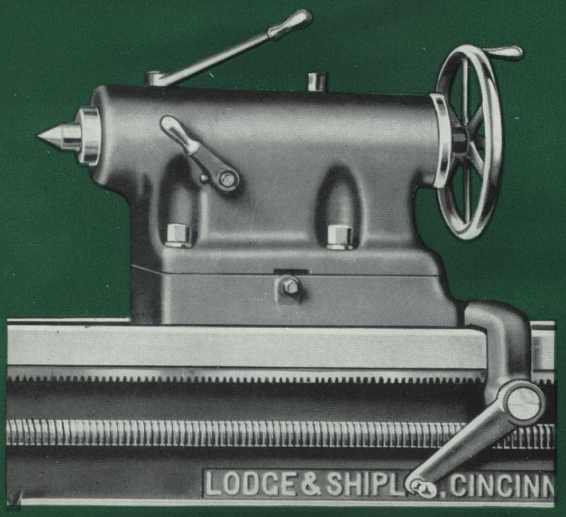
All requirements of modern lathe operation are met by the quick change gearing which provides 65 feed and thread changes from the extra fine feed of .0033″ to the very coarse feed of .832″, and from ½ to 128 threads per inch. One-shot lubrication for the quick change and end gearing assures long life of the unit. To avoid overhang and insure rigidity the cone of quick change gears is mounted in the center of the bed.

CENTRALIZED CONTROL



The double wall box type apron contains alloy steel gears carried on heat treated and ground shafts. A pump and reservoir system combined with a supplementary one-shot system provides a steady flow of lubricant to all bearing surfaces. All controls are conveniently located for ease of operation on the front of the carriage and apron. These units, like the entire lathe, are designed to remain permanently accurate under all types of service.

HEAVY-DUTY TAILSTOCK



Built to provide a permanently accurate support for any work that may be swung between centers, the new tailstock is massive in every detail. An unusually large spindle with ball bearing end thrust combines with an extremely large bearing area to provide a perfectly solid support. A rack and pinion arrangement is provided for the easy movement of the unit along the bed.

TOMORROW'S LATHE... TODAY!

INCORPORATING every feature necessary for easy and profitable operation, the new Lodge & Shipley 24" and 27" Selective Head Lathes are powerful, heavy duty machines which reflect in every detail the experience gained over many years of specialized manufacture of lathes. Whether the job be one requiring unusually close limits of accuracy or one where speedy removal of metal is necessary by heavy hogging cuts, these lathes provide an ease of operation which permits the operator to do far more and better work with less expenditure of effort.

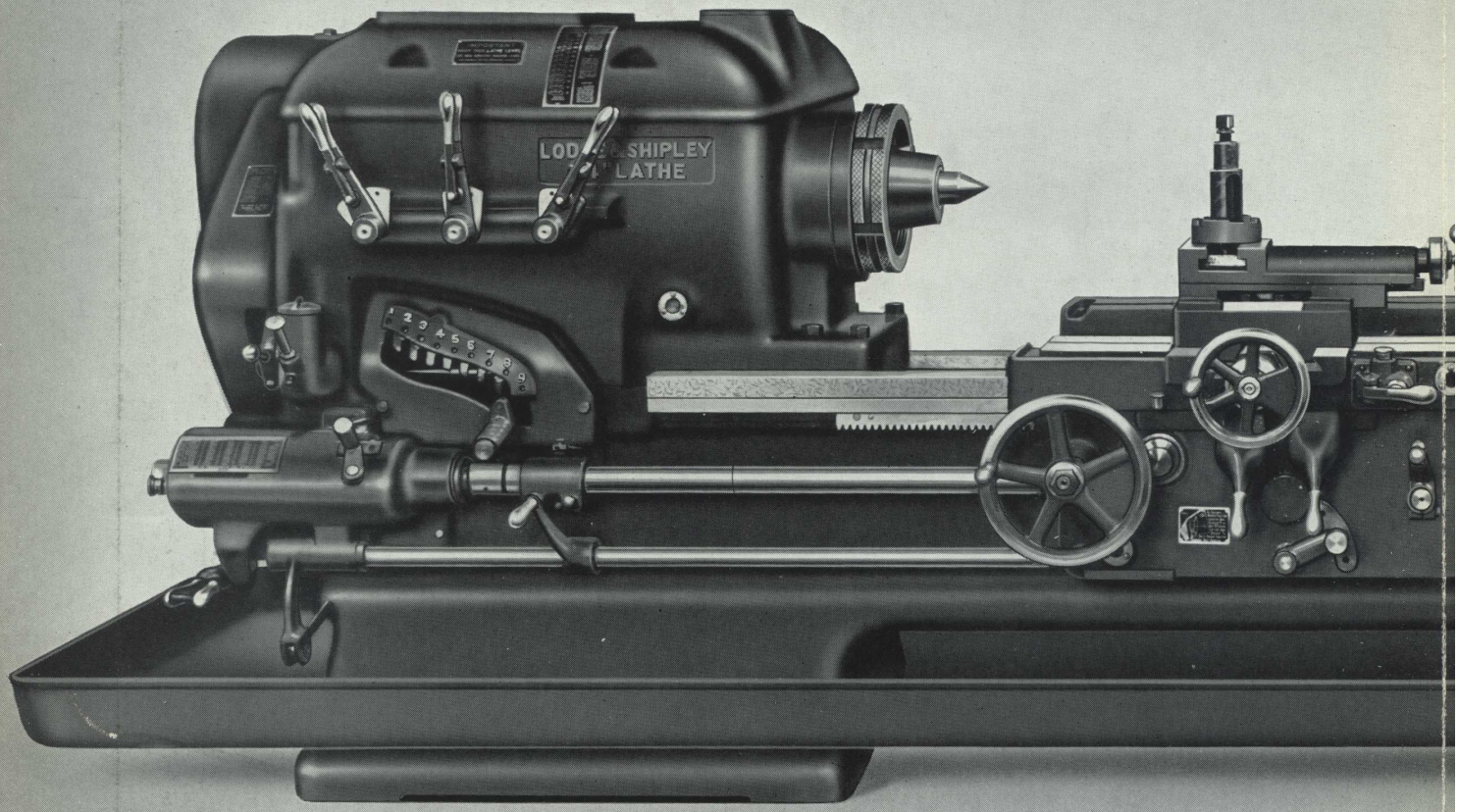
Rigidity of the entire unit is assured by the new elliptical girth, flat type bearing way lathe bed introduced by Lodge & Shipley. This new bed with the dovetail front way not only prevents carriage lift and minimizes wear through the employment of unusually large bearing surfaces, but also permits the heaviest hogging cuts with an amazing resistance to cutting stresses.

Abiding by a program followed since 1892, the new lathes are constructed of only the finest materials available and the design of every part of the unit is the result of years of specialized experience. The design, material and pride in craftsmanship combine to create a heavy duty lathe built for years of trouble-free operation.

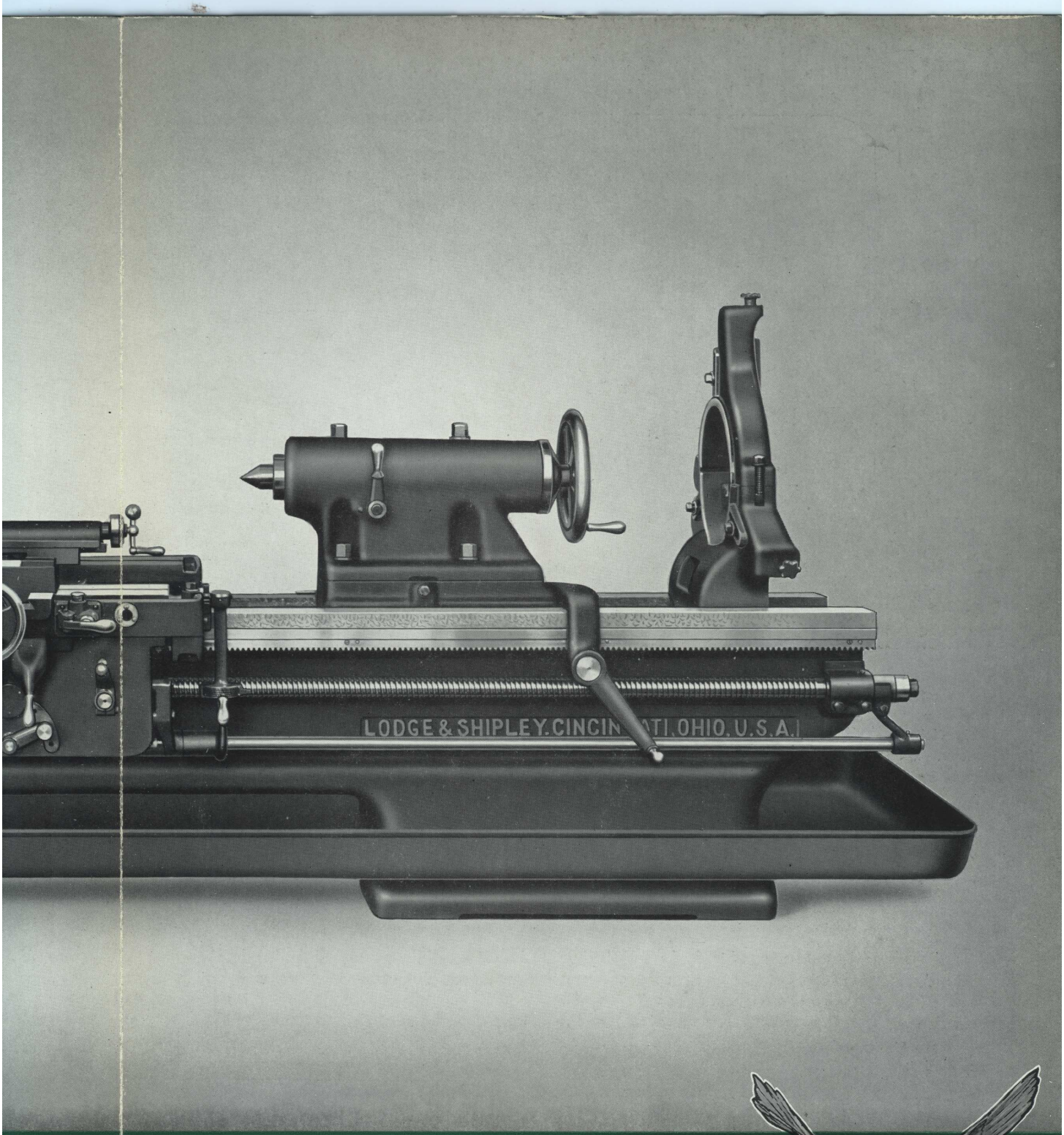
Proper lubrication for the entire lathe insures long lived accuracy. The headstock is automatically lubricated by a combined pump and splash system and the spindle bearings receive only filtered oil. A combined automatic and one-shot system for the apron, carriage and bed ways provides a maximum of lubrication at these points. Quick change and end gearing is lubricated by a one-shot system.

The twelve speed selective headstock with the new Key Drive Taper Type Spindle Nose provides a range of speeds which when coupled with the 65 threads and feeds available, permits the selection of the proper feed and speed for any job within the range of the lathe. Grouping of controls both at the headstock and apron further speeds operation.

The smooth, quiet transmission of power coupled with the phenomenal rigidity of the entire unit creates a lathe which will handle the heaviest types of work with an ease possible only with a tremendous reserve of strength and stamina. To see the new lathes in operation is to see modern tools possessing every attribute that makes for long, successful operation.



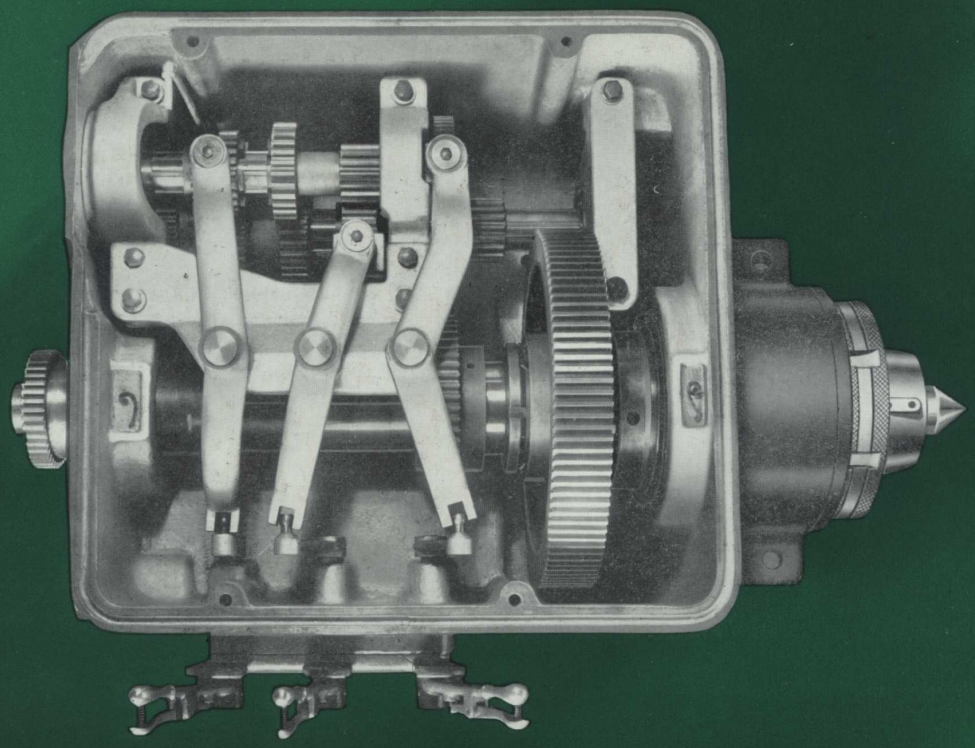
THE LODGE & SHIPLEY 24″ SELEC



ELECTIVE HEAD LATHE

L&S LATHES

GROUND-GEAR HEADSTOCK



Simplicity of design and massiveness of construction are the keynotes of the automatically lubricated headstock. Unusual rigidity is given to the entire headstock by the oversize hardened and ground spindle mounted in roller bearings which are in turn held in permanent alignment by the solid wall casting of the unit.

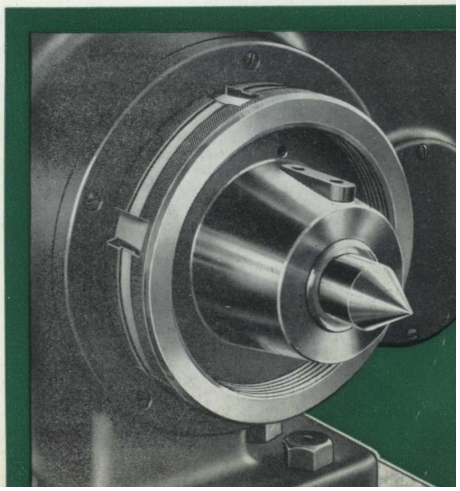
The headstock is designed to provide maximum horse power at all speeds. Heat treated, multi spline shafts supported in anti-friction bearings carry twelve spur tooth, hardened and ground gears. The bores of all gears are ground after hardening and the teeth are then finish ground, locating from the ground bore.

The resultant perfect tooth spacing and tooth contour of the gears combined with the inertia generated by the flywheel effect of the extremely large face gear mounted on the spindle, remove any possibility of gear marks on the work piece.

All of the mechanism is mounted in the base of the headstock casting and the removal of the headstock cover does not in any way disturb the alignment of the mechanism. Three easily operated levers mounted on the front of the headstock control the selection of twelve spindle speeds ranging in geometric progression from 8 to 331 R. P. M. on the 24″ lathe and from 7 to 298 R. P. M. on the 27″ lathe.

A groove in the headstock cover and in the heavy headstock base prevents oil seepage and returns the oil to the reservoir for redistribution by the combined pump and splash system.

Designed to meet every condition of modern lathe operation, the new No. 3 Size Key Drive Taper Spindle Nose on the 24″ and 27″ lathes is simple in design and operation. Unexcelled for accuracy and rigidity the new hardened and ground nose is a definite addition to the operating convenience of these lathes.



SPECIFICATIONS

24″ and 27″ SELECTIVE HEAD LATHES

SIZE OF LATHE	24″ x 48″ Between Centers	27″ x 48″ Between Centers
Swing over bed and carriage wings	27½″	30½″
Swing over cross slide	19″	22″
Swing over connected rear rest (if ordered)	14⅜″	15″
Distance between centers, base length:		
Tailstock flush	48″	48″
Tailstock overhung	54″	54″
Front Spindle Mounting: Two Timken Tapered Roller Bearings		
Rear Spindle Mounting: One Norma Hoffman Straight Roller Bearing		
Hole through spindle	2½″	2½″
Morse taper of centers	No. 6	No. 6
Spindle Nose No. 3 Standard Key Drive Taper Type		
Number of spindle speeds	12	12
24″ Spindle Speeds (Normal Range): 8, 12, 16, 22, 32, 44, 62, 88, 122, 169, 240 and 331		
24″ Spindle Speeds (High Range): 12, 18, 24, 33, 48, 66, 93, 132, 183, 254, 360 and 497		
27″ Spindle Speeds (Normal Range): 7, 11, 14, 20, 29, 40, [redacted] 56, 79, 110, 152, 216 and 298		
27″ Spindle Speeds (High Range): 10½, 16½, 21, 30, 43½, 60, [redacted] 84, 118½, 165, 228, 324 and 447		
Number of thread and feed changes	65	65

SIZE OF LATHE	24″ x 48″ Between Centers	27″ x 48″ Between Centers
Threads per inch—Right- or left-hand: 1/2, 9/16, 5/8, 11/16, 23/32, 3/4, 13/16, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-7/16, 1-1/2, 1-5/8, 1-3/4, 2, 2-1/4, 2-1/2, 2-3/4, 2-7/8, 3, 3-1/4, 3-1/2, 4, 4-1/2, 5, 5-1/2, 5-3/4, 6, 6-1/2, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112 and 128		
Leads coarser than 1″: 1-1/7, 1-3/13, 1-1/3, 1-9/23, 1-5/11, 1-3/5, 1-7/9 and 2		
Range of feeds per revolution of spindle	.0033″ to .832″	0033″ to .832″
Leadscrew diameter	2⅜″	2⅜″
Leadscrew threads per inch	2 Acme	2 Acme
Tailstock spindle diameter	4¾″	4¾″
Tailstock spindle travel	13″	13″
Steady Rest capacity:		
Standard	13½″	13½″
No. 1 Oversize	20″	20″
Size of tool:		
Round tool post	⅞″ x 1¾″	1″ x 2″
High Duty tool block-square	1½″	1¾″
Four-way tool block-square	1½″	1¾″
Taper Attachment:		
Maximum taper per foot	5″	5″
Length at one setting	30″	30″
Motor recommendations:		
H. P.	15-20-25	15-20-25
Speed of motor on head or at rear of leg	1200 R.P.M.	1200 R.P.M.
Approximate domestic shipping weight, base length of bed	13,000	14,000
Extra for each additional 24″ between centers	950	1,000

EQUIPMENT

Standard equipment regularly furnished with these Lathes includes mechanical apron control for twelve spindle speeds, a positive mechanical brake, large and small face plates, standard steady rest, round tool post, two centers, thread indicator, necessary wrenches and motor drive arrangement exclusive of electrical equipment.

Pan shown on inside illustration is not part of standard equipment and is furnished only when ordered.

The motor may be mounted on top of head or at rear of headstock end leg and connected to driving sheave by multi-vee belts. The lathe can also be arranged for single pulley drive from lineshaft.

A complete line of attachments can be furnished for these lathes. These are extras and are supplied only when ordered.

PUBLICATION No. 504-M-939

PRINTED IN THE UNITED STATES OF AMERICA

THE WORLD OVER KNOWN · FOR GOOD LATHES ONLY ·

L&S LATHES

LODGE & SHIPLEY

18″ & 20″
SELECTIVE HEAD
MANUFACTURING LATHES

7 Steps to Faster Production.

1 Multiple Length Stops consist of telescopic type stop dogs, adjustable along the stop bar, for automatically disengaging the longitudinal feed at any of five desired positions when feeding toward the headstock. Quick and easy to set up, the use of this attachment makes possible automatic duplication of shoulders on repetitive work. For extremely accurate work, the attachment is provided with a positive stop against which the carriage can be moved by hand after the feed is automatically disengaged.

2 Conveniently located on the cross feed screw the Multiple Diameter Stops are used for quickly duplicating diameters. Six stops are provided for the front tools and six for the rear tools. Although not automatic in operation, the Multiple Diameter Stops when used in conjunction with the automatic Multiple Length Stops eliminate cut and try methods and make appreciable time savings on lots of duplicate turnings.

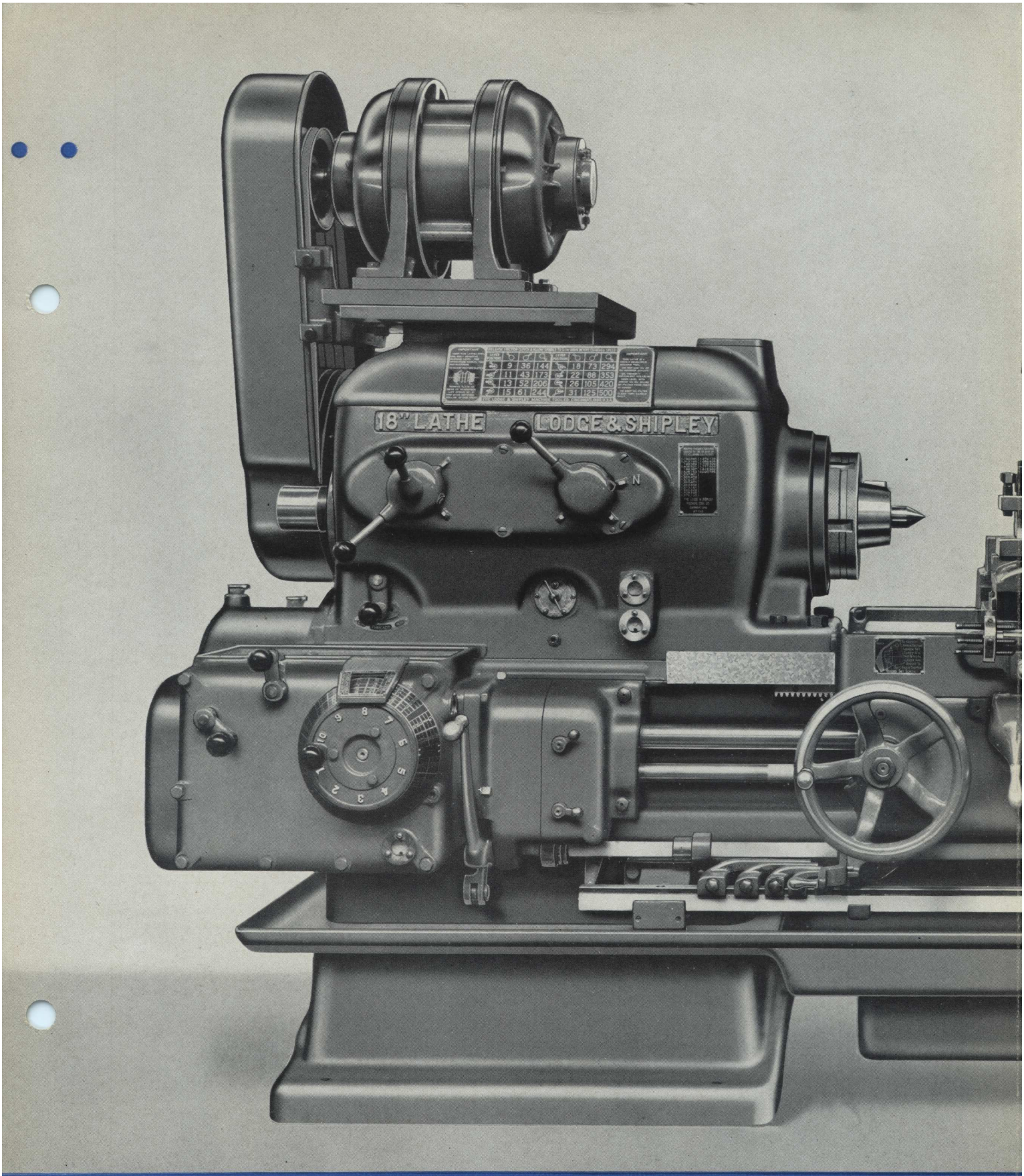
3 The Connected Rear Rest increases the tooling possibilities, since it enables mounting an additional tool holder or multiple tool holders for necking, grooving, forming and facing operations, practically doubling the productive capacity of the machine. The Rear Rest is connected to the compound rest and is controlled either by hand or power through the cross feed screw. The Tool Block is adjustable toward or away from center and has a standard "T" slot for interchangeability of all tool holders on front or rear rests.

4 Various operations can be performed without changing tools by mounting four different tools in the Four Way Tool Block. The block can be indexed to twelve equally spaced positions and each position is quickly located by a ball in the block slipping into a recess in the post. The unit can be repeatedly indexed to each position with not more than .001″ variation.

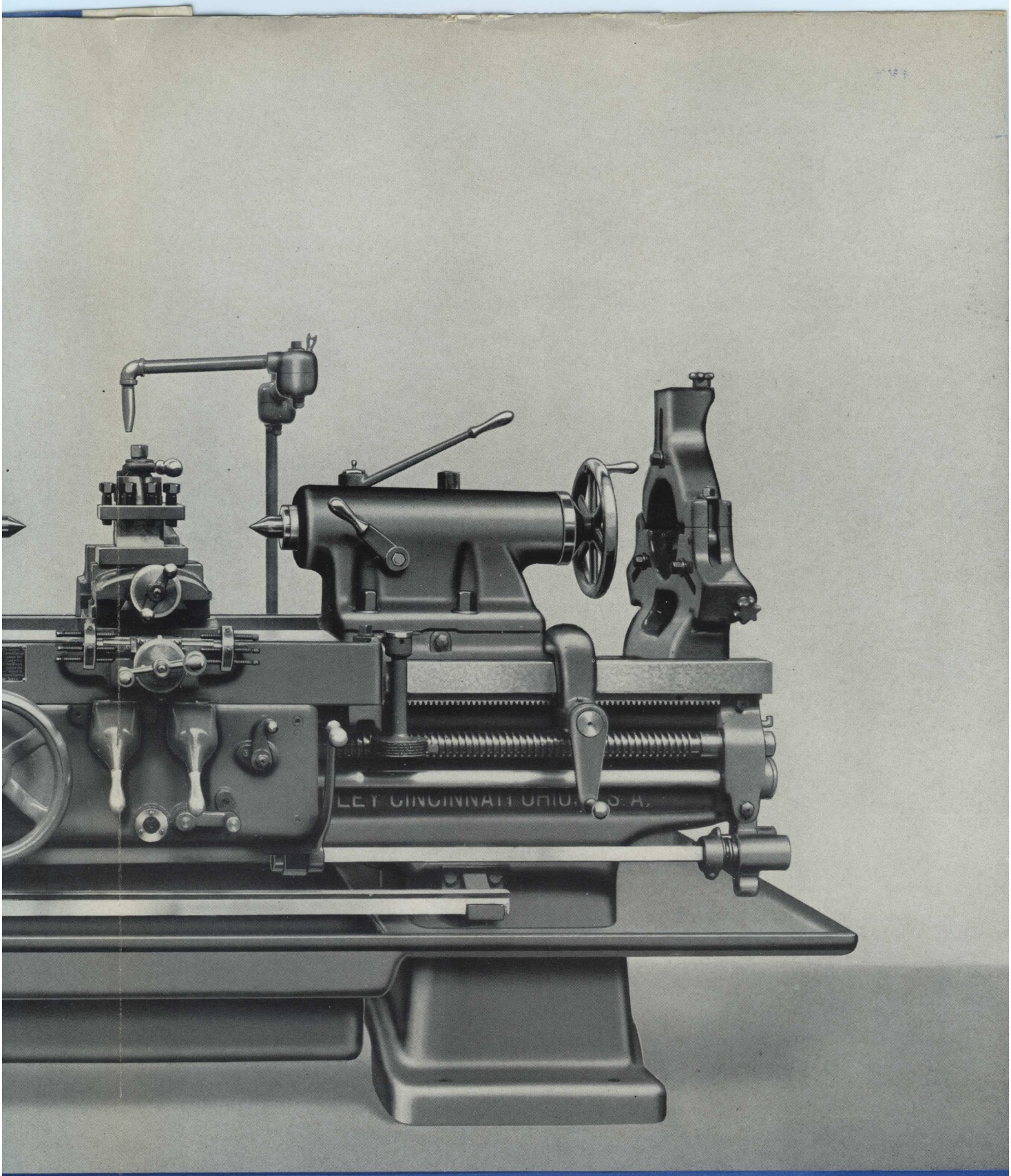
5 The pressed steel Pan extends the full length of the bed, keeping the floor around the machine clean and dry. It is equipped with strainer and an exceptionally large sump which can be filled to capacity and still keep the Pan free of lubricant.

6 The 18″ and 20″ Manufacturing Lathes are equipped with a motor driven centrifugal pump and suitable tubing delivering a deluge of coolant on tool and work, thus permitting the use of maximum cutting speeds without burning up the tool. The amount of cutting lubricant delivered is controlled by a valve in the tubing which is accessible to the operator in his normal working position.

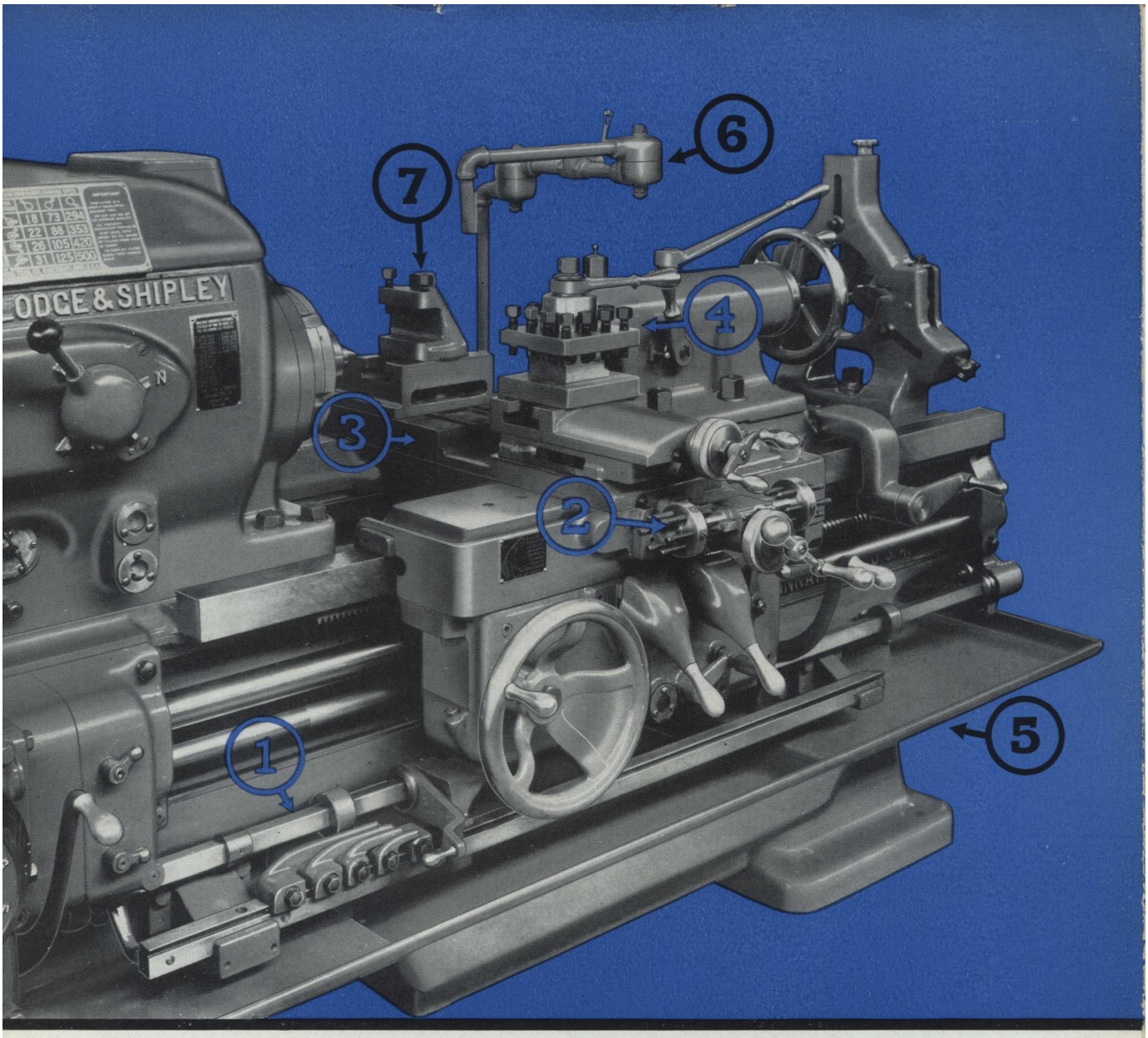
7 The High Duty Tool Block, of heavy construction and with double screws for holding the tool, is regular equipment on Manufacturing Lathes. It can be supplemented by or replaced with multiple tool holders at a slight added cost.



The 18" Selective Head



ead Manufacturing Lathe



DESIGNED to rival an automatic for production and retain the flexible utility of an engine lathe, the Manufacturing Lathes show phenomenal performance on repetitive lathe work. Any of the special attachments which make up the Manufacturing Lathe may be instantly disengaged and the machine can be used as a standard engine lathe.

The 18″ and 20″ Manufacturing Lathes with their twenty-four speed selective headstocks and range of fifty-five threads and feeds, increase production by fitting the proper cutting speed and feed to every job. Fast and accurate, Manufacturing Lathes are an investment in production efficiency.

SPECIFICATIONS

18″ & 20″ SELECTIVE HEAD

MANUFACTURING LATHES

SIZE OF LATHE	18″ x 30″ Between Centers	20″ x 48″ Between Centers
Swing over bed and carriage wings	20½″	22½″
Swing over cross slide	13½″	15″
Swing over connected rear rest	10⅝″	11½″
Distance between centers, base length:		
Tailstock flush	30″	48″
Tailstock overhung	34″	52″
Front Spindle Mounting:		
Two Timken Tapered Roller Bearings		
Rear Spindle Mounting:		
One Norma Hoffman Straight Roller Bearing		
Hole through spindle	2⅛″	2⅛″
Morse taper of centers	No. 5	No. 5
Spindle Nose, No. 2 Standard Key Drive, Taper Type		
Number of spindle speeds	24	24
Spindle Speeds: 9, 11, 13, 15, 18, 22, 26, 31, 36, 43, 52, 61, 73, 88, 105, 125, 144, 173, 206, 244, 294, 353, 420 and 500 R.P.M.		
For higher spindle speeds we recommend increasing the above range up to 50%.		
Number of thread and feed changes	55	55
Threads per inch—Right or left-hand: 1, 1⅛, 1¼, 1⅜, 1 7/16, 1½, 1⅝, 1¾, 1⅞, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 3¾, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 7½, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, 26, 28, 30, 32, 36, 40, 44, 46, 48, 52, 56, 60 and 64.		

SIZE OF LATHE	18″ x 30″ Between Centers	20″ x 48″ Between Centers
Range of feeds per revolution of spindle	.0025″ to .160″	.0025″ to .160″
Leadscrew diameter	1 15/16″	1 15/16″
Leadscrew threads per inch	2 Acme	2 Acme
Tailstock spindle diameter	3½″	4″
Tailstock spindle travel	10″	11″
Steady rest capacity:		
Standard	¾″ to 7″	¾″ to 7½″
No. 1 oversize	6½″ to 12″	7″ to 14″
Size of tool:		
Round tool post	¾″x1½″	⅞″x1¾″
High duty tool block—Square	1⅛″	1½″
Four-way tool block—Square	1⅛″	1½″
Taper attachment:		
Maximum taper per foot	4″	4″
Length at one setting	24″	24″
Motor recommendations:		
H.P.	7½-10-15	7½-10-15
Speed of motor on head or at rear of leg—R.P.M.	1800	1800
Speed of flange motor—R.P.M.	1200	1200
Maximum overall diameter of flange motor	20″	20″
Approximate domestic shipping weight, base length of bed	8500 lbs.	9500 lbs.
Extra for each additional 2 feet of bed	600 lbs.	650 lbs.

Regular equipment furnished with Manufacturing Lathes includes Large and Small Face Plates, Standard Steady Rest, Two Centers, Two Adjustable Automatic Length Stops, one for either direction of carriage travel when feeding only, Thread Indicator, Pan, Pump and Tubing, Multiple Length and Diameter Stops, Four-way Tool Block, Connected Rear Rest with High Duty Tool Block, necessary Wrenches and Motor Drive Arrangement exclusive of Electrical Equipment.

The motor may be direct connected flange type or it may be mounted on top of head or at rear of headstock end leg and connected to driving sheave by multi-vee belts. Lathe can also be arranged for single pulley drive from lineshaft.

When ordering motors for mounting at the rear of the head end leg, the motor should be ordered arranged for wall mounting with the feet on the right hand side facing the shaft end of the motor. Sleeve bearing motors should have oiling arrangements suitable for the above mounting. The motor terminal box should be directly opposite the feet.

When ordering Flange Type Motors, the motor must be of a type which will fit one of the several housings designed for this type application. A dimension print of the motor must be submitted for approval before the order is finally placed with the motor manufacturer. All orders for flange type motors should specify ball bearing flange type motors without feet, open type with semi-enclosing covers. The maximum frame size is NEMA 365 or equivalent. The shoulder or recess on the front bell or flange must be square and concentric with shaft. The motor armature must be dynamically balanced. The motor terminal box must be on the right hand side facing the shaft end of the motor.

A combination of Multiple Length Stops and Reverse to Leadscrew cannot be supplied for 18″ and 20″ lathes.

THE LODGE & SHIPLEY MACHINE TOOL CO.

CINCINNATI, OHIO, U. S. A.

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