



US00D976403S

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

(10) **Patent No.:** **US D976,403 S**

(45) **Date of Patent:** **** Jan. 24, 2023**

(54) **TROCAR DEPTH LIMITER**

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

(72) Inventors: **Sajayesh Vijayachandran**, Kerala (IN);
Haribaskaran Nagarathinam,
Virudhunagar (IN)

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

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

(21) Appl. No.: **29/733,354**

(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; D4/104,
D4/120, 137, 138, 100, 108, 111;
D8/90–94, 107, 300, 310–311, 313, 97,
D8/387, 82; D28/57, 59, 62; 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 25/09033; 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

D462,256 S * 9/2002 Jaynes D8/382
D790,700 S * 6/2017 Zhou D24/146
D807,727 S * 1/2018 Krombein D8/354
D808,248 S * 1/2018 Krombein D8/354

D877,898 S * 3/2020 Tiedeken D24/146
D908,874 S * 1/2021 Conklin D24/155
D926,976 S * 8/2021 Phillips D24/127

(Continued)

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 first side view of the trocar depth limiter of FIG. 1;

FIG. 3 is a second side view of the trocar depth limiter of FIG. 1;

FIG. 4 is a third side view of the trocar depth limiter of FIG. 1;

FIG. 5 is a fourth side view of the trocar depth limiter of FIG. 1;

FIG. 6 is a top view of the trocar depth limiter of FIG. 1;

FIG. 7 is a bottom view of the trocar depth limiter of FIG. 1;

FIG. 8 is a perspective view of a second embodiment of a trocar depth limiter embodying our new design;

FIG. 9 is a first side view of the trocar depth limiter of FIG. 8;

FIG. 10 is a second side view of the trocar depth limiter of FIG. 8;

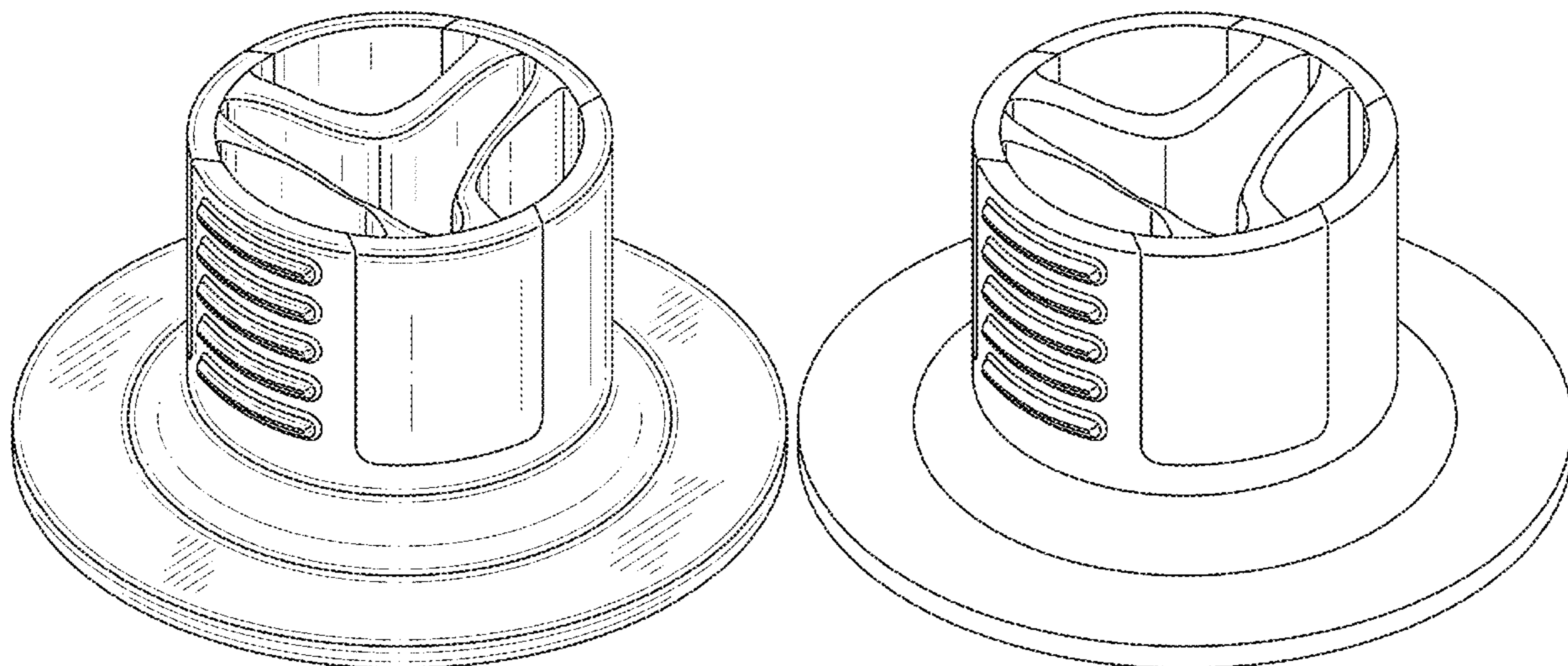
FIG. 11 is a third side view of the trocar depth limiter of FIG. 8;

FIG. 12 is a fourth side view of the trocar depth limiter of FIG. 8;

FIG. 13 is a top view of the trocar depth limiter of FIG. 8; and,

FIG. 14 is a bottom view of the trocar depth limiter of FIG. 8.

1 Claim, 10 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

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

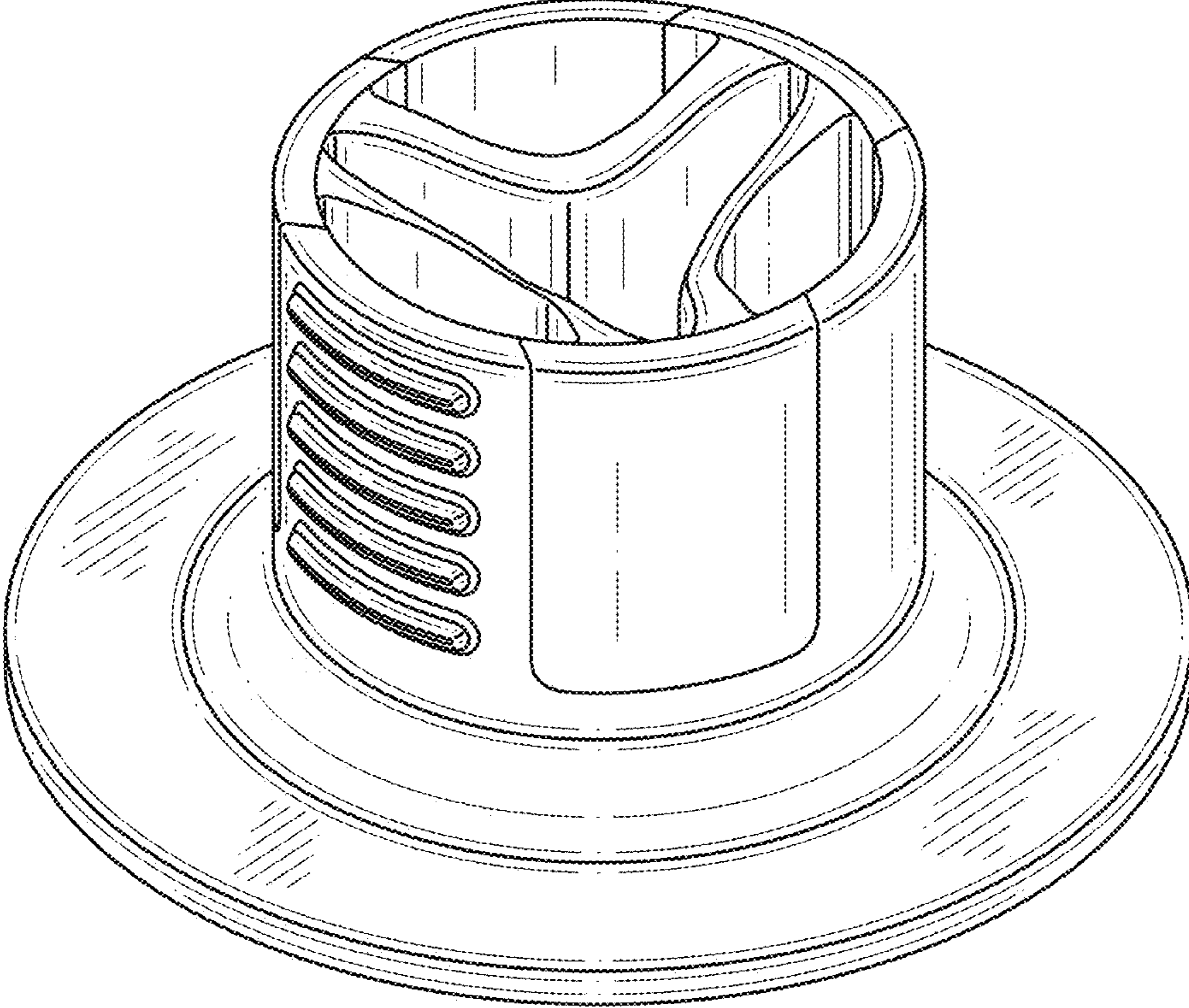


FIG. 1

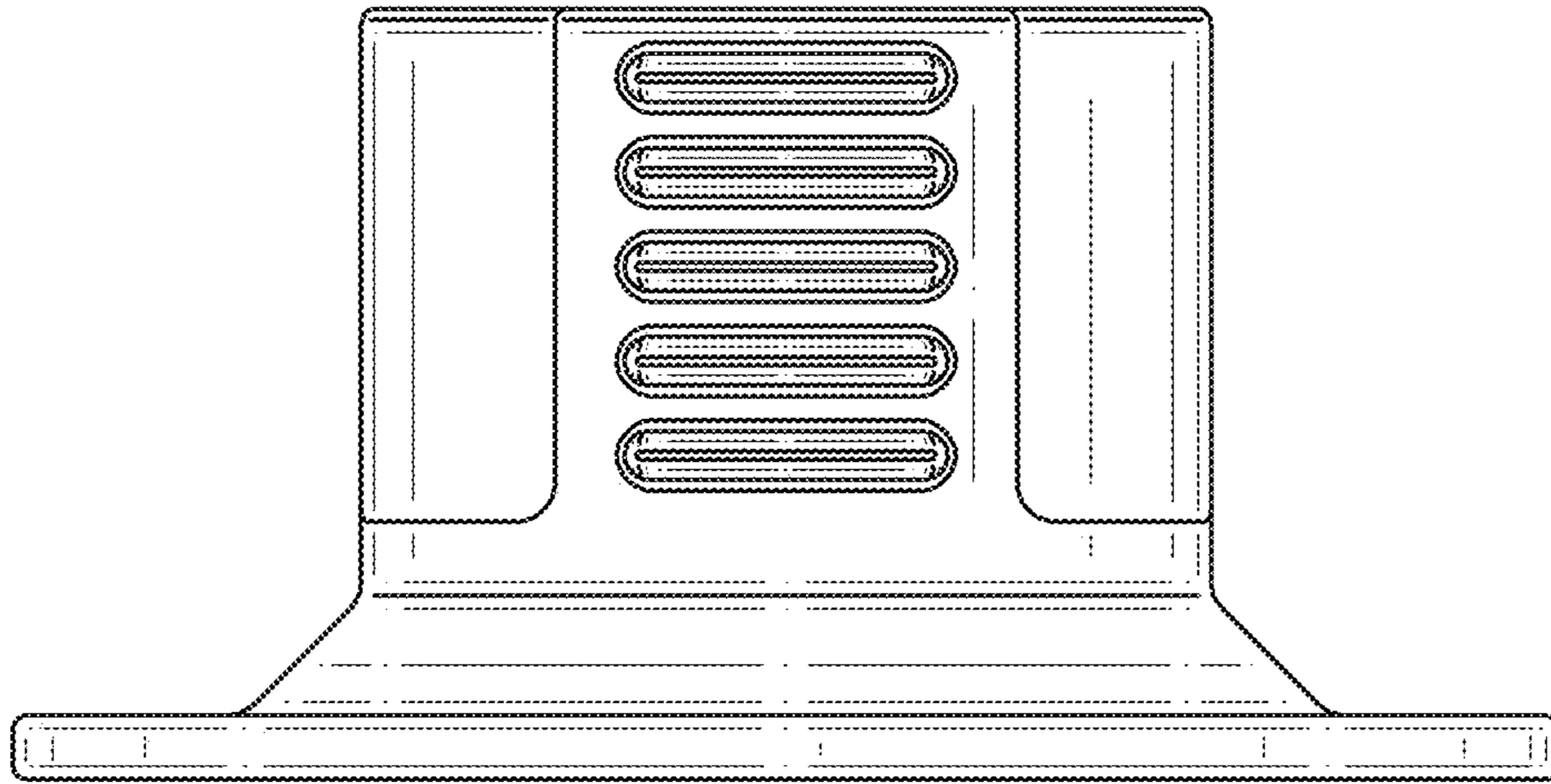


FIG. 2

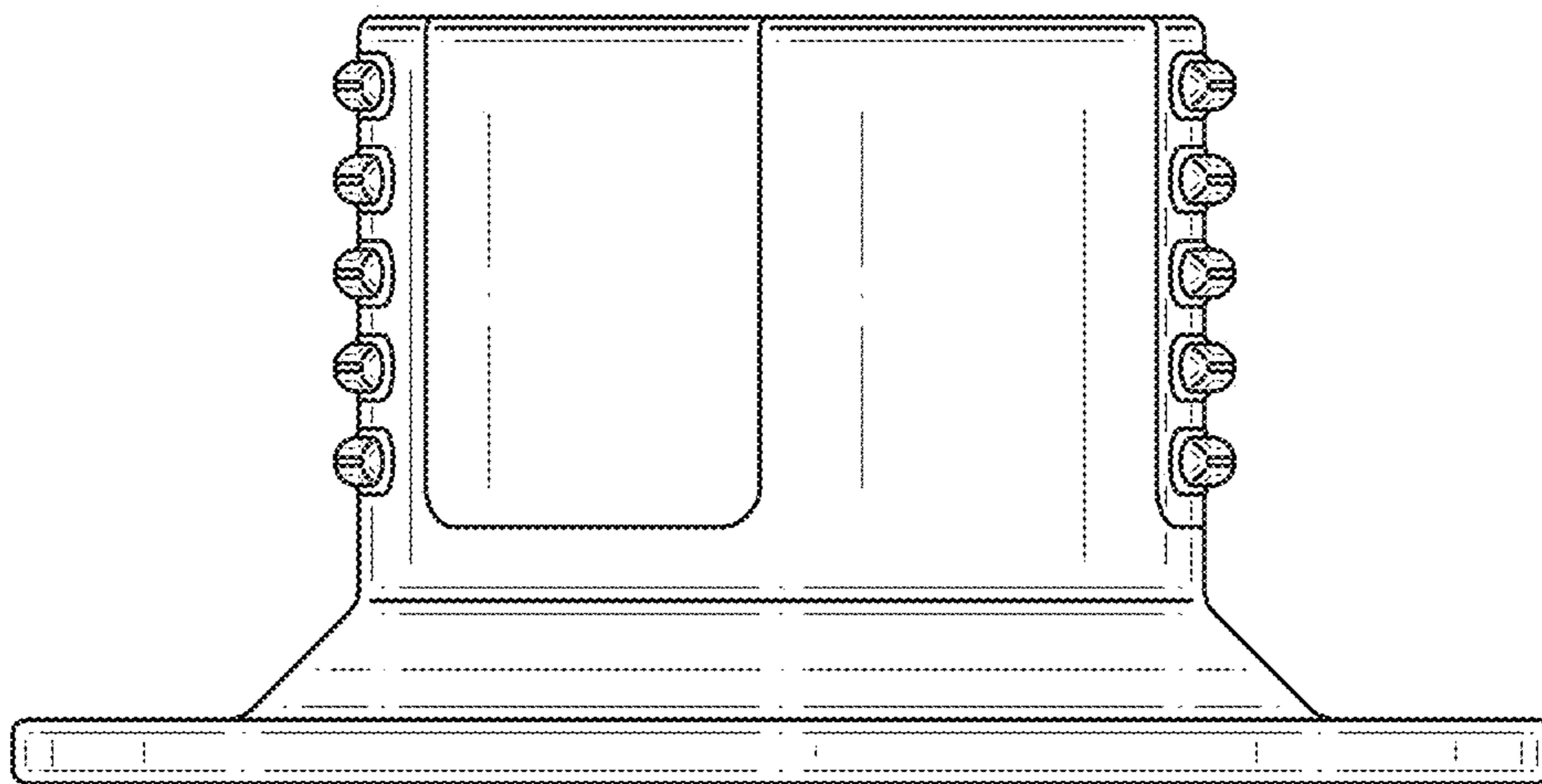


FIG. 3

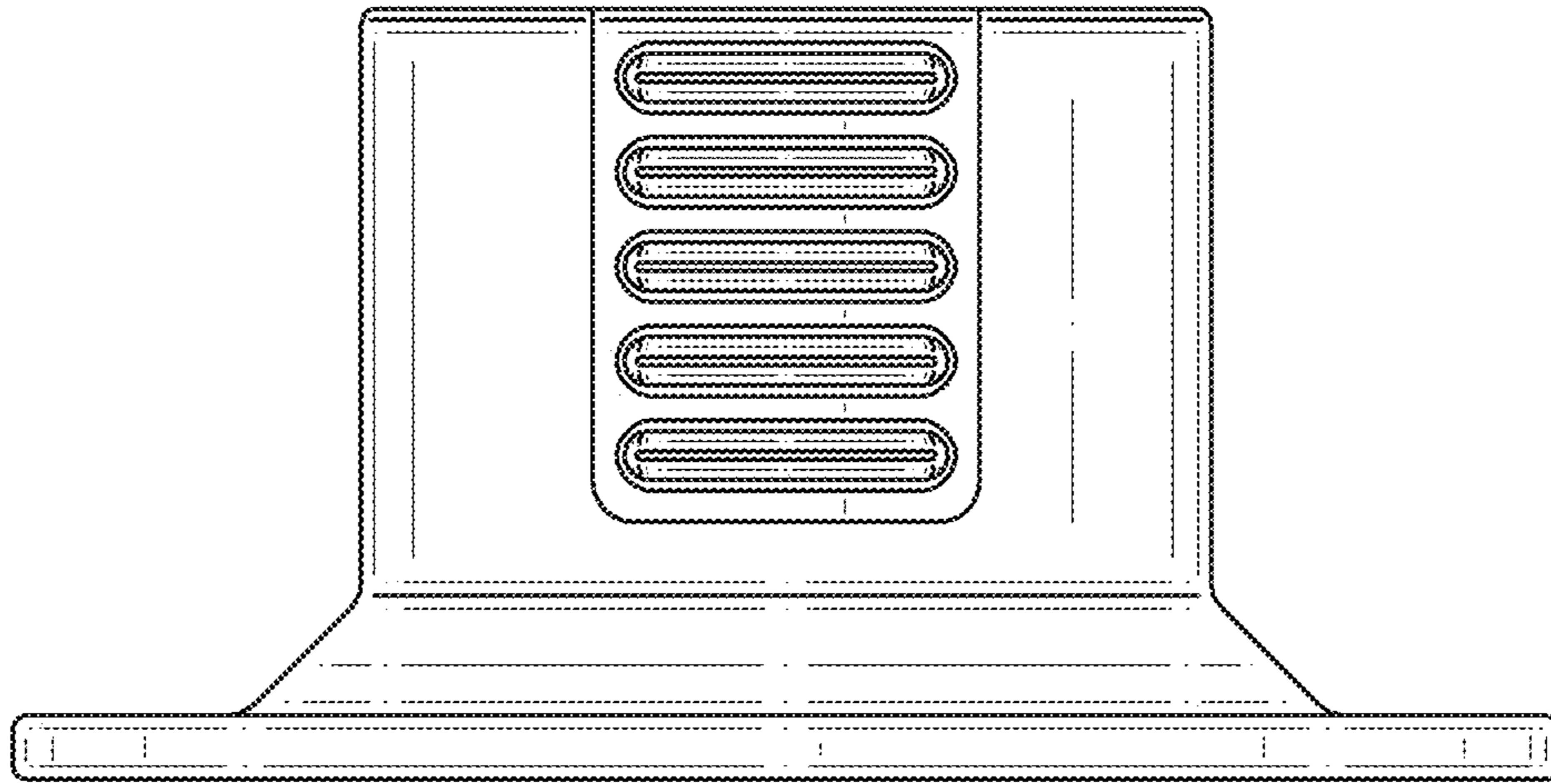


FIG. 4

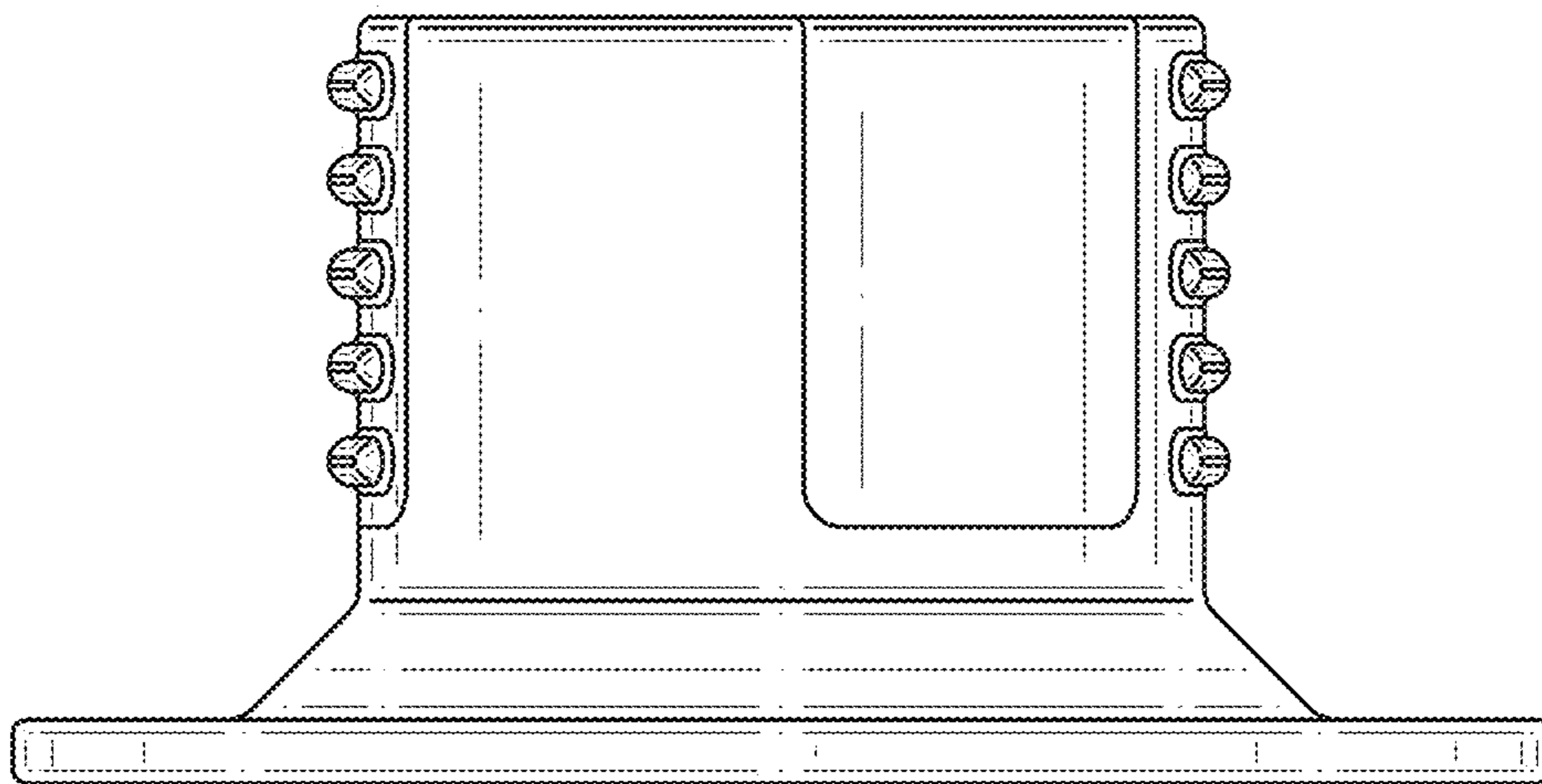


FIG. 5

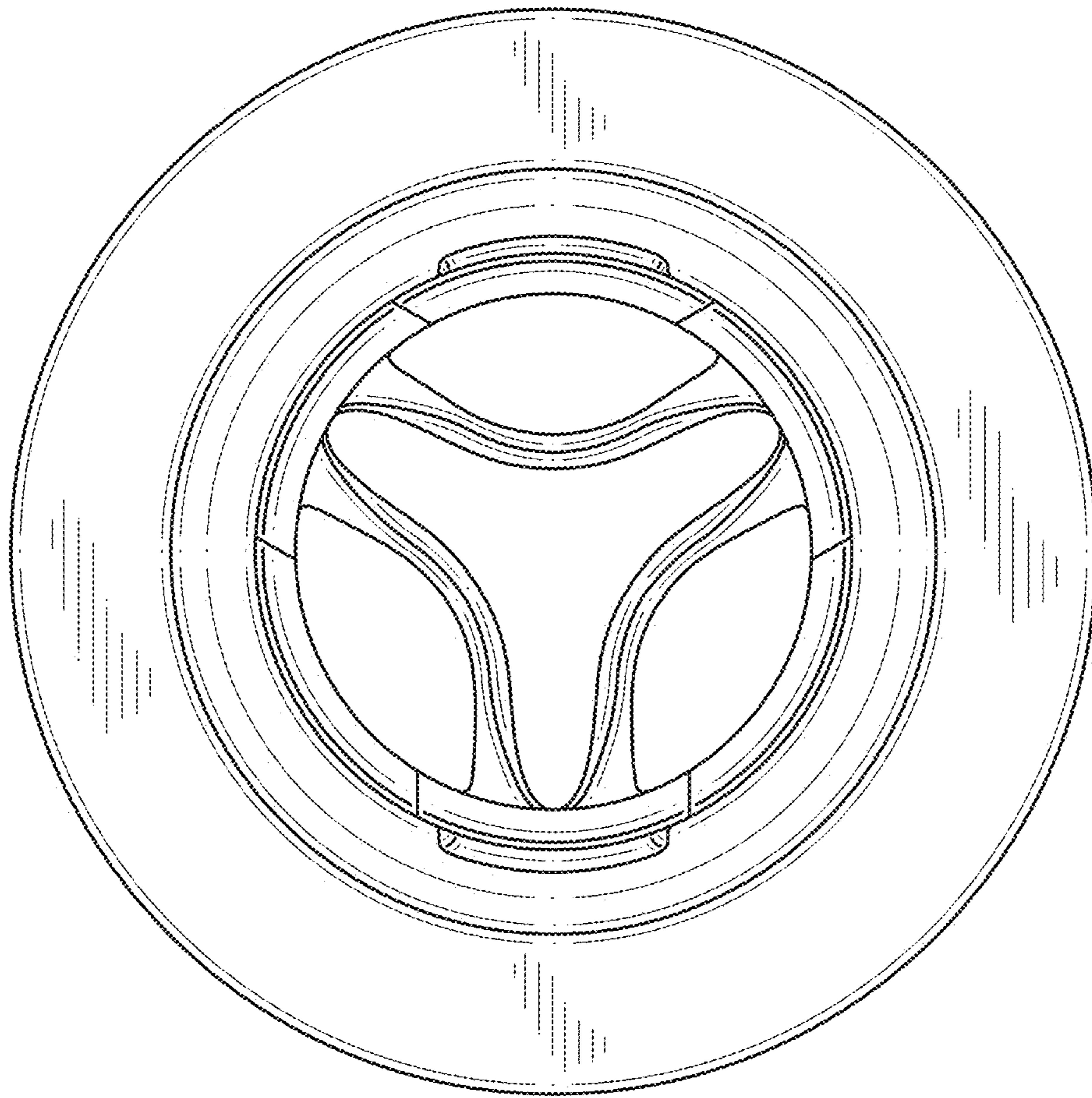


FIG. 6

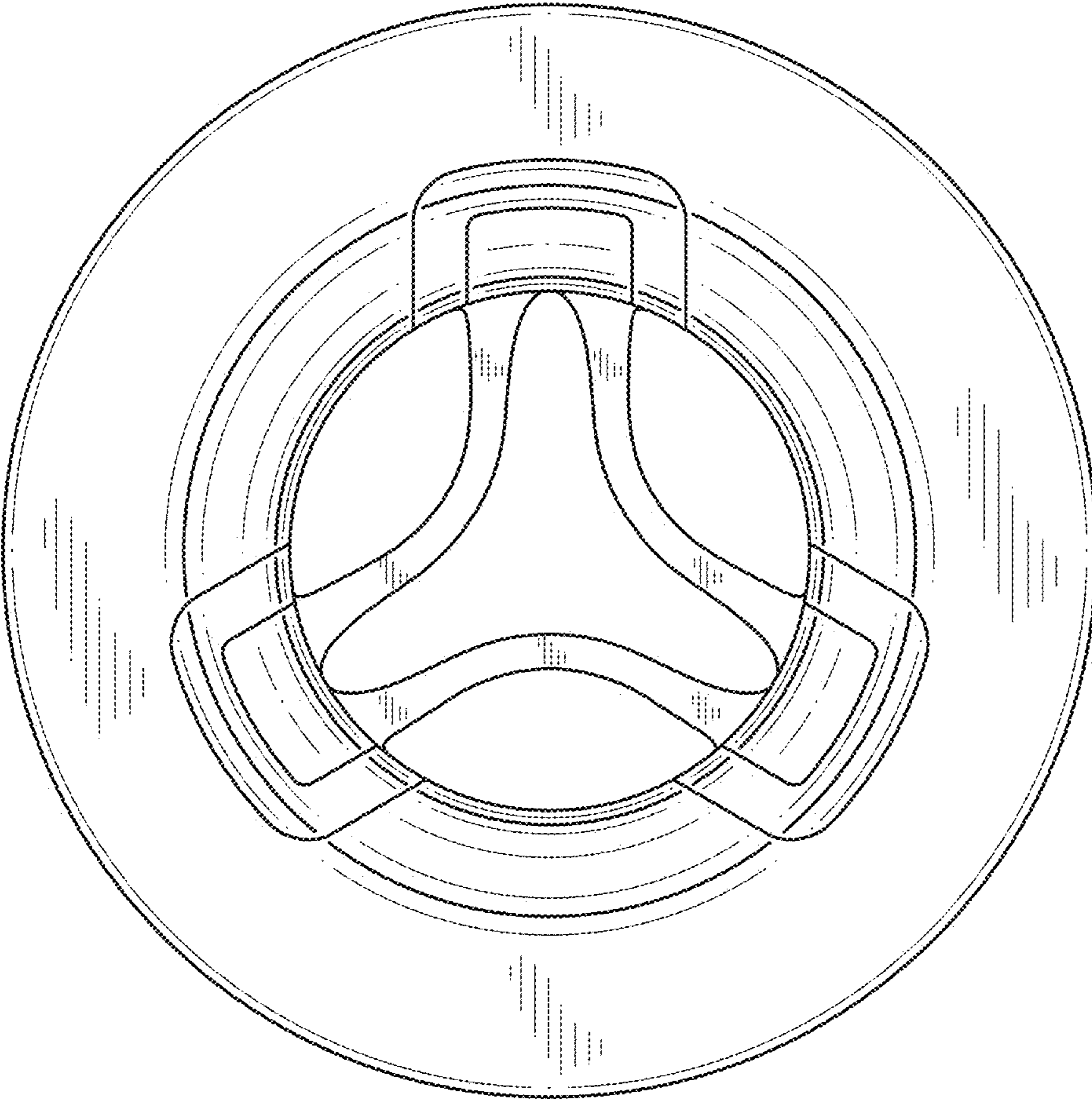


FIG. 7

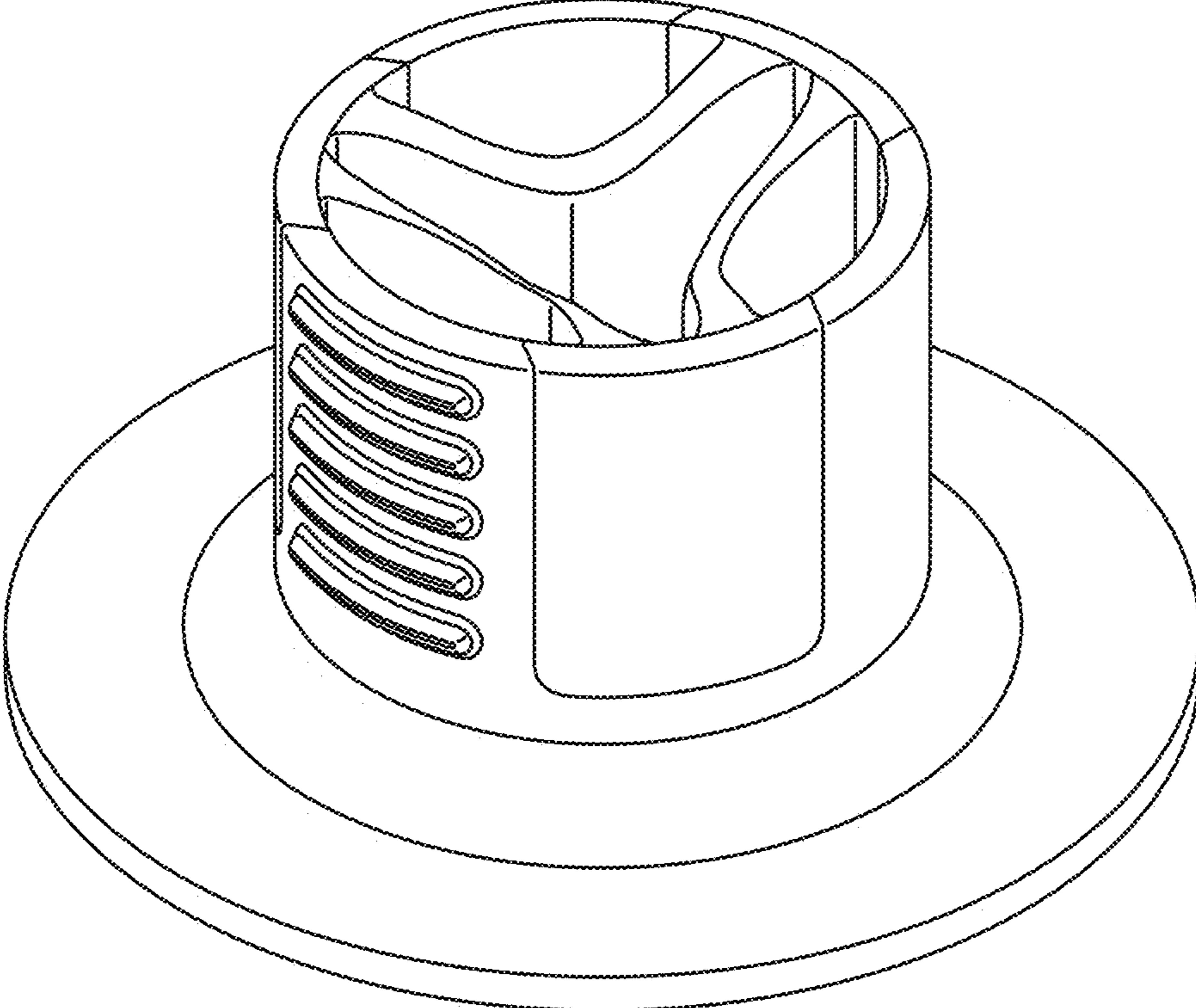


FIG. 8

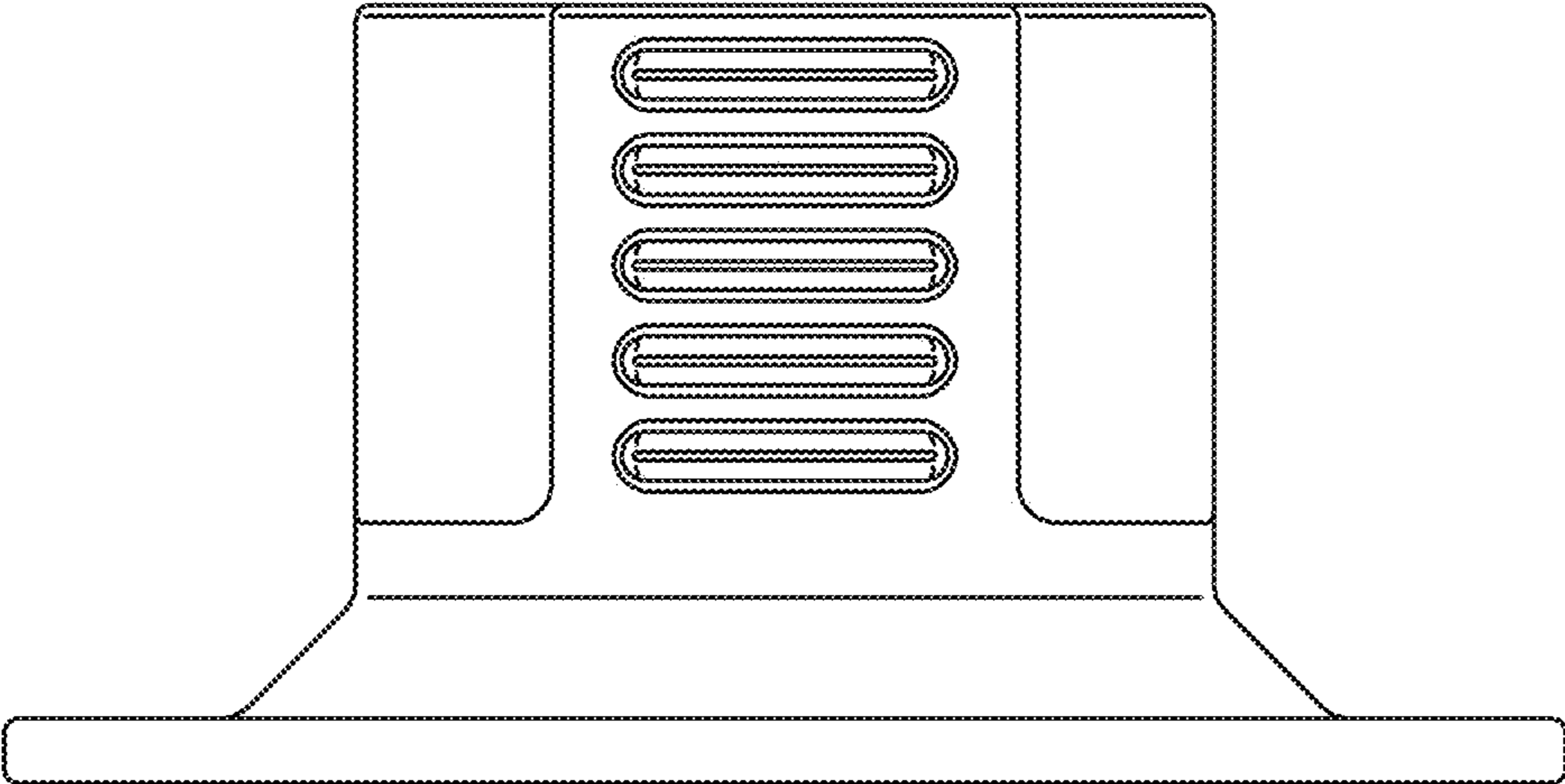


FIG. 9

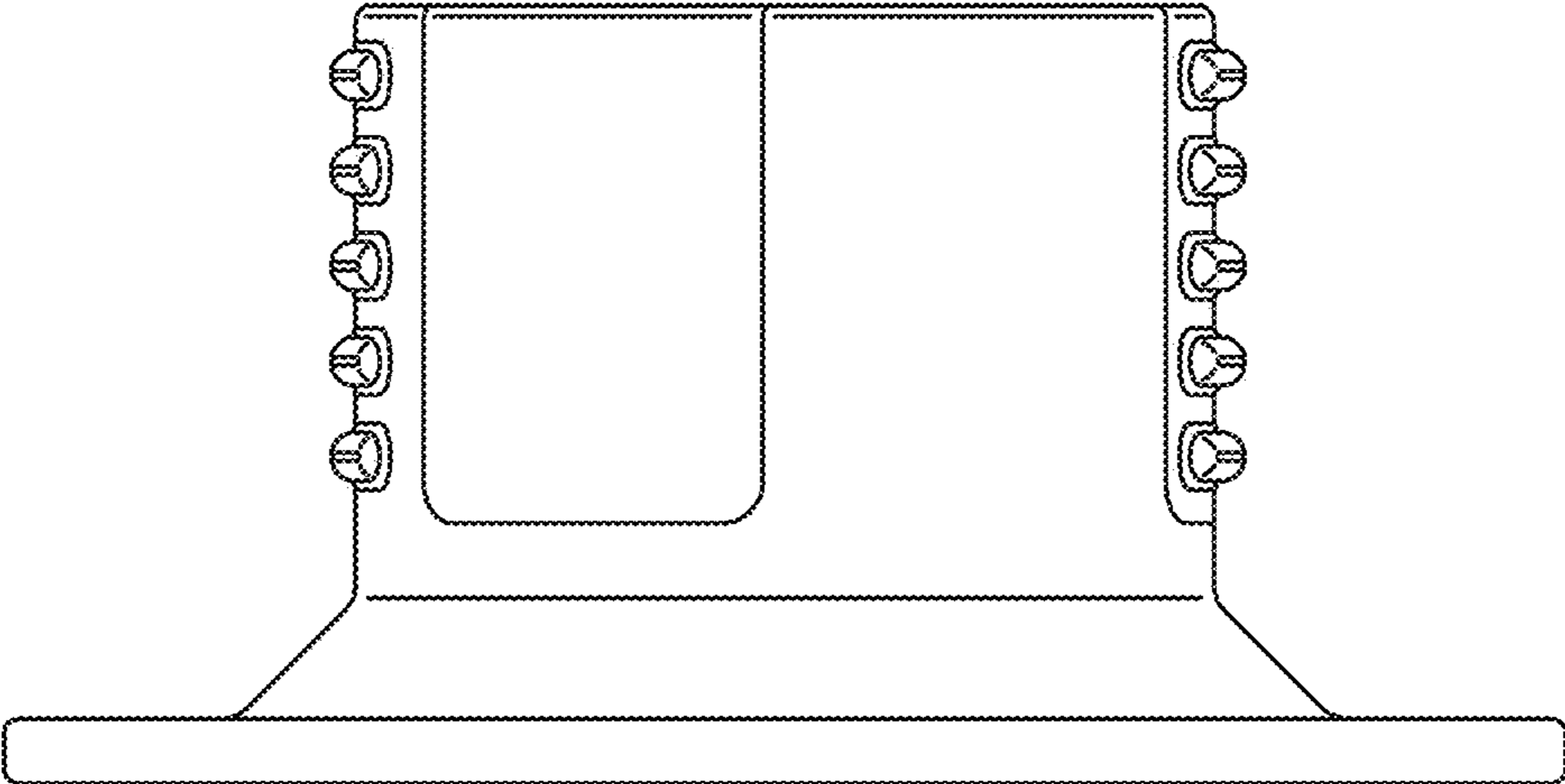


FIG. 10

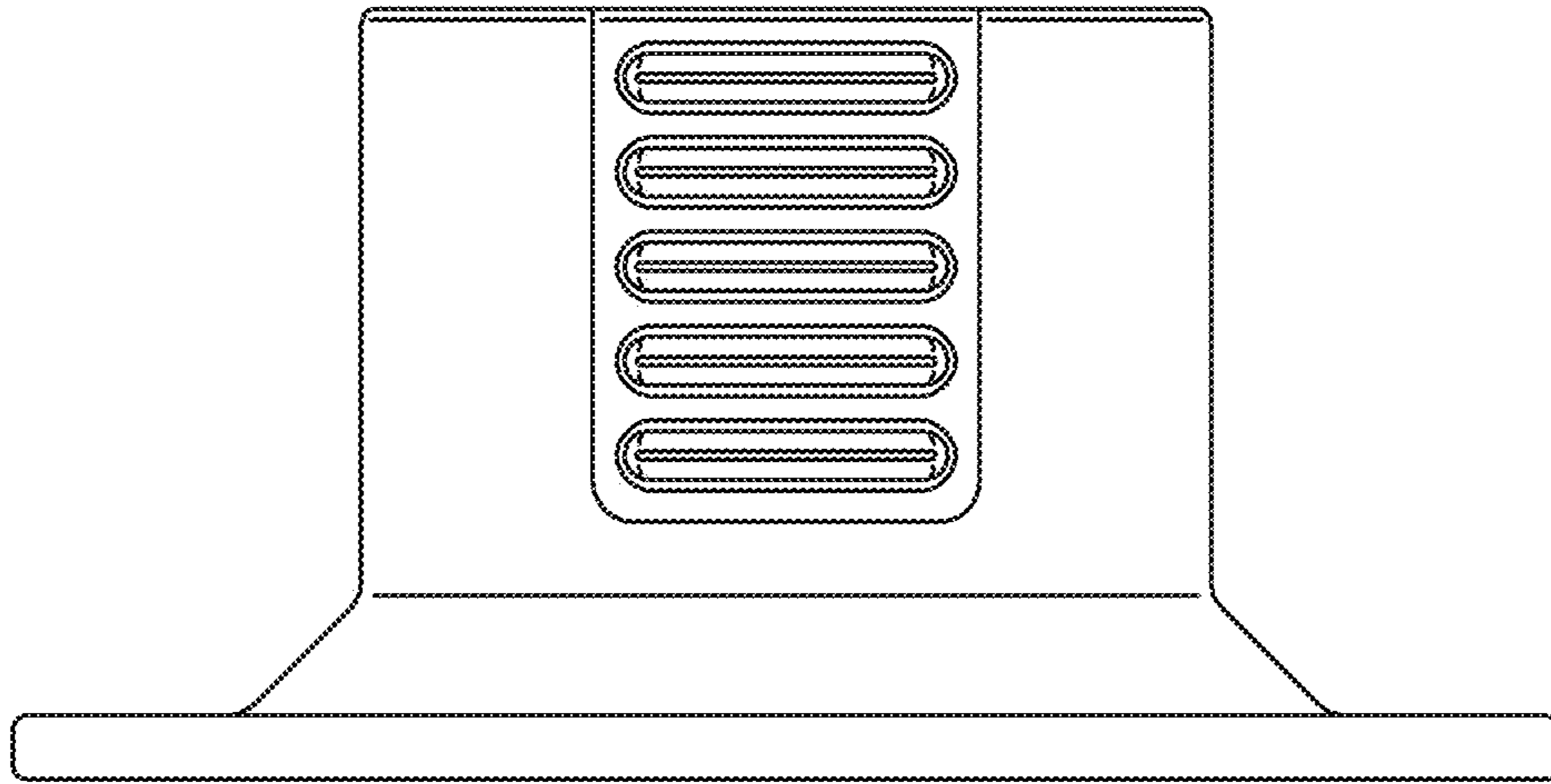


FIG. 11

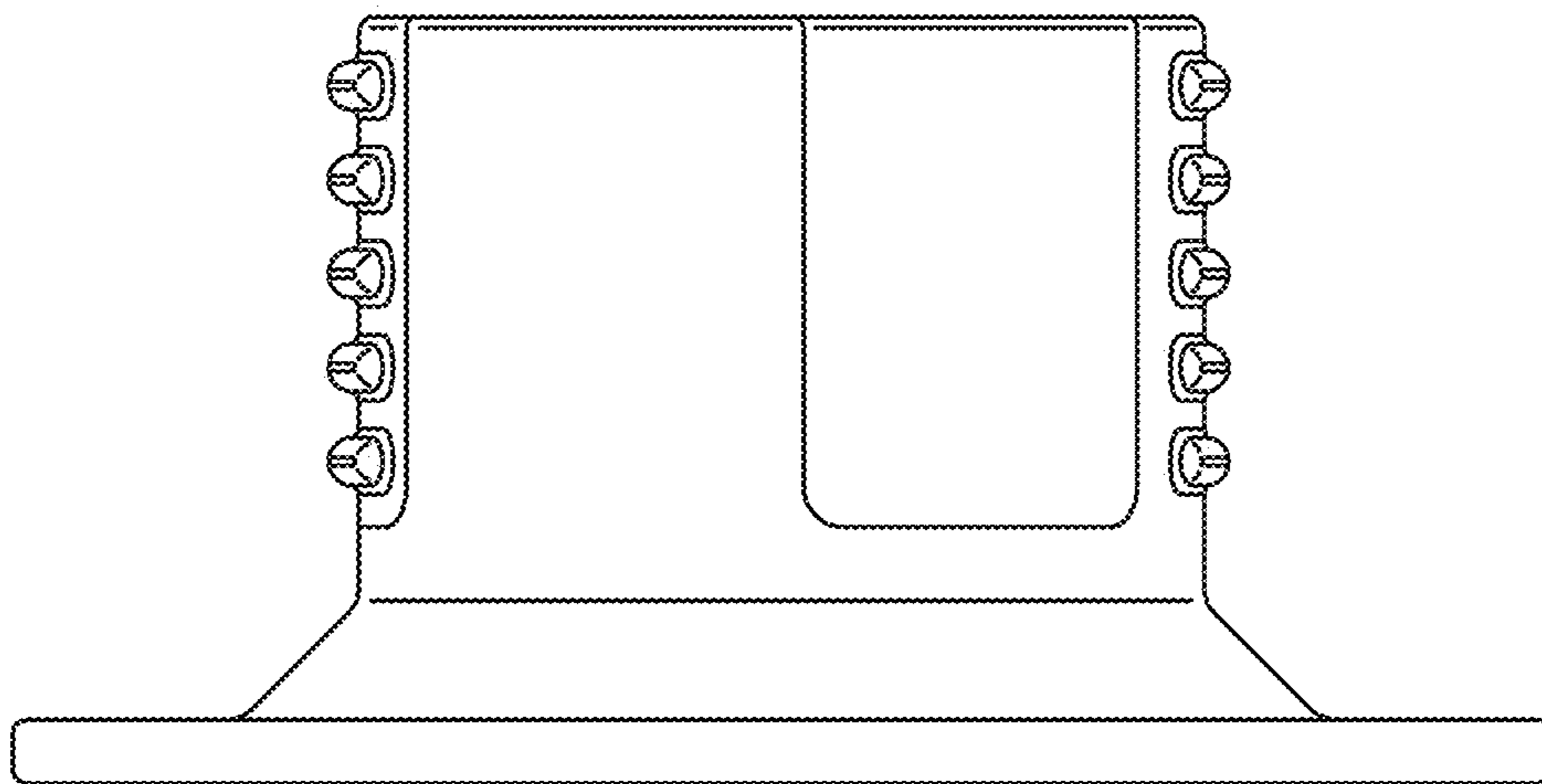


FIG. 12

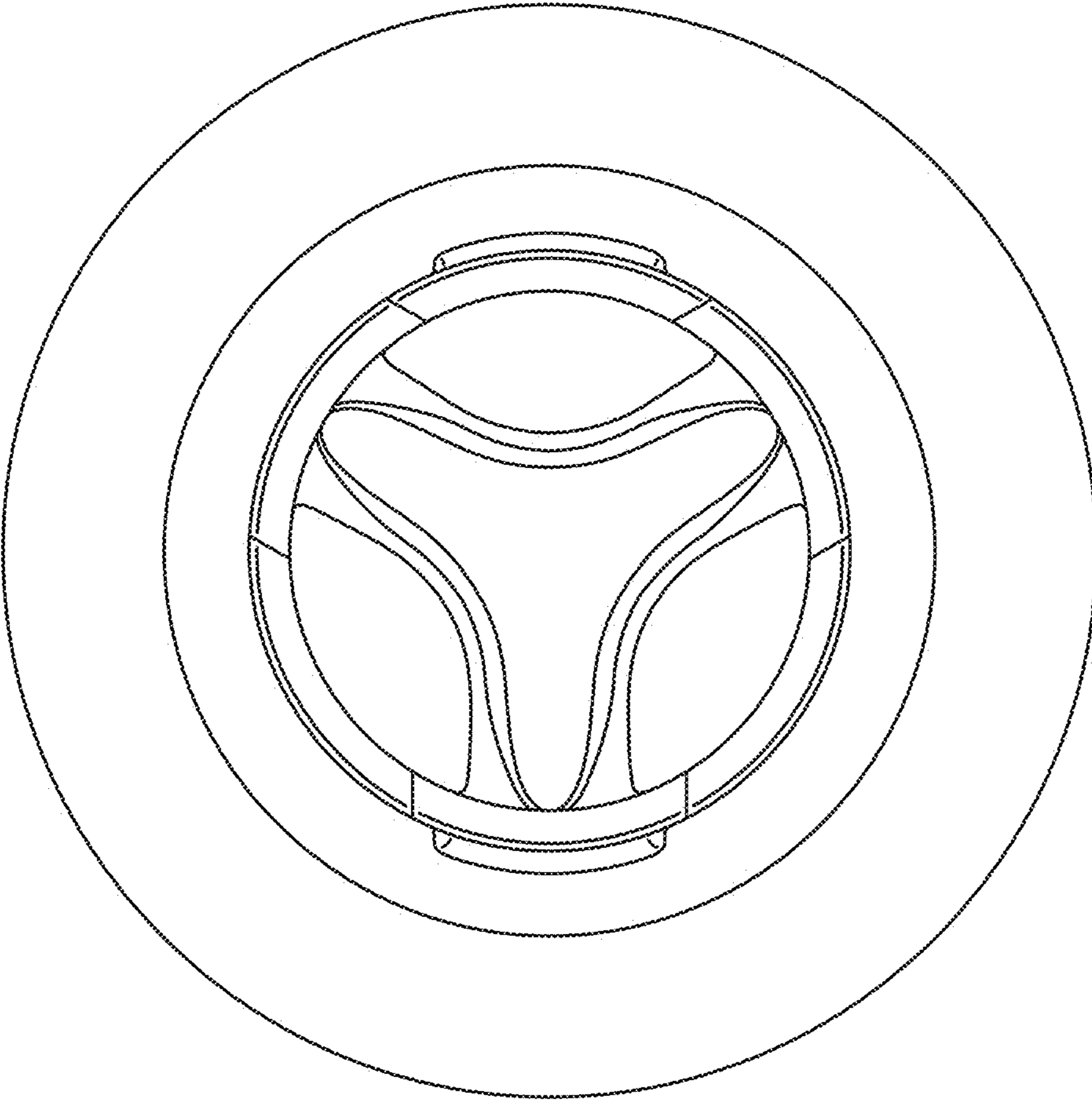


FIG. 13

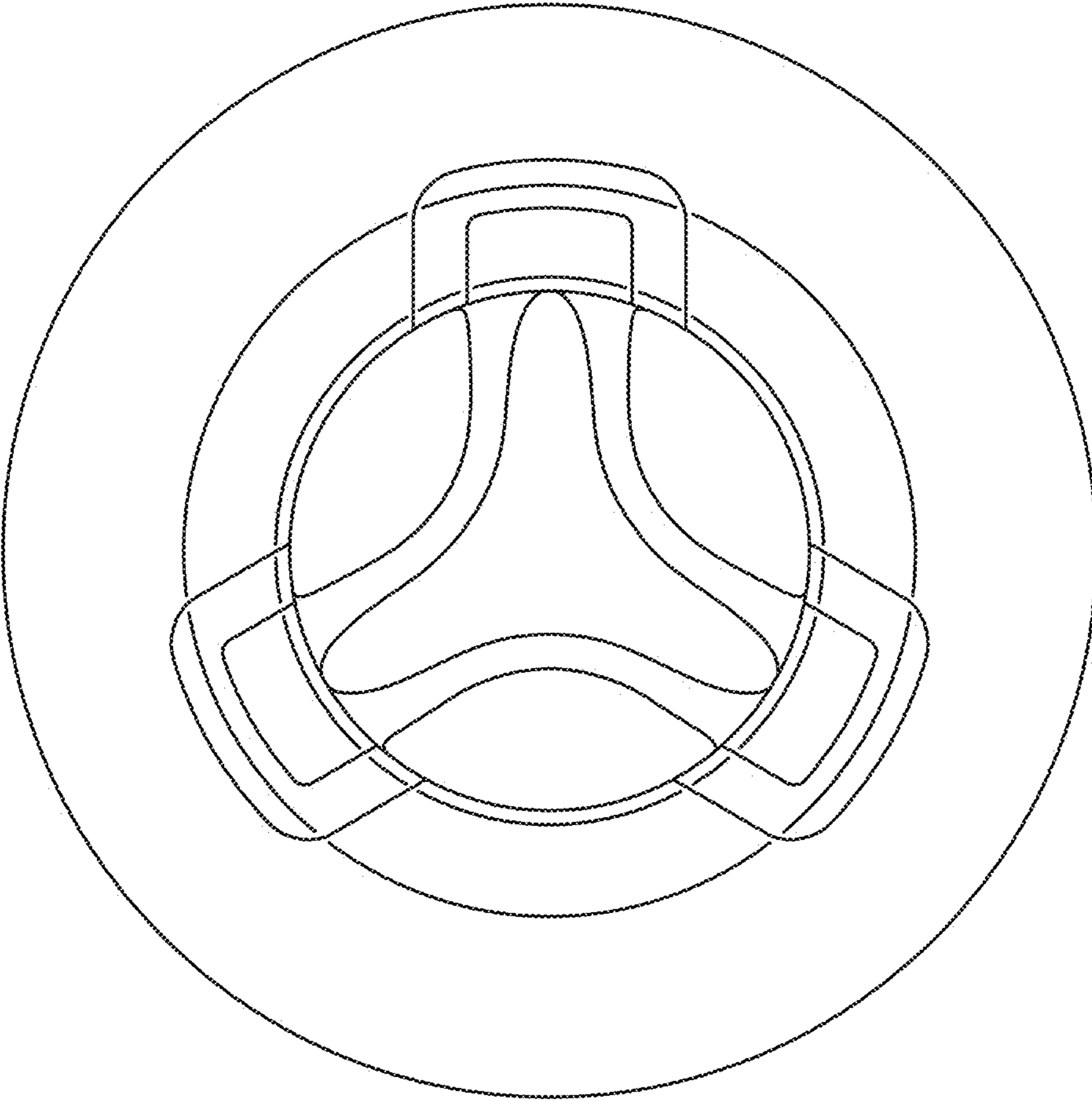


FIG. 14