

OPERATOR'S  
INSTRUCTION  
BOOK

CINCINNATI No. 2  
CUTTER and TOOL GRINDER



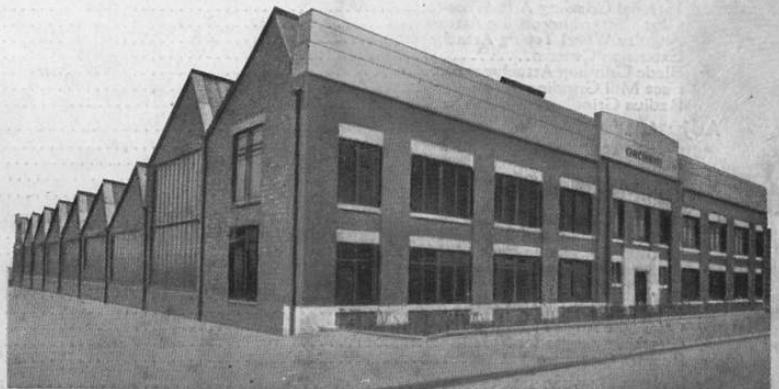
*Place this Booklet in the  
Hands of the Machine  
Operator or Set-Up Man*

CINCINNATI MILLING MACHINES, LTD.  
WOODLANDS FARM ROAD . . . TYBURN  
BIRMINGHAM, ENGLAND

*N. H. Earne*  
TOOL ROOM

**A**NY CUTTER can be sharpened and still produce as good a finish and as true a form as a new cutter. In fact, new cutters of the type which are sharpened by grinding the periphery of the teeth should not be used until they are ground to the proper clearance angle for the material to be machined.

This booklet gives, in a condensed form, tables and data which are necessary to set up and grind all the ordinary types of milling cutters on the No. 2 CINCINNATI Cutter Grinder. Of course, a wide variety of small tool room work can also be economically and accurately ground with the aid of the standard attachments. Detail instructions for the operation, lubrication and adjustment of the machine are given to help the new operator to understand more fully the operation and care of his machine.



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# TOOL ROOM SPECIFICATIONS

## CINCINNATI No. 2 CUTTER GRINDER

### Capacity

Swing between centres.....10" diam. (max.)  
Length between tailstock centres.....27" (max.)  
Length between workhead and tailstock centres.....21½" (max.)

### Range

Table movement..... { 16" Longitudinal  
8" Cross  
Swivels 360°

Grinding wheel head..... { 7½" Vertical  
Swivels 120°  
either way (240° total)

### Speeds

Grinding wheel spindle speeds.....3850 or 5735 r. p. m.  
Corresponding motor speed.....3425 r. p. m.

### General

Horiz. distance—centre tailstock to centre of wheel head { 10¼" max.  
2¼" min.

Vert. distance—centre tailstock to centre of wheel head.... { 2¼" below  
5¼" above

Tailstock centre above table.....4⅞"

Tailstock centre offset from table T-slot.....4⅞"

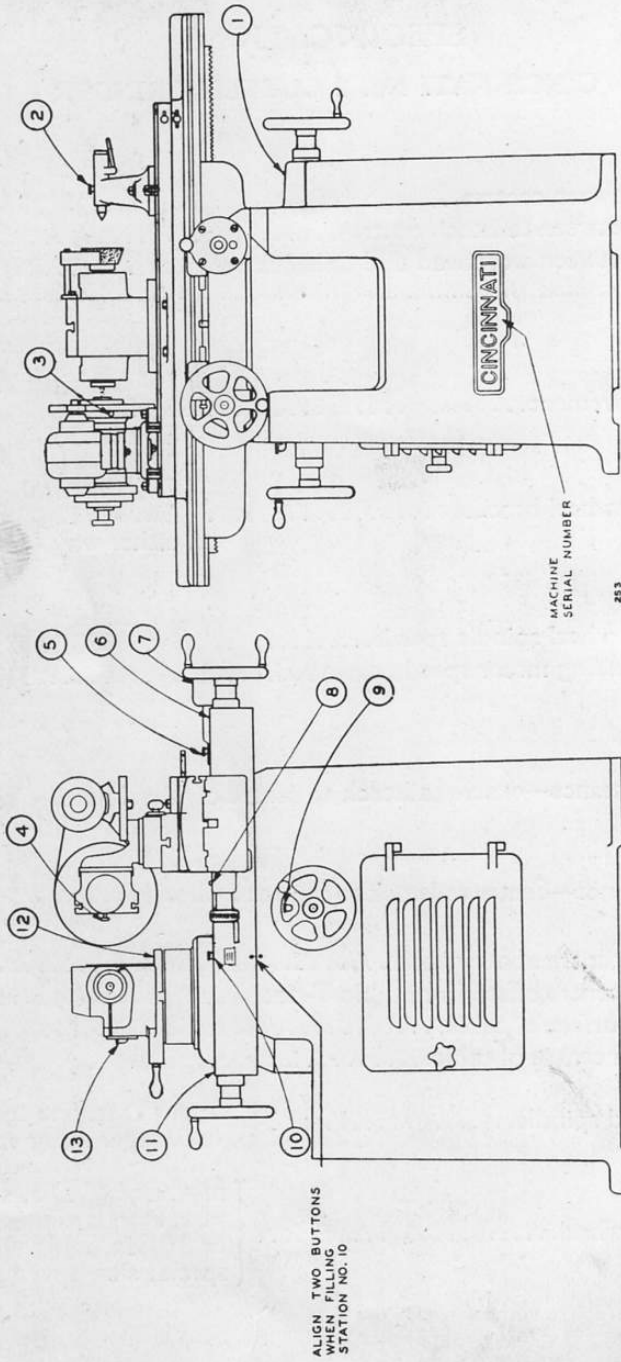
Working surface of table.....36 x 5¼"

Tee slot in centre of table.....⅝" wide

Work head spindle..... { 3½" taper per ft. one end  
12 B. & S. taper other end

Grinding wheel..... { max. size 6" Dia. x ½" wide  
with standard motor pulley,  
or 8" Dia. x ½" wide with  
special slow speed pulley.

LUBRICATION



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Fig. 1  
Lubrication Chart for No. 2 Cincinnati Cutter Grinder

LUBRICATION

TOOL ROOM

LUBRICATING INSTRUCTIONS AND SPECIFICATIONS

When to Oil	Station Number	Parts Lubricated	Instructions	Specifications
Once a Day	1	Elevating Shaft Brg.	Oil from squirt can	Medium machine mineral oil Viscosity 190 to 210 seconds Saybolt at 100° F.
	2	Tailstock	Oil from squirt can	
	3	Work Head Dial	Remove screw and oil from squirt can	
	4	Work Head Spindle	Oil from squirt can	
	5	Differential Shaft Bearings	Oil from squirt can	
	6	Front Cross Screw Brg.	Oil from squirt can	
	7	Differential Gear Bearings	Remove screw and oil from squirt can	
	8	Shaft Bearing	Oil with squirt can	
	9	Elevating Shaft and Worm	Oil from squirt can	
	10	Cross Screw	Oil from squirt can. Align two buttons when oiling.	
	11	Rear Cross Screw Bearing	Oil from squirt can	
	12	Column Bearing in Sleeve	Remove screw and oil from squirt can	
Refill When Necessary	13 (2 cups)	Wheel Head Spindle	Fill oil cups, when spindle is at rest, to top of glass (high oil level). Drain and re-fill every three months. About 1/8 pint required each filling.	High grade spindle oil Viscosity 120 to 130 seconds Saybolt at 100° F.
		Spindle	Adjust to use about one cup of oil each day.	
<b>DRIVING MOTOR IN BASE</b>				
Once a Day		Motor Bearings (two cups)	Keep grease cup filled—one turn daily	Good grade of cup grease without fillers. Min. flow temperature 270° F.

