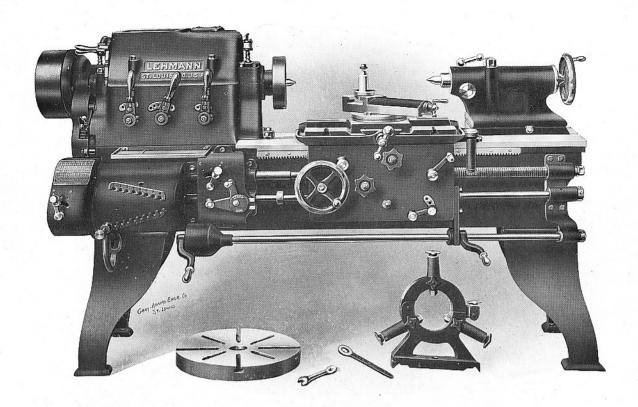
LEHMANN MACHINE COMPANY

MANUFACTURERS OF

ENGINELATHES

ST. LOUIS, MO.



16" Selective Head Engine Lathe

Swings over Shear
Swings over Carriage
Takes between Centers, 9' bed 5
Tailstock Spindle Travel 7½"
Tailstock Spindle Diameter 2½"
Taper of Center
Front Spindle Bearing3-5/16"x5"
Rear Spindle Bearing2-1/16"x4"
Hole through Spindle1-5/16"
Diameter of Spindle Nose 23/4"
Number of Threads on Spindle Nose 5 U. S. S.
Highest Gear Ratio
Width of Belt 4
Driving Pulley Diameter 10½"
Revolutions of Driving Pulley 300

Number of Spindle Speeds
Minimum and Maximum Spindle Speeds11.5-450
Size and Speed of Motor Required2 or 3 H. P.
1200 R. P. M.
Number of Thread and Feed Changes 48
Lathe cuts following threads: 2, 21/4, 21/2,
$2\frac{3}{4}$, $2\frac{7}{8}$, 3 , $3\frac{1}{4}$, $3\frac{1}{2}$, 4 , $4\frac{1}{2}$, 5 , $5\frac{1}{2}$, $5\frac{3}{4}$, 6 ,
$6\frac{1}{2}$, 7, 8, 9, 10, 11, $11\frac{1}{2}$, 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 to the inch.
Feeds per inch—48 Changes
Lead Screw Threads per inch 4
Size of Tool
Steady Rest Opening
Weight on Skids—9' Bed

GEARED HEADSTOCK:— Through single pulley drive 16 spindle speeds from 11.5 to 450 R. P. M., in almost exact geometrical progression are obtained (without the use of countershaft). Clutch and brake are operated by handle on apron and a similar handle on headstock end of bed. All gears in this headstock are heat treated steel of a special selected grade for the purpose and clutches are of hardened steel. All shafts are high carbon steel and run on ball bearings. Spindle has hardened and ground front bearings and runs in bronze boxes. The gear arrangement is extremely simple and the sixteen speeds are obtained with only ten gears. This head forms an oil tight case enclosing all running parts.

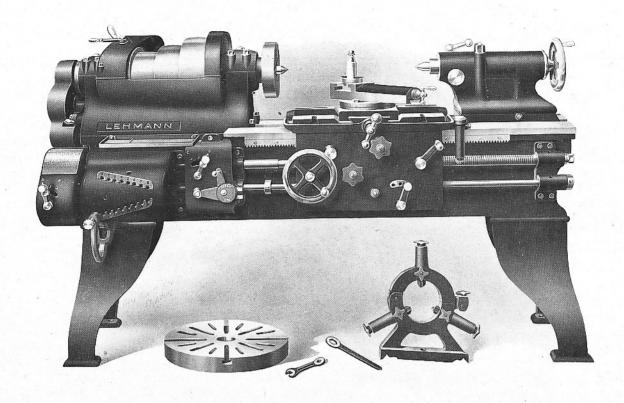
STANDARD EQUIPMENT furnished with each lathe consists of compound and steady rests, thread cutting dial, one large and one small face plate, apron control of clutch and brake, and necessary wrenches.

TAPER ATTACHMENT or FOLLOW REST will be furnished as extras when ordered and can be readily attached by purchaser at any time.

CONSTANT SPEED MOTOR DRIVE is arranged through belt and idler.

VARIABLE SPEED MOTOR DRIVE: This head is also made in modified form with 4 mechanical speed changes. By use of a variable speed motor of 500 to 1500 R. P. M. a full range of spindle speeds are obtained.

LEHMANN MACHINE COMPANY



16" Three-Step Cone Double Back Geared Engine Lathe SPECIFICATIONS

Swings over shear	181/4"
Swings over carriage	12"
Takes between centers, 9' bed	
Tailstock spindle travel	$7\frac{1}{2}''$
Tailstock spindle diameter	$2\frac{1}{4}''$
Taper of center	No. 4 Morse
Front spindle bearing	
Rear spindle bearing	2_{16}^{1} x 4"
Hole through spindle	
Diameter of spindle nose	$2\frac{1}{2}''$
No. of threads on spindle nose	
Cone pulley diameters	$7\frac{1}{3}$ ", $9\frac{1}{6}$ ", 11 "
Width of belt	3"
1st back-gear ratio	3.39:1
2nd back-gear ratio	11.5:1
Countershaft driving pulleys	12" x 4½"

Countershaft speeds, both forward 200-245
Spindle speeds 11.6 to 367
Countershaft speeds, forward and reverse245-300
Spindle speeds, forward 14.2 to 367
Number of thread and feed changes48
Lathe cuts following threads:—2, 21/4, 21/2, 23/4, 27/8,
$3, 3\frac{1}{4}, 3\frac{1}{2}, 4, 4\frac{1}{2}, 5, 5\frac{1}{2}, 5\frac{3}{4}, 6, 6\frac{1}{2}, 7, 8, 9, 10,$
11, 11½, 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 to the inch.
Feeds per inch, 48 changes 2½ to 140
Lead screw threads per inch
Size of tool $\frac{5}{8}$ " x $1\frac{1}{4}$ "
Steady rest opening
Weight on skids, 9' bed

STANDARD EQUIPMENT furnished with each lathe consists of compound and steady rests, thread cutting dial, one large and one small face plate, double friction clutch countershaft and necessary wrenches.

TAPER ATTACHMENT or FOLLOW REST will be furnished as extras when ordered and can be readily attached by purchaser at any time.

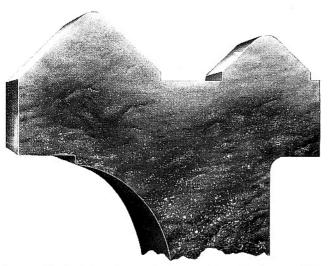
LEHMANN MACHINE COMPANY

606 to 612 South Broadway

SAINT LOUIS, U.S.A.

FEATURES OF "LEHMANN LATHES"

The features of **LEHMANN LATHES** embody the latest approved ideas in lathe construction and also some improvements which are exclusively a part of these machines.

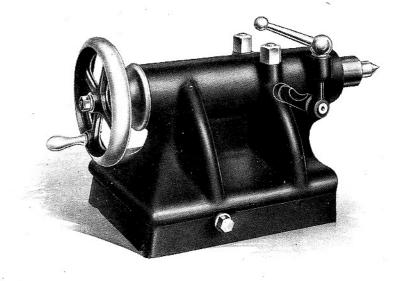


BED has chilled ways, which insures permanent maintenance of alignment. It is deep and wide and braced by large cross ribs. All bearings fastened to bed are doweled and keyed into position on planed bosses. The V's are large, the combined angle of same being 90 degrees. The cross section at end of bed is cut away to permit overhang to the tail-stock or placing steady-rest at extreme end of bed. This also facilitates the removal of tail-stock or steady-rest. The inside front way is flat; this permits greater depth to the bridge, adding strength and rigidity where most needed.

HEADSTOCK is of the latest design, the casting being carried from front to rear boxes on a line with center of spindle, tying bearings rigidly together and serving as a protection against operator being caught by the belt. It

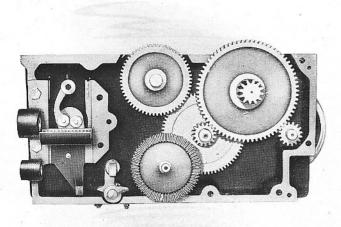
is provided with a three-step cone of a wide face and double back gears, which give a correct geometrical progression of nine spindle speeds using one forward belt on the countershaft. The spindle is made of high carbon steel bored from the solid and ground. Bearings are phosphor-bronze and positively lubricated; they are securely held in place but may readily be renewed. End thrust is taken by bronze in contact with steel washers hardened and ground.

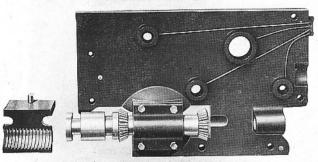
TAIL-STOCK is rigid in construction and is clamped to the bed by bolts brought up to the top of the barrel, which is convenient for the operator, besides adding the strength of the bolts to the line of stress. The spindle is large in diameter and is provided with a new and improved device for locking. This consists of a heavy floating plug (shown in outline on tailstock illustration) set in a bearing below the spindle. Said plug is concaved to match the spindle and rests at one end on a shoulder of larger diameter, and is free to move upward against the spindle; the other end extends beyond the back of the tail-stock casting and fits into an eyebolt which is suspended,



by an overhanging lug. The locking handle sets above this and is threaded to the eyebolt. A movement of the handle draws plug up against the bottom of spindle. Its proportion doubles the power of the thread in the locking handle and a very light pressure securely locks spindle. The barrel not being split, and the locking being accomplished by the vertical movement of a floating member, no distortion occurs and a correct alignment is always maintained.

CARRIAGE has a wide bridge of good depth which insures rigidity under the heaviest cuts, and is provided with an oil trough which returns cutting lubricant inside of the V's. Shear wipers fastened to the carriage keep the V's lubricated and clean.



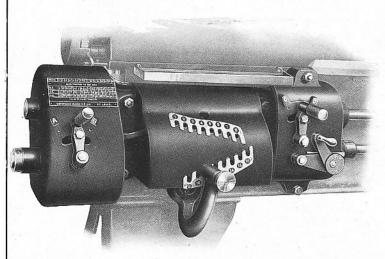


APRON is tongued and grooved to the carriage and provided with a back plate which gives a double support for studs and a double bearing for running shafts. Lead screw and feed rod have bearings in the apron to prevent sagging and undue wear on half nut and reverse gears. Gears and pinions, except friction gears, are made of steel and studs are hardened and ground. A safety device prevents engagement of feed rod and lead screw at the same time. Link connections to the parts of the half nut reduces the wear and consequent lost motion to a minimum. Half-nut operating handle has an easy motion; its leverage is slight at the commencement of the throwing-in movement, which prevents danger of injury in closing on the top or edges of the thread. As the nut is thrown further in, the leverage increases, till at the finish, the links being on a dead center, the two halves of the nut are locked in position and cannot be spread apart by any internal pressure.

COMPOUND REST is of large diameter and heavily built. It is graduated for any angle up to 90 degrees and is securely held to the bottom slide by bolts, which being placed at a large radius from the center, provide ample hold and are accessible to the operator.

QUICK CHANGE MECHANISM. The quick change mechanism is so designed as to simplify the construction and double the range with the addition of only two gears. A cone of gears with the familiar type of sliding rocker arm is employed; the rocker, however, has two central driving gears of different ratios, each with an intermediate which engage the cone of gears. By dropping the rocker arm and sliding same on the rocker shaft one of the intermediate is thrown in mesh with the different gears of the cone; by raising the rocker the other

different gears of the cone; by raising the rocker the other intermediate gear is thrown into use and the next progressive set of changes are obtained. This brings the device to a form where all changes commonly used are made by a movement of the rocker arm alone. For uncommonly fine or coarse threads or feeds it is only necessary to throw



another handle to the right or left. Double bearings for the intermediate and central gears are provided, which on account of greater extension and rigidity make the movement of rocker arm easy. The additional central gears and idler on the rocker divide the duty its function demands, which is severe where one pair serve for all changes. The whole quick change mechanism is a unit contained within a housing which is tongued and grooved to the bed and held by dowel pins and four screws. It can be entirely removed in a few minutes.

FEED ROD is not running when thread cutting and similarly the lead screw is not running when the feed rod is employed. An adjustable collar on the feed rod serves as an automatic stop for the carriage feed and also as a safety.

LEAD SCREW is of high carbon steel with a four-pitch Acme thread. It is provided with high-grade ball thrust bearings, which reduce the gear strain, anadvantage especially whencutting coarse pitch threads and worms.

THREAD INDICATOR is attached to the carriage and may be disengaged when not in use. This device permits both pulleys on countershaft to be run forward, giving an intermediate step up in the spindle speeds. When cutting threads, the carriage may be quickly run back by hand and the half nut re-engaged at the correct point by reference to the dial on indicator.

STEADY REST is of improved design, all adjustments and locking (except to the bed) are accomplished with star handles, making more sensitive and convenient adjustment than where the use of a wrench is necessary. It can be reversed on the bed so that the tool may be run up close from either side.

GEARS. The back gears and the friction gears in the apron are made of a special grade of semi-steel. All other gears except a safety gear on the end of the spindle are cut from solid steel, a high carbon steel being used where the service requires it.

SHAFTS are made of high carbon steel ground to size. Studs and pins are hardened and ground.

SAFETY. All gears are covered and at no time is it necessary for the operator to take any chance of injury in the manipulations of this lathe. A handle outside of the gear cover shifts from lead screw to feed rod connection or vice-versa.

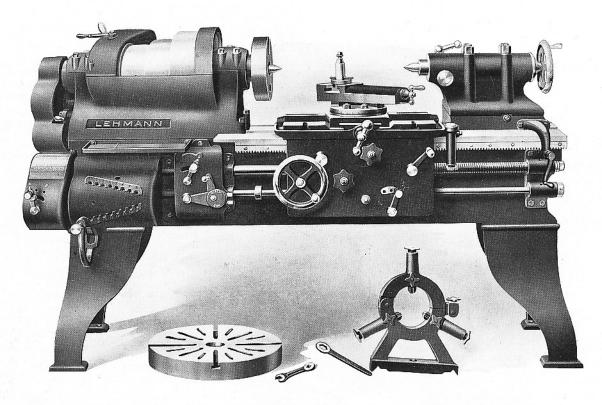
GENERAL. In design it will be seen that there is liberality in all dimensions without exaggeration, and in general, follows that which has been approved by the majority of users. The new features of these lathes are not radical departures, but modifications of old and time-tried devices. They do much, however, to add to the effectiveness of the machines and simplify the manipulations. The materials used in construction are such as modern requirements demand and the same as are commonly used by builders of strictly high-grade lathes.

SPINDLE SPEEDS.

	2nd back gear.	1st back gear.	Open belt.
	(14.12	48.6	163
With forward and reverse belts on countershaft	21.3	72.	245
	32.	108.3	367
	/ 11.6	39.2	133
	14.2	48.1	163
With two forward belts on countershaft.) 17.4	59.	200.
	$\stackrel{\checkmark}{}$ 21.3	72.2	245
	26.1	88.5	300
	32.	108.3	367

LEHMANN MACHINE COMPANY

606 to 612 South Broadway SAINT LOUIS, U. S. A.



18" Three-Step Cone Double Back Geared Engine Lathe SPECIFICATIONS

Swings over shear	201/4"
Swings over carriage	
Takes between centers, 9' bed	
Tailstock Spindle travel	8½"
Tailstock spindle diameter	
Taper of center	
Front spindle bearing	
Rear spindle bearing	
Hole through spindle	
Diameter of spindle nose	
No. of threads on spindle nose	5 U. S. S.
Cone pulley diameters	8", 10", 12"
Width of belt	3"
1st back-gear ratio	3.57:1
2nd back-gear ratio	12.3:1
Countershaft driving pulleys	14" x 4½"

Countershaft speeds, both forward189—233
Spindle speeds
Countershaft speeds, forward and reverse 233-283 $\frac{1}{2}$
Spindle speeds, forward
Number of thread and feed changes48
Lathe cuts following threads: -2 , $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$, $2\frac{7}{8}$, 3 , $3\frac{1}{4}$, $3\frac{1}{2}$, 4 , $4\frac{1}{2}$, 5 , $5\frac{1}{2}$, $5\frac{3}{4}$, 6 , $6\frac{1}{2}$, 7 , 8 , 9 , 10 , 11 , $11\frac{1}{2}$, 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 to the inch.
Feeds per inch, 48 changes $2\frac{1}{2}$ to 140
Lead screw threads per inch4
Size of tool
Steady rest opening6"
Weight on skids, 9' bed3650 lbs.

STANDARD EQUIPMENT furnished with each lathe consists of compound and steady rests, thread cutting dial, one large and one small face plate, double friction clutch countershaft and necessary wrenches.

TAPER ATTACHMENT or FOLLOW REST will be furnished as extras when ordered and can be readily attached by purchaser at any time.

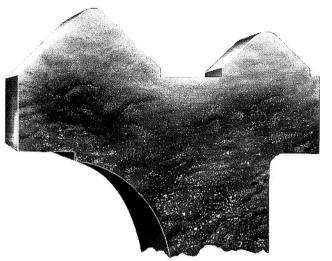
LEHMANN MACHINE COMPANY

606 to 612 South Broadway

SAINT LOUIS, U. S. A.

FEATURES OF "LEHMANN LATHES"

The features of **LEHMANN LATHES** embody the latest approved ideas in lathe construction and also some improvements which are exclusively a part of these machines.

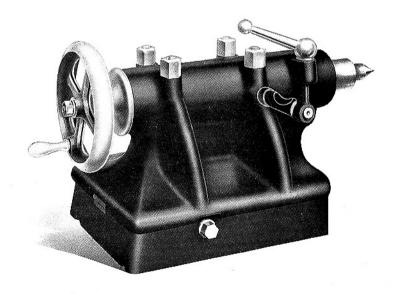


BED has chilled ways, which insures permanent maintenance of alignment. It is deep and wide and braced by large cross ribs. All bearings fastened to bed are doweled and keyed into position on planed bosses. The V's are large, the combined angle of same being 90 degrees. The cross section at end of bed is cut away to permit overhang to the tail-stock or placing steady-rest at extreme end of bed. This also facilitates the removal of tail-stock or steady-rest. The inside front way is flat; this permits greater depth to the bridge, adding strength and rigidity where most needed.

HEADSTOCK is of the latest design, the casting being carried from front to rear boxes on a line with center of spindle, tying bearings rigidly together and serving as

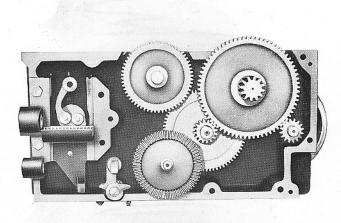
a protection against operator being caught by the belt. It is provided with a three-step cone of a wide face and double back gears, which give a correct geometrical progression of nine spindle speeds using one forward belt on the countershaft. The spindle is made of high carbon steel bored from the solid and ground. Bearings are phosphor-bronze and positively lubricated; they are securely held in place but may readily be renewed. End thrust is taken by bronze in contact with steel washers hardened and ground.

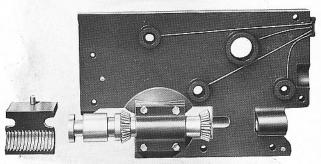
TAIL-STOCK is rigid in construction and is clamped to the bed by four bolts brought up to the top of the barrel, which is convenient for the operator, besides adding the strength of the bolts to the line of stress. The spindle is large in diameter, made of high carbon steel ground and is provided with a new and improved device for locking. This consists of a heavy floating plug (shown in outline on tailstock illustration) set in a bearing below the spindle. Said plug is concaved to match the spindle and rests at one end on a shoulder of larger diameter, and is free to move upward against the spindle; the other end extends



beyond the back of the tail-stock casting and fits into an eyebolt which is suspended by an overhanging lug. The locking handle sets above this and is threaded to the eyebolt. A movement of the handle draws plug up against the bottom of spindle. Its proportion doubles the power of the thread in the locking handle and a very light pressure securely locks spindle. The barrel not being split, and the locking being accomplished by the vertical movement of a floating member, no distortion occurs and a correct alignment is always maintained. A handle is provided for moving tail stock on bed by means of a pinion engaging in feed rack. This is made inoperative by sliding pinion out of engagement with rack.

CARRIAGE has a wide bridge of good depth which insures rigidity under the heaviest cuts, and is provided with an oil trough which returns cutting lubricant inside of the V's. Shear wipers fastened to the carriage keep the V's lubricated and clean.



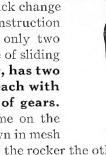


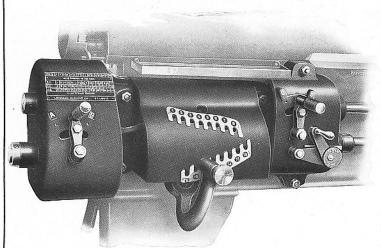
APRON is tongued and grooved to the carriage and provided with a back plate which gives a double support for studs and a double bearing for running shafts. Lead screw and feed rod have bearings in the apron to prevent sagging and undue wear on half nut and reverse gears. Gears and pinions, except friction gears, are made of steel and studs are hardened and ground. A safety device prevents engagements of feed rod and lead screw at the same time. Link connections to the parts of the half nut reduces the wear and consequent lost motion to a minimum. Half-nut operating handle has an easy motion; its leverage is slight at the commencement of the throwing-in movement, which prevents danger of injury in closing on the top or edges of the thread. As the nut is thrown further in, the leverage increases, till at the finish, the links being on a dead center, the two halves of the nut are locked in position and cannot be spread apart by any internal pressure.

COMPOUND REST is of large diameter and heavily built. It is graduated for any angle up to 90 degrees and is securely held to the bottom slide by four bolts, which being placed at a large radius from the center, provide ample hold and are accessible to the operator.

QUICK CHANGE MECHANISM. The quick change mechanism is so designed as to simplify the construction and double the range with the addition of only two gears. A cone of gears with the familiar type of sliding rocker arm is employed; the rocker, however, has two central driving gears of different ratios, each with an intermediate which engage the cone of gears. By dropping the rocker arm and sliding same on the

rocker shaft one of the intermediates is thrown in mesh with the different gears of the cone; by raising the rocker the other intermediate gear is thrown into use and the next progressive set of changes are obtained. This brings the device to a form where all changes commonly used are made by a movement of the rocker arm alone.





For uncommonly fine or coarse threads or feeds it is only necessary to throw another handle to the right or left. Double bearings for the intermediate and central gears are provided, which on account of greater extension and rigidity make the movement of rocker arm easy. The additional central gears and idler on the rocker divide the duty its function demands, which is severe where one pair serve for all changes. The whole quick change mechanism is a unit contained within a housing which is tongued and grooved to the bed and held by dowel pins and four screws. It can be entirely removed in a few minutes.

FEED ROD is not running when thread cutting and similarly the lead screw is not running when the feed rod is employed. An adjustable collar on the feed rod serves as an automatic stop for the carriage feed and also as a safety.

LEAD SCREW is of high carbon steel with a four-pitch Acme thread. **It is provided with high-grade ball thrust bearings,** which reduce the gear strain, an advantage especially when cutting coarse pitch threads and worms.

THREAD INDICATOR is attached to the carriage and may be disengaged when not in use. This device permits both pulleys on countershaft to be run forward, giving an intermediate step up in the spindle speeds. When cutting threads, the carriage may be quickly run back by hand and the half nut re-engaged at the correct point by reference to the dial on indicator.

STEADY REST is of improved design, all adjustments and locking (except to the bed) are accomplished with star handles, making a more sensitive and convenient adjustment than where the use of a wrench is necessary. It can be reversed on the bed so that the tool may be run up close from either side.

GEARS. The back gears and the friction gears in the apron are made of a special grade of semi-steel. All other gears are cut from **solid steel**, a high carbon steel being used where the service requires it. The feed gear on end of spindle is driven by a collar keyed to the spindle with a shear pin which provides a safety against breakage of parts of feed mechanism.

SHAFTS are made of high carbon steel ground to size. Studs and pins are hardened and ground.

SAFETY. All gears are covered and at no time is it necessary for the operator to take any chance of injury in the manipulations of this lathe. A handle outside of the gear cover shifts from lead screw to feed rod connection or vice-versa.

GENERAL. In design it will be seen that there is liberality in all dimensions without exaggeration, and in general, follows that which has been approved by the majority of users. The new features of these lathes are not radical departures, but modifications of old and time-tried devices. They do much, however, to add to the effectiveness of the machines and simplify the manipulations. The materials used in construction are such as modern requirements demand and the same as are commonly used by builders of strictly high-grade lathes.

SPINDLE SPEEDS.

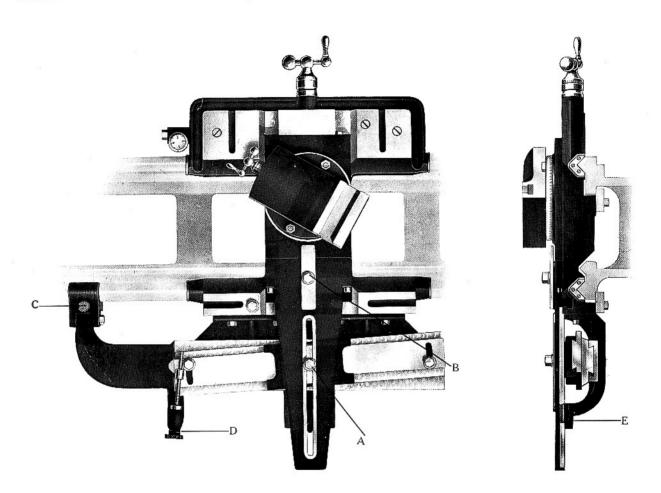
With forward and reverse belts on countershaft	2nd back gear. 12.5 19. 28.	1st back gear. 43.5 65. 98.	Open belt. 155.5 233. 349.5
With two forward belts on countershaft	10.2	35.	126.
	12.5	43.5	155.5
	15.	53.	189.
	19.	65.	233.
	23.	79.4	283.5
	28.	98.	349.5

LEHMANN MACHINE COMPANY

606 to 612 South Broadway SAINT LOUIS, U. S. A.

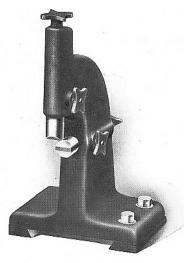
ATTACHMENTS FOR "LEHMANN LATHES"

The attachments shown in this circular may be ordered at any time and can be put on all lathes without trouble and in a very short while.



TAPER ATTACHMENT is furnished only when ordered. It is of the most approved type, in which a rigid and direct connection is established between the cross slide and the taper slide, avoiding strain on cross feed screw and nut and eliminating backlash. The cross slide extension is gibbed to the carriage. On top of the cross slide extension are two screws, A and B. When A is loose and B tight, the cross feed may be used in the regular way. To use the taper attachment, it is only necessary to tighten A, loosen B and lock clamp C on to the bed. The taper slide is graduated for taper in inches to the foot. Taper in degrees may also be readily obtained. One full turn of adjusting handle D gives a taper of 0 degrees 15 minutes from center line; four full turns gives a taper of 1 degree. Thus, by starting at zero, it is extremely simple to set exactly to any taper in degrees that is required. A great improvement has been made by providing an outer slide "E" for the cross slide extension. This furnishes a carrying member at both sides of the point of resistance, i. e. where the shoe moves on taper slide. In this way, tendency to bend or spring the cross slide is avoided and twisting pressure on cross slide eliminated. The whole result is an easier movement to the cross slide, a better balanced means of effecting same and greater accuracy in the work done.

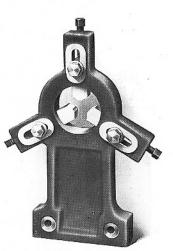
With this improvement, it is quite practical to use cams. In doing so, taper slide and shoe are removed and cams fastened to lower or stationary slide; cam roller being held by screw "A." This method may also be used for cutting tapers of greater angle that setting of taper slide permits.



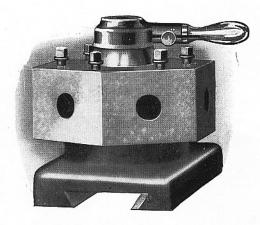
Follow Rest "A"

FOLLOW REST, STYLE A. This style of follow rest provides a very rigid support and a capacity for large work. It is gibbed to the carriage slide. The adjustable plugs are ground to fit into reamed holes and are moved in and out by star wheels, which provide a sensitive adjustment. They are locked in position by binding screws having star wheel heads, and the use of a wrench is unnecessary.

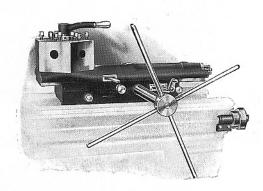
FOLLOW REST, STYLE B, is made to fasten to either side of the carriage bridge and is used on lathes fitted with a taper attachment. It has three jaws fitted to square slides and, although the capacity is smaller than the Style A, for some purposes it is preferred.



Follow Rest "B"



carriage turrets. The wide bridge on our lather renders them particularly well adapted to the use of carriage turrets, which can be furnished at any time. This turret is of an extra heavy type and makes a very rigid tool. Carriage turrets have the advantage of all feeds of the lathe: Power cross feed for facing, lateral feeds for boring and reaming and screw feeds for tapping.



BED TURRETS without power feed can be furnished at any time. When power feed is required it must be ordered with the lathe. This type of turret is automatic revolving and each face is provided with an adjustable automatic stop, supplemented with a positive stop, which permits finishing to shoulders within very close limits. Eccentric clamps located at either end serve to hold the turret in any desired position on the bed. When power feed is furnished the drive is from a sprocket at the end of the feed rod to another feed rod at the back of the bed. The locking pin, index ring, revolving dog and pins are all made of tool steel, hardened and ground. The locking pin is fitted with an adjustable taper gib.

CABINET LEGS are furnished at extra cost and only when ordered. They can be put on either end or both ends of the lathe. These legs have hinged doors and cast ledges on the inside for two shelves.

DRAW-IN-CHUCK can be furnished as an extra with collets up to $\frac{3}{4}$ ". **OIL PUMP AND PAN** can be furnished only when ordered with lathe.

LEHMANN MACHINE COMPANY

606 to 612 South Broadway

ST. LOUIS, U. S. A.

"LEHMANN LATHES"

Equipped with Taper Attachment and Used Mostly for Tool Room Purposes

Pratt Chuck Company
Kellogg Products Co. Buffalo, N. Y. 1 16"x11 Liberty Steel Co. Warren, Ohio. 1 16"x11 Faber Pump Company. Buffalo, N. Y. 1 16"x 7 Moon Motor Car Co. St. Louis, Mo. 3 16"x 7 Moon Motor Car Co. St. Louis, Mo. 3 16"x 7 Northwestern Leather Co. Chicago, Ill 1 16"x 1 Willys-Overland Co. Elyria, Ohio. 8 16"x 9 Excelsior Foundry Co. Belleville, Ill. 1 16"x 7 II. II. Franklin Mfg. Co. Syracuse, N. Y 2 18"x 9 Asvac Mfg. Company, Anderson, Ind. 2 16"x 7 McNab & Harlan Mfg. Co. Paterson, N. J. 1 16"x 1 General Eng. & Mfg. Co. St. Louis, Mo. 1 16"x 1 General Eng. & Mfg. Co. St. Louis, Mo. 1 16"x 1 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 9 S. K. F. Ball Bearing Co. Hartford, Conn. 3 16"x 7 International Harvester Co. Chicago, Ill. 4 16"x 7 British Munitions Co. Montreal, Canada 6 18"x 9 Maryland Pressed Steel Co. Hagerstown, Md., (3 with taper) 5 16"x 1 Wirebounds Corp. Chicago, Ill. 1 16"x 9 Maryland Pressed Steel Co. Rockford, Ill. 1 16"x 9 Northern Illinois Cereal Co. Rockford, Ill. 1 16"x 7 Buckeye Tool & Machine Co. New York City 1 16"x 7 Buckeye Tool & Machine Co. New York City 1 16"x 7 Buckeye Tool & Machine Co. Rockford, Ill. 1 18"x 9 American Machinery Co. Chicago, Ill. 2 16"x 7 Buston & Albany R. R. West Springfield, Mass 1 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duguesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duguesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Duguesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7 Dave Park Park Park Park Park Park Park Park
Liberty Steel Co., Warren, Ohio. 1 16"x11
Faber Pump Company. Buffalo, N. V. 1 16"x 7 Moon Motor Car Co., St. Louis, Mo. 3 16"x 7 Morthwestern Leather Co. Chicago, Ill. 1 16"x 11 Willys-Overland Co., Elyria, Ohio. 8 16"x 9 Excelsior Foundry Co., Belleville, Ill. 1 16"x 7 11. II. Franklin Mfg. Co. Syracuse, N. Y 2 18"x 9 Asvac Mfg. Company. Anderson, Ind. 2 16"x 7 McNab & Harlan Mfg. Co. Paterson, N. J. 1 16"x 7 Thomas Spacing Machine Co. Glenshaw, Pa. 1 16"x 11 16"x 11
Moon Motor Car Co., St. Louis, Mo. 3 16"x 7 Northwestern Leather Co. Chicago, Ill. 1 16"x 11 Willys-Overland Co. Elyria, Ohio. 8 16"x 9 Excelsior Foundry Co. Betleville, Ill. 1 16"x 7 II. H. Franklin Mfg. Co. Syracuse, N. Y. 2 18"x 9 Asvac Mfg. Company. Anderson, Ind. 2 16"x 7 McNab & Harlan Mfg. Co. Paterson, N. J. 1 16"x 7 Thomas Spacing Machine Co. Glenshaw, Pa. 1 16"x 7 Thomas Spacing Machine Co. Glenshaw, Pa. 1 16"x 11 General Eng. & Mfg. Co. St. Louis, Mo. 1 16"x 11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 1 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 1
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Asvac Mfg. Company. Anderson, Ind. 2 16"x 7 McNab & Harlan Mfg. Co. Paterson, N. J 1 16"x 7 Thomas Spacing Machine Co. Glenshaw, Pa. 1 16"x 17 General Eng. & Mfg. Co. St. Louis, Mo 1 16"x 11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 9 S. K. F. Ball Bearing Co. Hartford, Conn. 3 16"x 7 International Harvester Co. Chicago, Ill. 4 16"x 7 Root & Van Dervoort Eng. Co. East Moline, Ill. 5 16"x 7 British Munitions Co., Montreal, Canada 6 18"x 9 Maryland Pressed Steel Co., Hagerstown, Md., (3 with taper) 5 16"x 7 Wirebounds Corp., Chicago, Ill. 1 16"x 7 S. Anargyres, Inc., New York City 1 16"x 7 Northern Illinois Cereal Co., New York City 1 16"x 7 Northern Illinois Cereal Co., Rockford, Ill. 1 18"x 9 American Machimery Co., Chicago, Ill. 2 16"
McNab & Harlan Mfg. Co. Paterson, N. J. 1 16"x 7 Thomas Spacing Machine Co. Glenshaw, Pa 1 16"x11 General Eng. & Mfg. Co., St. Louis, Mo 1 16"x11 U. S. Smelting Furnace Co. Belleville, Ill. 1 16"x 9 S. K. F. Ball Bearing Co., Hartford, Conn. 3 16"x 7 International Harvester Co., Chicago, Ill. 4 16"x 7 Root & Van Dervoort Eng. Co. East Moline, Ill. 5 16"x 7 British Munitions Co., Montreal, Canada 6 18"x 9 Maryland Pressed Steel Co., Hagerstown, Md., (3 with taper) 5 16"x11" Wirebounds Corp., Chicago, Ill. 1 16"x 7 S. Anargyres, Inc., New York City 1 16"x 7 Northern Illinois Cereal Co., Rockford, Ill. 1 16"x 7 Northern Illinois Cereal Co., Rockford, Ill. 1 18"x 9 American Machinery Co., Chicago, Ill. 2 16"x 7 Buckeye Tool & Machine Co., New Philadelphia, Ohio. 1<
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Maryland Pressed Steel Co., Hagerstown, Md., (3 with taper) 5 16"x11 Wirebounds Corp., Chicago, Ill. 1 16"x 7" S. Anargyres, Inc., New York City 1 16"x 9 Dickinson Cord Tire Co., New York City 1 16"x 7 Northern Illinois Cereal Co., Rockford, Ill. 1 18"x 9 American Machinery Co., Chicago, Ill. 2 16"x 7 Buckeye Tool & Machine Co., New Philadelphia, Ohio 1 16"x 9 Milliken Co., Arkansas City, Kans 1 16"x 9 Hendey Iron Works, Sunnyvale, Cal., (2 with taper) 4 16"x 9 Boston & Albany R. R. West Springfield, Mass 1 16"x 7 One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co. Pittsburgh, Pa 1 16"x 7
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Dickinson Cord Tire Co.,New York City116"x 7Northern Illinois Cereal Co.,Rockford, Ill.118"x 9American Machinery Co.,Chicago, Ill.216"x 7Buckeye Tool & Machine Co.,New Philadelphia, Ohio.116"x 9Milliken Co.,Arkansas City, Kans.116"x 9Hendey Iron Works,Sunnyvale, Cal., (2 with taper)416"x 9Boston & Albany R. R.West Springfield, Mass.116"x 7One Man Auto Top Co.,Buffalo, N. Y.216"x 7Duquesne Elec. & Mfg. Co.Pittsburgh, Pa.116"x 7
Northern Illinois Cereal Co., Rockford, Ill. 1 18"x 9" American Machinery Co., Chicago, Ill. 2 16"x 7 Buckeye Tool & Machine Co., New Philadelphia, Ohio. 1 16"x 9" Milliken Co., Arkansas City, Kans. 1 16"x 9" Hendey Iron Works, Sunnyvale, Cal., (2 with taper) 4 16"x 9" Boston & Albany R. R. West Springfield, Mass. 1 16"x 7 One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
American Machinery Co., Chicago, Ill. 2 16"x 7 Buckeye Tool & Machine Co., New Philadelphia, Ohio. 1 16"x 9 Milliken Co., Arkansas City, Kans. 1 16"x 9 Hendey Iron Works, Sunnyvale, Cal., (2 with taper) 4 16"x 9 Boston & Albany R. R. West Springfield, Mass. 1 16"x 7 One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
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Milliken Co., Arkansas City, Kans. 1 16"x 9" Hendey Iron Works, Sunnyvale, Cal., (2 with taper) 4 16"x 9" Boston & Albany R. R. West Springfield, Mass. 1 16"x 7" One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
Hendey Iron Works, Sunnyvale, Cal., (2 with taper) 4 16"x 9" Boston & Albany R. R. West Springfield, Mass 1 16"x 7" One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
Boston & Albany R. R. West Springfield, Mass 1 16"x 7" One Man Auto Top Co., Buffalo, N. Y. 2 16"x 7 Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
One Man Auto Top Co.,
Duquesne Elec. & Mfg. Co., Pittsburgh, Pa. 1 16"x 7
J. G. Brill Company, Philadelphia, Pa. 2 16"x 7
Liggett & Meyers Tobacco Co.,
Medart Patent Pulley Co. St. Louis, Mo. 1 16"x 7"
Commonwealth Steel Co
Von Storch Colliery,
Health Dept., City of Havana, Havana, Cuba 1 16"x11
Grant, Smith, Porter Ship Co
Shepherd Engineering Co Williamsport Pa 1 16"x 7"
Curtis Engineering Co., Garden City, N. Y. 2 16"x 7" Hyatt Roller Bearing Co. Newark, N. J. 2 16"x 7" Orteig Motor Corp., New York City 1 16"x 7"
Hyatt Roller Bearing Co
Orteig Motor Corp., New York City 1 16"x 7
Wolf Parkhurst Casting Co
Morgan Mfg. Co., Keene, N. H. 1 16"x 9"
Gurney Ball Bearing Co., Jamestown, N. Y. 2 16"x 9
Standard Calorimeter Co
Symington Chicago Corp.,
Moline Plow Co.,
Bindell & Weiss, Tarentum, Pa. 1 18"x 9
Standard Engineering Corp
Traffic Motor Truck Corp., St. Louis, Mo. 1 16"x 7
Kardell Motor Truck Corp., St. Louis, Mo. 1 16"x 7"

SOME OF THE KNOWN USERS OF "LEHMANN LATHES"

Lockport, N. Y
Evertight Piston Ring Co. St. Louis, Mo. 50 16"x 7' St. Louis Iron & Machine Works. St. Louis, Mo. 2 16"x 9' Garton Toy Co. Sheboygan, Wis. 1 16"x 9' Fireproof Garage. Monticello, III. 1 16"x 9' Wm. Josephs. Hartford, Conn. 1 16"x 9' Cadwell-Vernon Co. Jamestown, N. Y. 1 16"x 7' Union Steam Pump Co. Battle Creek, Mich. 1 16"x 7' Peter A. Frasse & Co. Hartford, Conn. 1 16"x 7' Peter A. Frasse & Co. Hartford, Conn. 1 16"x 7' Pittsburgh Model Engine Co. Pittsburgh, Pa. 1 16"x 9' Homestead Valve Co. Homestead, Pa. 1 16"x 9' Homestead Valve Co. Homestead, Pa. 1 16"x 9' Essmueller Mill Furnishing Co. St. Louis, Mo. 1 16"x 9' New Springh Model Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Holsting Engine Co. New Brunswick, N. J. 3 16"x 7'
St. Louis Iron & Machine Works St. Louis Mo. 2 16" x 9"
Garton Toy Co. Sheboygan, Wis. 1 16"x 9"
Fireproof Garage, Monticello, III. 1 16"x 9'
Win Josephs Hartford Conn 1 16" x 9"
Cadwell-Vernon Co. Jamestown, N. Y. 1 16"x 7' Union Steam Pump Co. Battle Creek, Mich. 1 16"x 7' Peter A. Frasse & Co. Hartford, Conn. 1 16"x 9' Saturn Foundry Co. Wheeling, W. Va. 1 16"x 9' Pittsburgh Model Engine Co. Pittsburgh, Pa. 1 16"x 9' Homestead Valve Co. Homestead, Pa. 1 16"x 9' Essmueller Mill Furnishing Co. St. Louis, Mo. 1 16"x 9' New Brunswick, N. J. 3 16"x 7' 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' New York City. 1 16"x 9' New York City. 1 16"x 7' New York City.
Union Steam Pump Co. Battle Creek, Mich. 1 16"x 7' Peter A. Frasse & Co. Hartford, Conn. 1 16"x 9' Saturn Foundry Co. Wheeling, W. Va. 1 16"x 9' Pittsburgh Model Engine Co. Pittsburgh, Pa. 1 16"x 9' Homestead Valve Co. Homestead, Pa. 1 16"x 9' Essmueller Mill Furnishing Co. St. Louis, Mo. 1 16"x 9' Essmueller Mill Furnishing Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New York City. 1 16"x 9' Bemis Bros, Bag Co. Minneapolis, Minn 1 16"x 1' F. S. Auston. W. Springfield, Mass. 1 16"x 1' New York Air Brake Co. Watertown, N. Y. 2 16"x1' New York Air Brake Co. St. Louis, Mo. 2 16"x 7' Champion Shoe Machinery Co. St. Louis, Mo. 2 16"x 7' Champion Shoe Machinery Co. St. Louis, Mo. 1
Peter A. Frasse & Co.
Saturn Foundry Co., Wheeling, W. Va. 1 16"x 7 Pittsburgh Model Engine Co Pittsburgh, Pa. 1 16"x 9" Homestead Valve Co. Homestead, Pa. 1 16"x 9" Essmuteller Mill Furnishing Co St. Louis, Mo 1 16"x 9" Neverslip Mfg. Co., New Brunswick, N. J. 3 16"x 7" Liberty Hoisting Engine Co New Brunswick, N. J. 3 16"x 7" Liberty Hoisting Engine Co New Brunswick, N. J. 3 16"x 7" Liberty Hoisting Engine Co New Brunswick, N. J. 3 16"x 7" Liberty Hoisting Engine Co New Brunswick, N. J. 3 16"x 7" Liberty Hoisting Engine Co Minneapolis, Minn. 1 16"x 9" Bemis Bros, Bag Co Minneapolis, Minn. 1 16"x 91" Remis Bros, Bag Co Minneapolis, Minn. 1 16"x 11" F. S. Auston, W. Springfield, Mass. 1 16"x 17" New York City. 1 16"x 17" Mides Afri Brake Co St. Louis, Mo. 2 16"
Pittsburgh Model Engine Co. Pittsburgh, Pa. 1 16"x 9' Homestead Valve Co. Homestead, Pa. 1 16"x 9' Essmueller Mill Furnishing Co. St. Louis, Mo. 1 16"x 9' Neverslip Mfg. Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New York City. 1 16"x 9' Bemis Bros, Bag Co. Minneapolis, Minn. 1 16"x 11' F. S. Auston, W. Springfield, Mass. 1 16"x 11' F. S. Auston, W. Springfield, Mass. 1 16"x 11' Midwest Mfg. Co. Watertown, N. Y. 2 16"x 17' Midwest Mfg. Co. St. Louis, Mo. 2 16"x 7' Alloy Steel Forging Co. St. Louis, Mo. 2 16"x 7' Alloy Steel Forging Co. Carnegie, Pa. 2 16"x 7' Alloy Steel Forging Co. Carnegie, Pa. 2 16"x 7' Russell Company, Massillon, Ohio. 1 16"x 7' Russell Works. St. Louis, Mo. 3 16"x 7'
Homestead Valve Co.
Essnuteller Mill Furnishing Co. St. Louis, Mo. 1 16"x 9' Neverslip Mfg. Co. New Brunswick, N. J. 3 16"x 7' Liberty Hoisting Engine Co. New York City. 1 16"x 7' Bemis Bros, Bag Co. Minneapolis, Minn 1 16"x 11' F. S. Auston, W. Springfield, Mass 1 16"x 7' New York Air Brake Co. Watertown, N. Y. 2 16"x 7' Midwest Mfg. Co. St. Louis, Mo. 2 16"x 7' Midwest Mfg. Co. St. Louis, Mo. 2 16"x 7' Alloy Steel Forging Co. Carnegie, Pa. 2 16"x 9' Alloy Steel Forging Co. Carnegie, Pa. 2 16"x 9' Russell Company, Massillon, Ohio. 1 16"x 11" St. Louis, Mo. 3 16"x 7' Waterliet Works St. Louis, Mo. 3 16"x 7' Watervilet Arsenal, Watervilet, N. Y. 4 16"x 9' Watervilet Arsenal, Watervilet, N. Y. 4 16"x 9' Watervilet Arsenal, Watervi
New Brunswick, N. J. 3 16"x 7'
Liberty Hoisting Engine Co. New York City. 1 16"x 9'
Bemis Bros. Bag Co., Minneapolis, Minn. 1 16"x11'
F. S. Auston, W. Springfield, Mass. 1 16"x 7' New York Air Brake Co. Watertown, N. Y 2 16"x17' Midwest Mfg. Co. St. Louis, Mo. 2 16"x 7' Champion Shoe Machinery Co. St. Louis, Mo. 2 16"x 7' Alloy Steel Forging Co. Carnegie, Pa 2 16"x 9' Peerblow Mfg. Co. Lutzdale, Pa 1 16"x 9' Russell Company, Massillon, Ohio 1 16"x11' St. Louis Electrical Works St. Louis, Mo. 3 16"x 7' Modern Engineering Co. St. Louis, Mo. 1 16"x 7' Century Electric Co. St. Louis, Mo. 5 16"x 7' Watervliet Arsenal. Watervliet, N. Y 4 16"x 9' Mooring Mfg. & Machine Shop. Toronto, Canada. 1 16"x 9' Alsop Process Co. St. Louis, Mo. 1 16"x 9' Springfield Boiler Co. St. Louis, Mo. 1 16"x 7' General Machinery Mfg. Co. St. Louis, Mo. 1 16"x 7' Riehl
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Federal Truck Co. St. Louis, Mo. 3 16"x 9' Bedford Can Co. Bedford, Va. 1 16"x 7' Millholland Machine Co. Indianapolis, Ind. 2 18"x11'
Bedford Can Co.,
Millholland Machine Co
Bullard Engineering Works. Bridgeport, Conn. 3 18"x11'
Racine Tool Company, Racine, Wis 2 16"x 7'
G. H. Hagius, Rockford, Ill. 1 16"x 9'
Continental Motors Corp., Muskegon, Mich. 1 18"x 7'
Economy Boiler Works, Ann Arbor, Mich. 1 16"x 9'
Atlas Wind Mill Co.,
Acme Elec. Mach. Co
Erley & Williams, Merced, California 1 16"x 7"
Stambaugh & Sons, St. Louis, Mo. 2 16"x 7'
Chas, Beal Pressed Steel Co. St. Louis, Mo. 1 16"x 7'
Superb Mfg. Co., Monticello, Ind. 1 16"x 7'
By-Products Coke Corp.Chicago, III.116"x 7'Continental Piston Ring Co.Memphis, Tenn.116"x 7'
Wappat Gear Works, Pittsburgh, Pa. 1 18"x 9'
Ordnance Tool Mfg. Co., St. Louis, Mo. 1 16"x 7'
Wire Wheel Corp. of America
H. & H. Machine Works
Aug. J. Luer Mfg. Co.,
Remmert Mfg. Co.,
Hager Hinge Mfg. Co., St. Louis, Mo. 1 16"x 7'
Modern Die & Plate Press Co
G. H. & L. Machine Co. St. Louis, Mo. 1 16"x 9'
Chandeysson Elec. Co