



US00D976404S

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

(10) **Patent No.:** **US D976,404 S**
(45) **Date of Patent:** **** Jan. 24, 2023**

(54) **TROCAR DEPTH LIMITER**

(71) Applicant: **Cilag GmbH International**, Zug (CH)

(72) Inventors: **Arunachalam Muthuchidambaram**,
Tamil Nadu (IN); **Rushikesh Shrikant**
Suryawanshi, Zenda chowk Patan (IN);
Sajayesh Vijayachandran, Kerala (IN);
Haribaskaran Nagarathinam,
Virudhunagar (IN); **Giri Prasanna**
Kumar Mathivanan, Salem (IN)

(73) Assignee: **Cilag GmbH International**, Zug (CH)

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

(21) Appl. No.: **29/733,356**

(22) Filed: **May 1, 2020**

(51) **LOC (14) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/146**

(58) **Field of Classification Search**
USPC D24/127, 130, 133, 146-147, 10.5, 107,
D24/110, 112-118, 121, 148,
D24/152.172-174, 176-178; D28/57, 59,
D28/62; D4/104, 120, 137, 138, 100,
D4/108, 111; D8/90-94, 107, 300,
D8/310-311, 313, 97, 387, 82; D19/110,
D19/115; D7/649
CPC A61B 17/089; A61B 17/1617; A61B
17/3211; A61B 17/1411; A61B 17/3417;
A61M 16/04; A61M 16/0463; A61M
16/0486; A61M 16/0484; A61M 25/0009;
A61M 25/007; A61M 25/02; A61M
25/09033; A61M 5/3286; A61M 5/343;
B26B 3/00; B26B 1/10; B26B 5/005

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D309,094	S	*	7/1990	Donis	.....	D23/265
D790,700	S	*	6/2017	Zhou	.....	D24/146
D806,241	S	*	12/2017	Swinney	.....	D24/129
D816,192	S	*	4/2018	Sato	.....	D8/382
D877,898	S	*	3/2020	Tiedeken	.....	D24/146
2011/0152774	A1	*	6/2011	Lopez	.....	A61F 9/007 604/167.01
2020/0015853	A1	*	1/2020	Hall	.....	A61B 17/3423
2021/0259728	A1	*	8/2021	Thomas	.....	A61B 17/3417

* cited by examiner

Primary Examiner — Samantha Q Lawrence

Assistant Examiner — Holly M Rodriguez

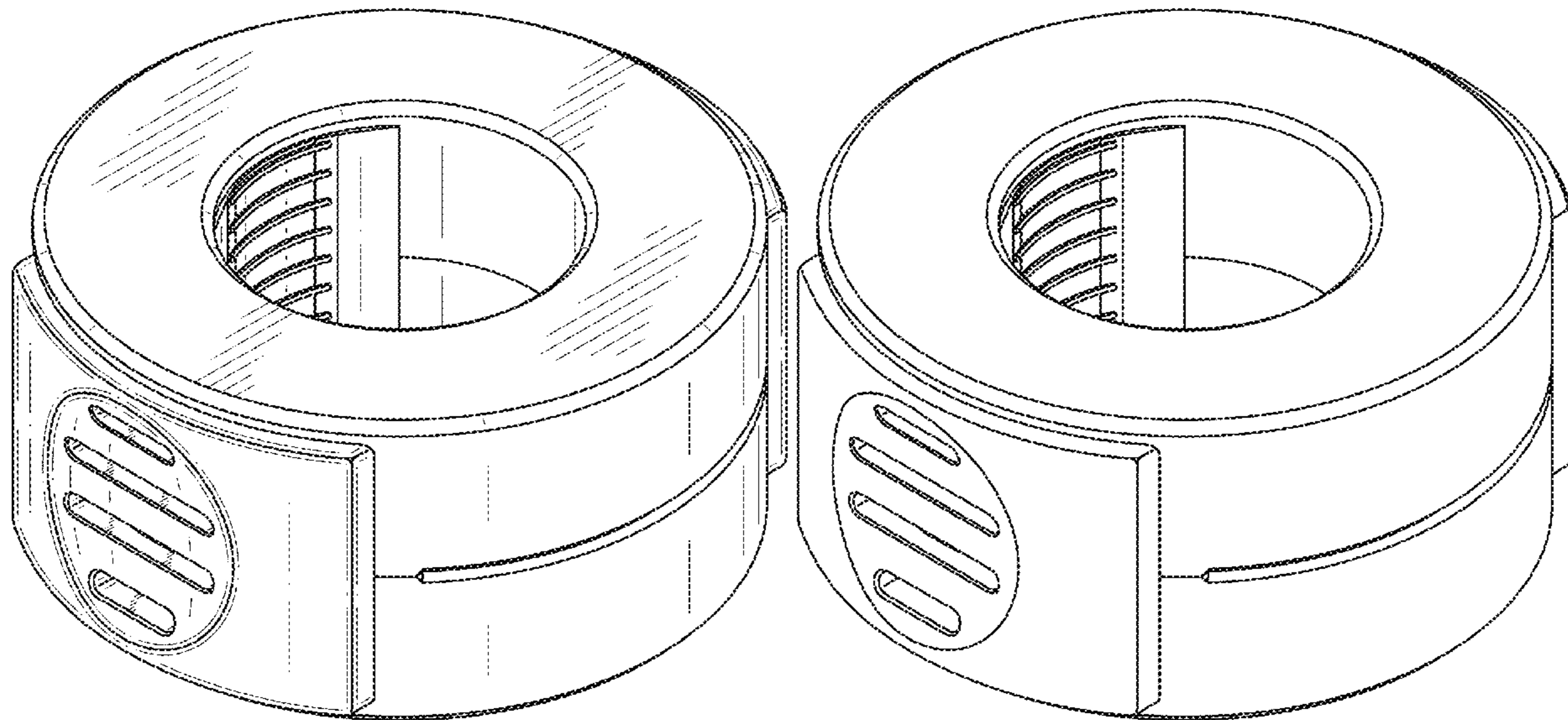
(57) **CLAIM**

The ornamental design for a trocar depth limiter, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a first embodiment of a trocar depth limiter embodying our new design;
FIG. 2 is a top and bottom view of the trocar depth limiter of FIG. 1;
FIG. 3 is a first side view of the trocar depth limiter of FIG. 1;
FIG. 4 is a second side view of the trocar depth limiter of FIG. 1;
FIG. 5 is a perspective view of a second embodiment of a trocar depth limiter embodying our new design;
FIG. 6 is a top and bottom view of the trocar depth limiter of FIG. 5;
FIG. 7 is a first side view of the trocar depth limiter of FIG. 5; and,
FIG. 8 is a second side view of the trocar depth limiter of FIG. 5.

1 Claim, 6 Drawing Sheets



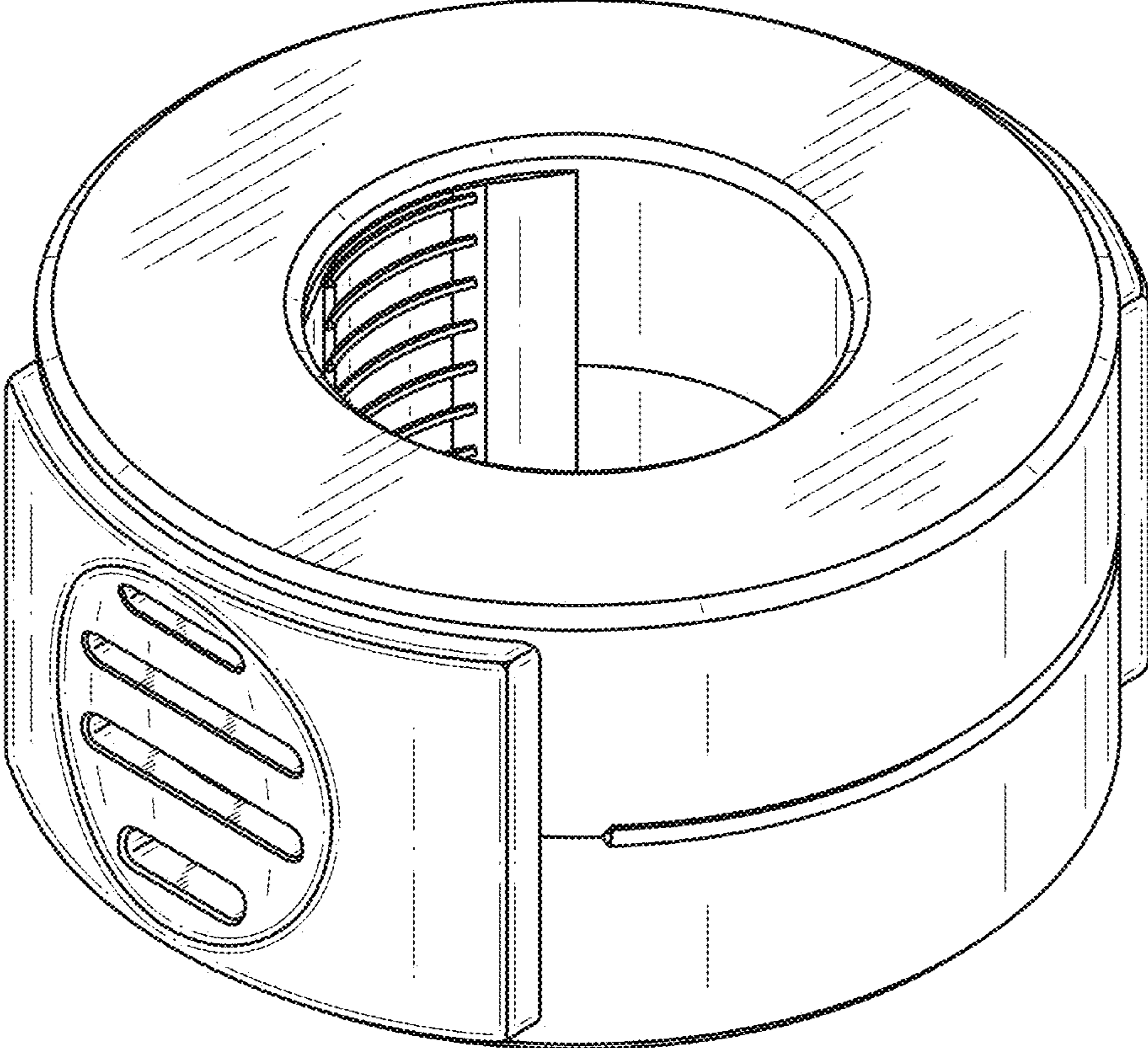


FIG. 1

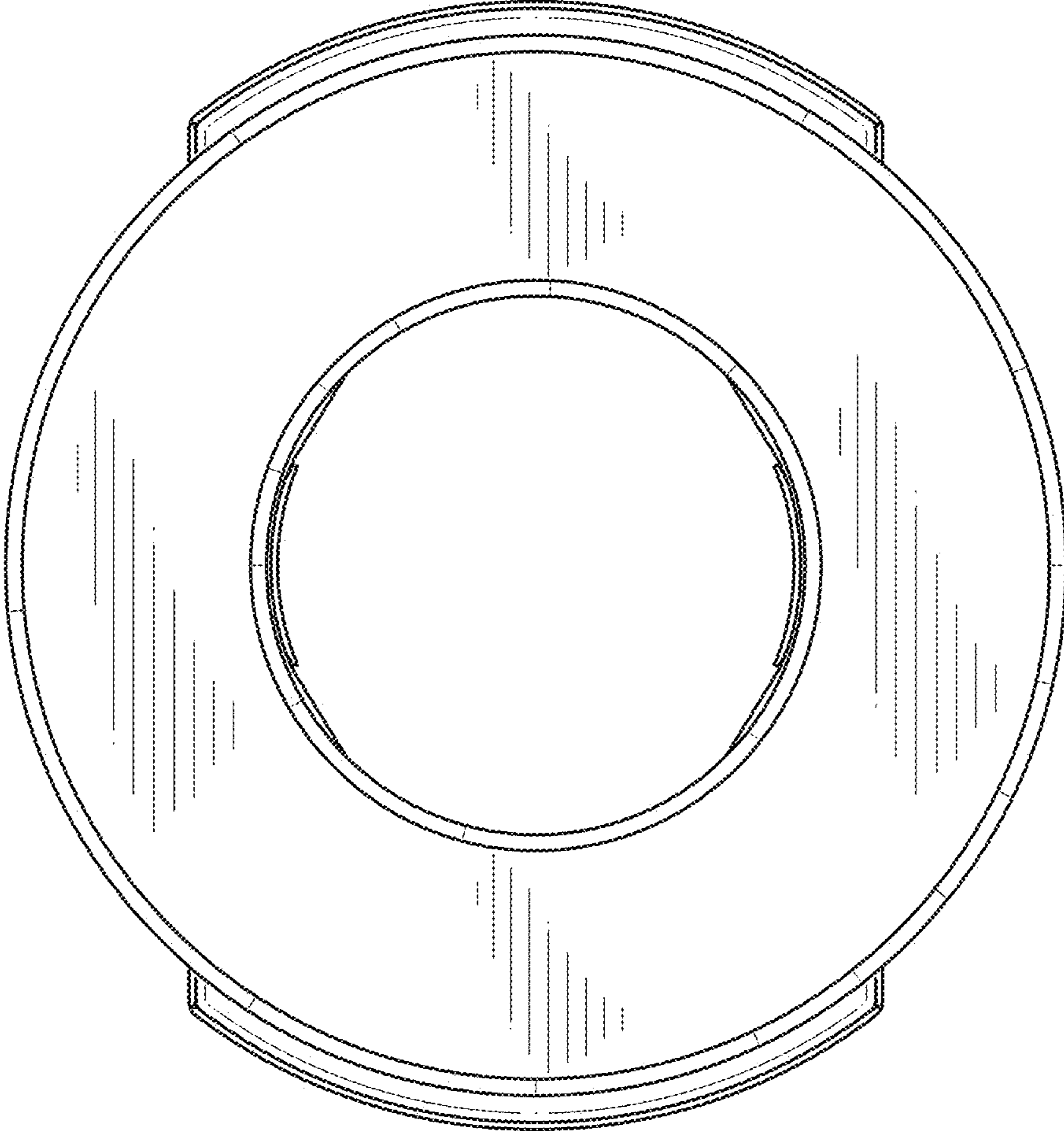


FIG. 2

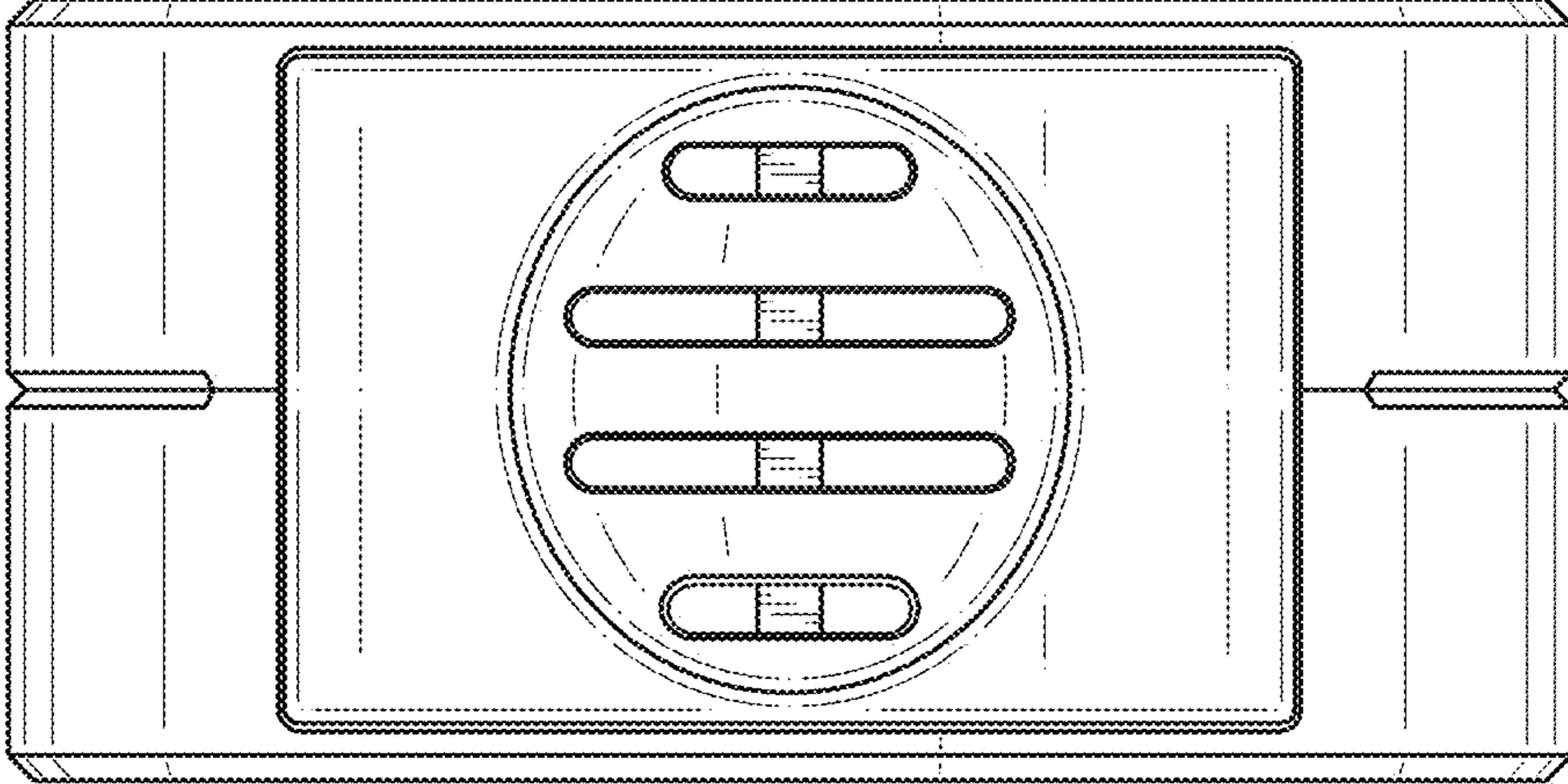


FIG. 3

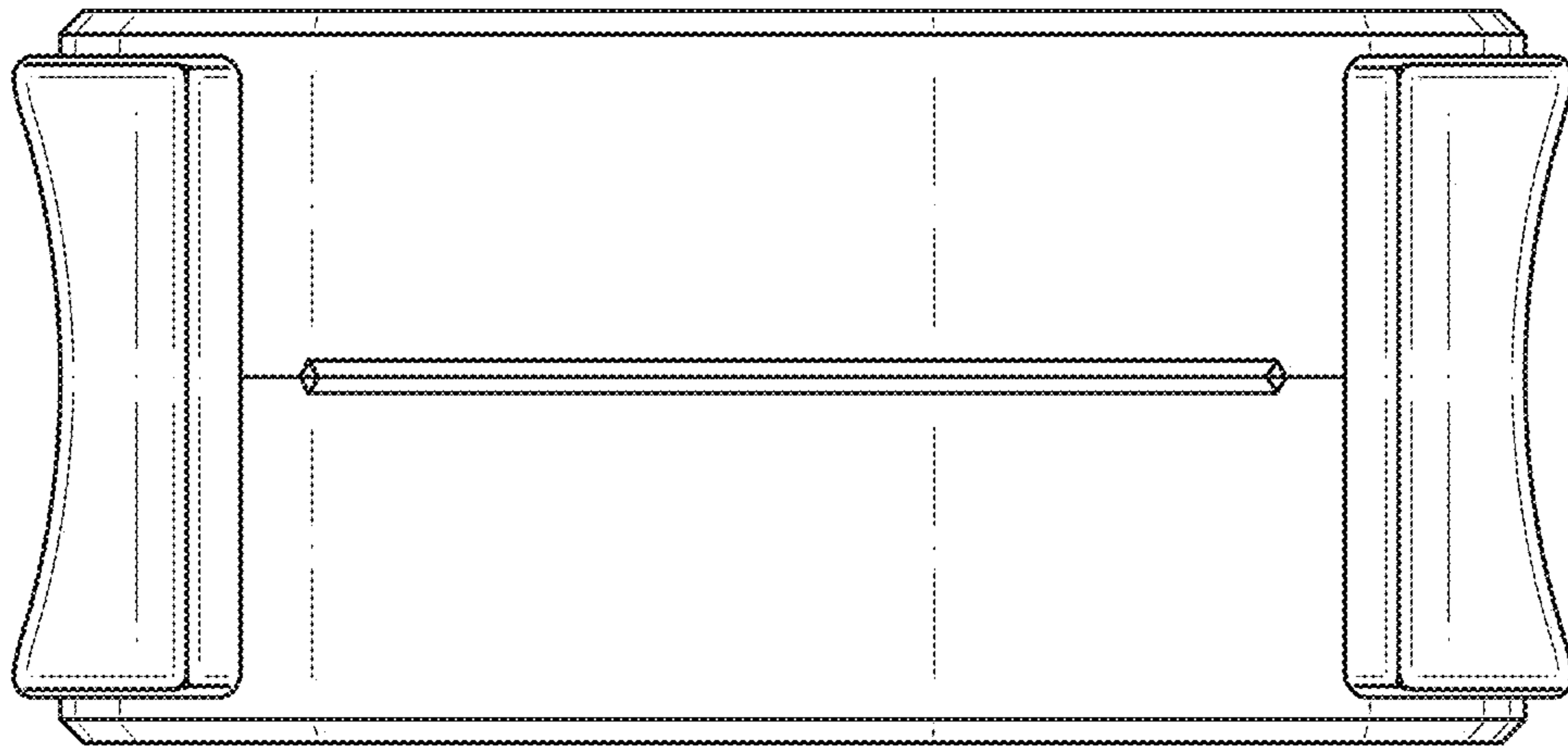


FIG. 4

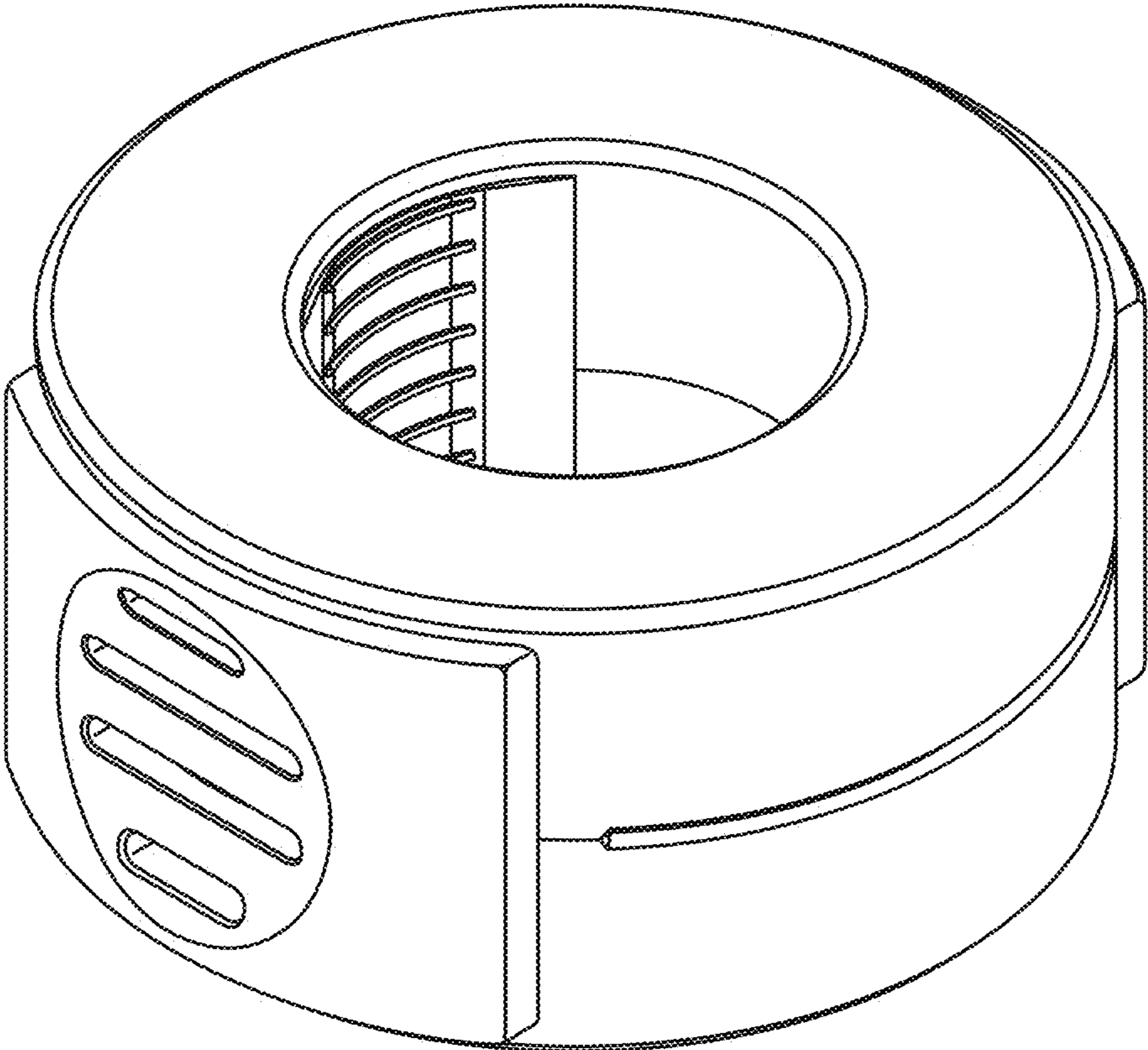


FIG. 5

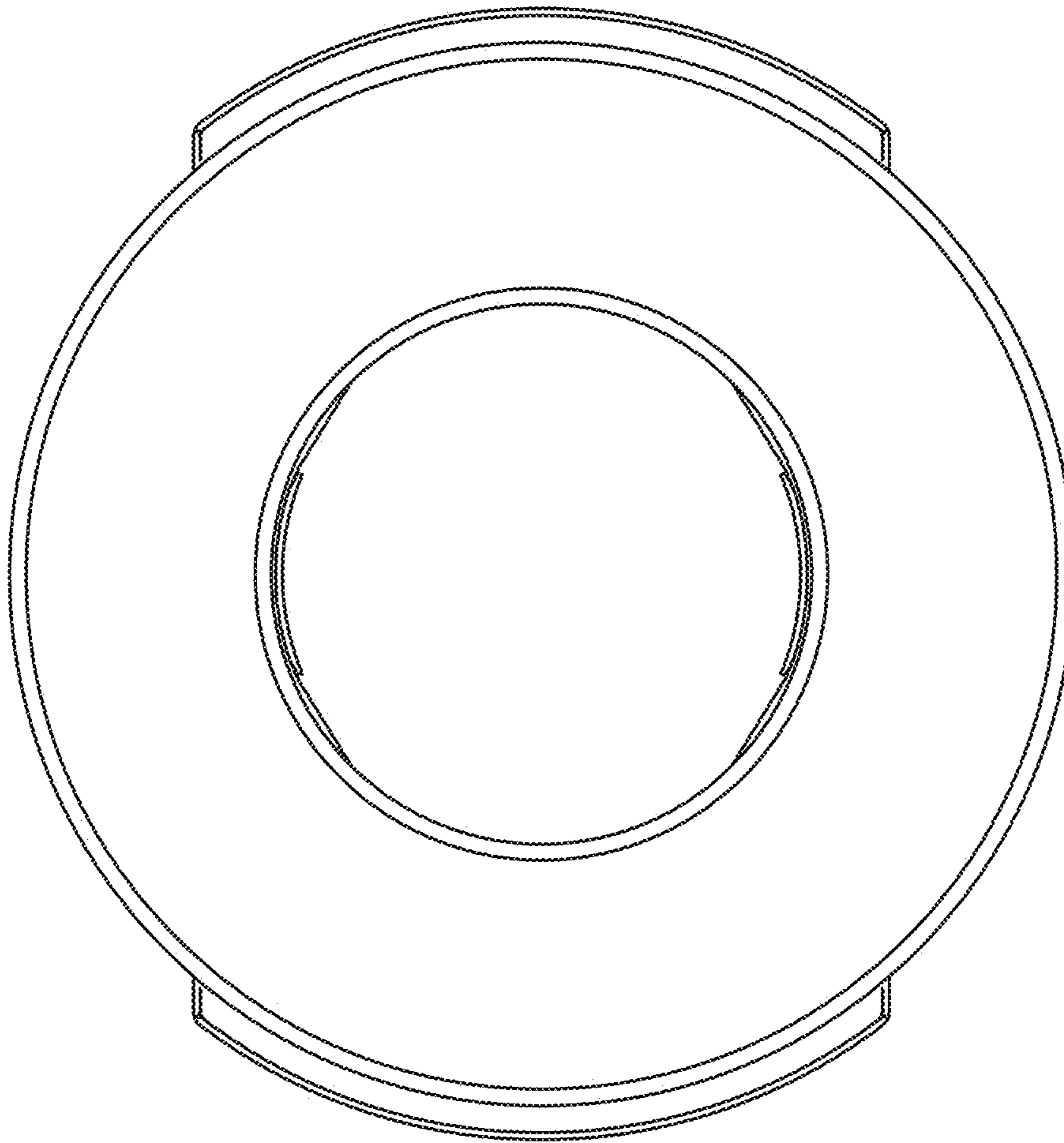


FIG. 6

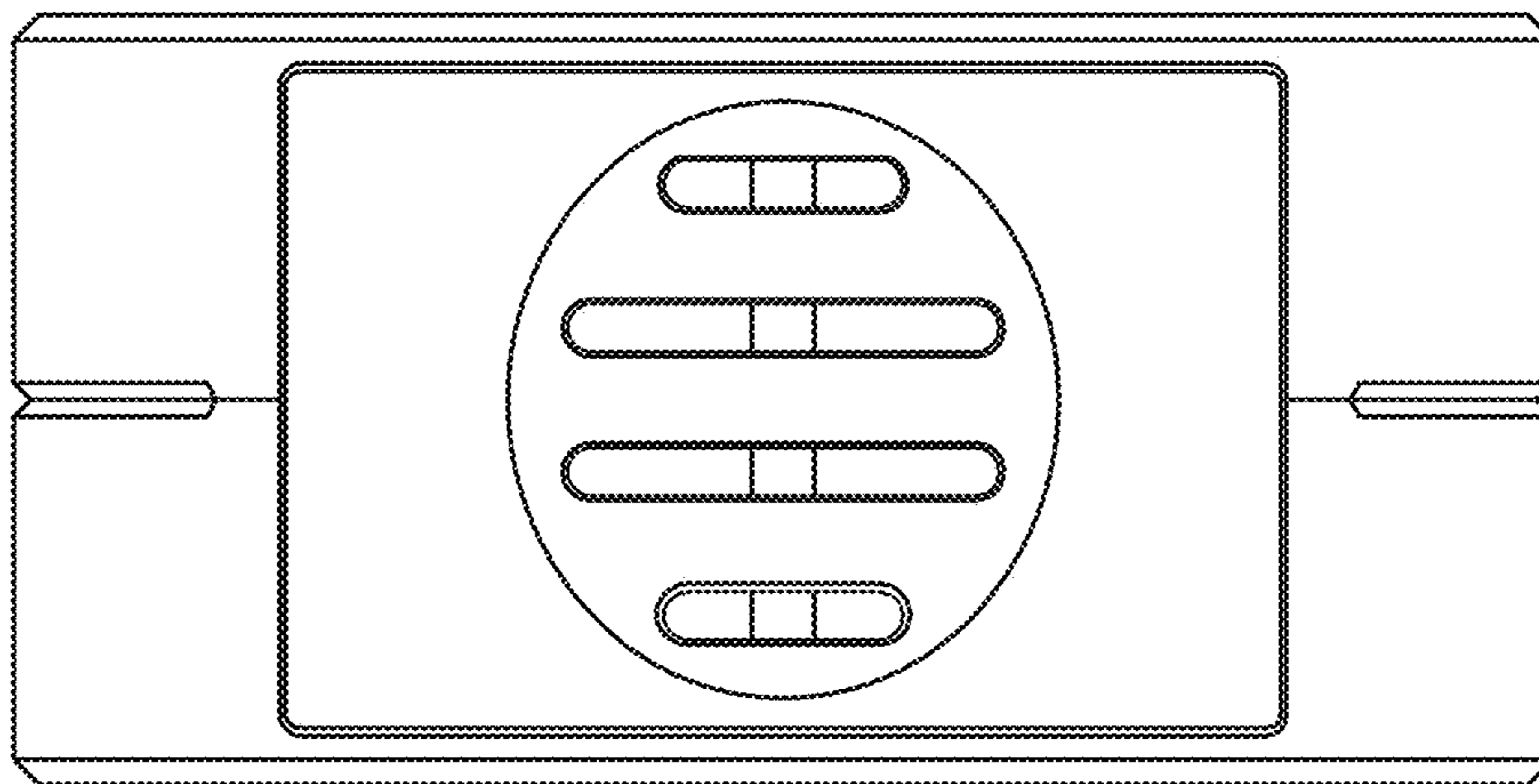


FIG. 7

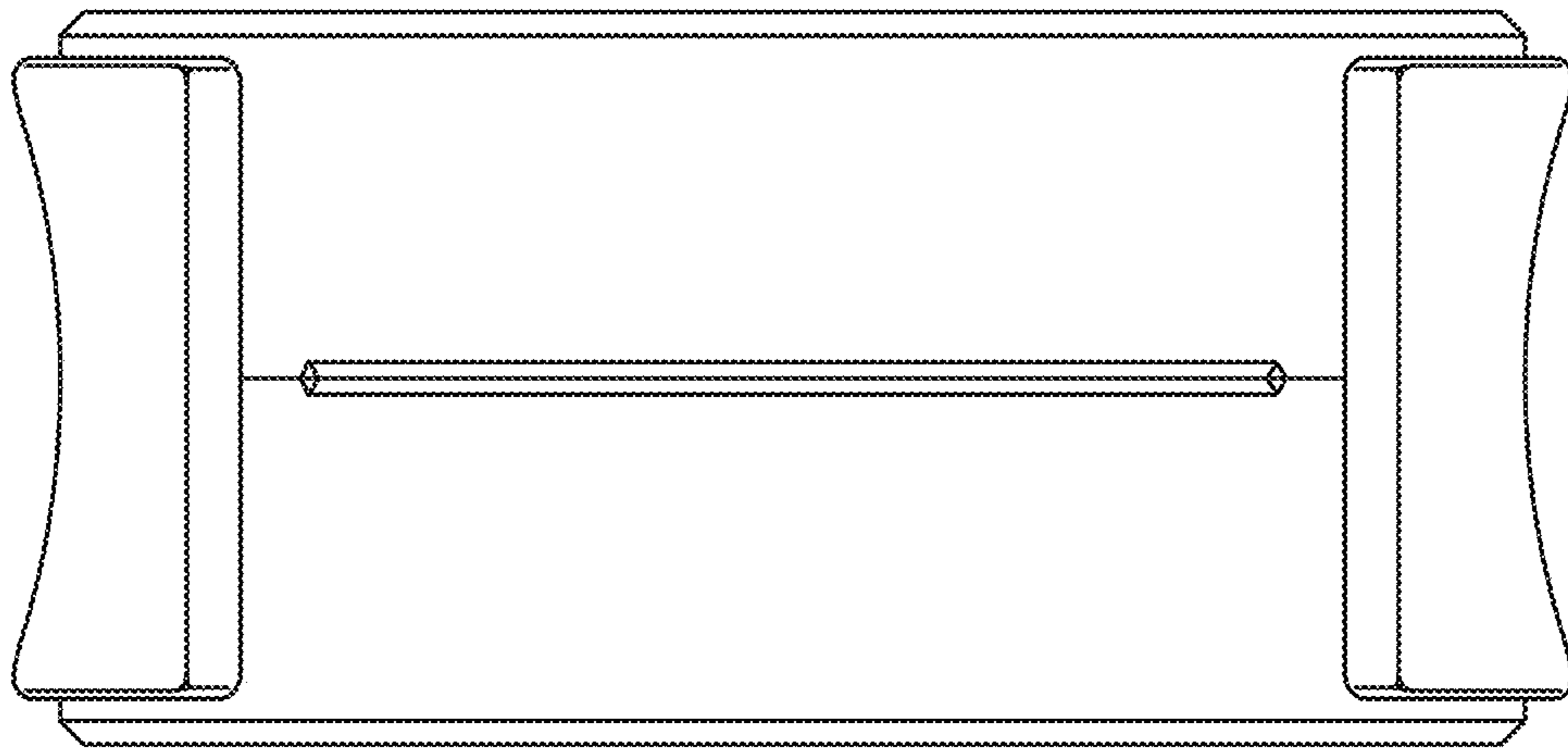


FIG. 8