



US00D992752S

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

(10) **Patent No.:** **US D992,752 S**
(45) **Date of Patent:** **** Jul. 18, 2023**

(54) **HANDRAIL STERILIZER MODULE**

(71) Applicant: **IRTronix, Inc.**, Torrance, CA (US)

(72) Inventors: **Danny Oh**, Rancho Palos Verdes, CA (US); **Chien Nguyen**, Santa Ana, CA (US)

(73) Assignee: **IRTronix, Inc.**, Torrance, CA (US)

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

(21) Appl. No.: **29/751,115**

(22) Filed: **Sep. 18, 2020**

(51) **LOC (14) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/217**

(58) **Field of Classification Search**
USPC D24/209, 210, 216, 217, 218, 231, 232,
D24/234; D34/35
CPC . B66B 23/04; B65G 45/22; B61L 2/18; B61L
2/26
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D869,811 S	*	12/2019	Jeong	.....	D34/35
D898,217 S	*	10/2020	Hickey	.....	D24/217
D933,600 S	*	10/2021	Wang	.....	D24/217
D950,767 S	*	5/2022	Khan	.....	D24/217
D963,873 S	*	9/2022	Pfiffner	.....	D24/210
11,465,851 B1	*	10/2022	Kuehl	.....	B65G 45/22
D970,746 S	*	11/2022	Matsuzawa	.....	D24/216
D971,438 S	*	11/2022	Shah	.....	D24/232
11,485,585 B1	*	11/2022	Bitondo	.....	A21B 3/16
D976,436 S	*	1/2023	Modica	.....	B65G 45/14 D24/227
D981,005 S	*	3/2023	Henke	.....	B65G 45/22 D24/231
11,618,635 B1	*	4/2023	Kane	.....	B65G 45/14 198/494

2020/0384141	A1*	12/2020	Kim	.....	A61L 2/10
2021/0276834	A1*	9/2021	Bong	.....	A61L 2/10
2022/0047735	A1*	2/2022	Kim	.....	A61L 2/10
2022/0062471	A1*	3/2022	Sakurai	.....	A61L 2/10
2023/0057901	A1*	2/2023	Robinson	.....	B65G 45/14

FOREIGN PATENT DOCUMENTS

JP D2018-16473 * 5/2019

OTHER PUBLICATIONS

Greg Isaacson. Sterilization Module Cleans Handrails With UV-C Light. Jun. 9, 2020. Retrieved from internet on Aug. 30, 2022 at: <https://www.commercialsearch.com/news/sterilization-module-cleans-handrails-with-uv-c-light/>.*

(Continued)

Primary Examiner — T Chase Nelson

Assistant Examiner — Kelly L Gross

(57) **CLAIM**

The ornamental design for a handrail sterilizer module, as shown and described.

DESCRIPTION

FIG. 1 is a front-top perspective view of a handrail sterilizer module showing my new design;

FIG. 2 is a front-bottom perspective view thereof;

FIG. 3 is a rear-top perspective view thereof;

FIG. 4 is a rear-bottom perspective view thereof;

FIG. 5 is a front elevational view thereof;

FIG. 6 is a rear elevational view thereof;

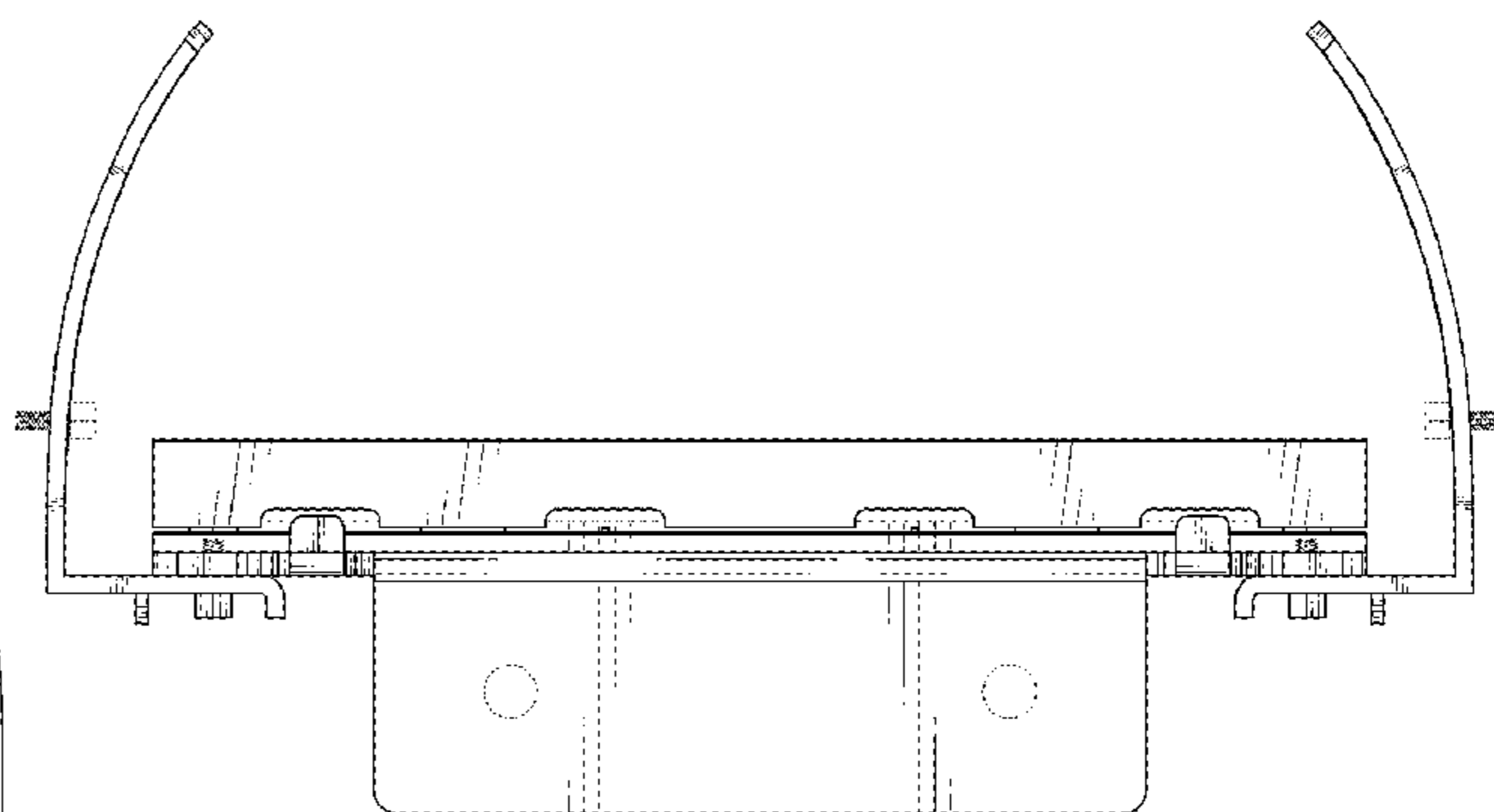
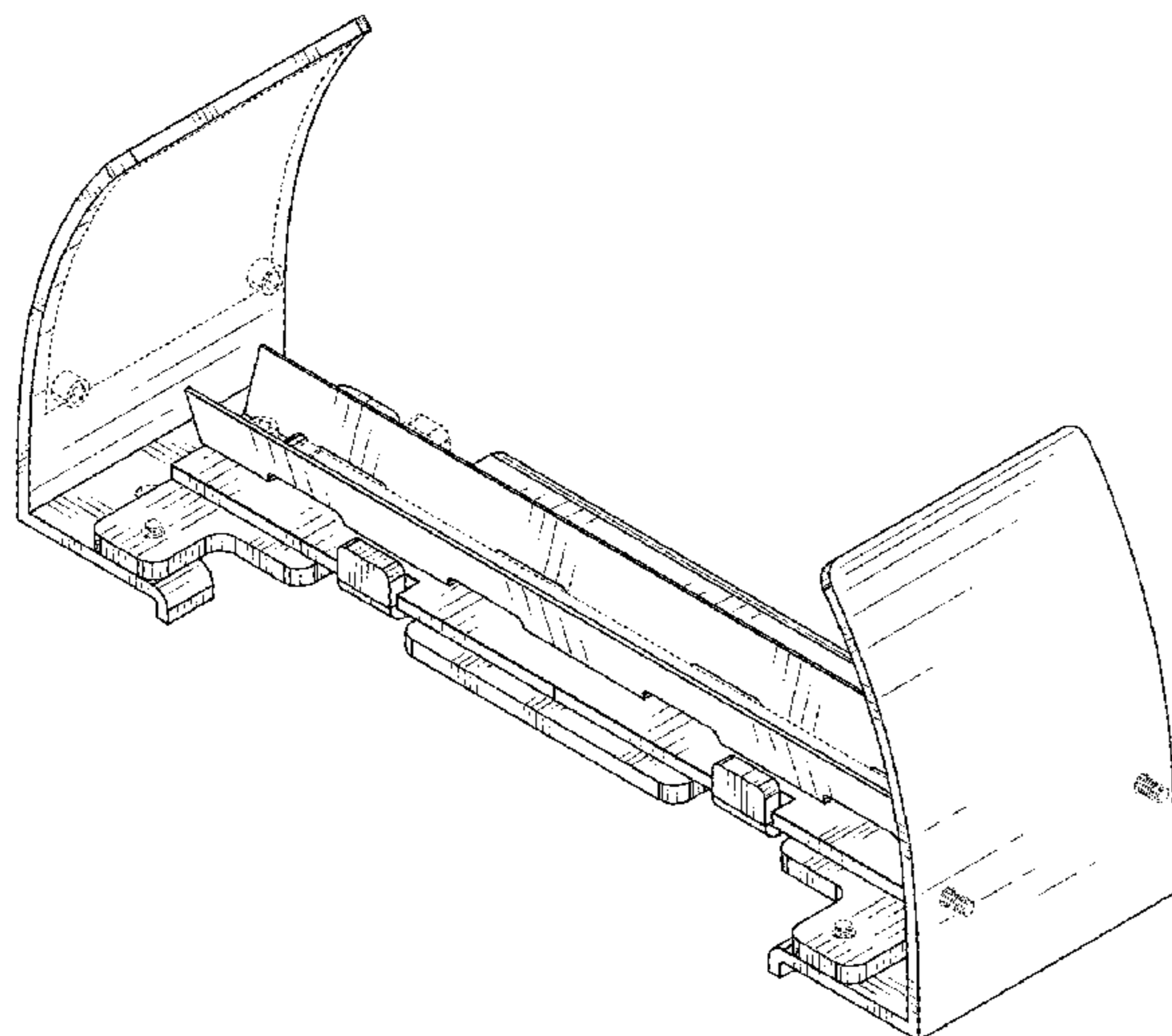
FIG. 7 is a right elevational view thereof, where the left elevational view is mirrored thereto;

FIG. 8 is a top plan view thereof; and,

FIG. 9 is a bottom plan view thereof.

The broken lines depict portions of the handrail sterilizer module that form no part of the claimed design.

1 Claim, 9 Drawing Sheets



(56)

References Cited

OTHER PUBLICATIONS

EHC Global. EHC Global Launches LED UV-C Handrail Sterilization Solution for Escalators and Moving Walks. Apr. 20, 2020. Retrieved from internet on Aug. 30, 2022 at: <https://www.ehc-global.com/ehc-global-launches-led-uv-c-handrail-sterilization-solution-for-escalators-and-moving-walks/>.*

* cited by examiner

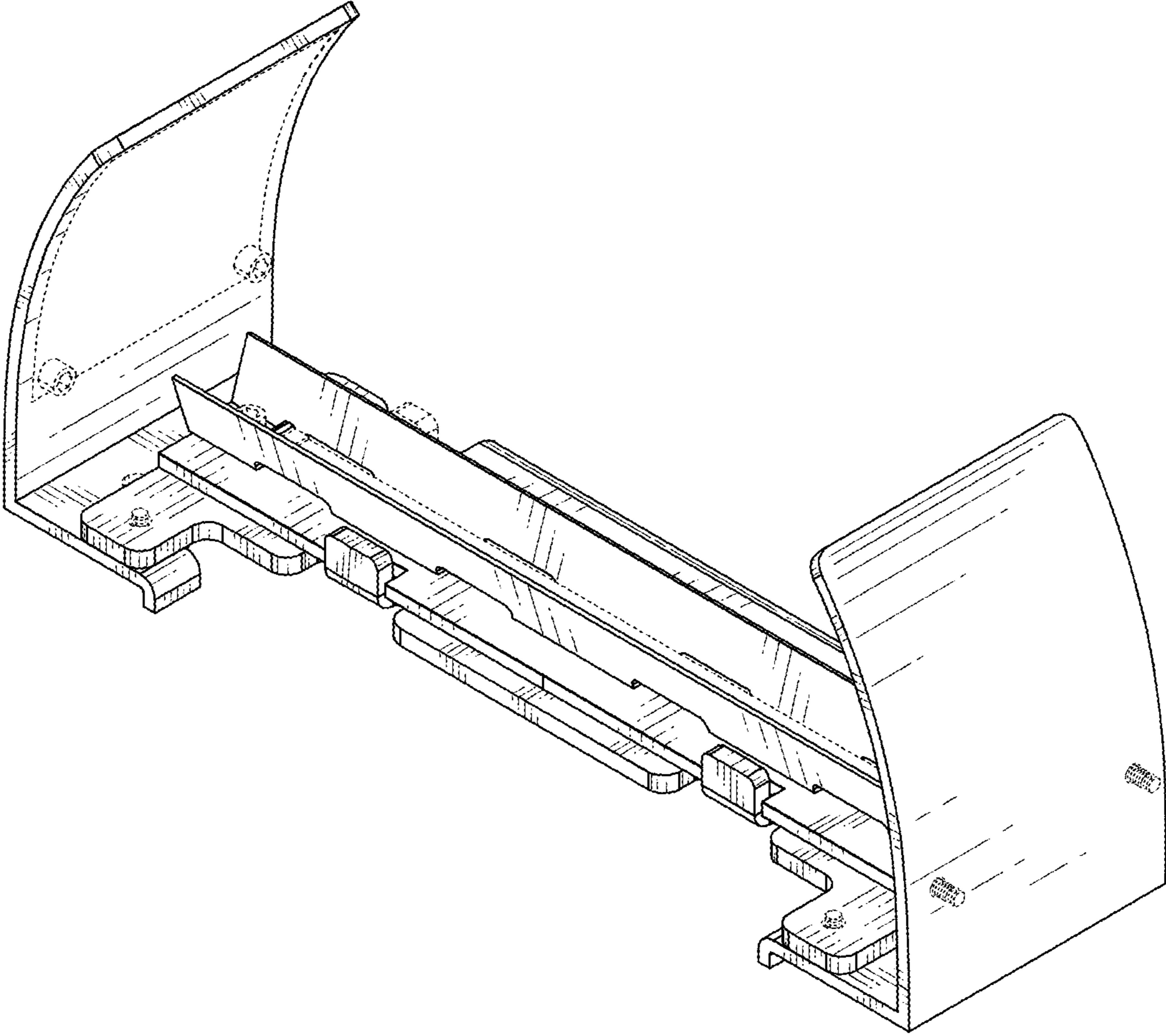


FIG. 1

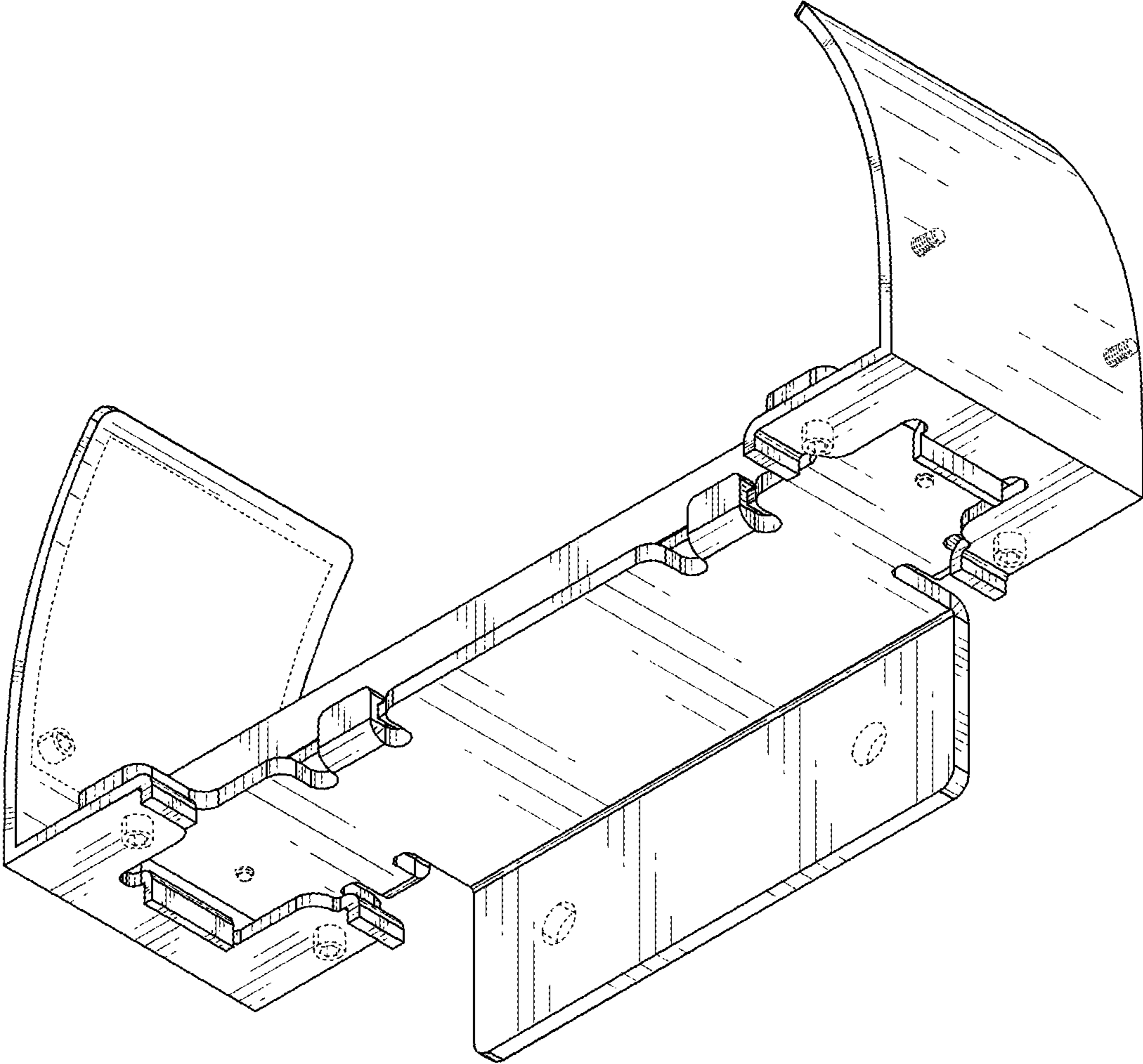


FIG. 2

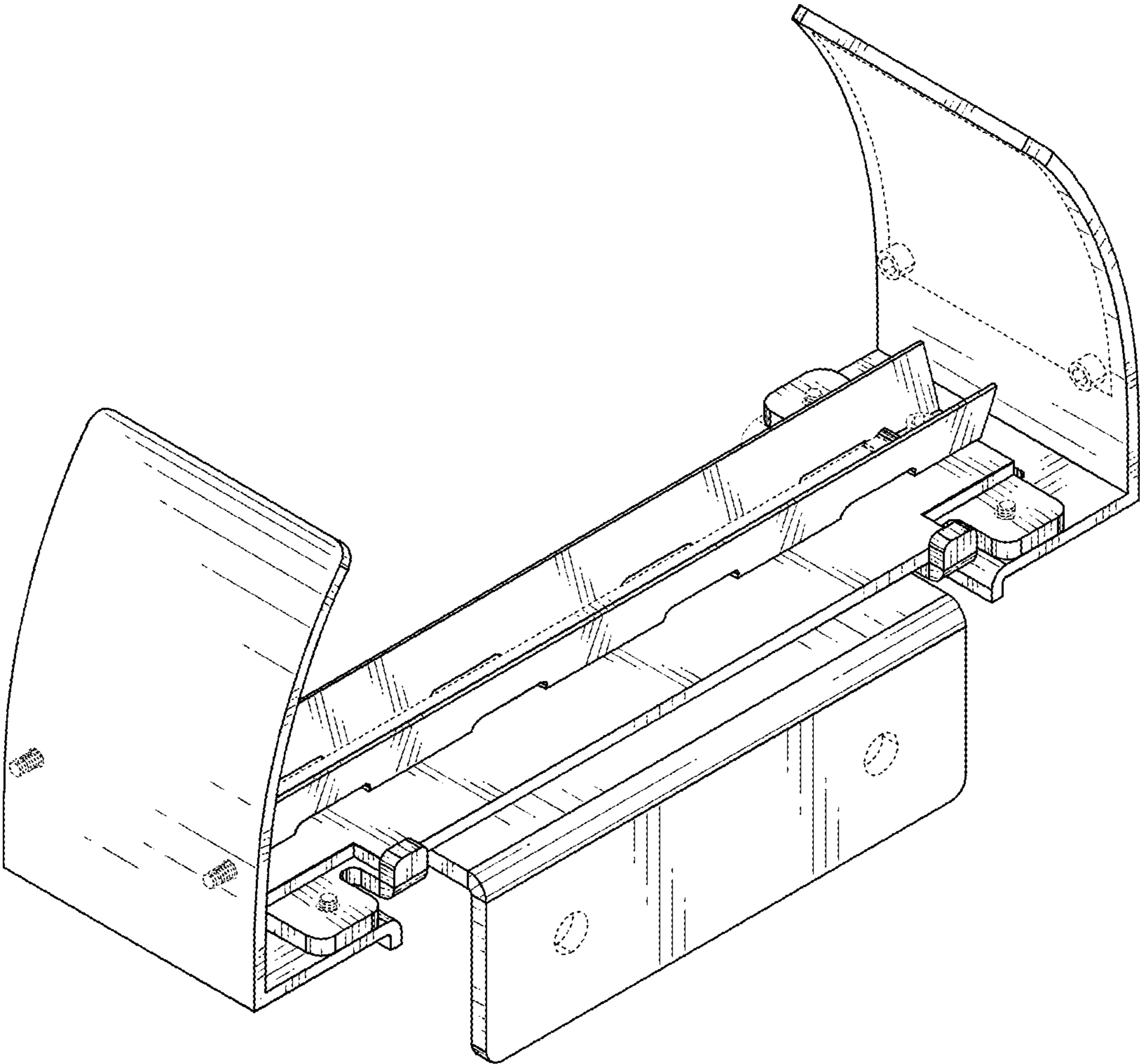


FIG. 3

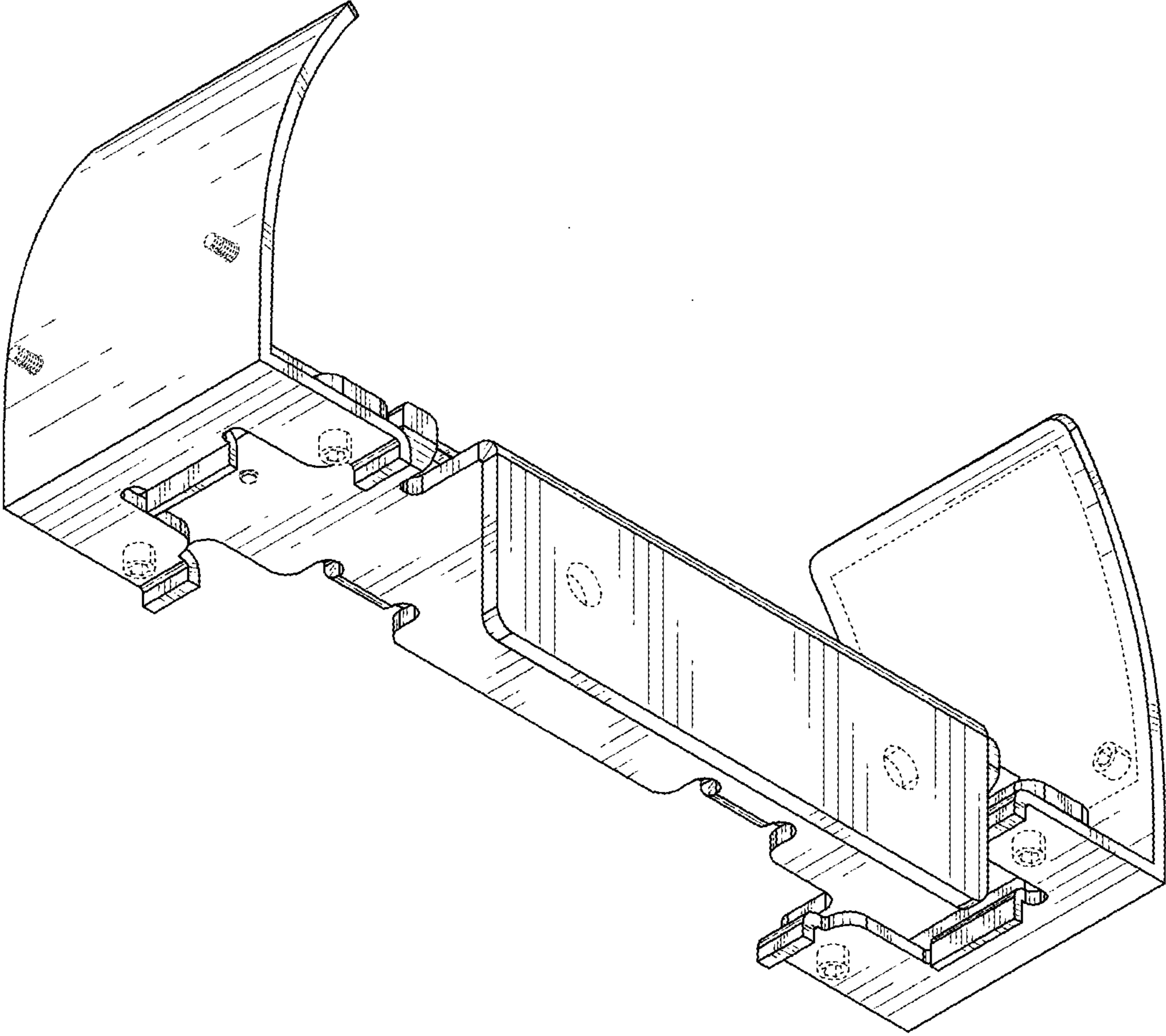


FIG. 4

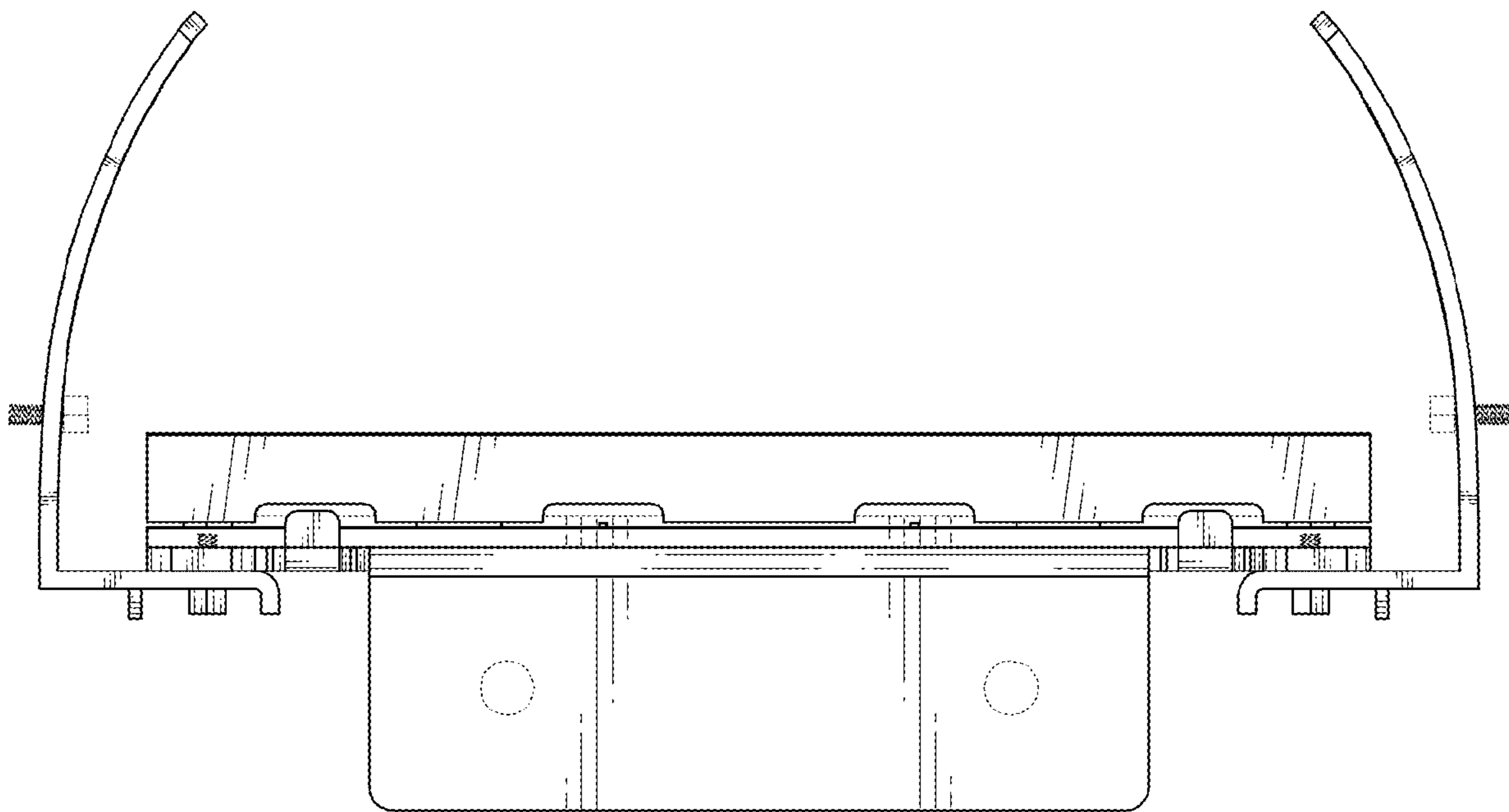


FIG. 5

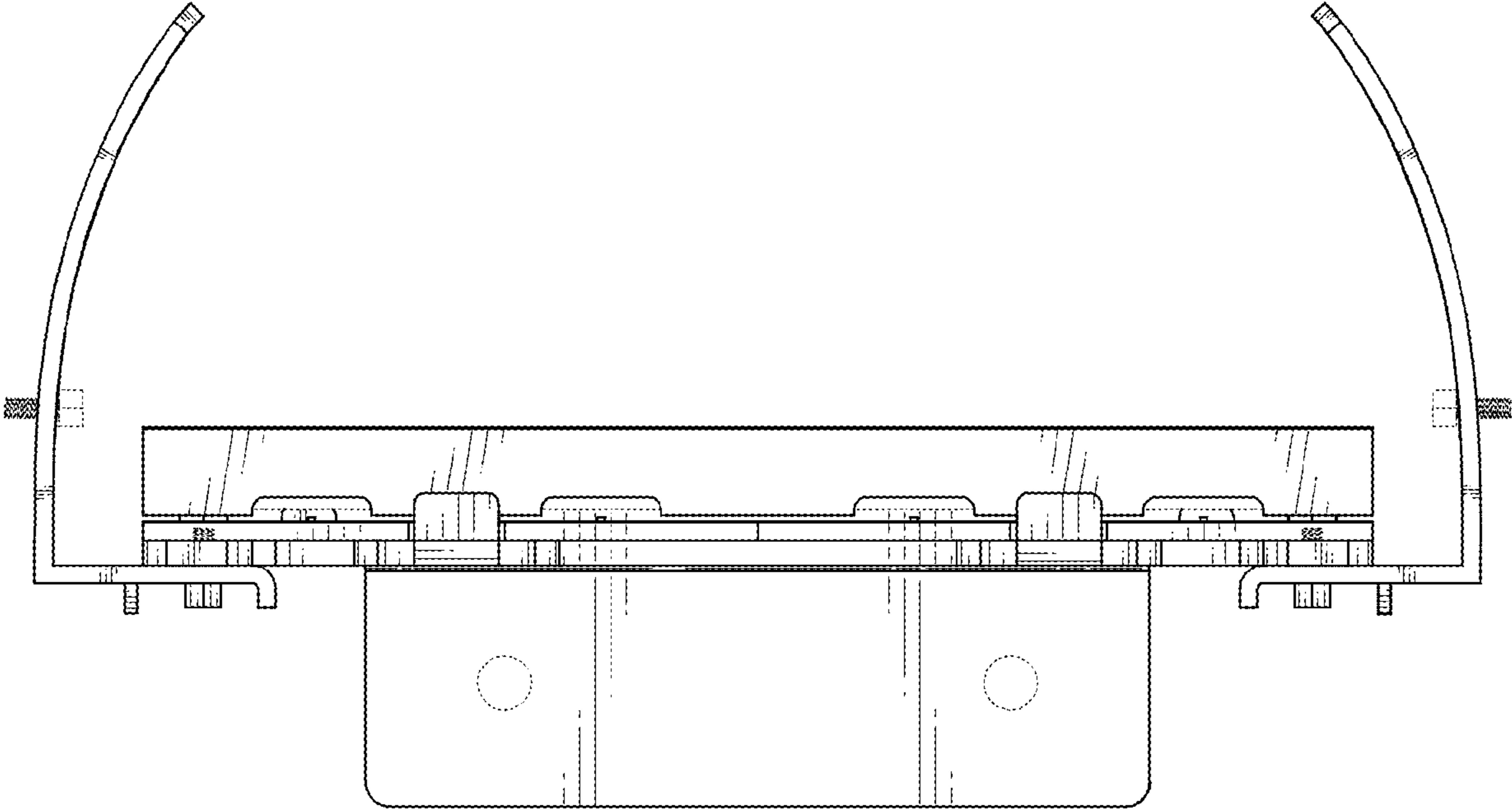


FIG. 6

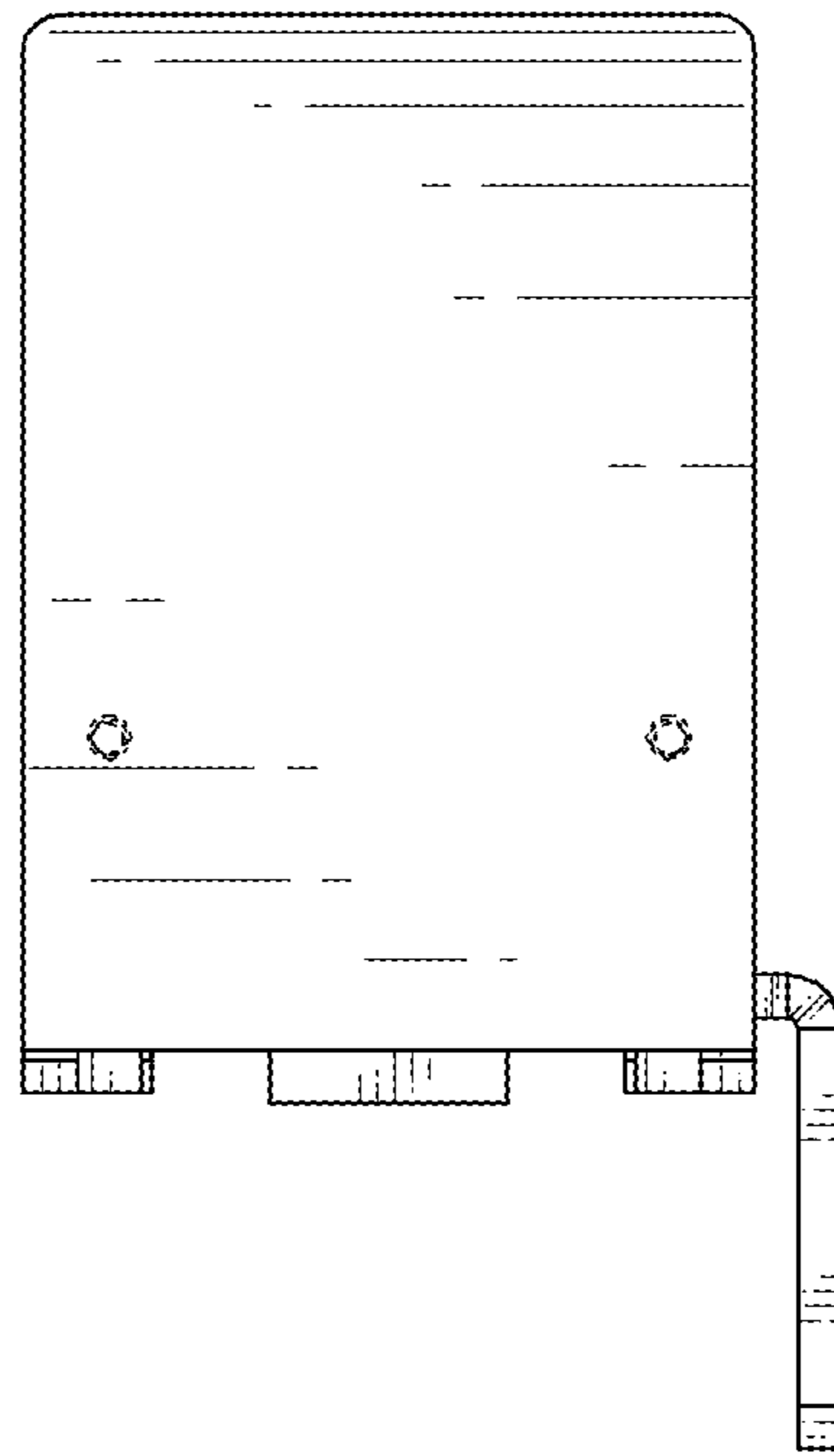


FIG. 7

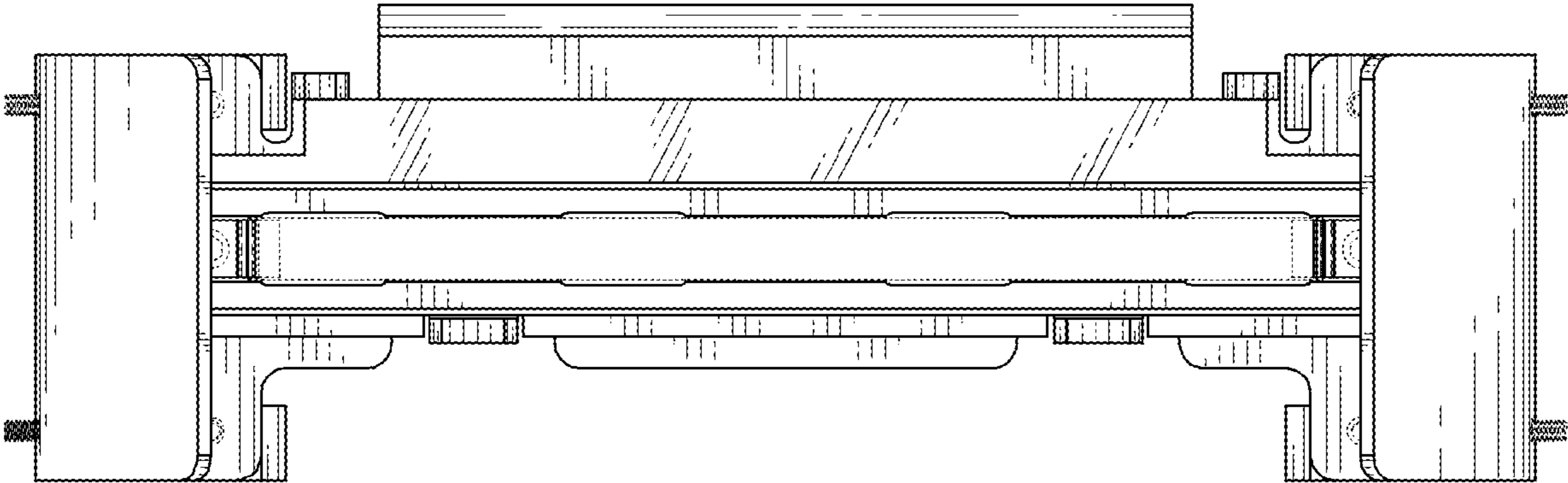


FIG. 8

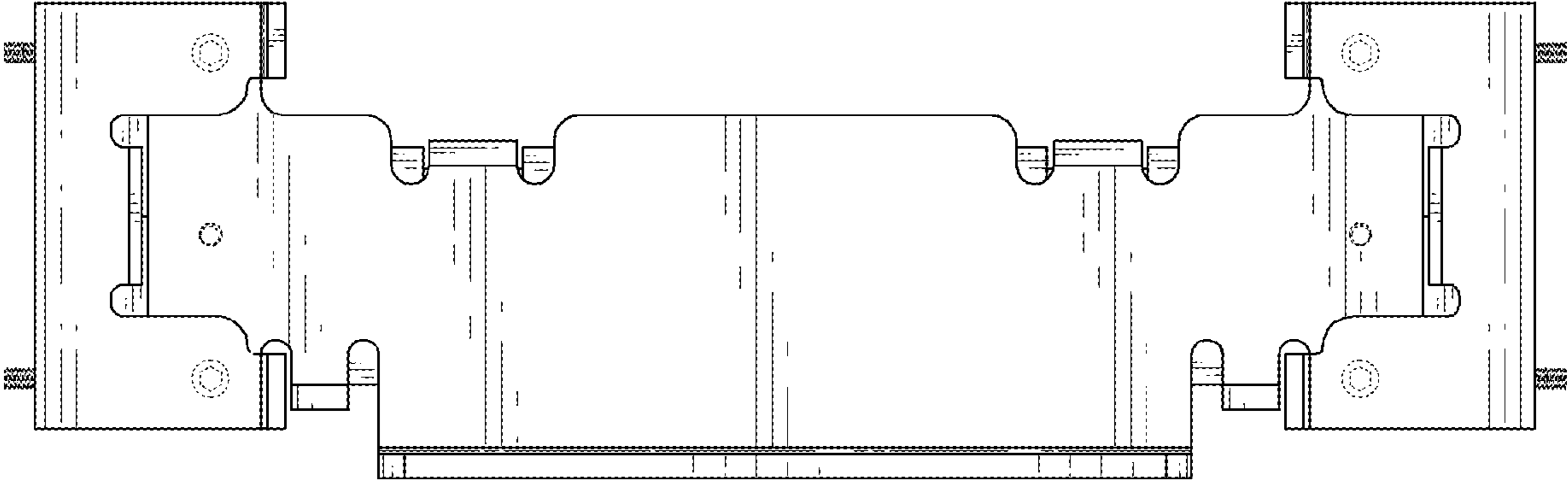


FIG. 9