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(12) **United States Design Patent**  
**Ioka et al.**

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(45) **Date of Patent:** **\*\* Sep. 10, 2002**

(54) **ELECTROMAGNETIC POWDER BRAKE**

6,244,394 B1 \* 6/2001 Gutierrez et al. .... 188/72.8  
6,318,513 B1 \* 11/2001 Dietrich et al. .... 188/72.7

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**FOREIGN PATENT DOCUMENTS**

JP 57-12146 3/1982

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\* cited by examiner

(\*\*) Term: **14 Years**

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Maier & Neustadt, P.C.

(21) Appl. No.: **29/150,207**

(57) **CLAIM**

(22) Filed: **Nov. 14, 2001**

The ornamental design for an electromagnetic powder  
brake, as shown and described.

(30) **Foreign Application Priority Data**

**DESCRIPTION**

Jun. 29, 2001 (JP) ..... 2001-019063

(51) **LOC (7) Cl.** ..... **12-16**

(52) **U.S. Cl.** ..... **D12/180**

(58) **Field of Search** ..... D12/180; 188/72.2,  
188/72.7, 72.8, 708, 111, 138, 156, 162;  
210/136, 304, 305

FIG. 1 is a front, top and left side perspective view of an  
electromagnetic powder brake, showing our new design;  
FIG. 2 is a rear, top and left side perspective view thereof;  
FIG. 3 is a front elevational view thereof;  
FIG. 4 is a rear elevational view thereof;  
FIG. 5 is a top plan view thereof;  
FIG. 6 is a bottom plan view thereof; and,  
FIG. 7 is a right side elevational view thereof, the left side  
elevational view is omitted as that is symmetrical to the  
right side elevational view thereof.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D271,292 S \* 11/1983 Wilson et al. .... D12/180  
4,974,705 A \* 12/1990 Le Pensee ..... 188/138  
5,791,442 A \* 8/1998 Arnold ..... 188/138

**1 Claim, 4 Drawing Sheets**

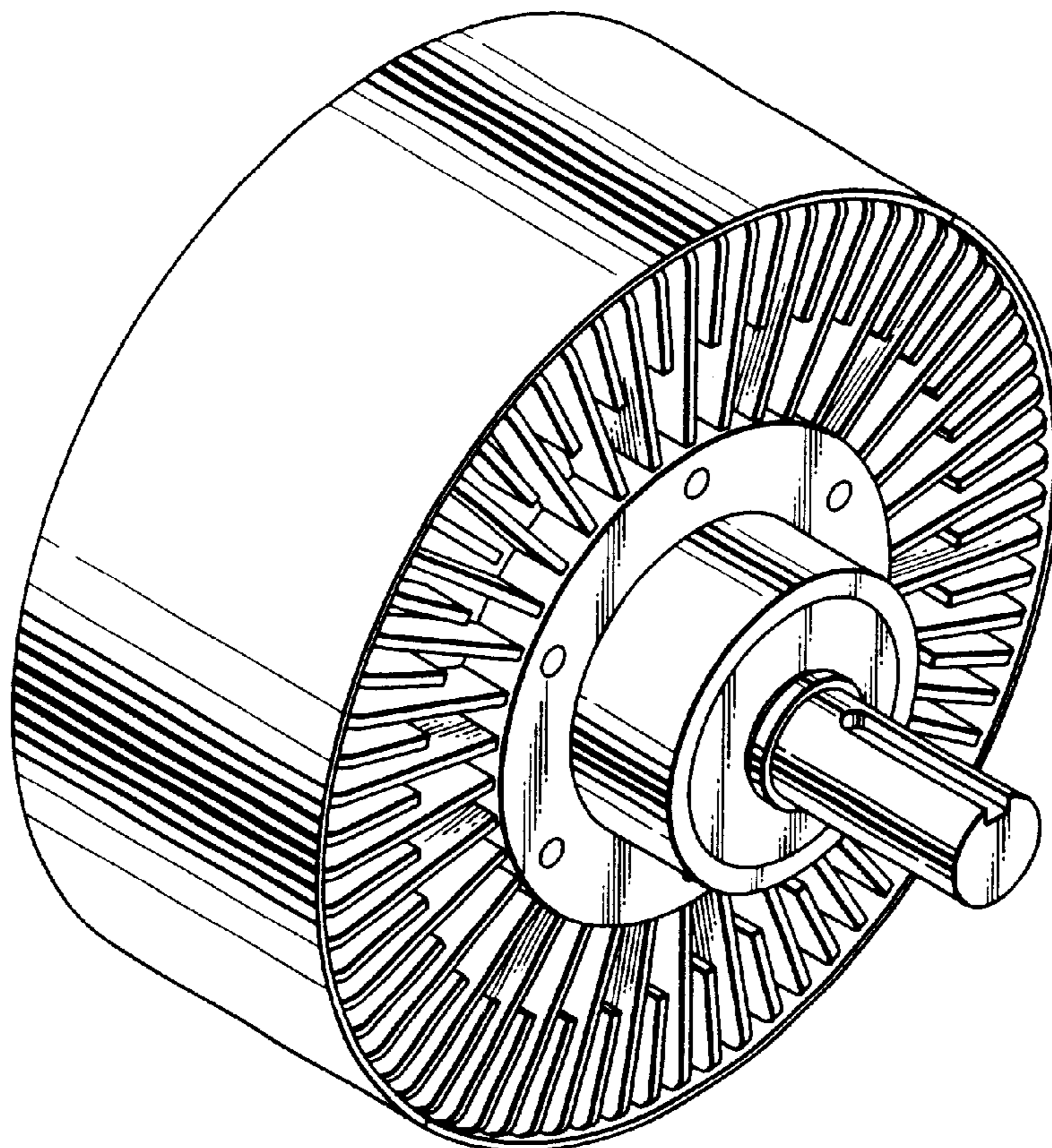


FIG. 1

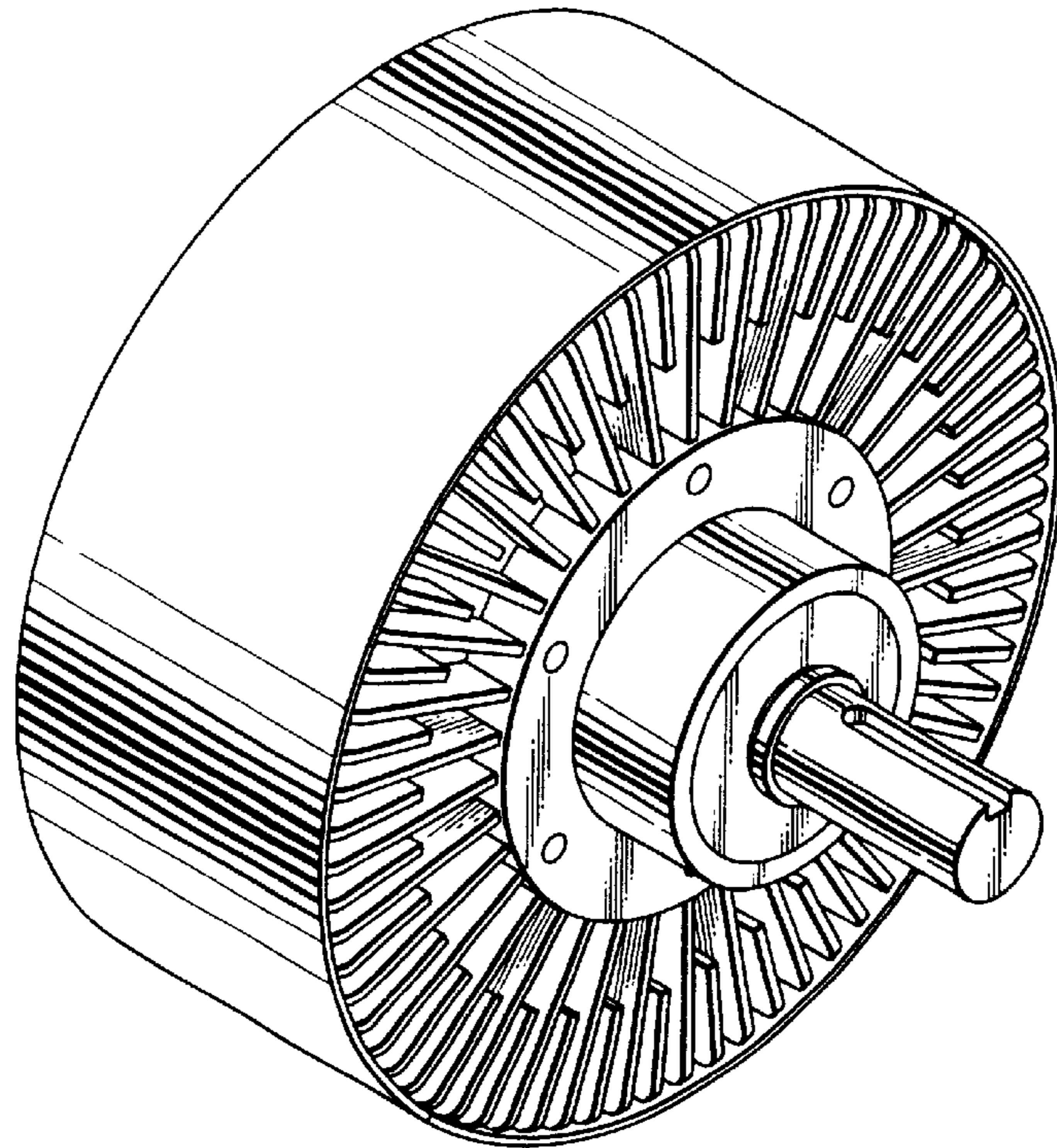


FIG. 2

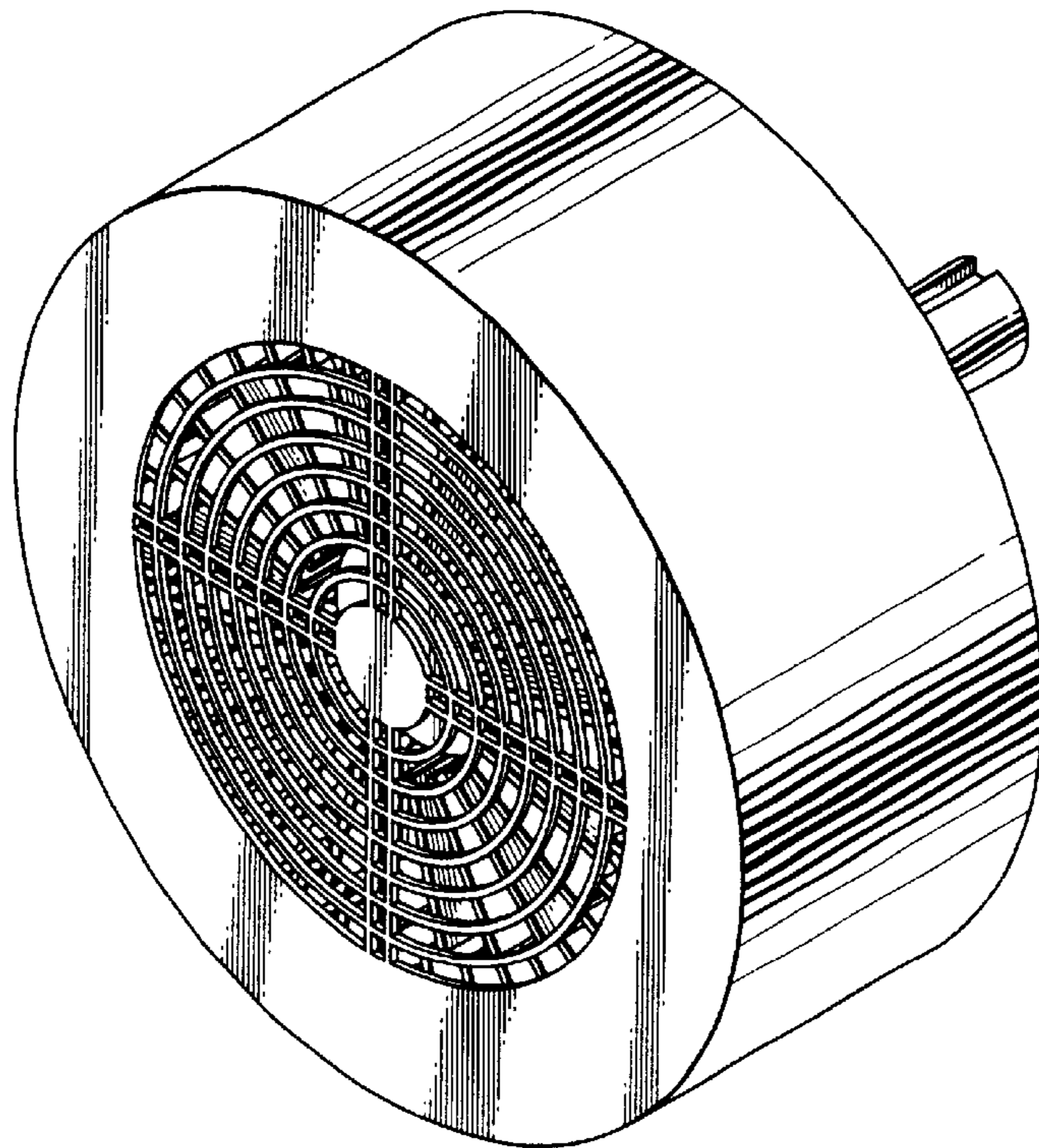


FIG. 3

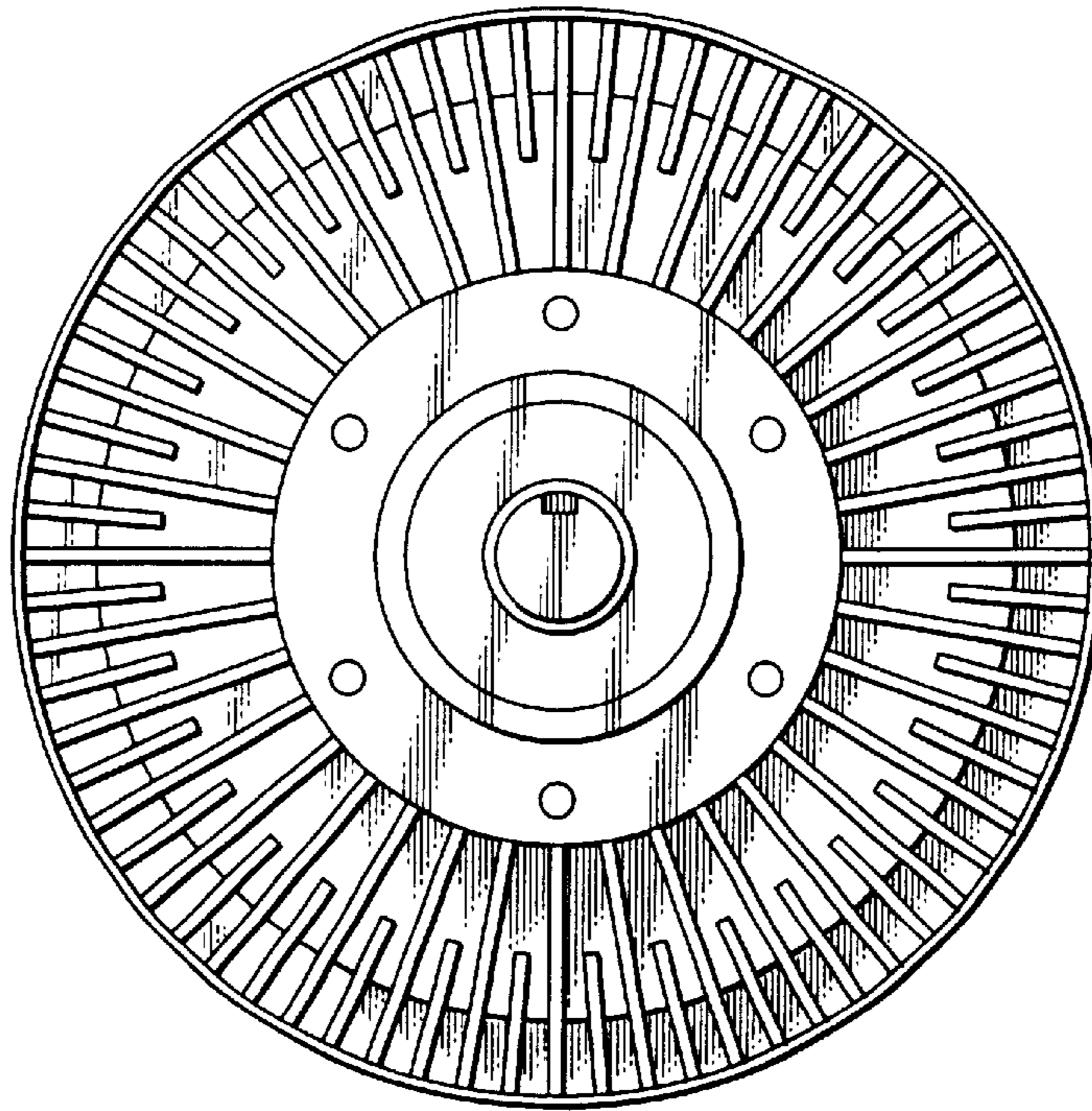


FIG. 4

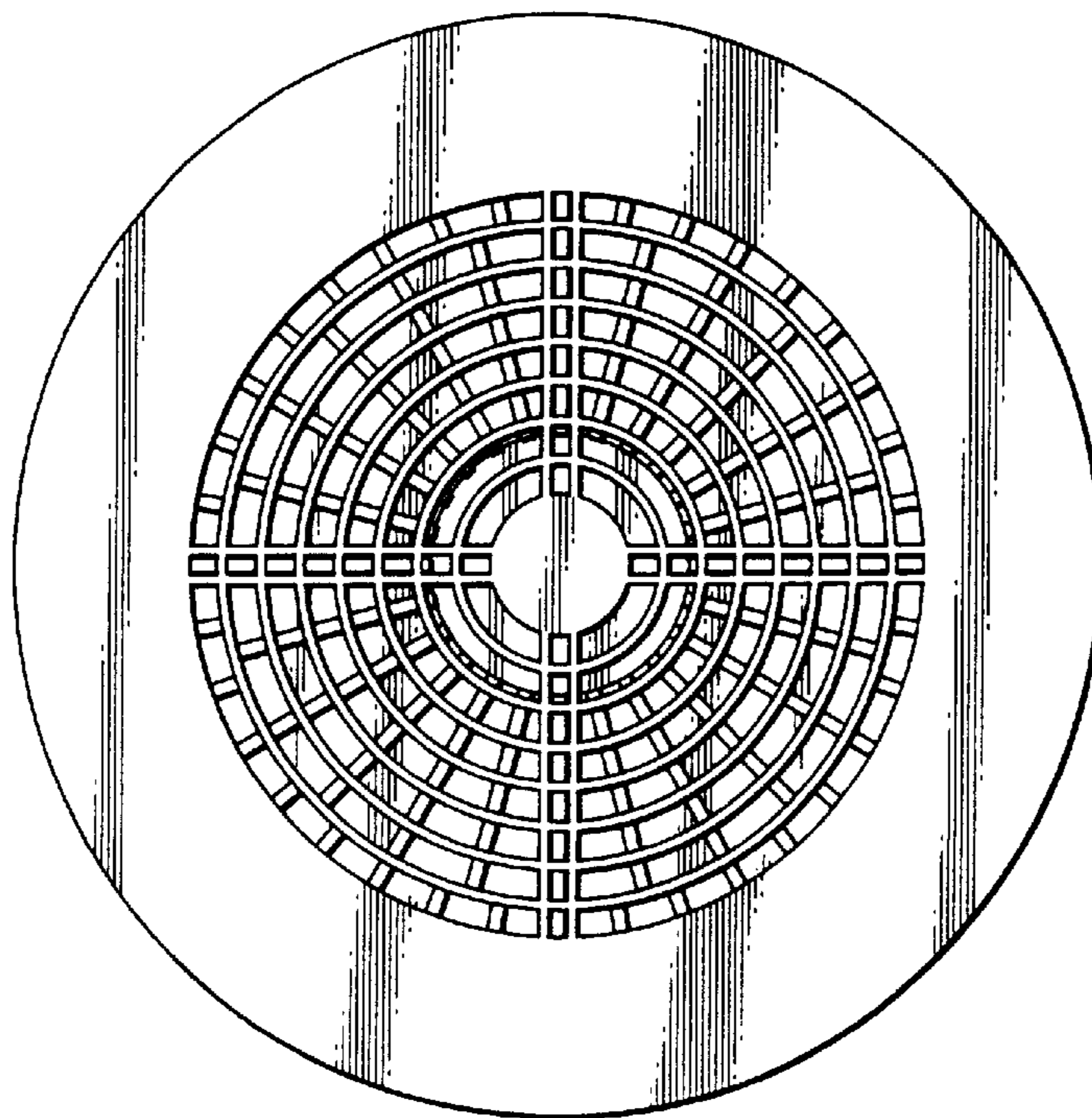


FIG. 5

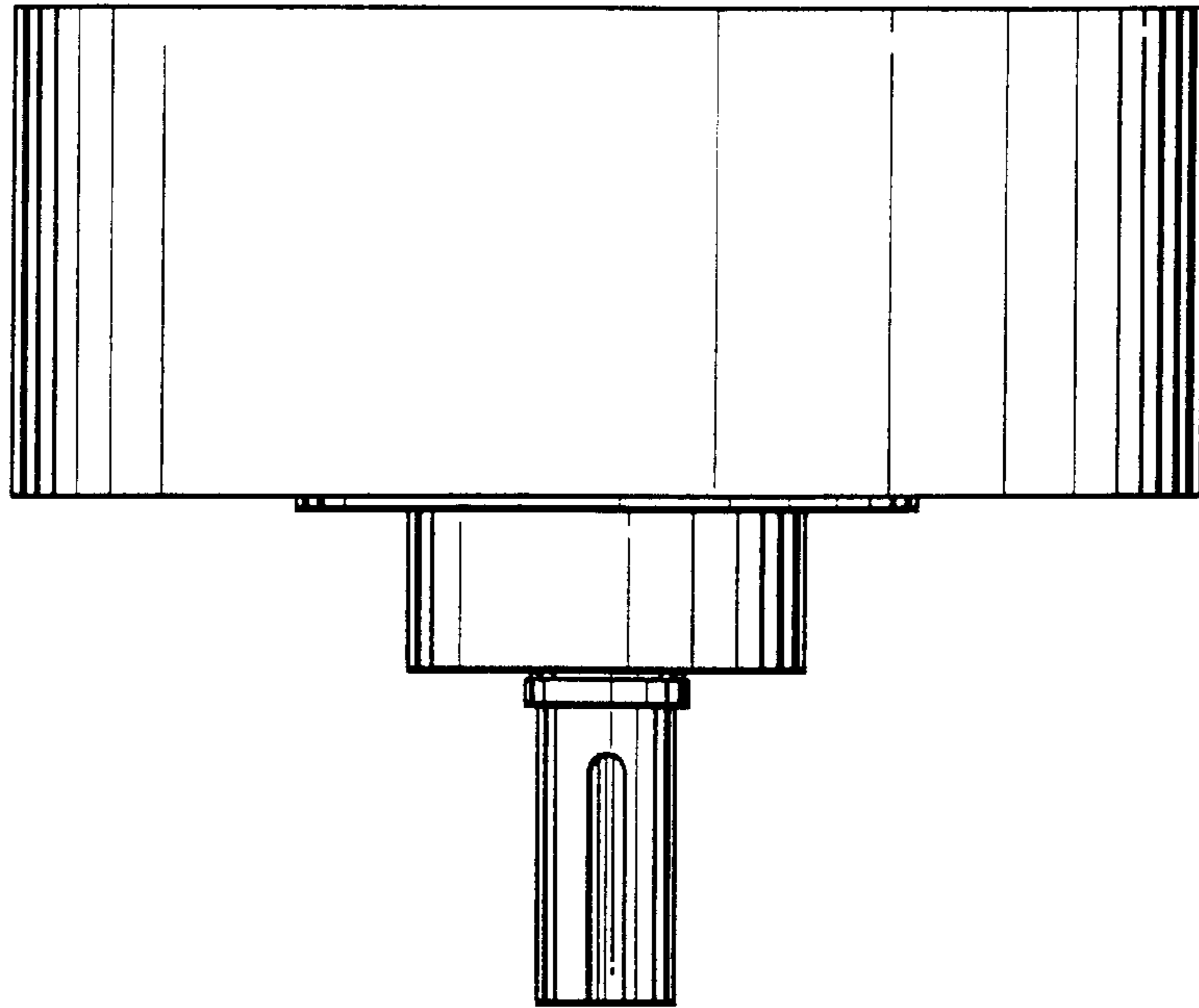


FIG. 6

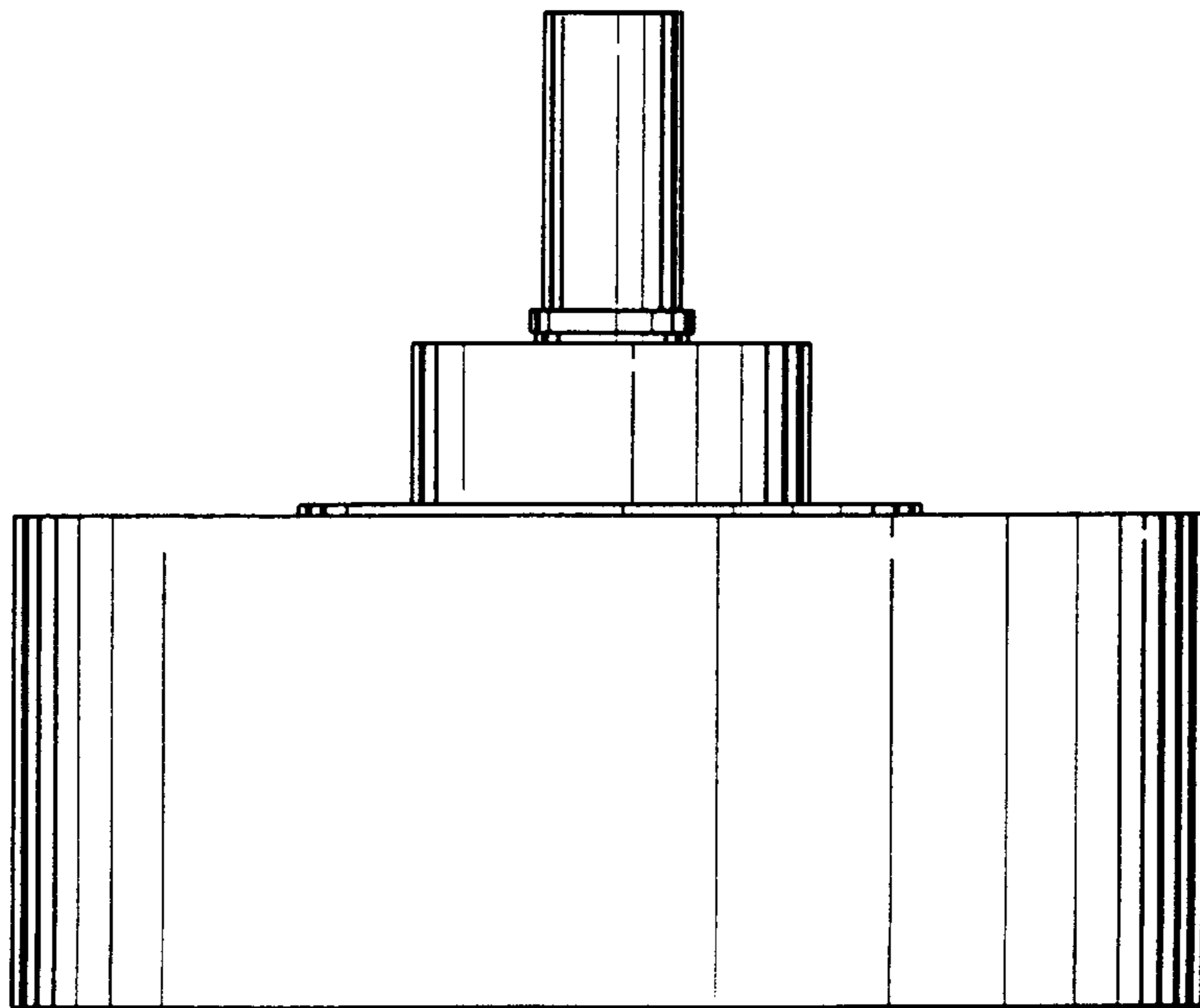


FIG. 7

