



US00D588078S

(12) **United States Design Patent**
Okada et al.

(10) **Patent No.:** **US D588,078 S**
(45) **Date of Patent:** **** Mar. 10, 2009**

(54) **HEAT DISSIPATION DETERRENCE LINK FOR SEMICONDUCTOR MANUFACTURE**

(75) Inventors: **Mitsuhiro Okada**, Tokyo (JP);
Yoshikazu Furusawa, Tokyo (JP);
Daisuke Suzuki, Tokyo (JP)

(73) Assignee: **Tokyo Electron Limited**, Tokyo (JP)

(**) Term: **14 Years**

(21) Appl. No.: **29/270,120**

(22) Filed: **Dec. 15, 2006**

(30) **Foreign Application Priority Data**

Jun. 16, 2006 (JP) 2006-015663

(51) **LOC (9) Cl.** **13-03**

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

(58) **Field of Classification Search** D13/182;
D8/16; D23/386; 118/724, 725; 432/241,
432/242; 438/680

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,637,410	A *	8/1927	Coryell	52/446
D93,058	S *	8/1934	Wagner	D5/1
4,803,948	A *	2/1989	Nakagawa et al.	118/725
5,370,736	A *	12/1994	Roy et al.	118/719
5,800,616	A *	9/1998	Persyn	118/719
5,846,073	A *	12/1998	Weaver	432/241
6,164,963	A *	12/2000	Weaver	432/241
6,746,240	B2 *	6/2004	De Ridder et al.	432/241
D516,318	S *	3/2006	Hasenoehrl et al.	D5/1
7,211,514	B2 *	5/2007	Fujita et al.	438/680
2001/0050054	A1 *	12/2001	Kwag et al.	118/715
2003/0175649	A1 *	9/2003	Oosterlaken et al.	432/242
2003/0175650	A1 *	9/2003	Ridder et al.	432/242
2004/0146827	A1 *	7/2004	Beatty et al.	432/1

2008/0044785 A1* 2/2008 Anbai et al. 432/241

OTHER PUBLICATIONS

Mitsuhiro Okada, et al. entitled Heat Dissipation Deterrence Link for Semiconductor Manufacture.

* cited by examiner

Primary Examiner—Selina Sikder

(74) *Attorney, Agent, or Firm*—Smith, Gambrell & Russell, LLP

(57) **CLAIM**

The ornamental design for a heat dissipation deterrence link for semiconductor manufacture, as shown and described.

DESCRIPTION

FIG. 1 is a front view of the design for a heat dissipation deterrence link for semiconductor manufacture in accordance with the invention;

FIG. 2 is a rear view thereof;

FIG. 3 is a right side view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a plan view thereof;

FIG. 6 is a bottom view thereof;

FIG. 7 is a sectional view thereof along A—A of FIG. 1;

FIG. 8 is a perspective view thereof; and,

FIG. 9 shows a heat dissipation deterrence link for semiconductor manufacture in accordance with the invention in use.

In practice, a heat dissipation deterrence link is placed on the bottom of a thermostat plug that is included in a process tube for semiconductor manufacture. Then, in use, the link suppresses heat from a bottom sub-heater. Preferably, the heat dissipation deterrence link for semiconductor manufacture in accordance with the present invention is fabricated from quartz.

The broken line showing the environment is for illustrative purposes only and forms no part of the claimed design.

1 Claim, 7 Drawing Sheets

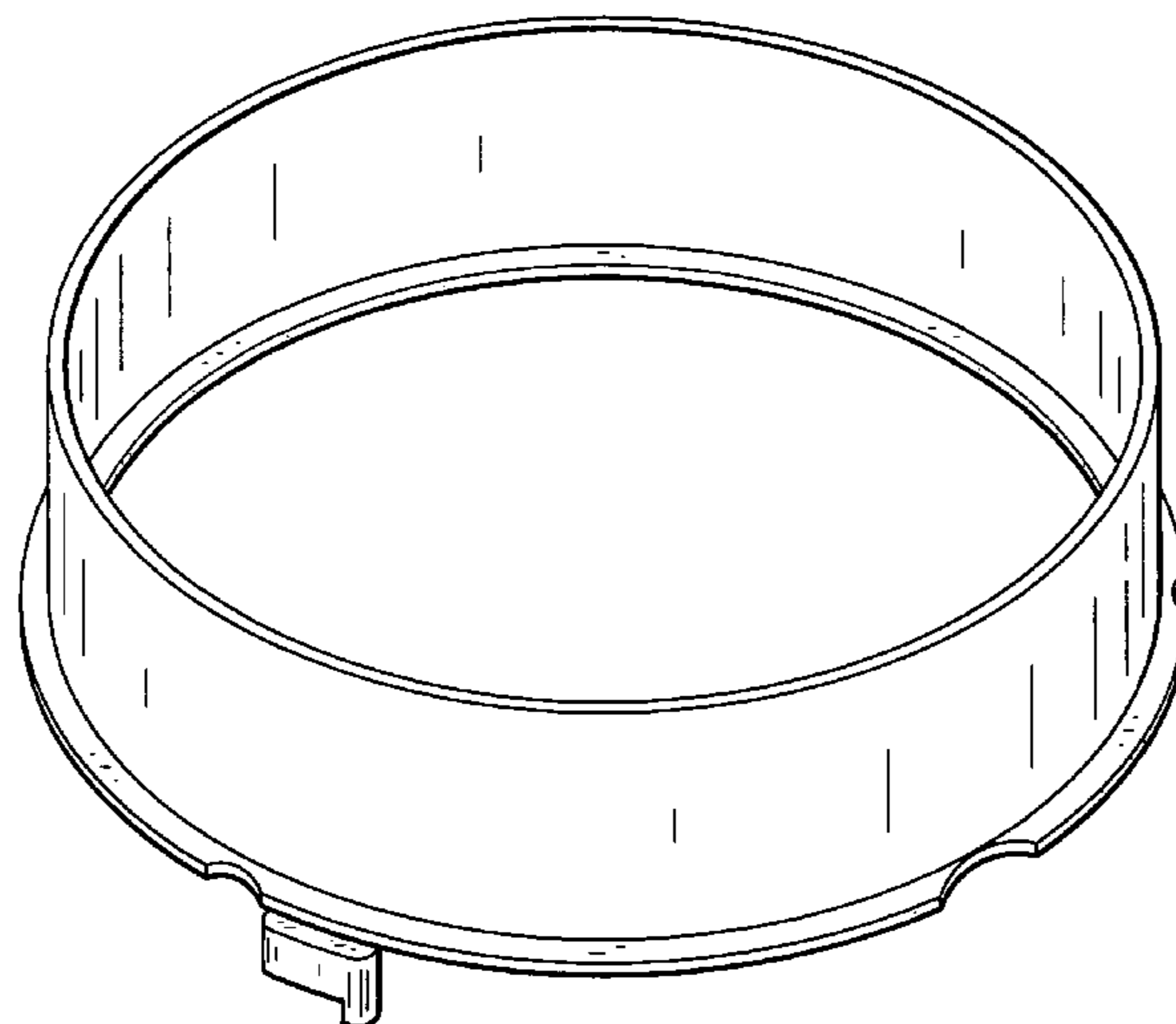


FIG. 1

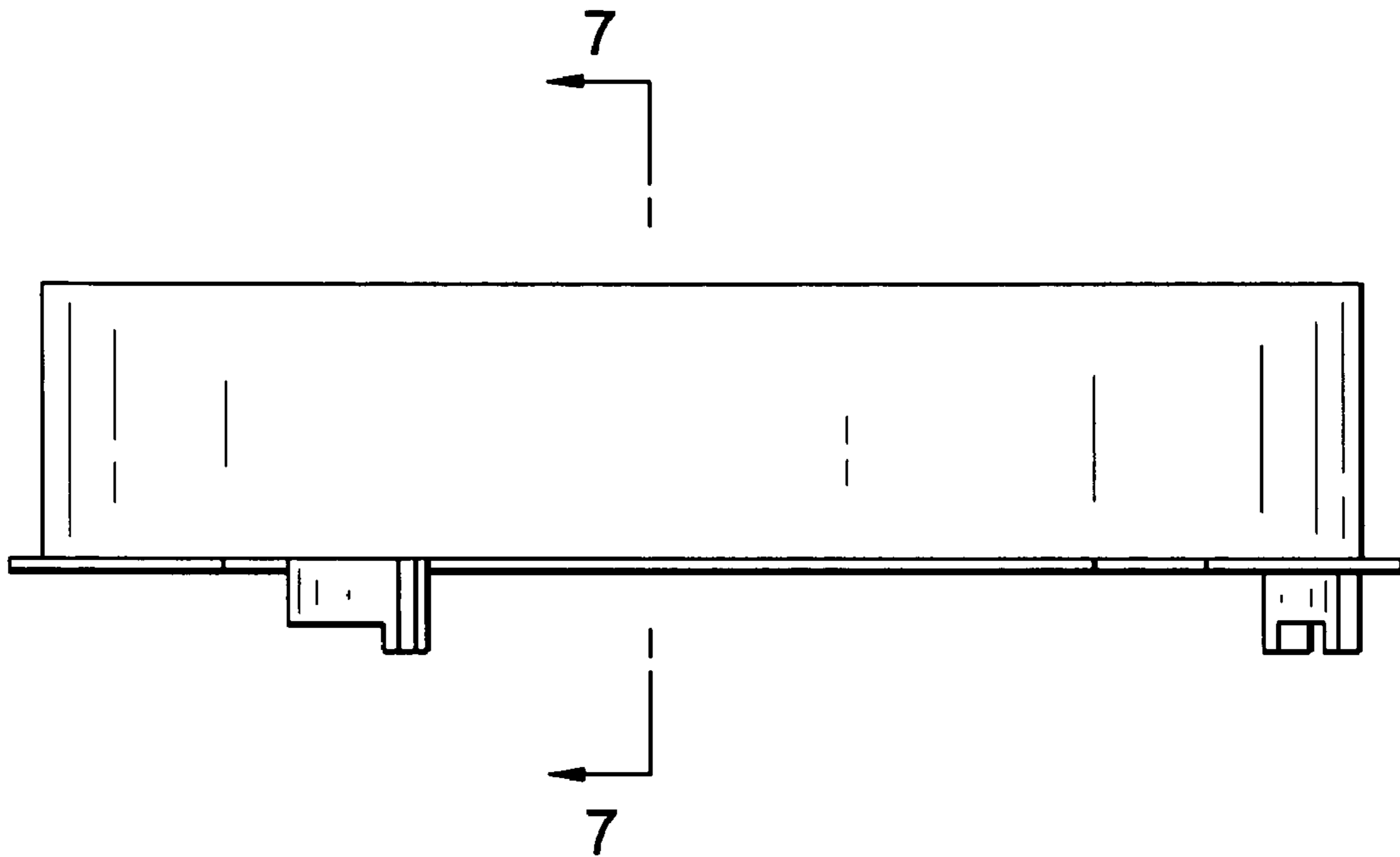


FIG. 2

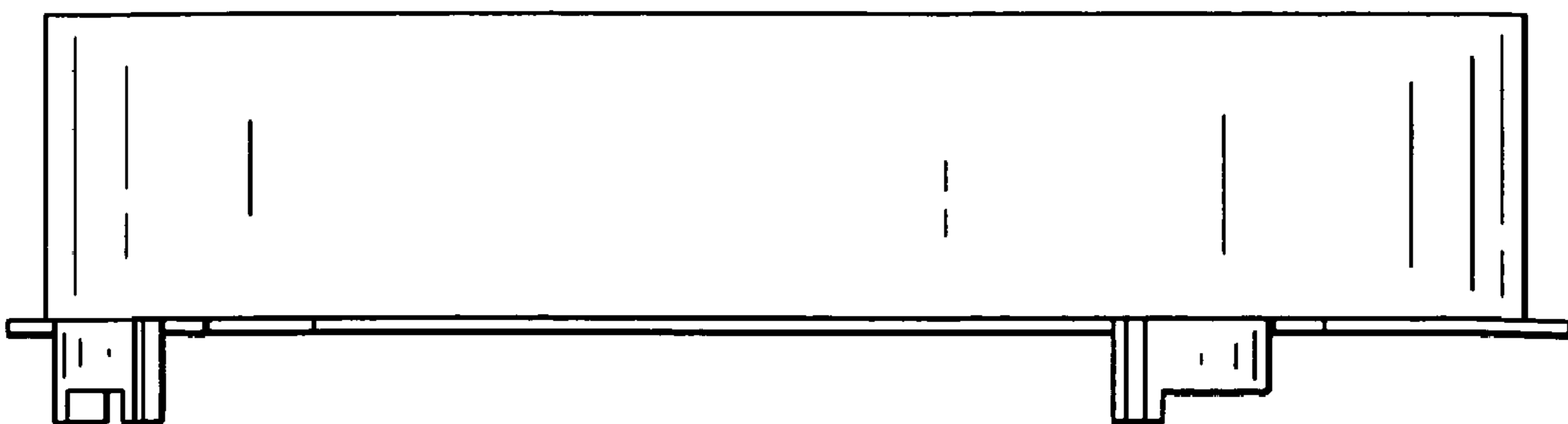


FIG. 3

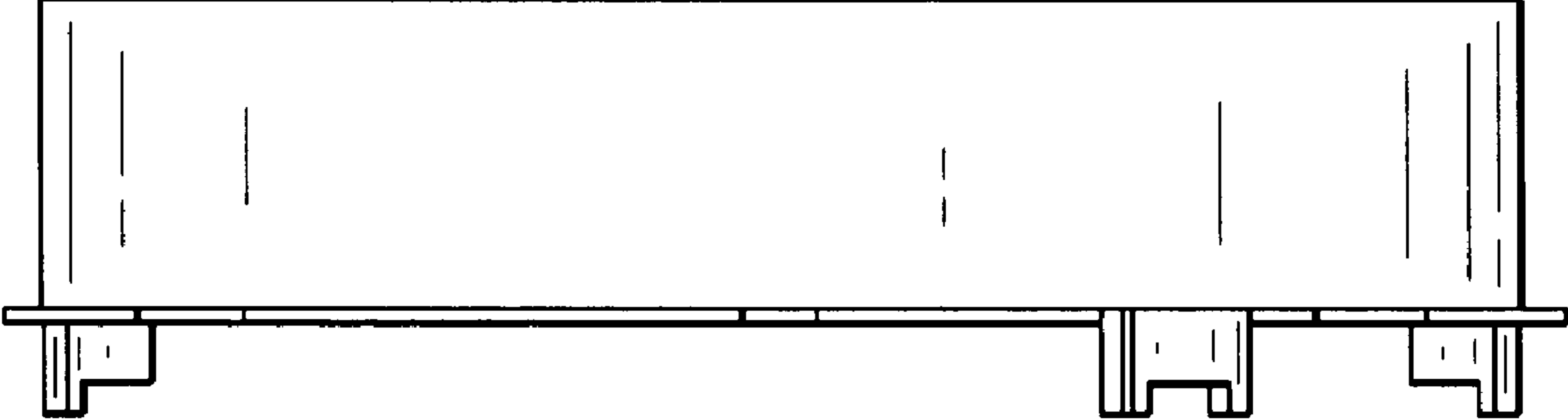


FIG. 4

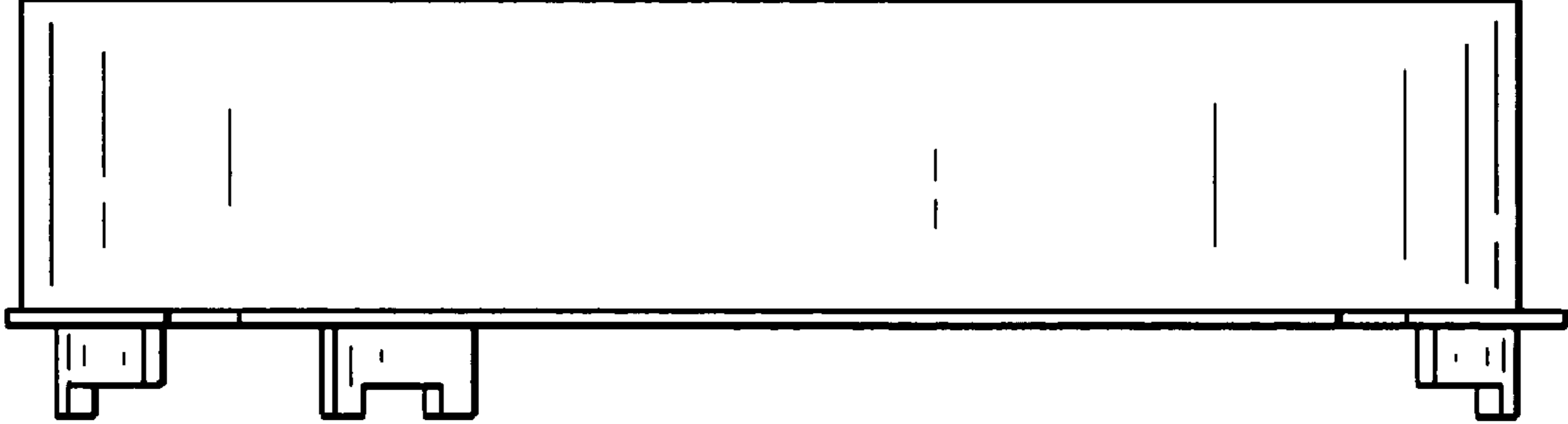


FIG. 5

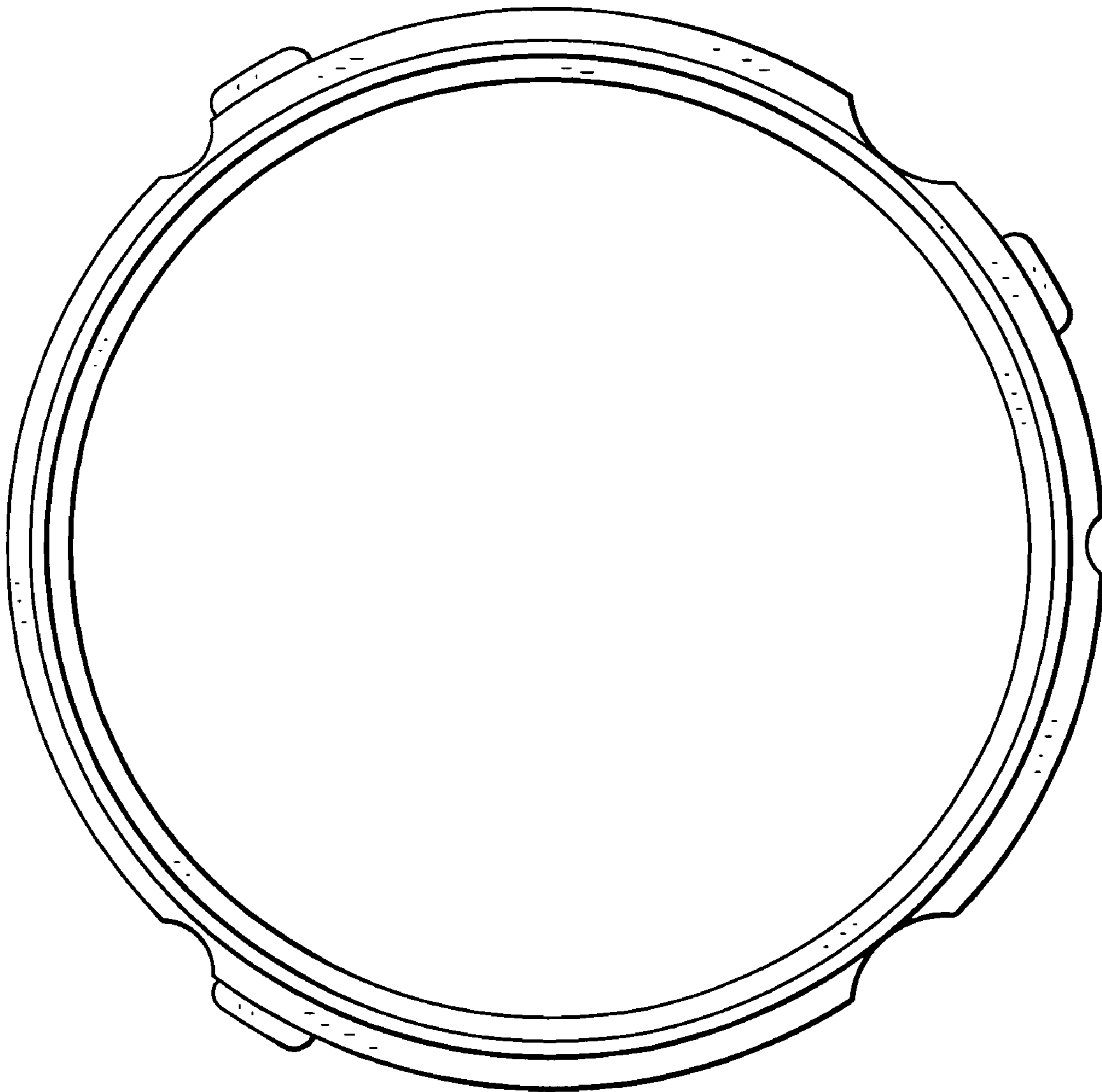


FIG. 6

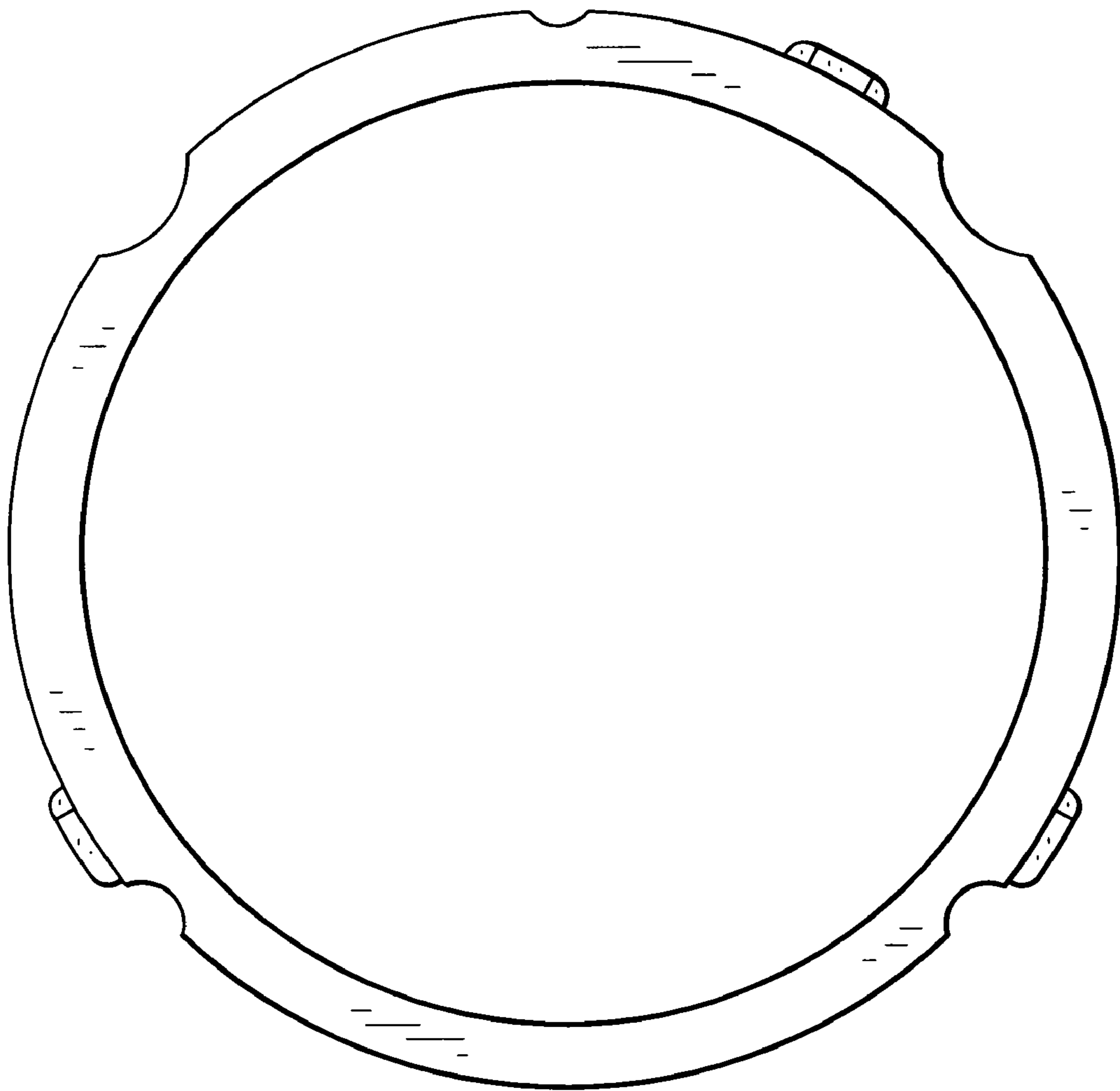


FIG. 7

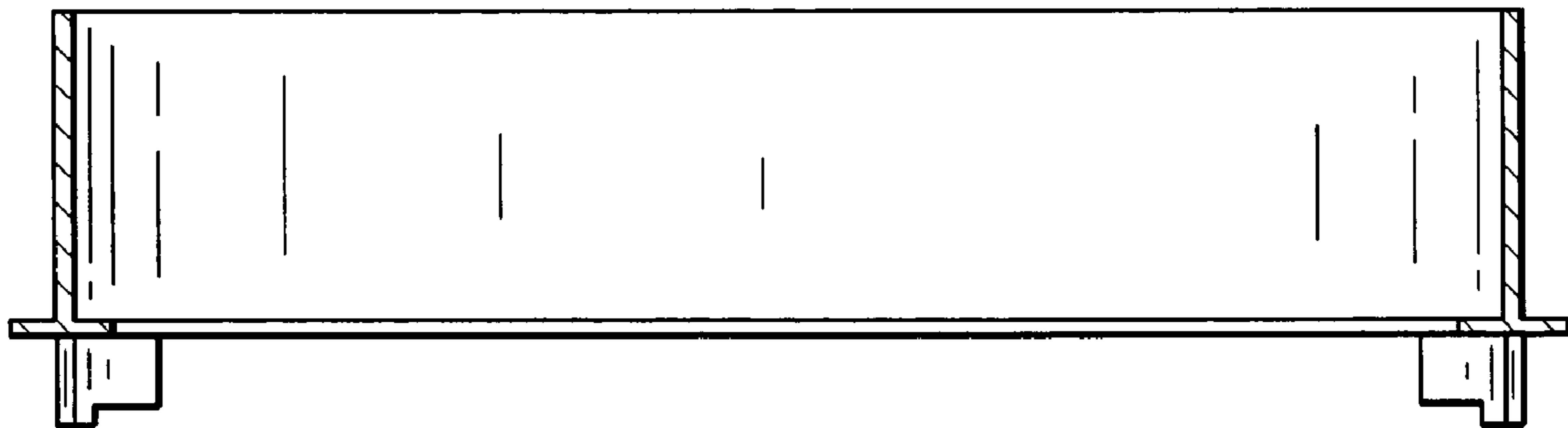


FIG. 8

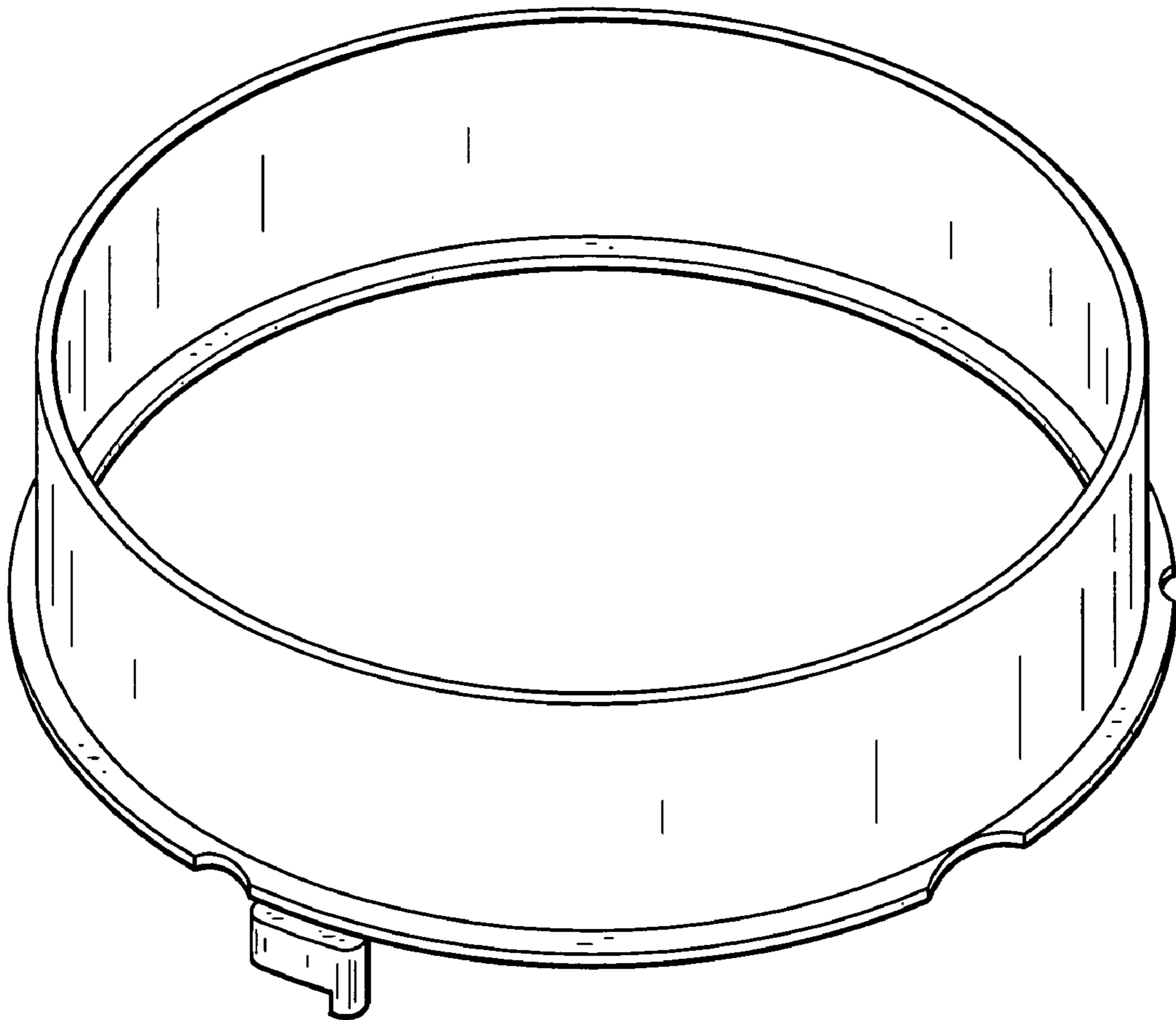


FIG. 9

