



US00D818508S

(12) **United States Design Patent** (10) **Patent No.:** **US D818,508 S**
Ban (45) **Date of Patent:** **** May 22, 2018**

(54) **ROLLER BEARING**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **THK CO., LTD.**, Tokyo (JP)

CN 302222133 S 12/2012
CN 202674003 U 1/2013

(72) Inventor: **Toshikazu Ban**, Tokyo (JP)

(Continued)

(73) Assignee: **THK CO., LTD.**, Tokyo (JP)

OTHER PUBLICATIONS

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

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(Continued)

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Related U.S. Application Data

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Primary Examiner — Patricia A Palasik

(74) *Attorney, Agent, or Firm* — Westerman, Hattori, Daniels & Adrian, LLP

(30) **Foreign Application Priority Data**

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(57) **CLAIM**

The ornamental design for a roller bearing, as shown and described.

(51) **LOC (11) Cl.** **15-09**

(52) **U.S. Cl.**
USPC **D15/143**

DESCRIPTION

(58) **Field of Classification Search**
USPC D15/143, 199
CPC F16C 19/30; F16C 19/305; F16C 33/37;
F16C 33/51; F16C 33/49; F16C 33/50;
F16C 33/541; F16C 33/543; F16C
33/546;

FIG. 1 is a perspective view of a roller bearing showing my new design.

FIG. 2 is a front elevation view thereof. A rear elevation view, a left side elevation view and a right side elevation view are identical to the front elevation view.

FIG. 3 is a top plan view thereof.

FIG. 4 is a bottom plan view thereof.

FIG. 5 is a cross-sectional view taken along the line 5-5 in FIG. 2.

FIG. 6 is an enlarged cross-sectional view taken along the line 6-6 in FIG. 3.

FIG. 7 is an enlarged view of the portion 7 in FIG. 6; and, FIG. 8 is a referential view showing the rollers.

The portions of the roller bearing shown in broken lines are for the purpose of showing environmental structure only and form no part of the claimed design. The dash-dot-dash lines are boundary lines and form no part of the claimed design.

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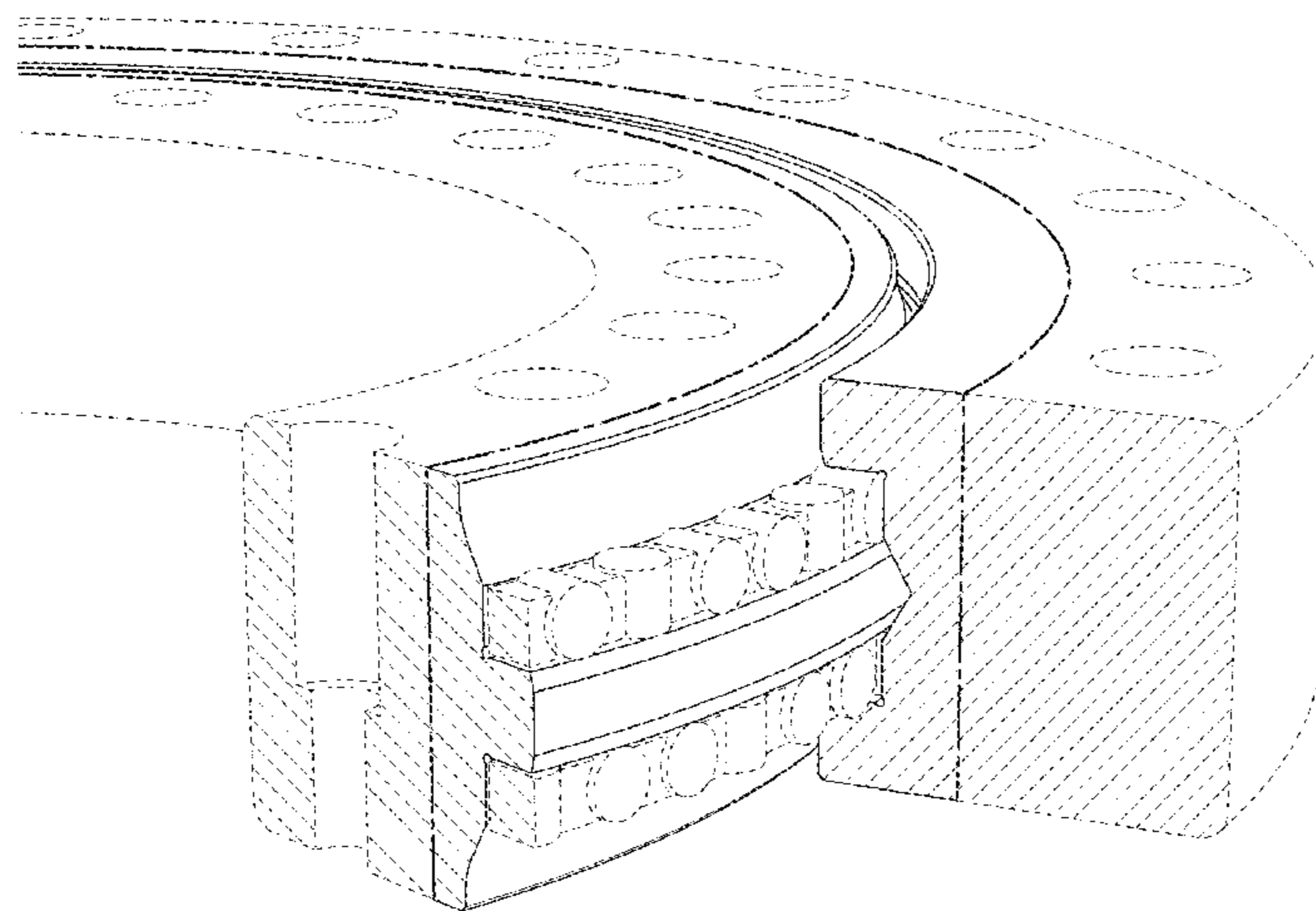
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,256,585 A 6/1966 Ripple
4,772,139 A 9/1988 Bretton

(Continued)

1 Claim, 8 Drawing Sheets



(58) **Field of Classification Search**

CPC F16C 33/565; F16C 33/4676;
 F16C 33/4682; F16C 33/6696
 See application file for complete search history.

FOREIGN PATENT DOCUMENTS

| | | |
|----|-------------|---------|
| CN | 302333628 S | 2/2013 |
| CN | 302341601 S | 3/2013 |
| TW | M467762 U | 12/2013 |
| TW | M469396 U | 1/2014 |

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|-----------------|---------|------------------|---------|
| 4,905,366 A | 3/1990 | Warner | |
| 5,255,985 A | 10/1993 | Alling | |
| 5,626,426 A | 5/1997 | Honda et al. | |
| 6,102,580 A | 8/2000 | Alling et al. | |
| D444,802 S | 7/2001 | Dyson et al. | |
| 6,513,987 B2 | 2/2003 | Takahashi et al. | |
| 6,883,968 B2 | 4/2005 | Fugel et al. | |
| 7,220,060 B2 | 5/2007 | Kono et al. | |
| 7,722,257 B2 | 5/2010 | Tabata et al. | |
| 8,303,191 B2 | 11/2012 | Albrecht et al. | |
| 8,480,307 B2 | 7/2013 | Hofmann et al. | |
| 8,596,873 B2 | 12/2013 | Hofmann et al. | |
| 8,814,437 B2 | 8/2014 | Braun | |
| D713,434 S | 9/2014 | Nishikawa | |
| 8,876,400 B2 | 11/2014 | Kanou et al. | |
| 8,894,294 B2 | 11/2014 | Durney et al. | |
| 8,985,860 B2 | 3/2015 | Honjo | |
| 9,033,585 B2 | 5/2015 | Hewitt et al. | |
| 9,039,288 B2 | 5/2015 | Takeuchi et al. | |
| D772,964 S * | 11/2016 | Ban | D15/143 |
| 2010/0303397 A1 | 12/2010 | Draser et al. | |
| 2010/0322549 A1 | 12/2010 | Brown et al. | |

OTHER PUBLICATIONS

Taiwanese Office Action dated Feb. 24, 2015, issued in corresponding TW Patent Application No. 103304200D01 with English translation (5 pages).

Taiwanese Office Action dated Feb. 24, 2015, issued in corresponding TW Patent Application No. 103304200D02 with English translation (5 pages).

Taiwanese Office Action dated Feb. 17, 2015, issued in corresponding TW Patent Application No. 103304200D03 with English translation (5 pages).

English translation of Office Action dated Jun. 20, 2017, issued in counterpart Taiwanese Application No. 103304200D01. (3 pages).

Office Action dated Sep. 30, 2017, issued in counterpart Taiwanese Application No. 103304200D01, with English translation. (7 pages).

Office Action dated Jun. 20, 2017, issued in counterpart Taiwanese Application No. 103304200D01 (3 pages).

* cited by examiner

FIG. 1

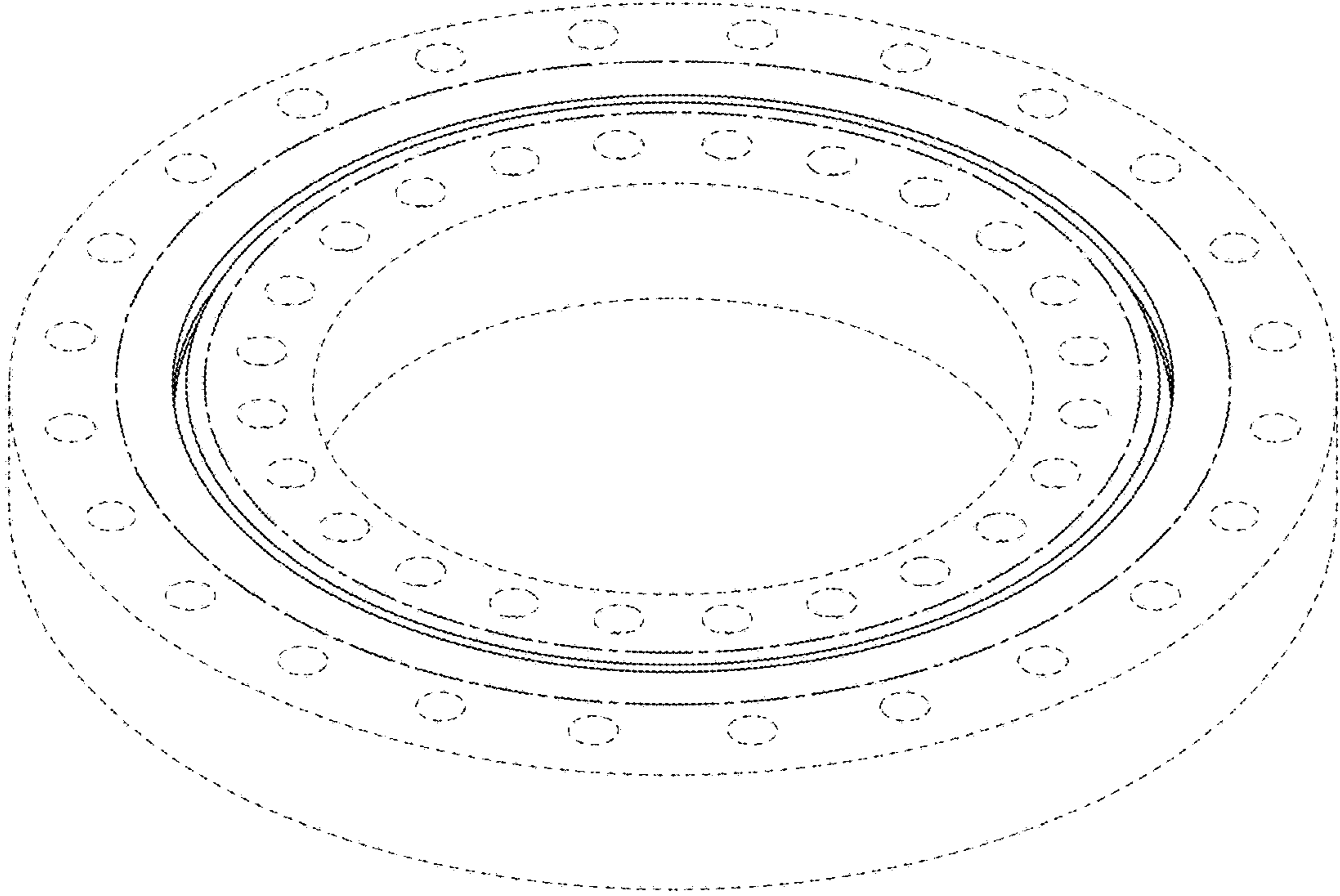


FIG. 2

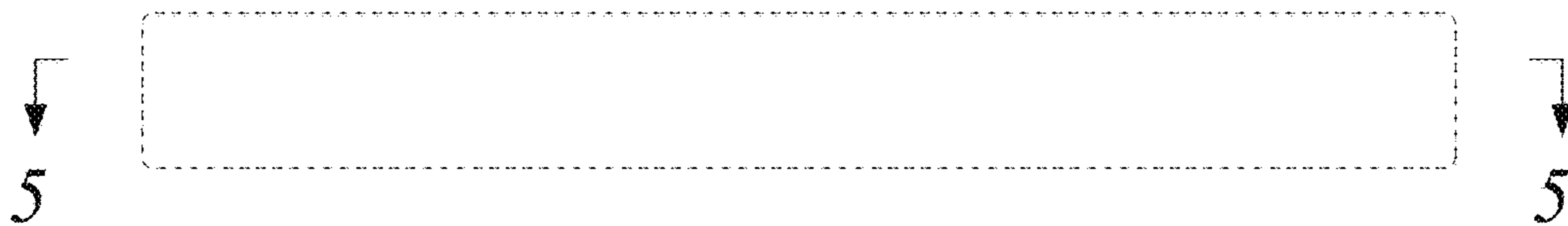


FIG. 3

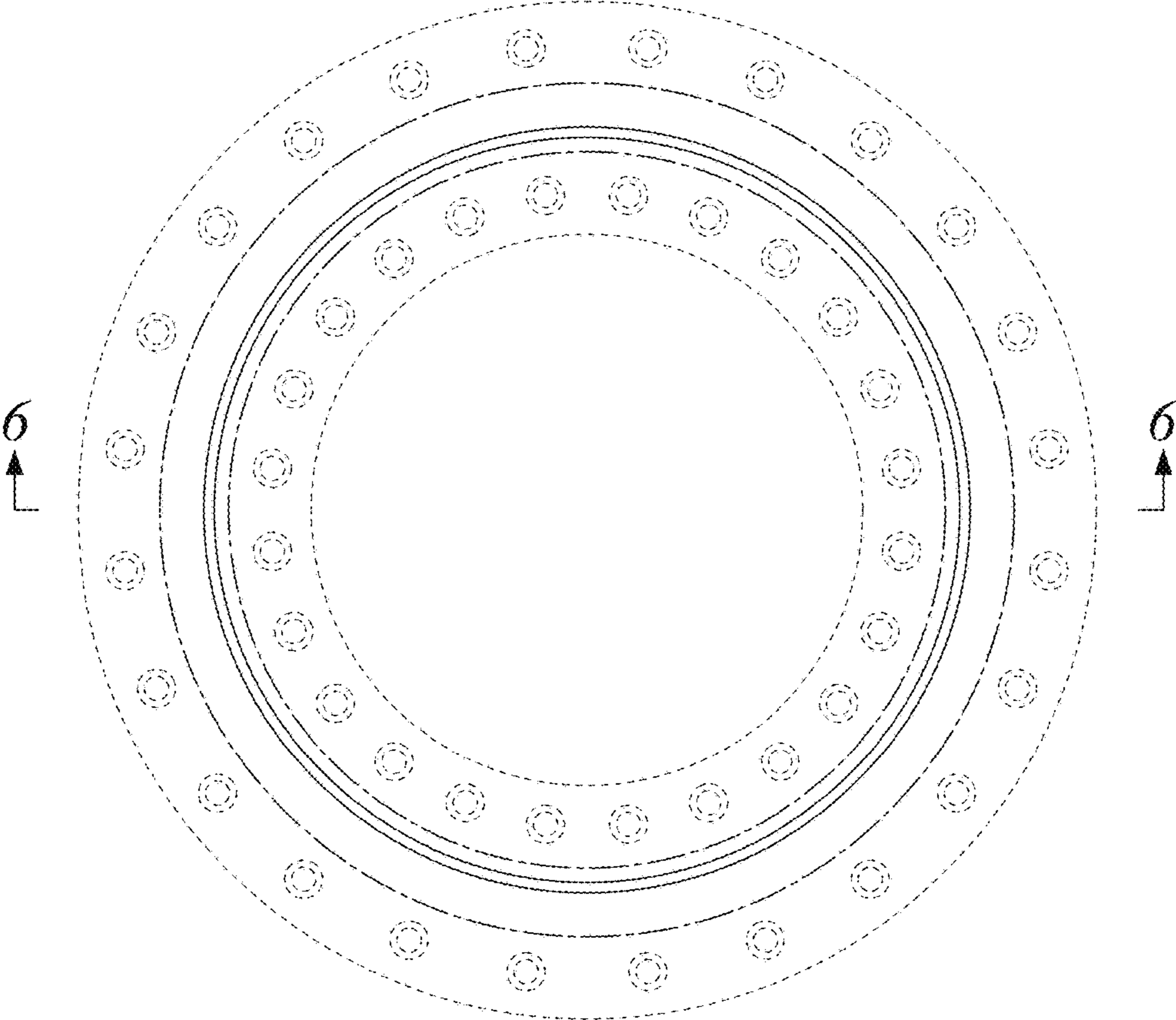


FIG. 4

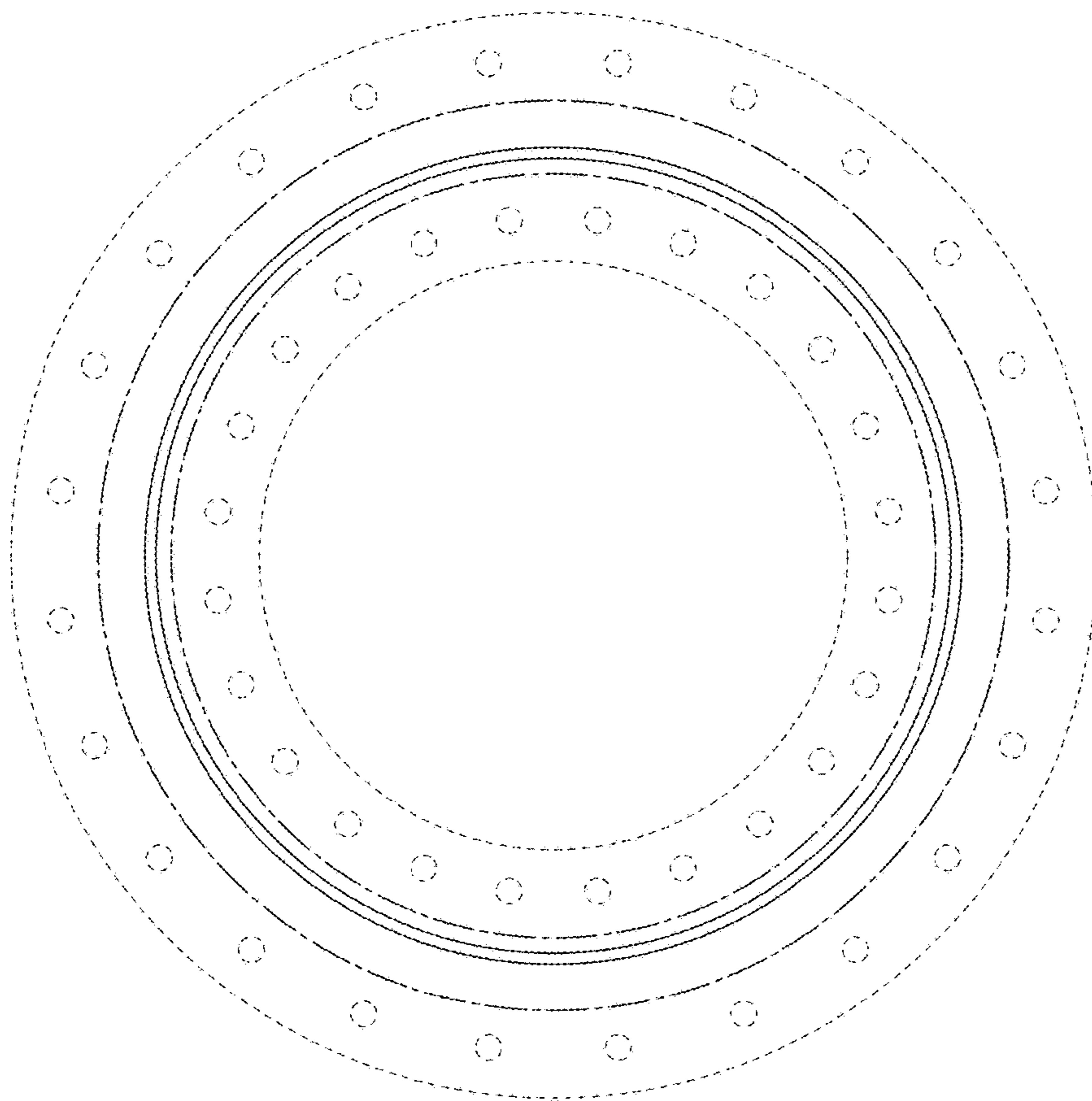


FIG. 5

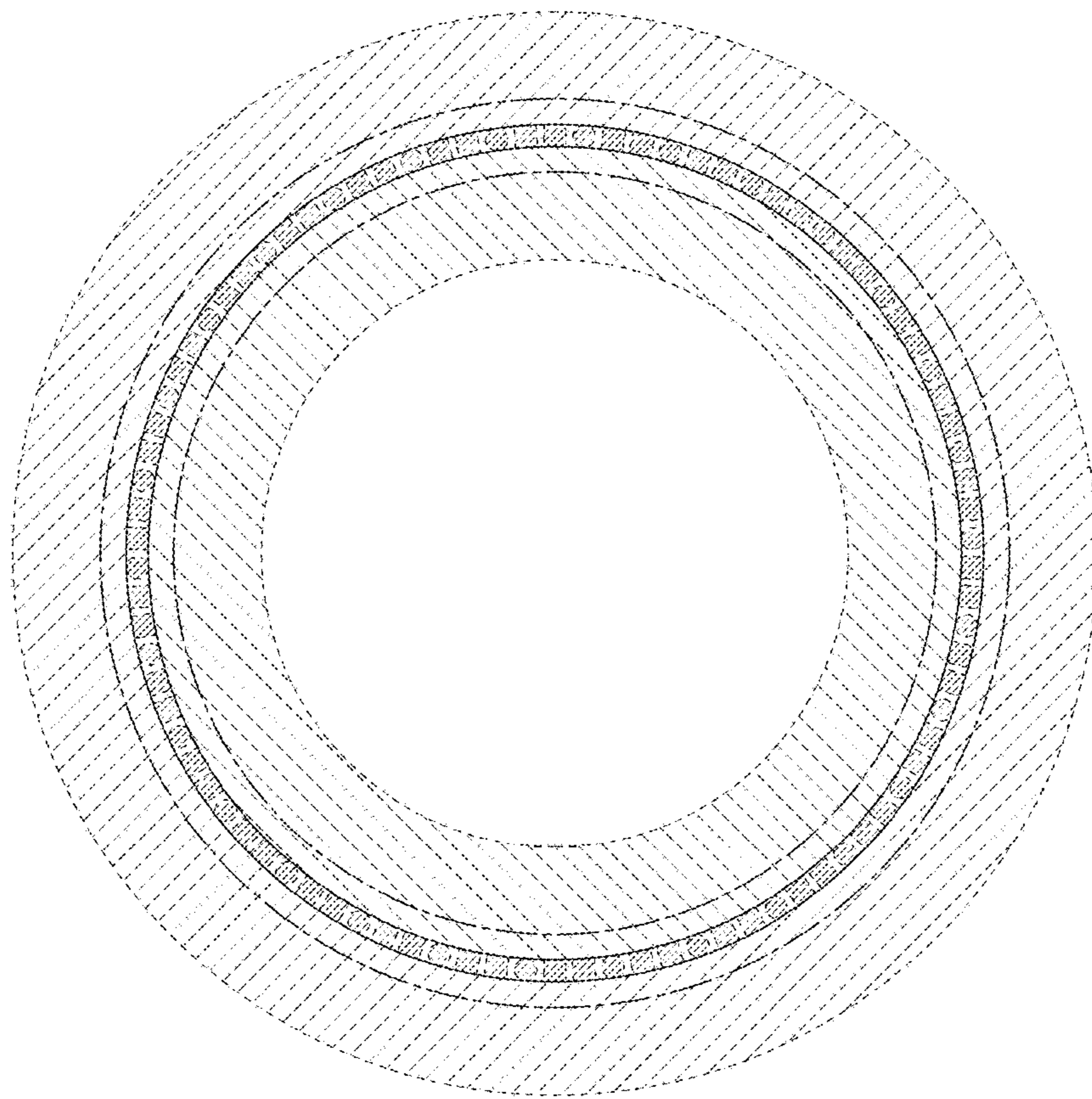


FIG. 6



FIG. 7

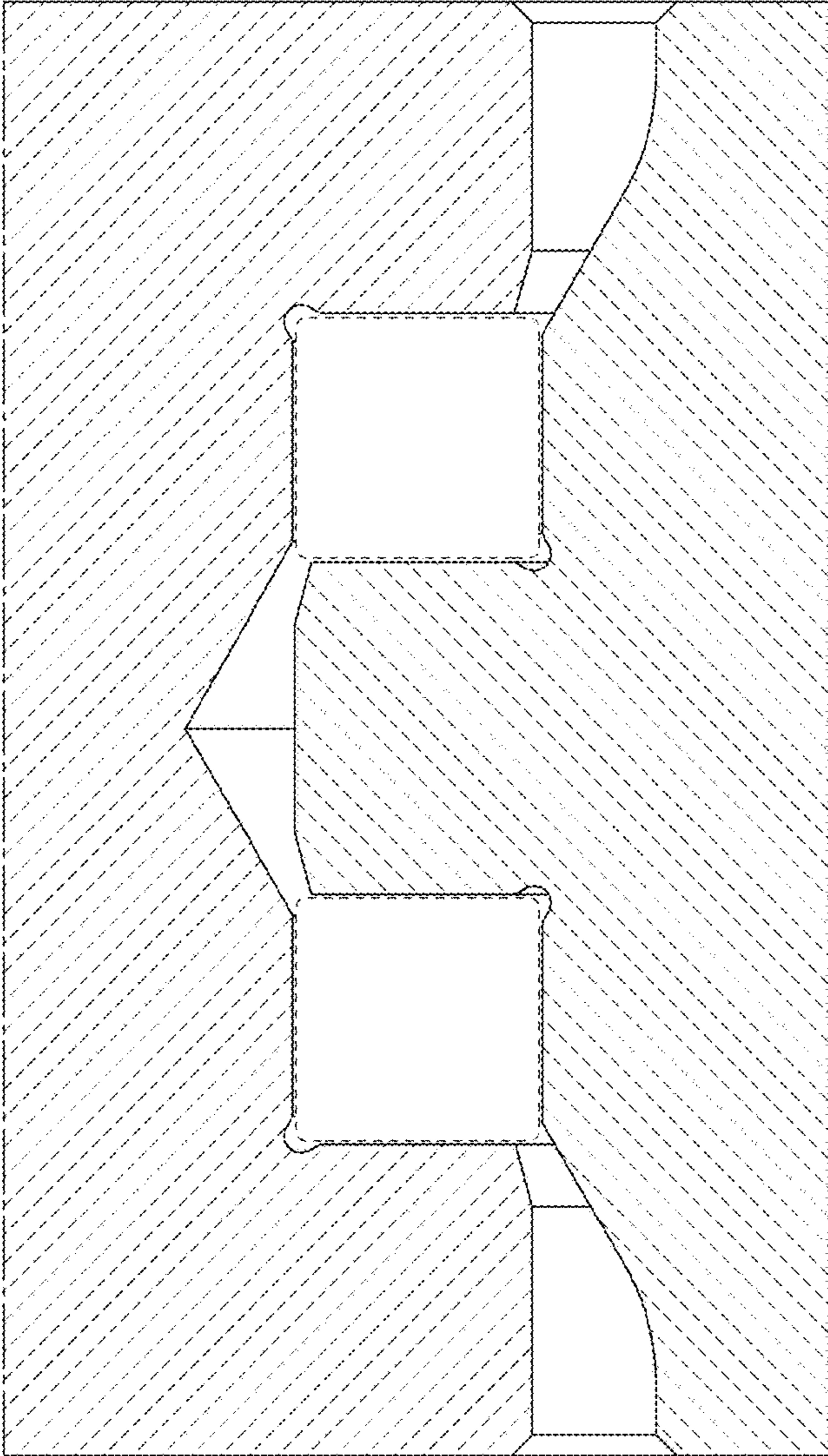


FIG. 8

