



US00D839156S

(12) **United States Design Patent** (10) **Patent No.:** **US D839,156 S**
Heimann, Jr. (45) **Date of Patent:** **** Jan. 29, 2019**

(54) **TONE WHEEL**

OTHER PUBLICATIONS

(71) Applicant: **A. J. Rose Manufacturing Co.**, Avon, OH (US)
(72) Inventor: **Rudy J. Heimann, Jr.**, Brunswick, OH (US)
(73) Assignee: **A.J. Rose Manufacturing Co.**, Avon, OH (US)

Photographs of a tone wheel previously sold by Applicant in 2015; pp. 1-2.

(Continued)

Primary Examiner — Susan E Krakower
Assistant Examiner — Jerry Shiuan-Hua Hsu
(74) *Attorney, Agent, or Firm* — Pearne & Gordon LLP

(**) Term: **15 Years**

(57) **CLAIM**

(21) Appl. No.: **29/613,306**

The ornamental design for a tone wheel, as shown and described.

(22) Filed: **Aug. 9, 2017**

(51) **LOC (11) Cl.** **12-16**

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

(58) **Field of Classification Search**
USPC D12/123, 179, 180; D16/136, 134, 133, D16/200, 237; D7/391, 354, 362, 352, D7/337, 323, 341, 339; D9/435, 446, D9/436, 438, 434, 454, 504, 451
CPC G01P 3/00; G01P 3/481; G01P 3/44; G01P 3/488; G01P 3/487; G01P 3/443; G01P 1/026; B60T 8/329; F16H 9/18
See application file for complete search history.

DESCRIPTION

FIG. 1 is a front perspective view of a first embodiment of a tone wheel, showing my new design.
FIG. 2 is rear perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a left side view thereof; the right side being a mirror image thereof;
FIG. 5 is a rear view thereof;
FIG. 6 is a right side sectional view taken in the direction of line 6-6 of FIG. 3;
FIG. 7 is a front perspective, exploded view thereof; and
FIG. 8 is a left side exploded view thereof;
FIG. 9 is a front perspective view of a second embodiment of a tone wheel, showing my new design.
FIG. 10 is rear perspective view thereof;
FIG. 11 is a front view thereof;
FIG. 12 is a left side view thereof; the right side being a mirror image thereof;
FIG. 13 is a rear view thereof;
FIG. 14 is a right side sectional view taken in the direction of line 14-14 of FIG. 11;
FIG. 15 is a front perspective, exploded view thereof; and,
FIG. 16 is a left side exploded view thereof.

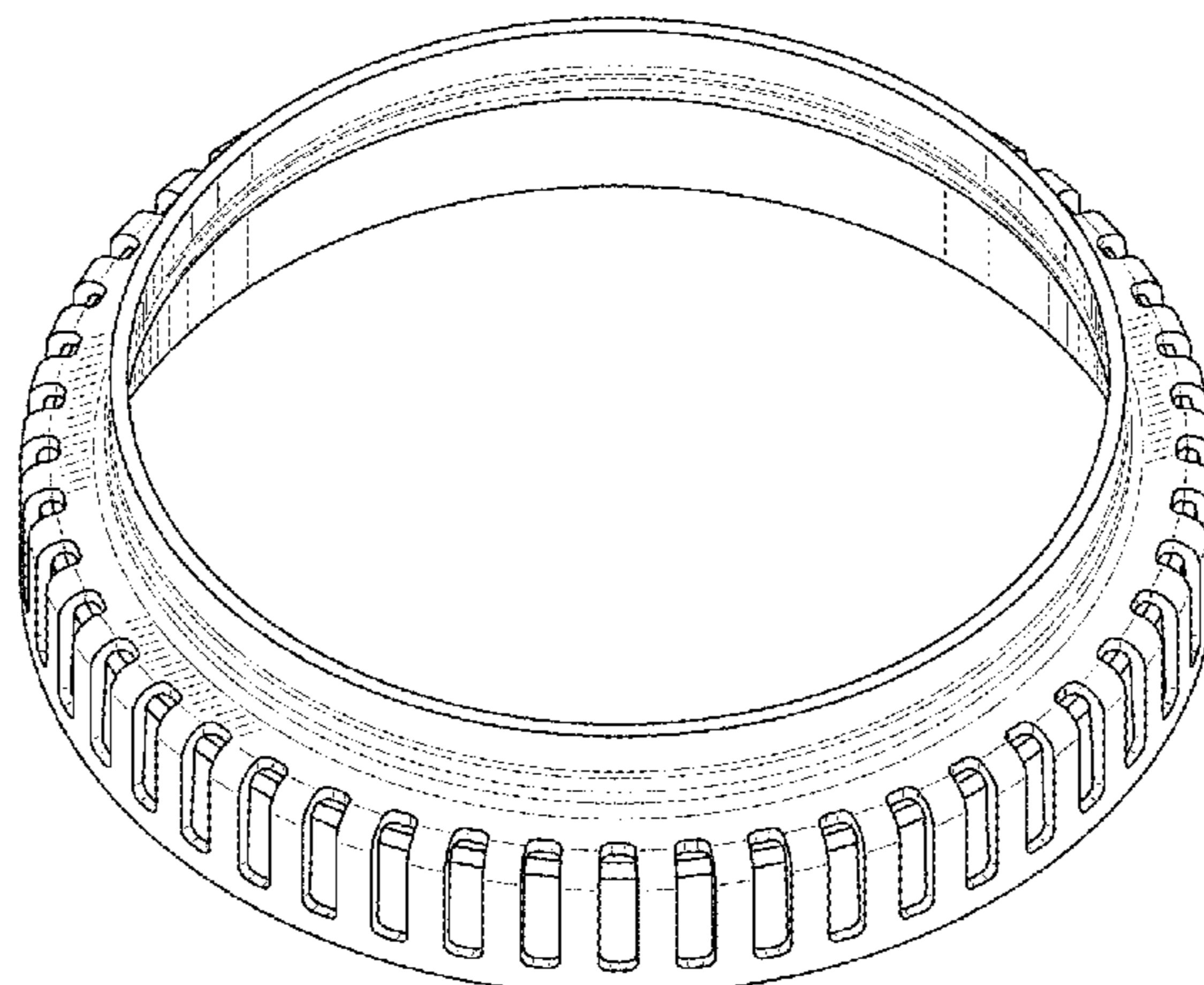
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,936,684 A 2/1976 Anselmino et al.
3,939,373 A 2/1976 Roberts
4,001,687 A 1/1977 Sorkin et al.
4,046,181 A 9/1977 Barnsdale
RE29,509 E 1/1978 Pauwels et al.
4,628,200 A 12/1986 Tinios
4,700,133 A 10/1987 Day
4,719,419 A 1/1988 Dawley
4,795,278 A 1/1989 Hayashi
4,797,611 A 1/1989 Schreiber
4,947,116 A 8/1990 Welcome et al.

(Continued)

1 Claim, 12 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,434,504 A 7/1995 Hollis et al.
 6,498,475 B2* 12/2002 Foster G01P 3/488
 29/894
 D476,931 S 7/2003 Fishburn et al.
 D476,932 S 7/2003 Fishburn et al.
 D481,312 S* 10/2003 Martin D9/435
 6,642,709 B2 11/2003 Heimann, Jr. et al.
 D651,544 S* 1/2012 Song D12/180
 D651,949 S* 1/2012 Song D12/180
 D651,950 S* 1/2012 Song D12/180
 8,460,137 B2* 6/2013 Kajigaya F16H 9/18
 474/11
 D819,530 S* 6/2018 Heimann, Jr. D12/180
 D820,748 S* 6/2018 Heimann, Jr. D12/180
 2004/0061493 A1* 4/2004 Fishburn G01P 3/443
 324/173
 2005/0236897 A1* 10/2005 Jung B60T 8/171
 303/166
 2006/0265875 A1* 11/2006 Song G01P 3/488
 29/894
 2009/0188762 A1* 7/2009 Hester B60T 8/329
 188/73.1
 2016/0299169 A1* 10/2016 Heuver G01P 3/44

OTHER PUBLICATIONS

Corresponding U.S. Appl. No. 29/613,308, filed Aug. 9, 2017.
 Corresponding U.S. Appl. No. 29/587,917, filed Dec. 16, 2016.
 Corresponding U.S. Appl. No. 29/587,919, filed Dec. 16, 2016.

* cited by examiner

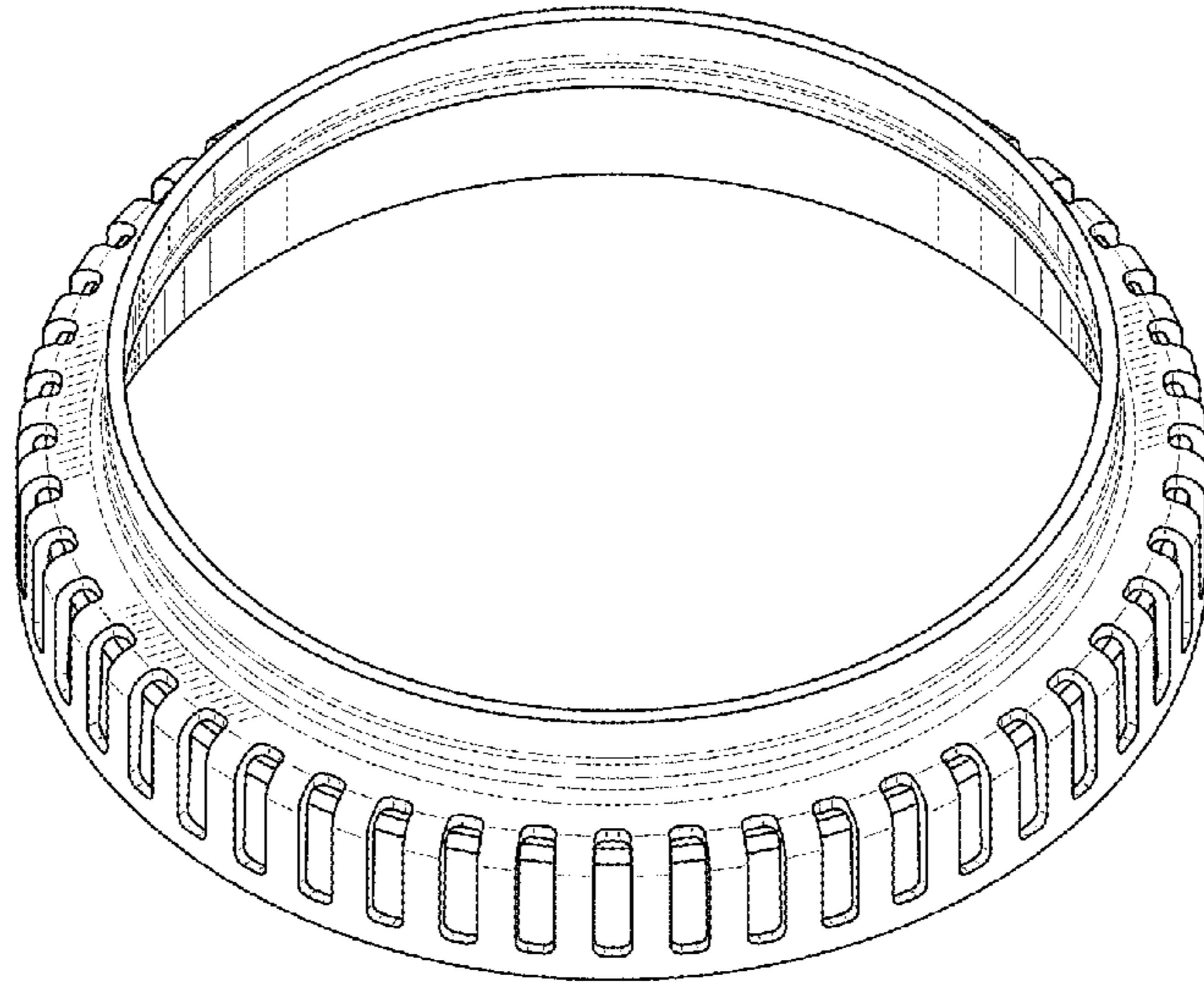


FIG. 1

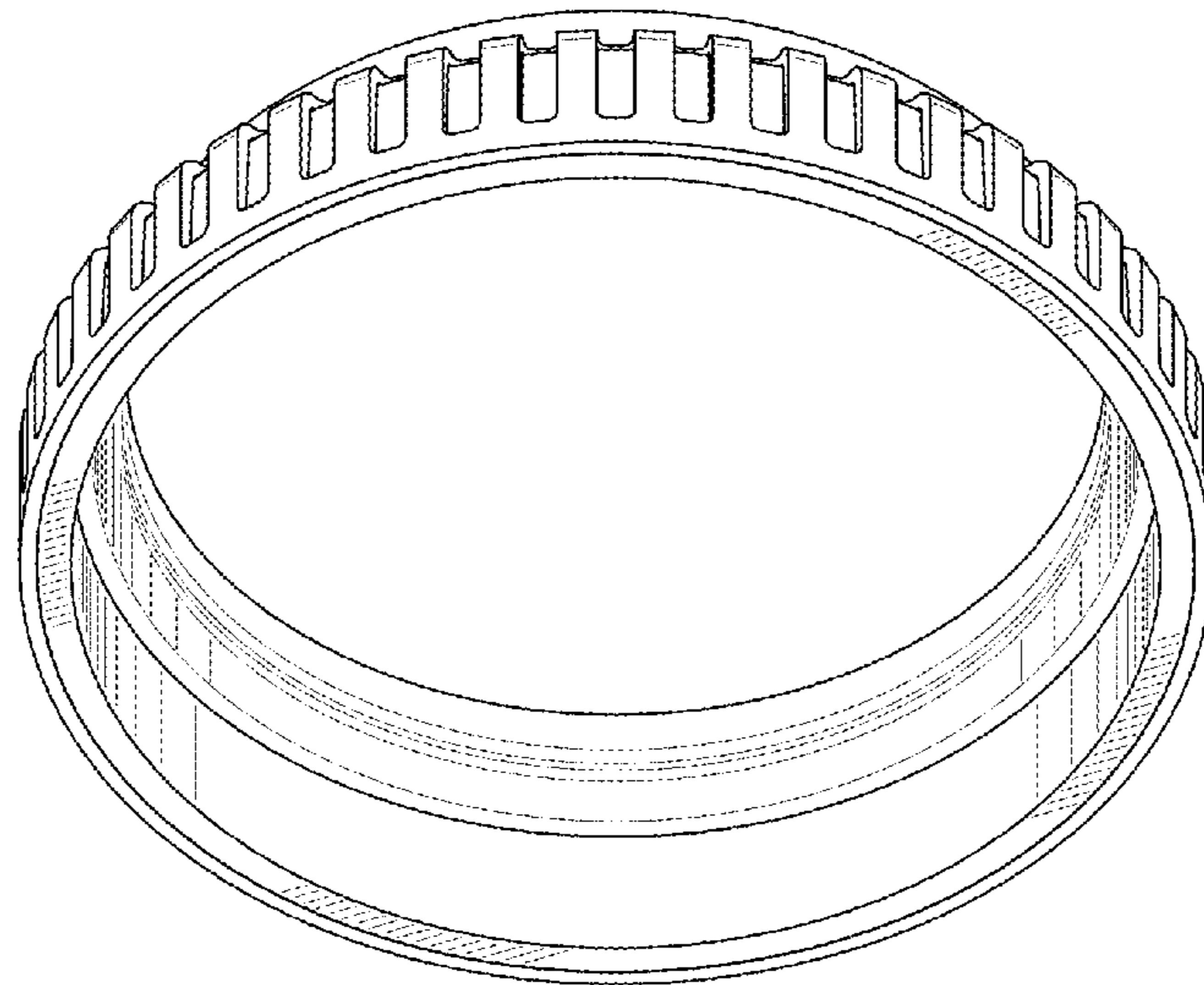


FIG. 2

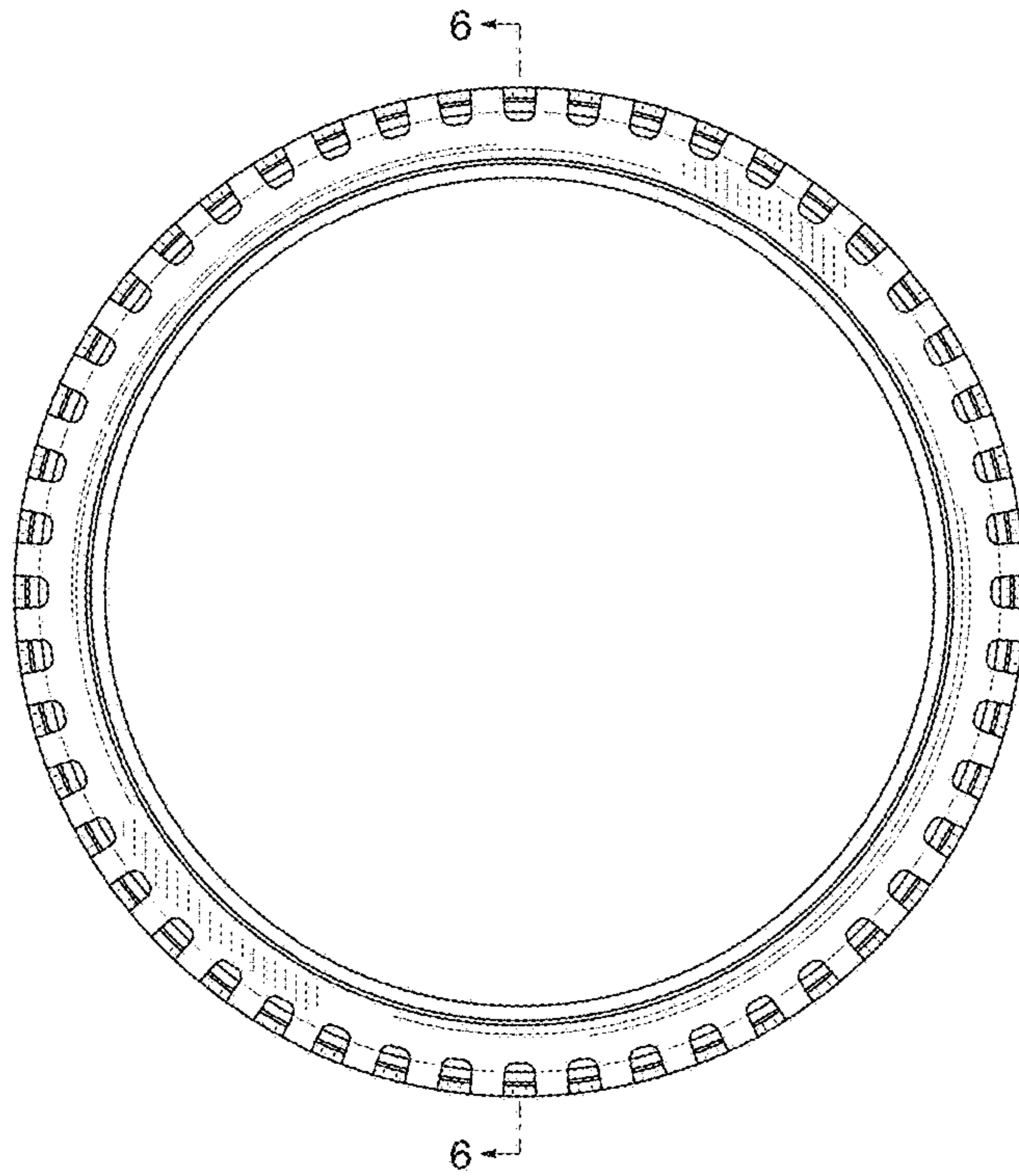


FIG. 3

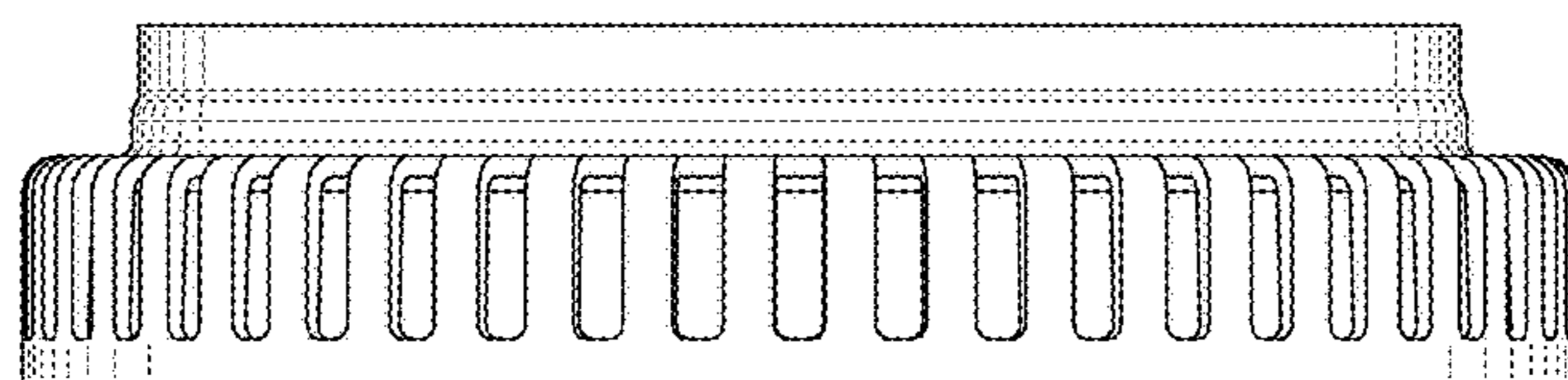


FIG. 4

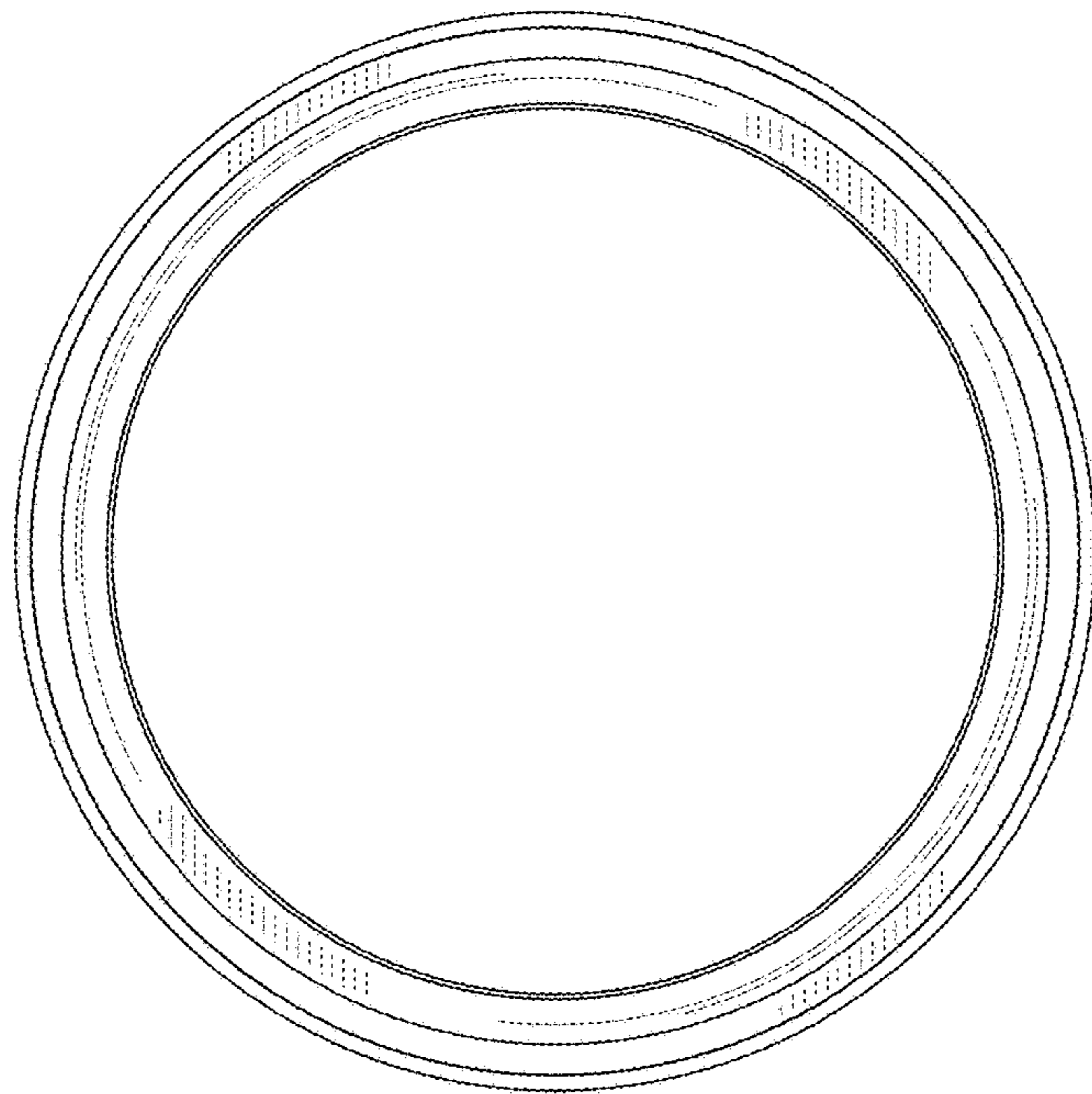


FIG. 5

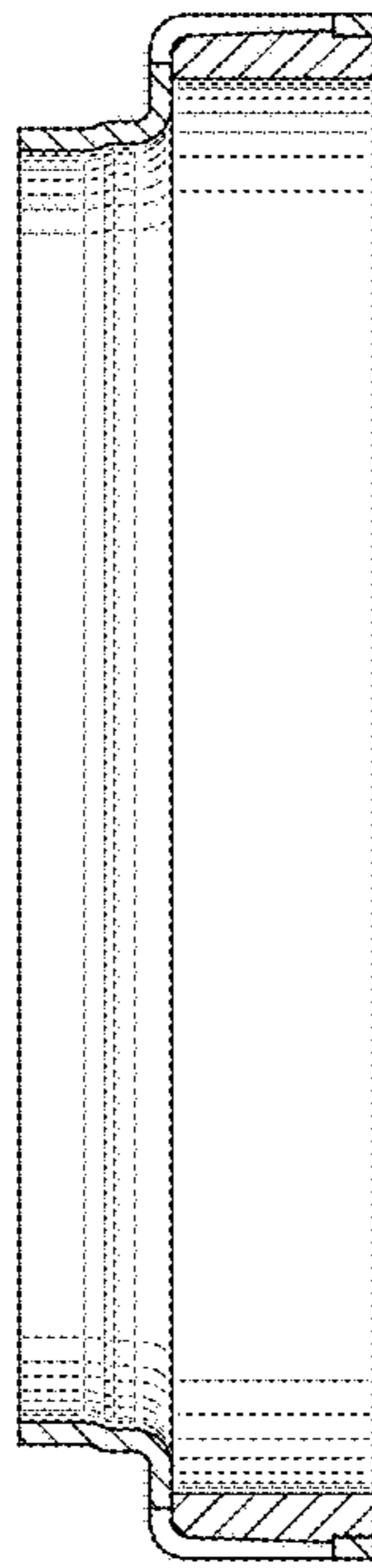


FIG. 6

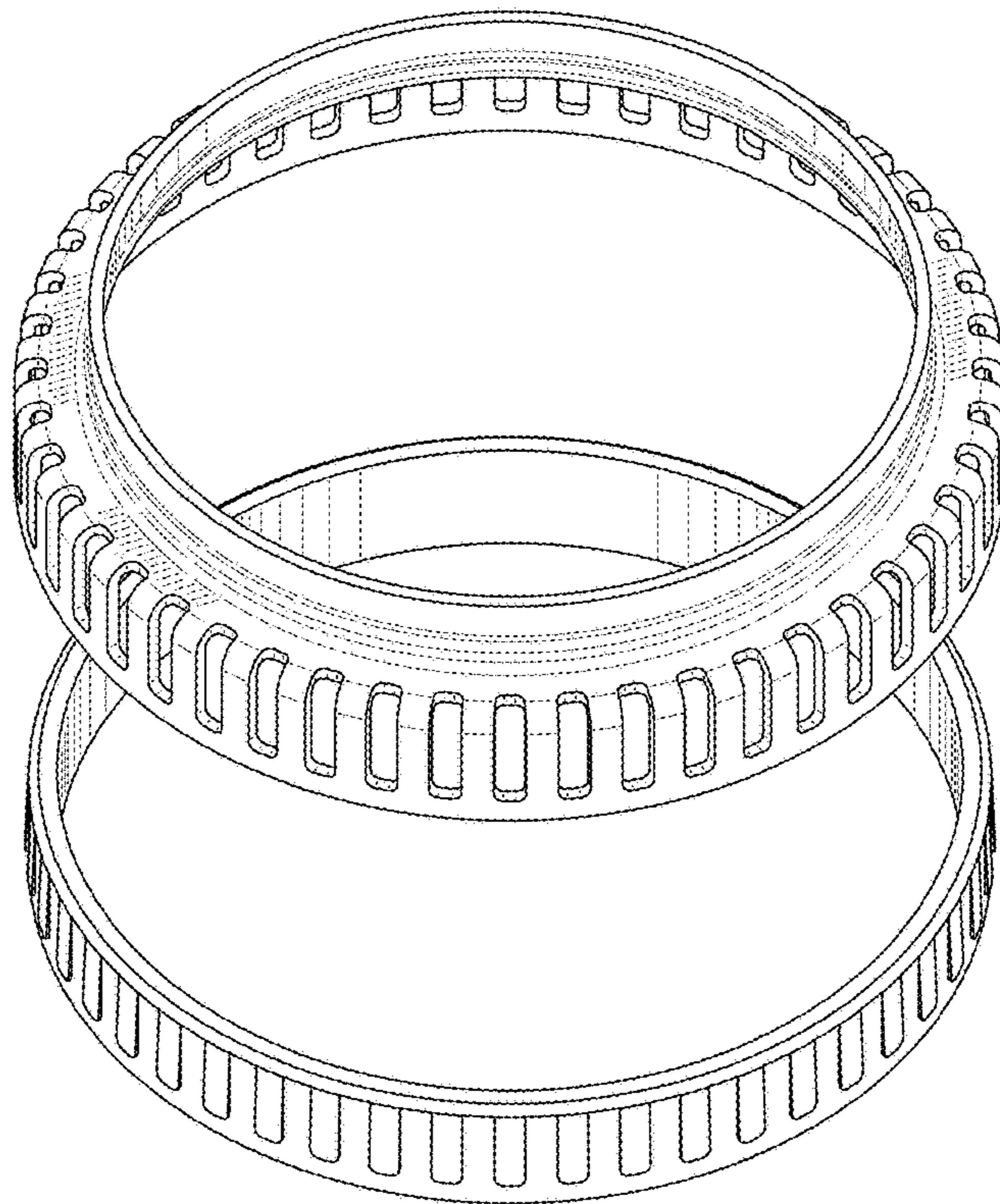


FIG. 7

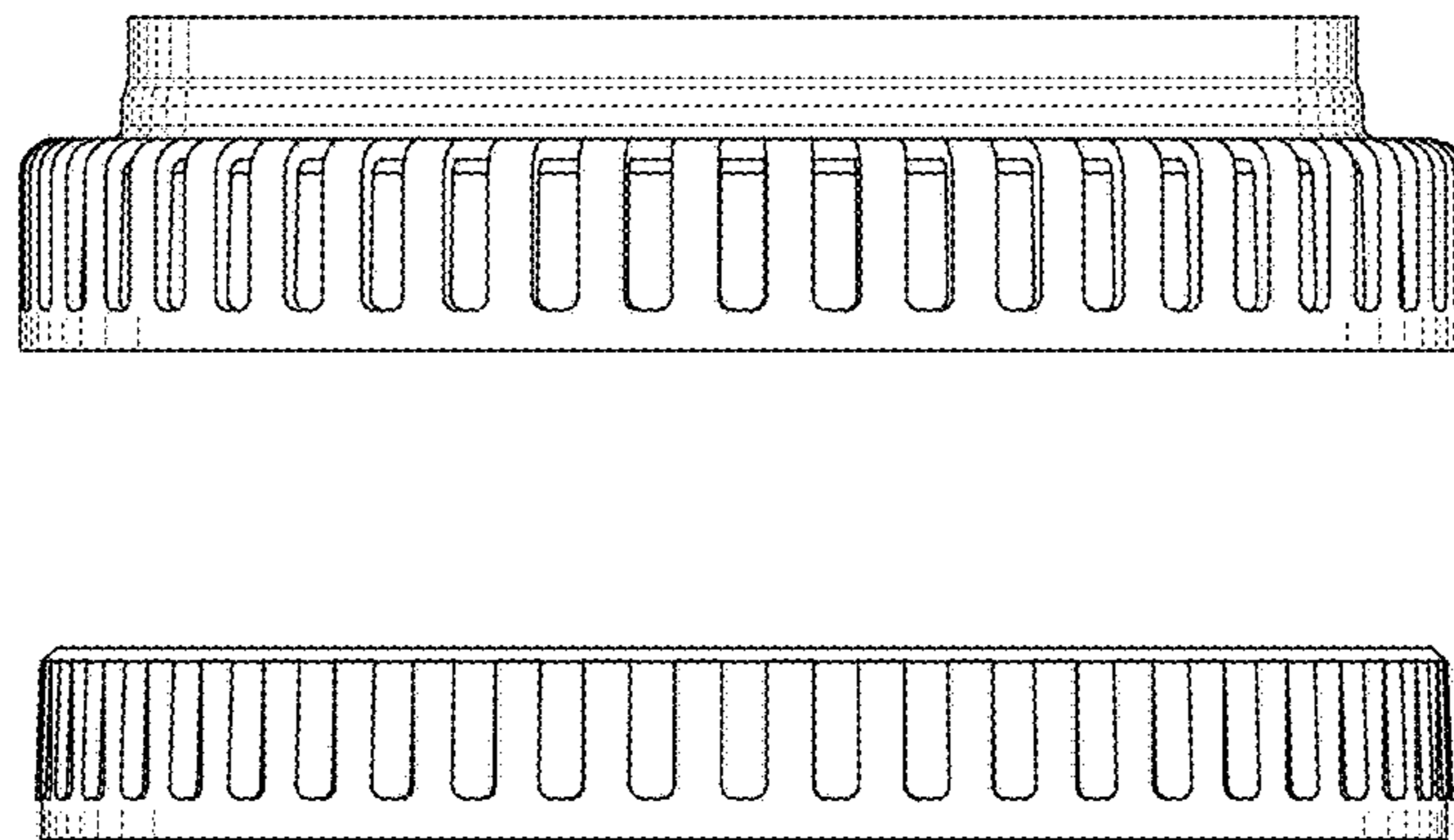


FIG. 8

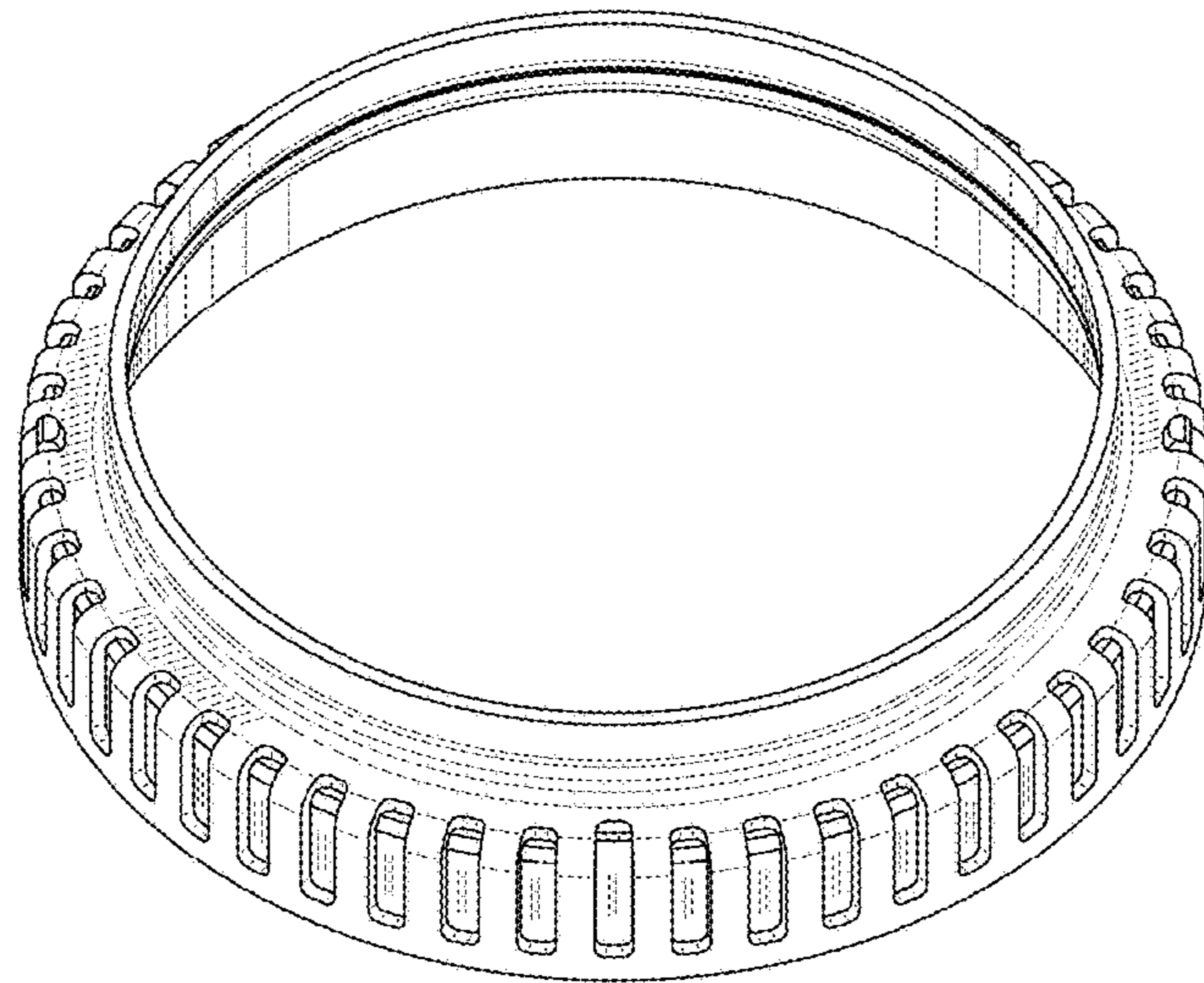


FIG. 9

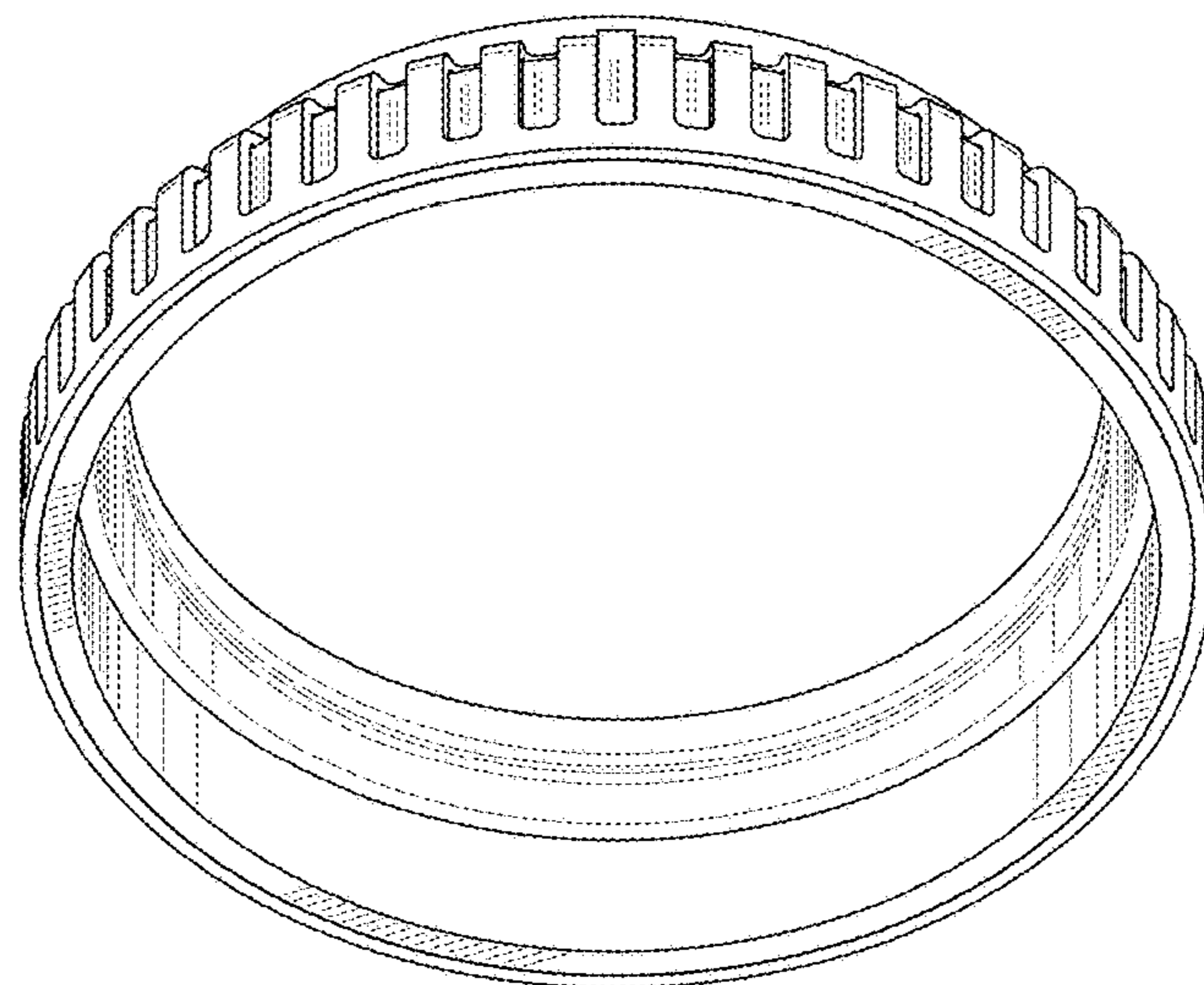


FIG. 10

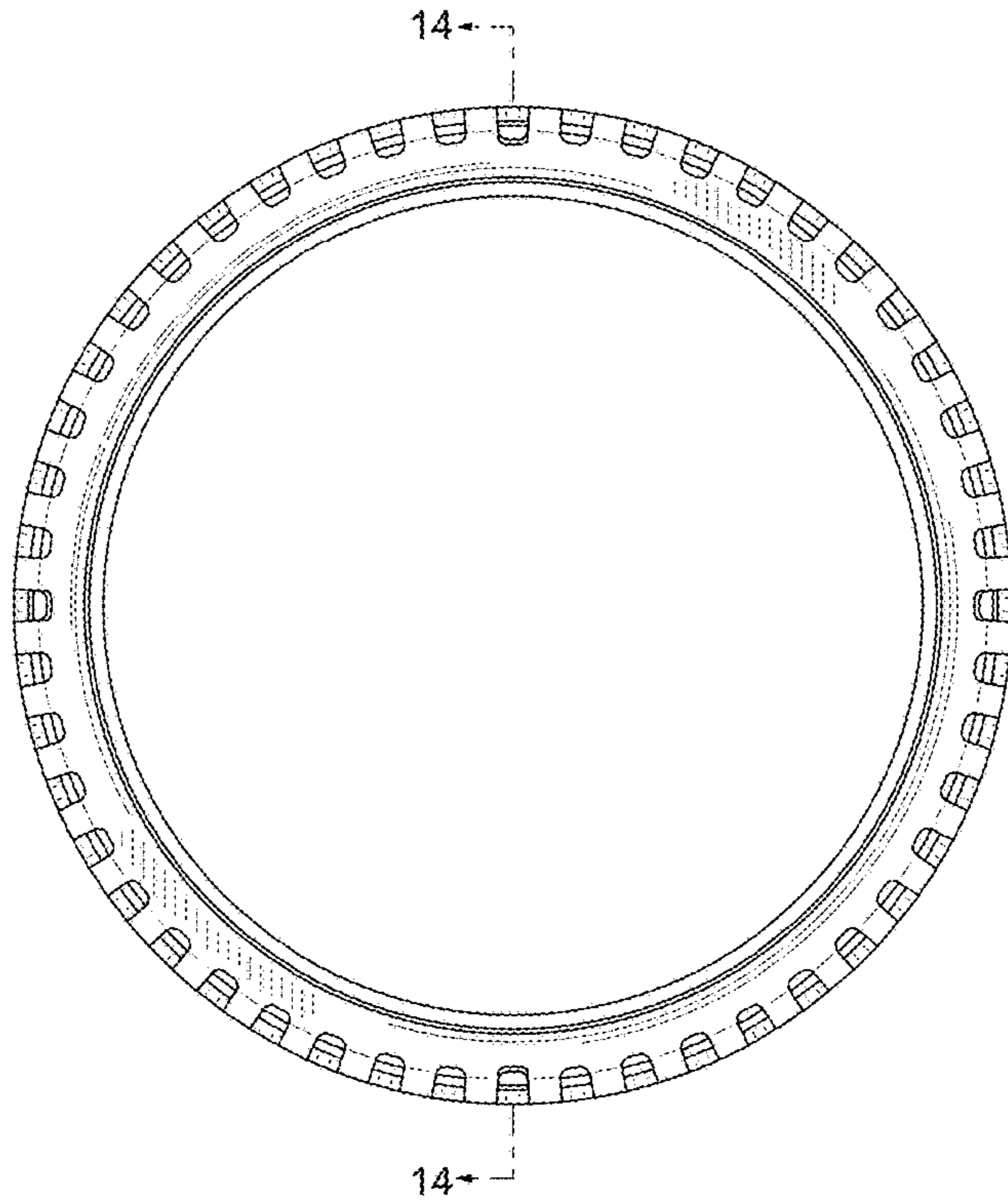


FIG. 11

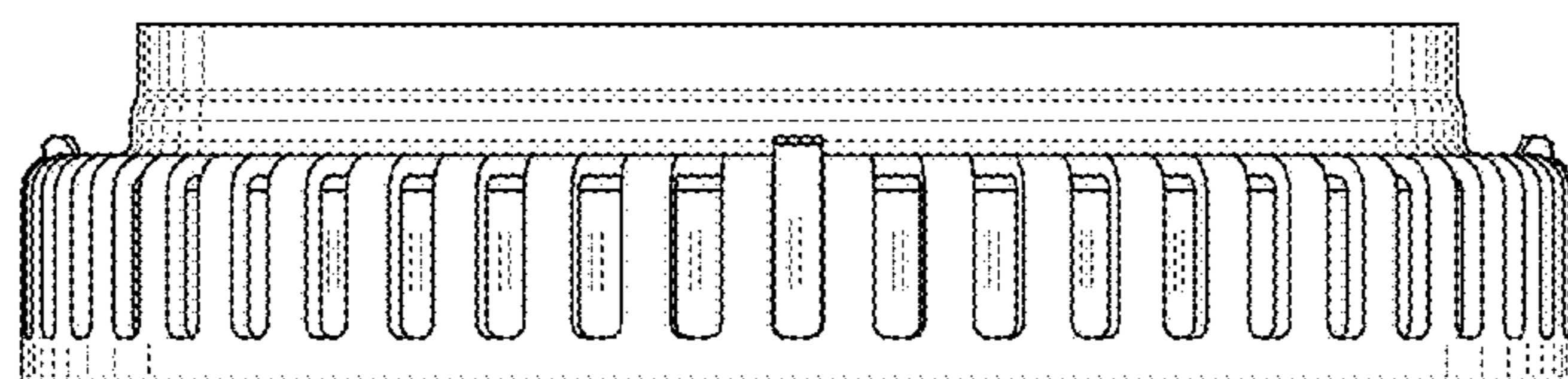


FIG. 12

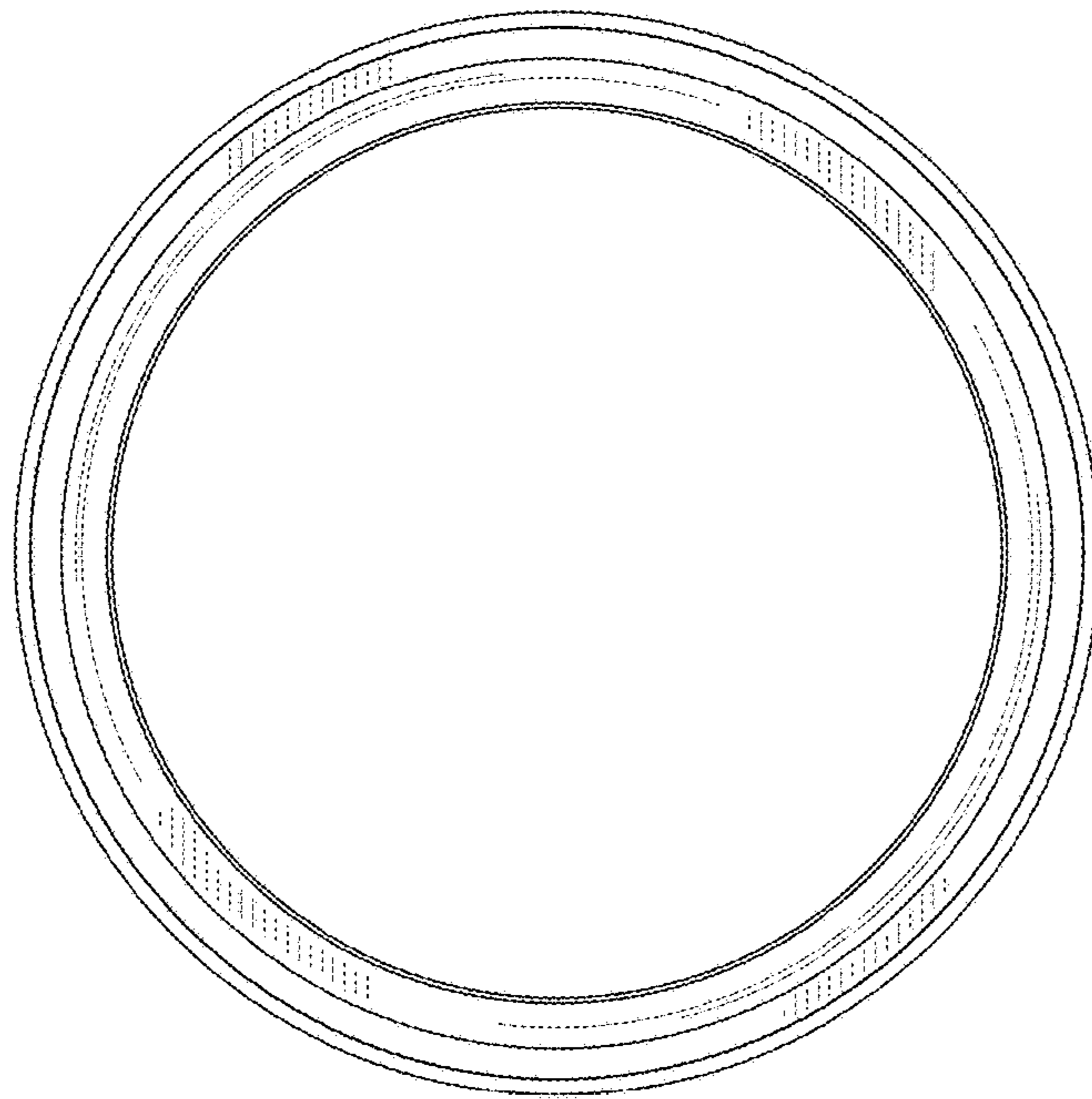


FIG. 13

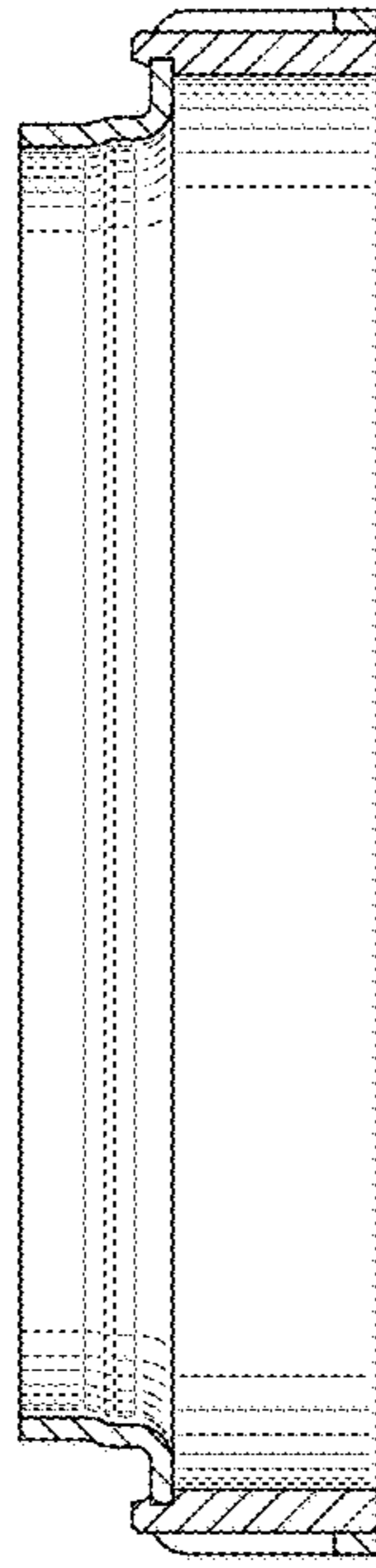


FIG. 14

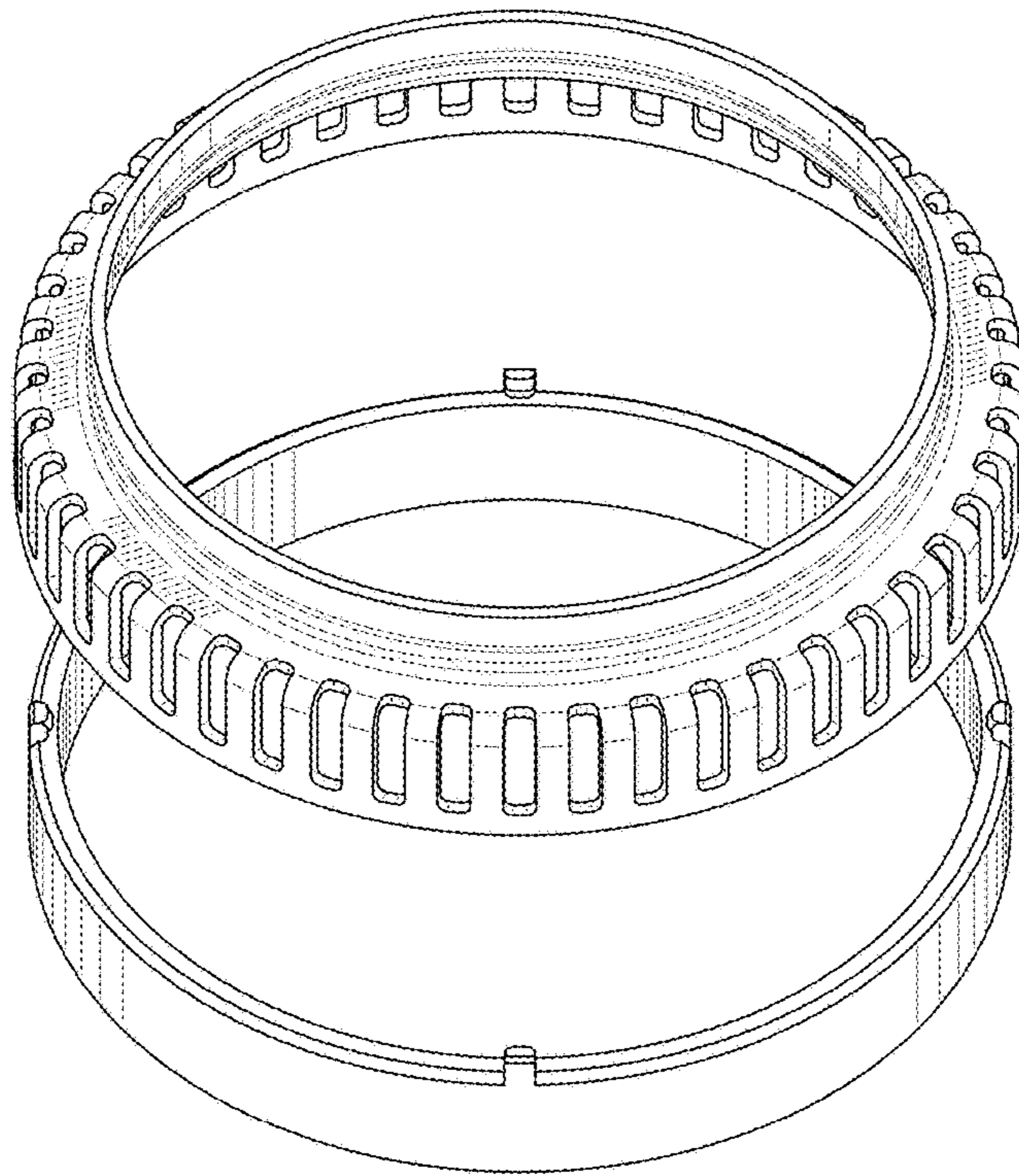


FIG. 15

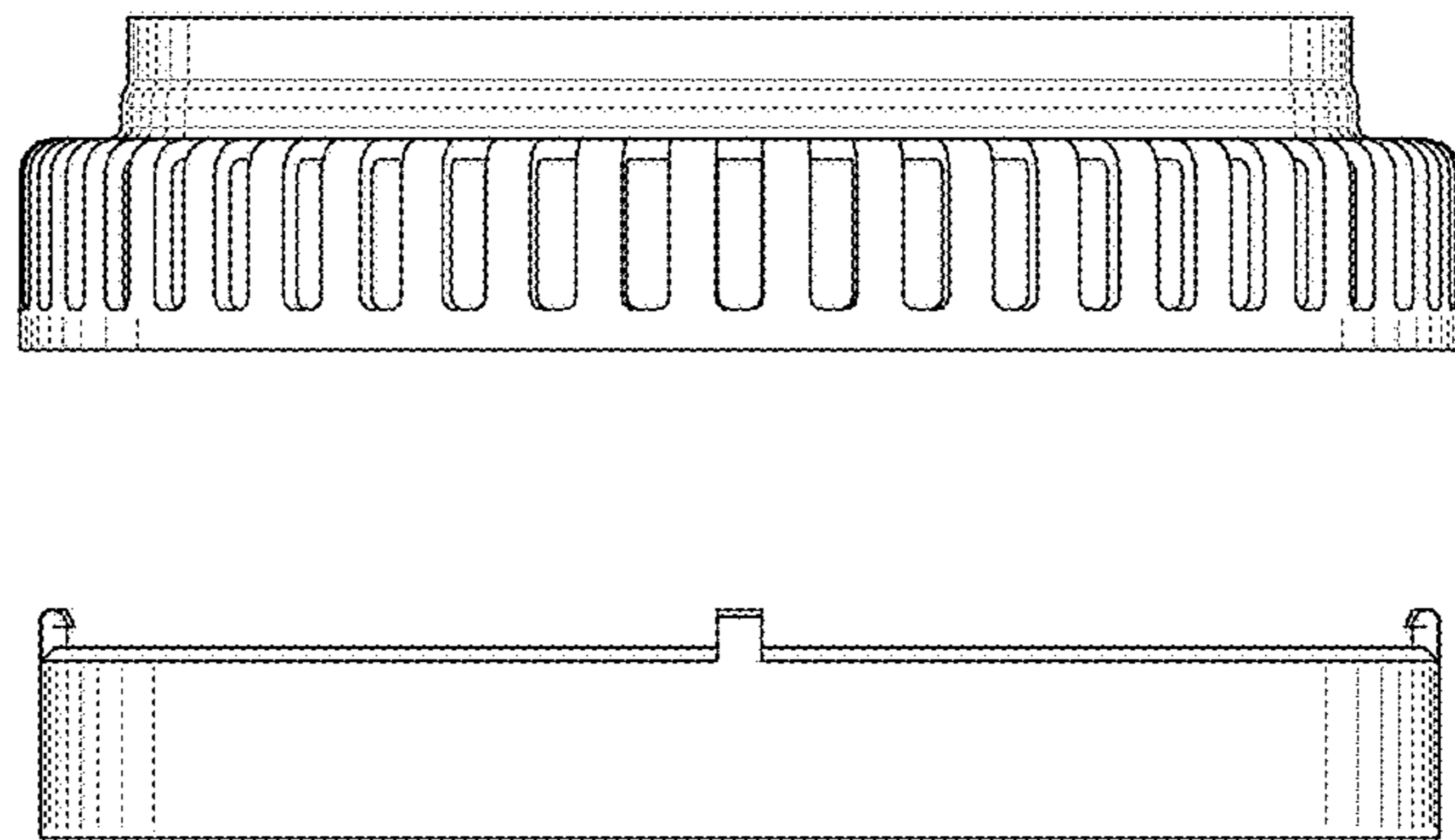


FIG. 16