



US00D919670S

(12) **United States Design Patent** (10) **Patent No.:** **US D919,670 S**  
**Tsuji et al.** (45) **Date of Patent:** **\*\* May 18, 2021**

(54) **SEAL MEMBER FOR SEMICONDUCTOR PRODUCTION APPARATUS**

(71) Applicant: **Valqua, Ltd.**, Tokyo (JP)  
(72) Inventors: **Kazuaki Tsuji**, Tokyo (JP); **Takafumi Sakurai**, Santa Clara, CA (US)  
(73) Assignee: **Valqua, Ltd.**, Tokyo (JP)  
(\*\*) Term: **15 Years**

(21) Appl. No.: **29/743,422**  
(22) Filed: **Jul. 21, 2020**

**Related U.S. Application Data**

(62) Division of application No. 35/507,137, filed on Jan. 21, 2019 (U.S. filing date under 35 U.S.C. 384), and having an international filing date of Jan. 21, 2019, now Pat. No. Des. 905,761.

**Foreign Application Priority Data**

(30) Jul. 24, 2018 (JP) ..... 2018-016130  
Jul. 24, 2018 (JP) ..... 2018-016131  
Jul. 24, 2018 (JP) ..... 2018-016132  
(51) **LOC (13) Cl.** ..... **15-03**  
(52) **U.S. Cl.**  
USPC ..... **D15/7**  
(58) **Field of Classification Search**  
USPC ..... D15/7, 9, 11, 17, 21, 28, 123, 199;  
D23/269, 386, 259; D8/349;  
277/602-626; 285/98, 109, 336, 910, 918  
CPC ..... F16K 51/02; F16J 15/025; F16J 15/0887;  
F16J 15/104; F16J 15/128  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,805,442 A 5/1931 Wallfisch  
4,226,431 A 10/1980 Jelinek et al.  
4,560,174 A 12/1985 Bisi  
4,834,398 A 5/1989 Guzowski et al.  
4,946,410 A 8/1990 Haman  
D323,024 S 1/1992 Petersson et al.  
D442,609 S 5/2001 Quantz et al.

(Continued)

FOREIGN PATENT DOCUMENTS

TW D127505 S 2/2009  
TW D149670 S 10/2012

(Continued)

*Primary Examiner* — Richard E Chilcot

(74) *Attorney, Agent, or Firm* — The Webb Law Firm

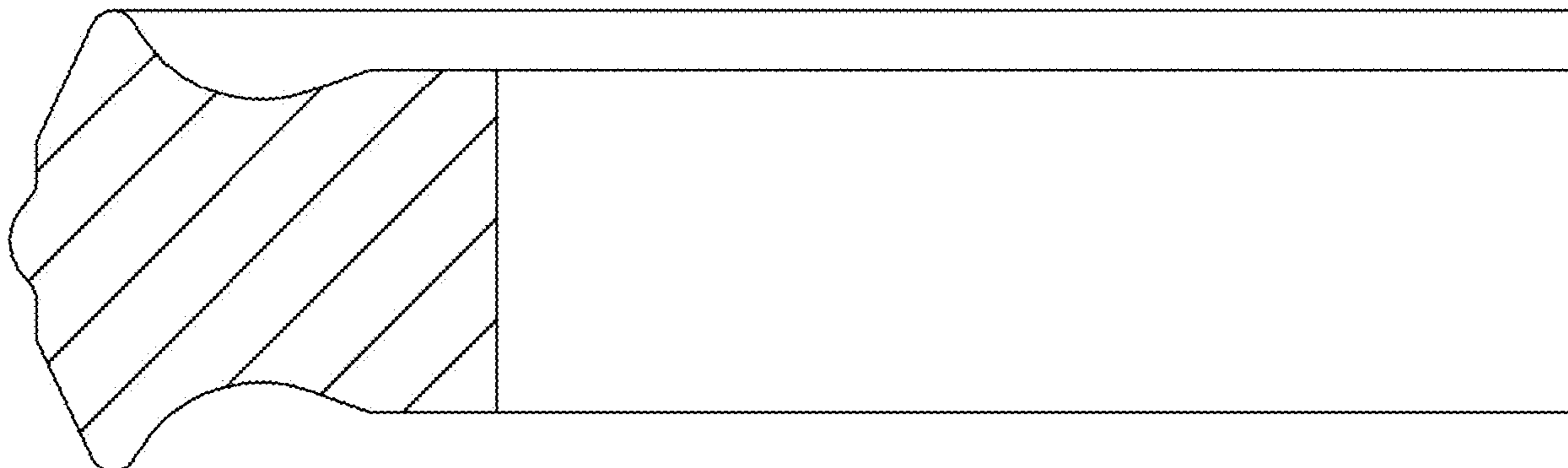
(57) **CLAIM**

The ornamental design for a seal member for semiconductor production apparatus, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a seal member for semiconductor production apparatus, showing our new design; FIG. 2 is a front elevation view thereof; FIG. 3 is a rear elevation view thereof; FIG. 4 is a left side elevation view thereof; FIG. 5 is a right side elevation view thereof; FIG. 6 is a top view thereof; FIG. 7 is a bottom view thereof; FIG. 8 is a cross-sectional view thereof; FIG. 9 is an enlarged cross-sectional view of a portion thereof; and, FIG. 10 is an enlarged cross-sectional view of a portion thereof in a condition of use. The broken lines shown in FIG. 10 are for the purposes of illustrating environmental structure and form no part of the claimed design.

**1 Claim, 10 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D572,348 S 7/2008 Arosio  
 D582,436 S 12/2008 Shimomura et al.  
 D582,437 S 12/2008 Shimomura et al.  
 D582,438 S 12/2008 Shimomura et al.  
 D582,439 S 12/2008 Shimomura et al.  
 D582,440 S 12/2008 Shimomura et al.  
 D582,441 S 12/2008 Shimomura et al.  
 D614,271 S 4/2010 Weston  
 D616,966 S 6/2010 Angell  
 D631,066 S 1/2011 Itadani et al.  
 D633,991 S 3/2011 Nakagawa  
 D655,401 S 3/2012 Muramatsu  
 D655,797 S 3/2012 Muramatsu  
 D690,336 S 9/2013 Gjertsen  
 8,608,173 B2 12/2013 Ryan  
 D722,621 S 2/2015 Gray et al.  
 D802,723 S 11/2017 Miyamoto  
 D822,181 S 7/2018 Nakagawa  
 D837,685 S 1/2019 Miki

D848,585 S 5/2019 Yamamoto  
 D848,586 S 5/2019 Yamamoto  
 D849,211 S 5/2019 Yamamoto  
 D864,361 S 10/2019 Kim et al.  
 D871,561 S 12/2019 Kang et al.  
 D885,444 S 5/2020 Tsuji  
 D905,761 S \* 12/2020 Tsuji ..... D15/7  
 2005/0001195 A1 1/2005 Blease et al.  
 2009/0026717 A1 1/2009 Tsuji  
 2011/0018211 A1 1/2011 Tsuji  
 2011/0169229 A1 7/2011 Hamade et al.  
 2015/0279706 A1 10/2015 Nakagawa

FOREIGN PATENT DOCUMENTS

TW D163769 S 10/2014  
 TW D164826 S 12/2014  
 TW D164827 S 12/2014  
 TW D166713 S 3/2015  
 TW D180129 S 12/2016  
 TW D183422 S 6/2017

\* cited by examiner

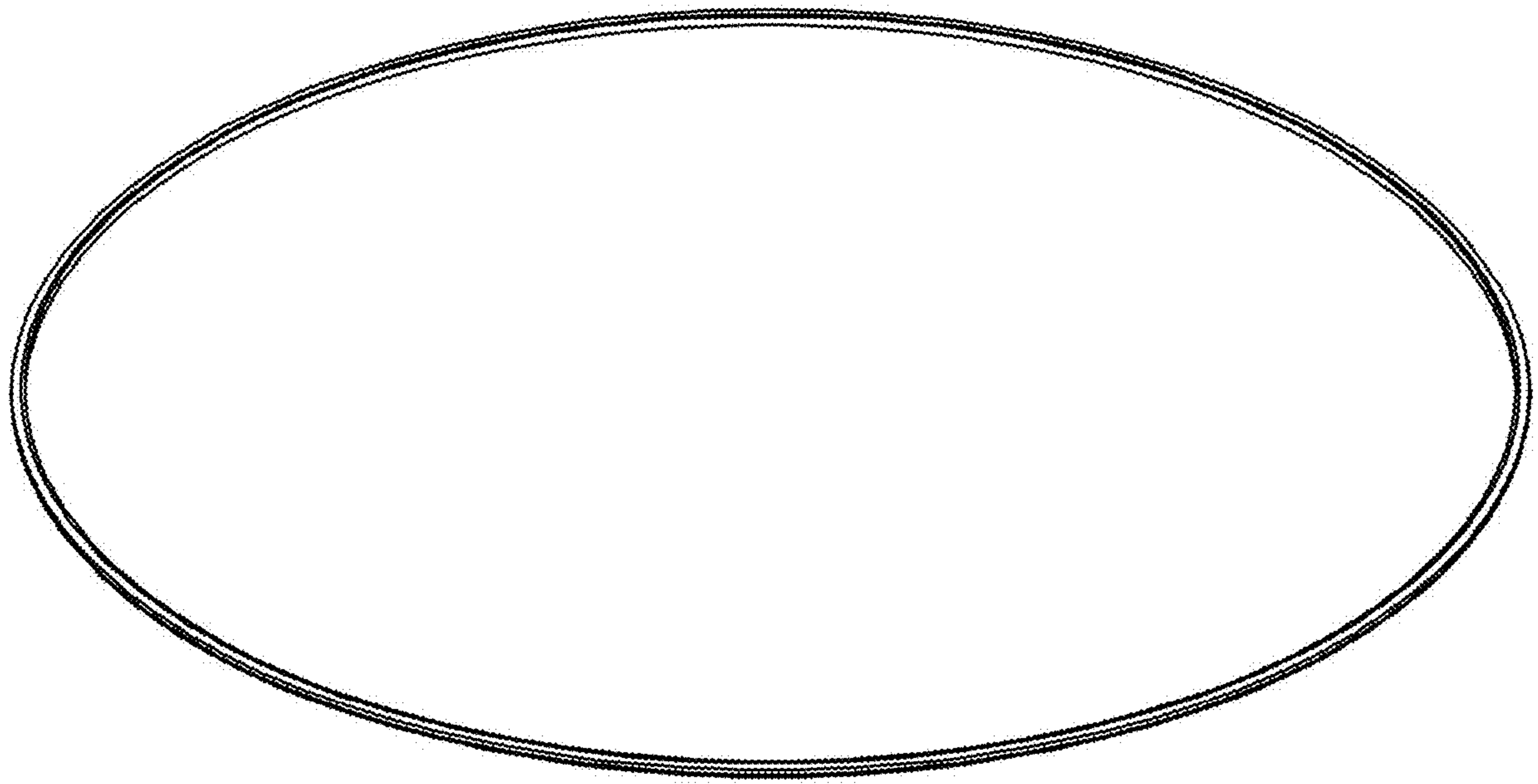
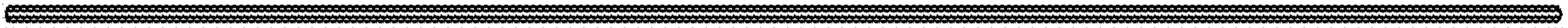


FIG. 1



**FIG. 2**



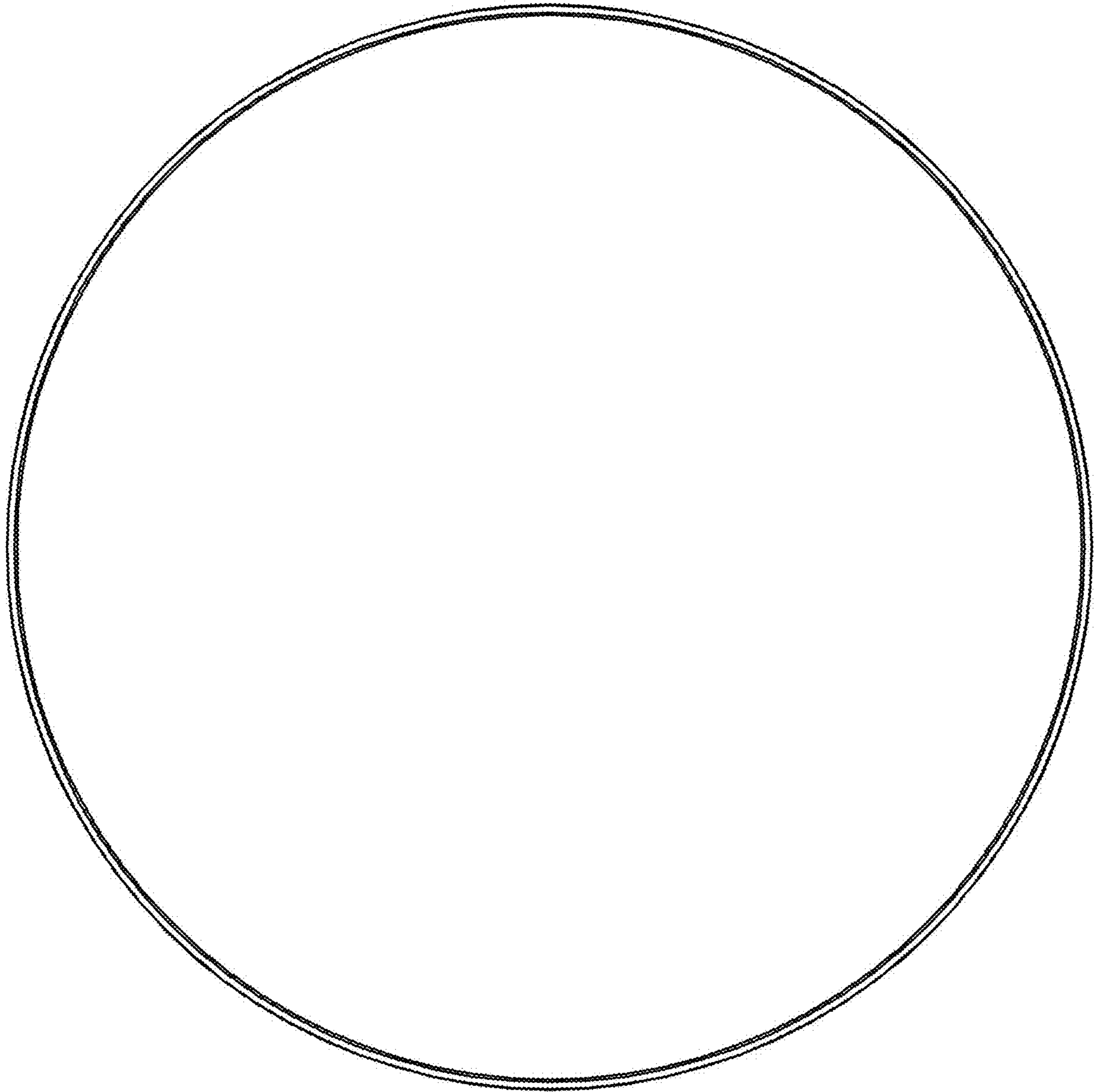
**FIG. 3**



**FIG. 4**

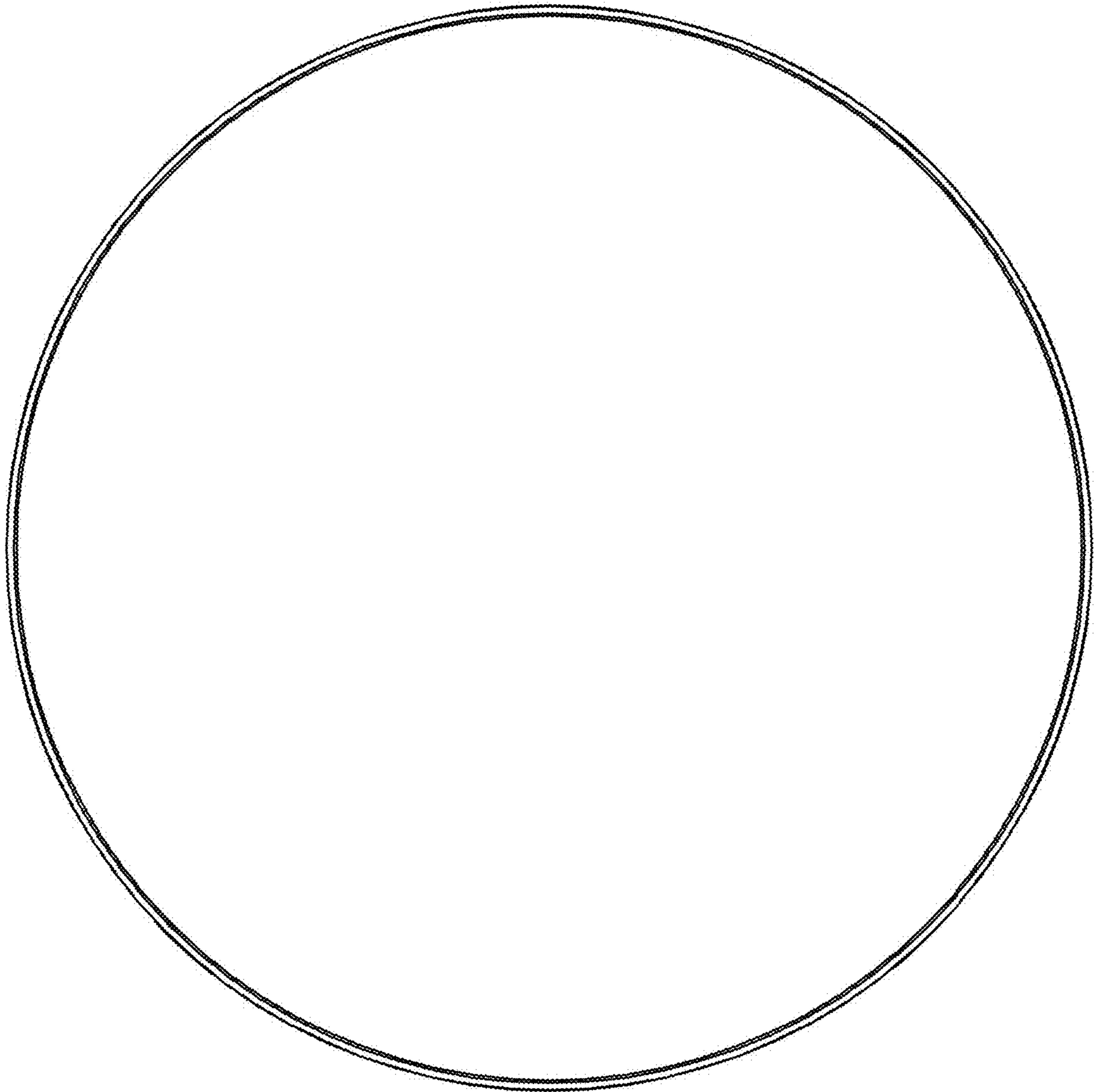


**FIG. 5**

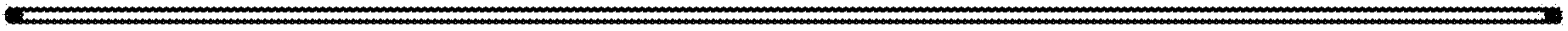


**FIG. 6**





**FIG. 7**



**FIG. 8**

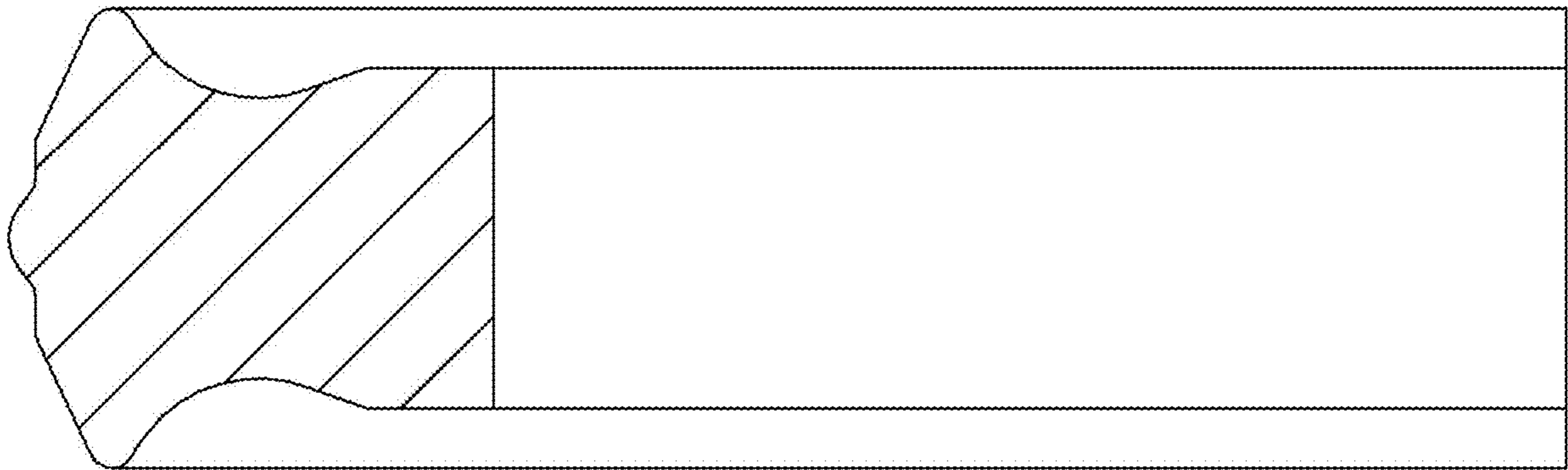


FIG. 9

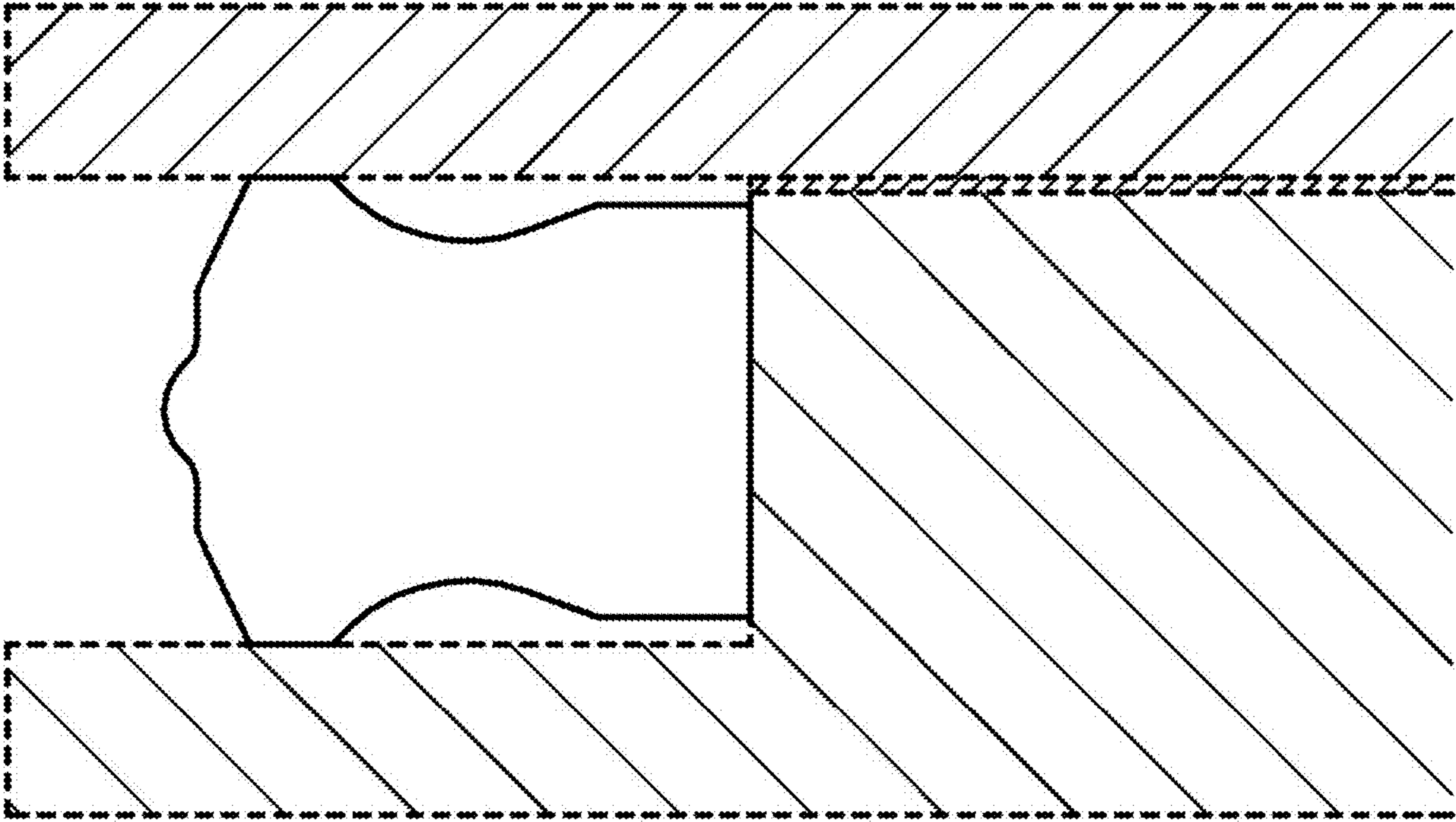


FIG. 10