



This world-famous masterpiece—the statue of Victory—symbolizes the expert craftsmanship in Cincinnati Shapers.

CINCINNATI SHAPERS

Catalog N-5

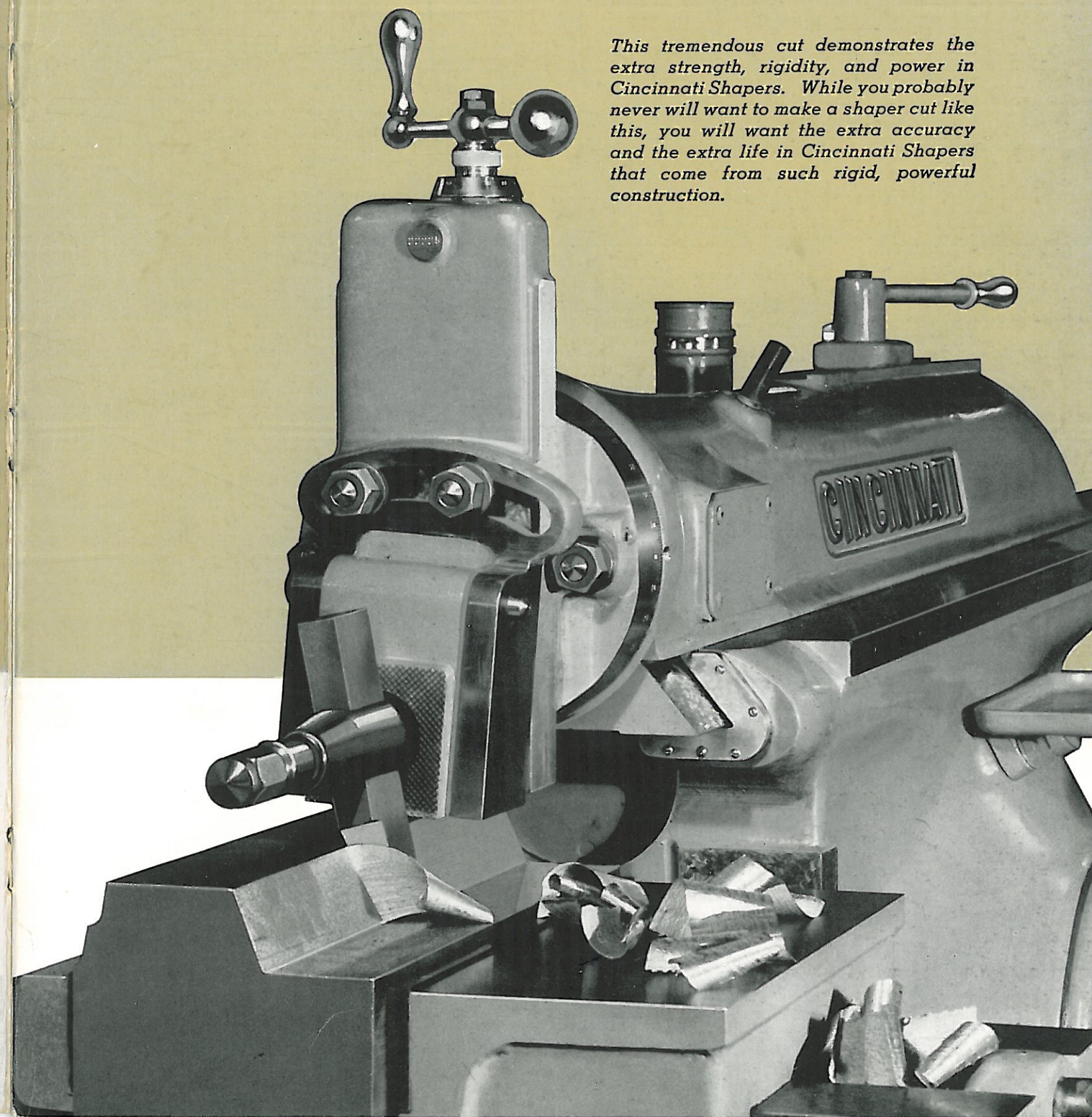


The shaper is the most versatile of machine tools. It is the Handy Man of Industry. The following pages review some of its many applications, and illustrate and describe the Cincinnati Line.

The Cincinnati Shaper Company
Cincinnati 25, Ohio, U. S. A.

Actual size steel chip.
2" Cut, .030" feed.
Cincinnati 24" Heavy Duty Shaper.

This tremendous cut demonstrates the extra strength, rigidity, and power in Cincinnati Shapers. While you probably never will want to make a shaper cut like this, you will want the extra accuracy and the extra life in Cincinnati Shapers that come from such rigid, powerful construction.

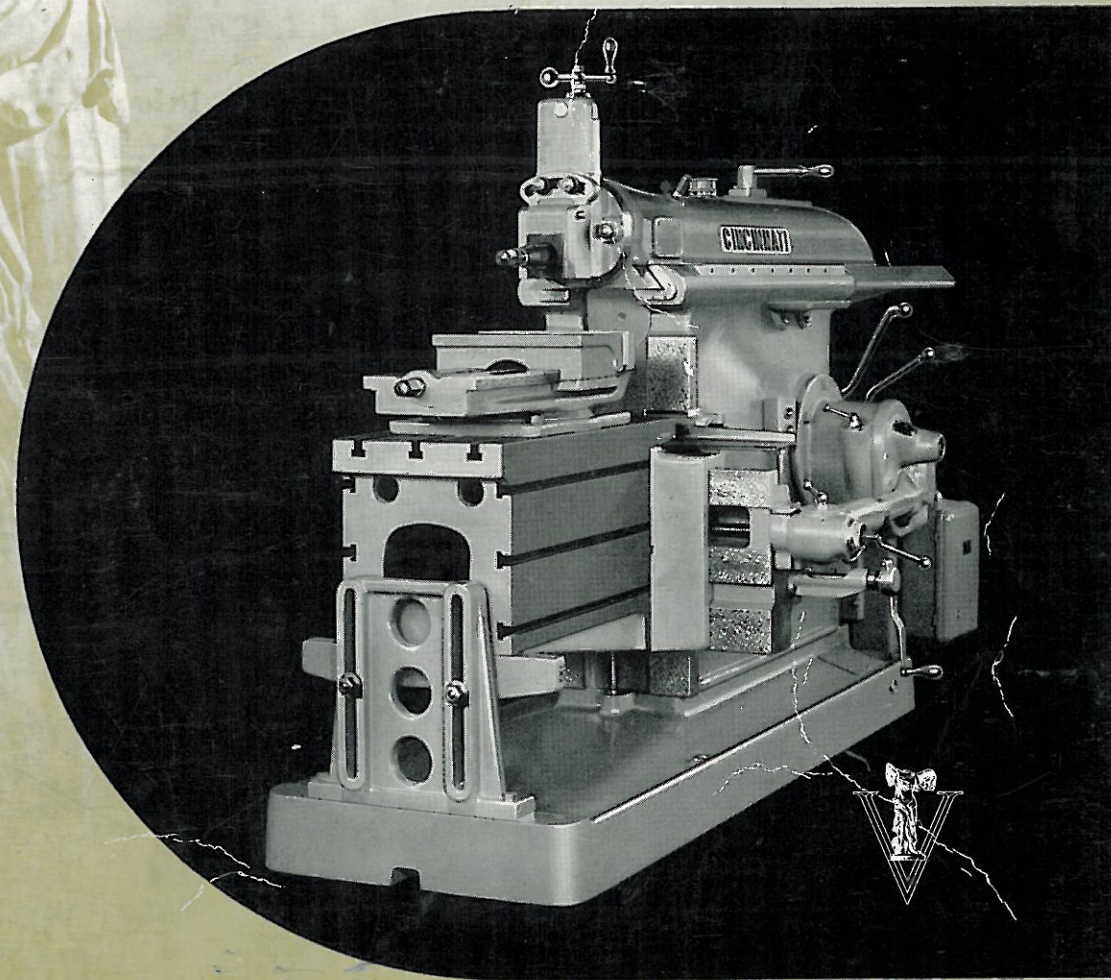


CINCINNATI SHAPERS



THE CINCINNATI SHAPER CO.

CINCINNATI 25, OHIO U.S.A.
SHAPERS · SHEARS · BRAKES

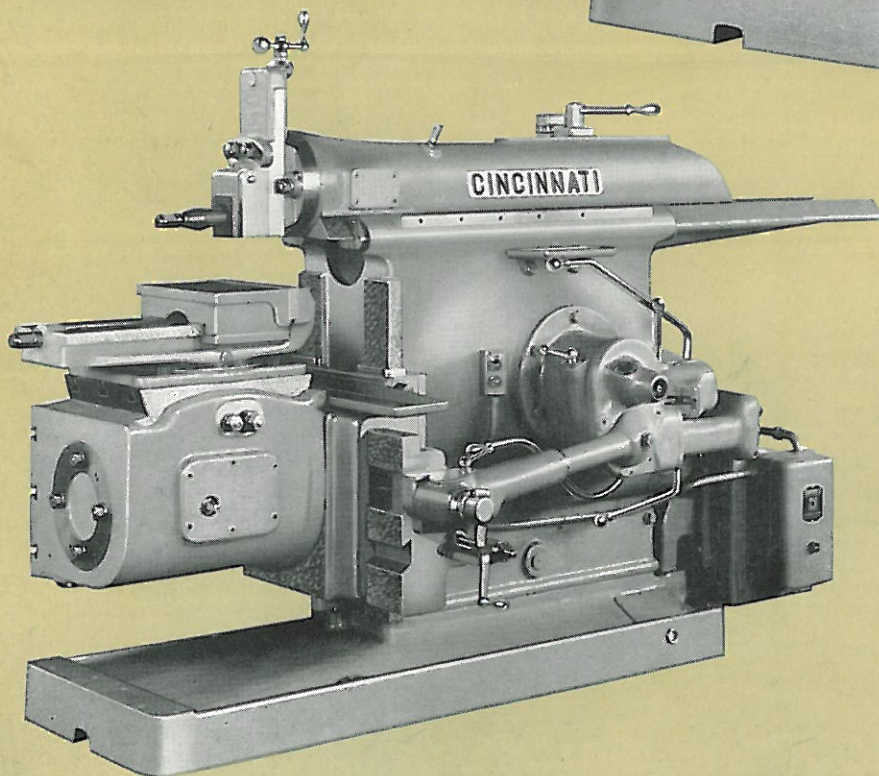
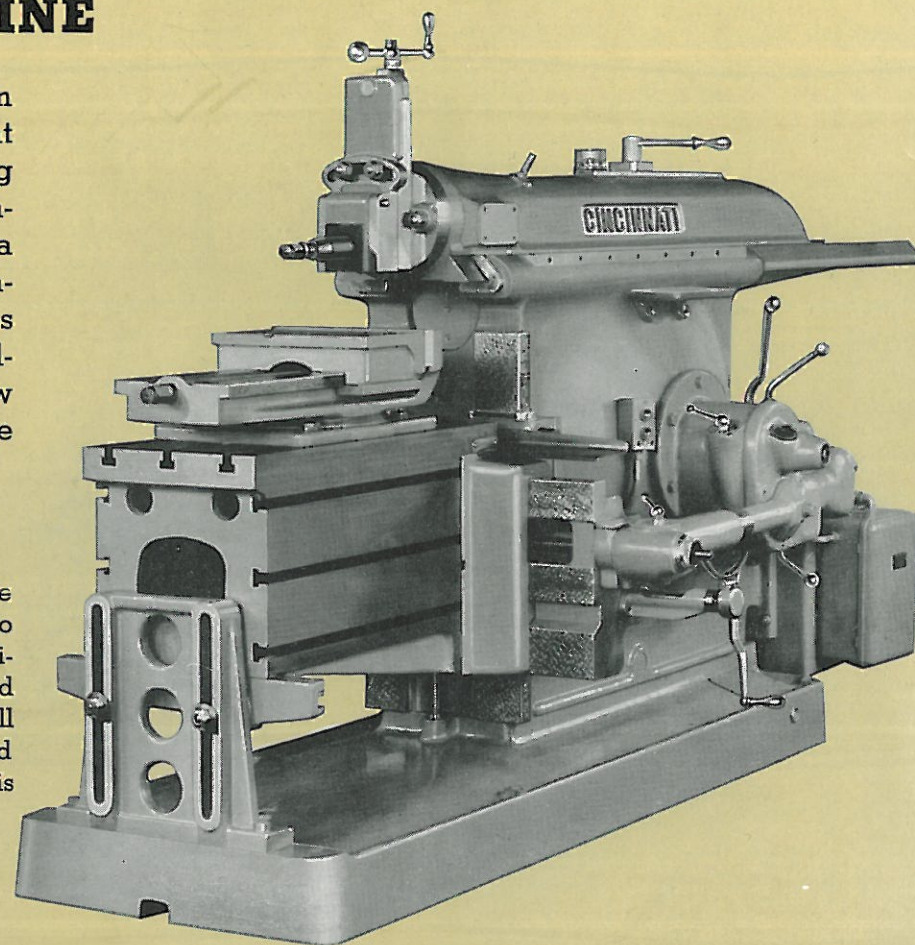




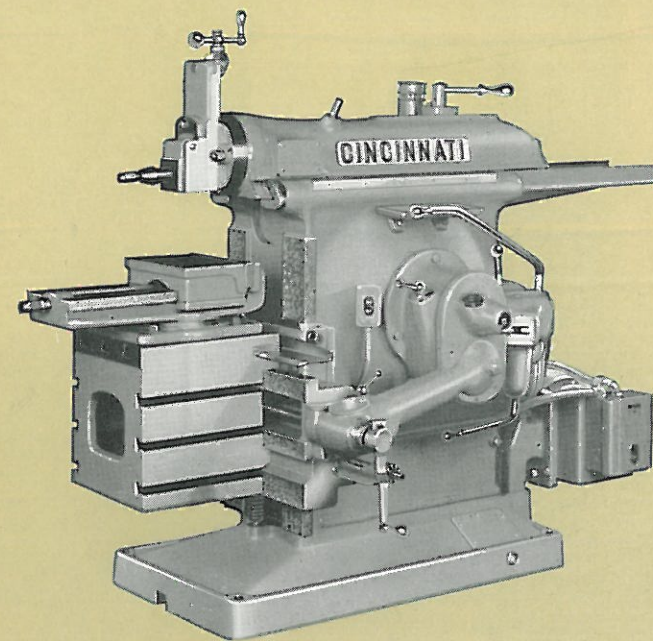
THE CINCINNATI LINE

There are twenty-five shapers in the Cincinnati Line, a line that takes care of all your shaping requirements. Twenty-five machines, ten sizes, five types, a shaper for any service, any capacity. These modern machines with exclusive features and advanced improvements are a new high in productive and profitable equipment.

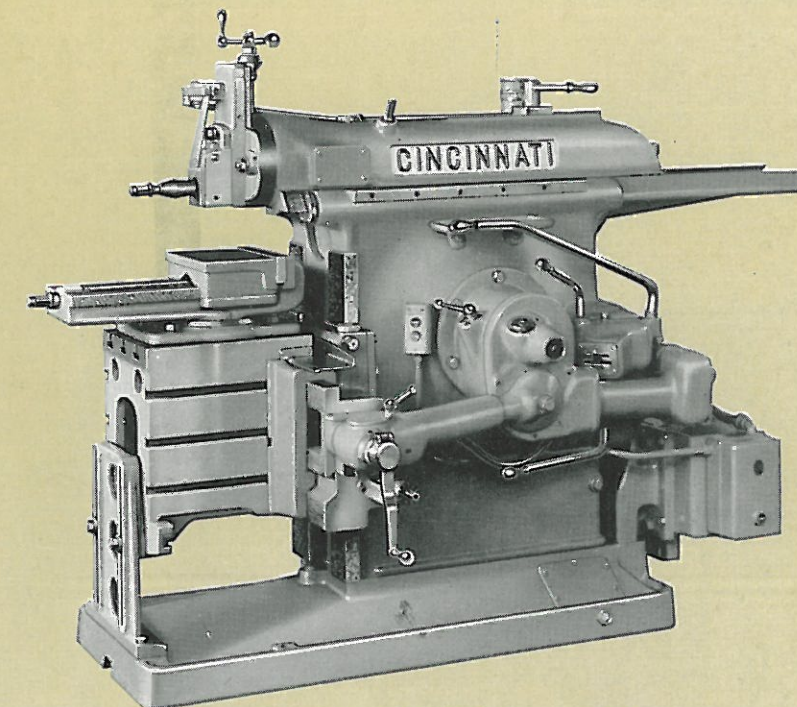
Cincinnati Plain Table Shapers are made in eight sizes, from the 16" to the 36". All have vertical and horizontal power rapid traverse, advanced automatic lubrication, convenient full control at operator's position, and many other features described in this book. Specifications on page 13.



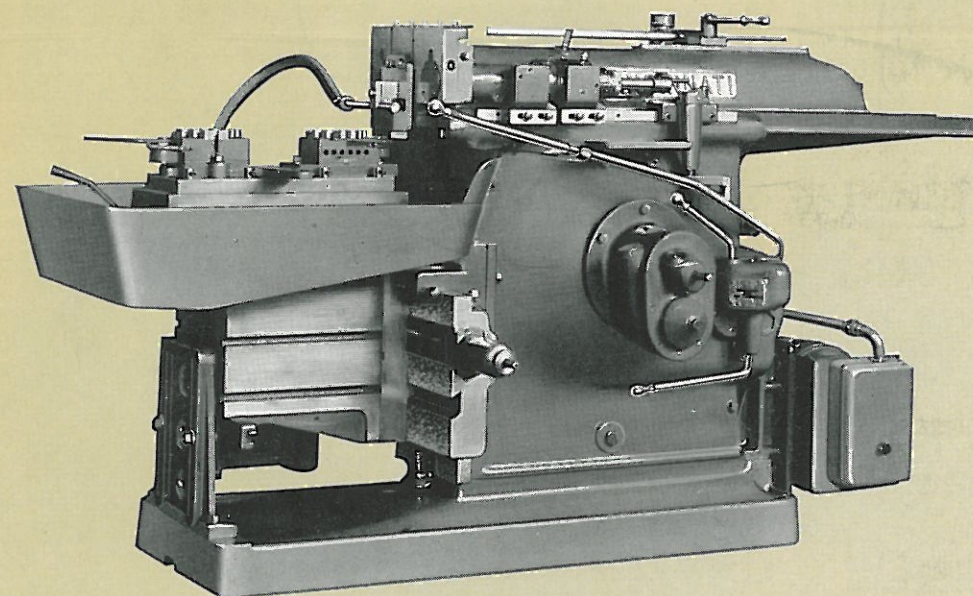
Cincinnati Universal Shapers are also made in eight sizes. They have all the features of the Rapid Traverse models and are equipped with the Cincinnati Universal Table. Specifications on page 17.



Cincinnati Utility Shapers are made in 16" and 20" sizes, plain and universal models. The Utility is a handy shaper at a moderate price. Specifications on page 21.



The 16" High-speed Shaper is made in plain and universal models, with speeds of 200 strokes per minute. Specifications on page 21. ✓

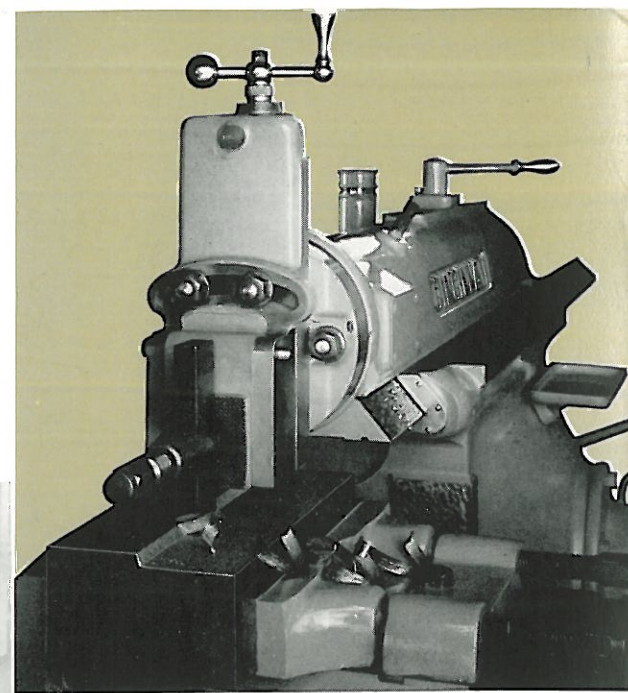


Cincinnati Special Shapers are built to customer's requirements and include shapers for automatic production, for fatigue tests, for shipboard, for railroads, and other uses.



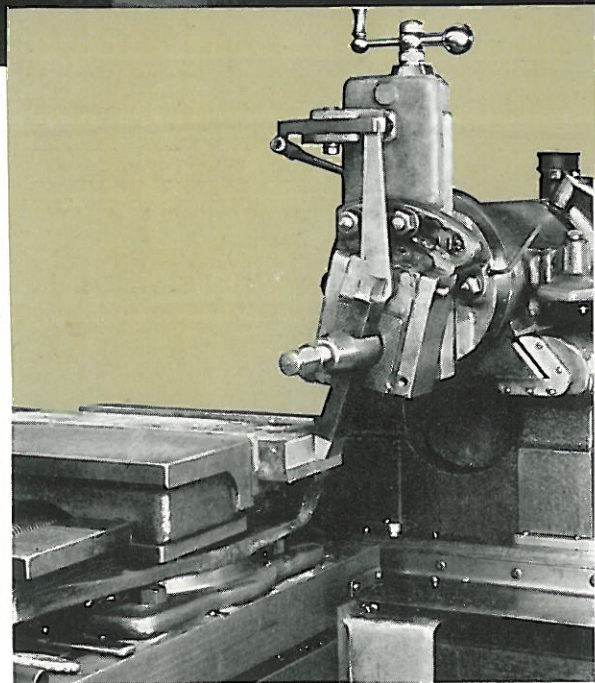
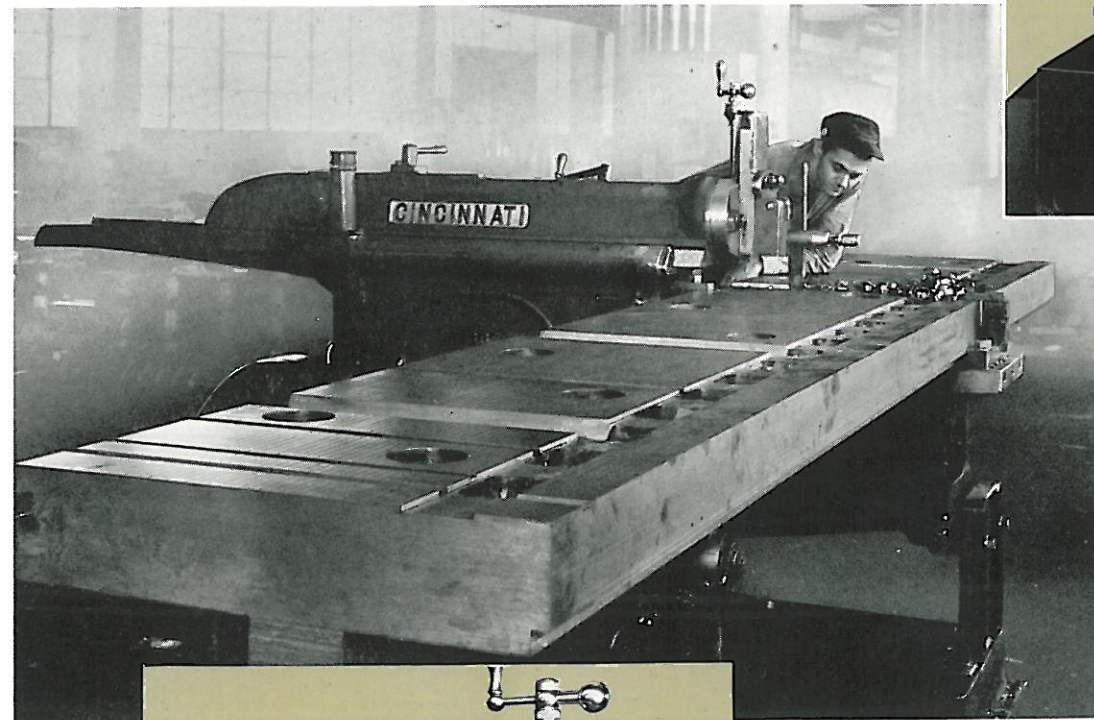
PLANING AND SHAPING

... the basic functions of the shaper, are performed efficiently and economically with low cost tools.



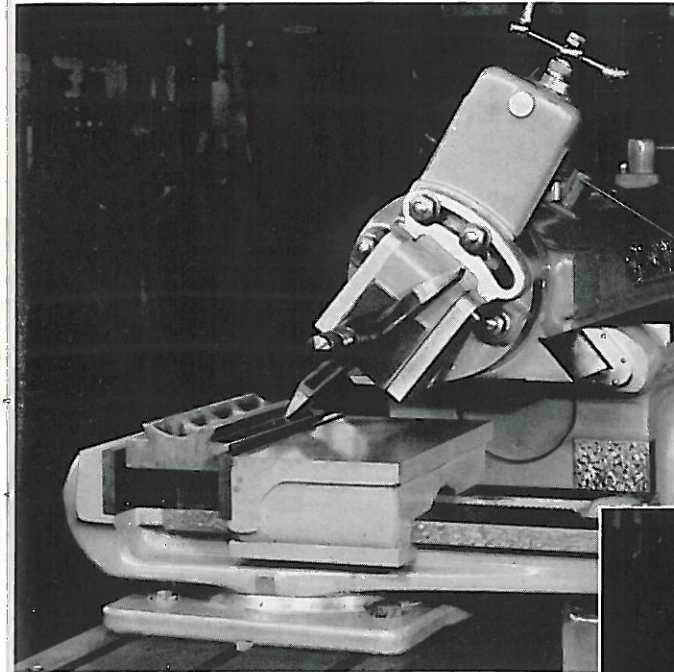
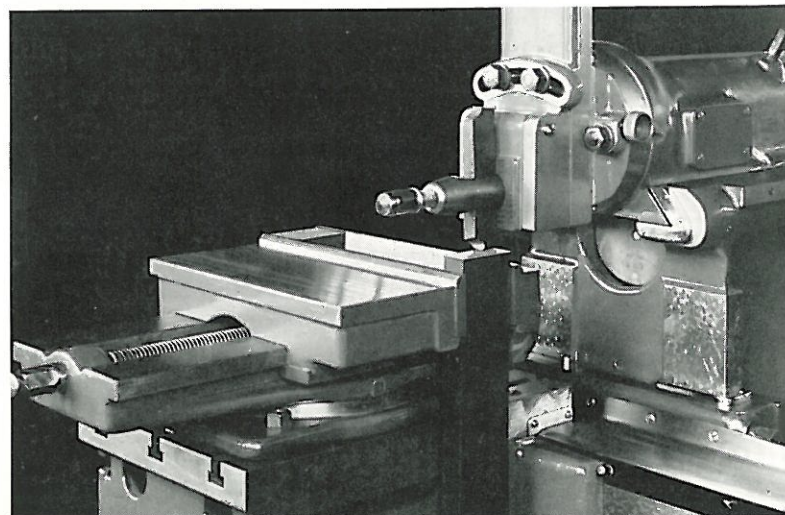
The majority of shaper work is held in the vise with quick, easy setup.

Shaping blind slots in a 10,000-pound steel table, an example of large work readily handled.



The shaper vise with extended jaws immediately lines up a bar for squaring the end.

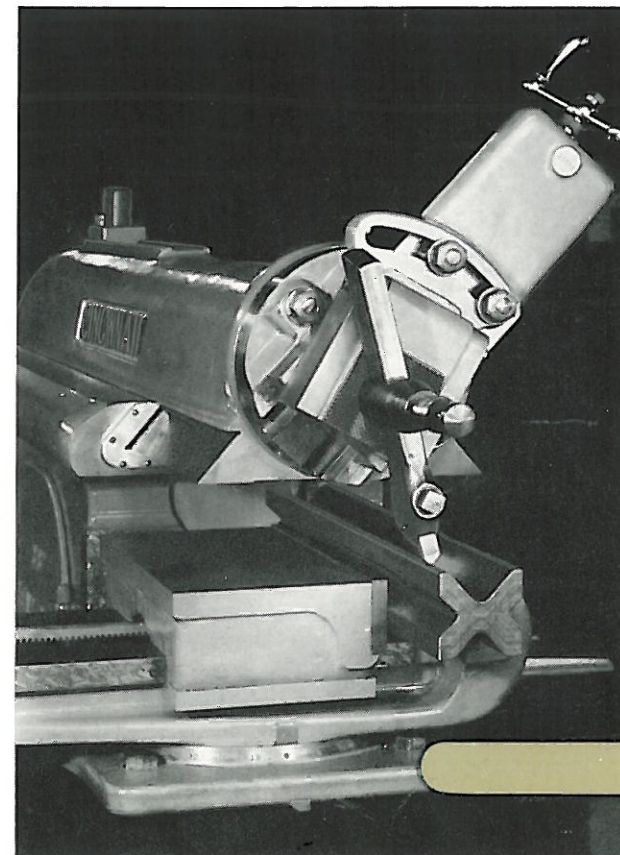
Vertical surfaces are shaped square and true either by hand or with automatic power down feed.



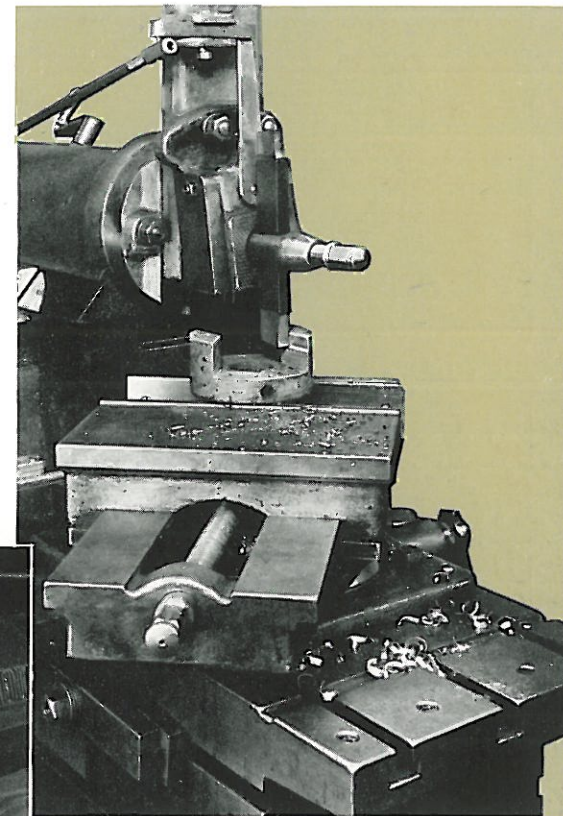
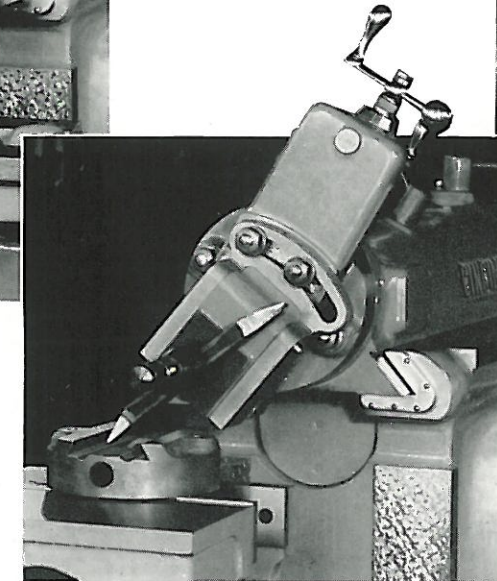
ANGULAR WORK

Both tool and work are easily swiveled for angular cutting of all kinds.

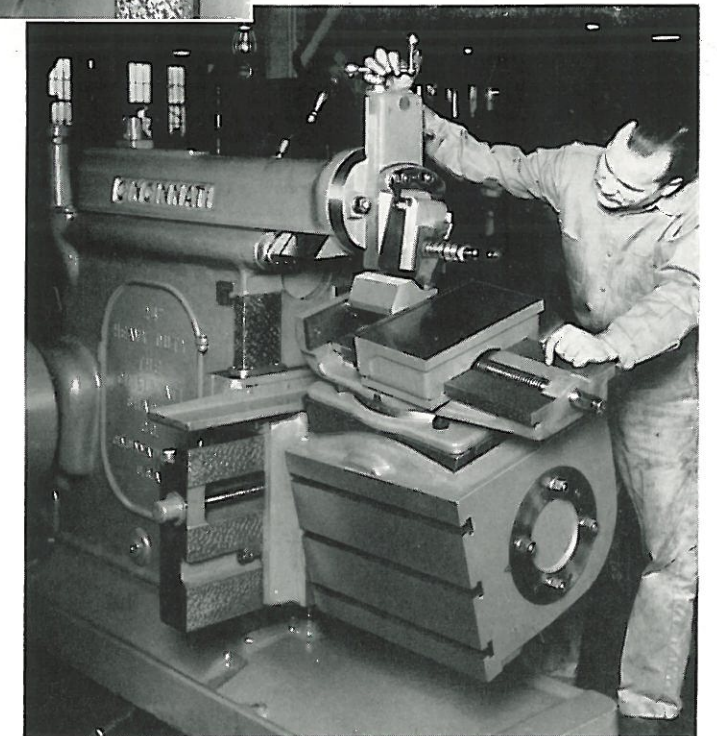
The ability to swivel the head to any angle simplifies angular work in shaping this four-way die.



Male and female dovetails are produced with equal ease.

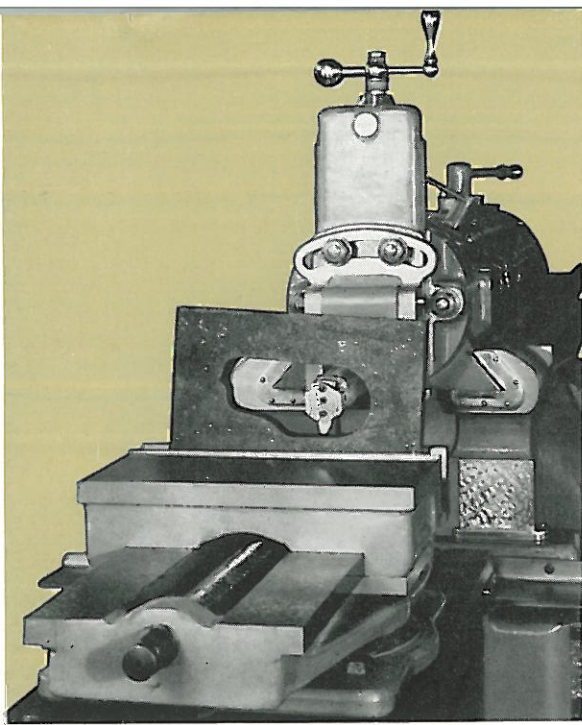


The shaper vise is quickly swiveled and set to graduations for accurately finishing these angular faces.



The work is rotated about all three axes with universal table and swiveling vise, giving extra flexibility for angular work.

MINIMUM INVESTMENT . . . MINIMUM TOOLING COST

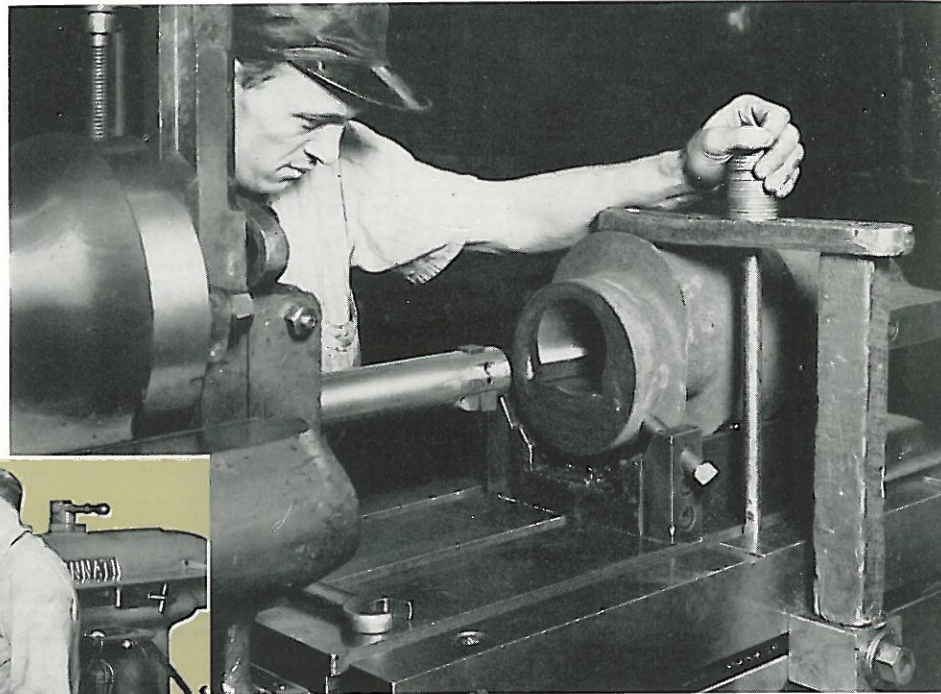


Many irregular shapes are cut with a simple extension tool.

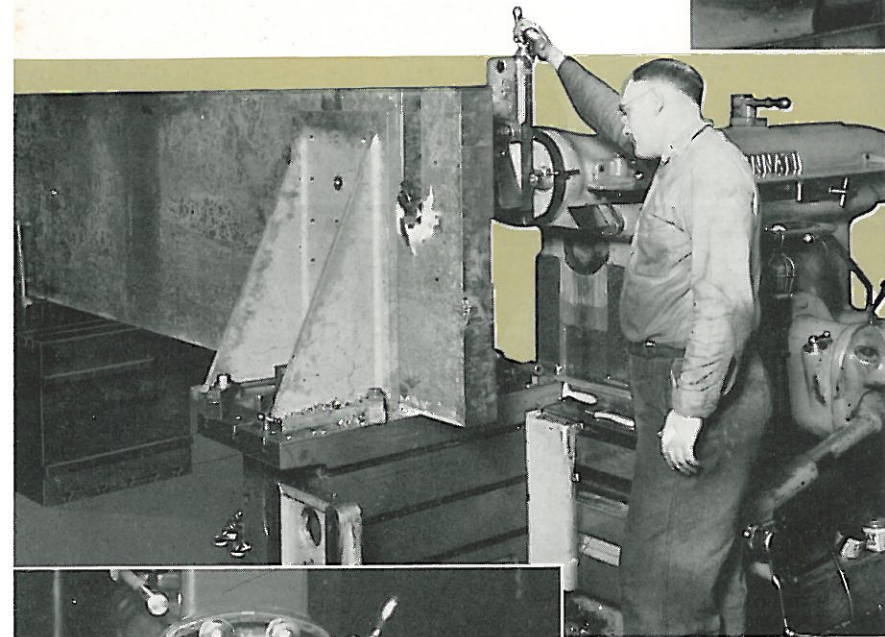


INTERNAL SHAPING

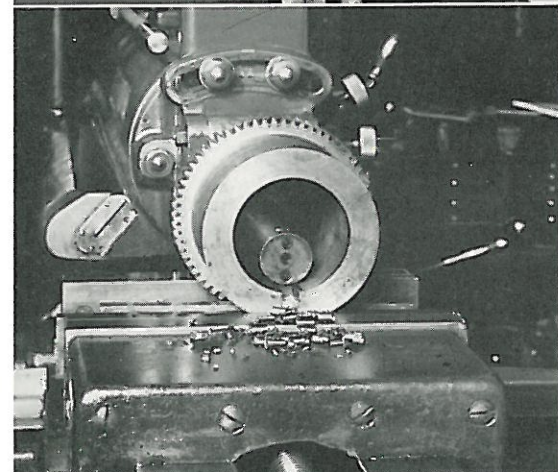
...the only practical method for many hard-to-get-at jobs.



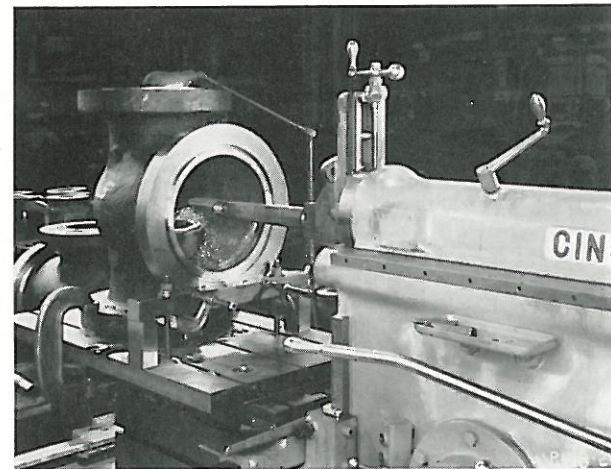
Kennedy keyways are cut to close tolerances in the blind hole of this forged eccentric.



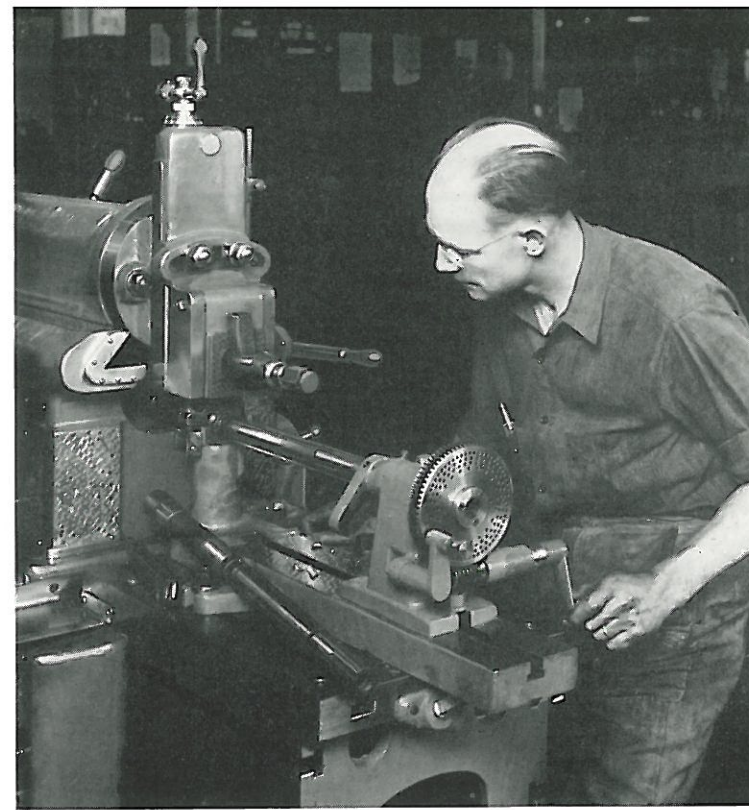
Shaping accurate flat bearing seats in this large bolster plate is a natural job for a shaper.



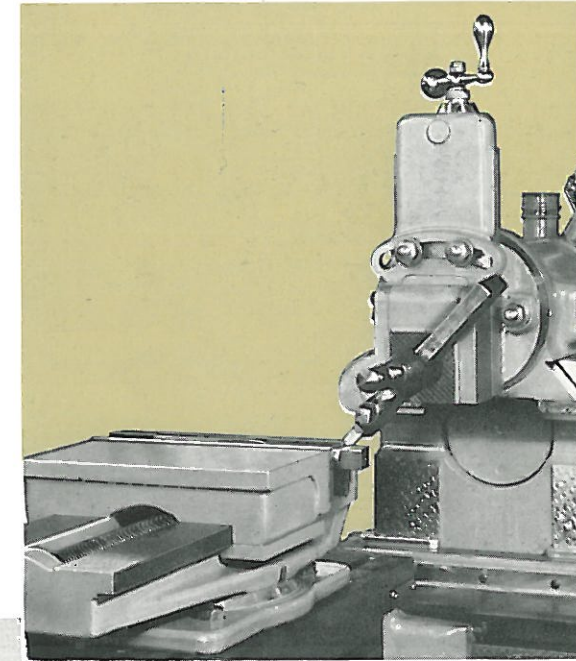
Shapers are widely used for cutting internal keyways.



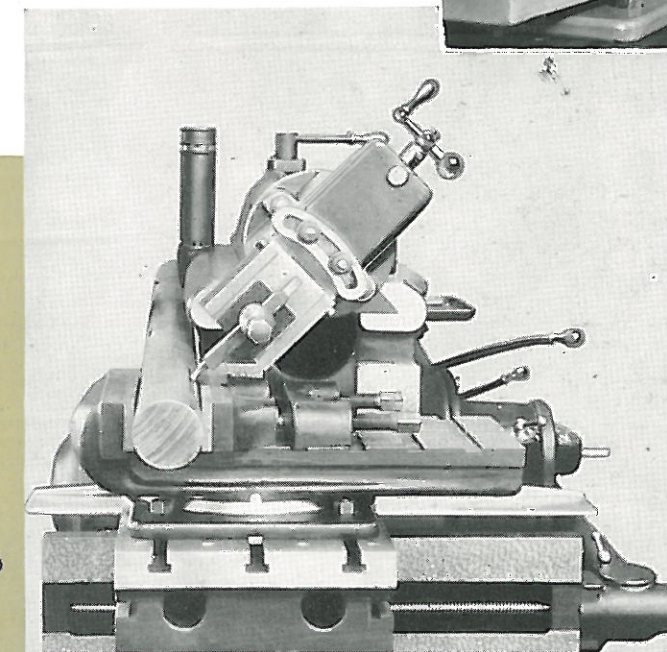
Machining internal guides of gate valves is another hard-to-get-at job which the shaper does very efficiently.



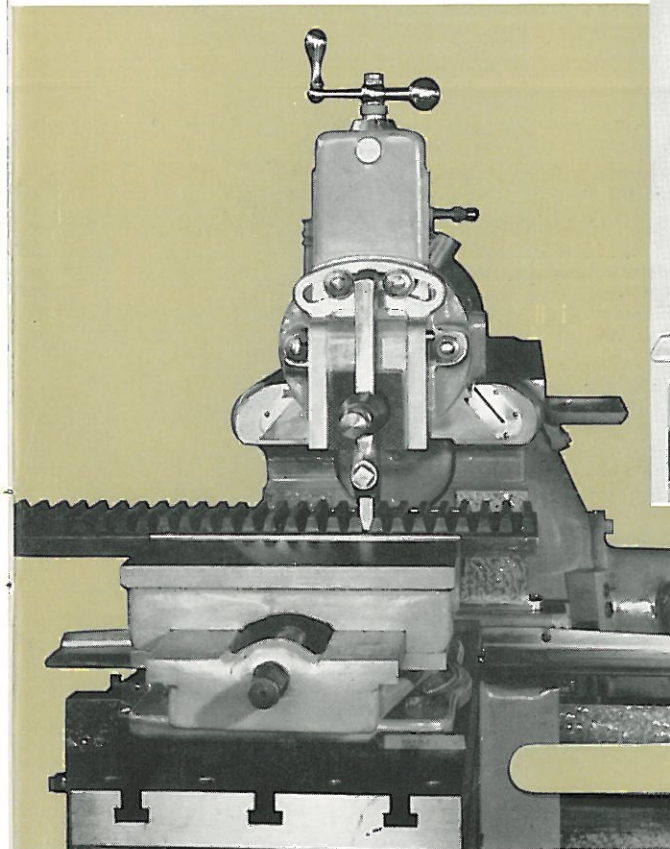
Splined shafts, gears, ratchets, and similar parts are made readily with shaper index centers.



Shaping a square end on a tool shank.



Keyways can be cut any place in a shaft.

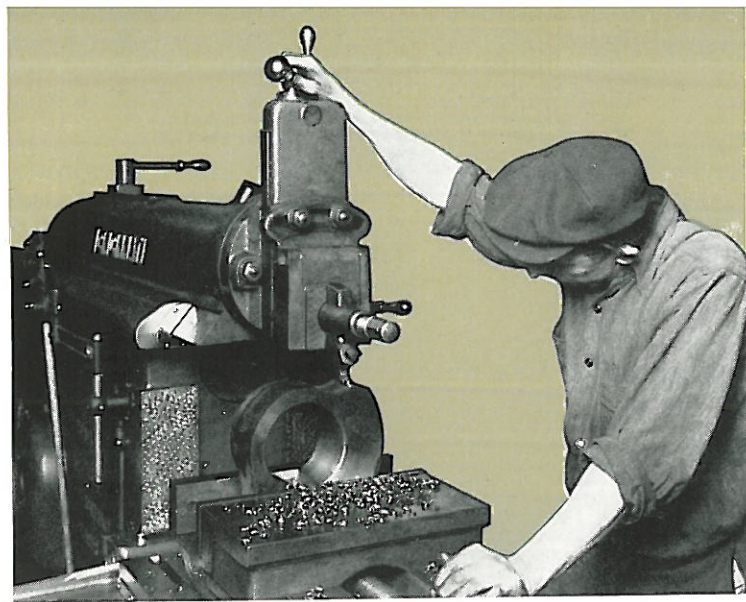


← Cutting a rack is relatively easy with the accurate Cincinnati cross feed.

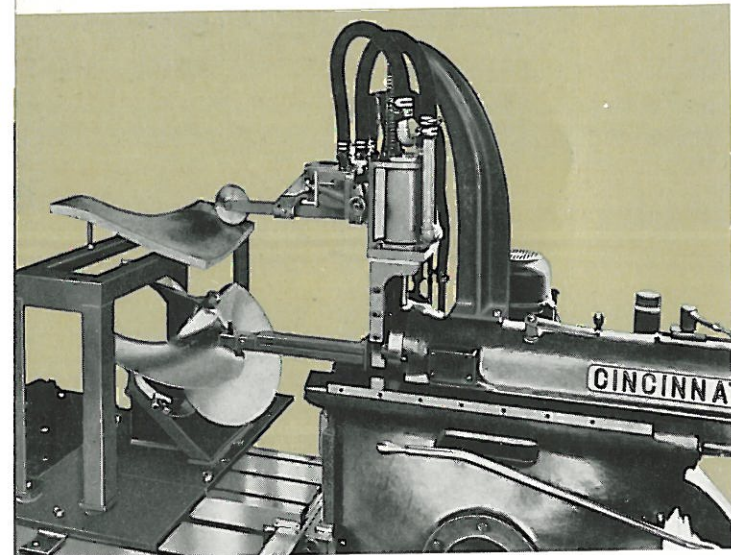
MINIMUM INVESTMENT . . . MINIMUM TOOLING COST

CONTOURING AND DUPLICATING

The shaper is widely used to produce irregular shapes and contours by cutting to a scribed line with manual control. This work also is produced automatically with tracer control.

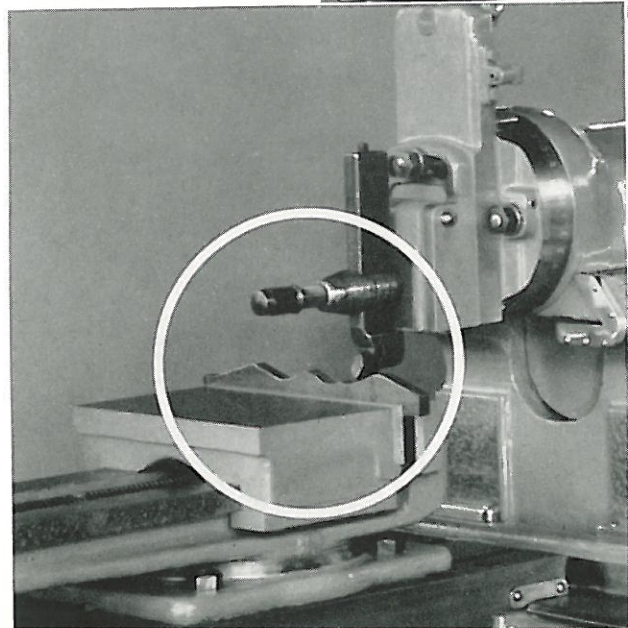


Contouring a cam using automatic cross feed and hand operated vertical feed.

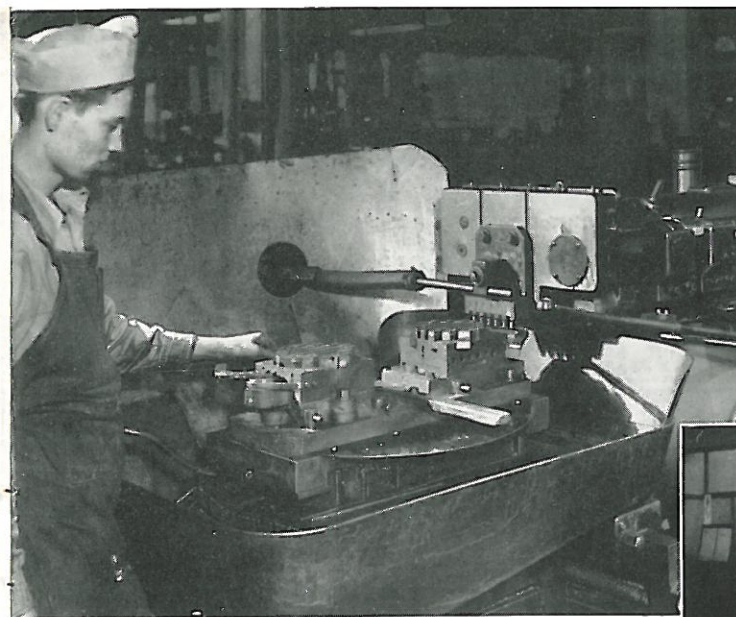
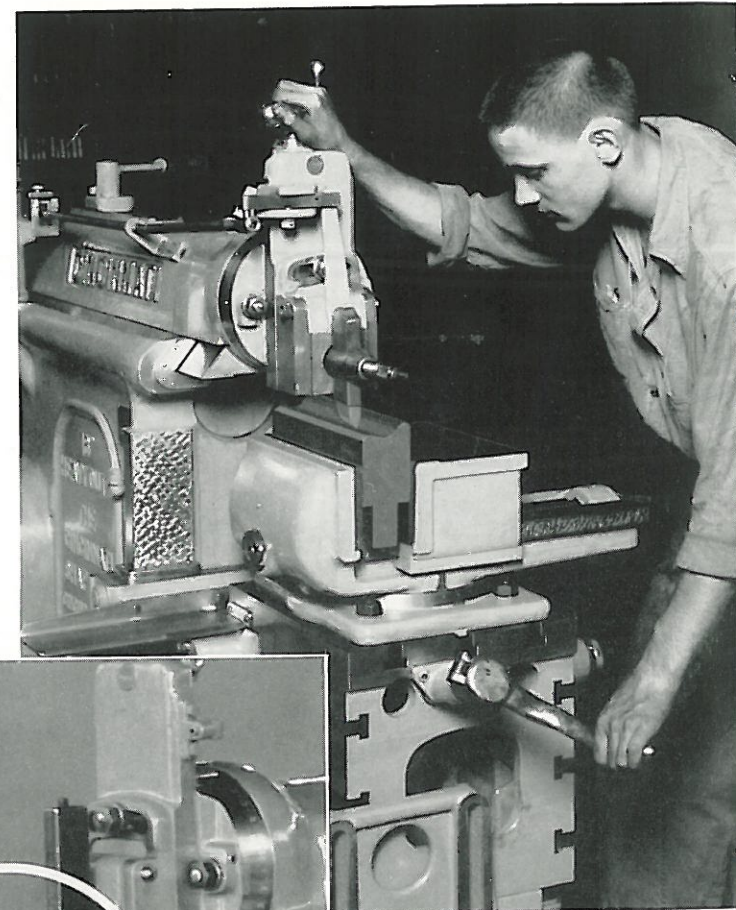


Automatic contouring with tracer control. Form tools, cams, dies and similar parts are produced economically in small lots from simple, inexpensive sheet metal templates.

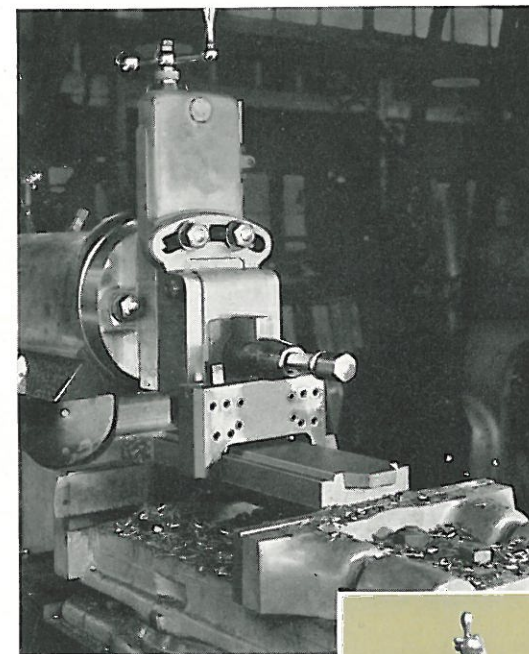
A great variety of shapes are automatically machined with an economical mechanical tracer.



An additional cross feed control located at the front of the shaper simplifies simultaneous hand operation of vertical and cross feeds.

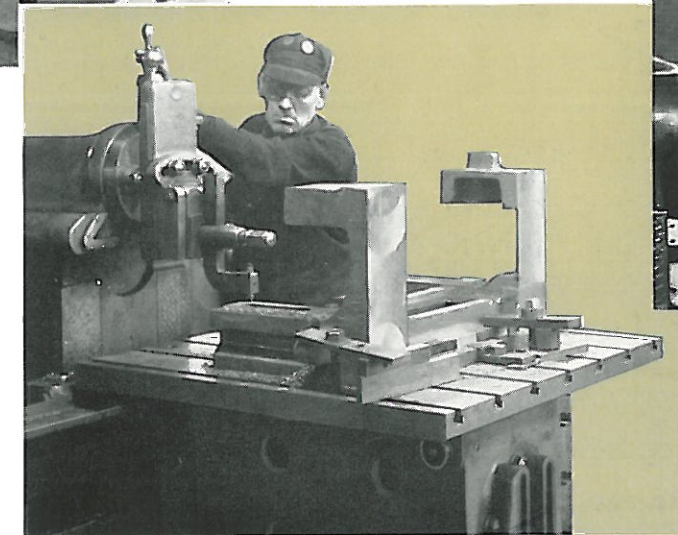


Ninety pieces of printers' metal base are machined per hour on this automatic cycle Cincinnati Shaper.



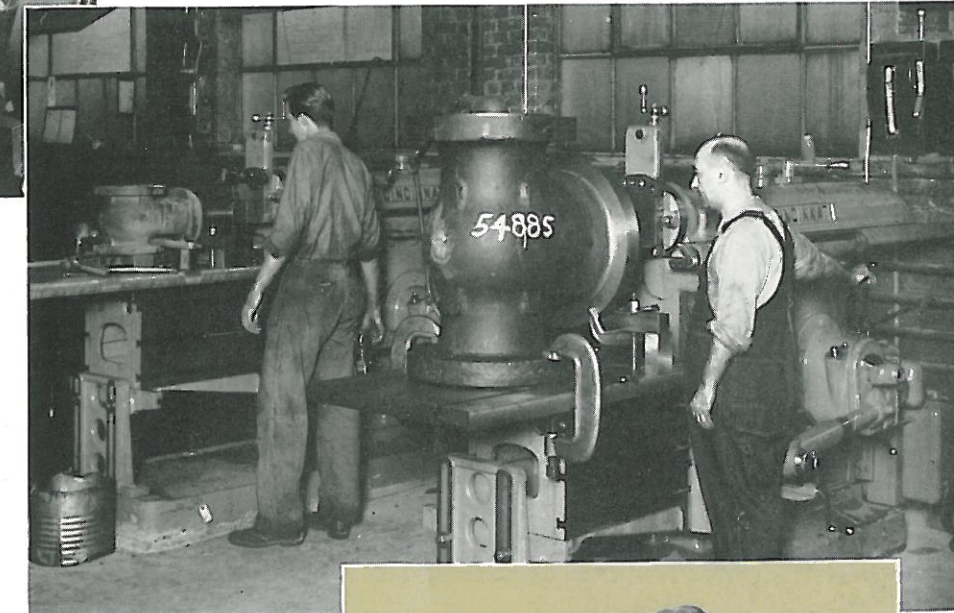
Production shapening glass molds to tolerance of .001".

Machining bases for woodworking machines with an offset tool and supplementary table top.

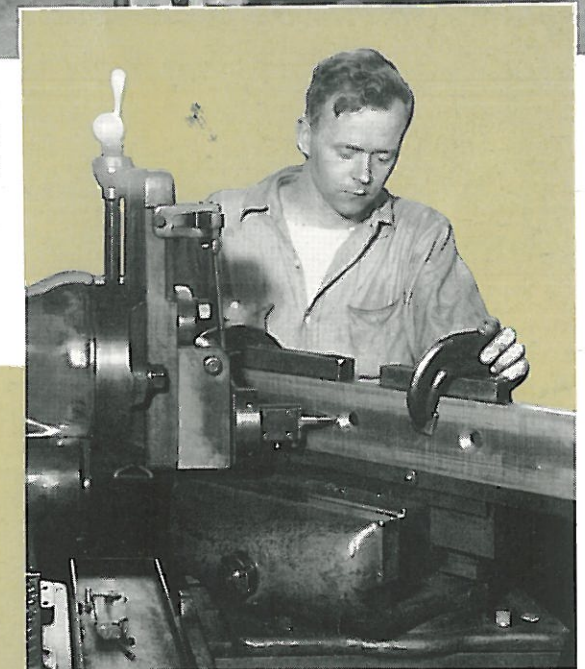


MANUFACTURING

Many manufacturing jobs are most efficiently done on a shaper.



The shaper is the natural tool for machining internal gate valve guides.



Machining plow bolt tongue slots in shear knives with simple tools and fixture; 150 per hour.

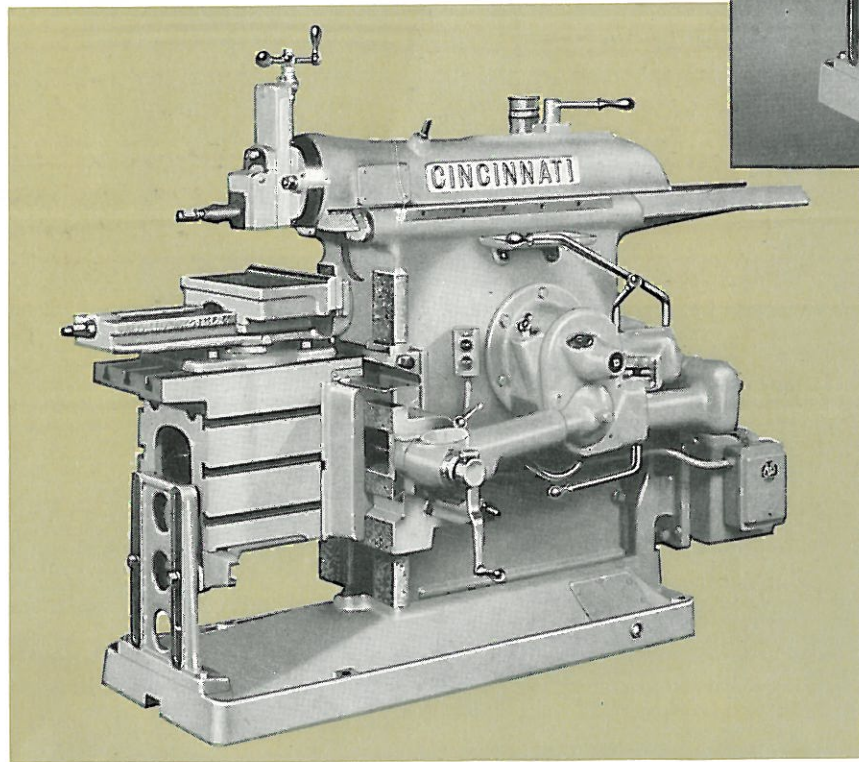
MINIMUM INVESTMENT . . . MINIMUM TOOLING COST

THE NEW CINCINNATI SHAPERS

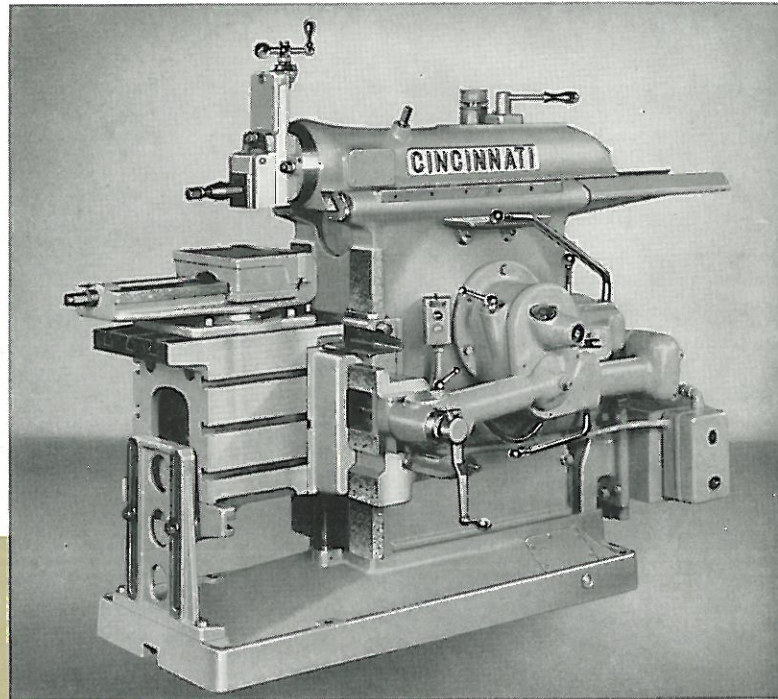
The new Cincinnati Shapers embody real advances. These modern machines are equipped with exclusive features and improvements not before available as standard equipment.

Cincinnati Shapers now have as standard equipment, built-in vertical power rapid traverse as well as horizontal power rapid traverse, a superior automatic lubrication system which includes the rail and apron, tool slide feed screws hardened and ground and mounted on anti-friction bearings, and single screw vises with extended jaws.

These models retain the popular and proved features of internal transmission running in oil, selective multiple cam feeds, full length taper gibs with single screw adjustment, anti-friction bearings at all critical points, and many other features described later in this book.



The 24" Standard Duty with Plain Table.



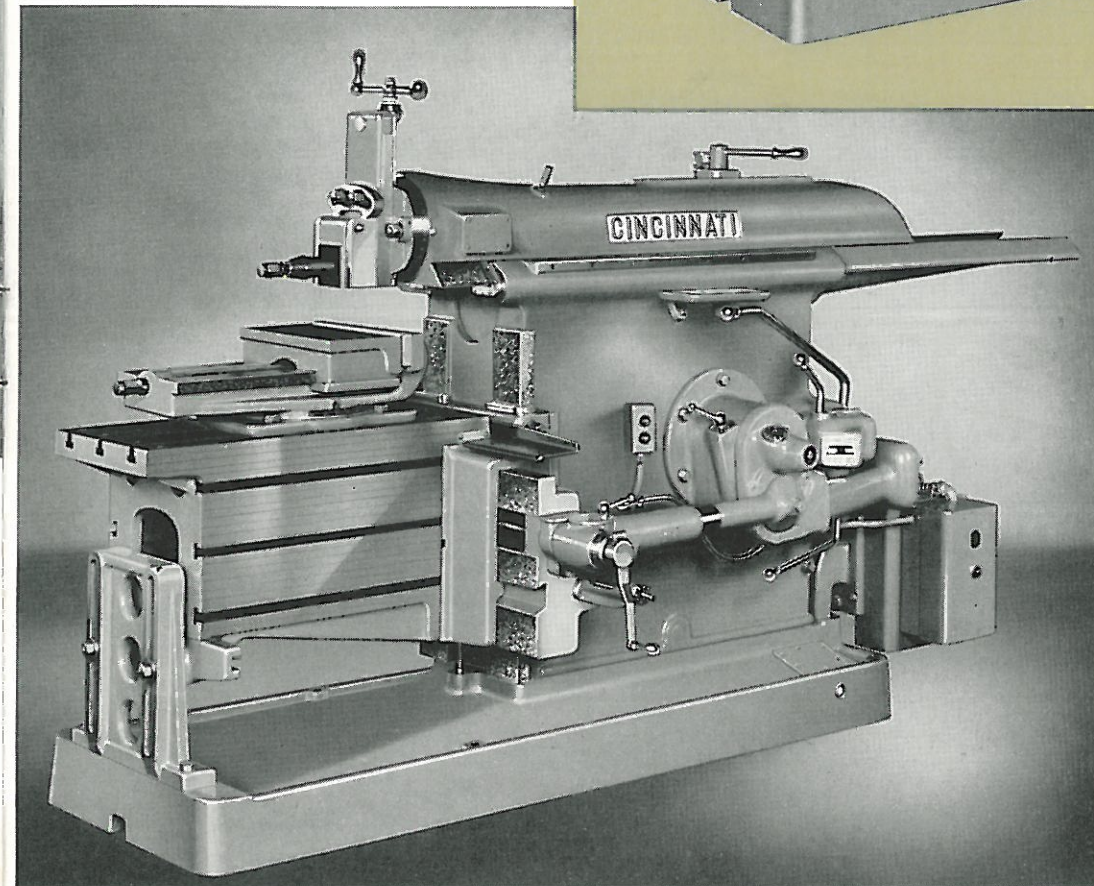
The 20" Standard Duty with Plain Table.

SELECTION

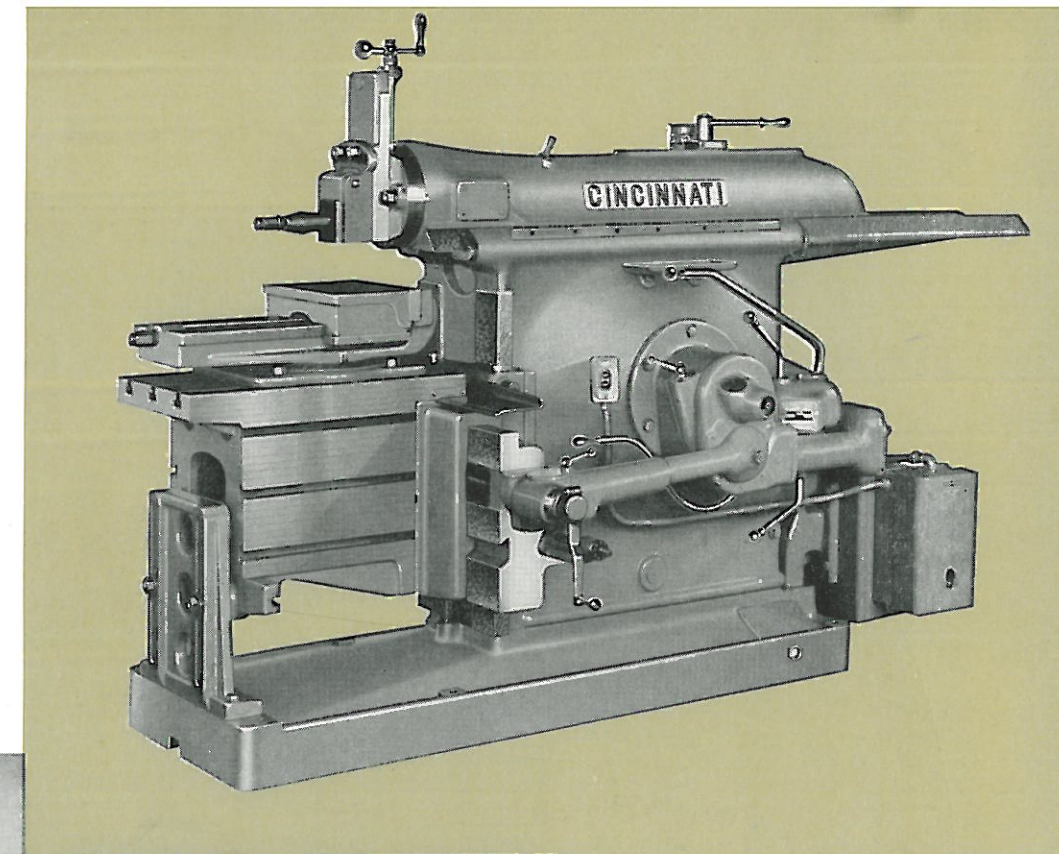
To select or specify shapers by length of stroke alone is not adequate. The power required in a shaper for cutting die block steel is far beyond that necessary in cast iron, aluminum or in tool room jobs. In selecting a shaper, therefore, the service to be performed must be considered as well as the length of the stroke.

Selection (Cont.)

To meet these conditions, we have in the 16" stroke either standard or high-speed in both a Utility and a Heavy Duty model. In the 20" we have a Utility, a Standard Duty and a Heavy Duty model. In the 24", either a Standard or Heavy Duty is available



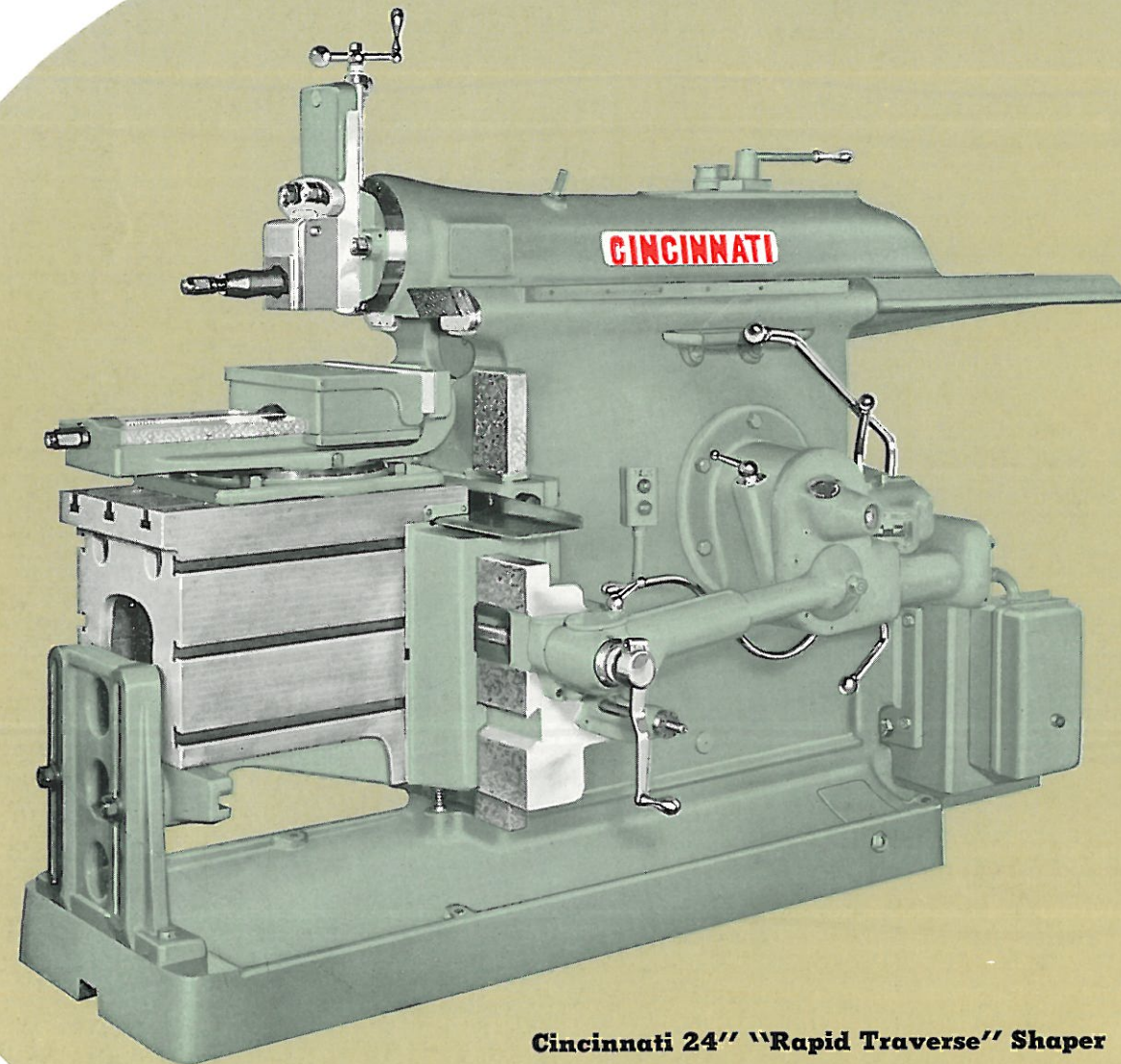
The 36" Heavy Duty with Plain Table.



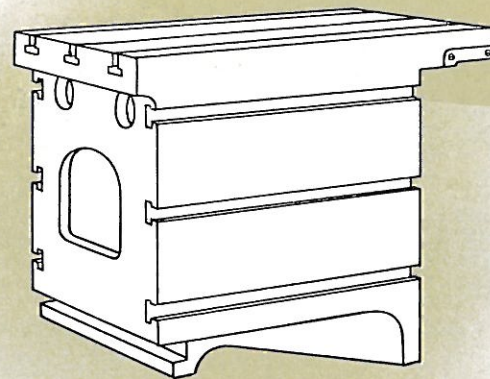
The 28" Heavy Duty with Plain Table.

Beyond the 24", that is, the 28", 32" and 36", the shapers reach a size where only heavy service is required. All are furnished with Universal or Plain Tables

Four sizes—typical of all—with Plain Tables are illustrated



Cincinnati 24" "Rapid Traverse" Shaper



Plain Table

Cincinnati "Rapid Traverse" Shapers

Cincinnati "Rapid Traverse" Shapers are equipped with Plain Tables and are basic machines in the small shop and in the large plant. These efficient machines have strength, power, accuracy, speed, convenience, and long life.

Dimensions and Specifications Cincinnati Rapid Traverse Shapers

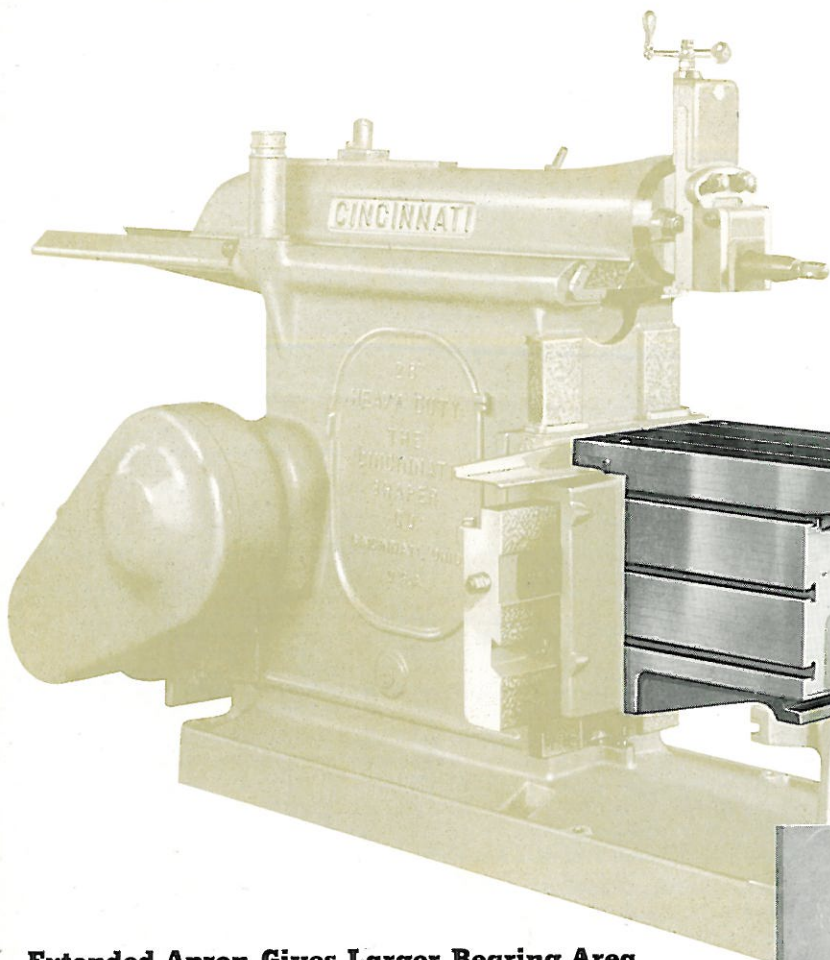
Machine	Stroke Service	16" Heavy	20" Standard	20" Heavy	24" Standard	24" Heavy	28" Heavy	32" Heavy	36" Heavy
Code Words		Paddy	Pluck	Pinto	Perky	Pipyn	Punch	Poker	Pegee
Stroke, Actual Length		17"	21"	21"	25"	25"	29"	33"	37"
Strokes per Minute		11 to 138	11 to 138	10 to 129	10 to 129	9 to 119	9 to 119	8 to 102	8 to 102
Cutting Speeds		8	8	8	8	8	8	8	8
Feed to Head		7½"	7½"	7½"	7½"	9½"	9½"	9½"	9½"
Cross Feeds, Number		11	11	11	11	11	11	11	11
Cross Feeds, Range		.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170
Table Travel, Horizontal		24"	24"	24"	24"	30½"	30½"	30½"	30½"
Table Travel, Vertical		13"	13"	13"	13"	13"	13"	13"	13"
Extreme Distance, Table to Ram		17½"	17½"	17½"	17½"	17½"	17½"	18"	18"
Table Top		14" x 16"	14" x 20"	14" x 20"	14" x 24"	16" x 24"	16" x 28"	16" x 32"	16" x 36"
Table Depth		15¾"	15¾"	15¾"	15¾"	20"	20"	20"	20"
Ram Bearing in Column		32"	32"	36"	36"	40"	40"	46"	46"
Ram Bearing, Width		10½"	10½"	11¼"	11¼"	12"	12"	13"	13"
Tools, Largest Size		7/8" x 1½"	7/8" x 1½"	7/8" x 1½"	7/8" x 1½"	1" x 2"	1" x 2"	1" x 2"	1" x 2"
Vise, Single or Double Screw	Jaw Size, Double	2½" x 12"	2½" x 12"	2½" x 12"	2½" x 12"	3" x 15"	3" x 15"	3" x 15"	3" x 15"
	Jaw Size, Single	3" x 15"	3" x 15"	3" x 15"	3" x 15"	3½" x 17½"	3½" x 17½"	3½" x 17½"	3½" x 17½"
	Jaws, Open	13"	13"	13"	13"	15"	15"	15"	15"
	Body, Height	4¾"	4¾"	4¾"	4¾"	5"	5"	5"	5"
Mould Makers' Vise	Jaws, Size	4½" x 12"	4½" x 12"	4½" x 12"	4½" x 12"	5" x 15"	5" x 15"	5" x 15"	5" x 15"
	Jaws, Open	13"	13"	13"	13"	15"	15"	15"	15"
Motor recommended when Motor Driven	H.P.	5	5	5	7½	10	10	10	10 to 15
	Speed, R.P.M.	1800	1800	1800	1800	1800	1800	1800	1800
Weight, Net Without Motor, Approx.		4200	4300	4850	4950	6400	6550	7800	8000
Weight, Domestic Shipping, Approx.		4600	4700	5300	5400	7100	7200	8400	8600
Weight, Export Shipping, Approx.		5500	5600	6200	6300	8100	8200	9600	9800
Cubic Feet, Export Packing, Approx.		170	170	190	190	240	240	280	280

Standard Equipment Includes These Features:

Plain table of heavy box construction—Cincinnati protected table support—Vertical built-in power rapid traverse to the table—Horizontal built-in power rapid traverse to the table—Automatic lubrication—Enclosed transmission running in oil—Individual cam feeds. All controls, including rail clamp and directional vertical traverse lever, at the operator's position. Direct-reading dials—Single or double screw vise—Complete guarding—Wrenches.

Features of the Cincinnati Power Rapid Traverse Shapers are described on the following pages.

THE CINCINNATI SHAPER COMPANY



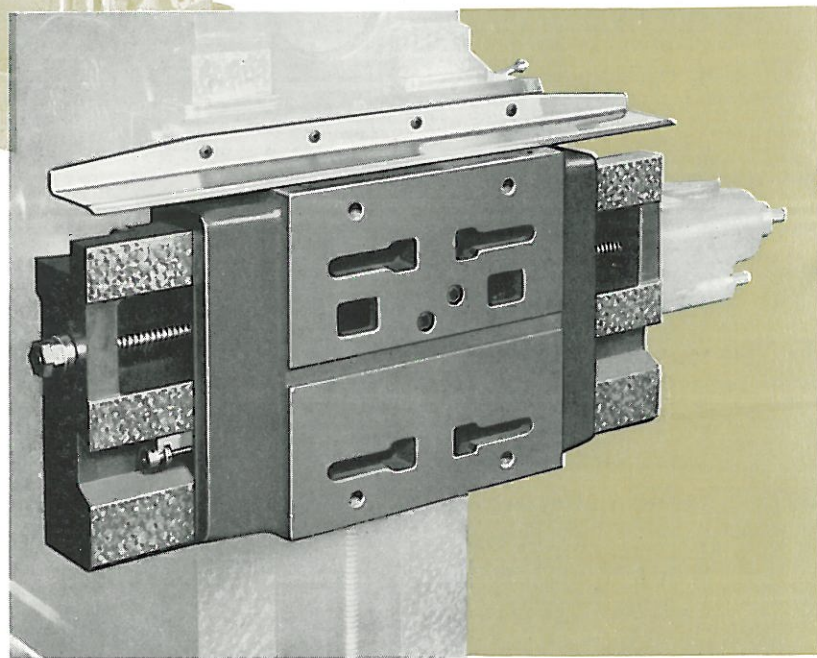
PLAIN TABLE

... "Rapid Traverse" Shaper



Rigid Table

The table is of rigid box construction with extra depth for extra strength. It is supported directly on top of the apron, a Cincinnati feature. This places the working surface adjacent to the column—a construction giving full work clearance and maximum rigidity.

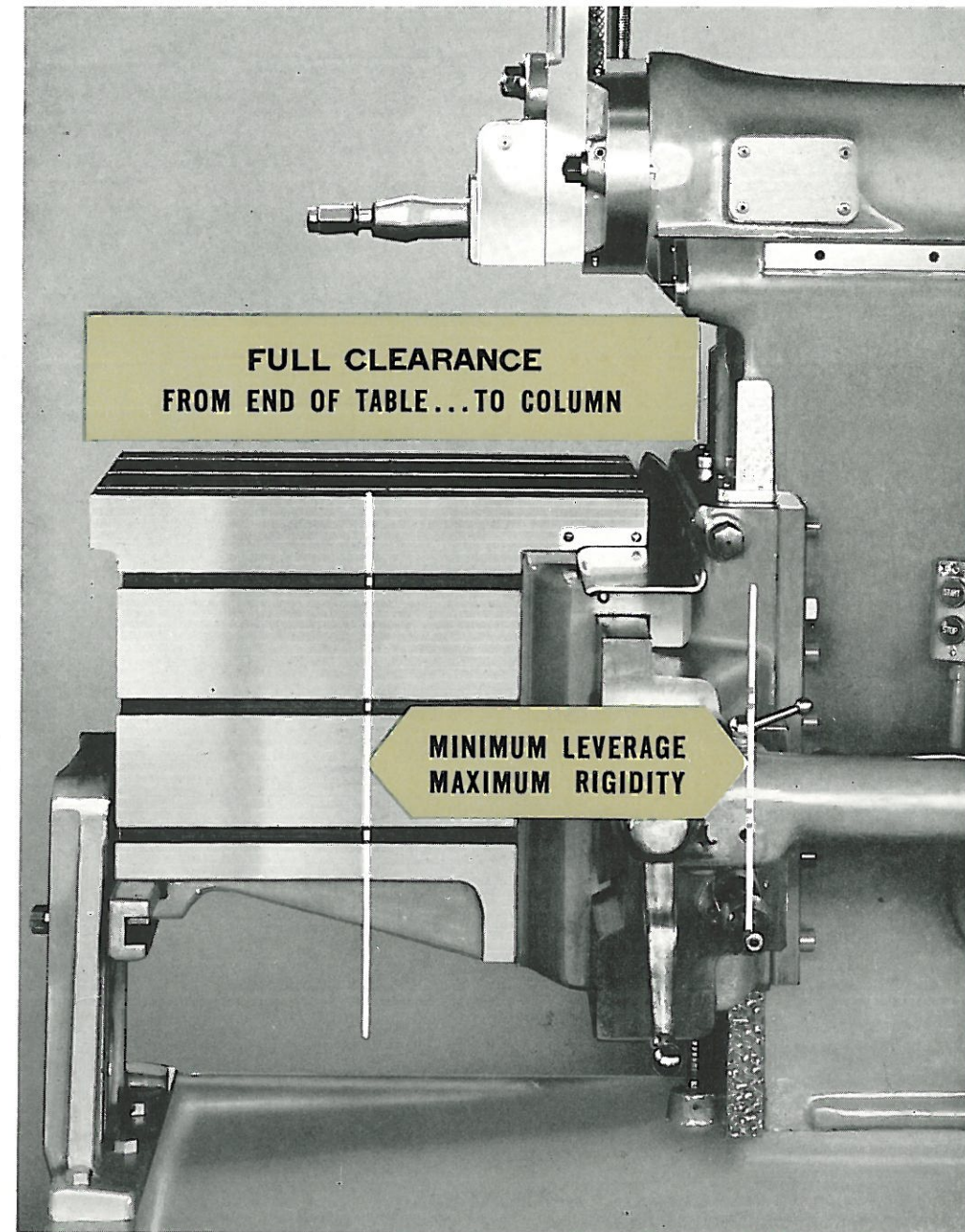
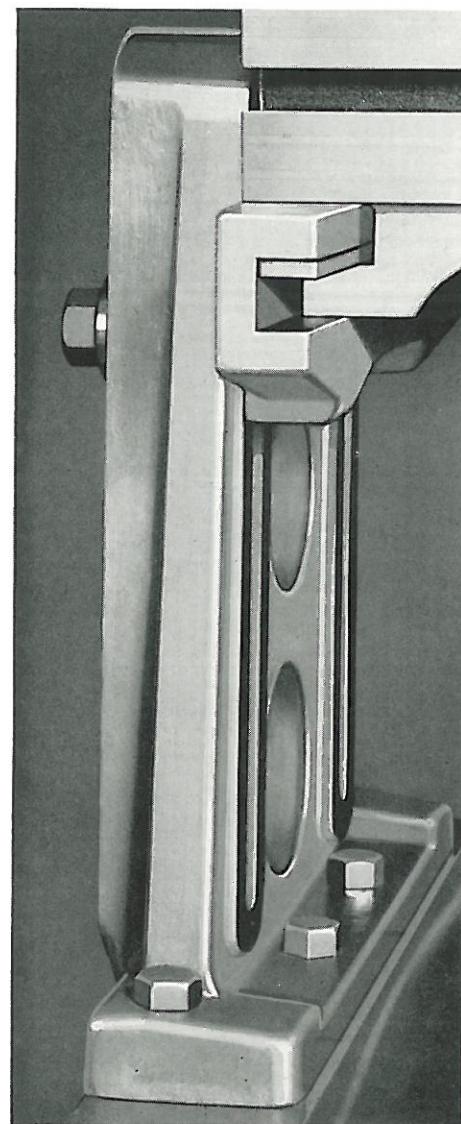
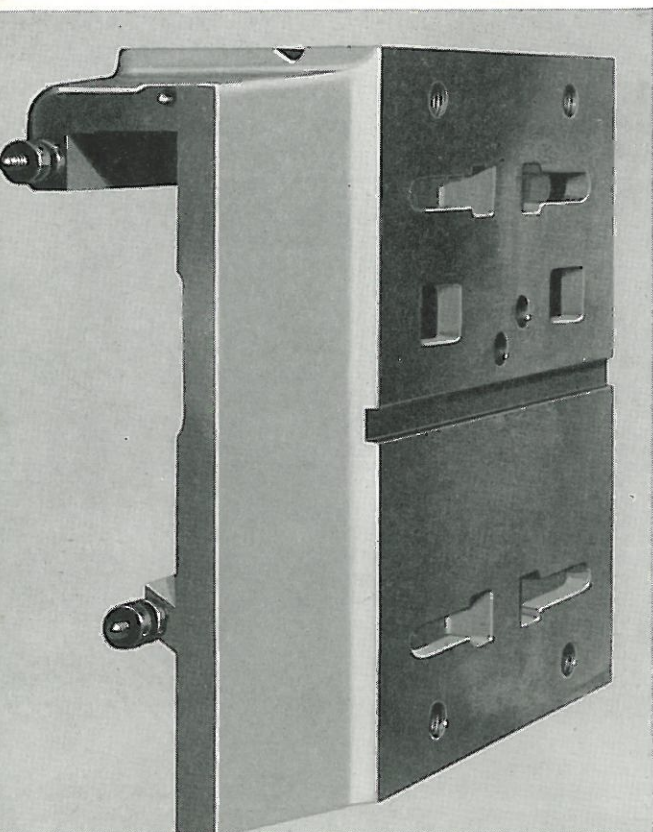


Massive Cross Rail Automatically Lubricated

All controls including rail clamp and vertical traverse lever are at the operator's position. The compound cross rail is square locked to the column. Side alignment is maintained by a single adjustment tapered gib. The thrust of the elevating nut is taken by a ball bearing. The rail securely supports the apron with three bearing surfaces. Both apron and rail-column bearings are automatically lubricated.

Extended Apron Gives Larger Bearing Area

The one-piece apron hooks over the rail and is secured to the cross rail by a tapered gib at the top and center for smooth operation. It is heavily reinforced for stiffness and extends well beyond both sides of the table, giving greatly increased bearing surface against the rail.



Minimum Table Overhang

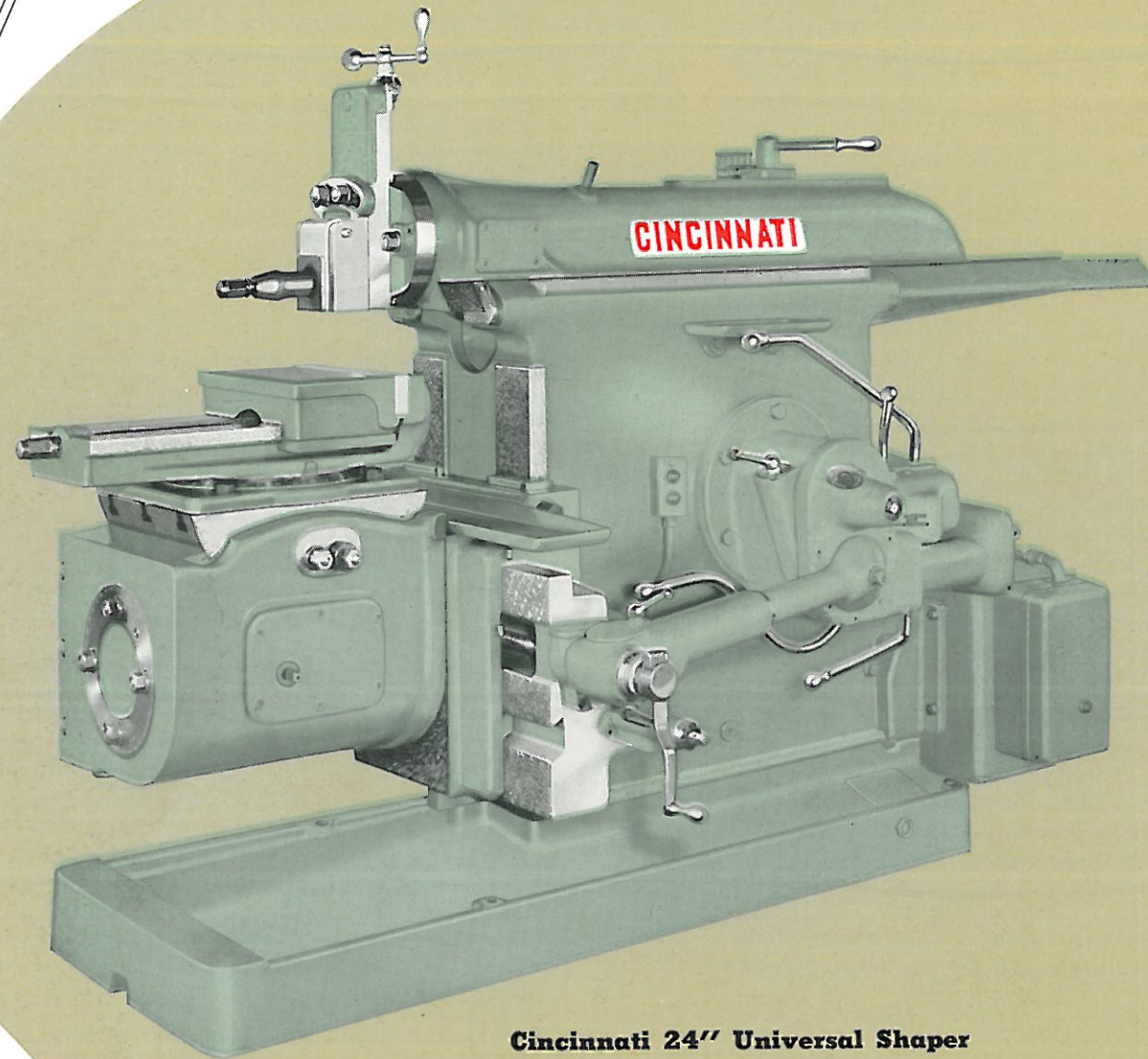
The unusual Cincinnati construction of apron, rail, and table gives full work clearance from the end of the table to the column. It also places the table surface immediately adjacent to the column. Work is supported with minimum leverage and maximum rigidity.

Rail Guard Is Out Of The Way

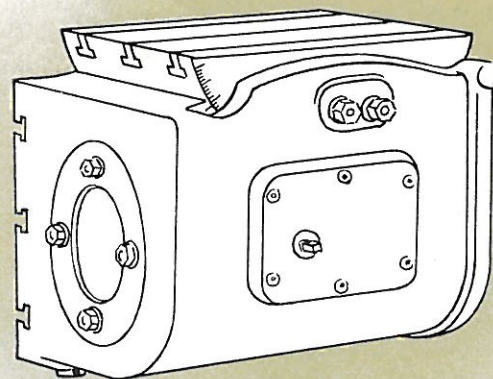
A heavy steel guard below the table surface protects the cross rail from chips, allows the use of the entire table surface, and does not interfere with the operator. Locating the work nearer the column gives greater rigidity and accuracy.

Protected Table Support Bearing

The plain table support has the sliding action at the table, not at the shaper base. With this unusual feature, parallel action is not dependent upon exact alignment of the base. The sliding surface is completely guarded against chips and dirt. It is gibbed to maintain accurate support.



Cincinnati 24" Universal Shaper



Universal Table

Cincinnati Universal Shapers

The Cincinnati Universal Shaper with universal table provides easy setups for shaping work at difficult angles. It combines high speed with extreme accuracy and has a degree of automatic operation and simplicity of control that put new life in any operator.

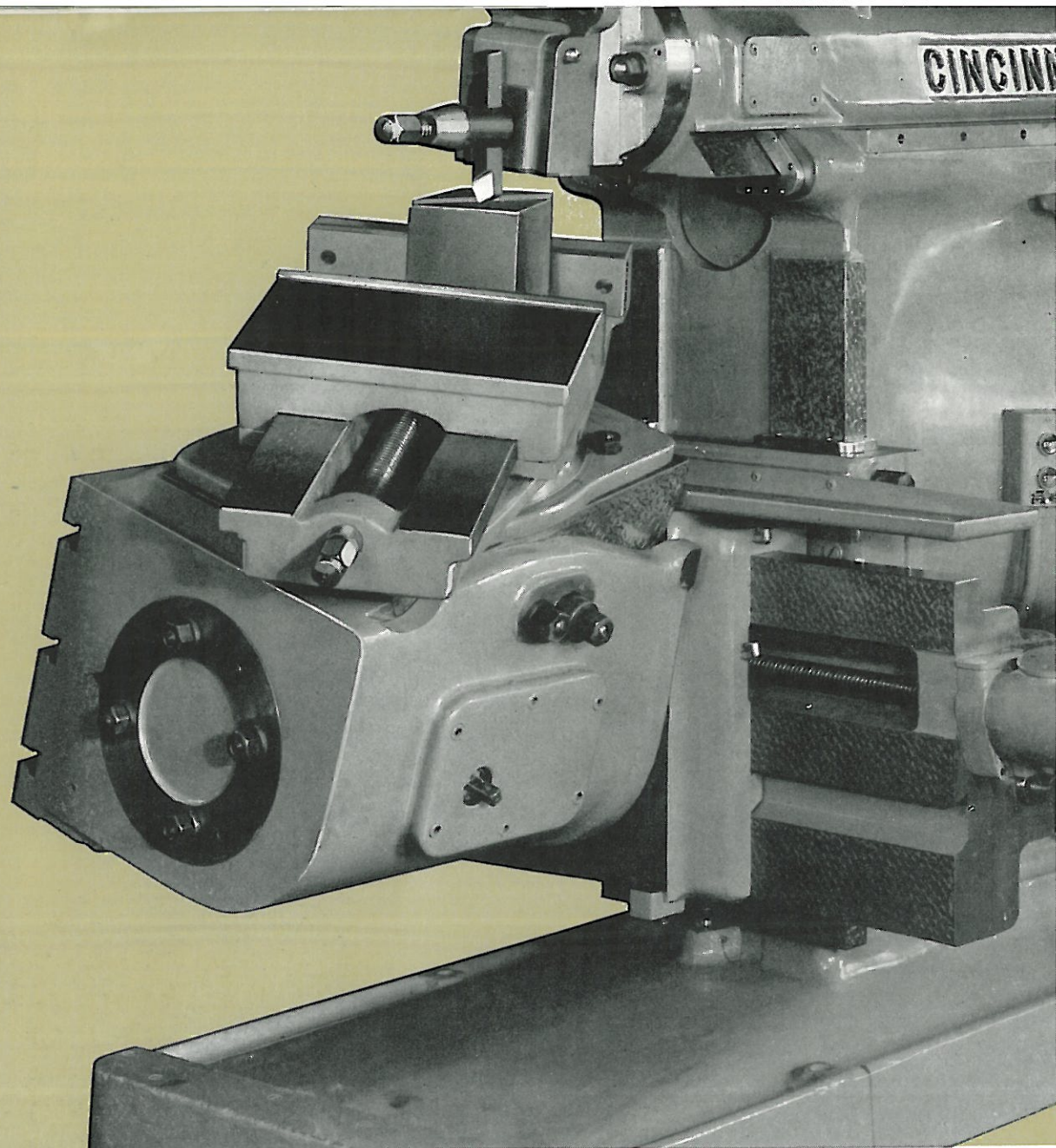
Dimensions and Specifications Cincinnati Universal Shapers

Machine	Stroke Service	16" Heavy	20" Standard	20" Heavy	24" Standard	24" Heavy	28" Heavy	32" Heavy	36" Heavy
Code Words		Paddy Pivot	Pluck Pivot	Pinto Pivot	Perky Pivot	Pipyn Pivot	Punch Pivot	Poker Pivot	Pegee Pivot
Stroke, Actual Length		17"	21"	21"	25"	25"	29"	33"	37"
Strokes per Minute		11 to 138	11 to 138	10 to 129	10 to 129	9 to 119	9 to 119	8 to 102	8 to 102
Cutting Speeds		8	8	8	8	8	8	8	8
Feed to Head		7½"	7½"	7½"	7½"	9½"	9½"	9½"	9½"
Cross Feeds, Number		11	11	11	11	11	11	11	11
Cross Feeds, Range		.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170	.010 to .170
Table Travel, Horizontal		24"	24"	24"	24"	30½"	30½"	30½"	30½"
Table Travel, Vertical		13"	13"	13"	13"	13"	13"	13"	13"
Extreme Distance Table to Ram	Tilting	17⅛"	17⅛"	17⅛"	17⅛"	17⅛"	17⅛"	17⅛"	17⅛"
	Plain	17⅝"	17⅝"	17⅝"	17⅝"	17½"	17½"	18"	18"
Table Size	Tilting	13¼" x 15"	13¼" x 15"	13¼" x 15"	13¼" x 15"	15" x 18¼"	15" x 18¼"	15" x 26¾"	15" x 26¾"
	Plain	13¼" x 16"	13¼" x 16"	13¼" x 16"	13¼" x 16"	16" x 20½"	16" x 20½"	16" x 28½"	16" x 28½"
Ram Bearing in Column		32"	32"	36"	36"	40"	40"	46"	46"
Ram Bearing, width		10½"	10½"	11¼"	11¼"	12"	12"	13"	13"
Tools, Largest Size		⅞" x 1½"	⅞" x 1½"	⅞" x 1½"	⅞" x 1½"	1" x 2"	1" x 2"	1" x 2"	1" x 2"
Vise, Single or Double Screw	Jaw Size, Double	2½" x 12"	2½" x 12"	2½" x 12"	2½" x 12"	3" x 15"	3" x 15"	3" x 15"	3" x 15"
	Jaw Size, Single	3" x 15"	3" x 15"	3" x 15"	3" x 15"	3½" x 17½"	3½" x 17½"	3½" x 17½"	3½" x 17½"
	Jaws, Open	13"	13"	13"	13"	15"	15"	15"	15"
	Body, Height	4¾"	4¾"	4¾"	4¾"	5"	5"	5"	5"
Mould Makers' Vise	Jaws, Size	4½" x 12"	4½" x 12"	4½" x 12"	4½" x 12"	5" x 15"	5" x 15"	5" x 15"	5" x 15"
	Jaws, Open	13"	13"	13"	13"	15"	15"	15"	15"
Motor recommended when Motor Driven	H.P.	5	5	5	7½	10	10	10	10 to 15
	Speed, R.P.M.	1800	1800	1800	1800	1800	1800	1800	1800
Weight, Net, Without Motor, Approx.		4500	4600	5150	5250	6900	7100	8400	8600
Weight, Domestic Shipping, Approx.		4900	5000	5600	5700	7600	7700	9000	9200
Weight, Export Shipping, Approx.		5800	5900	6500	6600	8600	8700	10200	10400
Cubic Feet, Export Packing, Approx.		170	170	190	190	240	240	280	280

Standard Equipment Includes These Features:

Universal table with tilting controls at operator's position—Vertical built-in power rapid traverse to the table—Horizontal built-in power rapid traverse to the table—Automatic lubrication—Enclosed transmission running in oil—Individual cam feeds. All controls, including rail clamp and directional vertical traverse lever, at the operator's position. Direct-reading dials—Single or double screw vise—Complete guarding—Wrenches.

Features of the Cincinnati Universal Table are described on the following pages.



THE UNIVERSAL TABLE

One-Piece Construction Eliminates Need For Table Support

An oversize trunnion and apron cast in one piece has eliminated the need for the outer support on all sizes up to and including the 28" heavy duty model. This universal table, complete in itself without any auxiliary prop, extra adjustment or clamps, speeds setups. The rigidity of this table is ample for the heaviest roughing out. On finishing, the work is shaped to the closest limits.

Full Universal Table

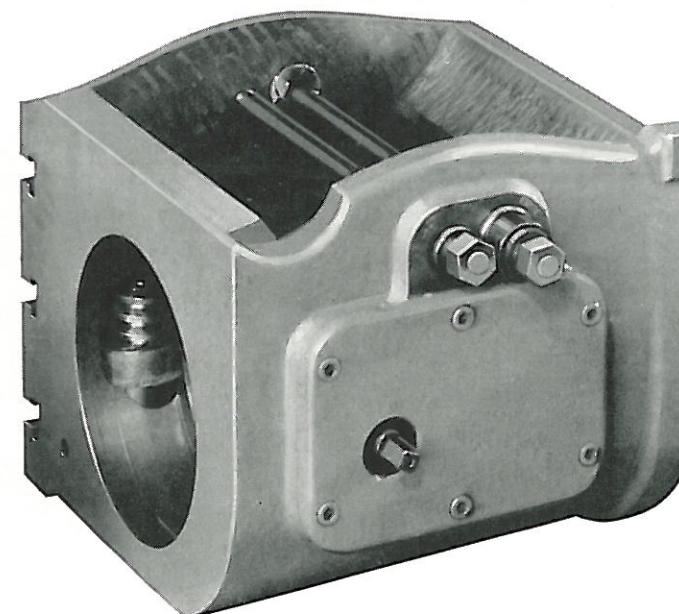
The Cincinnati Universal Shaper is equipped with a universal table that revolves to any angle. The table has one solid face, similar to the plain table, and one tilting face with adjustment up to 15° either way from the horizontal and on an axis at right angles to the trunnion. The latter is tilted by a crank through a worm and wormwheel. All controls are at the operator's position and all settings are indicated by graduated scales. Work can be rotated around all three axes with a universal table and swiveling vise.

Tilting Top Rigidly Supported

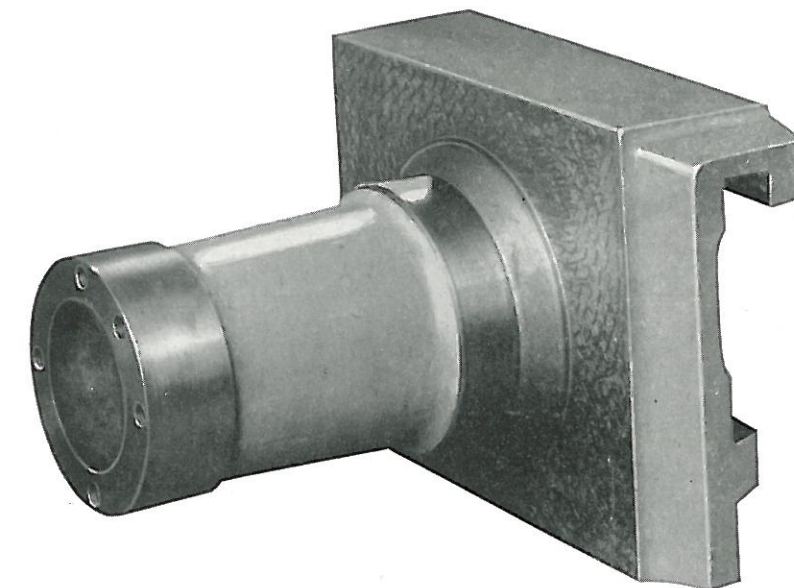
A full-bearing tilting top has the advantage of tilting either end above or below the horizontal, and maintains a solid bearing in the body of the table at any position. Clamping bolts at operator's position hold the top down firmly in its seat as well as grip it on the sides.



Solid, Full-Bearing, Tilting Top



Rigid, One-Piece Body With Scraped Bearings

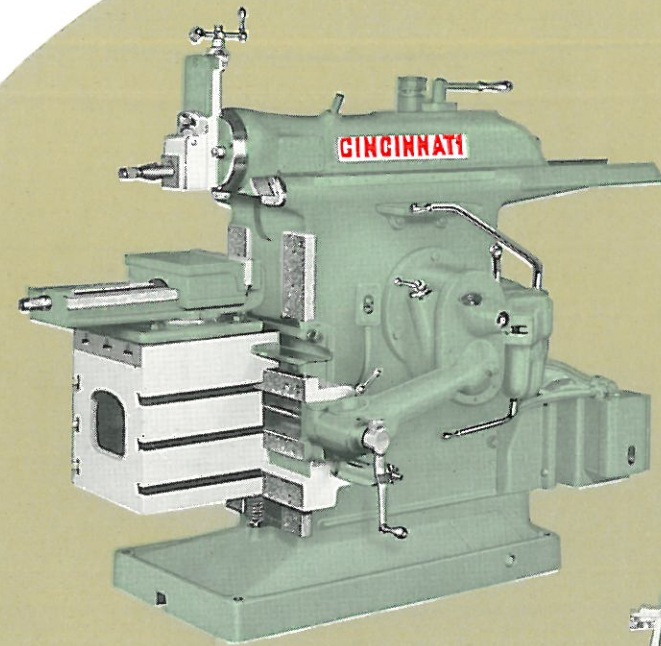


Extra Heavy, One-Piece Trunnion and Apron

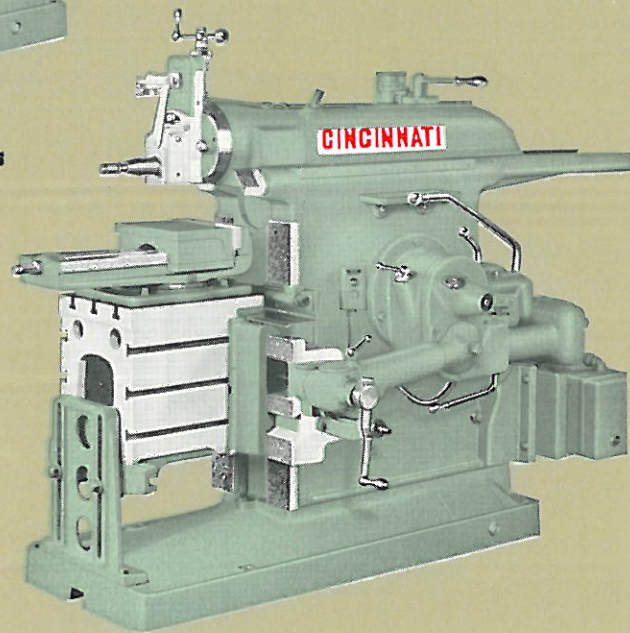
A table support is furnished on the very large machines, the 32" and 36" shapers. With a 32" or 36" overhang, it would be necessary to use a trunnion so large that the work space or clearance becomes inadequate. These two sizes, therefore, are equipped with table support.



Positive Clamp and Worm Wheel



Cincinnati 16'' and 20'' Utility Shapers



Cincinnati 16'' High-Speed Shaper

Cincinnati 16'' and 20'' Utility Shapers

The 16'' and 20'' Utility models are handy and fast, moderate in price and, except for rapid traverse, have the essential refinements of the larger shapers. The box table is very rigid and has a short overhang, being supported directly on the cross rail, close to the column. No table support is required. The Utility Shapers with universal tables are ideal for the tool room, and have all the conveniences and characteristics of the Universal Shapers with the exception of Power Rapid Traverse.

Cincinnati 16'' High-Speed Shaper

The Cincinnati High-Speed Shaper is made in the 16'' size, either Plain or Universal. This shaper has all the features of the Plain and Universal models, including both vertical and horizontal Power Rapid Traverse to the table. It is specially constructed for the speed range of 15 to 200 strokes a minute. This high range gives the fast speeds necessary for efficiency on short strokes. The Cincinnati Tool Lifter is standard on this machine and insures successful use of carbide-tipped cutting tools.

Dimensions and Specifications Cincinnati Utility and High-Speed Shapers

Machine	Stroke Service	16'' Utility	20'' Utility	16'' High Speed	Machine	Stroke Service	16'' Utility	20'' Utility	16'' High Speed
Code Words		Petit	Prior	Pace	Tools, Largest Size		7/8" x 1 1/2"	7/8" x 1 1/2"	7/8" x 1 1/2"
Stroke, Actual Length		17"	21"	17"	Vise, Single or Double Screw	Jaw Size, Double	2 1/2" x 12"	2 1/2" x 12"	2 1/2" x 12"
Strokes per Minute		12 to 157	12 to 157	15 to 200		Jaw Size, Single	3" x 15"	3" x 15"	3" x 15"
Cutting Speeds		8	8	8		Jaws, Open	13"	13"	13"
Feed to Head		7 1/2"	7 1/2"	7 1/2"		Body, Height	4 3/4"	4 3/4"	4 3/4"
Cross Feeds, Number		11	11	11	Mould Makers' Vise	Jaws, Size	4 1/2" x 12"	4 1/2" x 12"	4 1/2" x 12"
Cross Feeds, Range		.010 to .170	.010 to .170	.010 to .170		Jaws, Open	13"	13"	13"
Table Travel, Horizontal		24"	24"	24"	Motor recommended when Motor Driven	H. P.	3 to 5	3 to 5	5
Table Travel, Vertical		13"	13"	13"		Speed, R.P.M.	1800	1800	1800
Extreme Distance, Table to Ram		17 1/2"	17 1/2"	17 1/2"	Wt. Net, Without Motor, Approx.		3800	3900	4200
Table Top		14" x 16"	14" x 20"	14" x 16"	Wt. Domestic Shipping, Approx.		4350	4450	4600
Table Depth		15 3/4"	15 3/4"	15 3/4"	Wt. Boxed for Export, Approx.		5100	5200	5500
Ram Bearing in Column		32"	32"	32"	Cu. Ft., Export Packing, Approx.		160	160	170
Ram Bearing, Width		10 1/2"	10 1/2"	10 1/2"					

Standard features on the Utility models:

Plain or Universal table—Automatic lubrication—Enclosed transmission running in oil—Individual cam feeds—All controls at operator's position—Direct-reading dials—Single or Double Screw Vise—Complete guarding—Wrenches.

Additional Standard features on the High-speed Shaper:

Horizontal built-in power rapid traverse to the table—Vertical built-in power rapid traverse to the table—Automatic tool lifter—Special ram and linkage for high speeds.

THE CINCINNATI SHAPER COMPANY

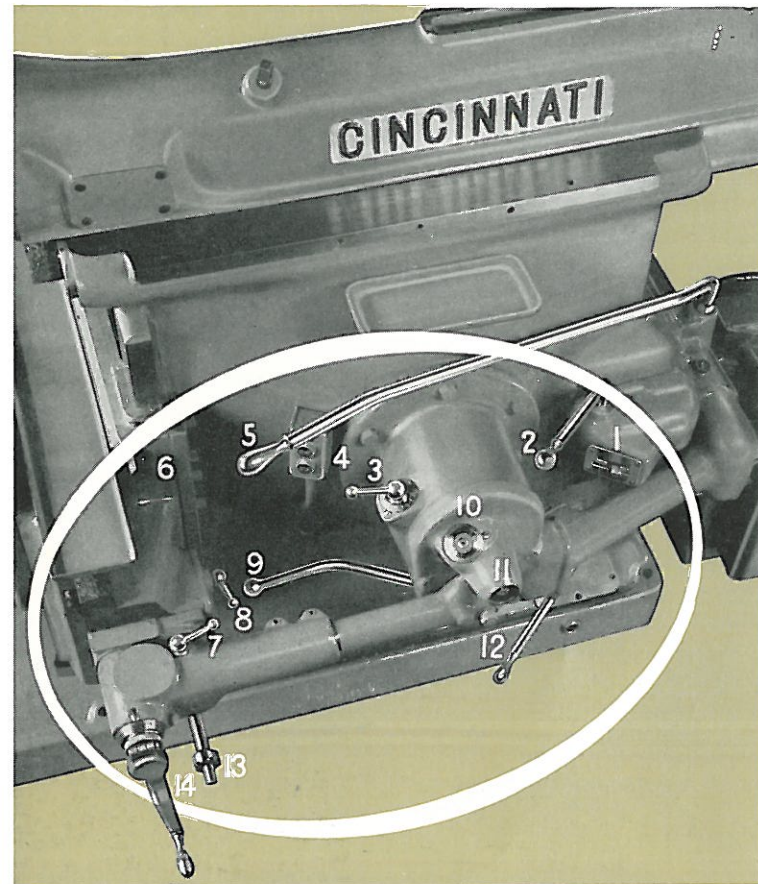
STANDARD FEATURES that make Cincinnati Shapers Handy! Convenient! Speedy!



Full Control at Operator's Position

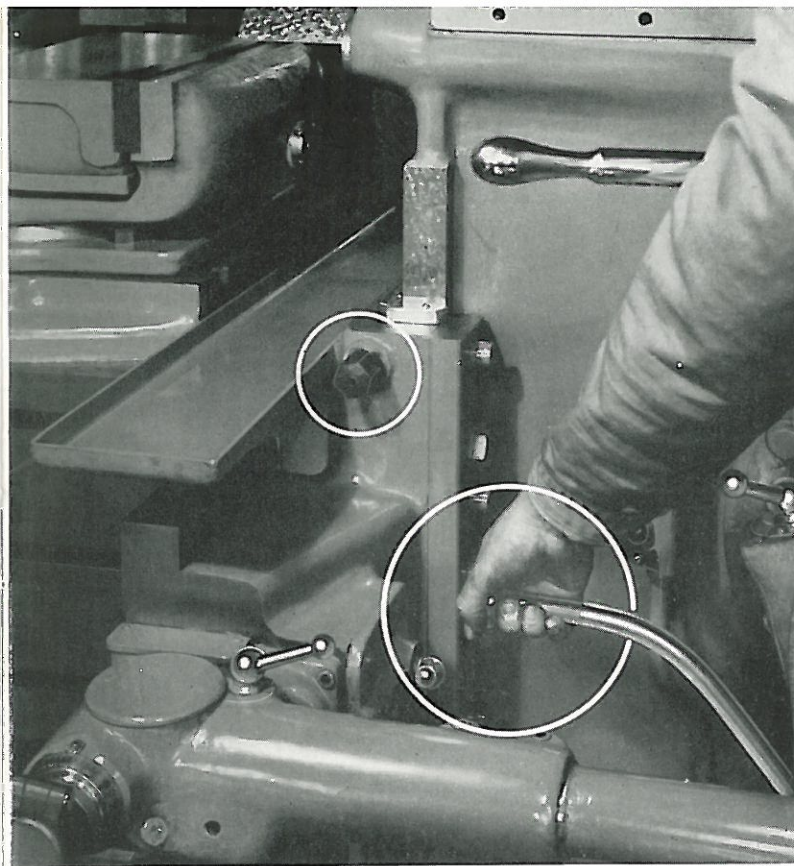
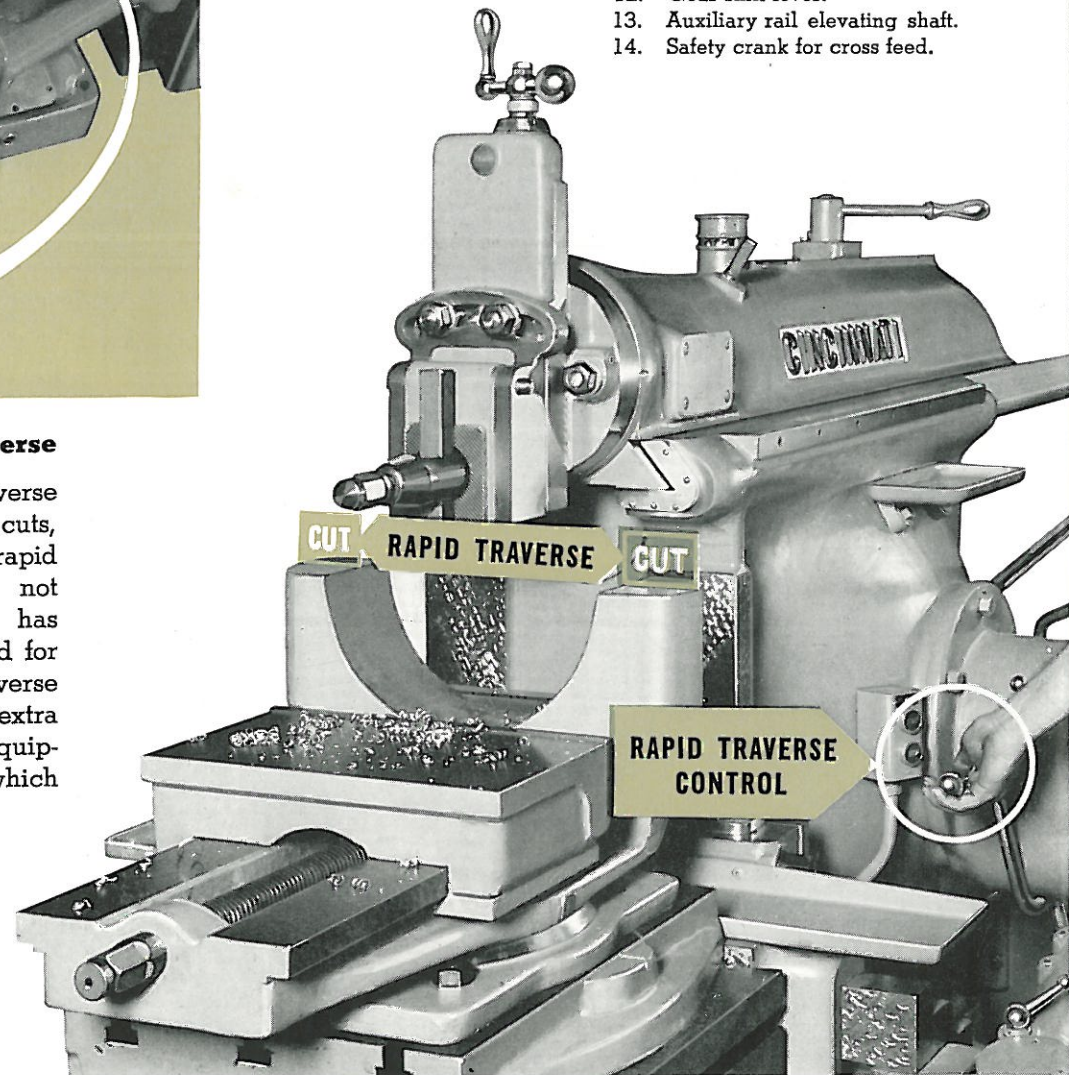
All controls including single point rail clamp and power vertical rapid traverse to the rail are at the operator's position. Controls and dials are:

1. Speed indicator plate.
2. Back gear lever.
3. Graduated feed selector.
4. Start-Stop button.
5. Clutch lever.
6. Single control rail clamp.
7. Directional cross feed and horizontal power rapid traverse control.
8. Directional vertical power rapid traverse control.
9. Power rapid traverse lever.
10. Stroke indicator dial.
11. Self-locking stroke adjustment.
12. Gear shift lever.
13. Auxiliary rail elevating shaft.
14. Safety crank for cross feed.



Built-in Power Rapid Traverse

Cincinnati Power Rapid Traverse greatly reduces time between cuts, reduces cost. This is a power rapid traverse for either direction, not merely a quick return. It has directional control, the standard for machine tools. This Rapid Traverse is built in and requires no extra motor and attachments. It is equipped with a safety friction which prevents accidental damage.

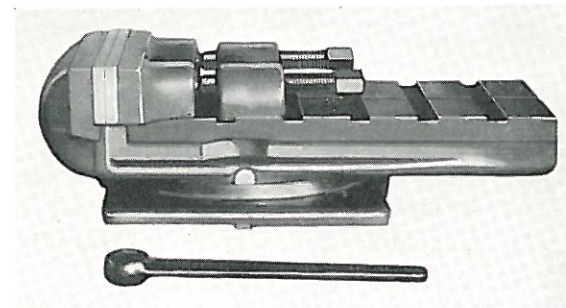


Vertical Power Rapid Traverse

Cincinnati Vertical Power Rapid Traverse is a new standard feature on Cincinnati "Rapid Traverse", "Universal", and "High-Speed" Shapers. It reduces setup time and operator fatigue. It is built into the machine and has a safety friction which prevents accidental damage. Control is directional and convenient to the operator's fingertips.

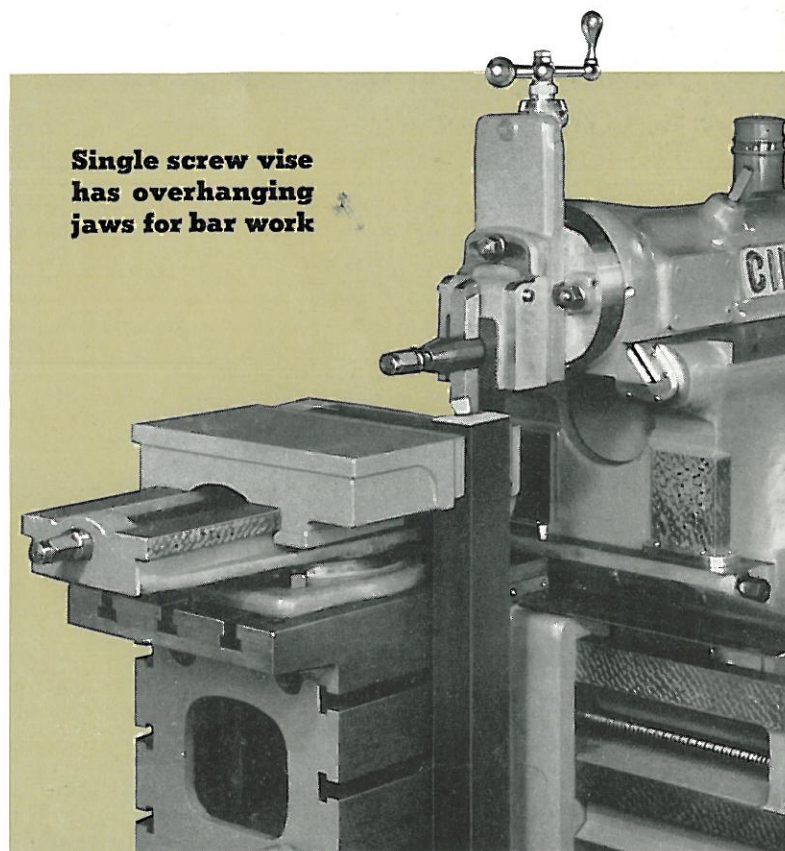
Rail Clamp At Operator's Position

The Cincinnati rail is clamped by a single control at the operator's position. This with the vertical power traverse, gives maximum operating convenience.



Choice Of Vises

A vise is standard equipment and can be either the single or double screw type. The single screw type has extended jaws for bar work and greater jaw capacity. Bars are automatically squared against the side of the table in the extended jaws for end shaping. The single screw vise also has an accurately ground flat on the stationary jaw for indicator or surface gauge. The double screw vise clamps tapered pieces without the use of extra jaws or shims, and also has greater clamping power. Jaw plates for both are hardened and ground for accuracy and long life. Special vises are described on page 30.

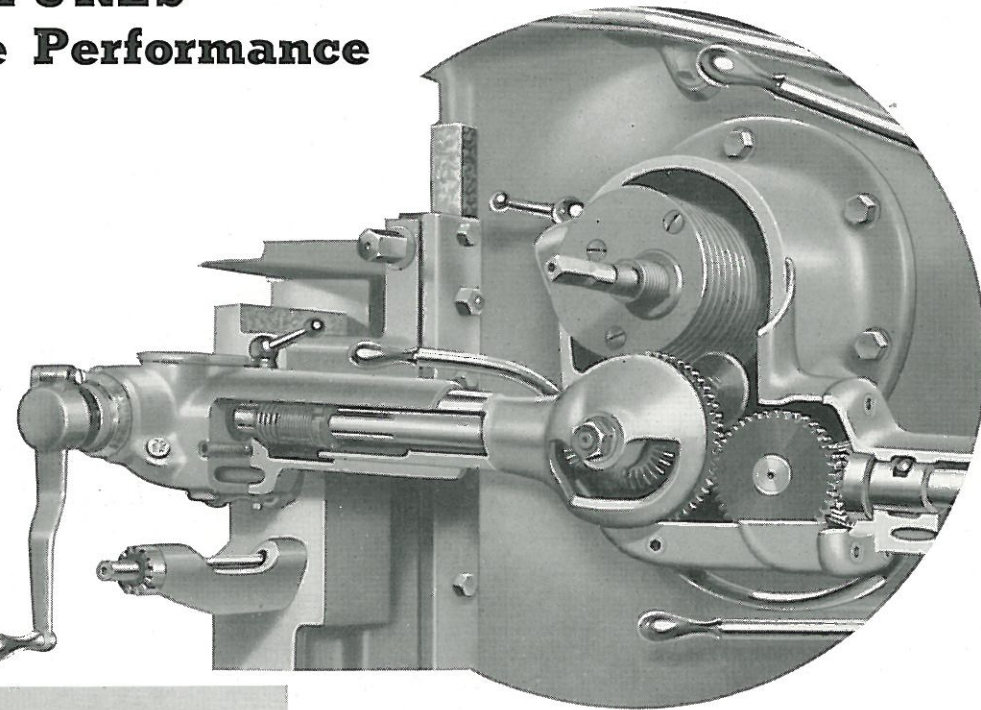


STANDARD FEATURES

That Give Accurate Performance

Individual Cam For Each Feed Gives Accuracy and Smoothness

The Cincinnati Feed is unique, having an individual cam for each feed. The follower is always in contact with a cam, giving a smooth movement instead of a "bump" feed. This smooth feeding gives a superior finish and original accuracy is maintained indefinitely. The feed range can be from .010" to .170" or from .005" to .085". A safety clutch protects the mechanism from injury.



Automatic Stroke Adjustment Lock

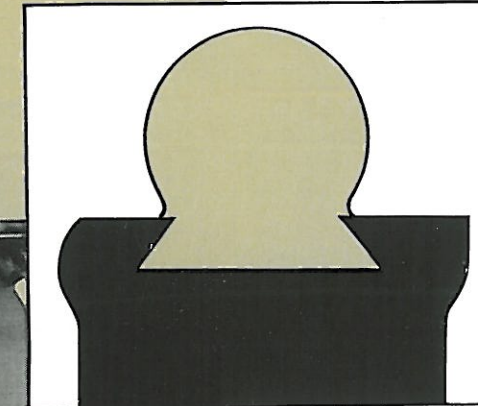
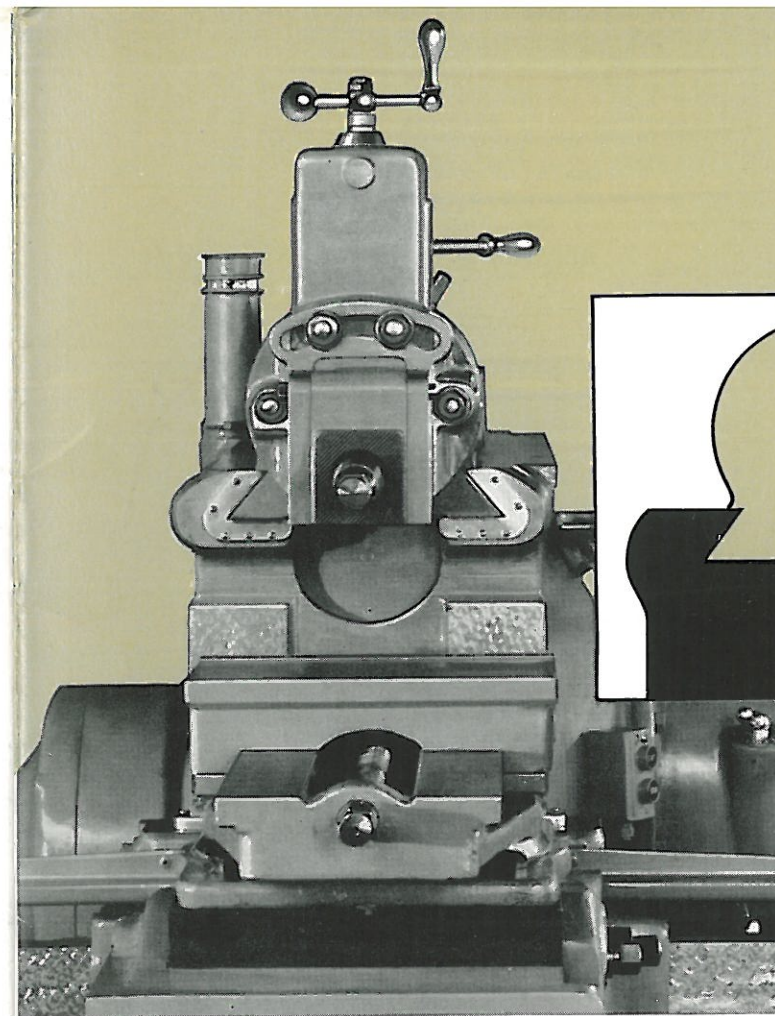
The stroke adjustment automatically locks itself. The length of stroke may be changed while the ram is in motion. A stationary indicator dial shows the setting for the length of stroke while the ram is in motion or stopped. The stroke adjusting shaft is guarded.

Ramway Bearings Extended For Greater Accuracy

Ramways are extended to support the ram beyond the face of the column. This extension greatly increases the ram support and minimizes wear. The extended bearings, together with the full table clearance to the column, provide the closest coupled combination in the shaper field. A Cincinnati literally hugs the work.

EXTENDED RAM BEARING

CLOSE COUPLED

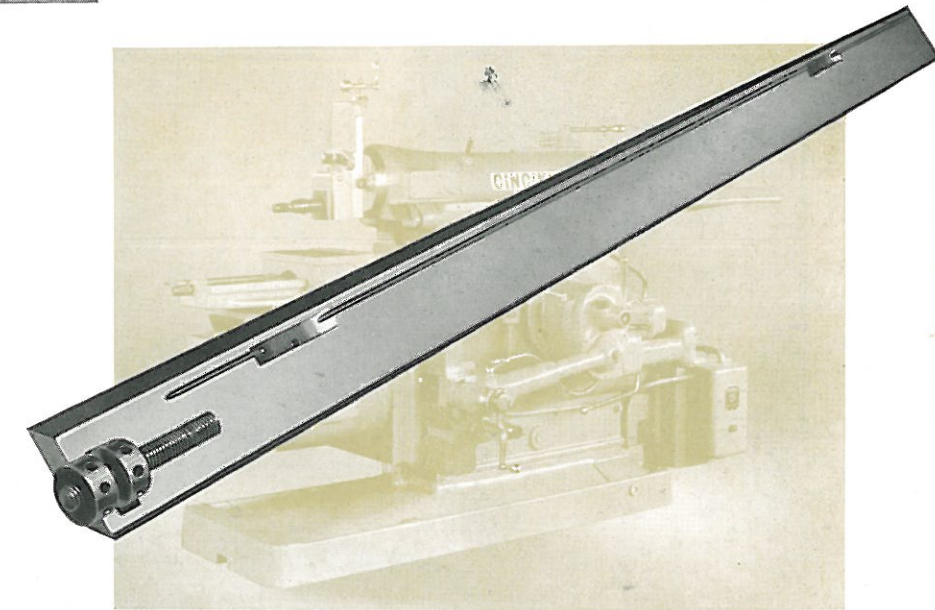


Solid Ramways

The vee ways are cast integral with the column, a big factor in the continued accuracy of Cincinnati Shapers. Freedom from joints materially increases the rigidity of the ram ways. Special ribs on each side of the ram fit closely over both the column and ram guard and keep out dust and dirt, greatly increasing bearing life.

Full Length Tapered Gibs are Featured on Cincinnati Shapers

Tapered gibs provide adjustment of sliding surfaces. They are simple to use with only a single screw and lock nut, avoiding the problem of getting a uniform fit with a series of screws. Any operator can adjust a single screw tapered gib. This type gives a solid bearing throughout and eliminates the spring that can occur between multiple screws. It forces a bearing to wear straight in contrast to the unequal pressure of multiple point adjustment. The parts so arranged are the ram, tool slide, apron, cross rail, crank block and sliding block.



High Strength Tool Slide With Hardened Feed Screw

The tool slide is solid and dovetails into the one-piece swivel for extra strength and rigidity. The graduated tool head swivels to any angle. The feed screw is hardened and ground for long life and mounted on anti-friction bearings for smooth operation. It is fitted with a large micrometer dial graduated in thousandths. The clapper is a steel forging hardened and ground.

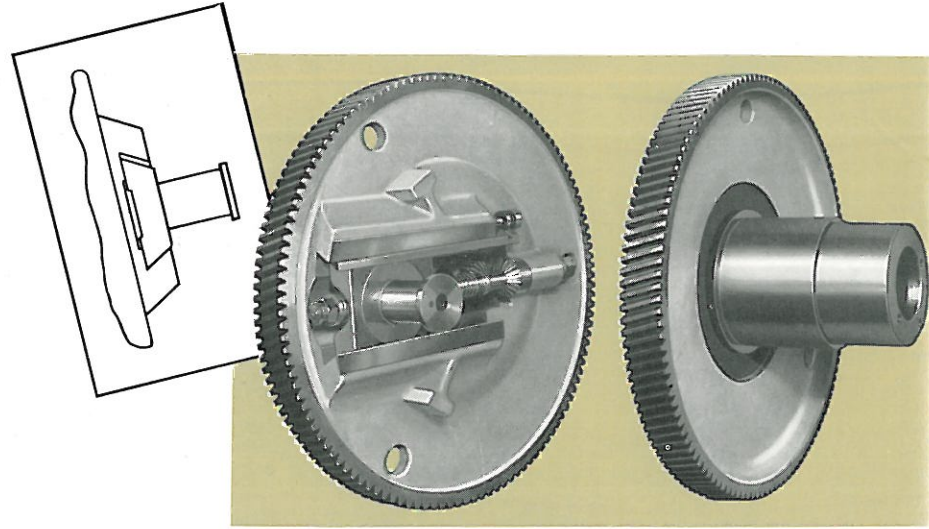
THE CINCINNATI SHAPER COMPANY

STANDARD FEATURES that make Cincinnati Shapers

DEPENDABLE ... DURABLE ... POWERFUL

High Strength One-Piece Crank Gear

The crank gear and shaft are cast in one piece of special high strength iron having great wear resistance. The integral shaft has a large diameter for strength and unusual length to insure accurate alignment.



Exclusive Dovetail Crank Block

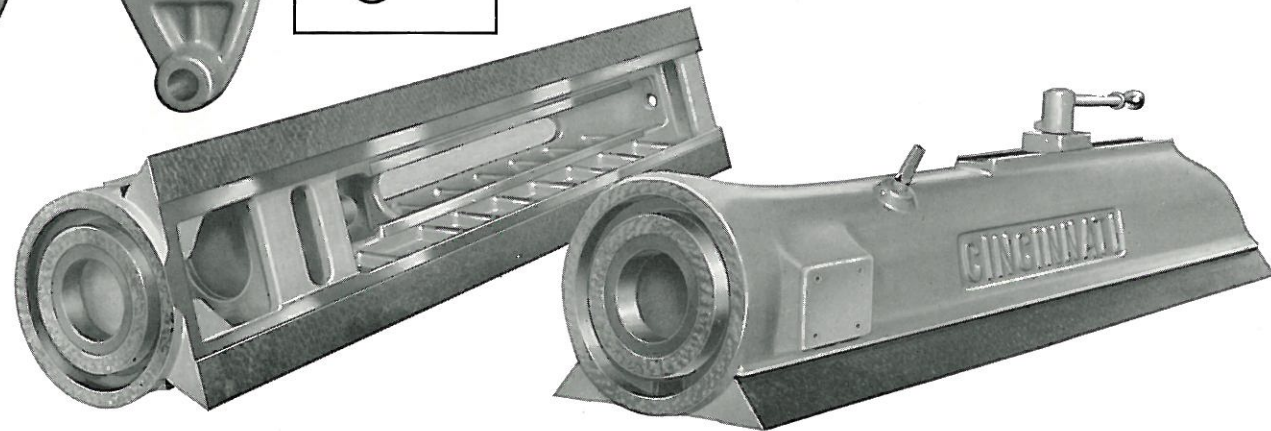
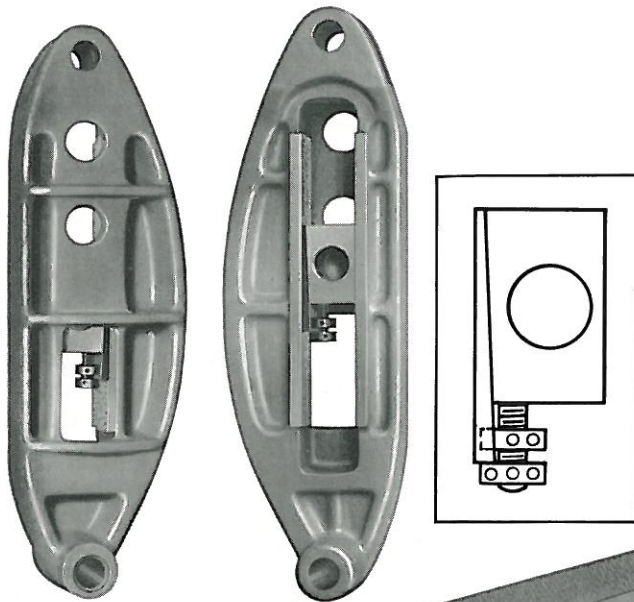
The forged crank block has a dovetail or vee bearing in the crank gear. This construction gives maximum rigidity and strength. Smooth operation is easily maintained by the single adjustment taper gib.

Powerful Rocker Arm

The one-piece rocker arm is heavily ribbed for maximum strength. The steel link and hardened and ground pins are automatically lubricated.

Taper Gib On Sliding Block

The sliding block has a hardened and ground steel taper gib on the driving side to insure smooth operation. The taper gib is as efficient on the sliding block as it is on any machine tool sliding member.

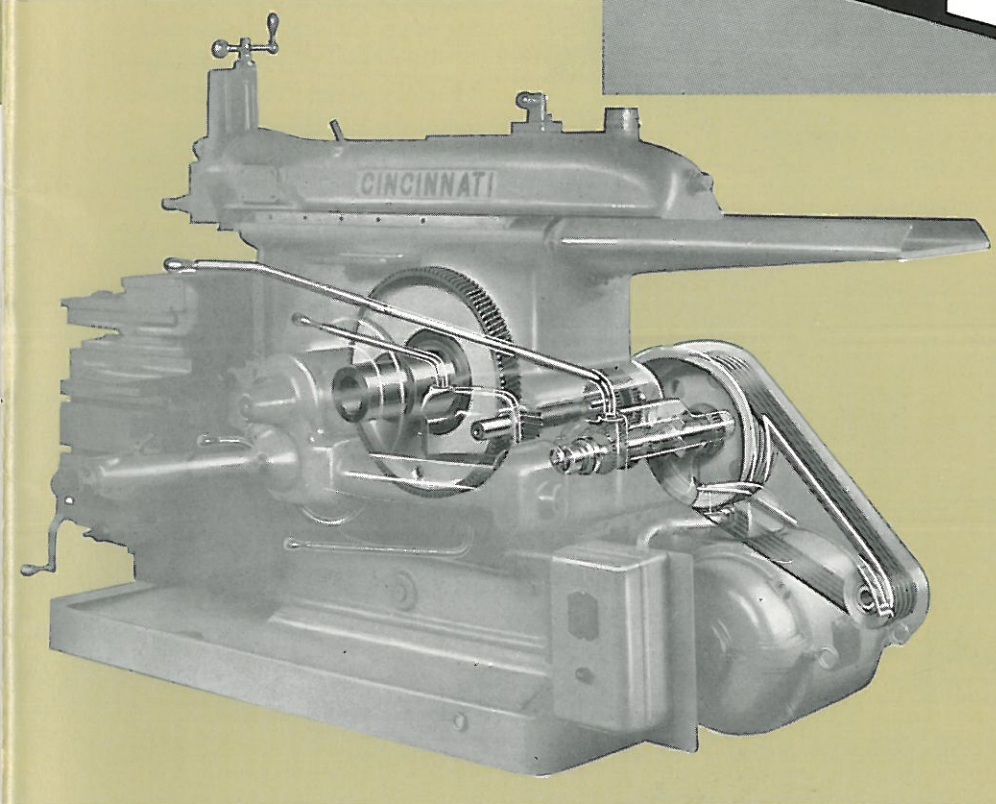
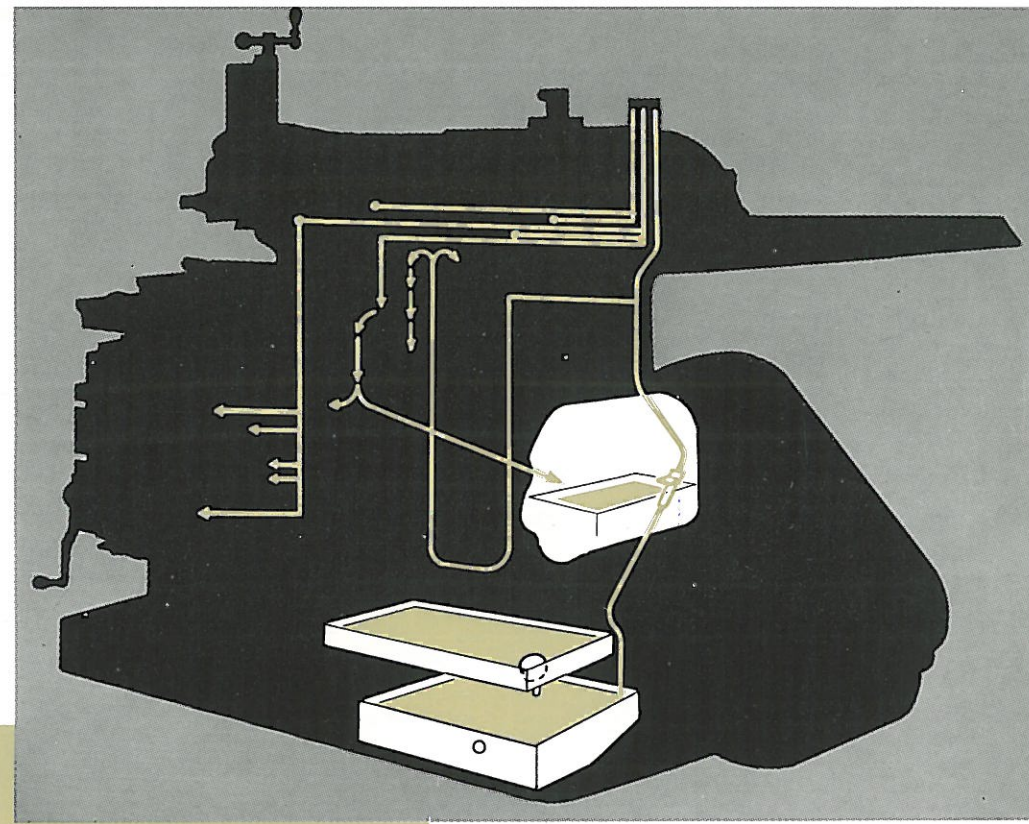


Ram Heavily Ribbed For Rigidity

The high strength cast-iron ram is heavily ribbed and cross braced. Special dust ribs on the sides fit closely over the column and ram guard and keep the accurately scraped ram bearing free from dirt and dust.

Advanced Automatic Lubrication

Particular emphasis has been placed on the automatic sight feed lubricating system. Oil is delivered by individual copper tubes automatically lubricating the crank gear bearing, feed and power rapid traverse mechanism, drive pinion, ram, ram link, rocker arm, sliding crank block, rocker arm fulcrum pin, rail bearing on the column, and apron bearings against the rail. The oil returns through settling tanks and filter to the main reservoir.



Enclosed Transmission Runs In Oil

A gear chamber in the column is also an oil reservoir. It is practically air tight, protecting the oil from dust and grit. The oil level is automatically maintained. The gears are chrome nickel steel, heat-treated and run in oil. They shift on solid splined shafts supported on both ends directly in the column. The internal transmission provides selective speeds covering a wide range as shown in the specifications. The changes are made easily through two levers at the operator's position.

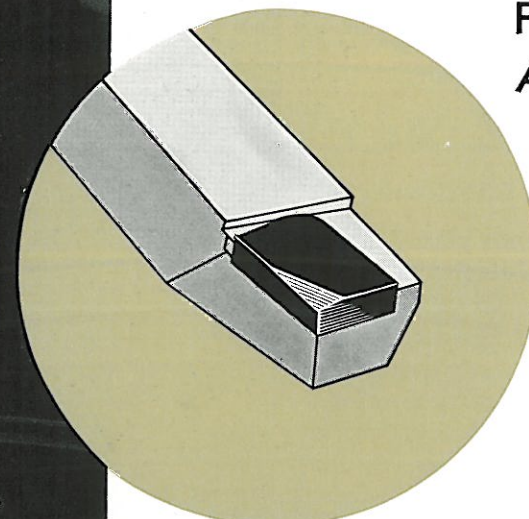
The powerful clutch has friction surfaces of Meehanite against a special bi-metallic friction material, giving smooth, accurate control. The motor is mounted on an adjustable base bolted to the machine for simple belt adjustment and electrical maintenance.

Safety Guards

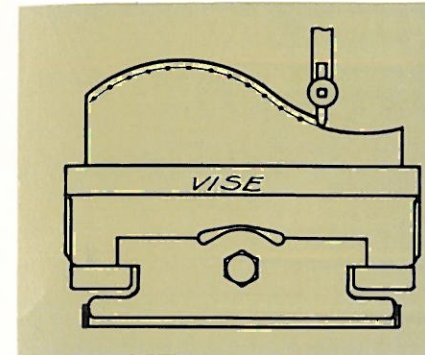
Safety equipment includes guard over the crank gear, ram guard, column throat guard, guard over the stroke adjusting shaft, chip guard over the cross rail, guard for the sliding ways of the table support, safety friction for power cross feed and power rapid traverse, safety crank handle on feed shaft and complete enclosure of the motor drive.

SPECIAL EQUIPMENT

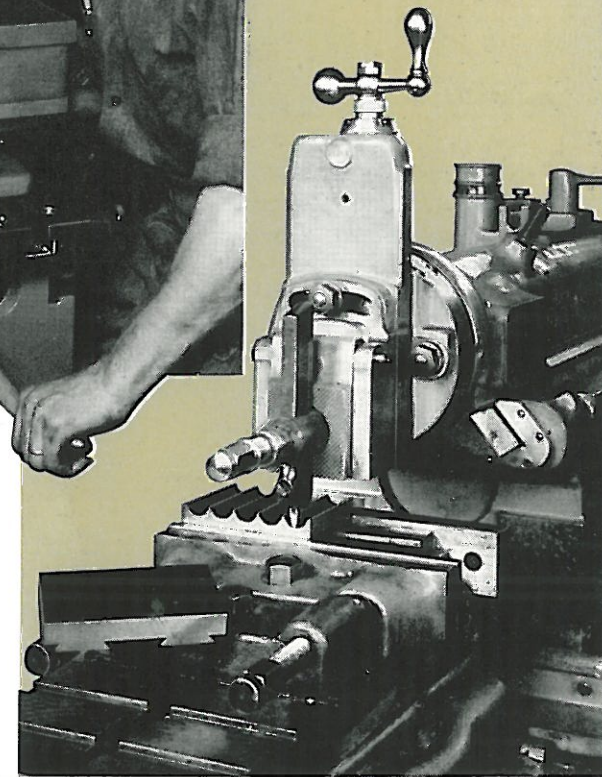
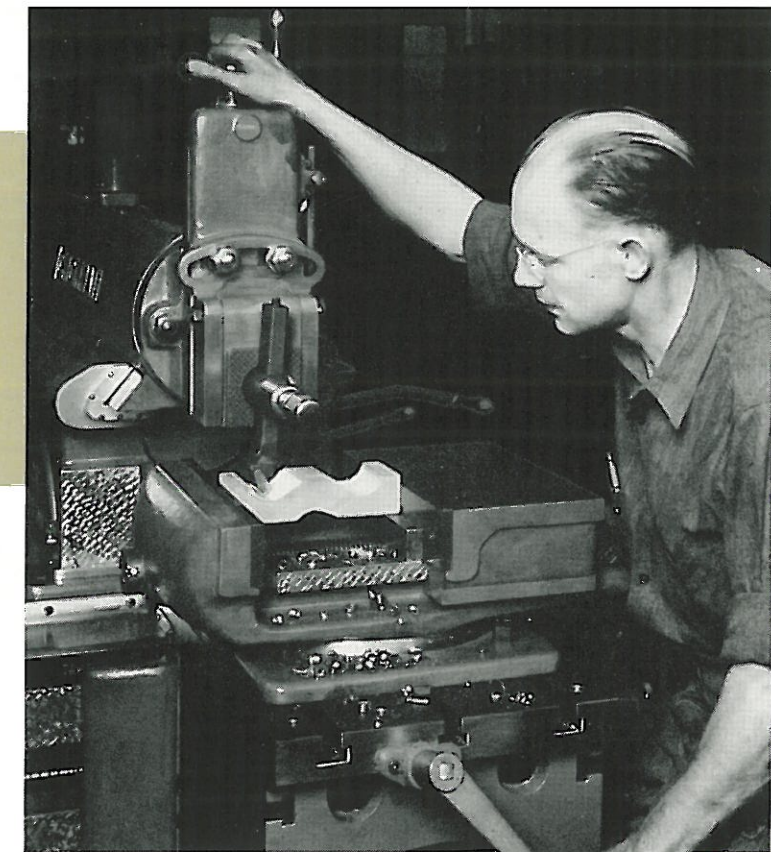
For Faster, More
Accurate Cutting



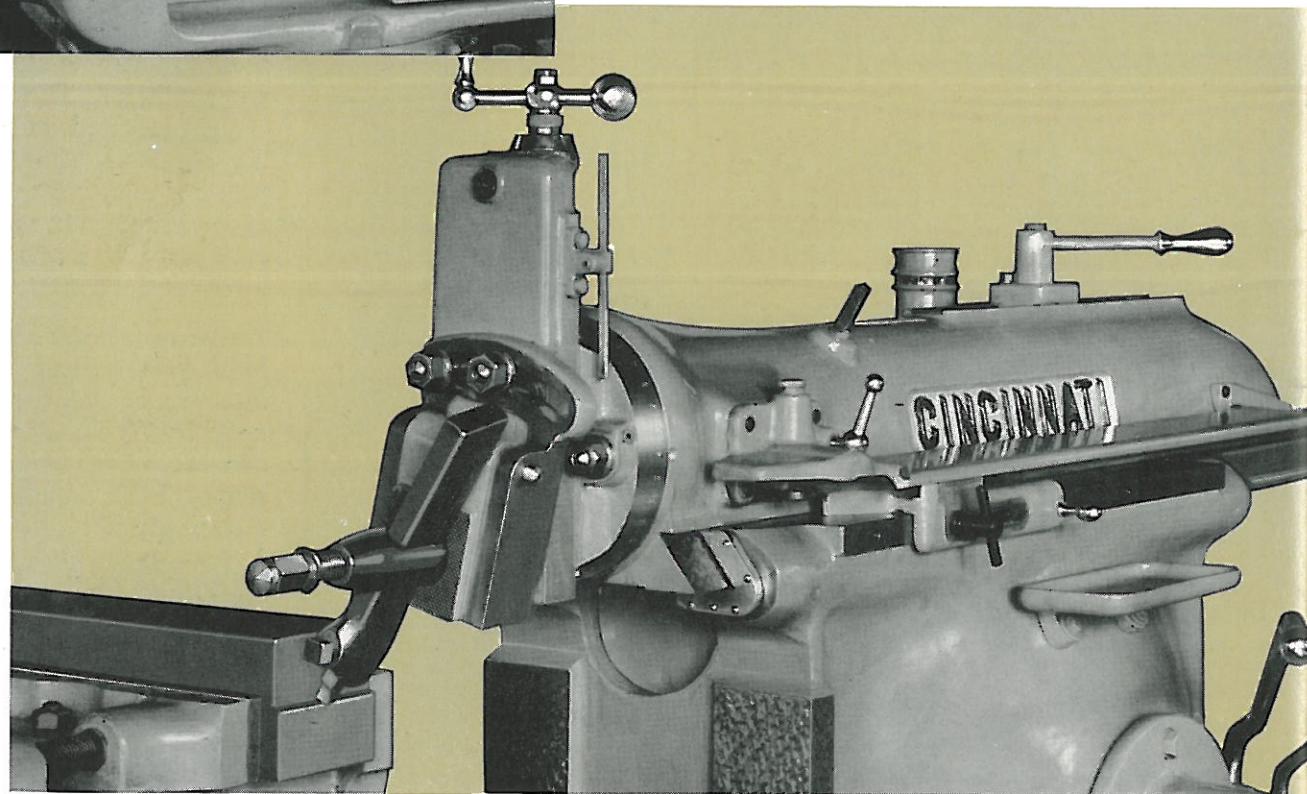
A Tool Lifter prolongs the life of high-speed tools and is essential for CARBIDES. Shock-proof grade carbides are in wide use for shaping alloy cast-iron glass molds, alloy steel die blocks, shear blades, wood bits, and other parts. The Cincinnati tool lifter operates positively for millions of strokes. It is automatic for different lengths of strokes, various speeds, positions of the tool slide, and cutting tools.



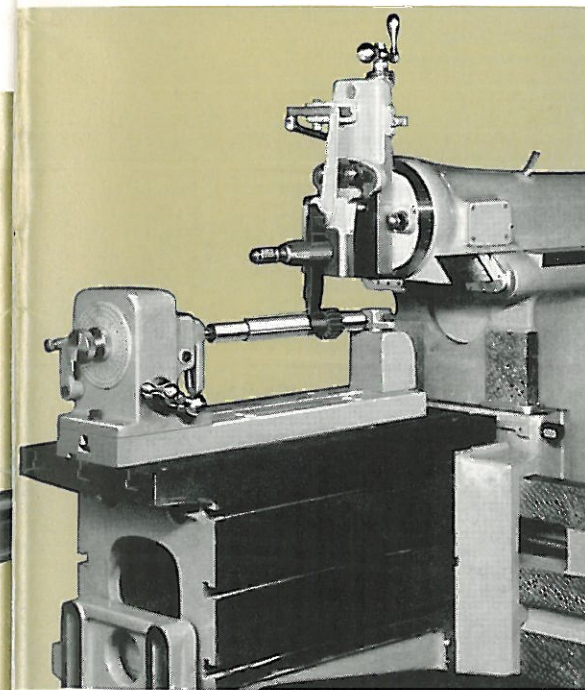
The Cincinnati Auxiliary Front Cross Feed makes manually controlled contouring easy. This auxiliary cross feed control is in addition to the regular hand-operated cross feed at the operator's end of the rail.



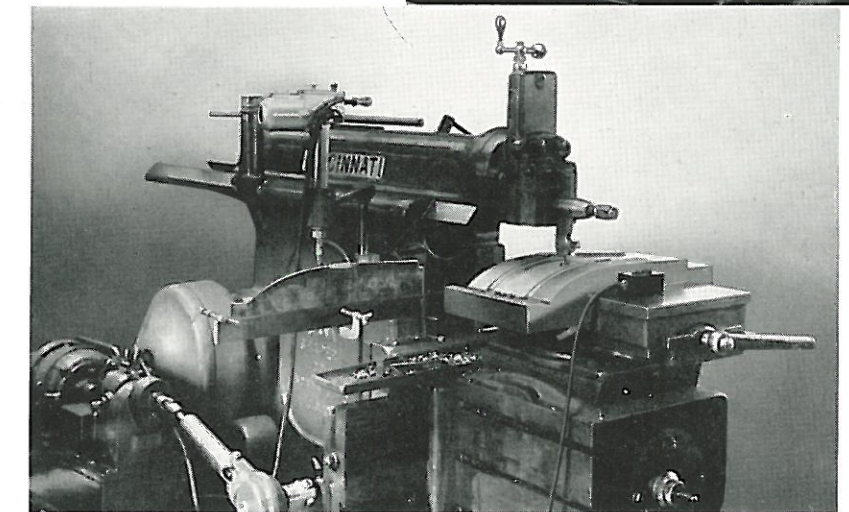
Automatic Profiling



Automatic Power Down Feed can be applied at the factory or in the field. The desired feed is set to a graduated scale. A clutch lever starts and stops the feed. Over-travel cannot occur. There is an adjustable automatic stop for feeding the head down repeatedly to the same depth for accurate slotting.



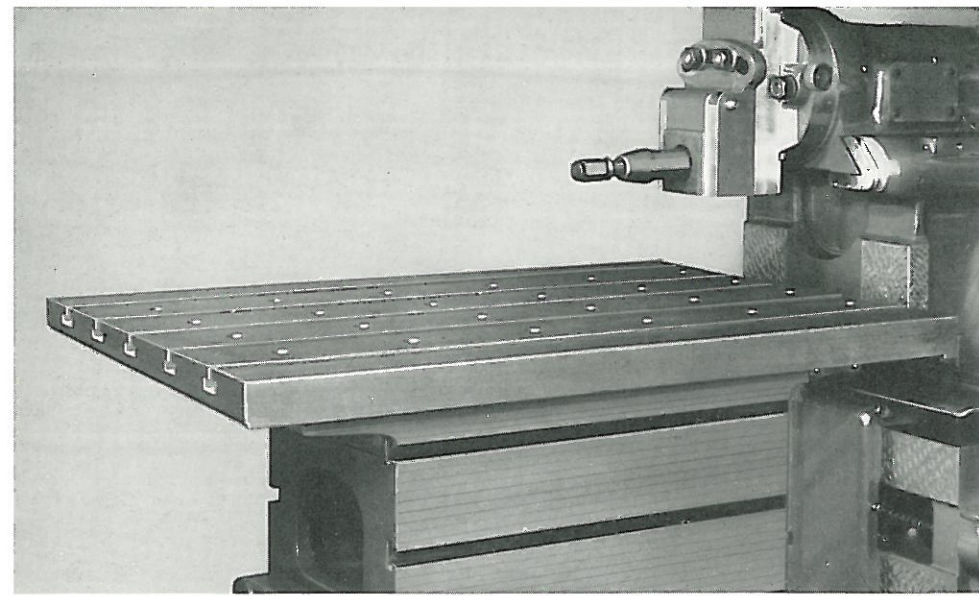
Cincinnati Index Centers are used for producing splined shafts, gears, multi-sided blanks and bars and similar work. Cincinnati Index Centers have a 12" swing and 18" opening. The index plate has four sets of holes at 20, 36, 40 and 60 spaces. The tailstock is adjustable for taper work.



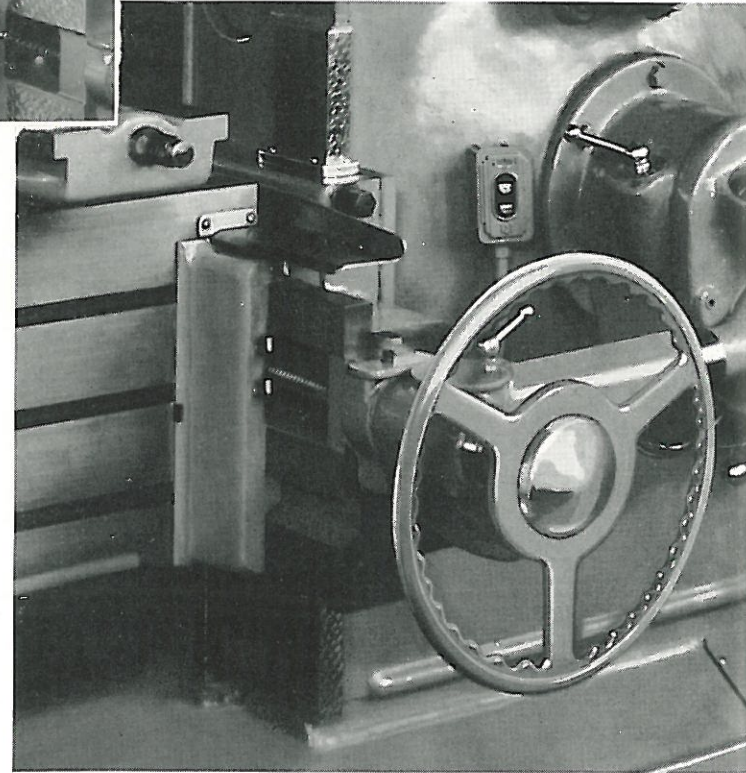
Tracer or Follower Control automatically produces form tools, bits, dies, cams, and other parts. Elaborate shapes are automatically produced from a simple sheet metal template and without expensive form cutters.

SPECIAL EQUIPMENT

For Faster, More Accurate Cutting

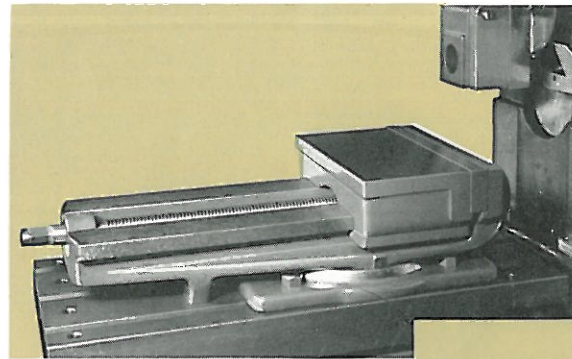


A Cincinnati Auxiliary Table Top can be furnished for holding large work. It provides a greater area for setting up and securing awkward work pieces. The top can be furnished in a variety of widths and lengths for both universal and plain tables.

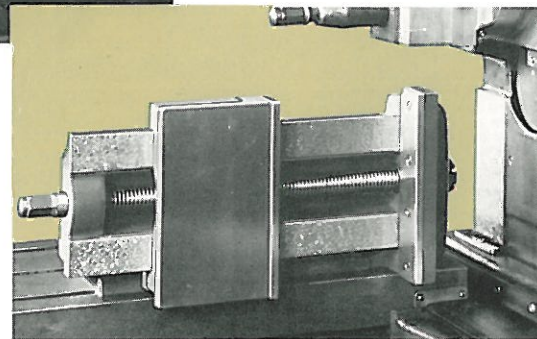


Hand Wheel Control instead of the Cincinnati safety crank is sometimes desirable, especially when contouring. Controls can be furnished to suit your requirements.

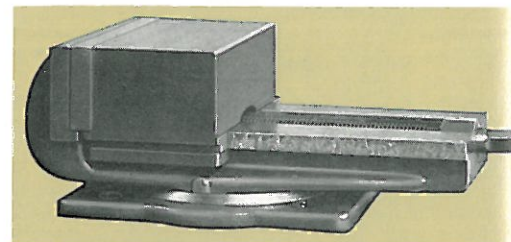
A Variety Of Cincinnati Vises can be furnished for special applications. Here are a few of these specials: a vise with extra large opening, a mould maker's vise, and a special side vise.



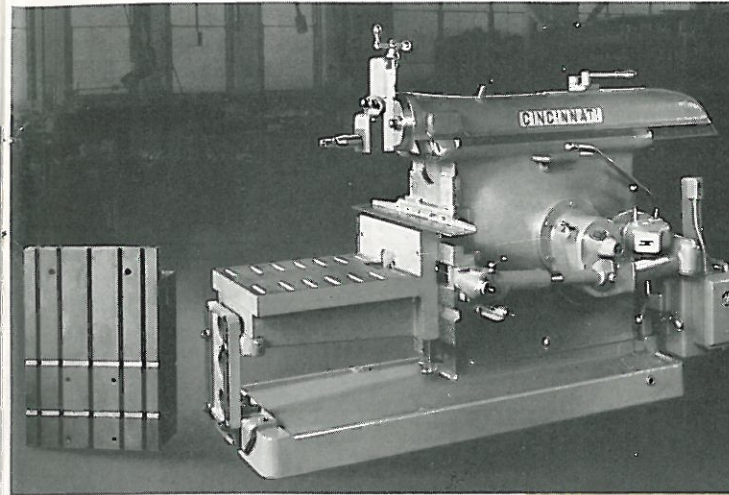
Large Opening Vise



Side Vise

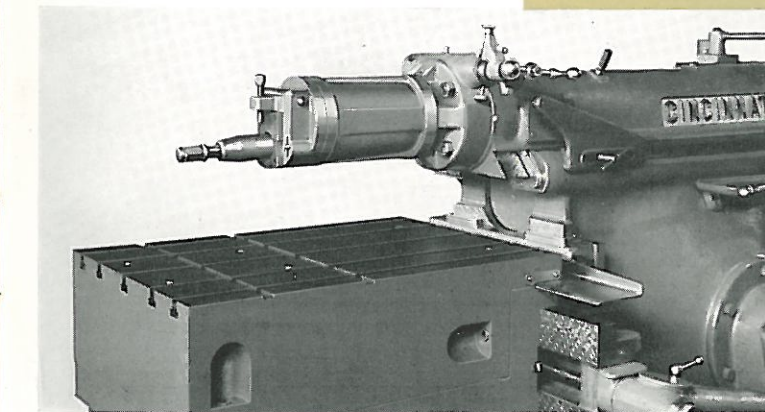


Mould Maker's Vise

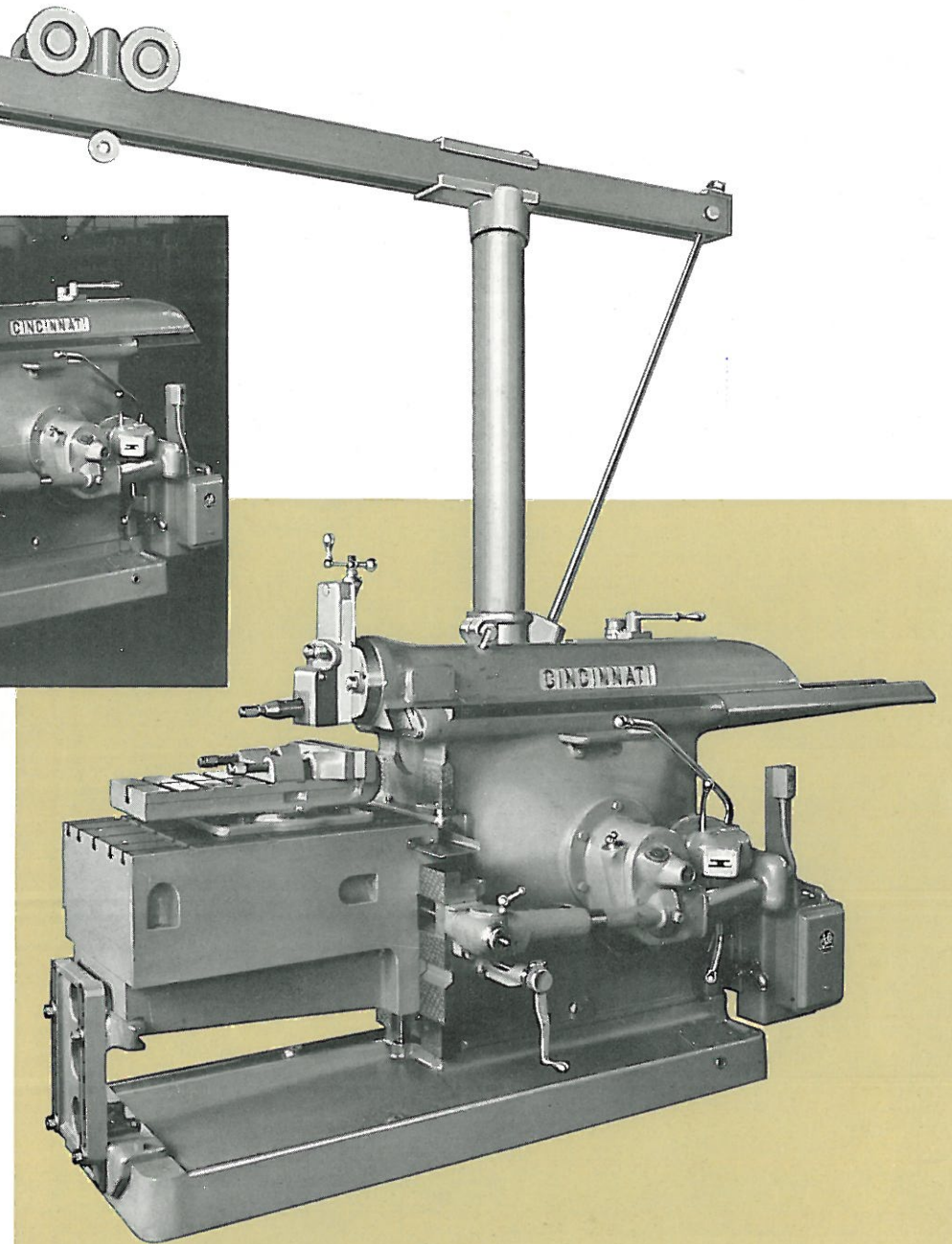


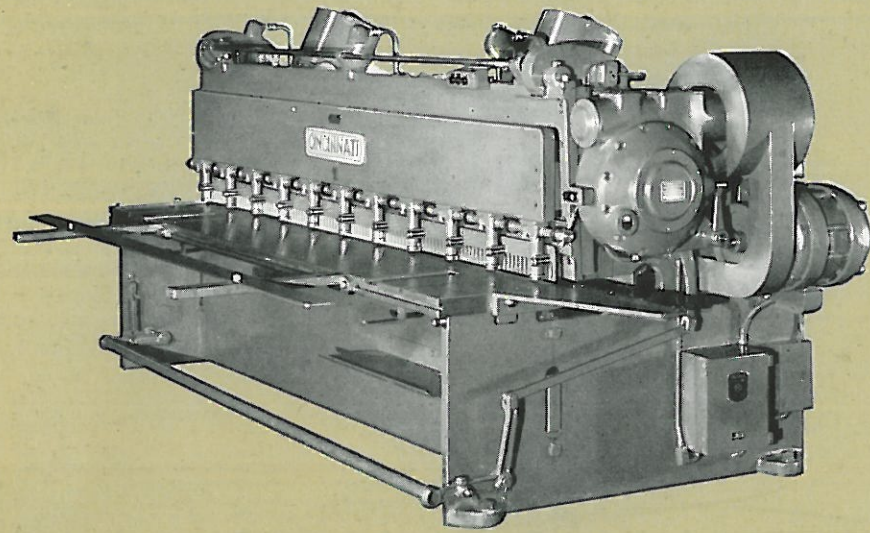
Special Clearance Tables can be furnished with removable tops for shaping large castings, die blocks and other bulky work. Work clearance of over 28" can be furnished. The vise is used for regular shaper work when the removable table top is in place.

Boom Cranes can be furnished with Cincinnati Shapers for individually servicing the machine.



The Circular Feeding Head is used for concave work and machining internal circular surfaces with interruptions. The head will plane diameters up to approximately 18". The head can be rotated by hand or automatically. It is interchangeable with the standard head.





CINCINNATI SHEARS

Cincinnati All-Steel Shears offer a new degree of *accuracy* in shearing sheet metal. They cut to tolerances that take a micrometer to measure; and maintain this *accuracy* at high speed. Hydraulic hold-downs automatically clamp all gauges of metal with the same firm pressure. Fine adjustments for the four-edge knives give most efficient use of the keen edge and longer life. All-Steel construction is a guarantee against breakage. Rapid, *accurate* gauging speeds up handling of the job.

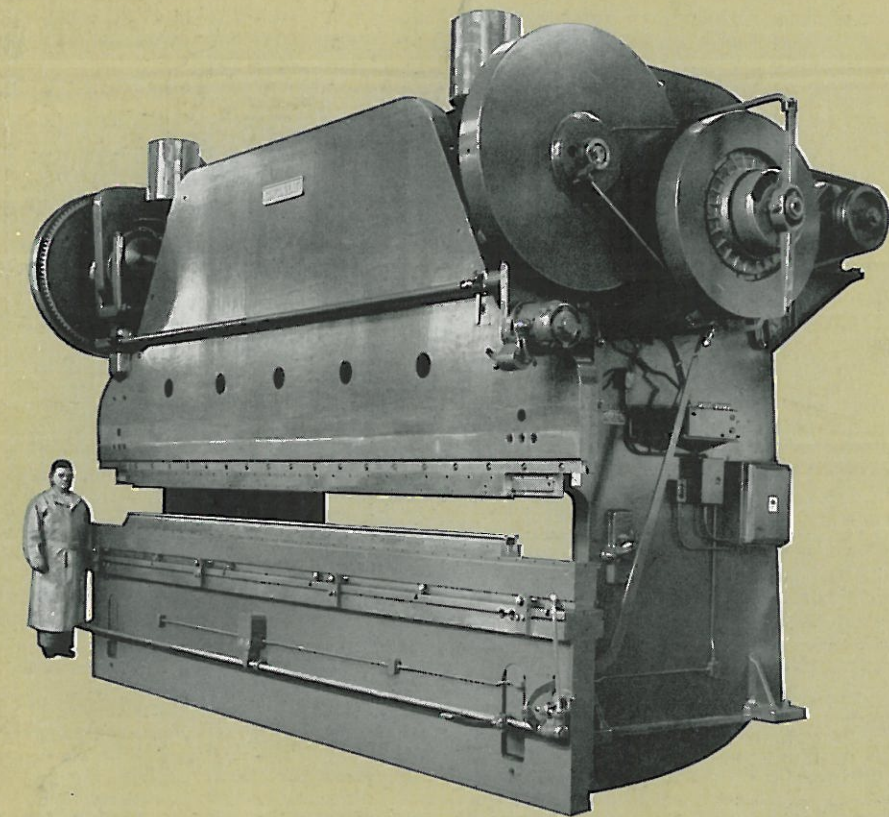
All standard sizes of Shears are available from ten gauge to 1 1/4 inches.



Cincinnati All-Steel Press Brakes, the Brakes of many uses, are today's machines for bending, forming, flanging, or multiple punching sheet metal. For easy fabrication, formed parts must fit; therefore *accuracy* and uniformity of bends are the fundamental advantages of these Brakes. All-Steel construction; built to withstand overload; deep bed and ram for minimum deflection are a few of the high points. These Brakes are built as accurately as a machine tool and have unusual mechanical refinements. Sizes cover practically any requirement.

THE
CINCINNATI SHAPER CO.
Cincinnati 25, Ohio, U. S. A.

PIONEERS OF THE STEEL PRESS
BRAKE AND STEEL SHEAR



CINCINNATI PRESS BRAKES