US0D1031656S

(12) United States Design Patent

Pan et al.

(10) Patent No.: US D1,031,656 S
(45) Date of Patent: ** Jun. 18, 2024

(54) **ELECTRICAL CONNECTOR**

(71) Applicant: **Molex, LLC**, Lisle, IL (US)

(72) Inventors: **Hua Pan**, Shanghai (CN); **You-Xiang Zheng**, Shanghai (CN)

(73) Assignee: **Molex, LLC**, Lisle, IL (US)

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

(21) Appl. No.: **29/817,525**

(22) Filed: **Dec. 1, 2021**

(30) **Foreign Application Priority Data**

Jun. 3, 2021 (CN) 202130339467.X

(51) **LOC (14) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/133**

(58) **Field of Classification Search**
USPC ... D13/133, 101, 123, 146, 147, 153, 137.1, D13/149; D14/433, 435.1
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D366,646 S * 1/1996 Carr D13/146
D410,629 S * 6/1999 Bandura D13/147
(Continued)

FOREIGN PATENT DOCUMENTS

TW D205956 S 7/2020
TW D207875 S 10/2020

OTHER PUBLICATIONS

Molex Micro-Fit 3.0 dual row, available in Amazon.com, date first available Dec. 30, 2017 [online], [site visited Jul. 20, 2023], Available from the internet URL: https://www.amazon.com/Molex-Micro-Fit-Circuits-receptacle-Terminal/dp/B078Q798L9/ (Year: 2017).*

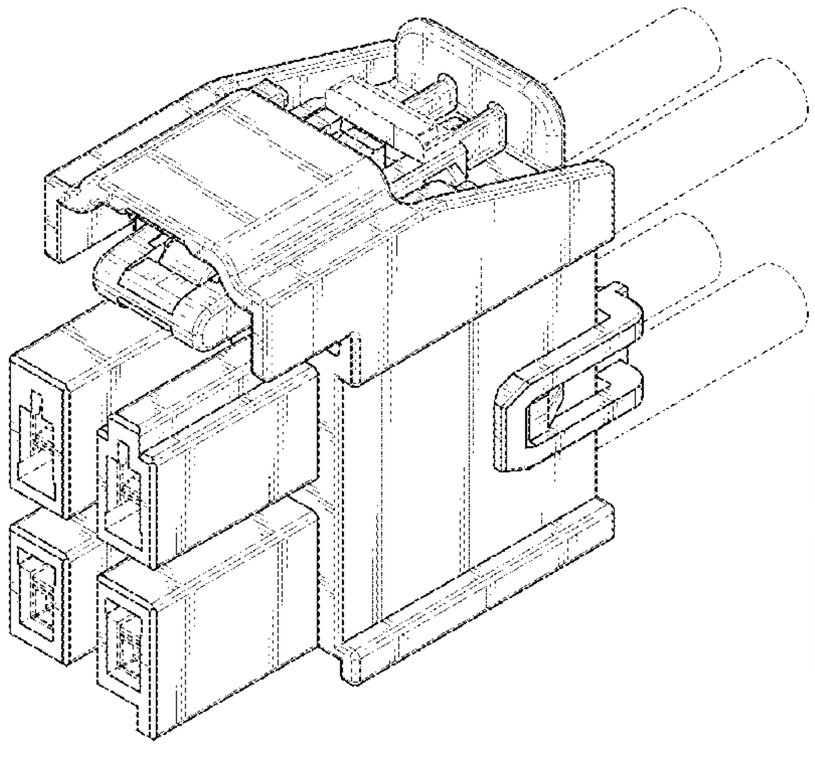
Primary Examiner — Christy Nemeth
Assistant Examiner — Leah E Hoeferkamp

(57) **CLAIM**

The ornamental design for an electrical connector, as shown and described.

DESCRIPTION

FIG. **1** is a front perspective view of a first embodiment of an electrical connector showing our new design;
FIG. **2** is a front view thereof;
FIG. **3** is a rear view thereof;
FIG. **4** is a left side view thereof;
FIG. **5** is a right side view thereof;
FIG. **6** is a top view thereof;
FIG. **7** is a bottom view thereof;
FIG. **8** is a rear perspective view thereof;
FIG. **9** is a front perspective view of a second embodiment of an electrical connector showing our new design;
FIG. **10** is a front view thereof;
FIG. **11** is a rear view thereof;
FIG. **12** is a left side view thereof;
FIG. **13** is a right side view thereof;
FIG. **14** is a top view thereof;
FIG. **15** is a bottom view thereof;
FIG. **16** is a rear perspective view thereof;
FIG. **17** is a front perspective view of a third embodiment of an electrical connector showing our new design;
FIG. **18** is a front view thereof;
FIG. **19** is a rear view thereof;
FIG. **20** is a left side view thereof;
FIG. **21** is a right side view thereof;
FIG. **22** is a top view thereof;
FIG. **23** is a bottom view thereof;
FIG. **24** is a rear perspective view thereof;
FIG. **25** is a front perspective view of a fourth embodiment of an electrical connector showing our new design;
FIG. **26** is a front view thereof;
FIG. **27** is a rear view thereof;
FIG. **28** is a left side view thereof;
FIG. **29** is a right side view thereof;
(Continued)



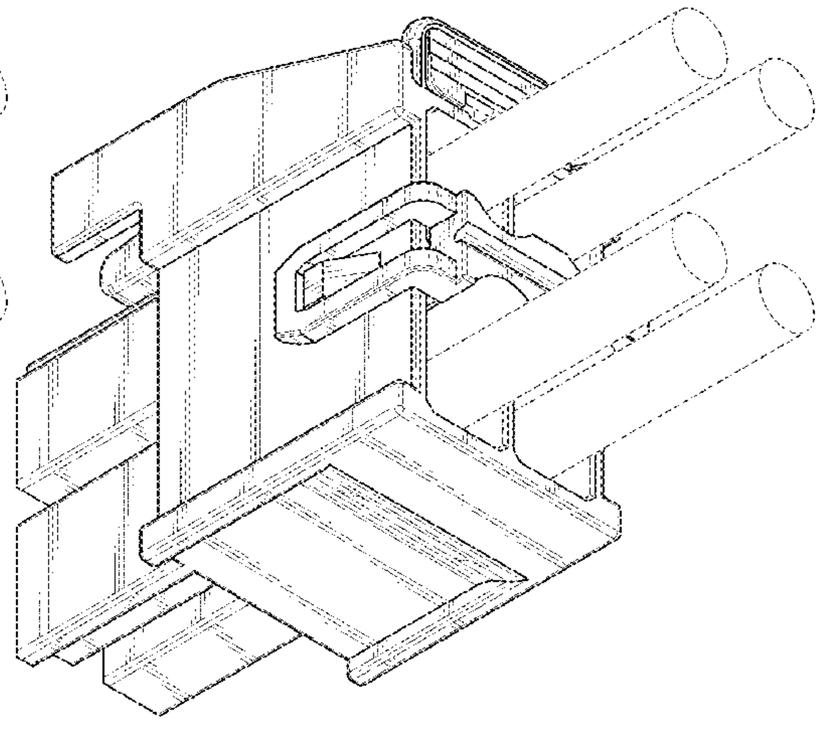


FIG. **30** is a top view thereof;
FIG. **31** is a bottom view thereof; and,
FIG. **32** is a rear perspective view thereof.
The broken lines immediately adjacent to the shaded areas define the bounds of the claimed design and form no part thereof. The broken lines depicting the remainder of the electrical connector form no part of the claimed design.

1 Claim, 20 Drawing Sheets

(58) **Field of Classification Search**
CPC G02B 6/38; G02B 6/38875; G02B 6/4284; H01R 13/40; H01R 13/58; H01R 13/627; H01R 13/66; H01R 13/6335; H01R 13/6272; H01R 13/6397; H01R 13/639; H01R 13/6275; H01R 31/06; H01R 24/00; H01R 24/46; H01R 43/26
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D425,869	S	*	5/2000	Yokomizo	D13/147
D494,141	S	*	8/2004	Spink, Jr.	D13/147
D524,751	S	*	7/2006	Lee	D13/147
7,387,545	B2		6/2008	Tyler et al.	
D597,956	S	*	8/2009	Sakamoto	D13/147
D801,278	S	*	10/2017	Li	D13/147
D803,161	S	*	11/2017	Li	D13/147
D803,162	S	*	11/2017	Li	D13/147
D840,938	S	*	2/2019	Hsu	D13/149
D847,756	S	*	5/2019	Endo	D13/147
D853,334	S	*	7/2019	Mastel	D13/146
10,355,393	B2	*	7/2019	Yi	H01R 13/5208
D894,126	S	*	8/2020	Somanathapura Ramanna	D13/133
D894,127	S	*	8/2020	Somanathapura Ramanna	D13/133
D895,552	S	*	9/2020	Somanathapura Ramanna	D13/133
D906,973	S	*	1/2021	Thyagaraj	D13/133
D906,978	S	*	1/2021	Ganamukhi	D13/133
D911,964	S	*	3/2021	Ganamukhi	D13/133
D911,965	S	*	3/2021	C	D13/133
D925,459	S	*	7/2021	Aromin	D13/146
D925,460	S	*	7/2021	Aromin	D13/146
D938,362	S	*	12/2021	Ito	D13/146
D938,919	S	*	12/2021	Ito	D13/147
D941,771	S	*	1/2022	Ito	D13/133
D973,598	S	*	12/2022	Tian	H01R 13/4226 D13/147
D975,024	S	*	1/2023	Wei	H01R 13/73 D13/154
D1,006,812	S	*	12/2023	Francis	D14/433
D1,008,978	S	*	12/2023	Böcker	D13/133
2016/0336669	A1	*	11/2016	Li	H01R 13/432
2019/0140389	A1	*	5/2019	Yi	H01R 13/5205
2019/0157797	A1	*	5/2019	McDowell	H01R 13/506
2019/0280430	A1	*	9/2019	Azad	H01R 13/64
2020/0227857	A1		7/2020	Kim et al.	
2021/0044055	A1		2/2021	Chen et al.	
2022/0006235	A1	*	1/2022	Kirschner	H01R 13/639

* cited by examiner

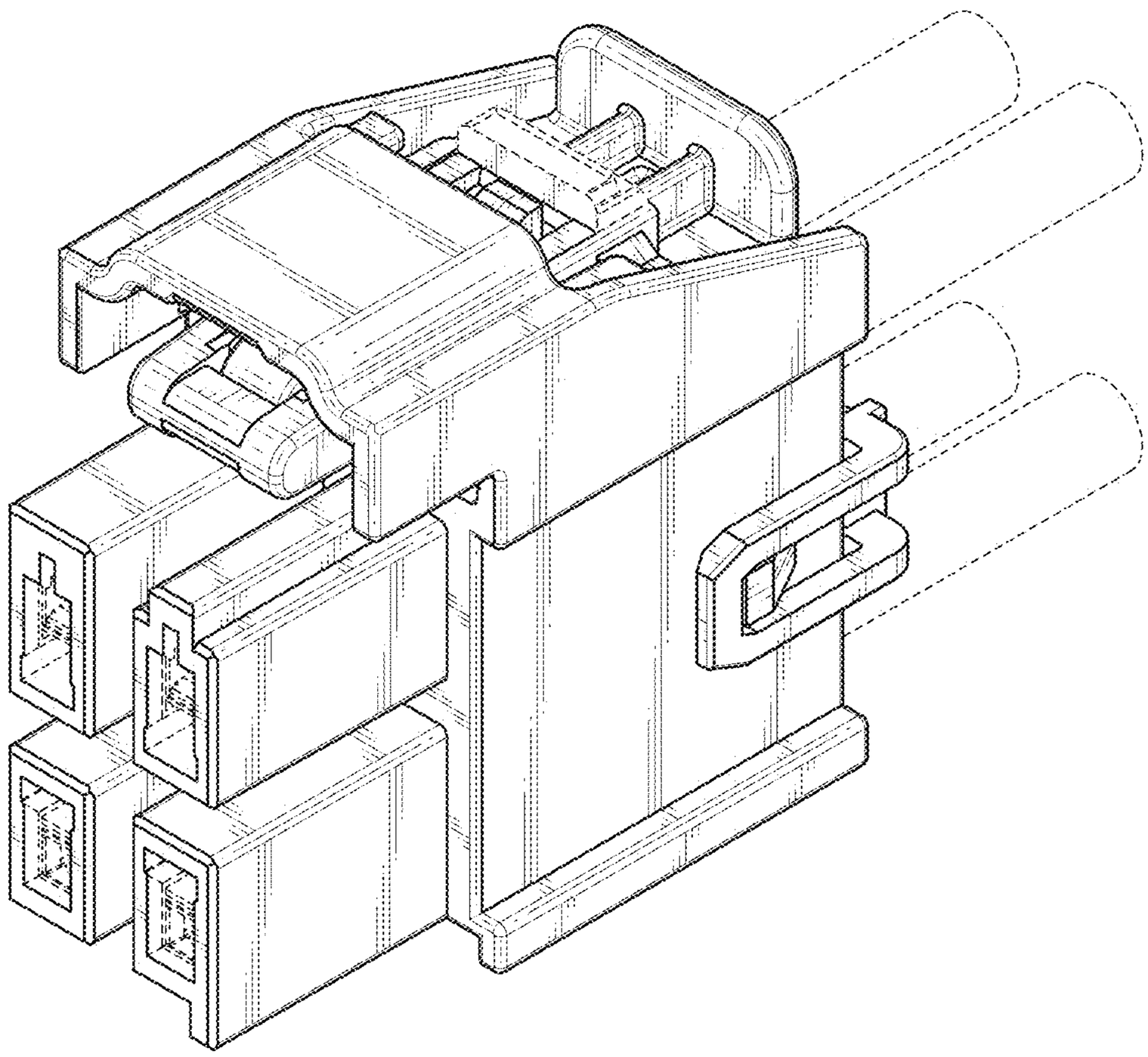


FIG. 1

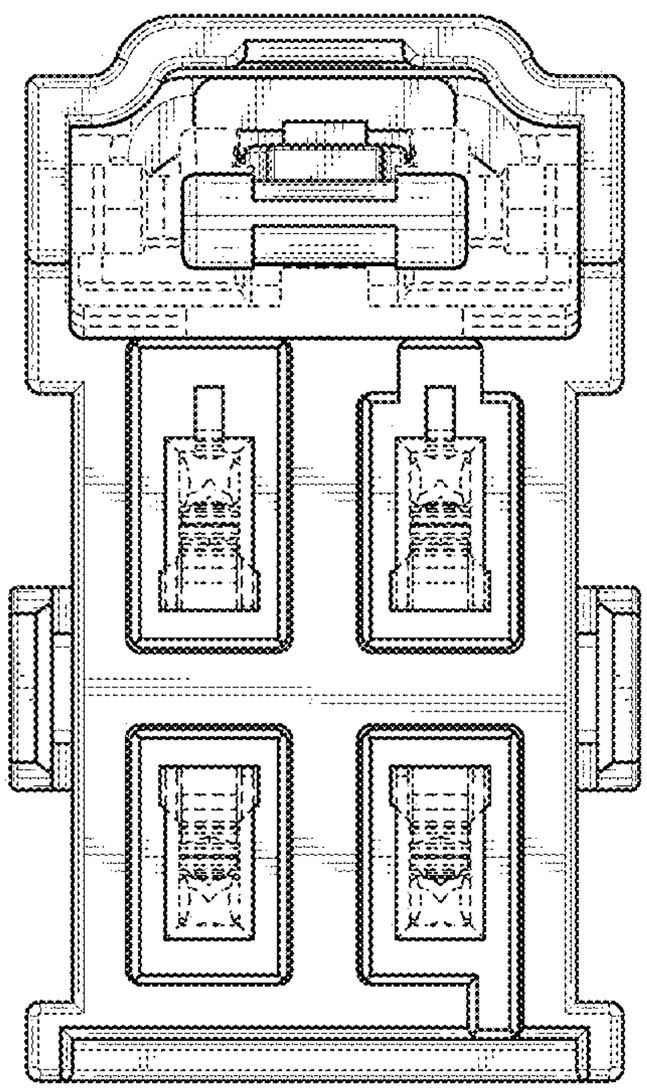


FIG. 2

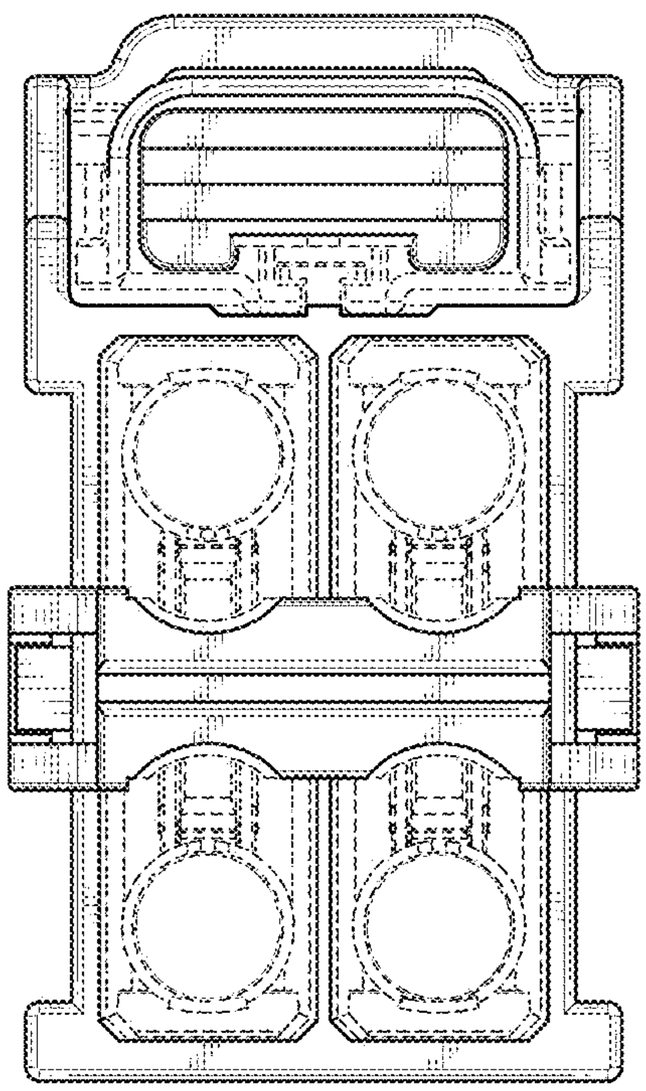


FIG. 3

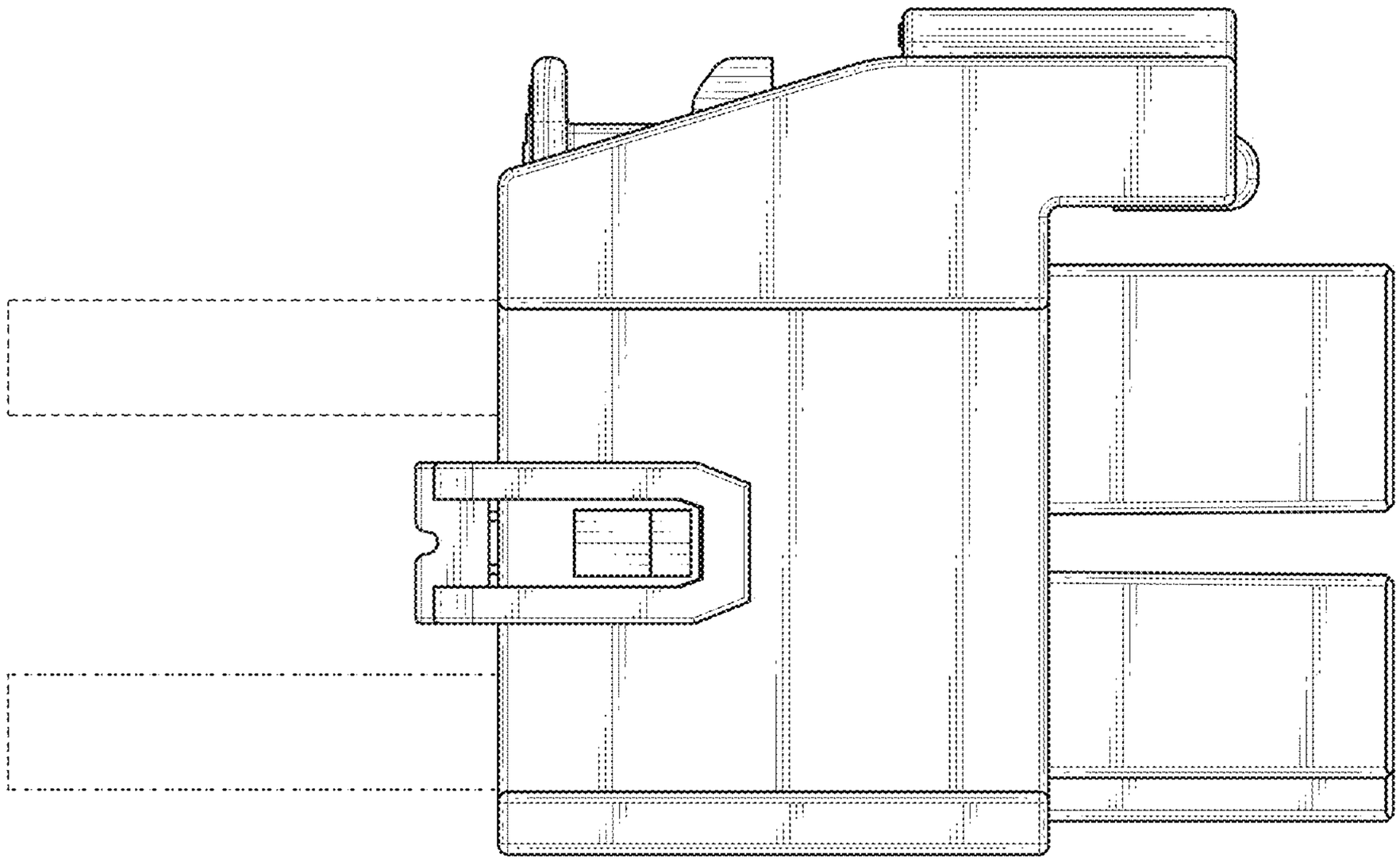


FIG. 4

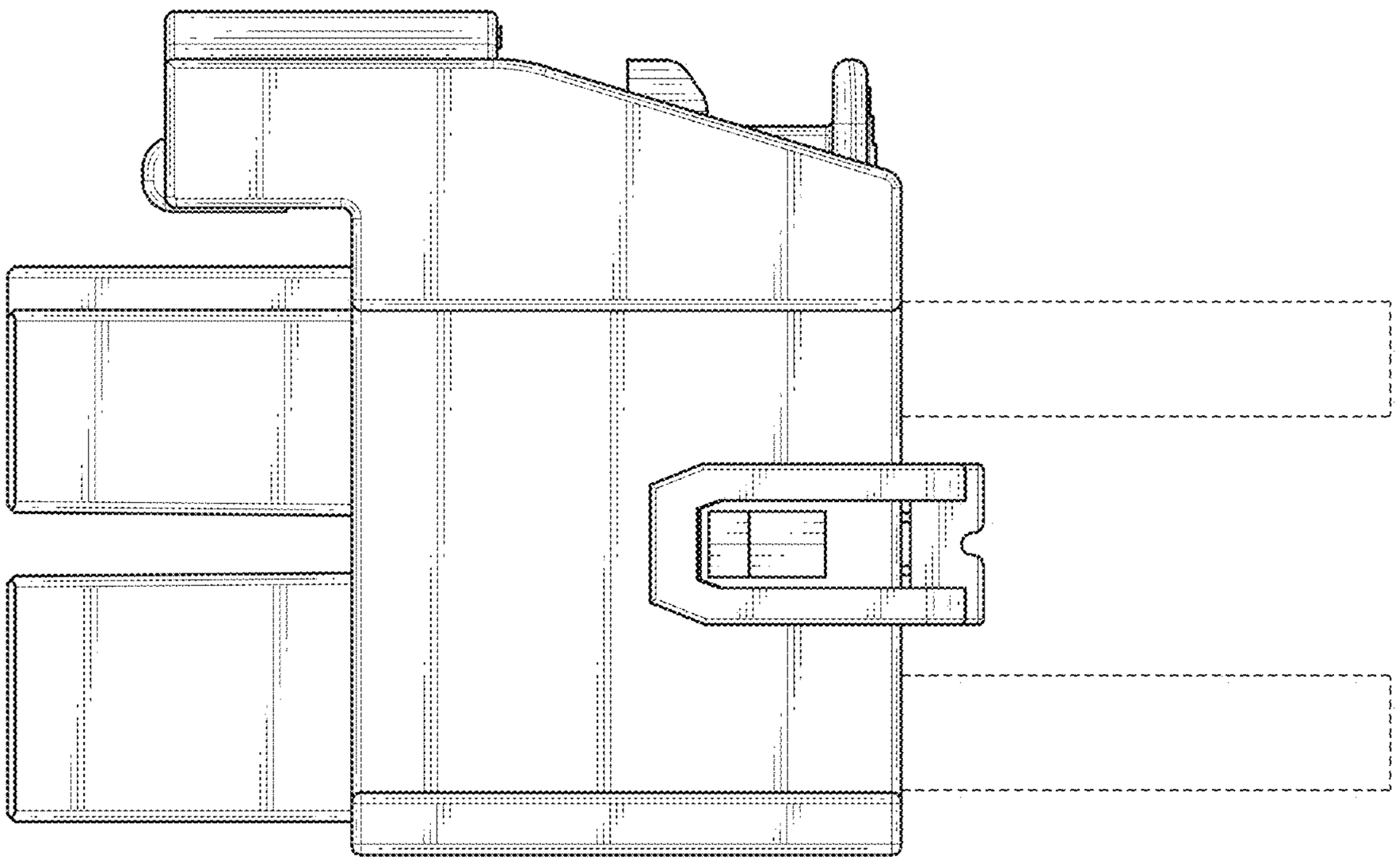


FIG. 5

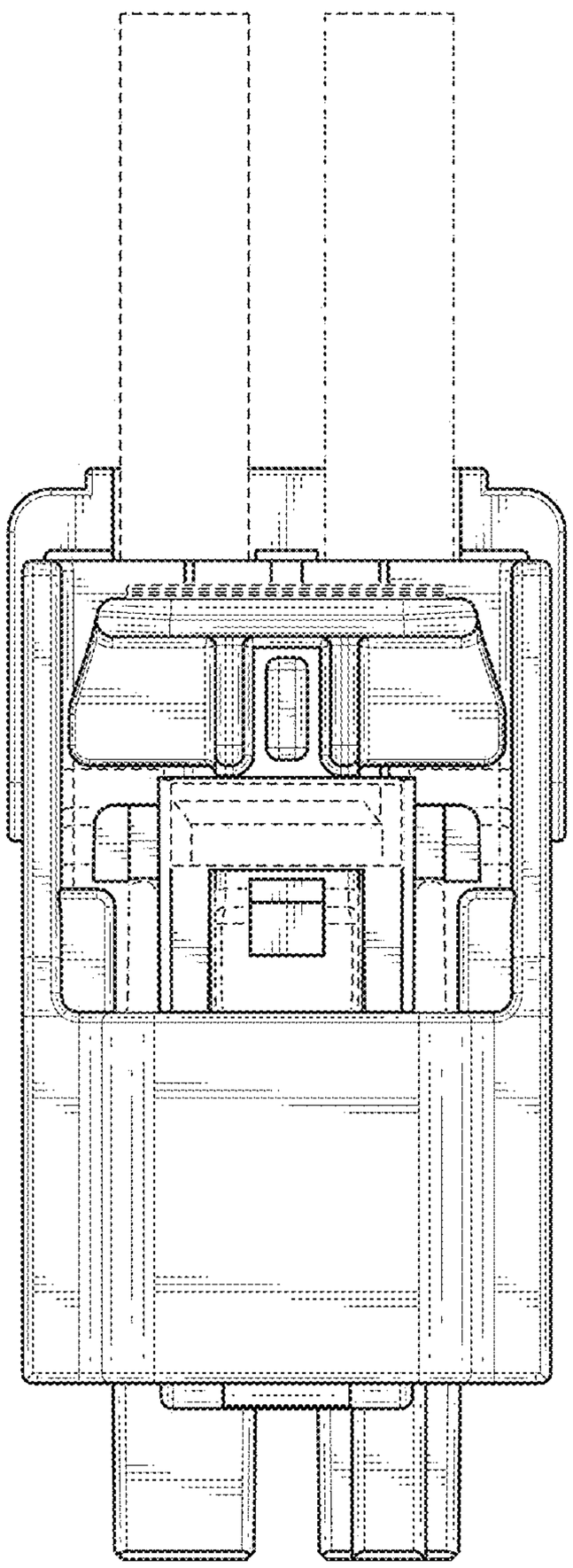


FIG. 6

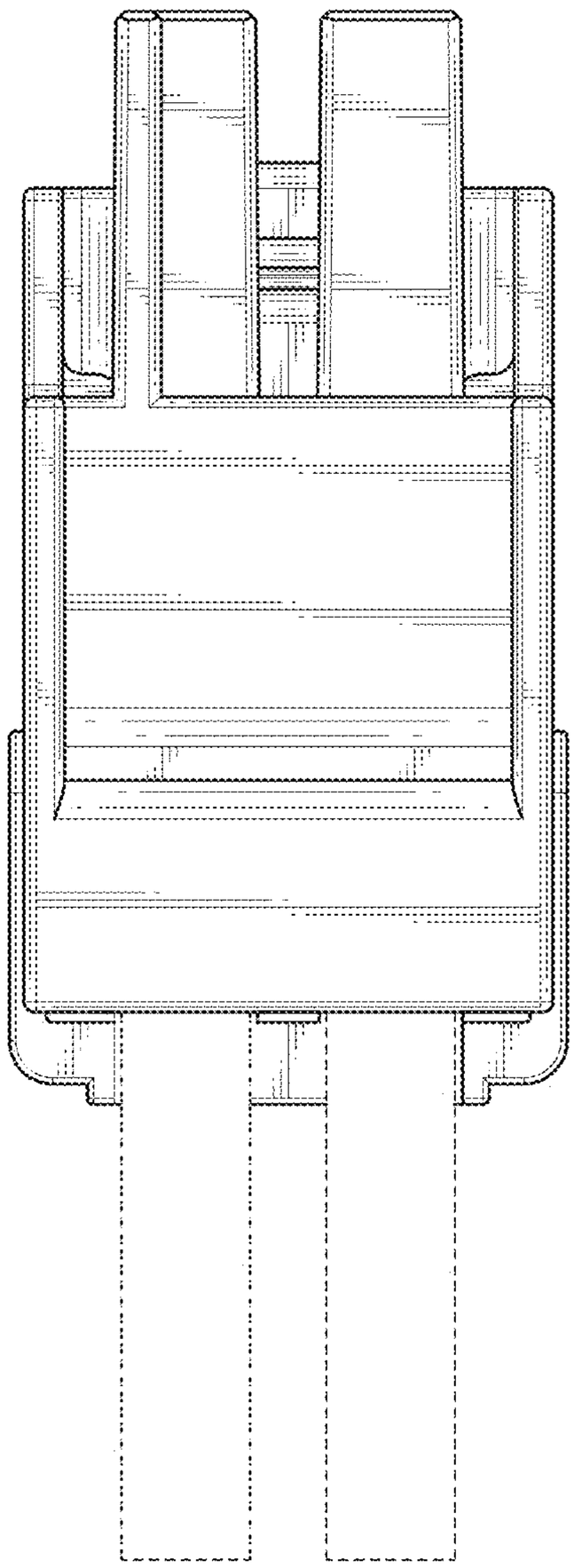


FIG. 7

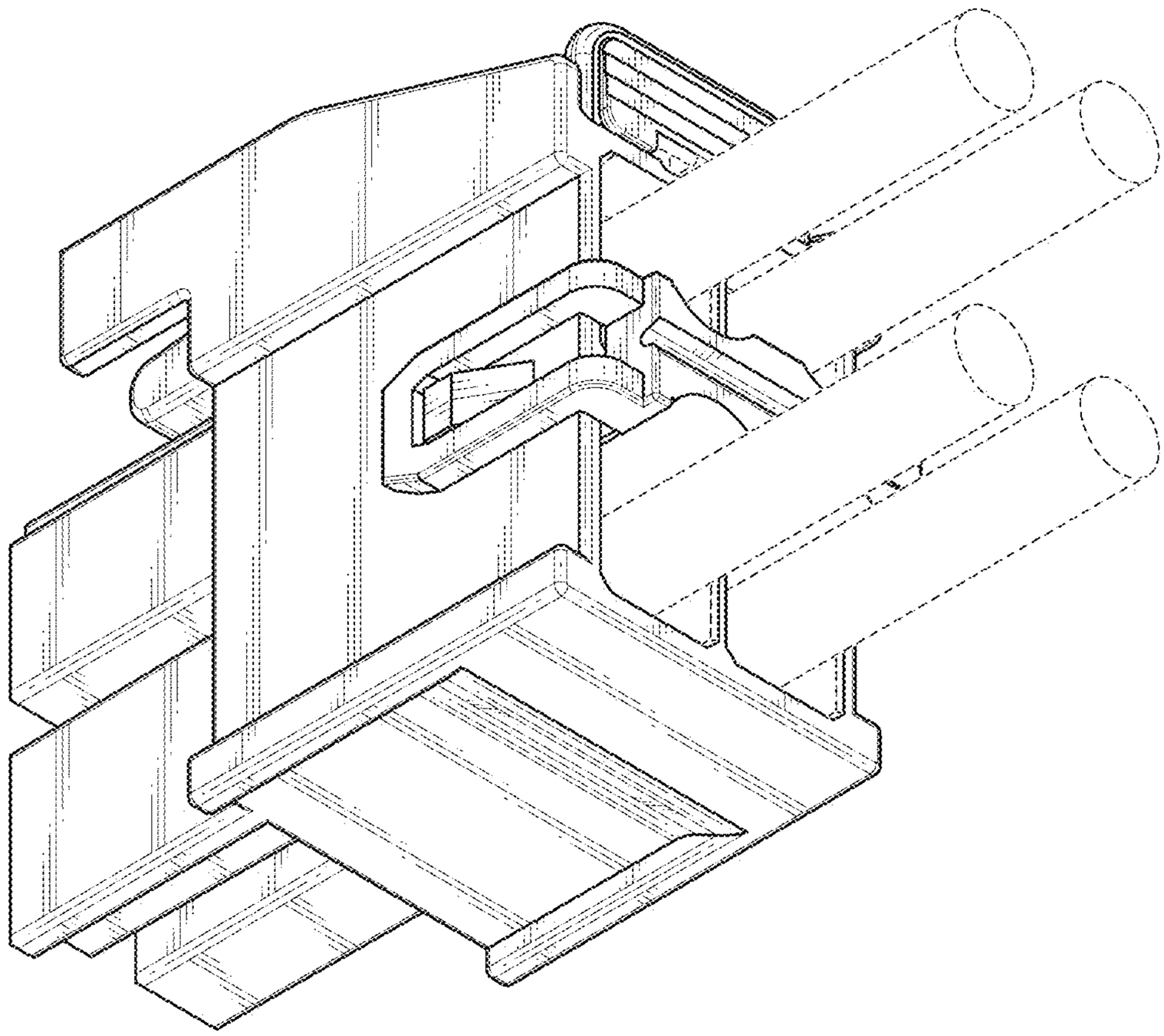


FIG. 8

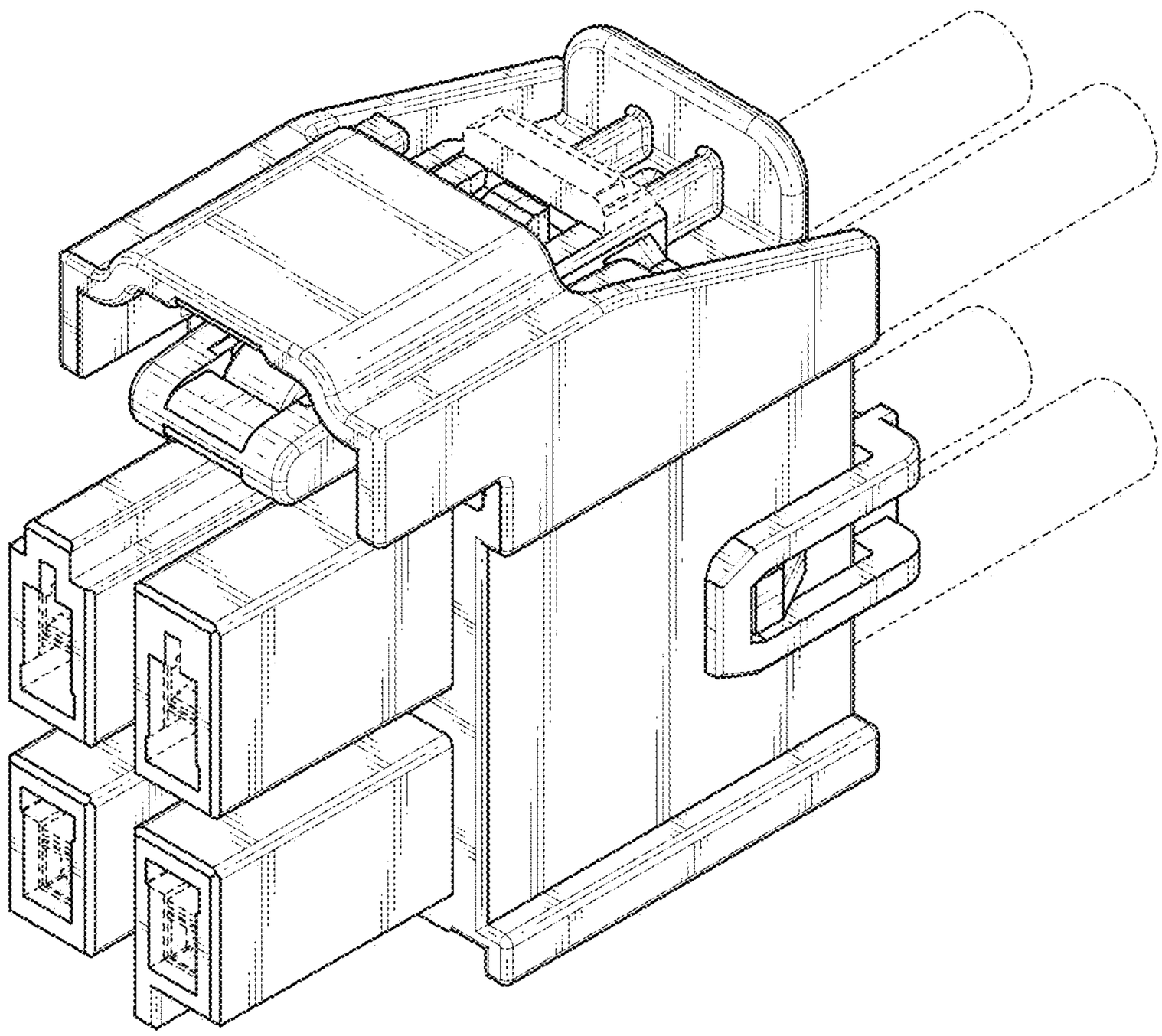


FIG. 9

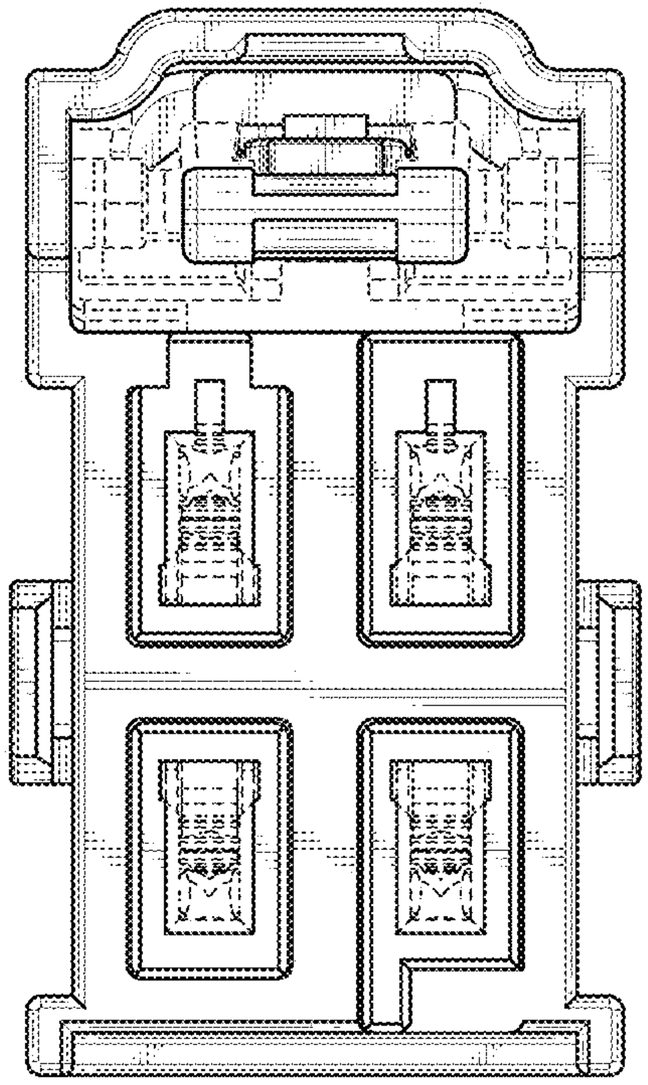


FIG. 10

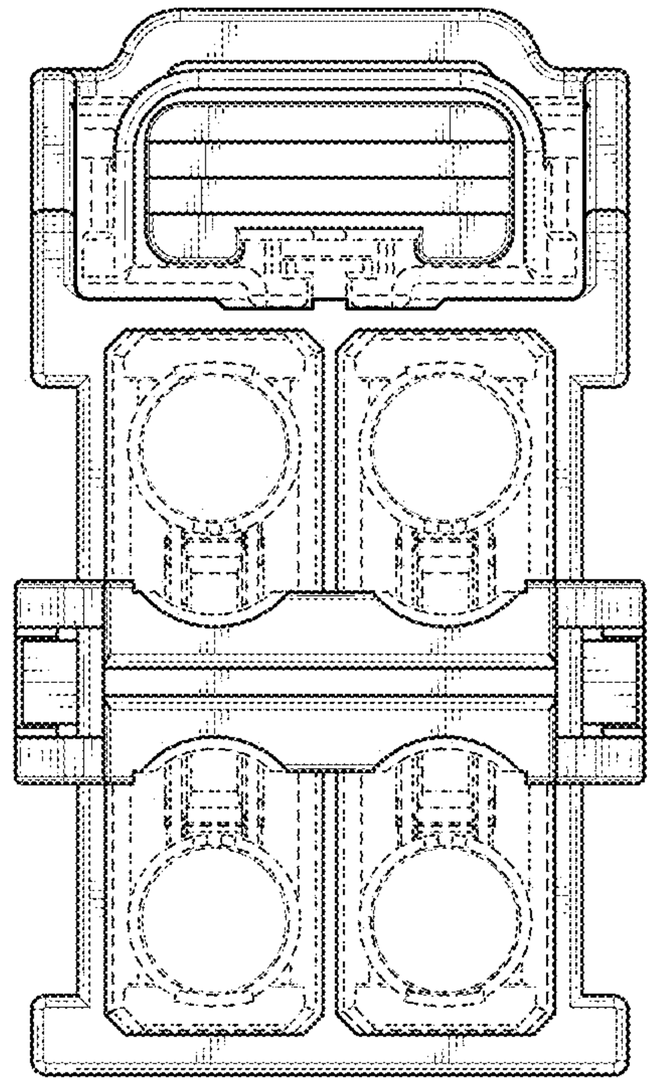


FIG. 11

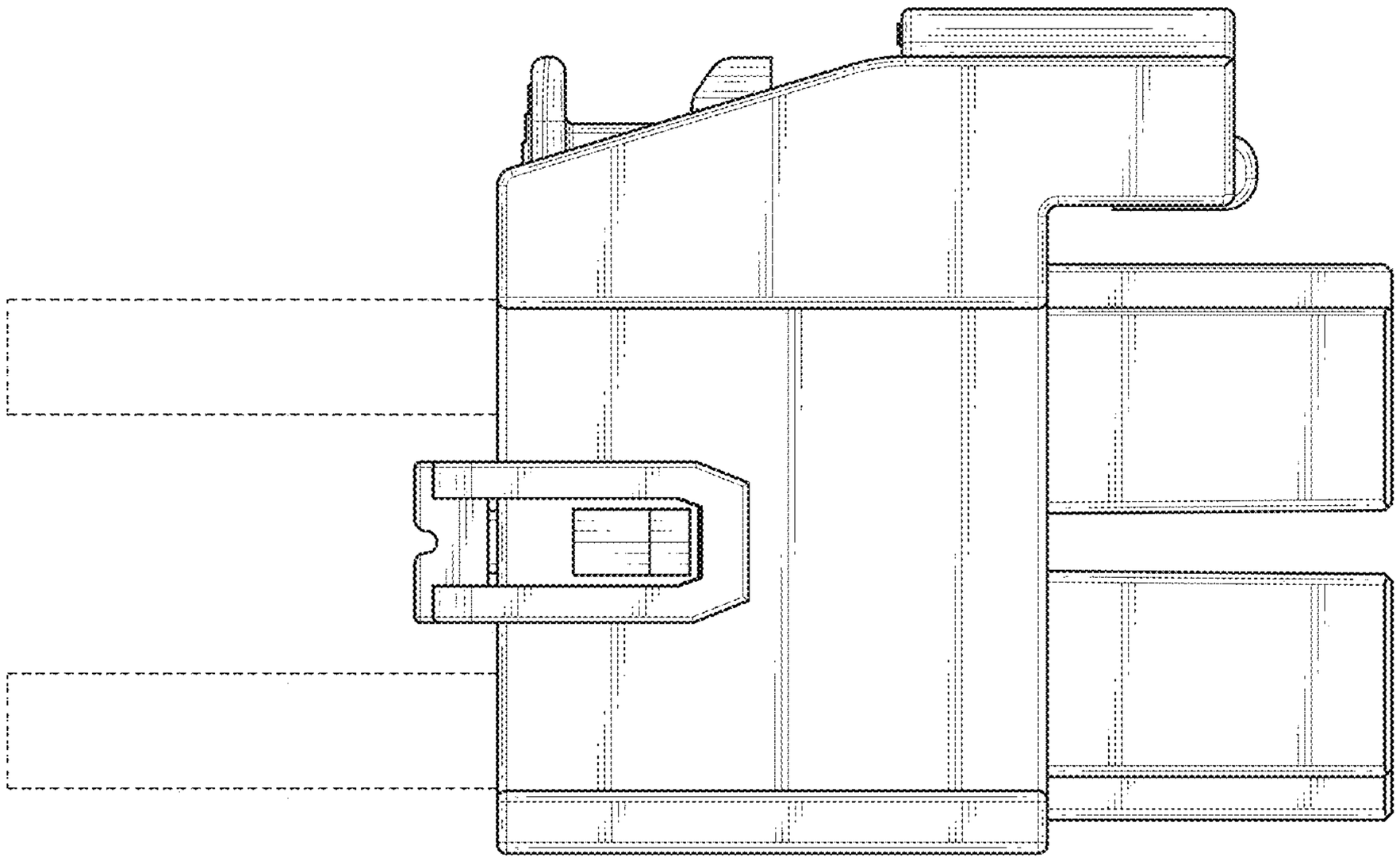


FIG. 12

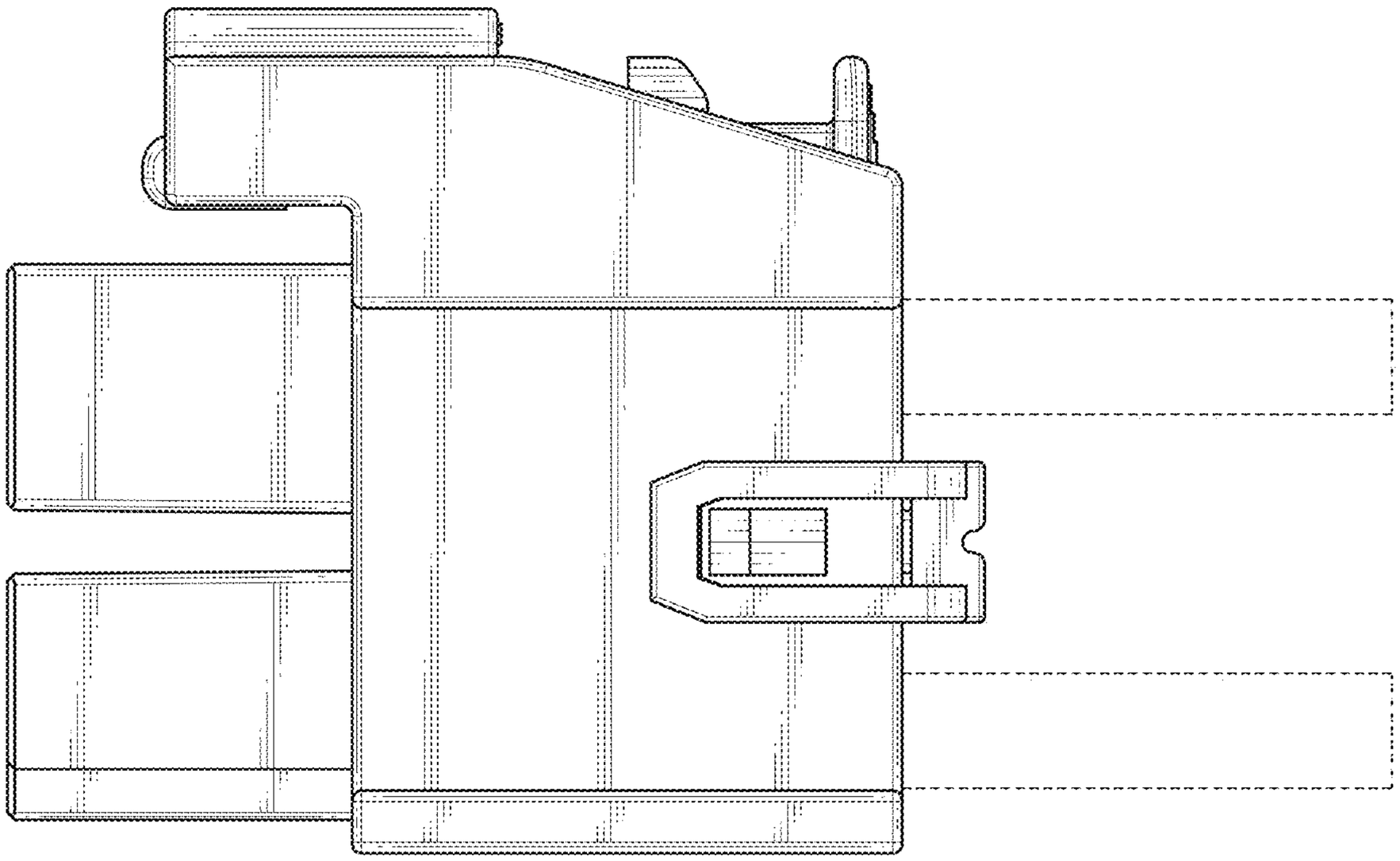


FIG. 13

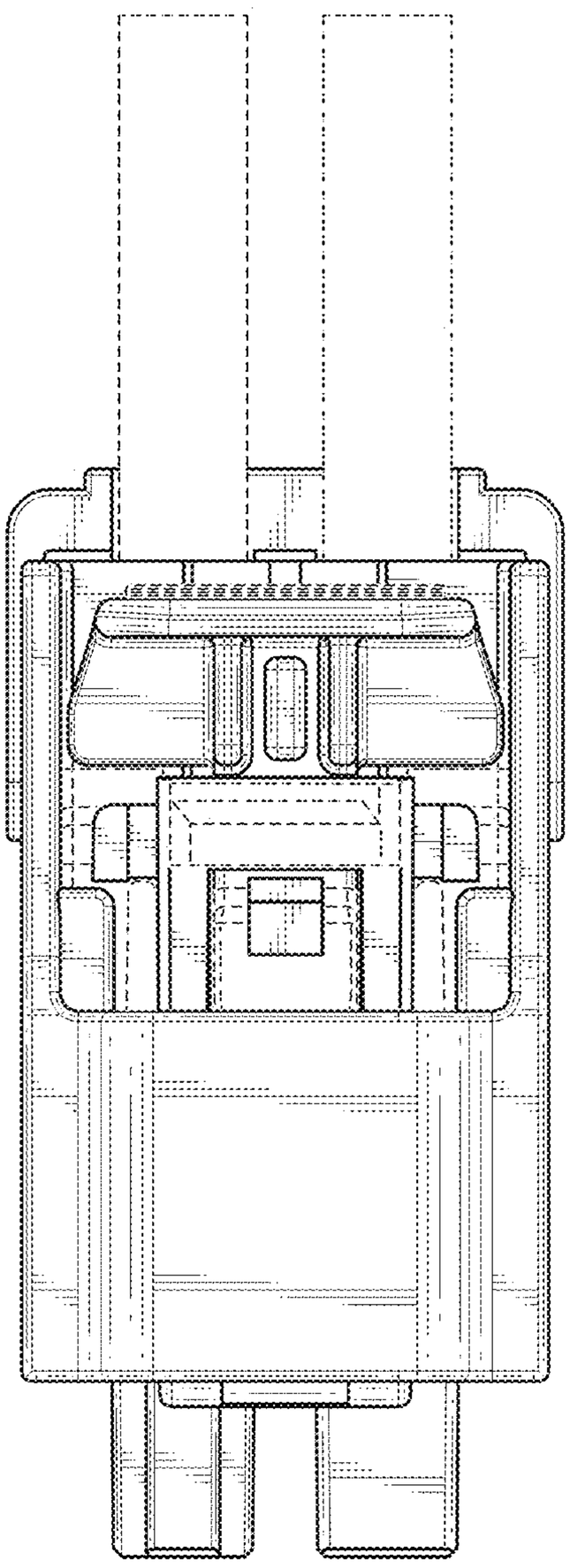


FIG. 14

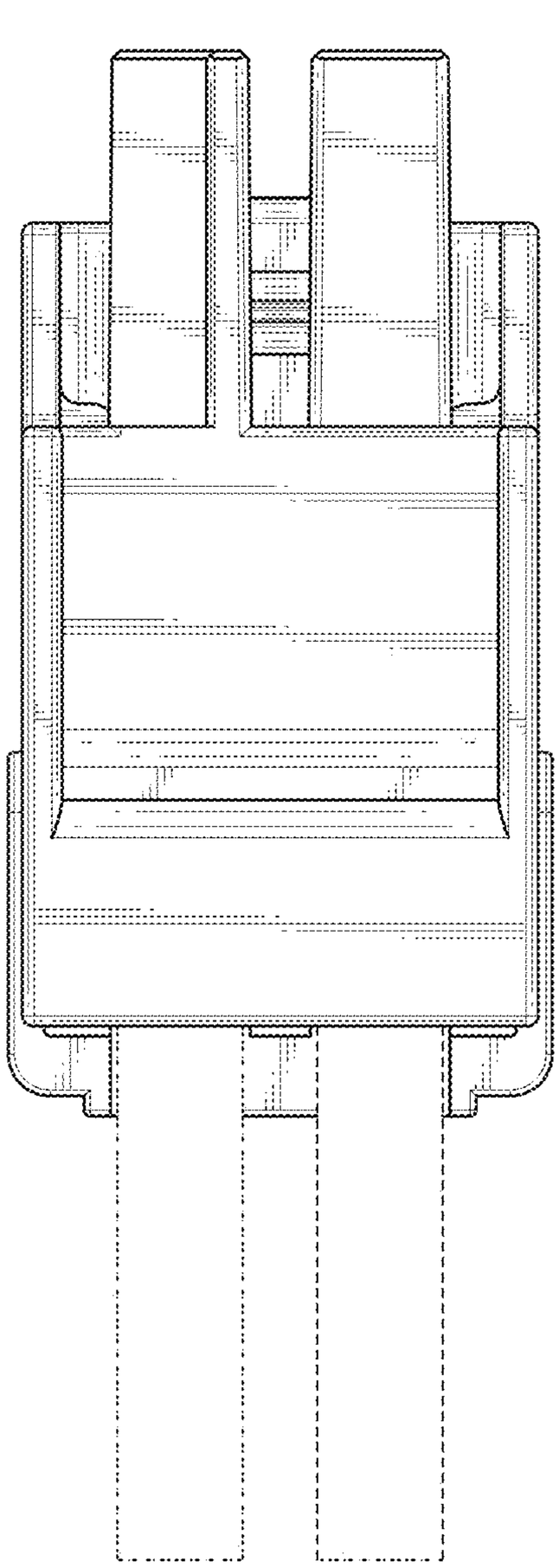


FIG. 15

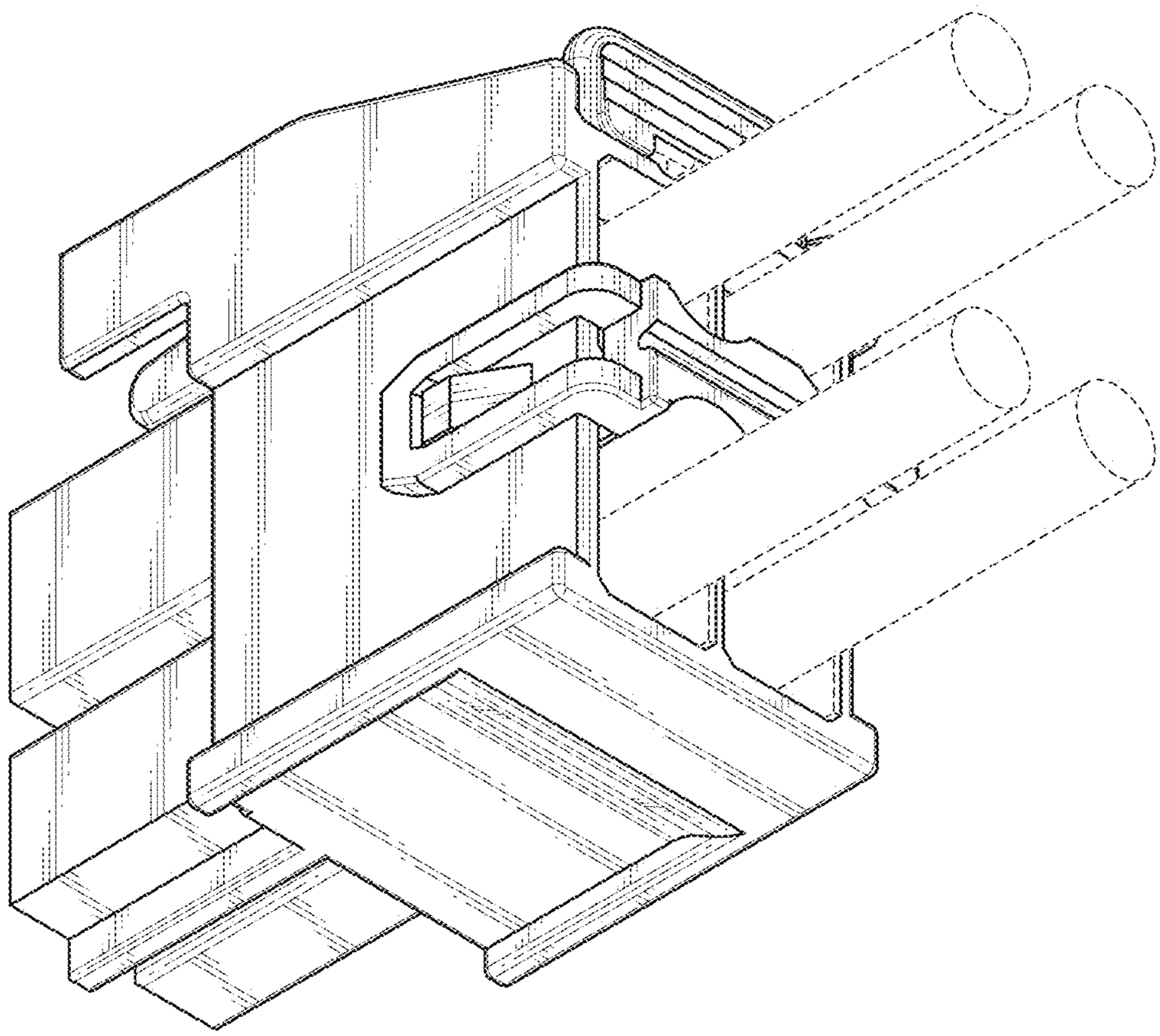


FIG. 16

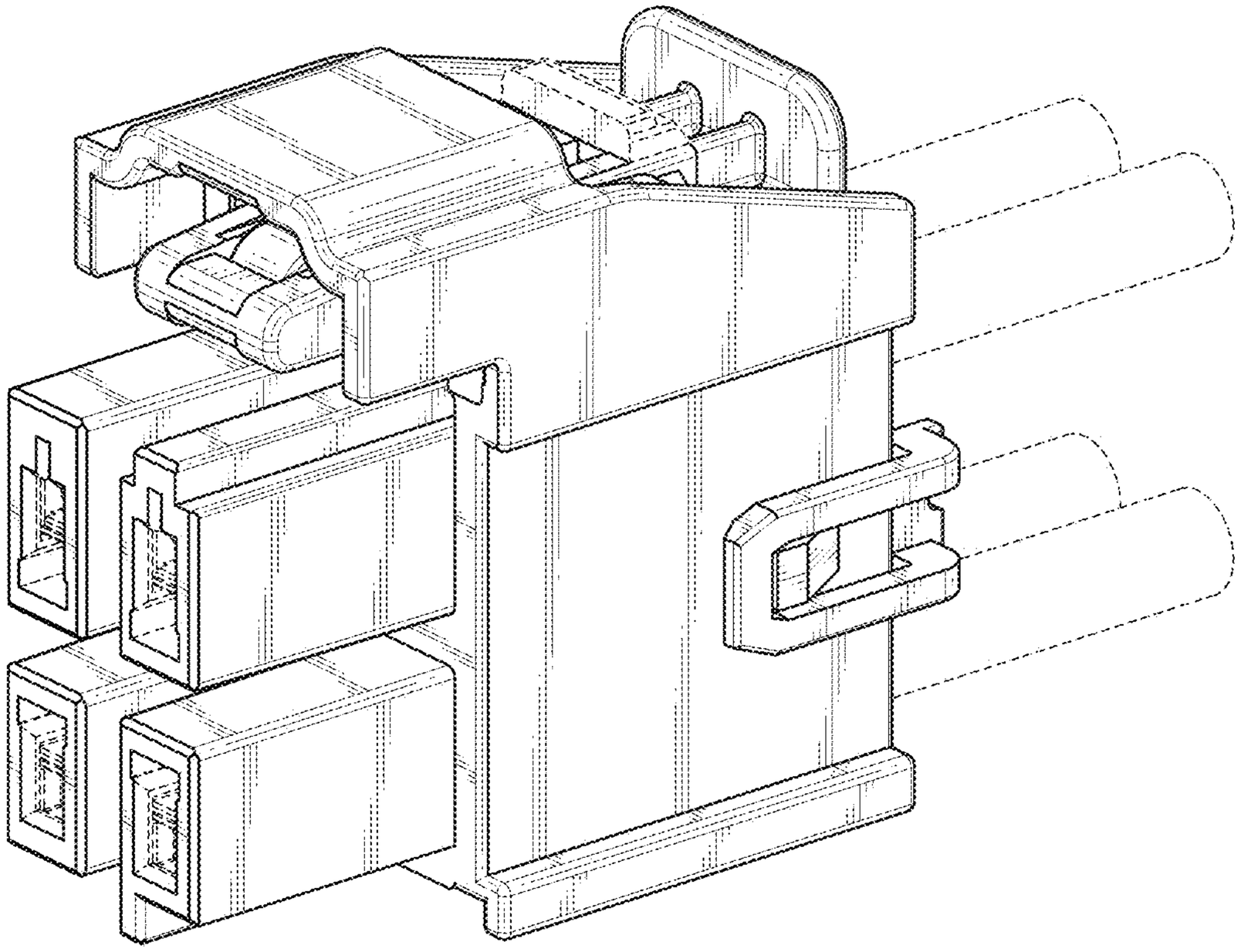


FIG. 17

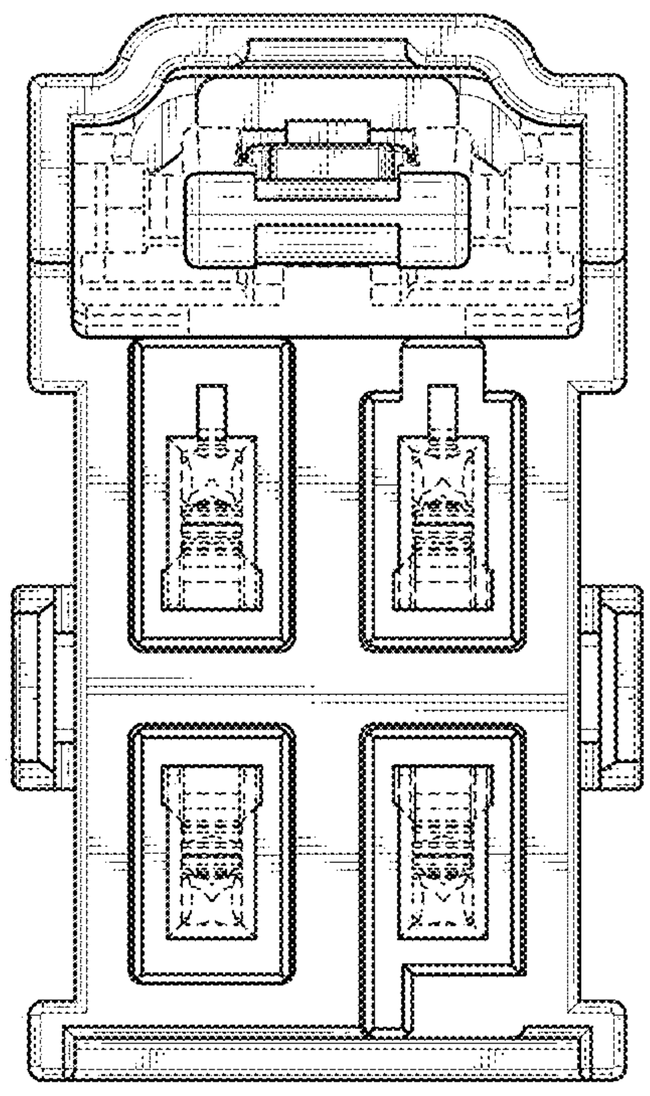


FIG. 18

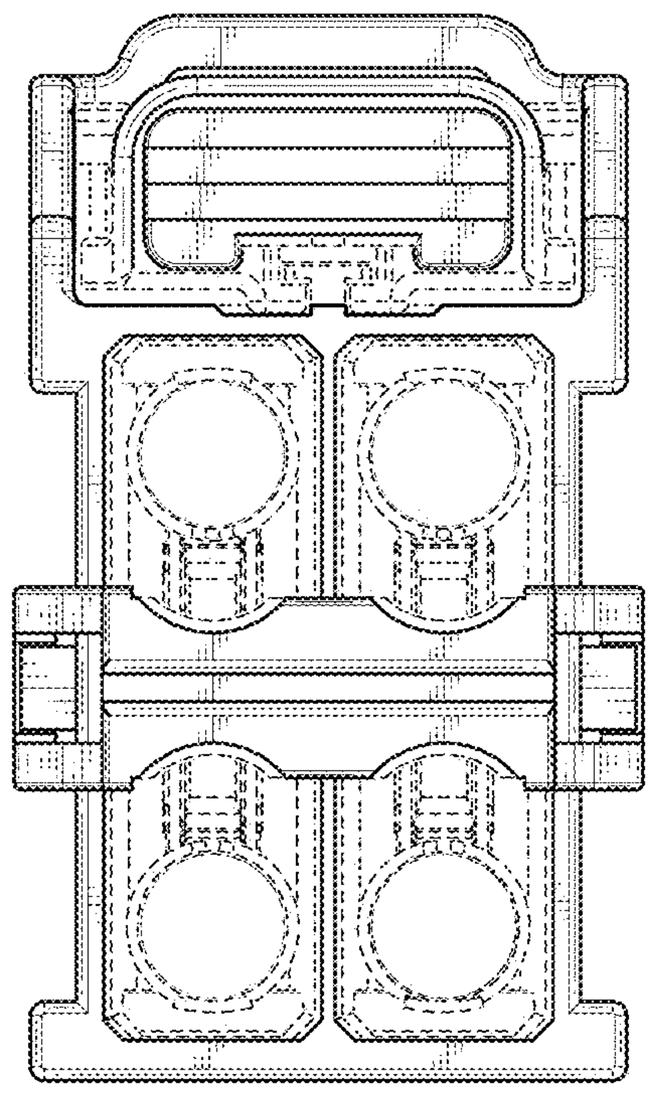


FIG. 19

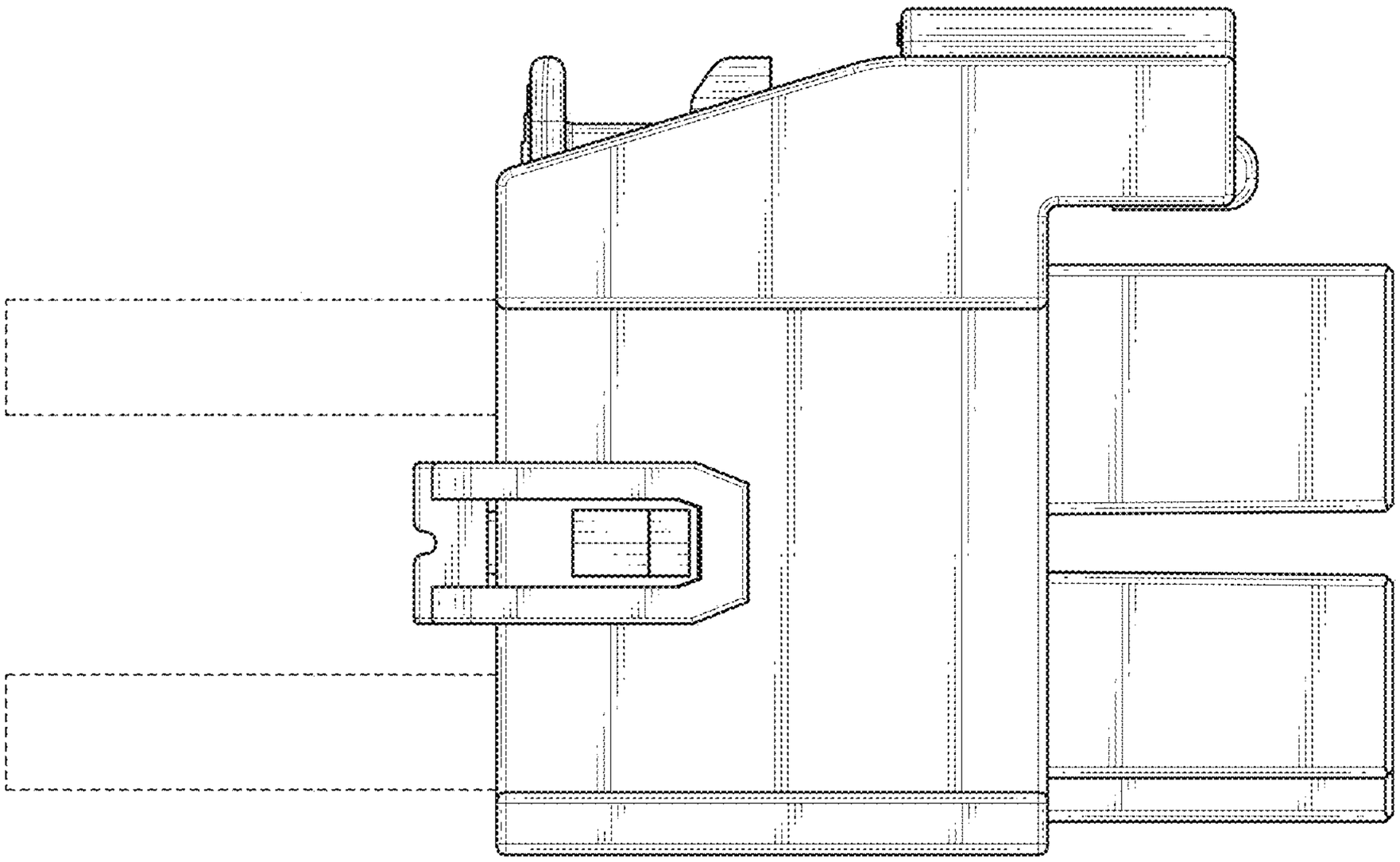


FIG. 20

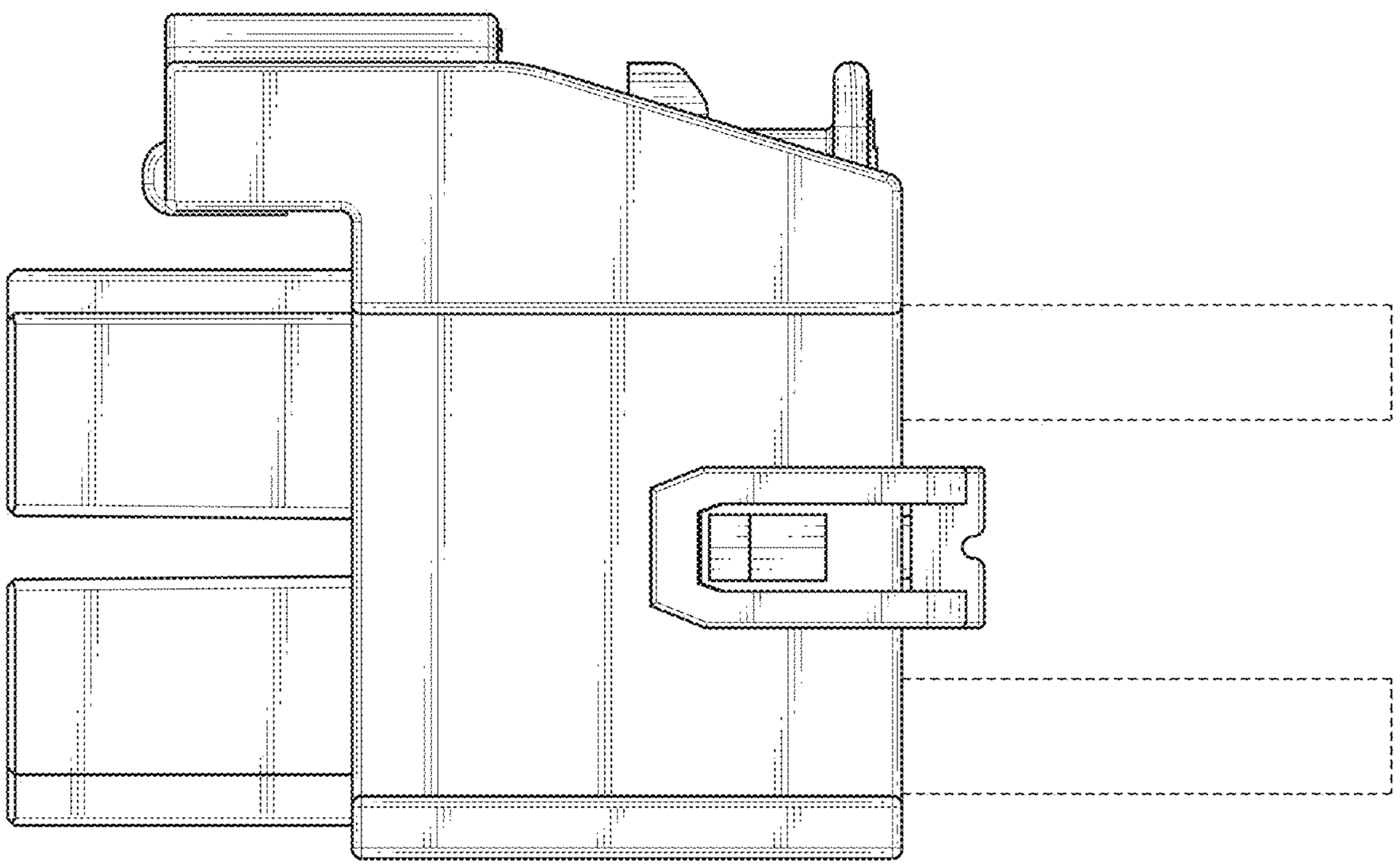


FIG. 21

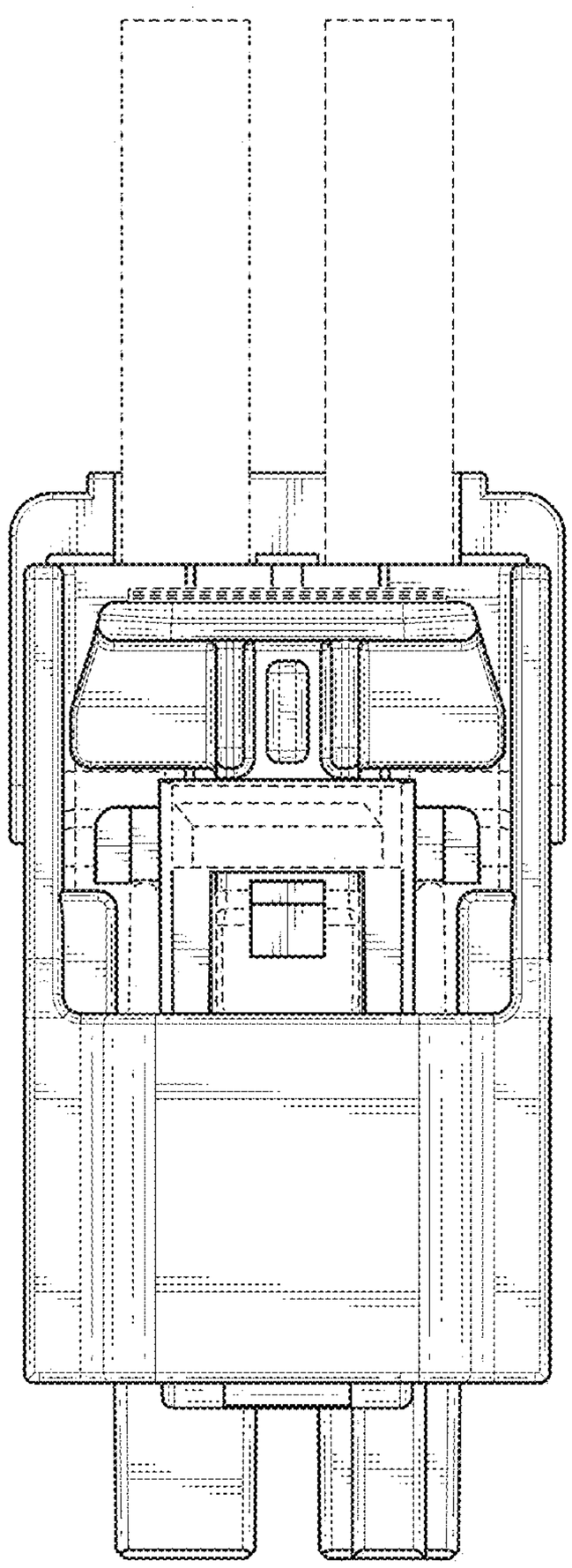


FIG. 22

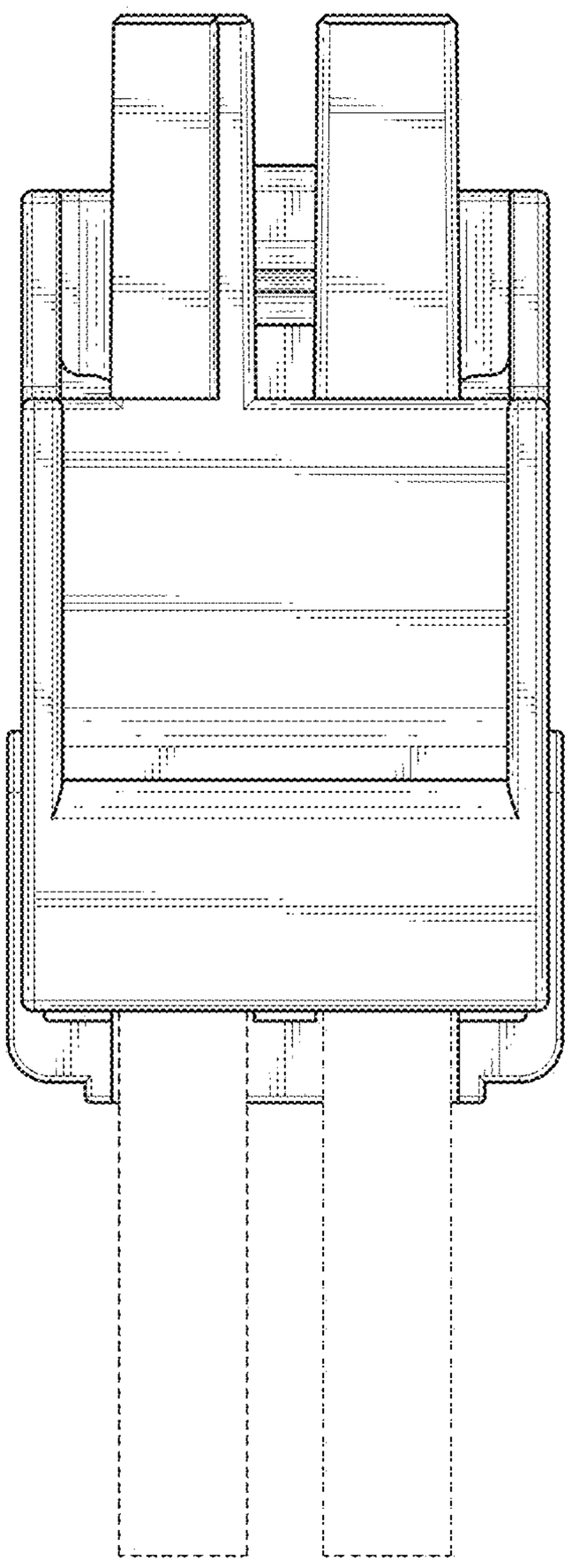


FIG. 23

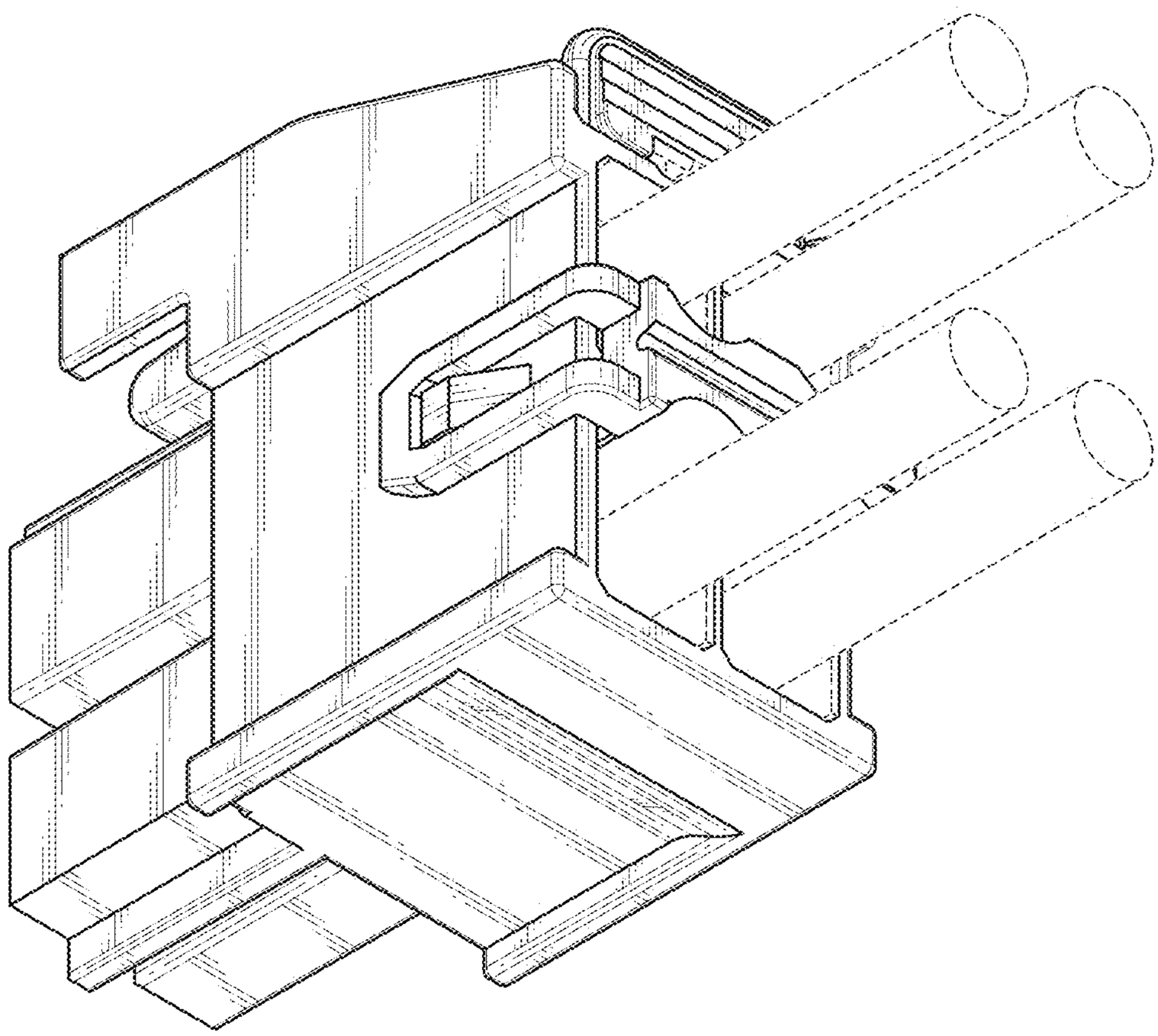


FIG. 24

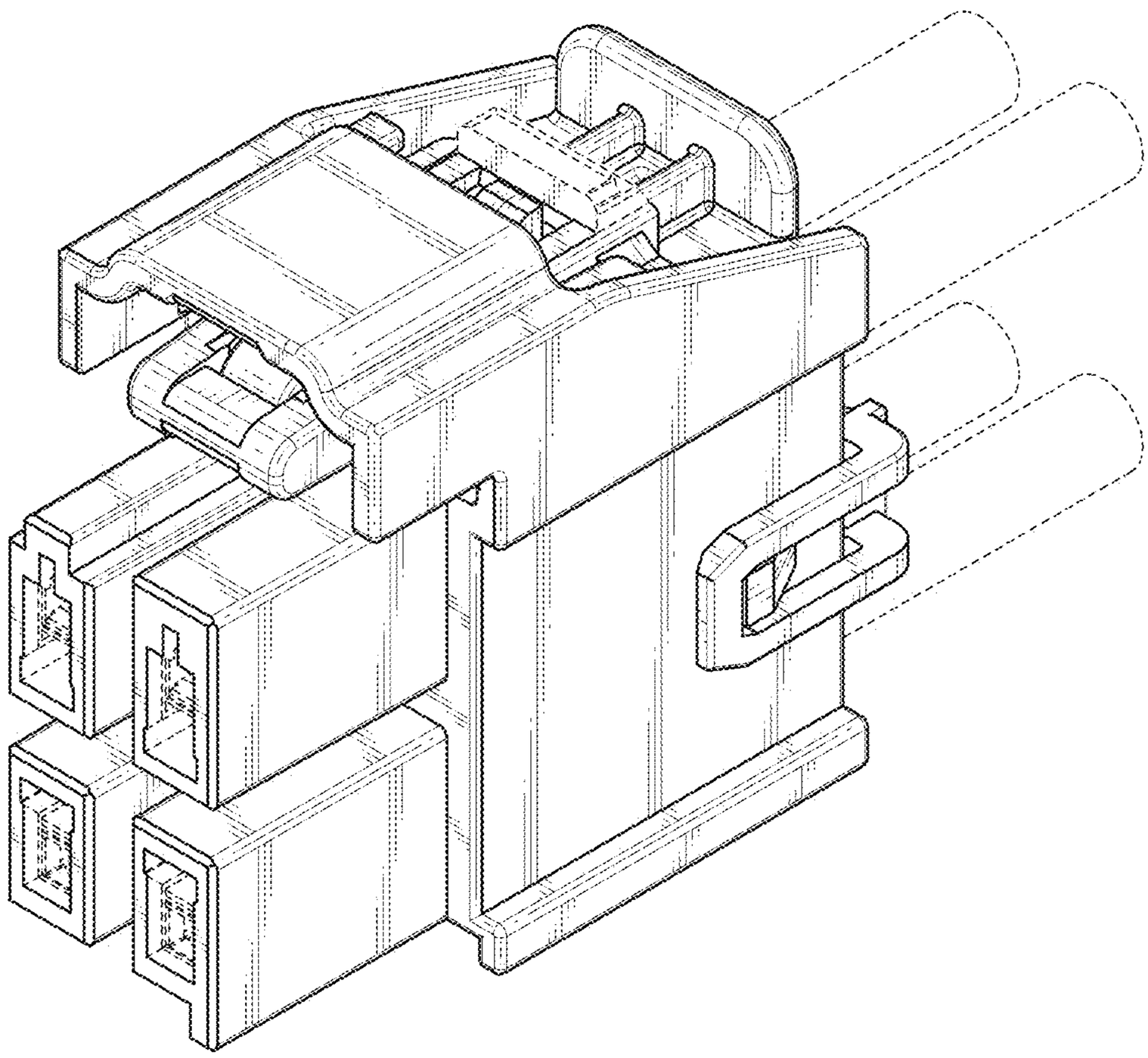


FIG. 25

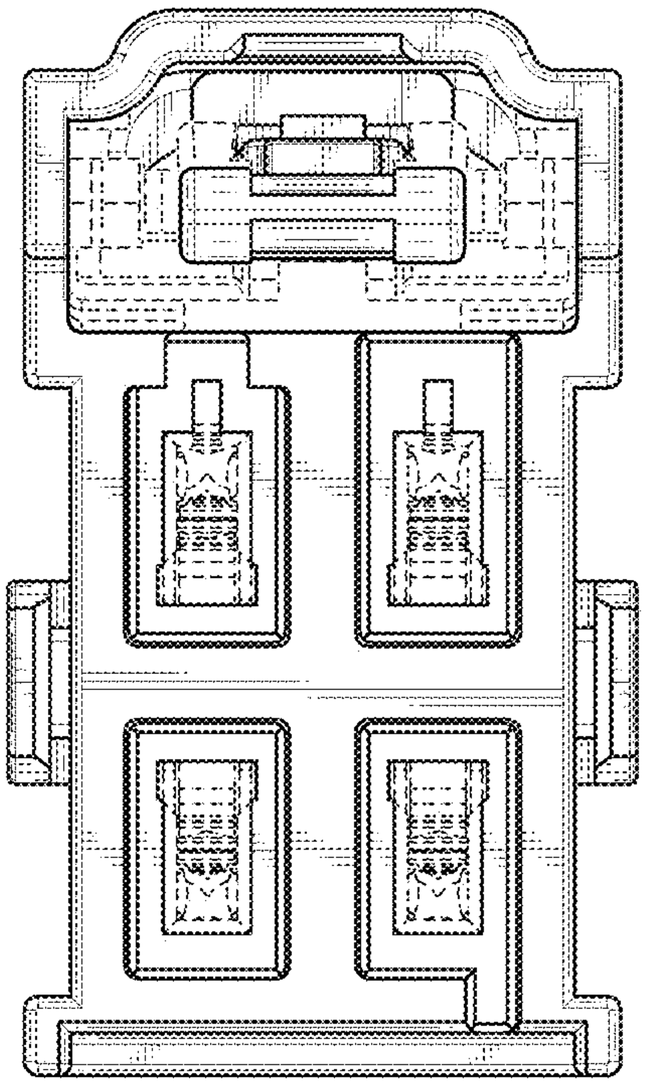


FIG. 26

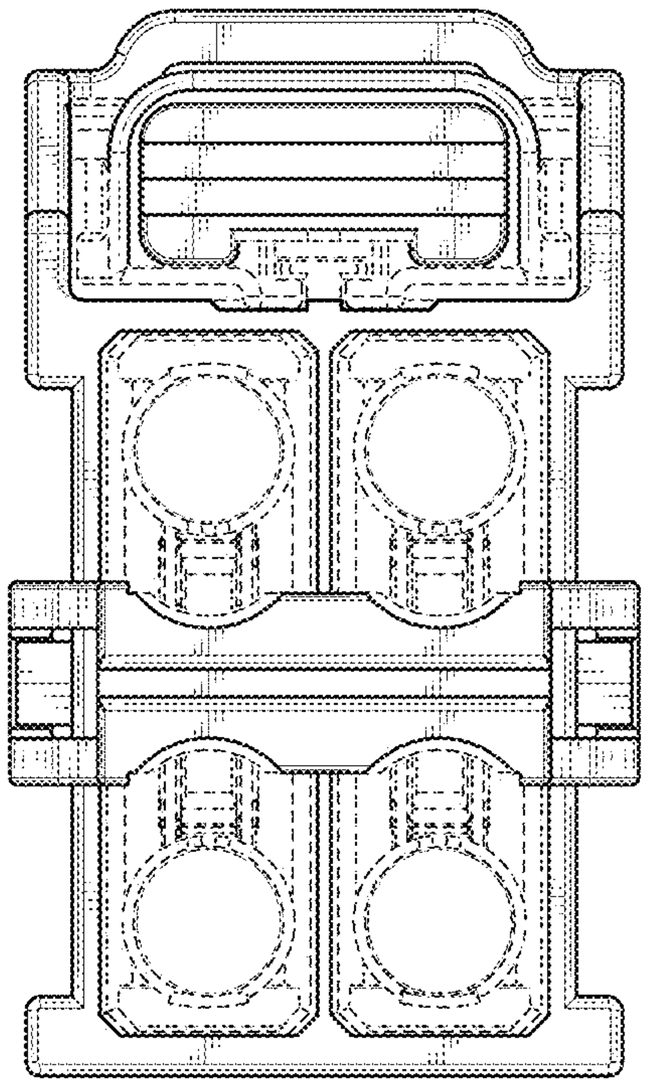


FIG. 27

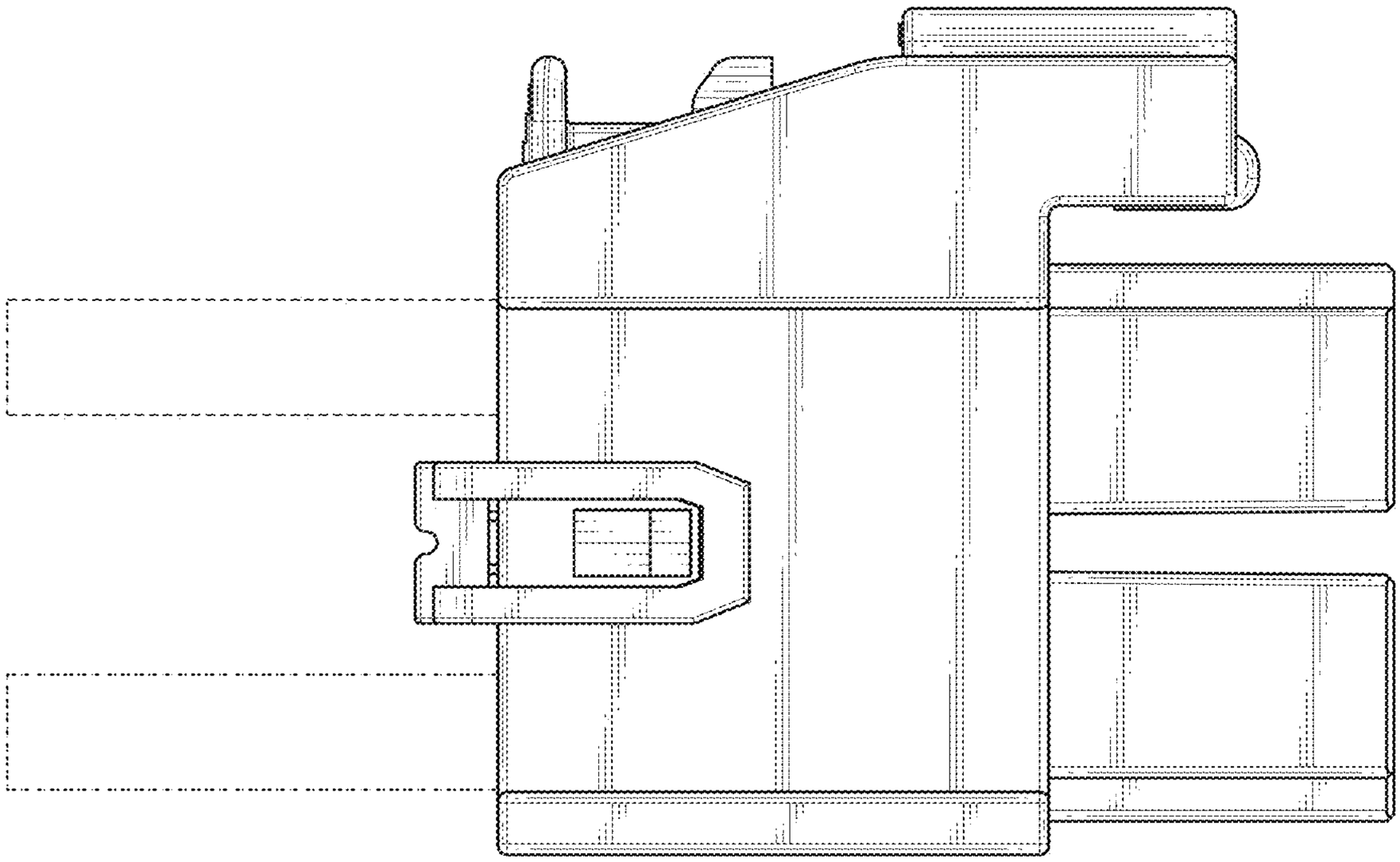


FIG. 28

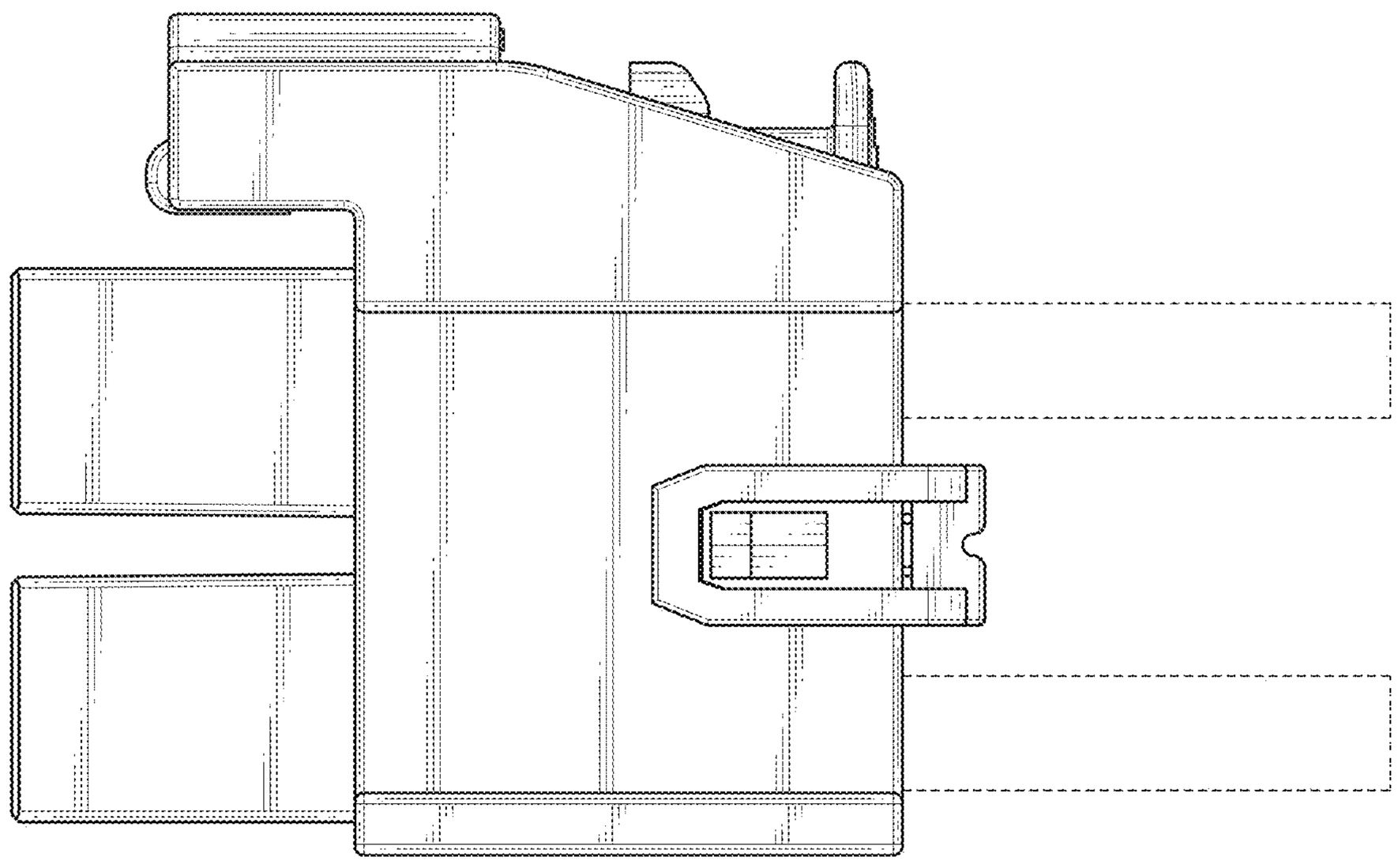


FIG. 29

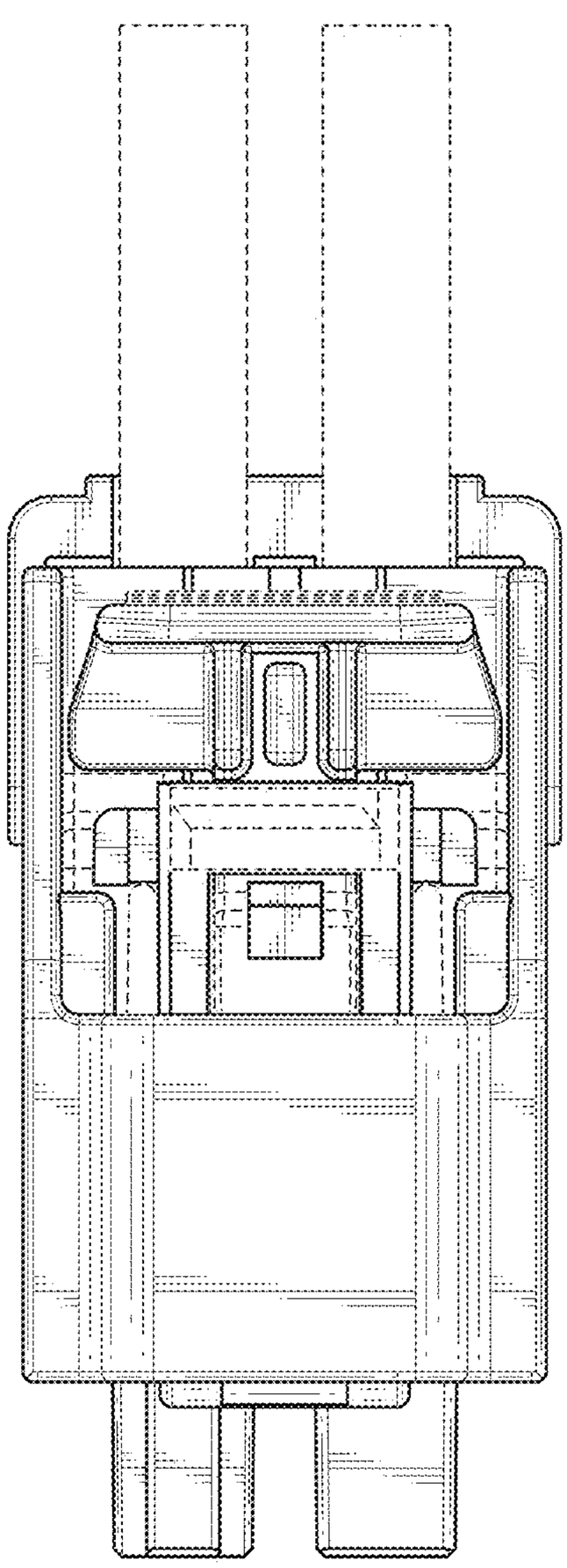


FIG. 30

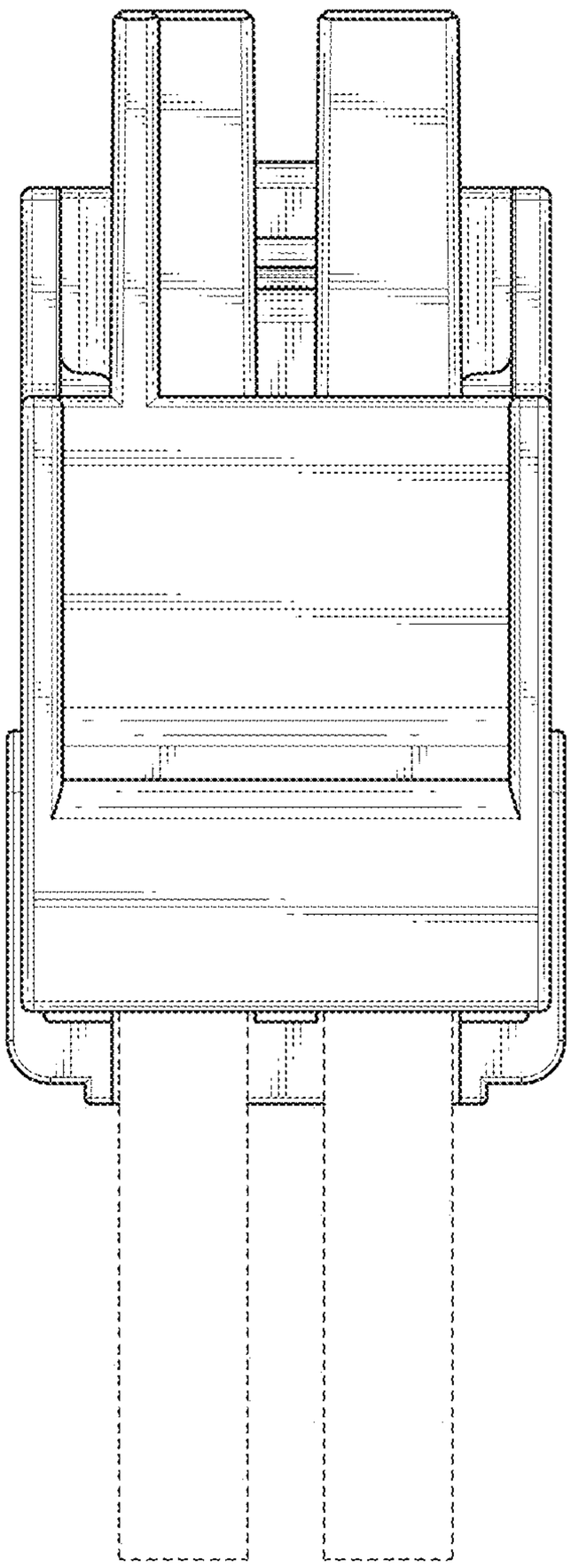


FIG. 31

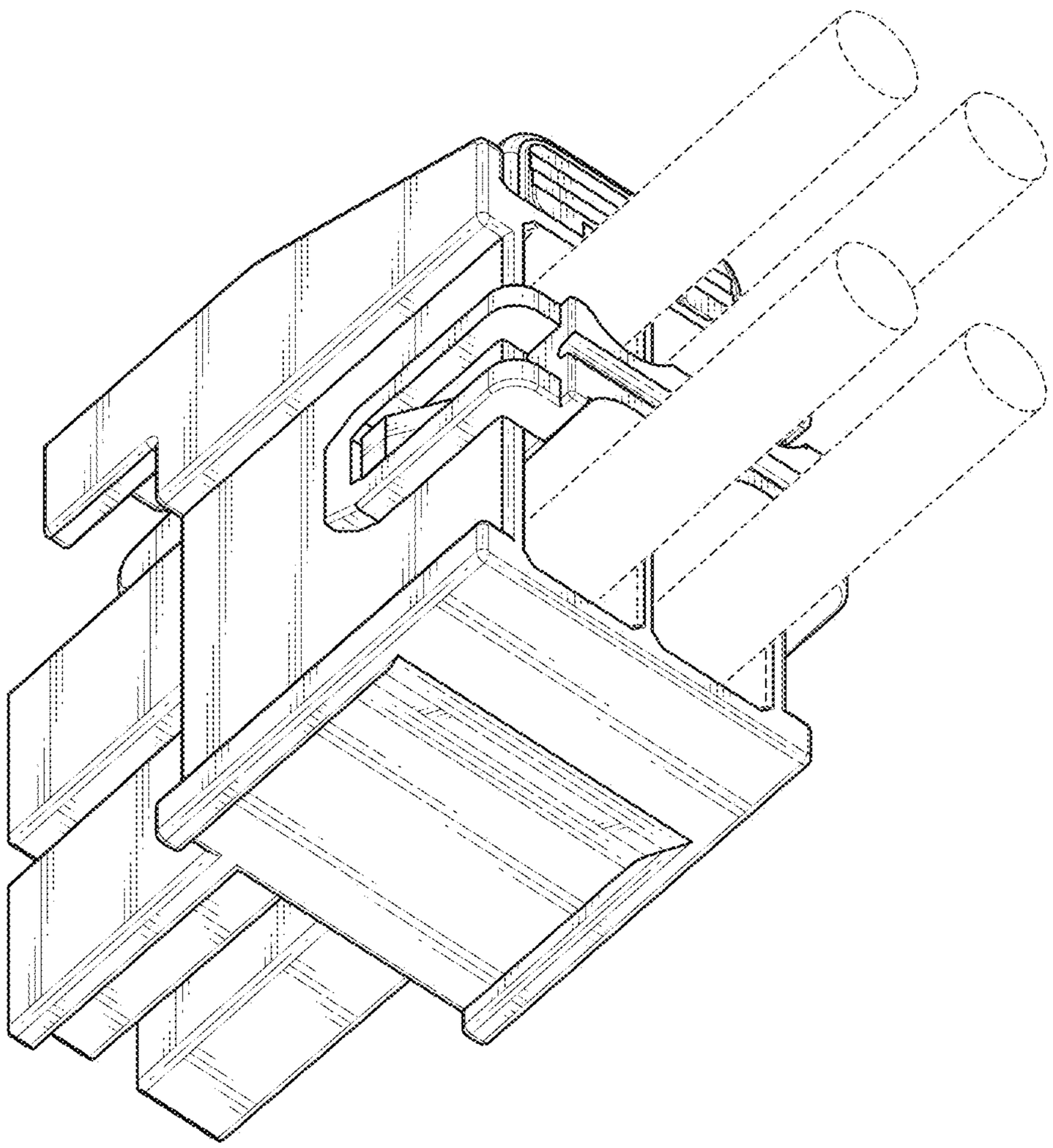


FIG. 32