



US00D925481S

(12) **United States Design Patent** (10) **Patent No.:** **US D925,481 S**
Kagaya et al. (45) **Date of Patent:** **** Jul. 20, 2021**

(54) **INLET LINER FOR SUBSTRATE PROCESSING APPARATUS** 6,170,429 B1 * 1/2001 Schoepp H01J 37/32495
 118/723 R
 6,234,219 B1 * 5/2001 Donohoe H01J 37/321
 118/715
 (71) Applicant: **KOKUSAI ELECTRIC CORPORATION**, Tokyo (JP) D491,963 S * 6/2004 Doba D15/144
 6,911,093 B2 * 6/2005 Stacey C23C 16/4401
 118/715
 (72) Inventors: **Toru Kagaya**, Toyama (JP); **Shinya Ebata**, Toyama (JP) 7,011,039 B1 * 3/2006 Mohn H01J 37/321
 118/723 R

(Continued)

(73) Assignee: **KOKUSAI ELECTRIC CORPORATION**, Tokyo (JP)

FOREIGN PATENT DOCUMENTS

(**) Term: **15 Years** JP 1412476 S 4/2014
 JP 1509912 S 10/2014
 JP 1598442 S 2/2018

(21) Appl. No.: **29/693,715**

(22) Filed: **Jun. 4, 2019**

(30) **Foreign Application Priority Data**

Dec. 6, 2018 (JP) 2018-026606

(51) **LOC (13) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/182**

(58) **Field of Classification Search**
 USPC D13/182; 118/50, 715, 728, 500, 501,
 118/504, 428, 505, 506, 723 R, 729, 719,
 118/733, 309; 204/298.01, 298.11;
 156/345.51, 916; D15/138
 CPC . C23C 16/00; C23C 16/4401; C23C 16/0245;
 C23C 14/564; C23F 1/02; C23F 1/04;
 C23F 1/38; B65B 1/04; B65B 3/04
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,641,375 A * 6/1997 Nitescu H01J 37/32495
 156/345.1
 D404,369 S * 1/1999 Kawachi D13/182
 6,099,651 A * 8/2000 Sajoto C23C 16/4481
 118/715

Primary Examiner — Elizabeth J Oswecki
 (74) *Attorney, Agent, or Firm* — Fitch, Even, Tabin & Flannery, LLP

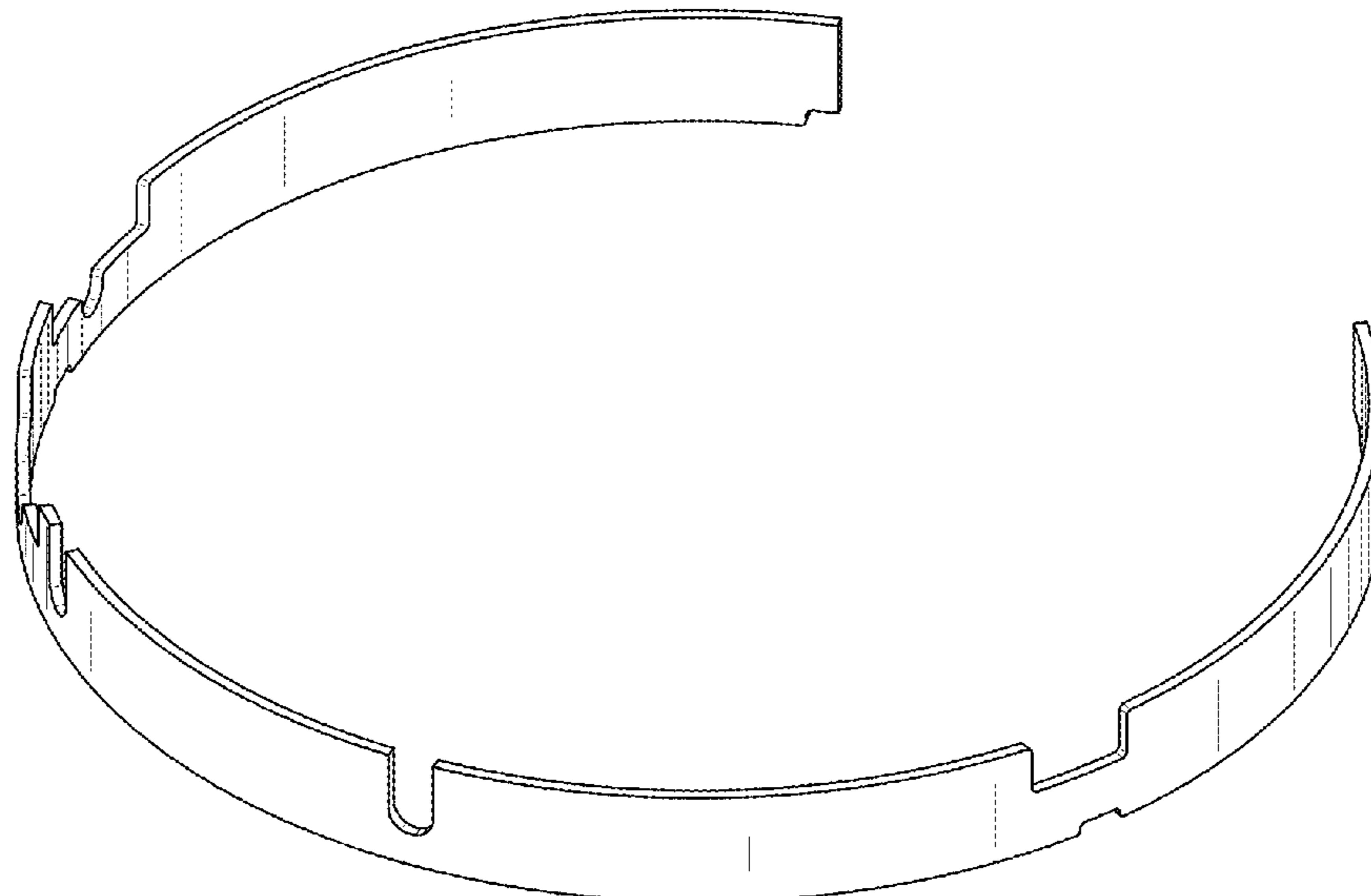
(57) **CLAIM**

The ornamental design for an inlet liner for substrate processing apparatus, as shown and described.

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of an inlet liner for substrate processing apparatus showing our new design;
 FIG. 2 is a front elevational view thereof;
 FIG. 3 is a rear elevational view thereof;
 FIG. 4 is a right side elevational view thereof;
 FIG. 5 is a left side elevational view thereof;
 FIG. 6 is a top plan view thereof;
 FIG. 7 is a bottom plan view thereof; and,
 FIG. 8 is a cross-sectional view take along line 8-8 in FIG. 6.
 The broken line arrow shows the association of the two sides of the cross sectional view in FIG. 8 and forms no part of the claimed design.

1 Claim, 3 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,234,412 B2 * 6/2007 Carpenter C23C 16/4401
 118/723 R
 D557,425 S * 12/2007 Nakamura D24/232
 D559,993 S * 1/2008 Nagakubo D24/232
 D559,994 S * 1/2008 Nagakubo D24/232
 7,987,814 B2 * 8/2011 Carducci H01J 37/32495
 118/723 R
 D655,258 S * 3/2012 Honma D13/182
 D655,262 S * 3/2012 Honma D13/182
 D658,691 S * 5/2012 Suzuki D15/138
 D658,692 S * 5/2012 Suzuki D15/138
 D658,693 S * 5/2012 Suzuki D15/138
 8,298,046 B2 * 10/2012 Frank, Jr. B24B 37/32
 451/286
 8,617,672 B2 * 12/2013 Bhatnagar C04B 41/0036
 428/34.4
 D711,331 S * 8/2014 Lau D13/182
 D716,239 S * 10/2014 Lau D13/182

D716,240 S * 10/2014 Lau D13/182
 D717,746 S * 11/2014 Lau D13/182
 D802,545 S * 11/2017 Tauchi D13/182
 D802,790 S * 11/2017 Tauchi D24/232
 D804,436 S * 12/2017 Tauchi D13/182
 D812,578 S * 3/2018 Uemura D13/182
 D837,754 S * 1/2019 Shono D13/182
 D838,681 S * 1/2019 Shono D13/182
 D840,365 S * 2/2019 Ichino D13/182
 D842,259 S * 3/2019 Shono D13/182
 2002/0069970 A1 * 6/2002 Noorbakhsh C23C 16/4411
 156/345.37
 2004/0069223 A1 * 4/2004 Tzeng H01L 21/67069
 118/715
 2004/0077167 A1 * 4/2004 Willis B24B 37/32
 438/689
 2005/0150452 A1 * 7/2005 Sen C23C 16/4412
 118/715
 2007/0113783 A1 * 5/2007 Lee C23C 16/4585
 118/715
 2017/0088948 A1 3/2017 Takagi et al.

* cited by examiner

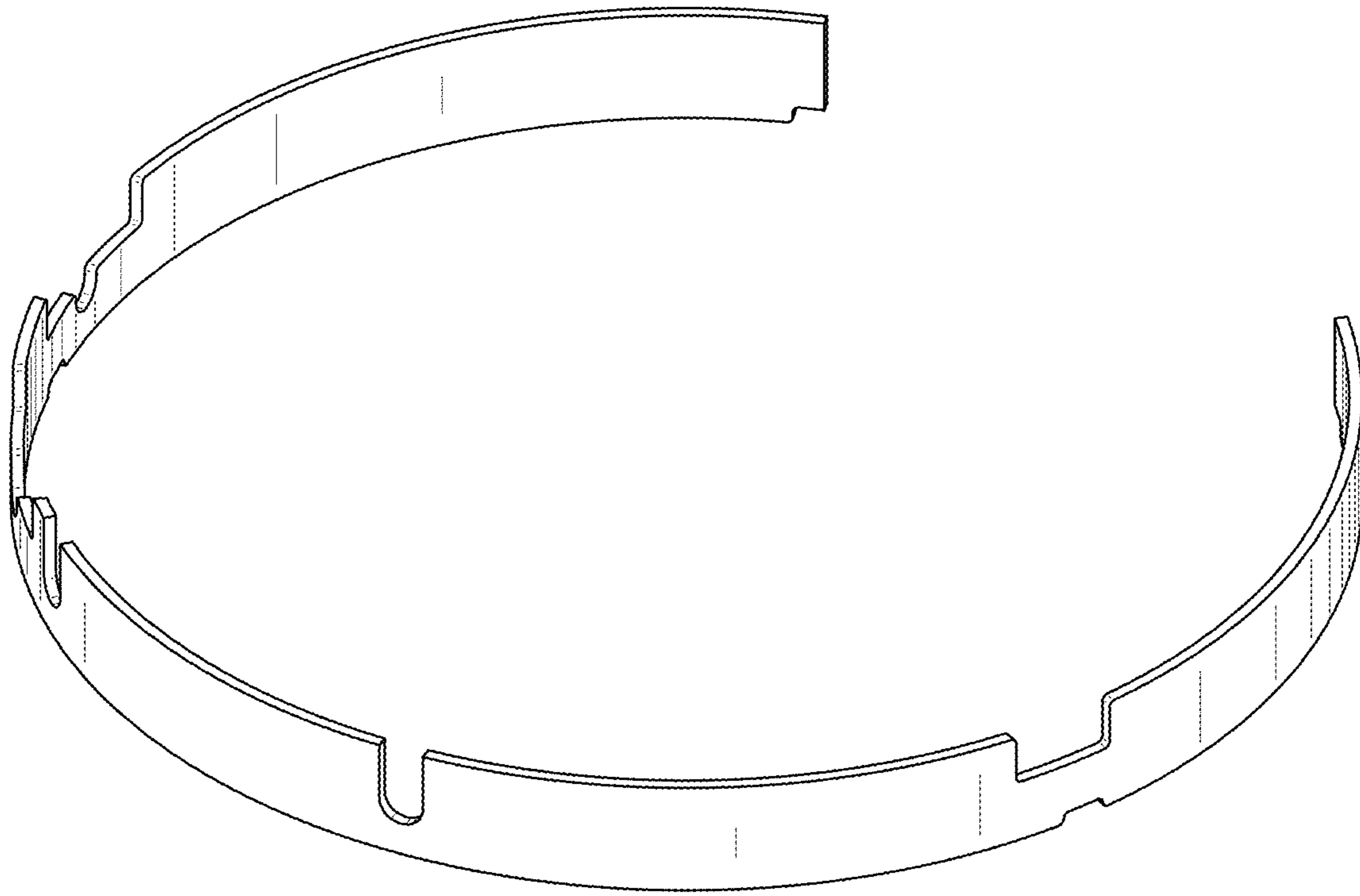


FIG. 1



FIG. 2

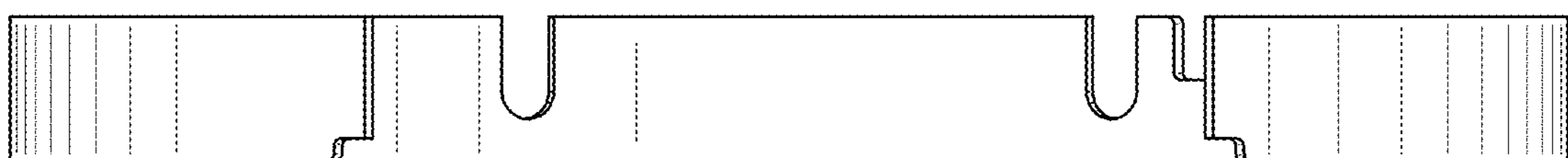


FIG. 3

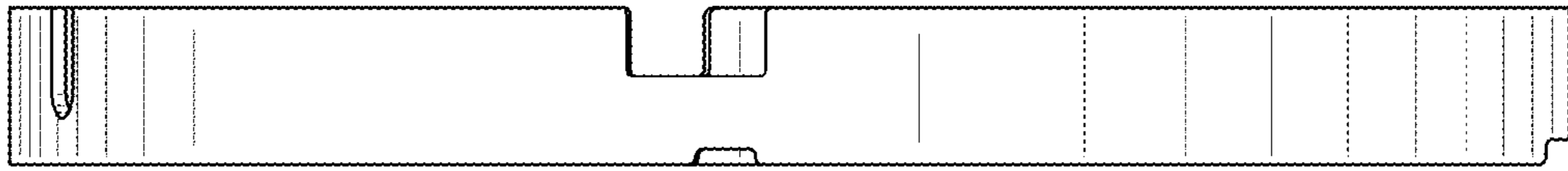


FIG. 4

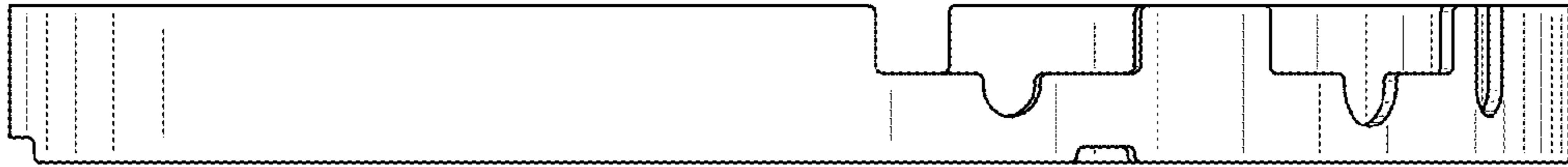


FIG. 5

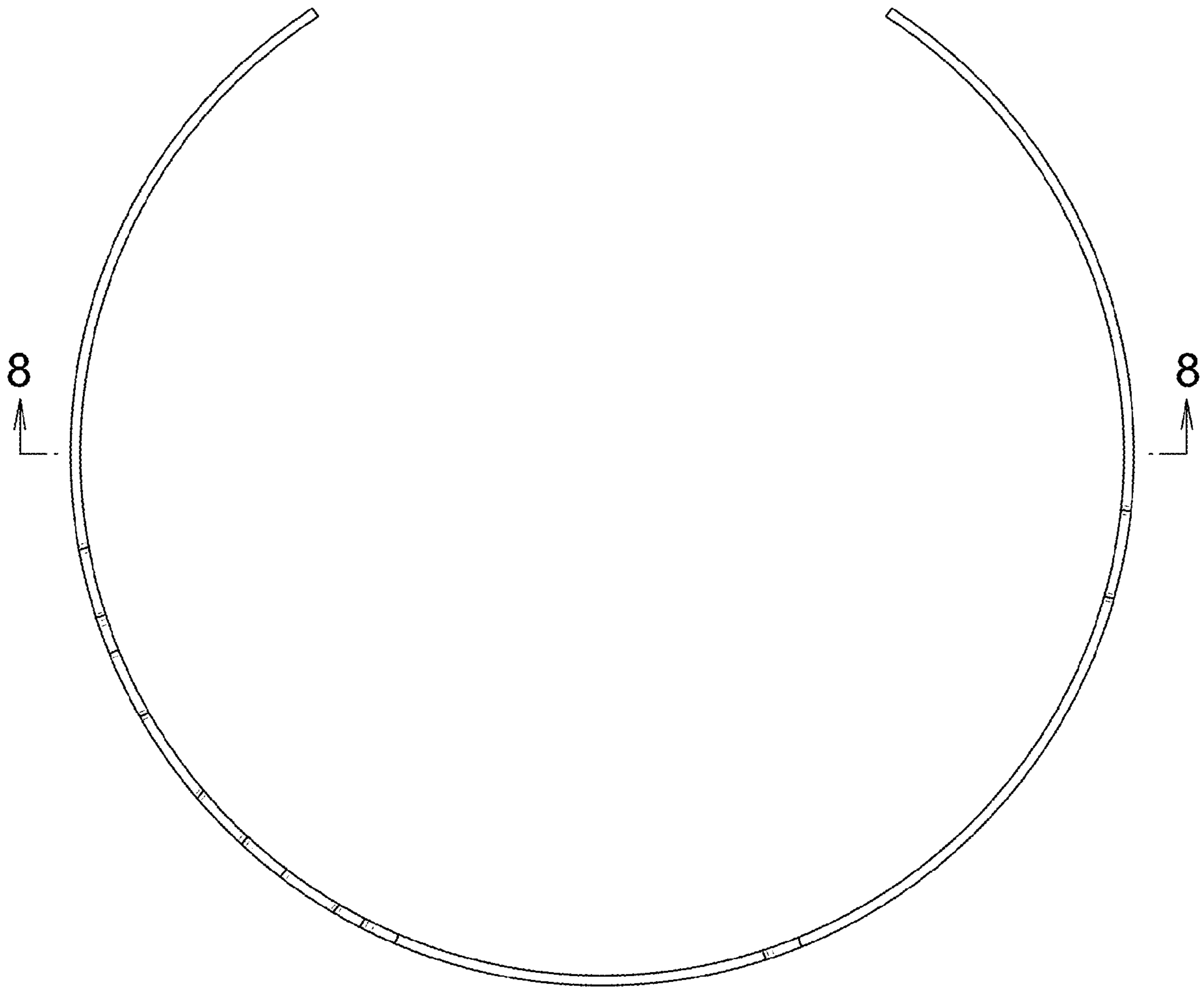


FIG. 6

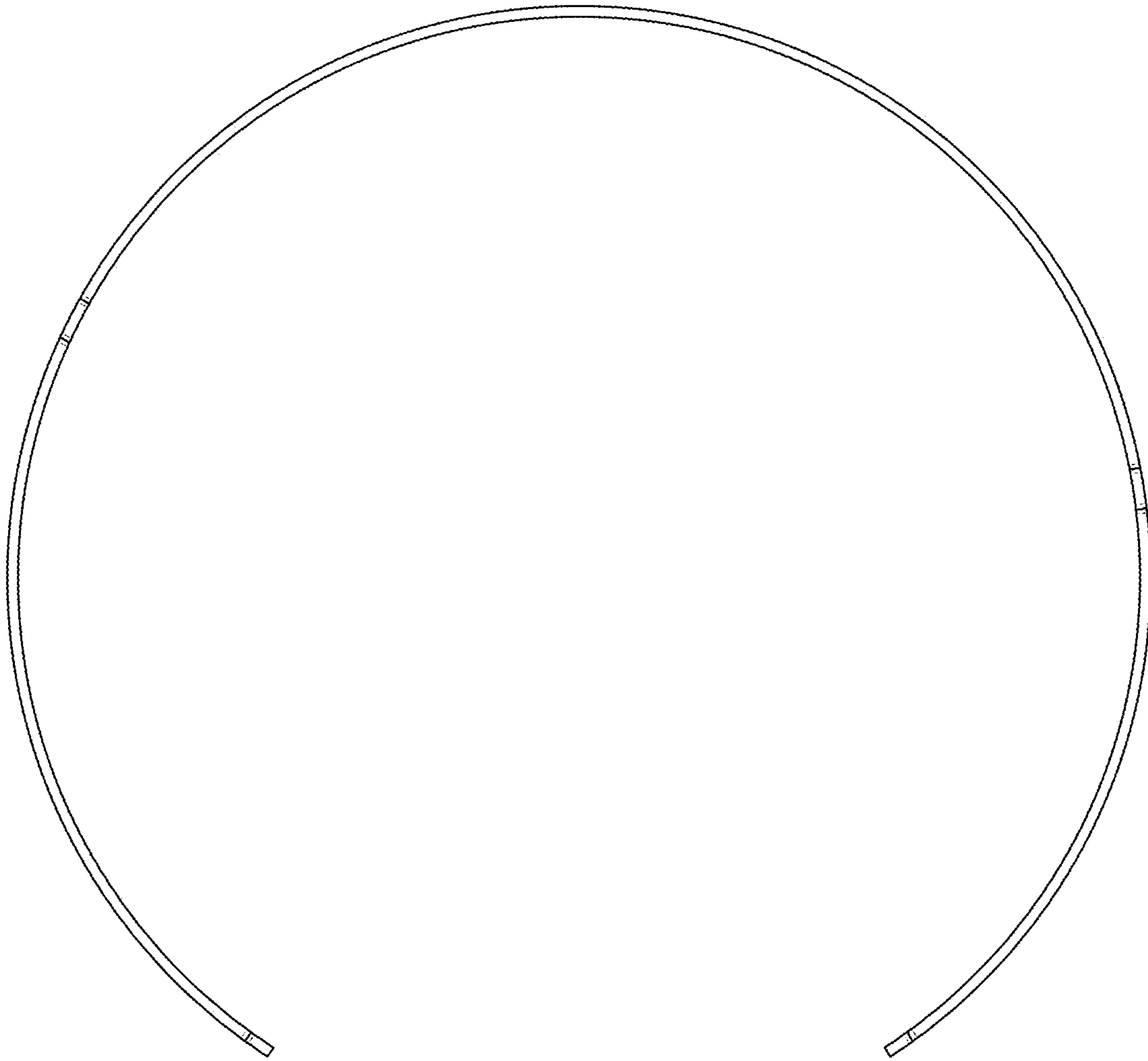


FIG. 7

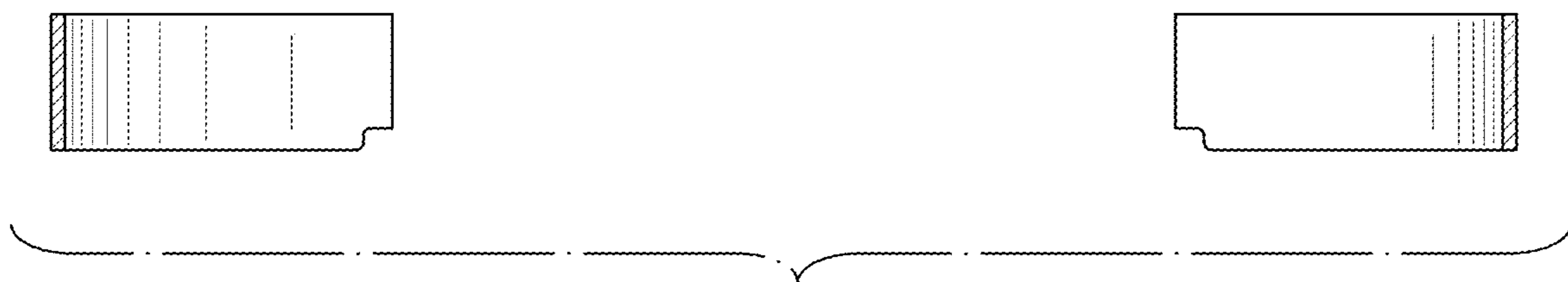


FIG. 8