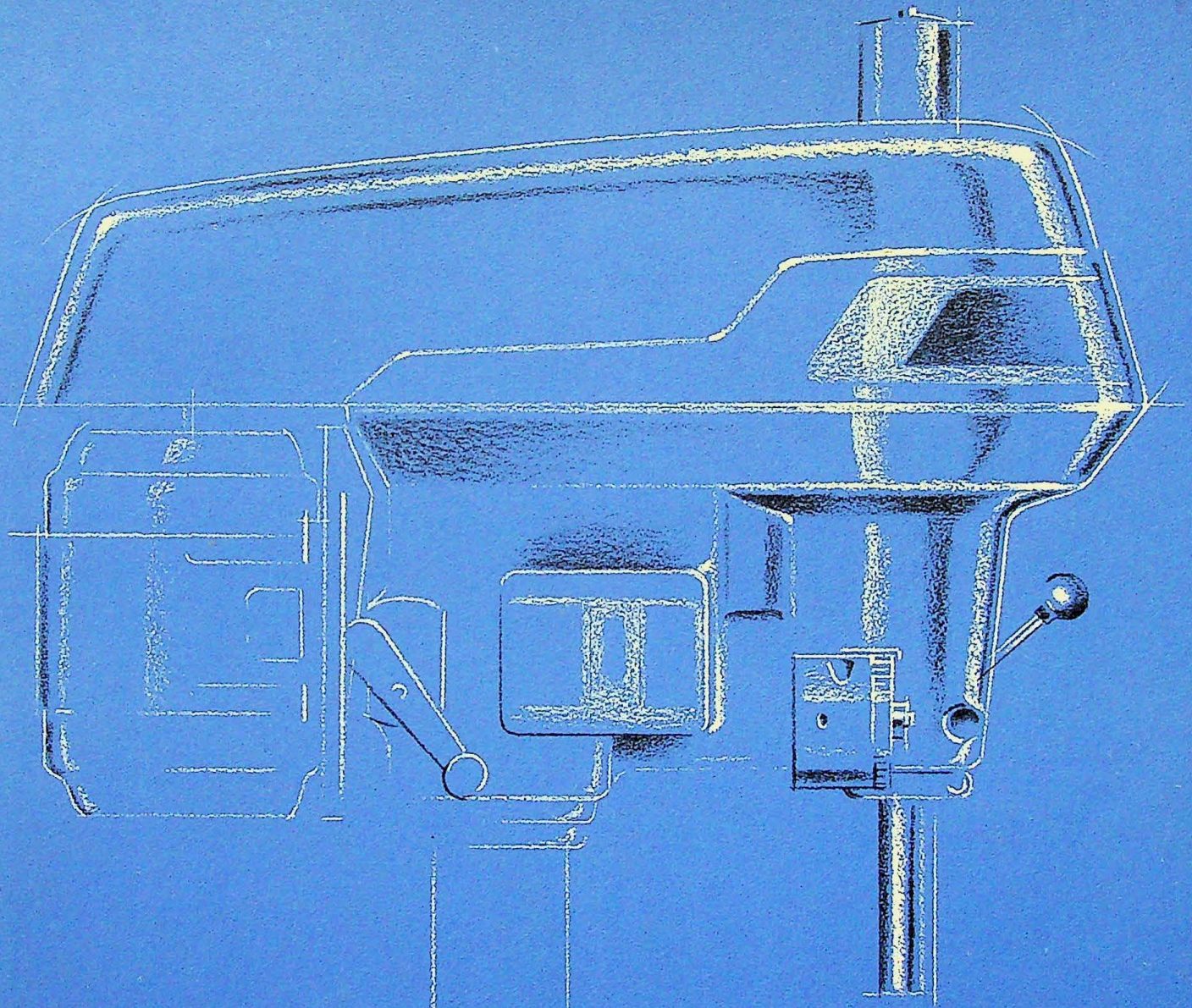


*new* **18"** Cincinnati **ROYAL** drills

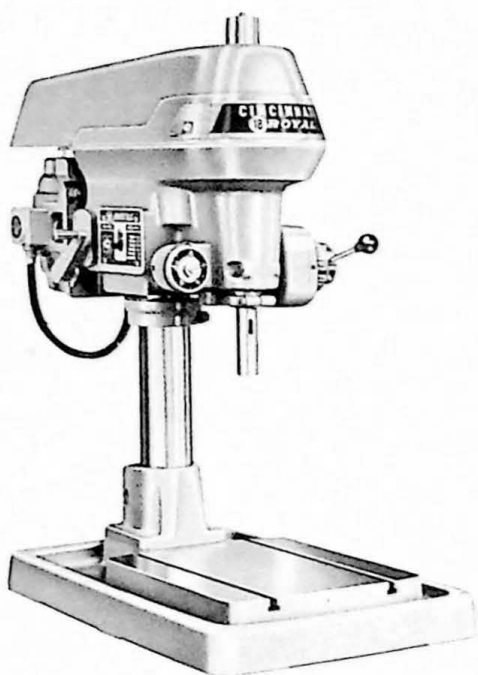


SOLD BY  
HARRON RICKARD & M  
2070 BRYANT STREET  
SAN FRANCISCO, CALIF.

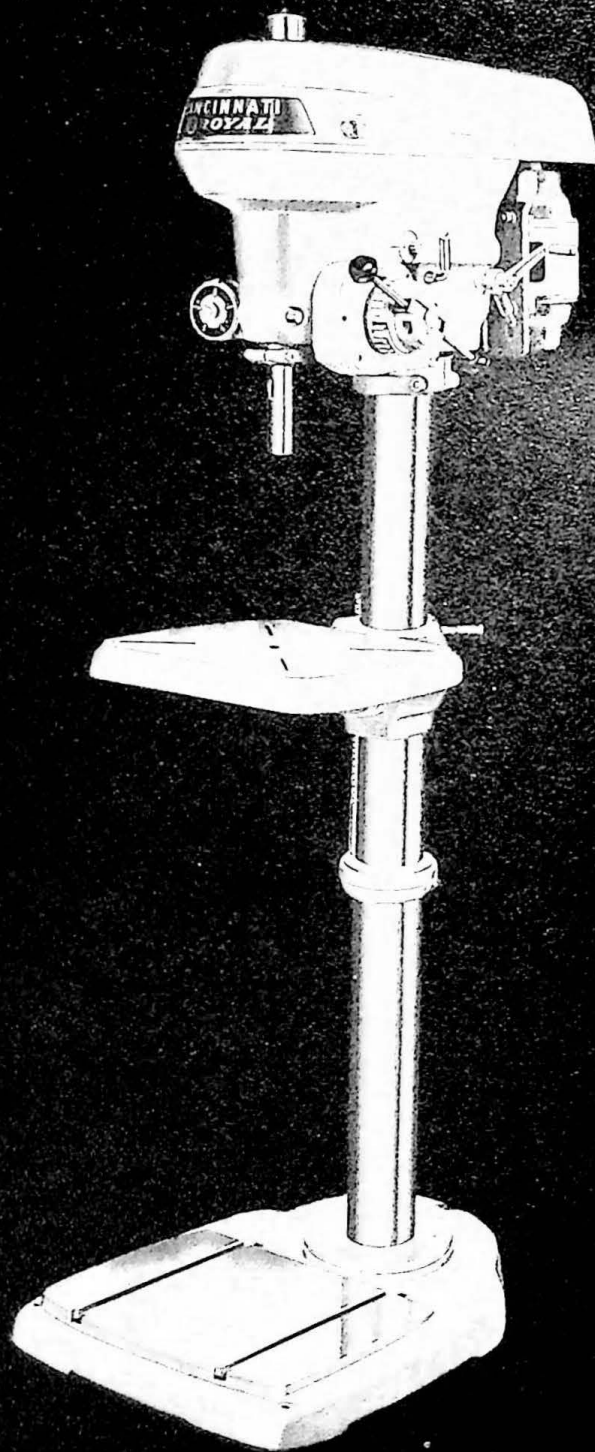
*bench, floor and  
multi-spindle models  
sensitive hand or power feed*



cincinnati lathe and tool co., cincinnati 9, ohio, U.S.A.



*single spindle bench drill*



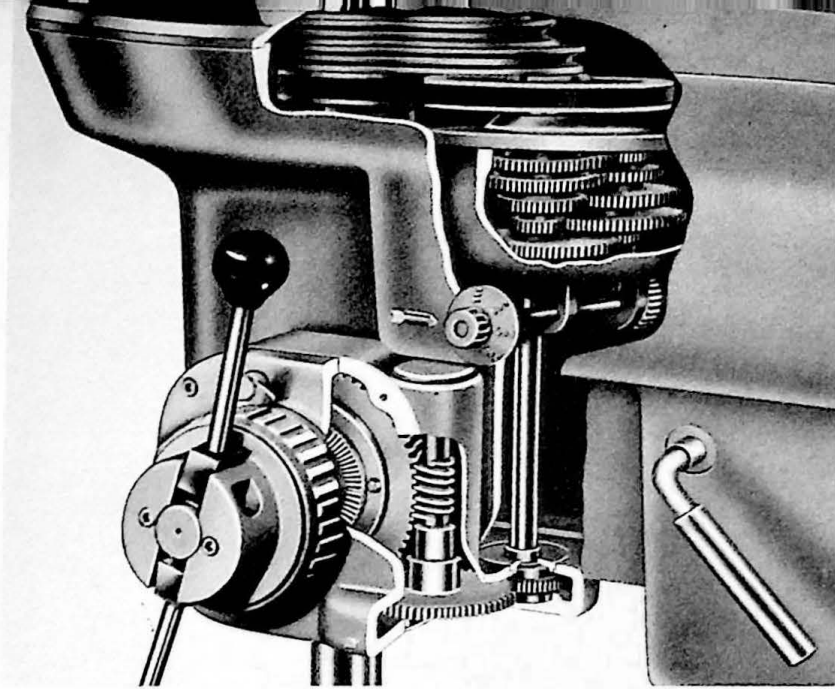
*single spindle floor drill*



*multi-spindle bench drill*

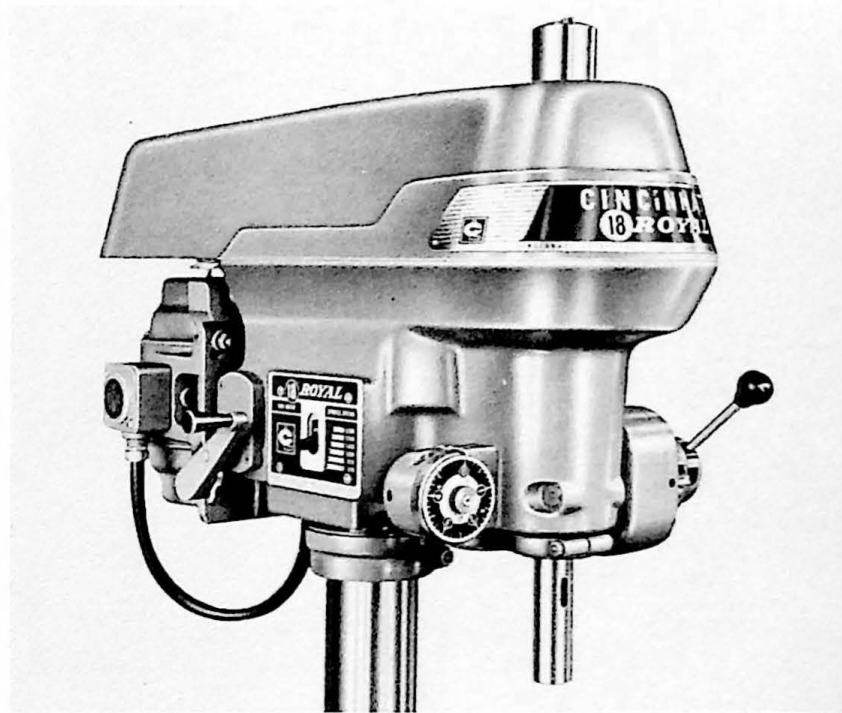
### *new geared power feed*

Easier drilling and higher production are yours at low cost with Cincinnati's built-in, geared power feed. Set the simple selector at any of four rates of feed—.002", .005", .009", or .015" per spindle revolution, advance the cutting tool with those easy-acting feed clutch levers, engage that powerful, positive jaw clutch, and let this feed mechanism of unit construction go to work.



### *new electrical controls*

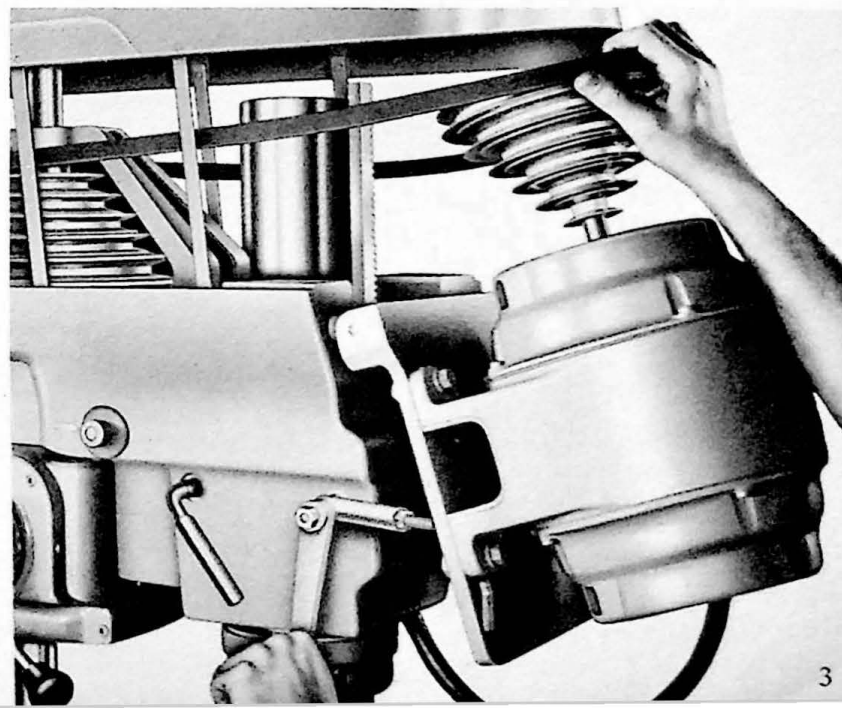
Conveniently located and built into the head, they invite you to start this drill. Drills are shipped complete with electrical controls. Merely connect your power leads, and flip the switch. You're ready to drill in minutes.



### *new easy, speed change*

Just raise the guard, tilt the motor with the convenient lever provided, and shift the V-belt to the proper groove. The tilting motor bracket also maintains uniform belt tension. The full, contour-fitting belt guard is standard equipment on all models—a new operator safety feature.

A simple V-belt drive transmits motor power efficiently and directly to the spindle. The horsepower delivered at the cutting tool is in direct ratio to the horsepower output of the motor, with full torque at all spindle speeds. A built-in, adjustable counterbalance spring provides quick, easy spindle return.



## *new depth dial*

When the cutting tool contacts the workpiece, set this big, direct-reading dial for the depth you want. As the cutting tool penetrates, the dial rotates on sensitive hand or power feed to zero, where a stop prevents further travel. If your machine is equipped with power feed, just set the dial for the depth you want, and the feed will disengage automatically on identical operations.

## *new full-floating spindle*

All the spindle has to take is torque! Four precision, sealed, lifetime lubricated bearings, two on the spindle and two in the spindle pulley, take radial and thrust loads. See specification table for spindle options at no extra cost, and speed ranges with various motors.

## *new spacious tables and bases*

Here's a drill on which you can handle a wide range of workpieces. Floor drills have a slotted intermediate table with over 200 square inches of *machined* working surface. This table may be tilted and locked at any angle up to 45° either side of center; and may be swung out of the way to accommodate large workpieces on the base. A raise-lower mechanism is supplied as standard equipment. A production type table with T-slots or a plain working surface is available at extra cost.

Floor drills are mounted on a base of adequate weight and area, having T-slots and a machined working surface.

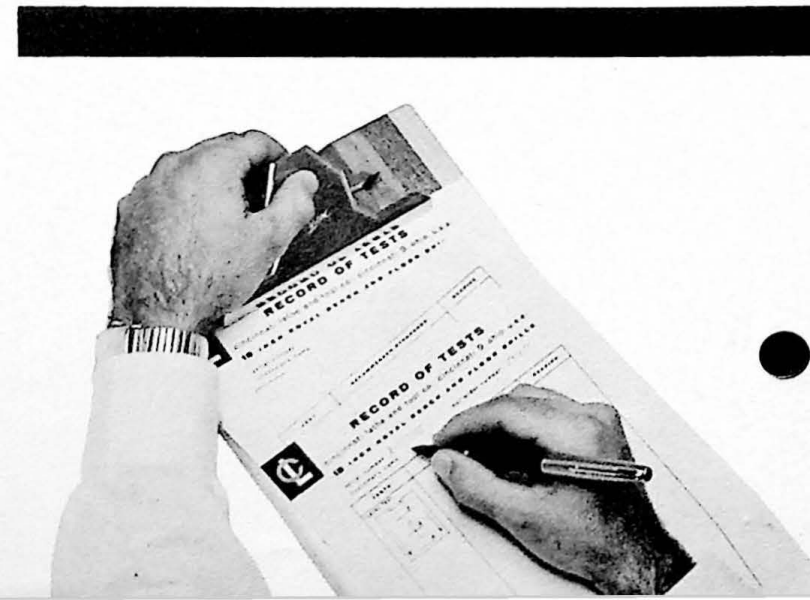
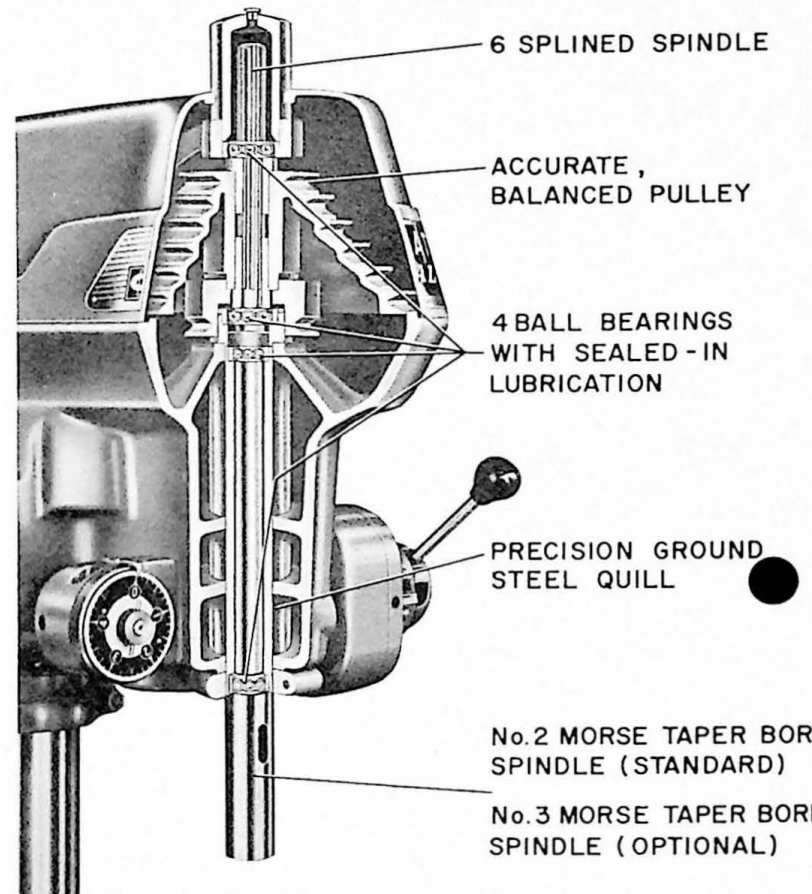
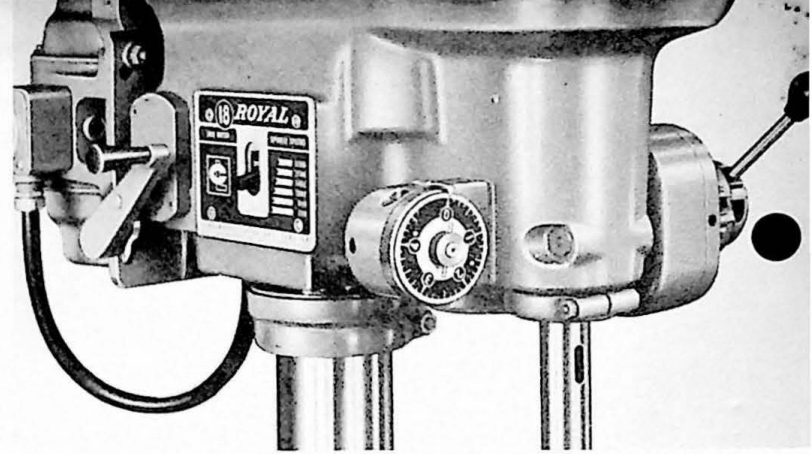
Single spindle bench drills are mounted on a heavy, T-slotted, oil trough base. They are also supplied with a plain working surface base at extra cost.

Any combination of two, three, four or six drill heads may be mounted on a multi-spindle base with a plain, machined working surface and coolant trough. A T-slotted base is supplied at extra cost.

A raise-lower mechanism is standard equipment on each bench drill head. Individual motor drive permits different speeds to be set for each spindle.

## *standards of accuracy*

Every machine is built to definite standards of accuracy, and tested before shipment. A record of these tests is kept for permanent reference.



*extend your range of operations with these fine accessories at small extra cost*

### *coolant system*

Motor driven coolant pump, tank, valve and piping. Specify number of spindles you wish to equip.

### *legs for bench drills*

A good investment for supporting bench drills at the most convenient operator level, and for stability. One to three spindle drills take a pair; four and six spindle drills use a set of three. (See main catalog illustration and floor plan.)

### *head raise-lower mechanism*

A rack and pinion to raise and lower the head on floor drills.

### *tapping attachments*

Procurier tapping heads; No. 2E,  $\frac{3}{16}$ " capacity in steel, or No. 3E,  $\frac{1}{2}$ " capacity in steel. Furnished with Morse taper arbor.

### *slow-speed attachment*

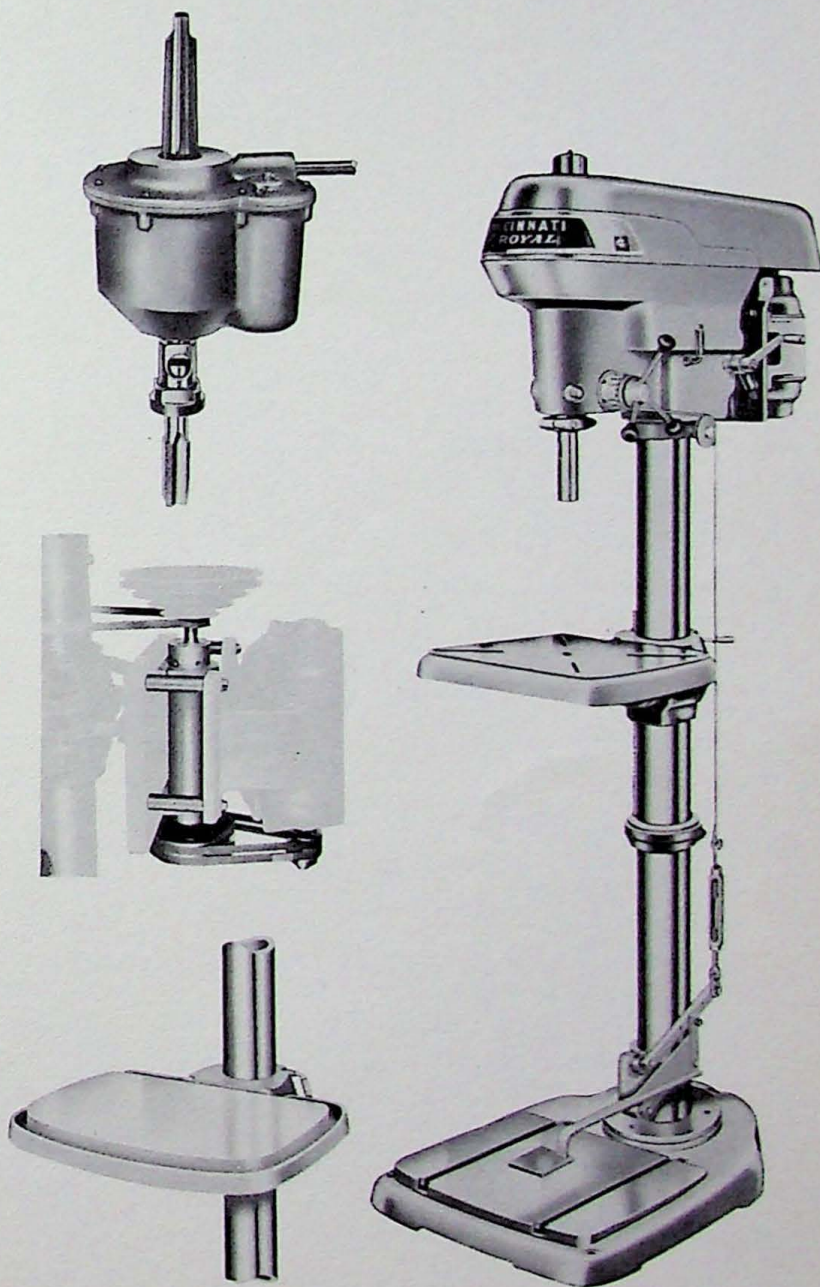
Cardinal No. 18 Slo-Drive reduces spindle speeds to those suitable for larger drills. With 1800 rpm motor, range is 156 to 1240; 1500 rpm motor—130 to 1032; 1200 rpm motor—104 to 824; 1000 rpm motor—96 to 686. V-belts are included.

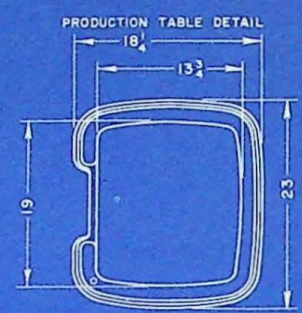
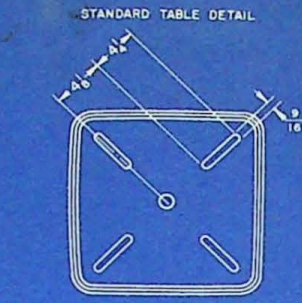
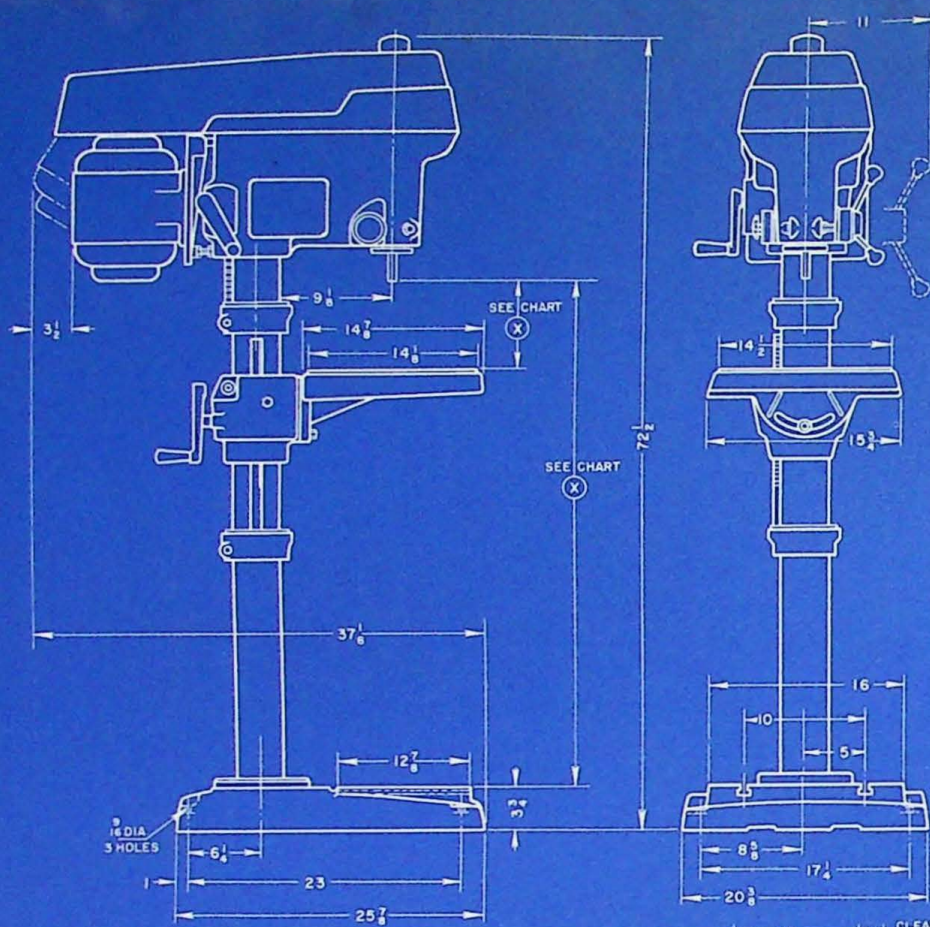
### *production table*

An oil trough, rectangular table with plain, machined, 18" x 12 $\frac{1}{16}$ " working surface can be supplied on floor drills instead of the standard slotted, tilting table.

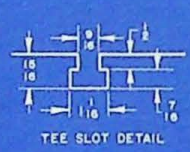
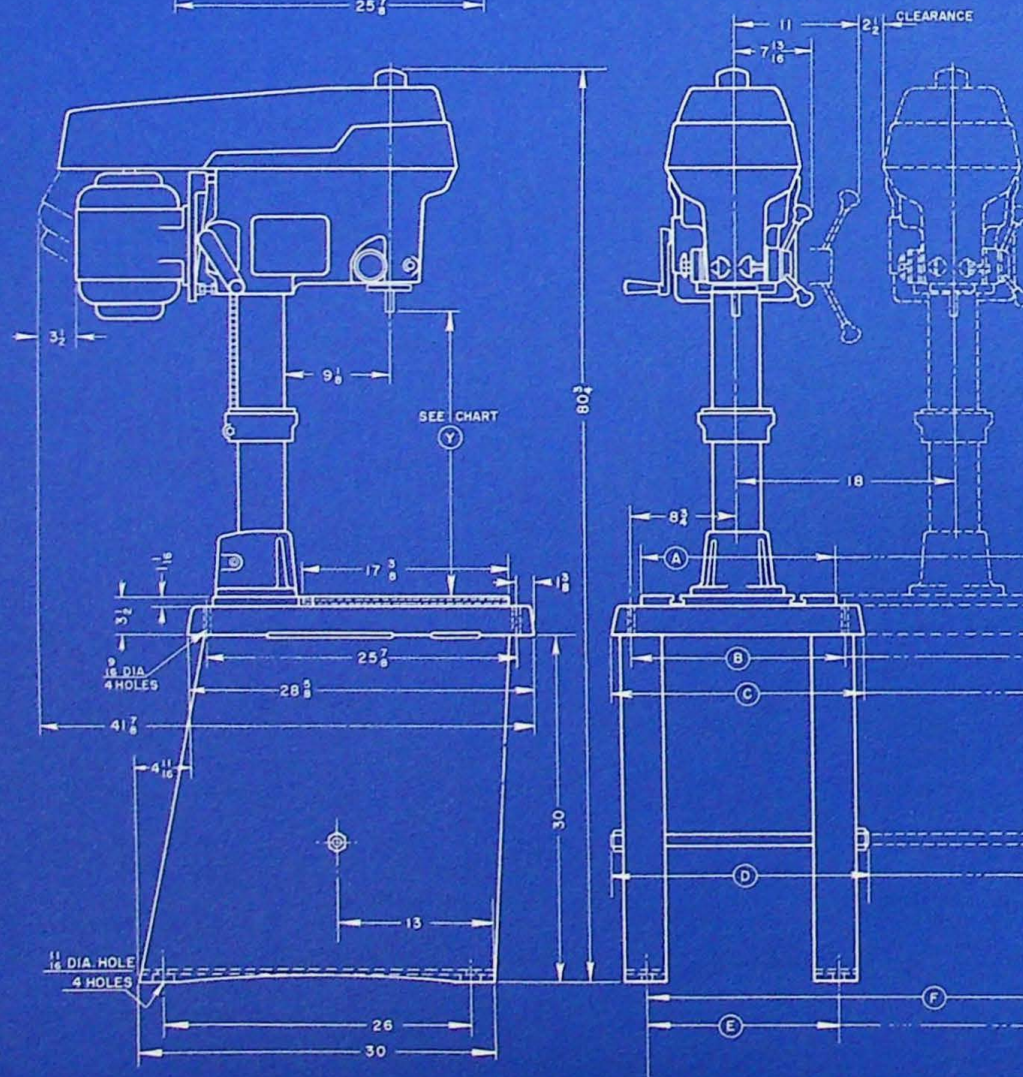
### *foot lever feed*

An efficiency-increasing device for production drilling jobs that require the use of both hands. Floor drills only.

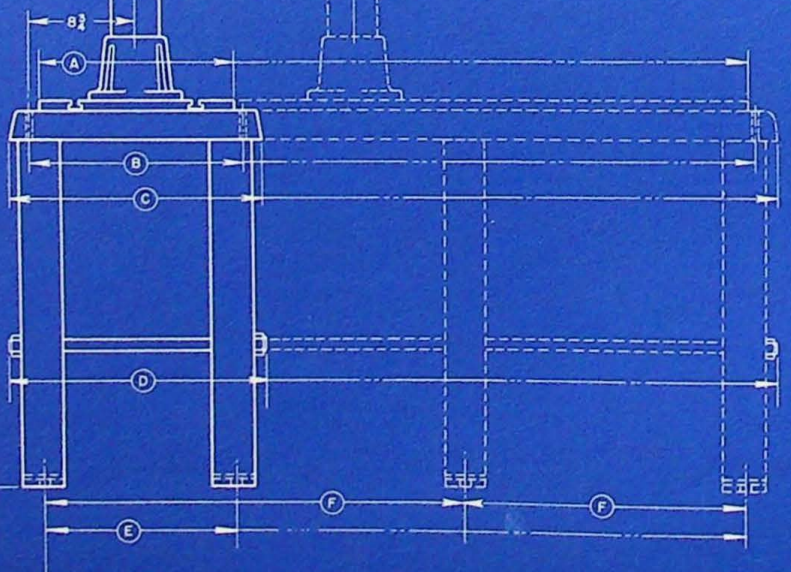




X FLOOR MODEL	TYPE OF SPINDLE	DIMENSION FROM SPINDLE NOSE			
		TO TABLE		TO BASE	
		MIN	MAX	MIN	MAX
	0-1" CAPACITY CHUCK	0	$33\frac{1}{4}$	0	$44\frac{1}{2}$
	No. 2 MORSE TAPER	0	$33\frac{1}{4}$	0	$44\frac{1}{2}$
	No. 3 MORSE TAPER	0	$33$	0	$43\frac{1}{2}$



Y PRODUCTION BENCH MODEL	TYPE OF SPINDLE	DIMENSION FROM SPINDLE NOSE TO BASE	
		MIN	MAX
	0-1" CAPACITY CHUCK	$3\frac{1}{8}$	$22\frac{1}{8}$
	No. 2 MORSE TAPER	$3\frac{1}{8}$	$23\frac{1}{8}$
	No. 3 MORSE TAPER	$3\frac{1}{8}$	$22\frac{1}{8}$



## specifications—floor and bench models 18" Royal "LE" drills

Drilling capacity in cast iron, inches  
 Drills to center of circle, diameter, inches  
 Distance column to center of spindle, inches  
 Distance between spindle centers, multi-spindle drills, inches  
 Diameter of quill, inches  
 Diameter of spindle at splines, inches  
 Dia. & length of spindle nose exposed, #2 MT, inches  
 Dia. & length of spindle nose exposed, #3 MT, inches  
 Spindle travel, inches  
     without stop and dial  
     with hand feed stop and dial  
     with power feed stop and dial  
 Diameter of column (OD), inches  
 Spindle speeds (6), with 1800 rpm motor  
 Spindle speeds (6), with 1500 rpm motor  
 Spindle speeds (6), with 1200 rpm motor  
 Spindle speeds (6), with 1000 rpm motor  
 Spindle Speeds with Slow-Speed attachment  
     1800 rpm motor  
     1500 rpm motor  
     1200 rpm motor  
     1000 rpm motor

See Floor Plans for overall and working surface dimensions, and distances between table or base and spindle nose with various optional spindles.

BENCH	FLOOR
1	1
18¼	18¼
9½	9½
18	—
2¾	2¾
7/8	7/8
1¼ x 4¼	1¼ x 4¼
1½ x 5½ <sub>16</sub>	1½ x 5½ <sub>16</sub>
5¾	5¾
4¼	4¼
5¾	5¾
4	4
3100-2140-1460-1000-690-390	
2580-1780-1210-830-573-324	
2060-1400-970-664-458-259	
1715-1180-810-550-380-216	
1240-856-584-400-276-156	
1032-712-484-432-230-130	
824-560-388-265-183-104	
686-472-324-220-152-86	

### general dimensions

	A	B	C	D	E	F
One Spindle .....	16¼	17½	20¼	20¾	14¾	
Two Spindle .....	34¼	35½	38¼	38¾	32¾	
Three Spindle .....	52¼	53½	56¼	56¾	50¾	
Four Spindle .....	70¼	71½	74¼	74¾	68¾	34¾
Six Spindle .....	106¼	107½	110¼	110¾	104¾	52¾

### equipment supplied with machine

Pulleys for spindle and motor, vee belt, belt guard, motor mount, and manual control with overload protection. Bench models have head raise-lower mechanism; floor models have table raise-lower mechanism. No. 2 Morse taper spindle is standard; No. 3 Morse taper spindle optional if specified. Light machine tool gray paint is standard.

### equipment supplied at extra cost

Power feed; motor driven coolant pump, tank, valve and piping; legs for bench drills; chucks with arbors; tapping attachment; slow speed attachment; production table (floor drills); head raise-lower mechanism (floor drills); foot lever feed (floor drills).

### warranty

Cincinnati Lathe and Tool Co. warrants each Cincinnati drilling machine to be free from defects in material and workmanship. Replacements for any parts of this machine or its equipment, which, when owned by the original user, under normal operation or service, prove defective in material or workmanship as determined by an inspection authorized by us, will be furnished f.o.b. plant, free of

charge during a period of one year from date of shipment from factory.

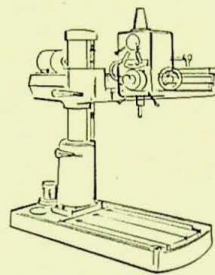
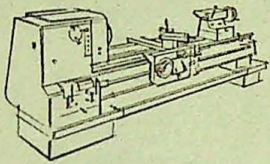
The design and specifications of Cincinnati drilling machines are subject to change without notice. Cincinnati Lathe and Tool Co. reserves the right to make such changes without incurring any obligation to apply them to drilling machines previously sold.

write for descriptive catalogs

Cincinnati Tray-Top Engine Lathes 10"-12½"-15"-18"-21½"-26" sizes.

Cincinnati Tray-Top Toolroom Lathes 10"-12½"-15"-18"-21½"-26" sizes.

Cincinnati Tray-Top Fixed Gap Bed Lathes 15"-18"-21½"-26" sizes.



3' Arm, 7½" Column Radial Drills.

21" Sliding Head, Box and Round Column Floor Drills,  
Single and Multiple Spindles.

21" Stationary Head Floor Drills.

16" Sliding Head, Box Column Drills, Bench and  
Floor, Single and Multiple Spindles.

16" Royal Drills, Bench and Floor, Single and Multiple Spindles.

18" Royal Drills, Bench and Floor, Single and Multiple Spindles.



cincinnati lathe and tool co., cincinnati 9, ohio, U. S. A.