



US00D983941S

(12) **United States Design Patent**
Tsuji

(10) **Patent No.:** **US D983,941 S**

(45) **Date of Patent:** **** Apr. 18, 2023**

(54) **SEALING RING**

(71) Applicant: **VALQUA, LTD.**, Tokyo (JP)

(72) Inventor: **Kazuaki Tsuji**, Santa Clara, CA (US)

(73) Assignee: **VALQUA, LTD.**, Tokyo (JP)

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

(21) Appl. No.: **29/730,991**

(22) Filed: **Apr. 10, 2020**

(51) **LOC (14) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/269**

(58) **Field of Classification Search**
USPC D23/259, 262, 269, 322; D15/138, 145,
D15/148; D13/118; 277/325-355;
D34/29
CPC F16L 21/007; F16L 55/07; F16L 17/025;
F16J 15/025
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,550,983	A *	8/1925	Pratt	.....	F16G 5/08 428/167
2,809,853	A *	10/1957	Nathan	.....	F16L 17/035 277/615
4,343,480	A *	8/1982	Vassallo	.....	F16L 17/025 285/379
4,487,421	A *	12/1984	Housas	.....	F16L 17/035 285/379
D598,988	S *	8/2009	Jaccoby	.....	D23/269
D705,280	S *	5/2014	Kimura	.....	D15/138
9,447,881	B2 *	9/2016	Tsuji	.....	F16J 15/064
9,587,744	B2 *	3/2017	Yoshida	.....	F16J 15/025
D828,524	S *	9/2018	Sugatani	.....	D23/269

(Continued)

FOREIGN PATENT DOCUMENTS

JP D1542465 * 1/2016

OTHER PUBLICATIONS

Valqua Catalogue No. LC10 020 SEN, published by Valqua, Ltd. in Sep. 2019, with partial English translation.

(Continued)

Primary Examiner — Amy C Wierenga

(74) *Attorney, Agent, or Firm* — Michael Best & Friedrich LLP

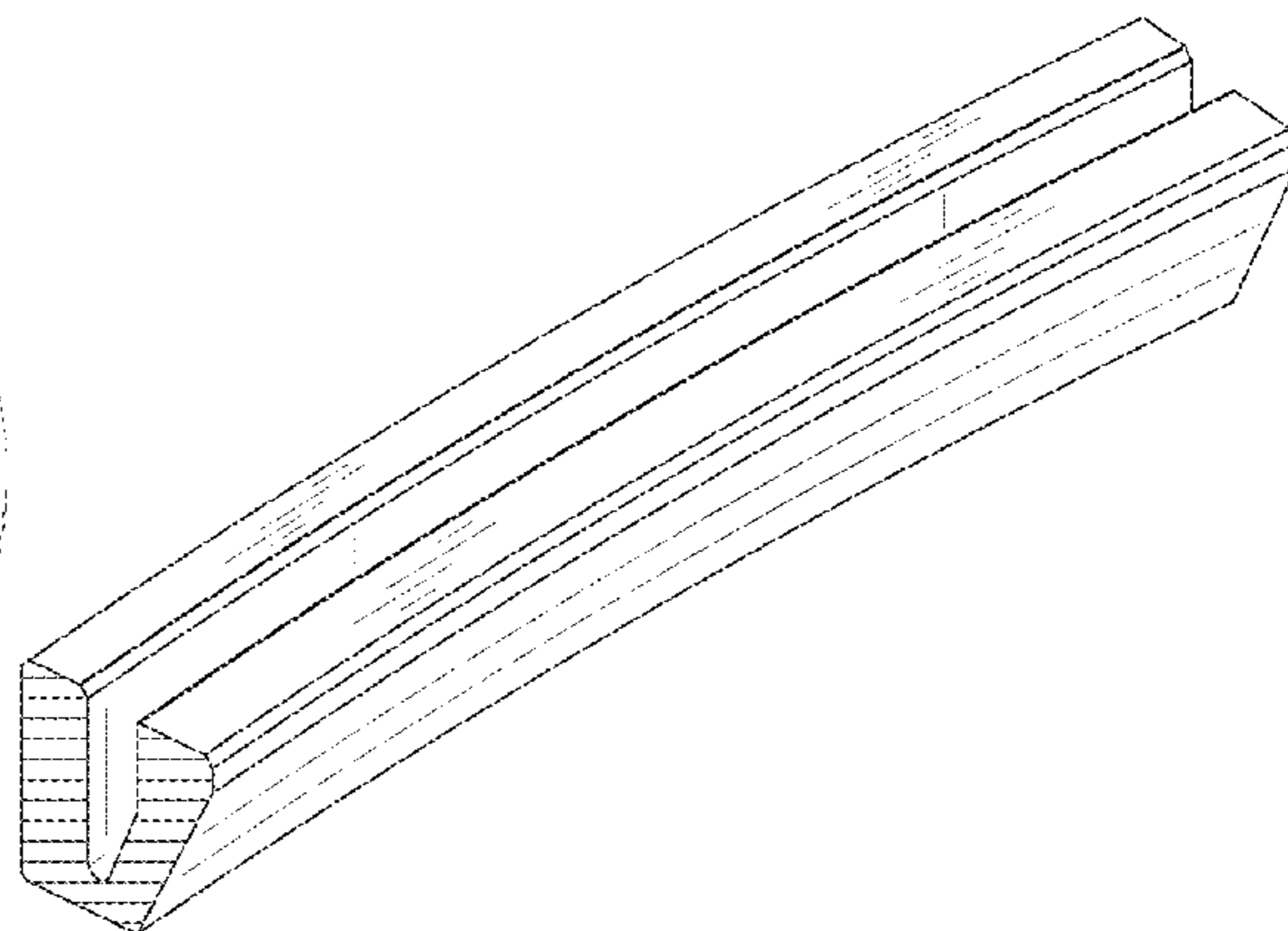
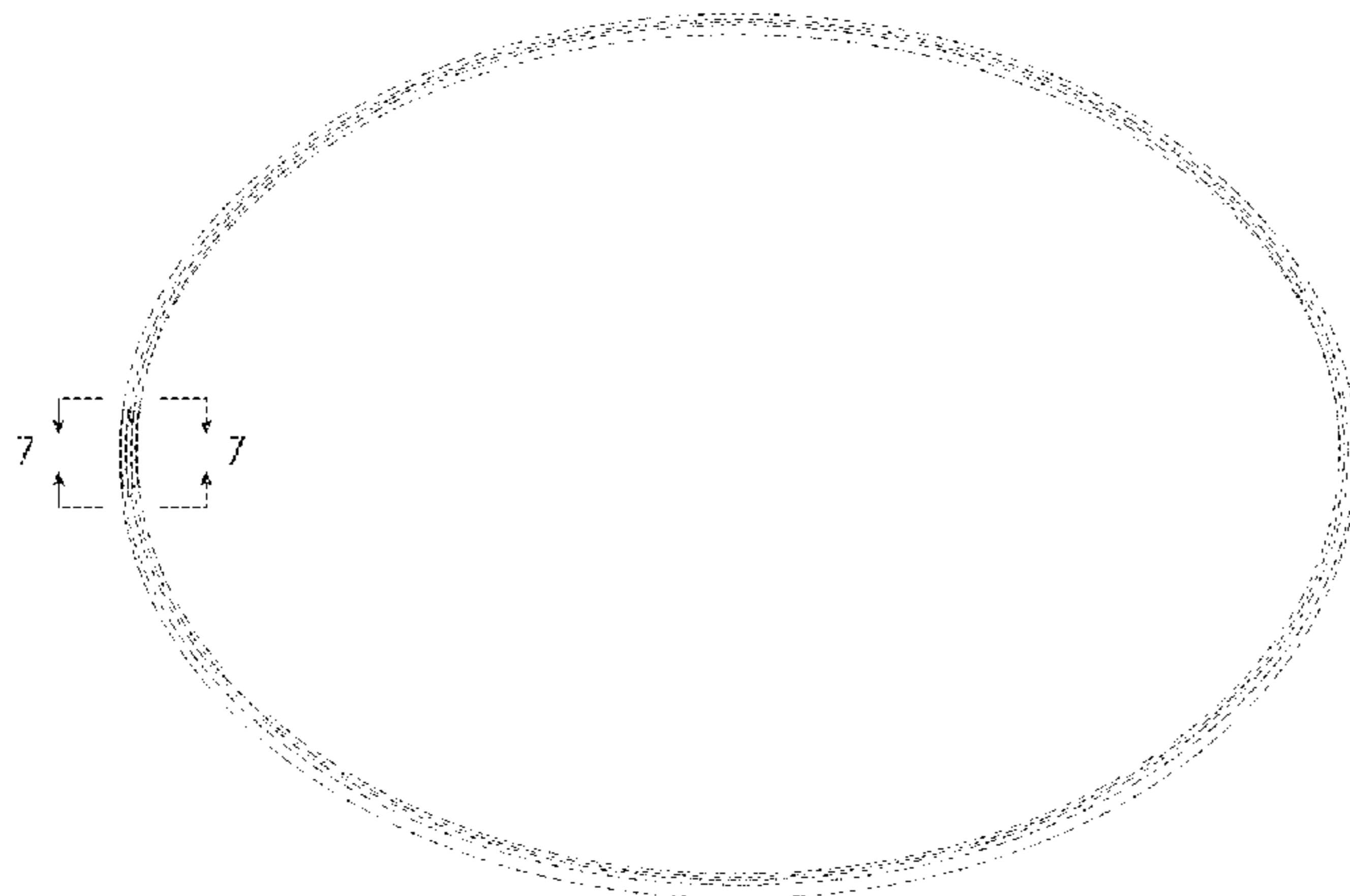
(57) **CLAIM**

The ornamental design for a sealing ring, as shown and described.

DESCRIPTION

FIG. 1 is a front, top perspective view of a sealing ring showing my new design;
 FIG. 2 is a top plan view thereof;
 FIG. 3 is a bottom plan view thereof;
 FIG. 4 is a front elevational view thereof;
 FIG. 5 is a left side elevational view thereof;
 FIG. 6 is a rear elevational view thereof;
 FIG. 7 is a partially enlarged front, top perspective view along the lines 7-7 of FIG. 1;
 FIG. 8 is a partially enlarged top plan view of the portion of the sealing ring shown in FIG. 7 along the lines 8-8 of FIG. 2;
 FIG. 9 is a cross sectional view thereof cut along the line 9-9 of FIG. 8;
 FIG. 10 is a partially enlarged front, top, left perspective cross sectional view thereof;
 FIG. 11 is a partially enlarged rear, bottom, left perspective cross sectional view thereof; and,
 FIG. 12 is a right side elevational view thereof.
 The broken lines illustrating portions of the sealing ring form no part of the claimed design. The dot-dash broken lines defining boundaries of the claimed design form no part of the claimed design.

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D881,958 S * 4/2020 Han D15/148
D898,171 S * 10/2020 Yoshida F16J 15/025
D23/269
D942,596 S * 2/2022 Nakagawa D23/269
2017/0074430 A1* 3/2017 Hartmann F16J 15/3236

OTHER PUBLICATIONS

Merkel PTFE U-rings for high level applications, published by
Freudenberg Sealing Technologies as late as 2019.

PTFE Lip Seal Design Guide Catalog EPS 5340/USA, published
and reprinted by Parker Hannifin Corporation in 2018.

* cited by examiner

FIG.1

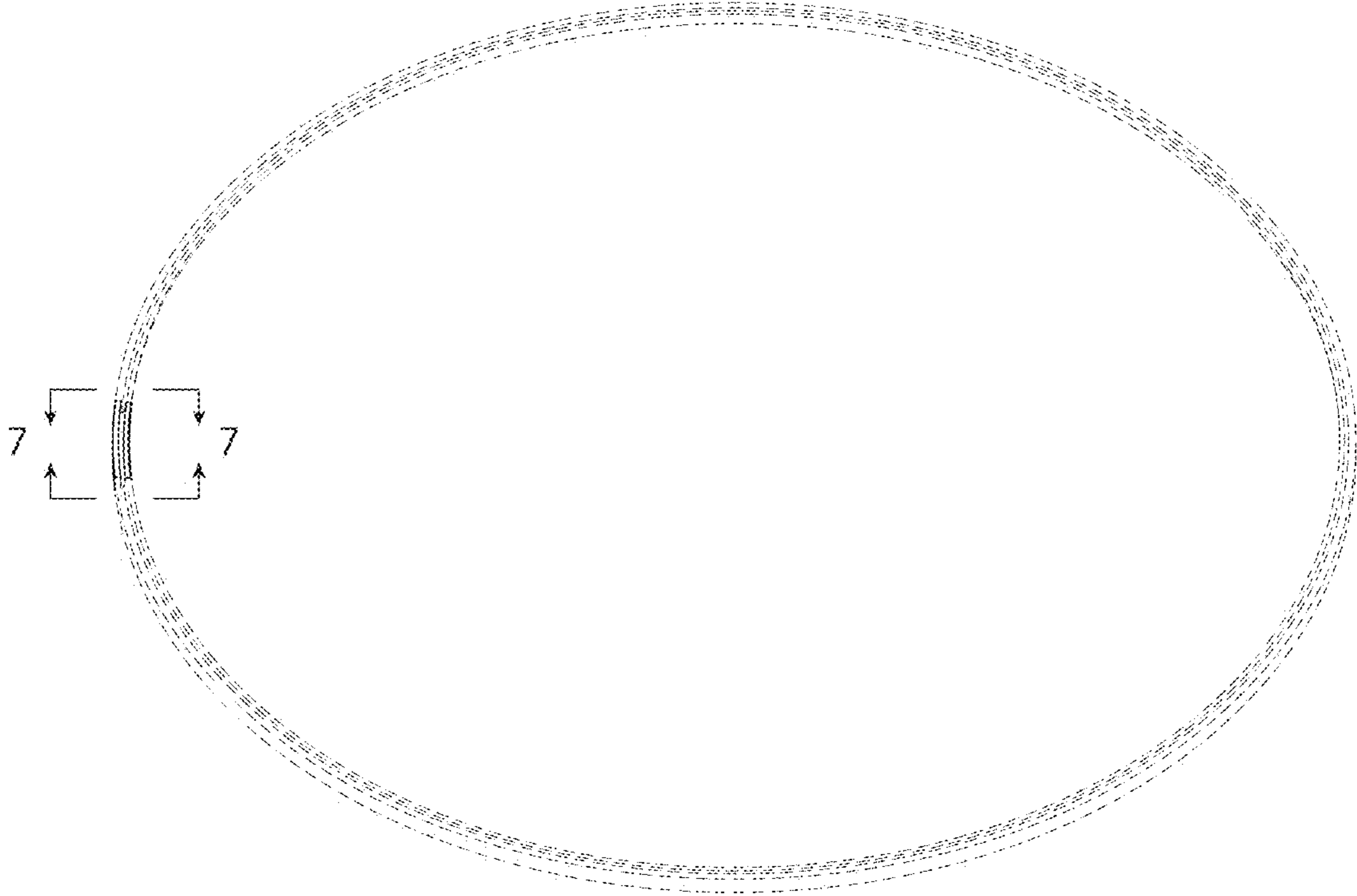


FIG.2

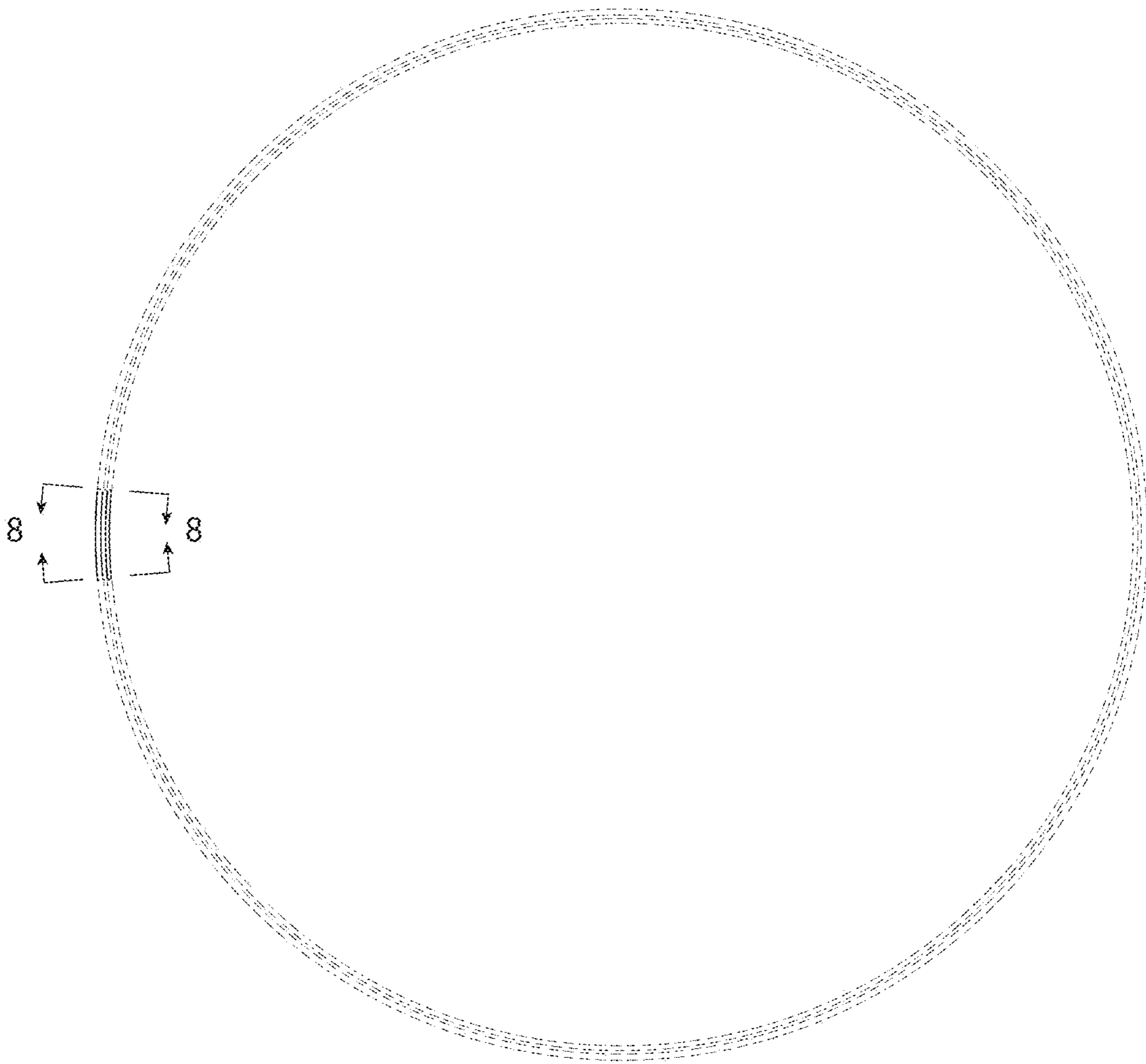


FIG.3

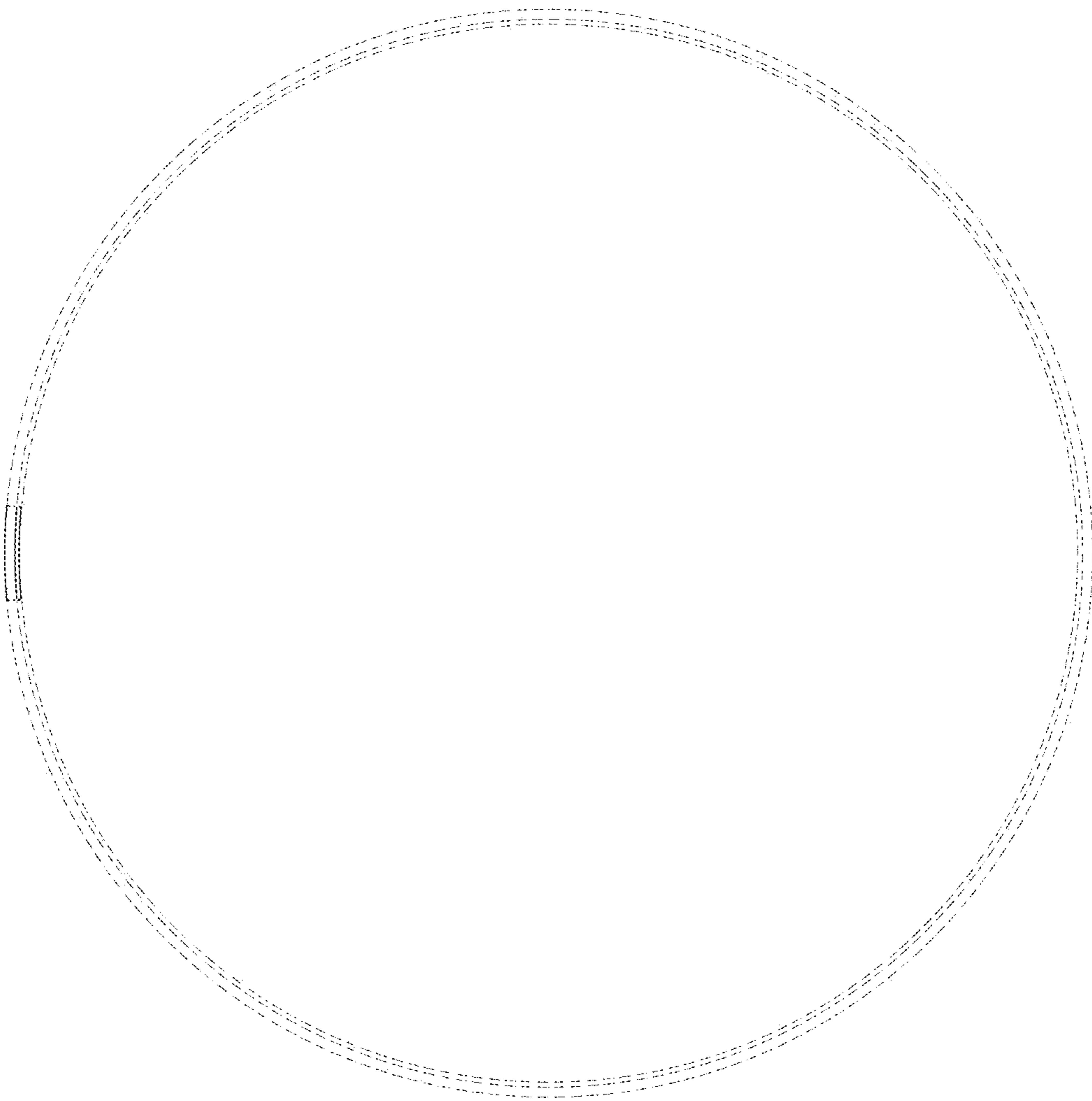


FIG.4

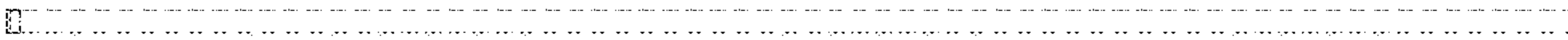


FIG.5

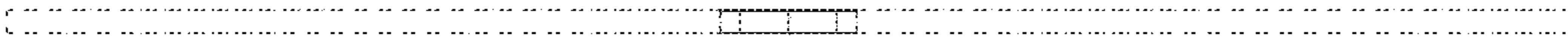


FIG.6

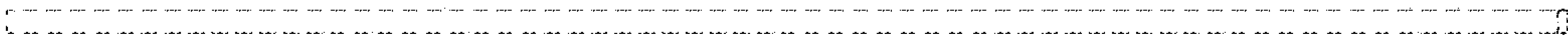


FIG. 7

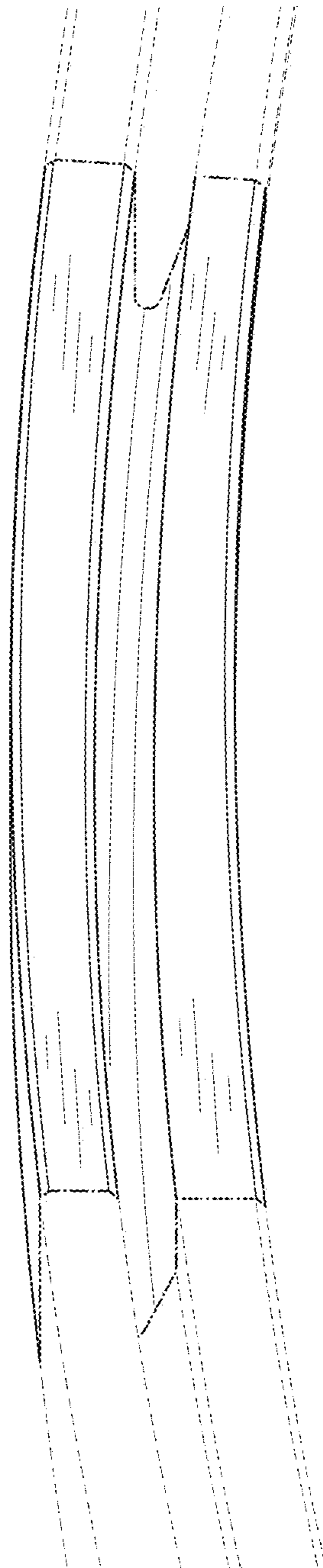


FIG.8

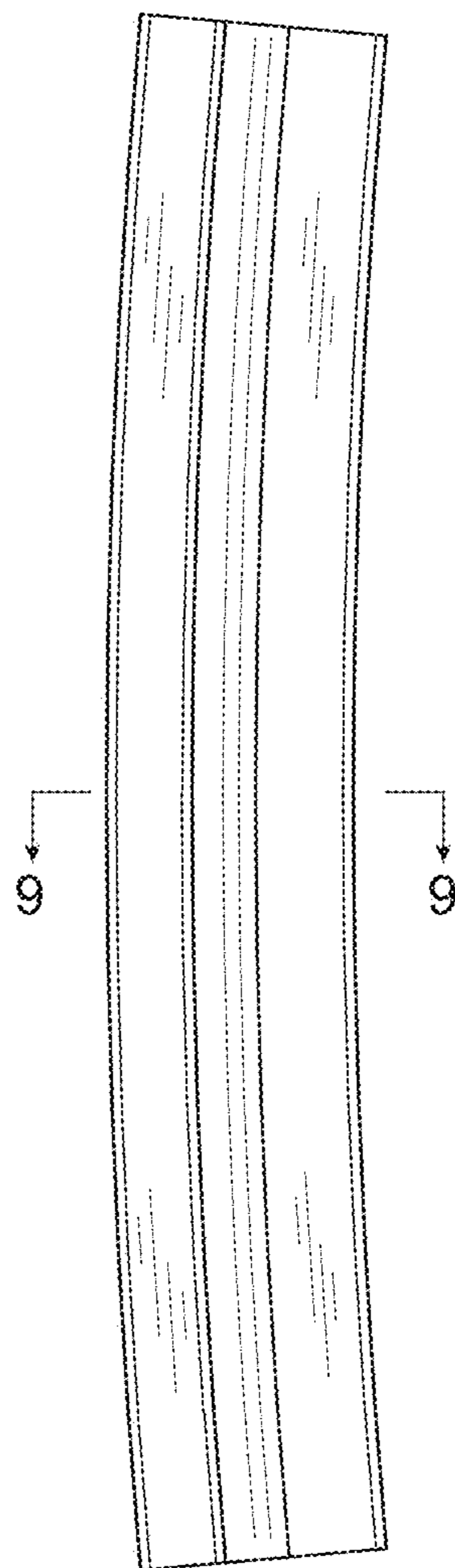


FIG.9

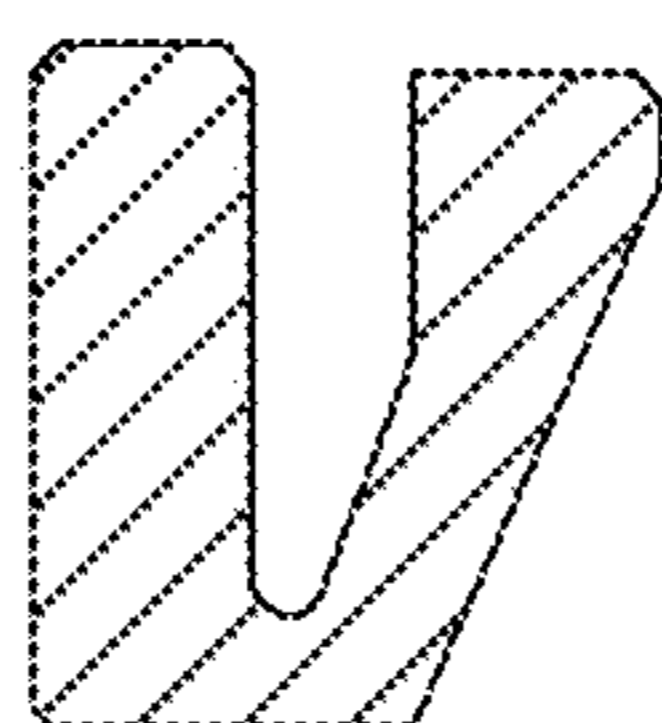


FIG. 10

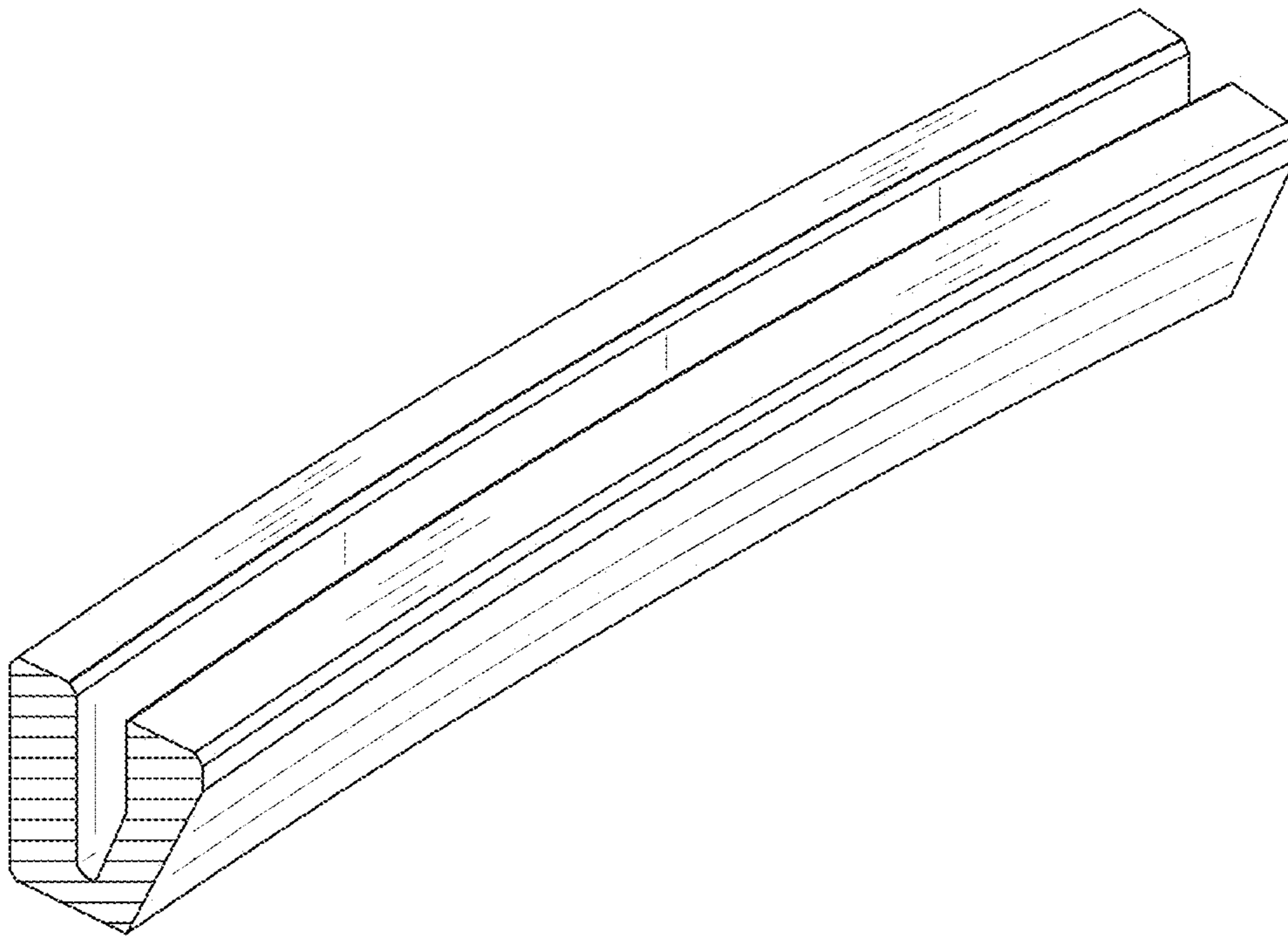


FIG. 11

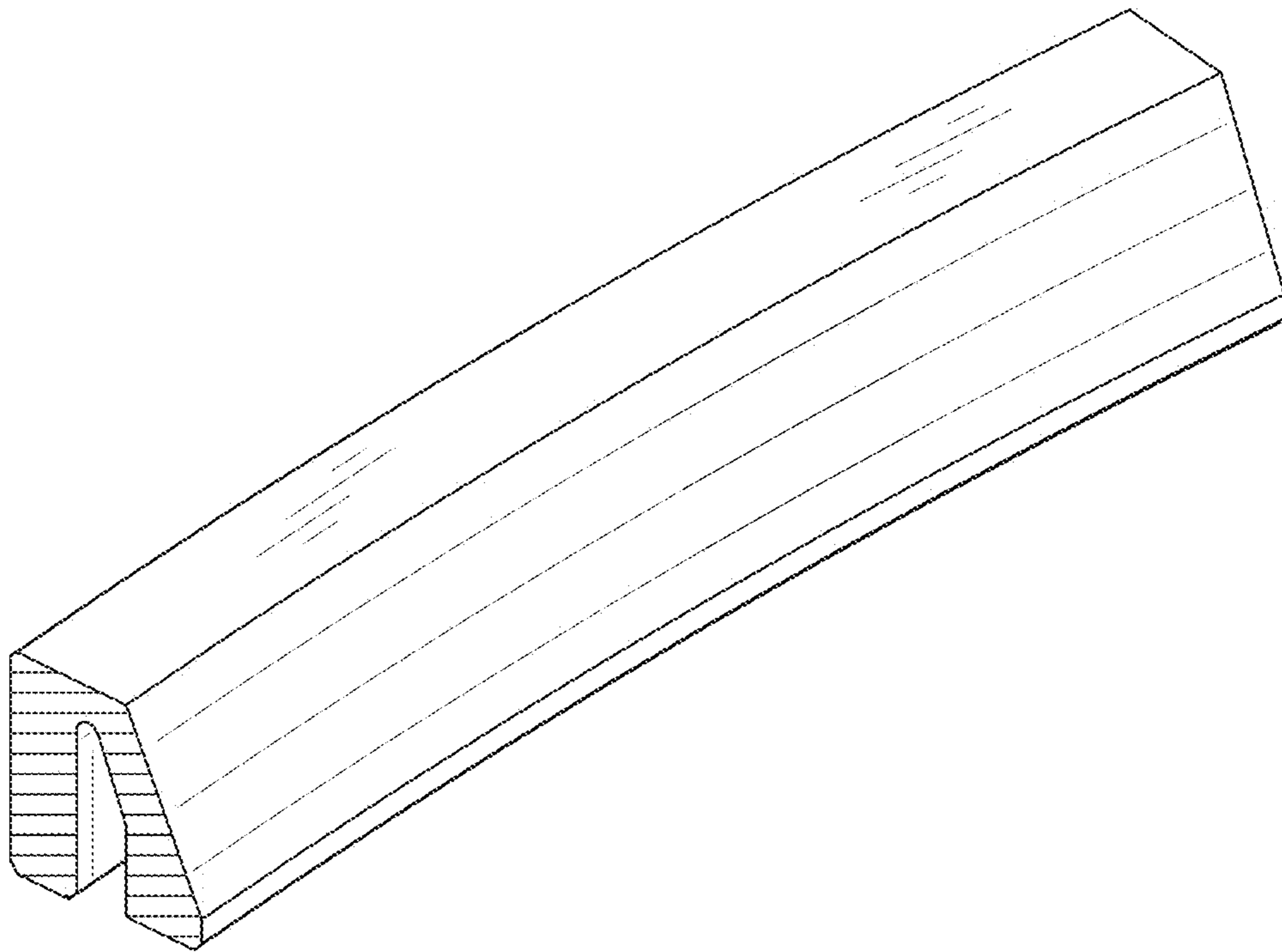


FIG. 12

