Machine Tools

JES!

Fay & Scott
DexterMaine USA

FAY & SCOTT

Builders of

Lathes

For Metal and Wood Turning

Index Centers

For Planers, Millers and Shapers

Special Machinery

Of any description, to specifications

DEXTER, ME., U. S. A.

Officers

N. H. FAY, President

W. L. FAY, Vice President and General Manager

P. S. PLOUFF, Assistant Manager



ESTABLISHED 1881

INCORPORATED 1900

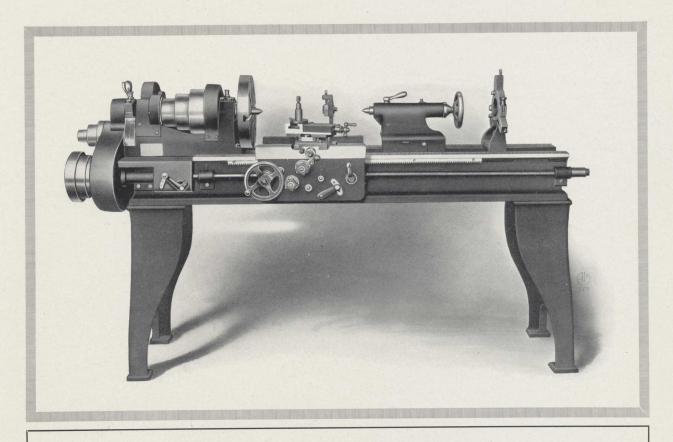
Mar. '19-5M

INTRODUCTION

- Our Plant is located at Dexter, Maine, in the central part of the State, a situation possessing many natural advantages in the way of water power, freight facilities, freedom from labor troubles, strikes, etc.
- Our Shops, including our own foundry, are of brick construction, equipped with the most modern machinery, and are specially arranged for the manufacture of lathes, of which we make a specialty.

INFORMATION

- Delivery. Our quotations cover delivery free on board cars at Dexter.
- Terms. Thirty days net cash when credit is satisfactory.
- Agents. We have agents in many of the large cities, and will gladly give you the name of the agent representing us in your territory, or make you quotations direct.
- **Boxing.** Machines for export will be charged for at cost. Machines for domestic shipment will be crated free of cost.
- Erecting Plans. These show floor space and countershaft arrangement, and will be forwarded on application.
- Repair Parts. In ordering repair parts for any of our lathes, give the Serial Number of the lathe, which will be found stamped on the back end, between the tracks; it is also well to give description of parts required, with a few of the principal dimensions. If these instructions are followed, it will enable us to furnish repair parts without liability of error and avoid expense of returning the broken parts to us.



Standard Engine Lathe

THREE-STEP CONE HEAD DOUBLE BACK GEARED

This Lathe is designed to supply the demand for a machine of maximum strength and durability, combined with minimum weight and price.

The former conditions have been met by the proper distribution of metal, determined by a careful study of the stresses to which a Lathe is subjected under the most trying conditions; the latter by using nothing but the highest grade of material, bringing out hundreds of duplicate parts by means of special machinery, in a well systemized shop, by a corps of skilled mechanics.

Code Word: Dusky

Swings over shear, Swings over carriage, Swings over elevating carriage, Distance between centers, six-foot bed, 3-Step Cone dia. double B. G., Width of belt, 3-step Cone, 4-Step Cone dia. single B. G. Width of belt, 4-step Cone 1st Back gear ratio, 2nd Back gear ratio, Hole through spindle, Head spindle front bearing, Head spindle diameter threaded nose, Head spindle number of threads on nose,	$ \begin{array}{c} 2^{1}4'' \\ 10 \text{ to } 1 \\ 4.5 \text{ to } 1 \\ 1^{\frac{5}{16}}'' \end{array} $	Head spindle taper of collet, Head spindle taper of centers, Morse No. Tail spindle diameter, Tail spindle travel, Cut threads, Countershaft friction driving pulleys, Countershaft speed, forward and reverse, Size of tool, Center rest takes in, Follow rest takes in, Angular travel of compound rest, Lead screw threads per inch, Weight of six-foot lathe, Weight per foot of additional bed,	34"=12" 3 1½" 5½" 4 to 64 10 x 3" 210—235 ½ x 1" 3½" 1½" 234" 8 threads 1,150 lbs. 50 lbs.
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For description of details of design, see reverse side.

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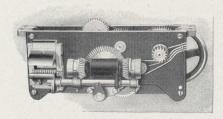
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DEXTER, ME. U. S. A.

Jan. '15-4M



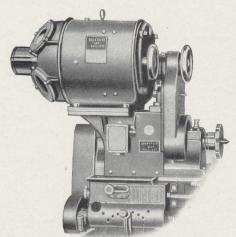
BED is very deep, with liberal number of box tie-wards to insure stiffness and is cut away at the rear end to allow overhang or removal of the Tailstock. The V's have liberal wearing surfaces, with tops slightly rounded. The inside front track is a flat bearing, which forms a solid support for the Bridge of the Carriage.



HEADSTOCK having Three Step Cone and Double Back Gear, gives a geometrical progression of spindle speeds, with a nicely proportioned cone, maximum belt speed and contact, and a Drive twice as powerful as with Single Back Geared Head. The Spindle is hollow, made of hammered steel, with ground bearings and as large a hole as possible, without impairing its stiffness. Journals are of phosphor bronze, carefully scraped and fitted. Back Gear has Positive Locking Device. All Gears are fully enclosed by substantial Guards.

TAILSTOCK is of the cut-away type, which allows the compound rest to be swung around parallel to the ways of the Bed, and is provided with set-over, for taper work. The Spindle is clamped by a Device consisting of split bushings, operated without danger of throwing the Spindle out of alignment.

CARRIAGE is strongly reinforced at the waist, with full length solid bearings on the V's and is securely gibbed to the Bed. Waist of Carriage has additional support provided by a bearing on the flat inside front track

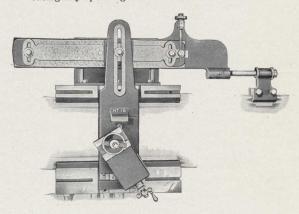


of the Bed. Compound Rest is graduated in degrees; has long traverse and taper gib adjustable for wear. Both Cross Feed and Compound Rest Screws are provided with adjustable graduated Index Collars.

APRON is the double plate, bevel gear driven type with feed reverse. All Gears are cut from the solid. All Studs are ground and have long bearings at each end, thus insuring long life. A Device is provided for preventing the simultaneous engagement of feeds and thread cutting. Star Feed Knobs, which furnish a good grip for the hands of the Operator, are provided on the Apron Frictions.

FEED WORKS: Both belt and gear feeds are available by means of (patented) Lead Screw Clutch, through which, a change from one to the other can instantly be made, without stopping the Lathe. A full set of Change Gears is furnished. A spline runs the whole length of Lead Screw, for driving the Apron Bevel Gears, but the threads of the Lead Screw are never in use, except in thread cutting.

QUICK CHANGE GEAR is a special feature and can be furnished in place of the regular Feed Works. All threads and feeds can be changed by manipulating two levers, without stopping the Lathe. These changes can be multiplied indefinitely, by substituting any special gears at the end of the Lathe.

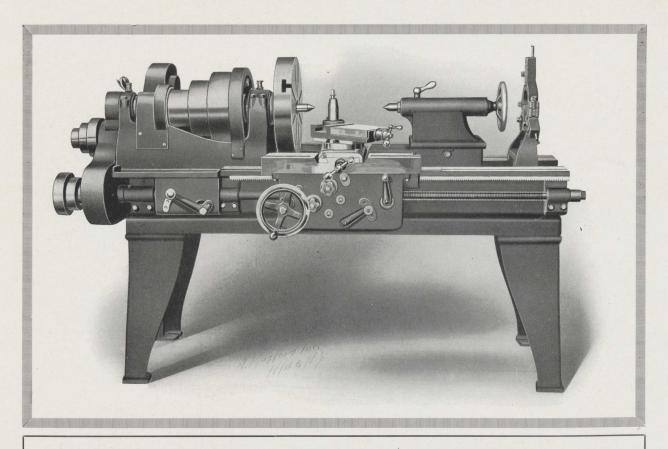


TAPER ATTACHMENT can be readily applied to Lathes after leaving our Works, as the Carriages are drilled to Jig, ready to receive same, with a small amount of fitting. The Attachment is supported by a bracket which is bolted to, and travels with the Carriage, consequently available for instant use at whatever part of the bed, the Carriage may be.

EQUIPMENT consists of Compound Rest, Center Rest, Large and Small Faceplates, Double Friction Countershaft, Wrenches and complete set of Change Gears.

EXTRAS can be furnished as follows: Taper Attachment, Quick Change Gear, Elevating Carriage, Oil Pan, Draw-in Chuck, Friction Head, Turrets fitted to Carriage, or V's. Five Step Cone (optional) in place of Standard Equipment.

MOTOR DRIVE can be furnished to suit varying conditions. Our regular method of application is to mount the Motor on a bracket over the Headstock, gearing direct to the lathe spindle, using an adjustable speed Motor.



Standard Engine Lathes 16, 18, and 20-INCH.

THREE-STEP CONE HEAD DOUBLE BACK GEARED

	0112			DEED DITOIL C	DILLEL	
Code Word				"Delco"	"Dulac"	"Dogit"
Size of Lathe				16"	18"	20"
Swings over shear,				17"	19"	20 ½"
Swings over carriage.				11"	13"	14"
Swings over elevated carriage,				10"	12"	
Distance between centers, six-foot bed.				26"	26"	20"
3-Step Cone dia. double B. G., Width of belt, 3-step Cone, 5-Step Cone dia. single B. G., (optional)			LE PA	7½ to 11½"	7½ to 11½"	8 to 12"
Width of belt, 3-step Cone.				3"	3"	4"
5-Step Cone dia, single B. G., (optional)				4 to 11 ½"	4 to 11 ½"	4½ to 12"
Width of belt, 5-step Cone.				21/2"	21/2"	3"
1st back gear ratio.				12 to 1	12 to 1	12 to 1
Width of belt, 5-step Cone, 1st back gear ratio, 2nd back gear ratio,				3 to 1	3 to 1	3 to 1
Hole through spindle,				1 3/8"	13/8"	$1\frac{9}{16}''$
Head spindle front bearing,				27/8 x 5"	27/8 x 5"	33/8 x 5 1/8"
Head spindle rear bearing,				21/4 x 37/8"	21/4 x 37/8"	21/4 x 37/8"
Head spindle diameter threaded nose,				21/2"	21/2"	3 1/4"
Head spindle number of threads on nose,				5 U. S. S.	5 U. S. S.	6 U. S. S.
Head spindle taper of collet, Morse No., .				5	5	5
Head spindle taper of centers, Morse No.,				4	4	4
Tail spindle diameter,				1 7/8"	1 7/8"	2 1/2"
Tail spindle travel,				6 1/2"	6 1/2 "	9"
Cut threads,				2 to 22	2 to 22	2 to 22
Countershaft friction driving pulleys,				12 x 4"	12 x 4"	15 x 4 ½"
Countershaft speed, forward and reverse,				140-200	140-200	120-175
Size of tool,				5/8 x 1 1/4"	5/8 x 1 1/4"	5/8 x 1 1/4"
Center rest takes in,				5"	5"	71/2"
Angular travel of compound rest,				43/4"	13/4"	
Lead screw threads per inch,				4	4	4
Weight of six-foot lathe,				2.400 lbs.	2,500 lbs.	3,700 lbs.
Weight per foot of additional bed,		Sign Sign		100 lbs.	100 lbs.	150 lbs.
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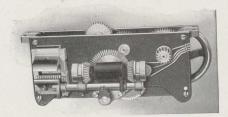
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DEXTER, ME. U. S. A.

June '20-4M



BED is very deep, with liberal number of box tie-wards to insure stiffness and is cut away at the rear end to allow overhang or removal of the Tailstock. The V's have liberal wearing surfaces, with tops slightly rounded. The inside front track is a flat bearing, which forms a solid support for the Bridge of the Carriage.



HEADSTOCK having Three Step Cone and Double
Back Gear, gives a geometrical progression of spindle speeds, with a nicely proportioned cone, maximum belt speed and contact, and a Drive twice as
powerful as with Single Back Geared Head. The
Spindle is hollow, made of hammered steel, with
ground bearings and as large a hole as possible,
without impairing its stiffness. Journals are of
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Back Gear has Positive Locking Device. All
Gears are fully enclosed by substantial Guards.

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CARRIAGE is strongly reinforced at the waist, with full length solid bearings on the V's and is securely gibbed to the Bed. Waist of Carriage has additional support provided by a bearing on the flat

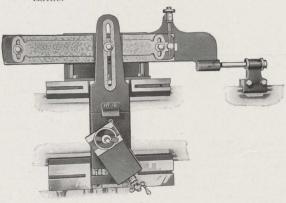


inside front track of the Bed. Compound Rest is graduated in degrees; has long traverse and taper gib adjustable for wear. Both Cross Feed and Compound Rest Screws are provided with adjustable graduated Index Collars.

APRON is the double plate, bevel gear driven type with feed reverse. All Gears are cut from the solid. All Studs are ground and have long bearings at each end, thus insuring long life. A Device is provided for preventing the simultaneous engagement of feeds and thread cutting. Star Feed Knobs, which furnish a good grip for the hands of the Operator, are provided on the Apron Frictions.

FEED WORKS: Both belt and gear feeds are available by means of (patented) Lead Screw Clutch, through which, a change from one to the other can instantly be made, without stopping the Lathe. A full set of Change Gears is furnished. A spline runs the whole length of Lead Screw, for driving the Apron Bevel Gears, but the threads of the Lead Screw are never in use, except in thread cutting.

QUICK CHANGE GEAR is a special feature and can be furnished in place of the regular Feed Works. All threads and feeds can be changed by manipulating two levers, without stopping the Lathe. These changes can be multiplied indefinitely, by substituting any special gears at the end of the Lathe.

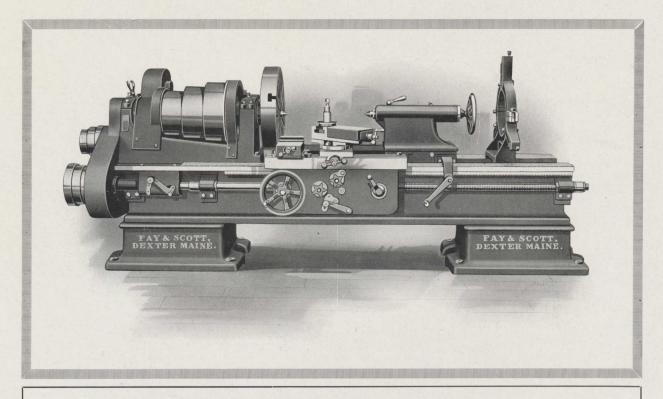


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EQUIPMENT consists of Compound Rest, Center Rest, Large and Small Faceplates, Double Friction Countershaft, Wrenches and complete set of Change Gears.

EXTRAS can be furnished as follows: Taper Attachment, Quick Change Gear, Elevating Carriage, Oil Pan, Draw-in Chuck, Friction Head, Turrets fitted to Carriage, or V's. Five Step Cone (optional) in place of Standard Equipment.

MOTOR DRIVE can be furnished to suit varying conditions. Our regular method of application is to mount the Motor on a bracket over the Headstock, gearing direct to the lathe spindle, using an adjustable speed Motor.



Standard Engine Lathes 24, 28, and 32-INCH. THREE-STEP CONE HEAD DOUBLE BACK GEARED

THREE-STEI	CI	THE	TILLI	U	DOU	DEE DROK C	LIKED	
Code Word						"Damit"	"Daton"	"Disco"
Size of Lathe						24"	28"	32"
Swings over shear,						24 3/4"	28 ½"	32 1/2"
Swings over shear,						17 ½"	20"	24 1/2"
Distance between centers, ten-foot bed,						60"	54"	54"
3-Step Cone dia. double B. G.,						9½ to 16¼"	12½ to 17½"	12½ to 17½"
Width of belt, 3-step Cone,						4 1/2"	5 1/2"	51/2"
5-Step Cone dia. single B. G. (optional),						6 1/4 to 15 3/4"	7½ to 17½"	7½ to 17½"
Width of belt, 5-step Cone,			. 02			31/2"	4"	4"
1st back gear ratio,						12 to 1	12 to 1	12 to 1
2nd back gear ratio		70				4 to 1	4 to 1	4 to 1
Hole through spindle,						$2\frac{1}{16}''$	$2\frac{1}{16}''$	$\frac{2\frac{1}{16}''}{}$
Hole through spindle,					1000	4 x 63/8"	4 x 7"	4 x 7"
Head spindle rear bearing,						$3 \times 4 \frac{3}{16}''$	27/8 x 51/2"	27/8 x 51/2"
Head spindle diameter threaded nose,						3 1/2"	4"	4"
Head spindle number of threads on nose		7 10 8 10				5 U. S. S.	4 U. S. S.	4 U. S. S.
Head spindle taper of collet, Morse No.,						6	6	6
Head spindle taper of centers, Morse No						5	5	5
Tail spindle diameter,						21/2"	27/8"	27/8"
Tail spindle travel.						11"	11"	11"
Cut threads,						2 to 22	2 to 22	2 to 22
Countershaft friction driving pulleys,						15 x 4 ½"	18 x 5"	18 x 5"
Countershaft speed, forward and reverse						120-175	110-150	110-150
Size of tool,						7/8 x 1 3/4"	1 x 2"	1 x 2"
Center rest takes in,						10"	12"	12"
Angular travel of compound rest, .						6"	7"	7"
Lead screw threads per inch,						4	4	4
Weight of ten-foot lathe,						4.800 lbs.	6,100 lbs.	6,400 lbs.
Weight per foot of additional bed, .	1					185 lbs.	240 lbs.	240 lbs.

NOTE:—The 32" Lathe is also furnished regularly, raised in the solid to 36" swing. For description of details of design, see reverse side.

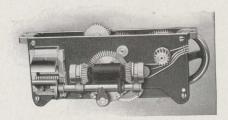
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DEXTER, ME. U. S. A.

June '20-4M

TOOLS

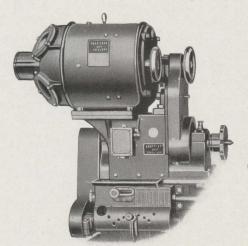
BED is very deep, with liberal number of box tie-wards to insure stiffness and is cut away at the rear end to allow overhang or removal of the Tailstock. The V's have liberal wearing surfaces, with tops slightly rounded. The inside front track is a flat bearing, which forms a solid support for the Bridge of the Carriage.



HEADSTOCK having Three Step Cone and Double Back Gear, gives a geometrical progression of spindle speeds, with a nicely proportioned cone, maximum belt speed and contact, and a Drive twice as powerful as with Single Back Geared Head. The Spindle is hollow, made of hammered steel, with ground bearings and as large a hole as possible, without impairing its stiffness. Journals are of phosphor bronze, carefully scraped and fitted. Back Gear has Positive Locking Device. All Gears are fully enclosed by substantial Guards.

TAILSTOCK is of the cut-away type, which allows the compound rest to be swung around parallel to the ways of the Bed, and is provided with set-over, for taper work. The Spindle is clamped by a Device consisting of split bushings, operated without danger of throwing the Spindle out of alignment.

CARRIAGE is strongly reinforced at the waist, with full length solid bearings on the V's and is securely gibbed to the Bed. Waist of Carriage has additional support provided by a bearing on the flat

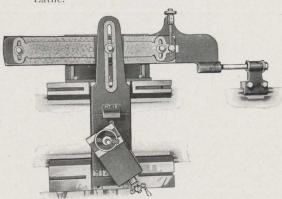


inside front track of the Bed. Compound Rest is graduated in degrees; has long traverse and taper gib adjustable for wear. Both Cross Feed and Compound Rest Screws are provided with adjustable graduated Index Collars.

APRON is the double plate, bevel gear driven type with feed reverse. All Gears are cut from the solid. All Studs are ground and have long bearings at each end, thus insuring long life. A Device is provided for preventing the simultaneous engagement of feeds and thread cutting. Star Feed Knobs, which furnish a good grip for the hands of the Operator, are provided on the Apron Frictions.

FEED WORKS: Both belt and gear feeds are available by means of (patented) Lead Screw Clutch, through which, a change from one to the other can instantly be made, without stopping the Lathe. A full set of Change Gears is furnished. A spline runs the whole length of Lead Screw, for driving the Apron Bevel Gears, but the threads of the Lead Screw are never in use, except in thread cutting.

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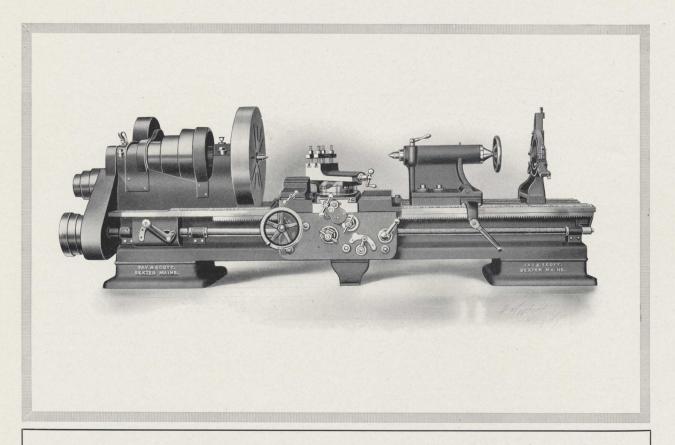


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EQUIPMENT consists of Compound Rest, Center Rest, Large and Small Faceplates, Double Friction Countershaft, Wrenches and complete set of Change Gears.

EXTRAS can be furnished as follows: Taper Attachment, Quick Change Gear, Elevating Carriage, Oil Pan, Draw-in Chuck, Friction Head, Turrets fitted to Carriage, or V's. Five Step Cone (optional) in place of Standard Equipment.

MOTOR DRIVE can be furnished to suit varying conditions. Our regular method of application is to mount the Motor on a bracket over the Headstock, gearing direct to the lathe spindle, using an adjustable speed Motor.



Standard Engine Lathe

38-Inch Size

THREE-STEP CONE HEAD DOUBLE BACK GEARED

This Lathe is massive to a degree that will satisfy the requirements of the most exacting. Heavy enough to absorb all vibrations, due to high speeds, and feeds of present day practice. On this size of Lathe we generally recommend the Triple Back Geared Head, which provides a direct drive into the large Face Plate. This feature is furnished at an additional price. The Compound Rest, unlike the rest of our line, is regularly furnished with angular power feed.

Code Word: Duxol

Swings over shear,	39"	Head spindle taper of collet, B. & S. No.	18
Swings over carriage,	261/2"	Head spindle taper of centers, Morse No.	6
Distance between centers, ten-foot bed,	34''	Tail spindle diameter,	4 ³ / ₈ " 15"
3-Step Cone dia. double B. G.	153/4-19-221/4	Tail spindle travel,	15"
Width of belt, 3-step Cone,	4"	Cut threads,	1 to 12
1st back gear ratio,	11½ to 1	Countershaft friction driving pulleys, .	20 x 61/4"
2nd back gear ratio,	4 to 1	Countershaft speed, forward and reverse,	100-125
Hole through spindle,	$3\frac{1}{16}''$	Size of tool,	$1\frac{1}{2} \times 2\frac{1}{4}''$
Head spindle front bearing,	$6\frac{1}{4} \times 10\frac{5}{16}$ "	Center rest takes in,	103/4"
Head spindle rear bearing,	$4\frac{1}{2} \times 6\frac{7}{8}''$	Angular travel of compound rest,	$12\frac{1}{2}''$
Head spindle diameter threaded nose,	5"	Lead screw threads per inch,	2
Head spindle number of threads on nose,	3 U.S.S.	Weight of ten-foot lathe,	13.000 lbs.
5-Step Cone dia. single B. G.	9-22"	Weight per foot of additional bed.	350 lbs.
Width of belt, 5-step Cone optional	4''		

NOTE:—The 38" Lathe is also furnished regularly, raised in the solid to swing 42". For description of details of design, see reverse side.

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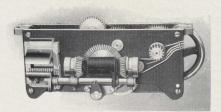
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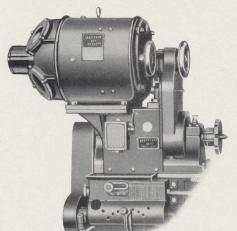
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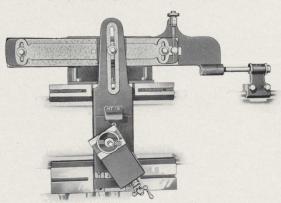


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