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

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(45) **Date of Patent:** **** Jun. 11, 2019**

(54) **ELECTRICAL CONNECTOR**

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Tokyo (JP)

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

(21) Appl. No.: **29/566,619**

(22) Filed: **Jun. 1, 2016**

(30) **Foreign Application Priority Data**

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(51) **LOC (11) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/147**

(58) **Field of Classification Search**
USPC D13/101, 103, 110, 112, 117, 118, 120,
D13/123, 129–133, 145–147, 149, 151,
D13/153–155, 173, 183, 199
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D345,343 S * 3/1994 Nakamura D13/147
D410,434 S * 6/1999 Wu D13/147
(Continued)

FOREIGN PATENT DOCUMENTS

JP 2017152310 A * 8/2017 H01R 13/6581

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Assistant Examiner — Shawn T Gingrich

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LLP

(57) **CLAIM**

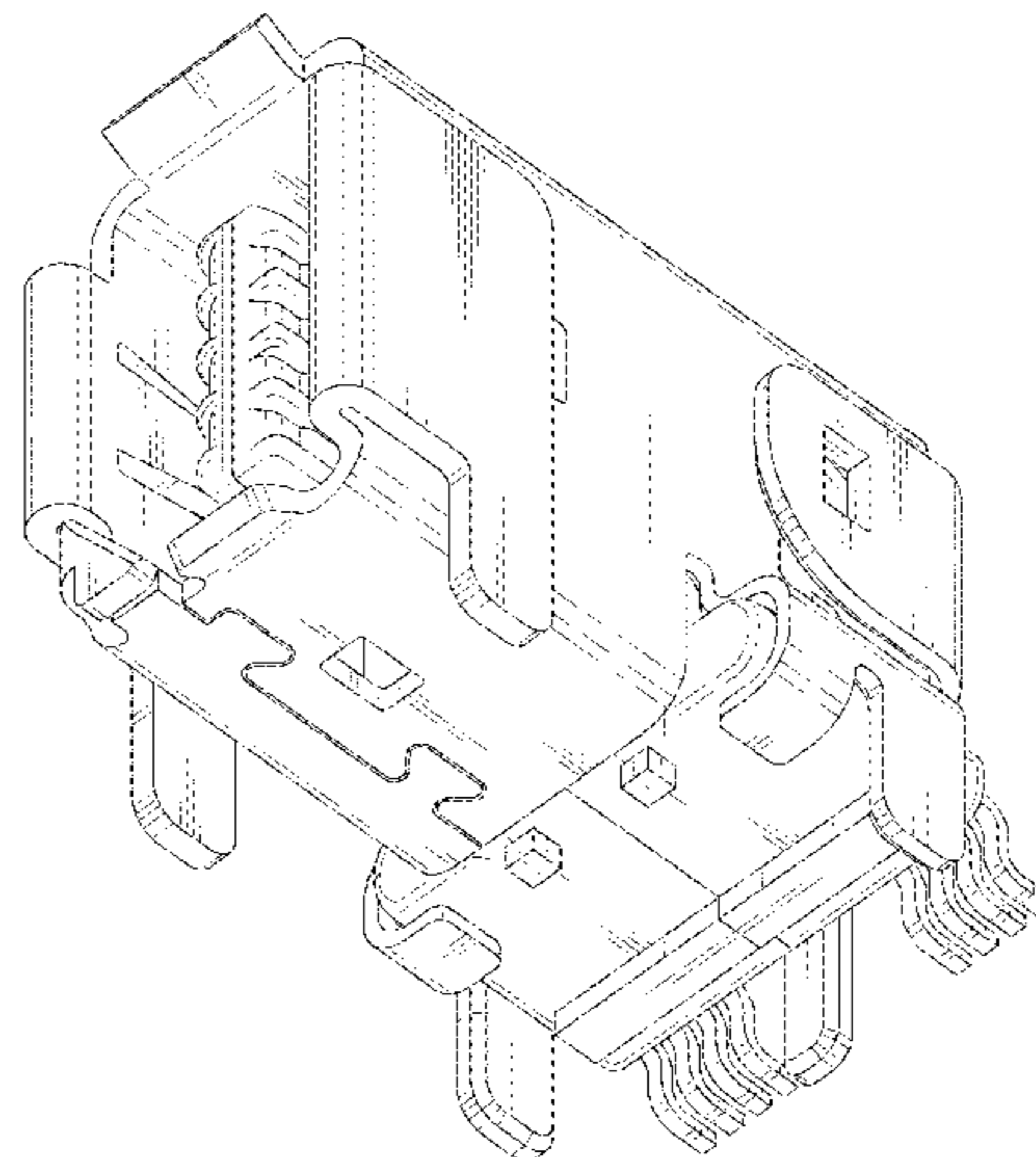
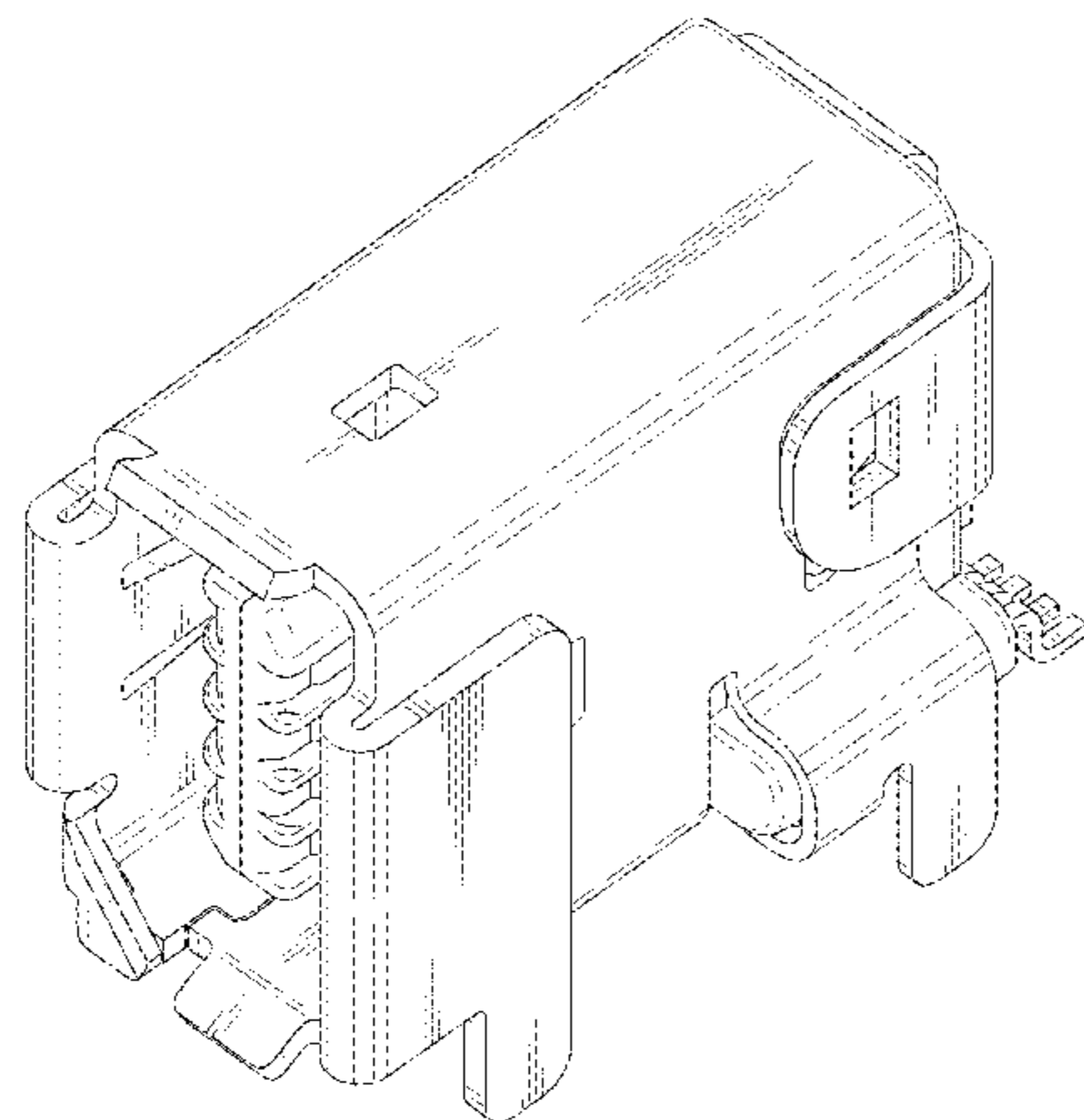
The ornamental design for an electrical connector, as shown
and described.

DESCRIPTION

FIG. 1 is a perspective view of the front, top and right side
of the electrical connector according to the first embodi-
ment, showing our new design;
FIG. 2 is a perspective view of the front, bottom and right
side thereof;
FIG. 3 is a perspective view of the rear, top and left side
thereof;
FIG. 4 is a perspective view of the rear, bottom and left side
thereof;
FIG. 5 is a front view thereof;
FIG. 6 is a rear view thereof;
FIG. 7 is a left side view thereof;
FIG. 8 is a right side view thereof;
FIG. 9 is a top plan view thereof;
FIG. 10 is a bottom view thereof;
FIG. 11 is a perspective view of the front, top and right side
of the electrical connector according to the second embodi-
ment, showing our new design;
FIG. 12 is a perspective view of the front, bottom and right
side thereof;
FIG. 13 is a perspective view of the rear, top and left side
thereof;
FIG. 14 is a perspective view of the rear, bottom and left side
thereof;
FIG. 15 is a front view thereof;
FIG. 16 is a rear view thereof;
FIG. 17 is a left side view thereof;
FIG. 18 is a right side view thereof;
FIG. 19 is a top plan view thereof; and,
FIG. 20 is a bottom view thereof.

The broken line showing of the electrical connector is for the
purpose of illustrating portions of the electrical connector
and forms no part of the claimed design.

1 Claim, 20 Drawing Sheets



(58) **Field of Classification Search**

CPC H01R 12/00; H01R 12/70; H01R 12/707;
H01R 12/72; H01R 13/62; H01R 13/66;
H01R 13/627; H01R 13/639; H01R
13/648; H01R 13/658; H01R 24/00;
H01R 24/06; H01R 25/00; H01R 12/71;
H01R 13/52; H01R 13/6471; H01R
13/6473; H01R 13/6581; H01R 13/6585

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D433,667	S	*	11/2000	Li	.....	D13/147
D447,466	S	*	9/2001	Chen	.....	D13/147
D540,746	S	*	4/2007	Watanabe	.....	D13/147
D569,345	S	*	5/2008	Ikegami	.....	D13/147
D676,390	S	*	2/2013	Naito	.....	D13/147
D706,721	S	*	6/2014	Naito	.....	D13/147
D733,661	S	*	7/2015	Tada	.....	D13/147
9,640,917	B1	*	5/2017	Li	.....	H01R 13/6581
D812,570	S	*	3/2018	Sakaizawa	.....	D13/147
2009/0017693	A1	*	1/2009	Nagata	.....	H01R 12/724 439/660

* cited by examiner

Fig. 1

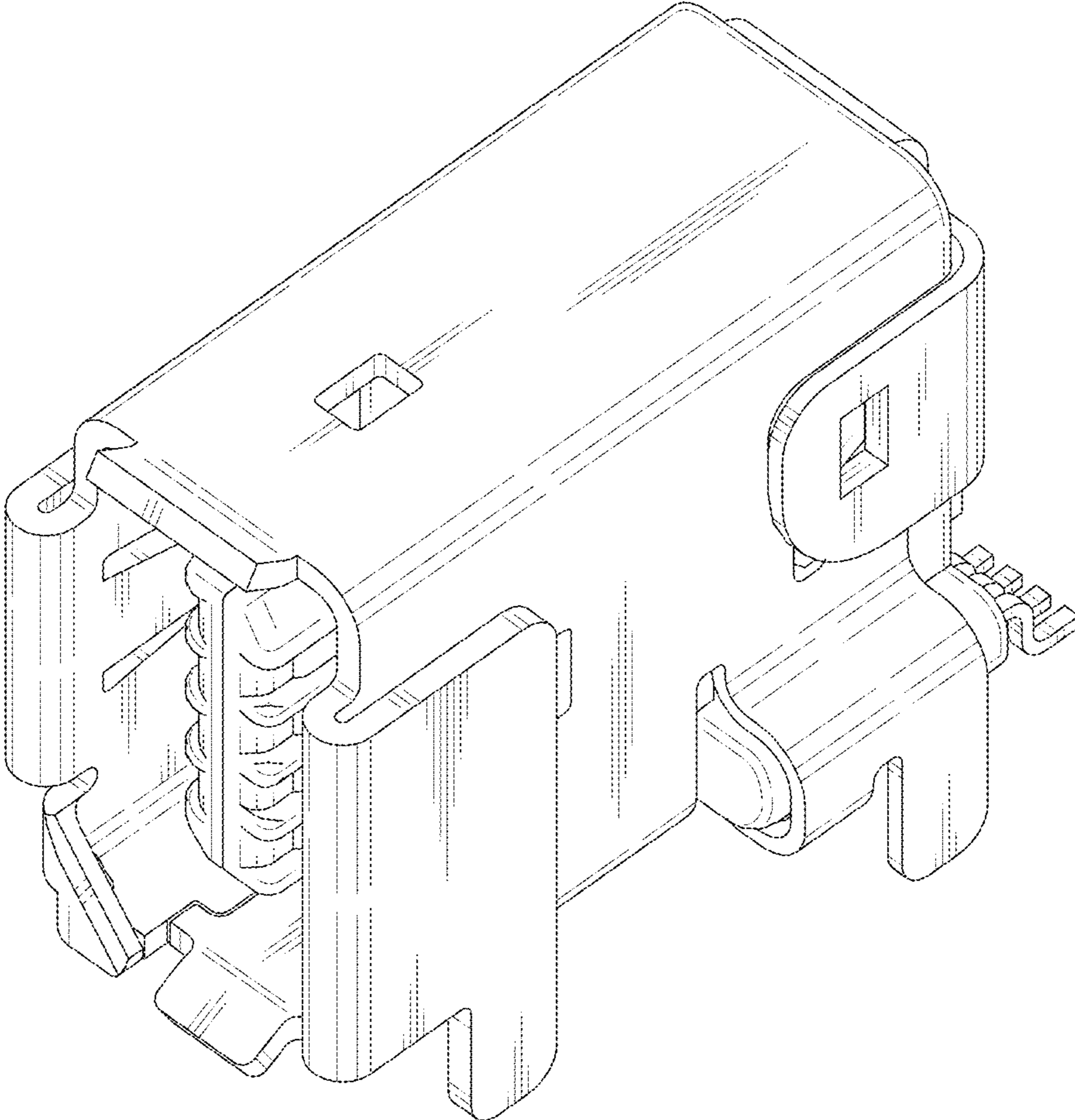


Fig. 2

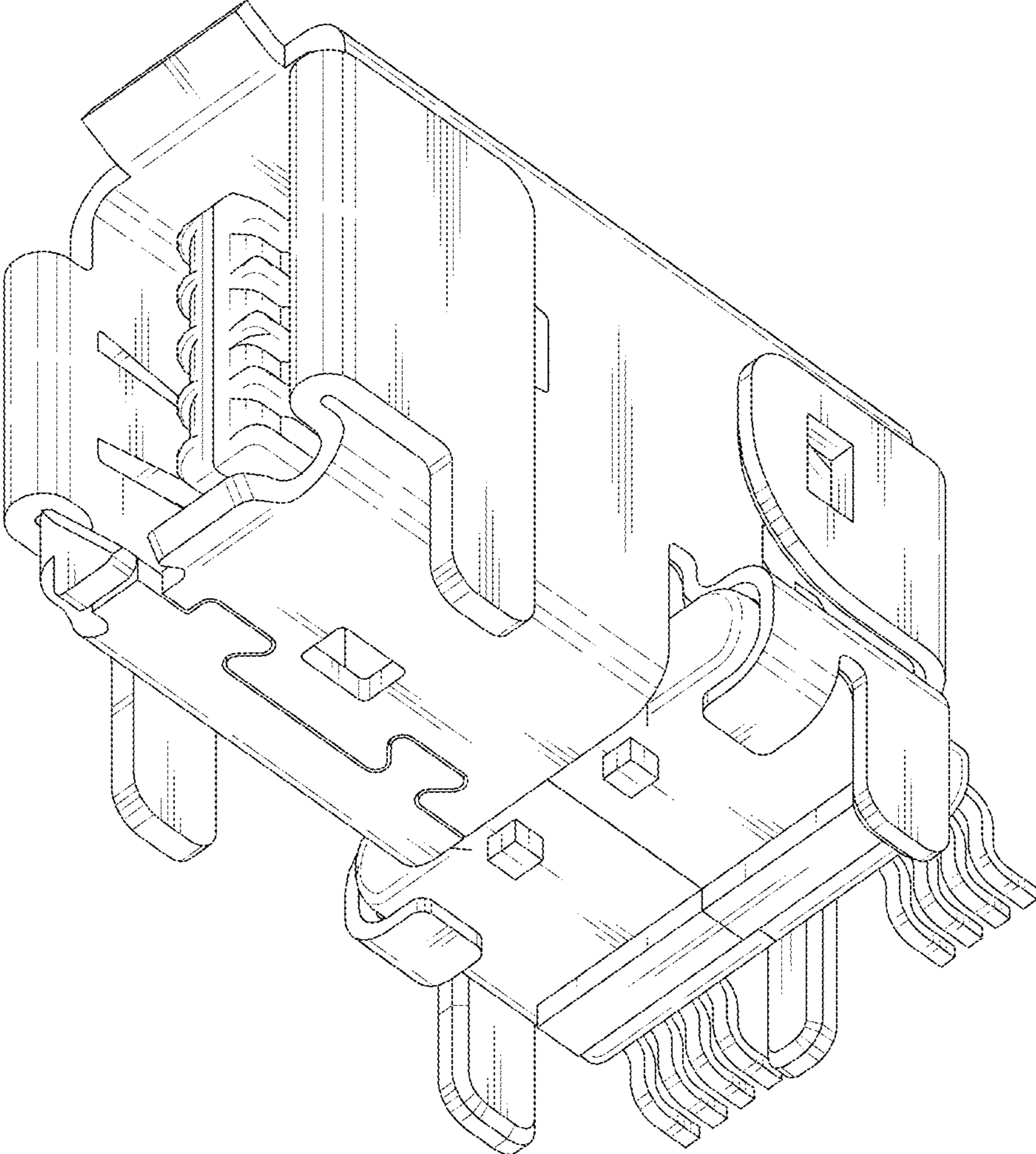


Fig. 3

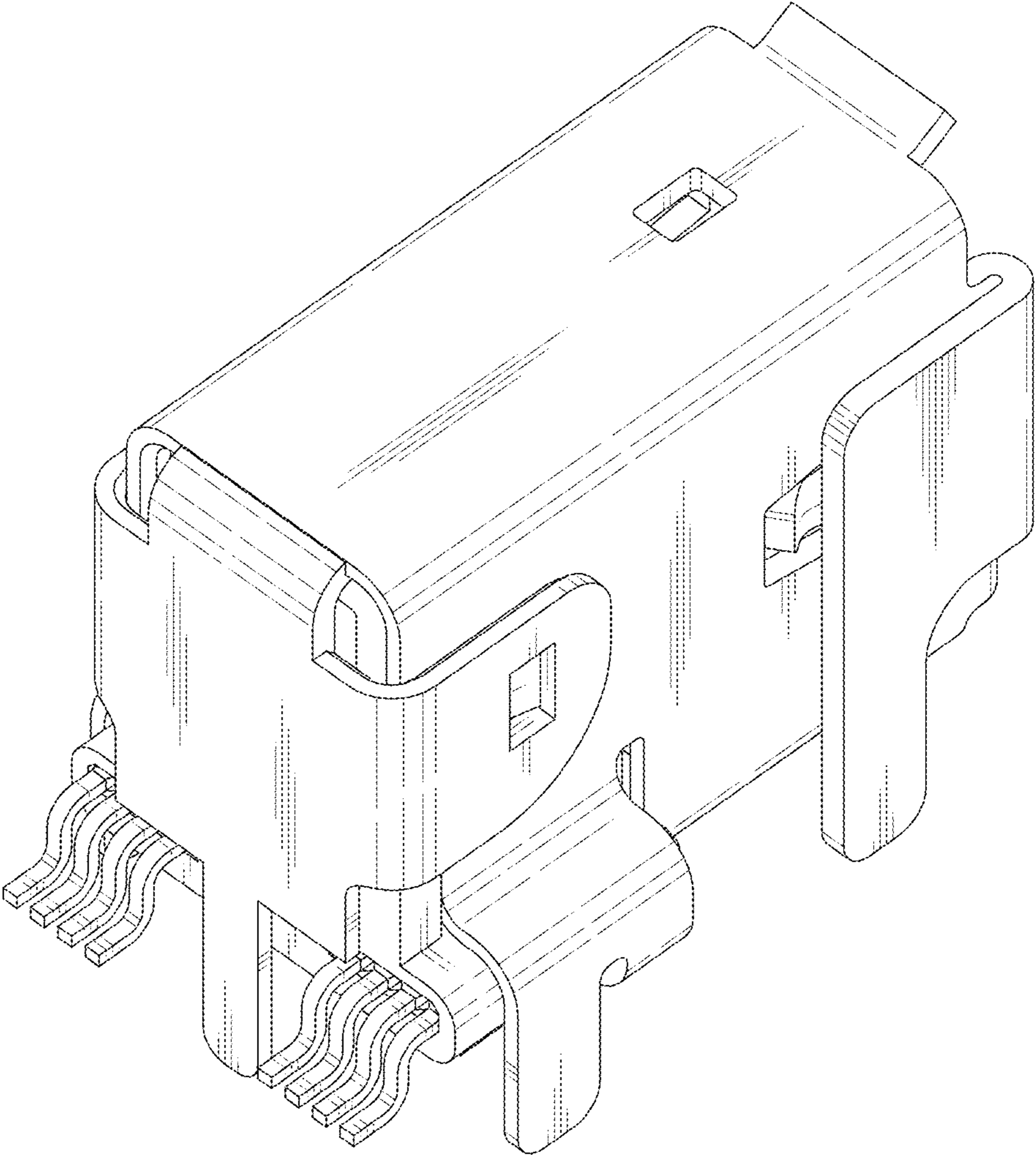


Fig. 4

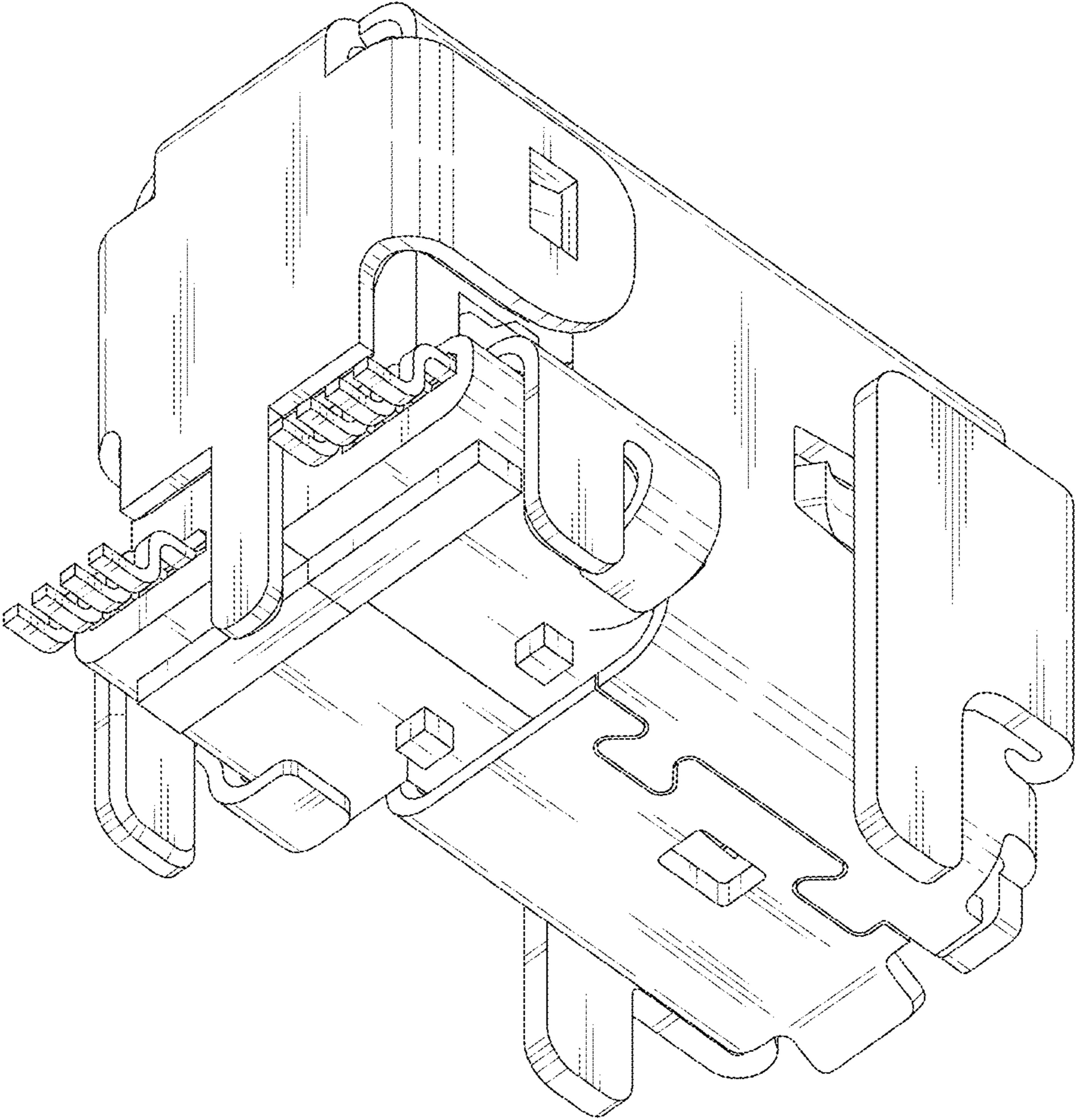


FIG. 5

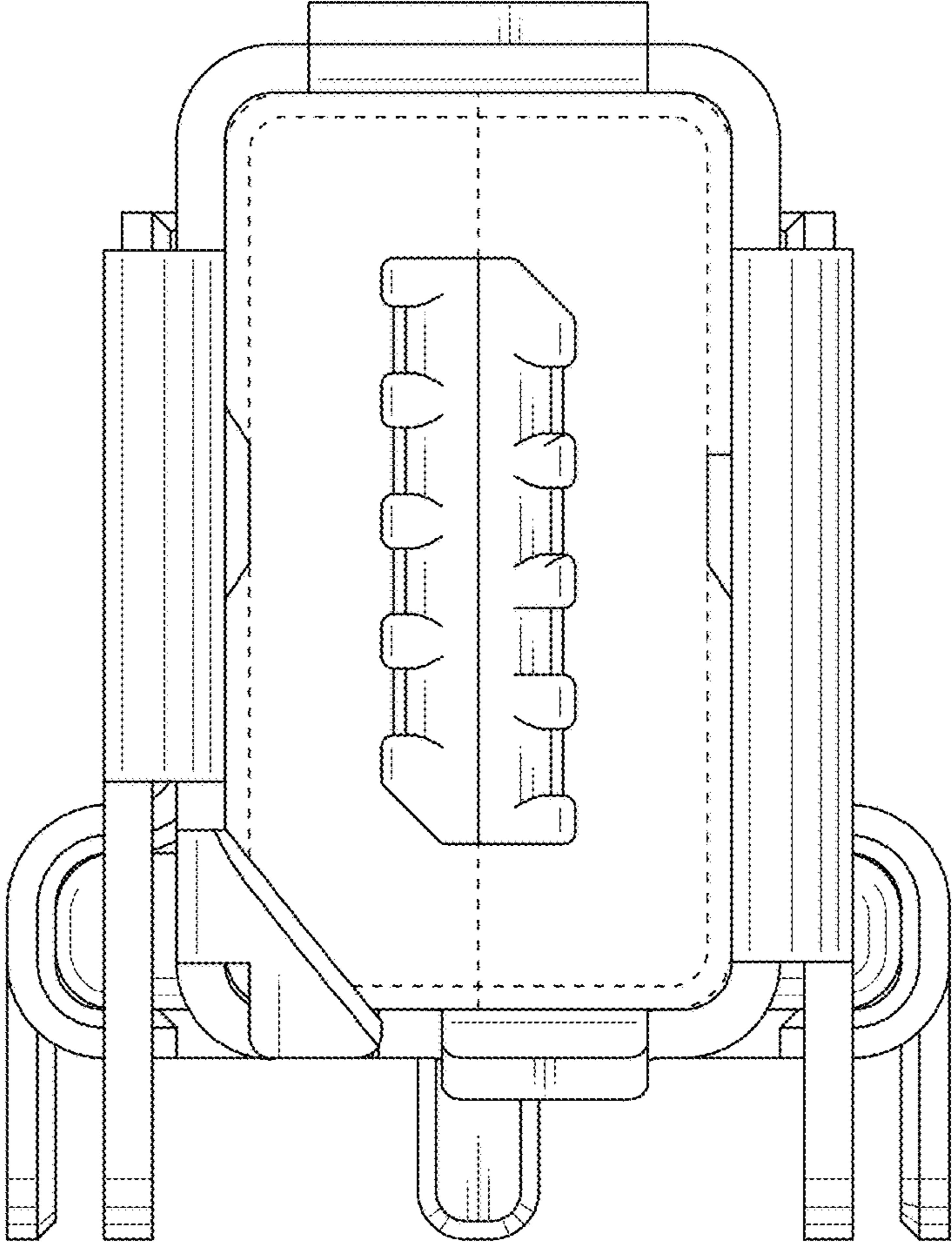


Fig. 6

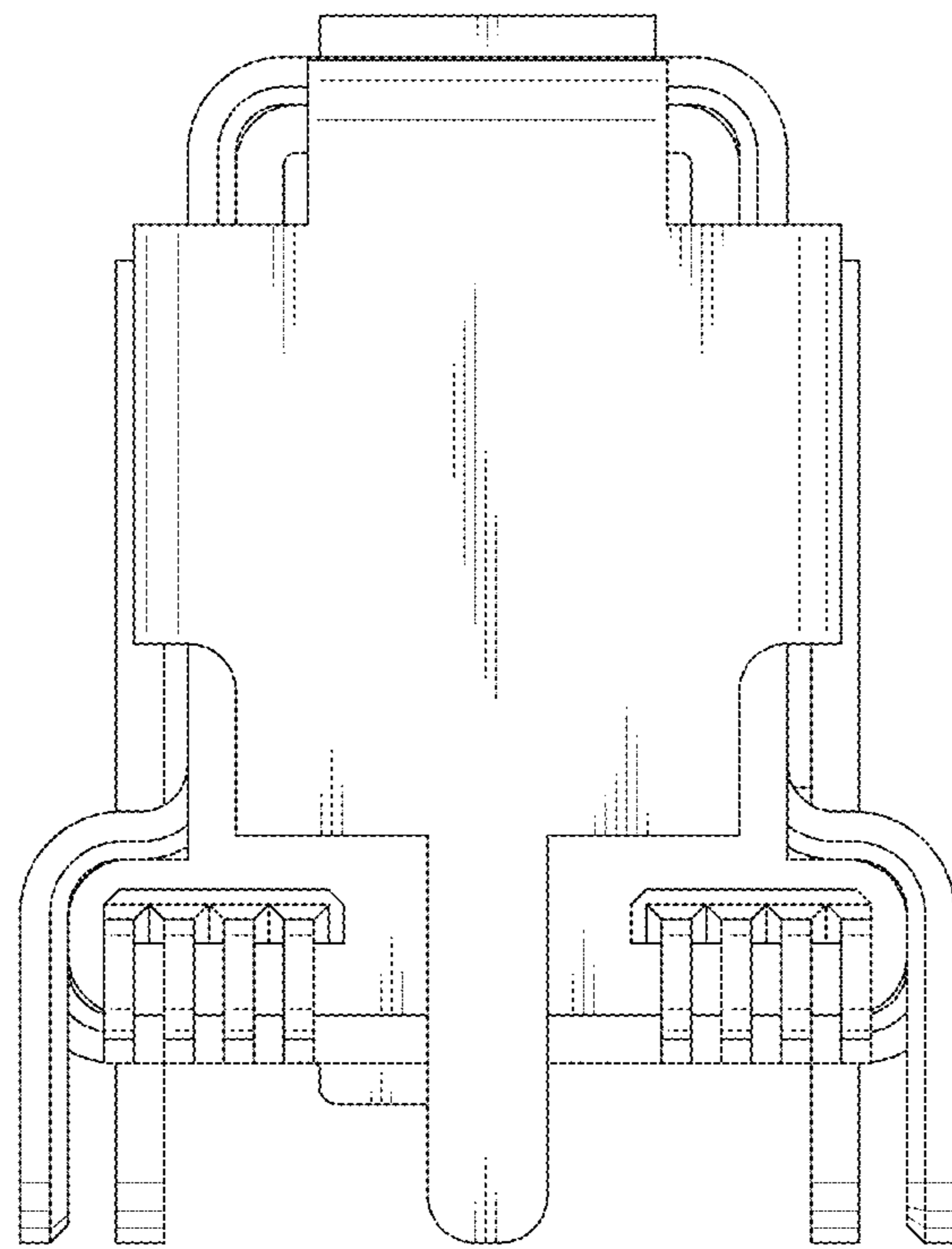


FIG. 7

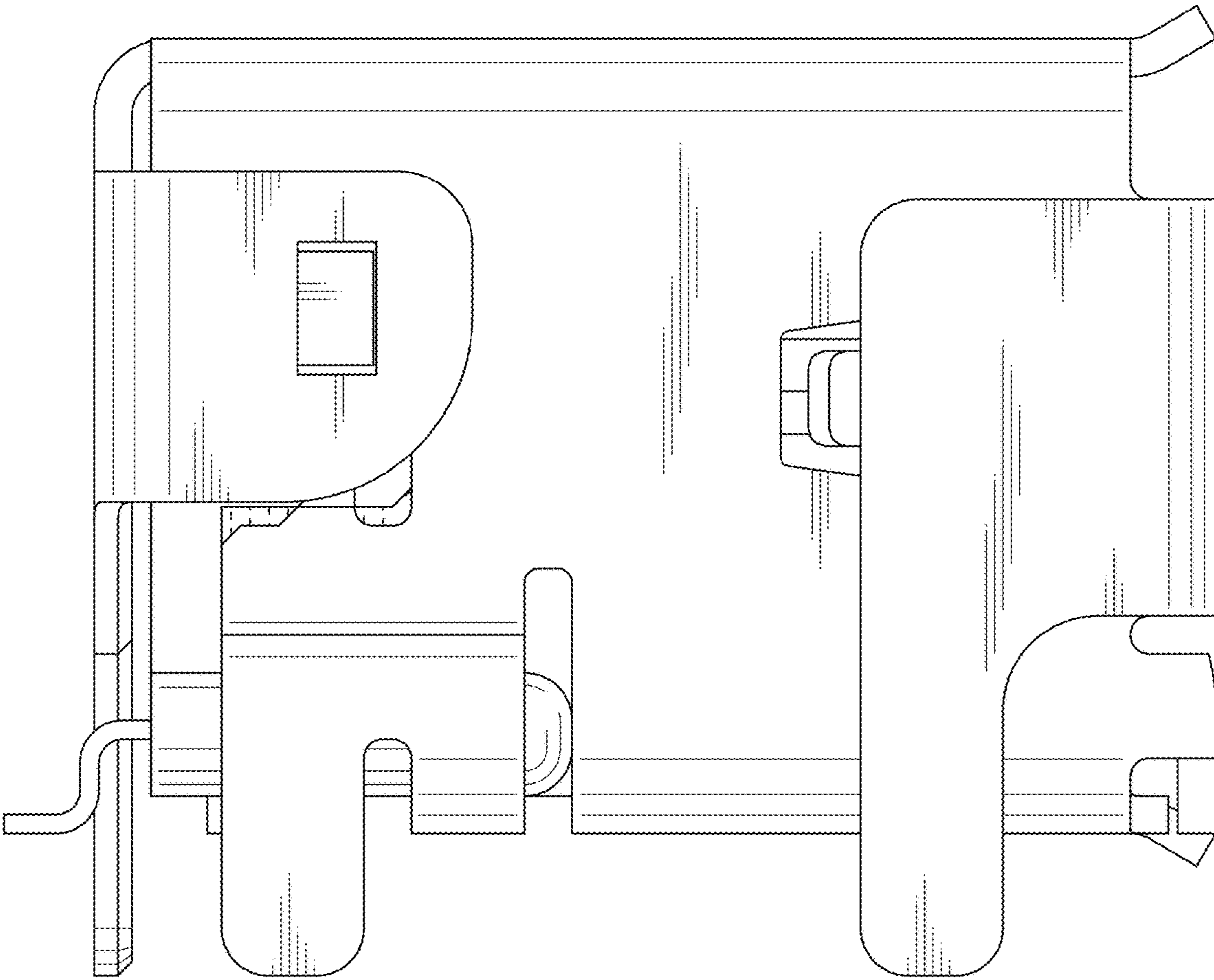


FIG. 8

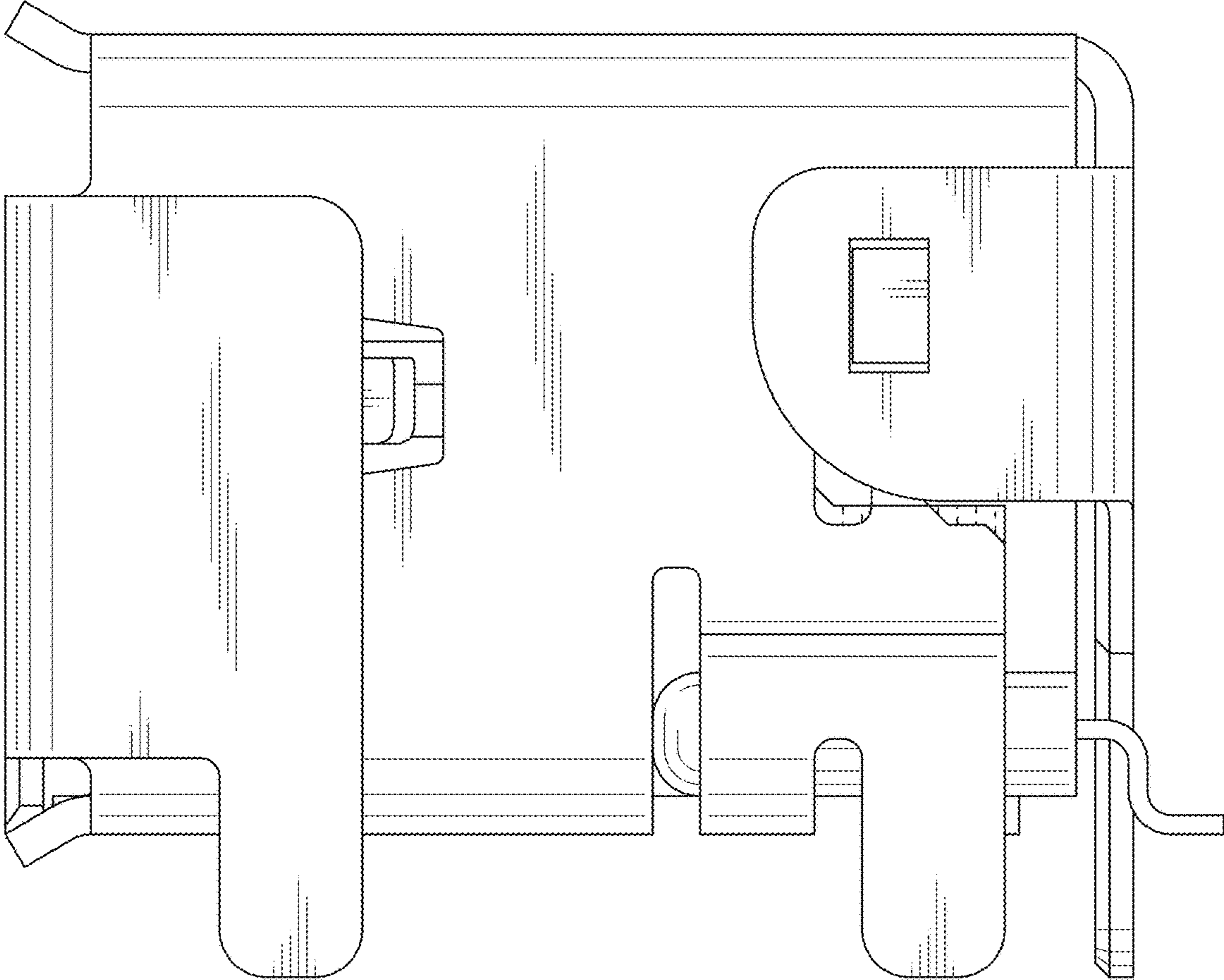


Fig. 9

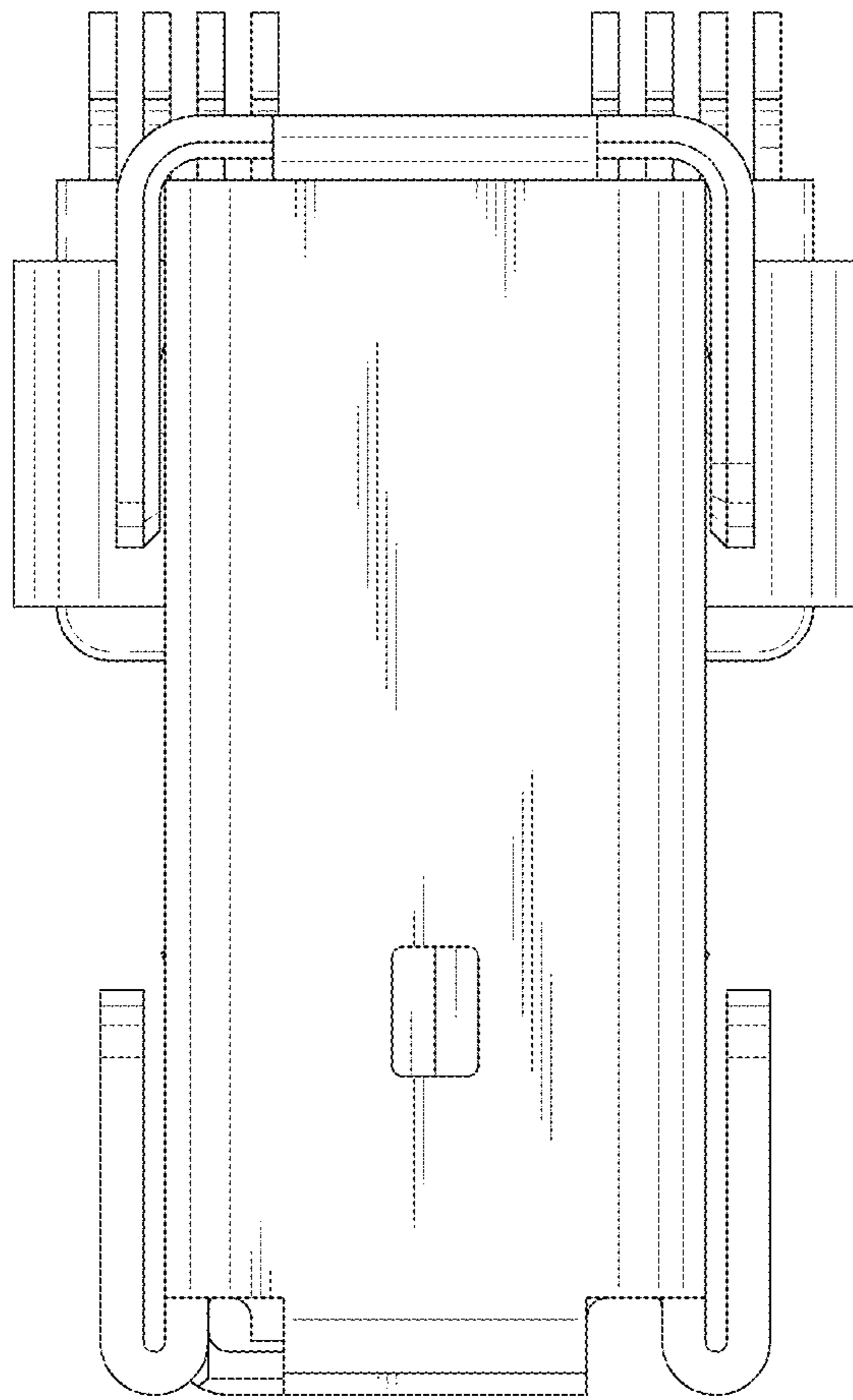


Fig. 10

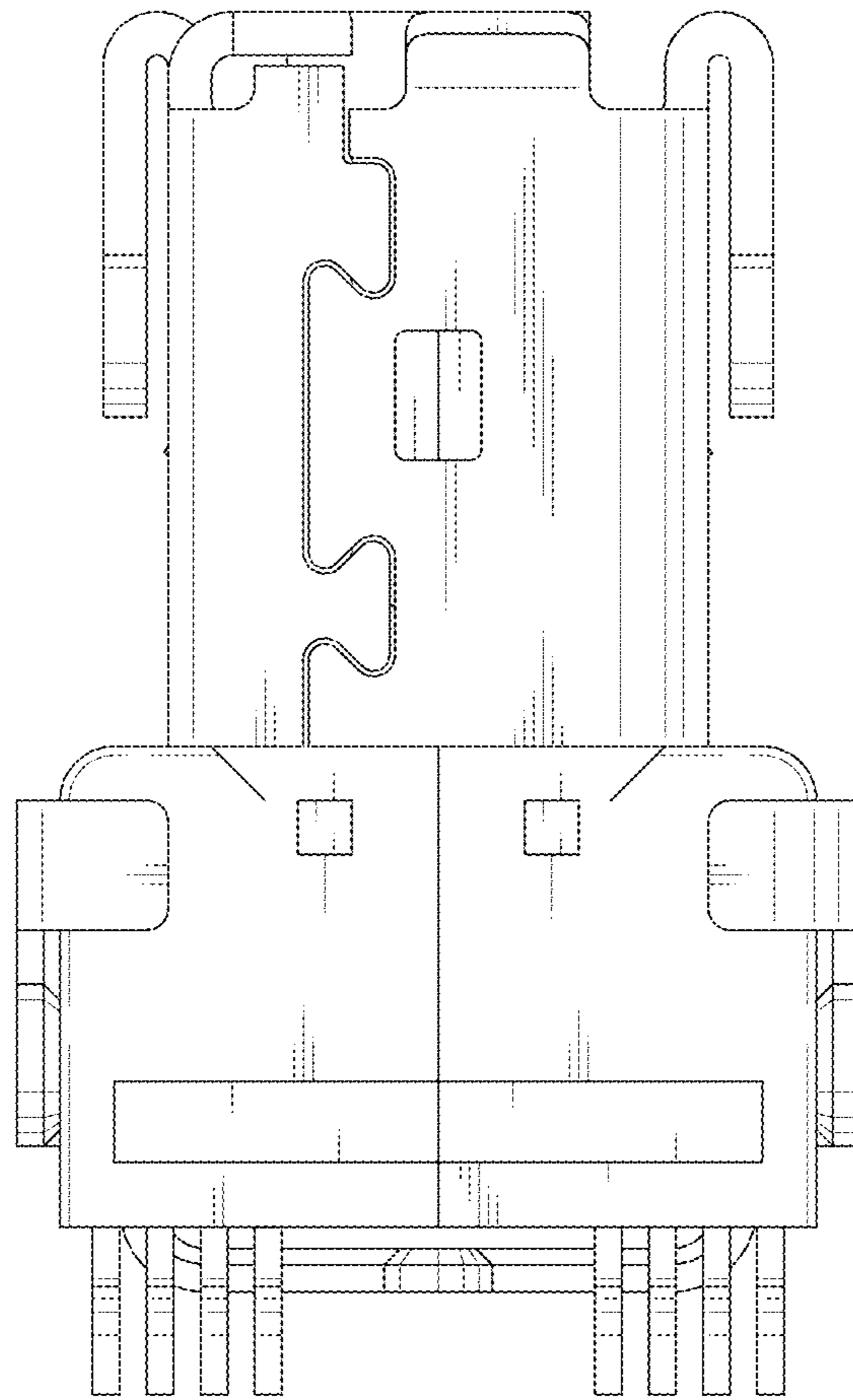


Fig. 11

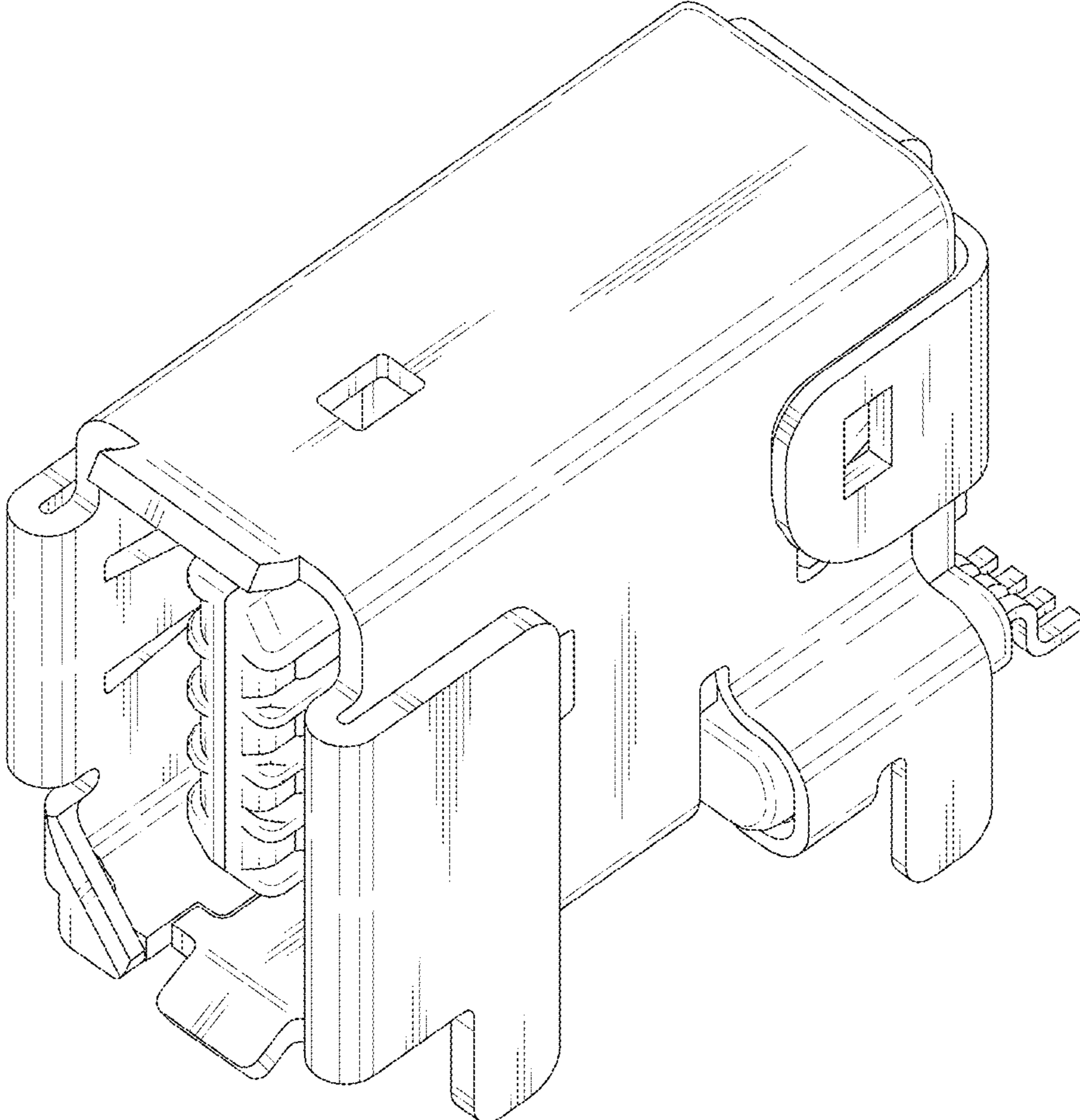


Fig. 12

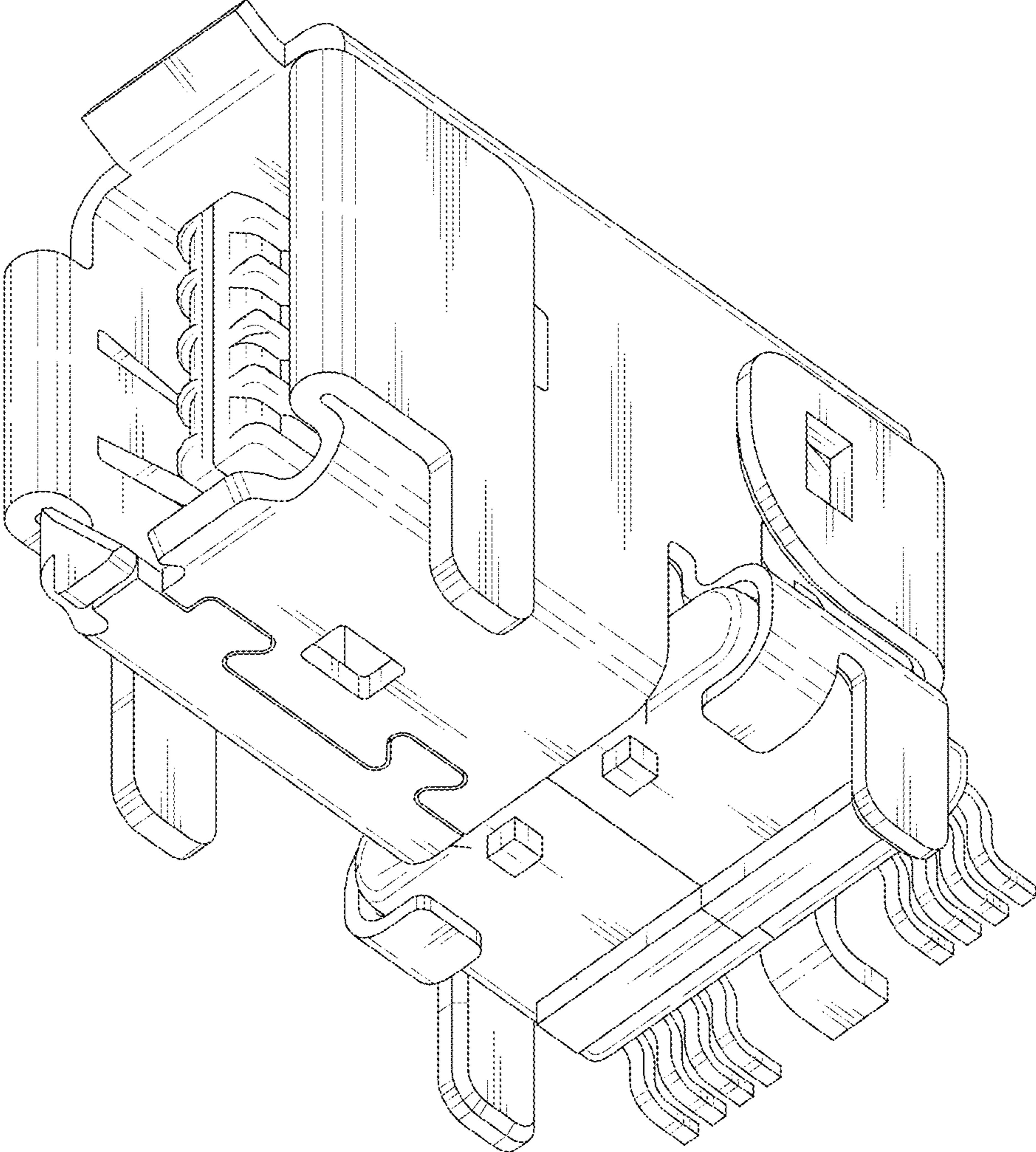


Fig. 13

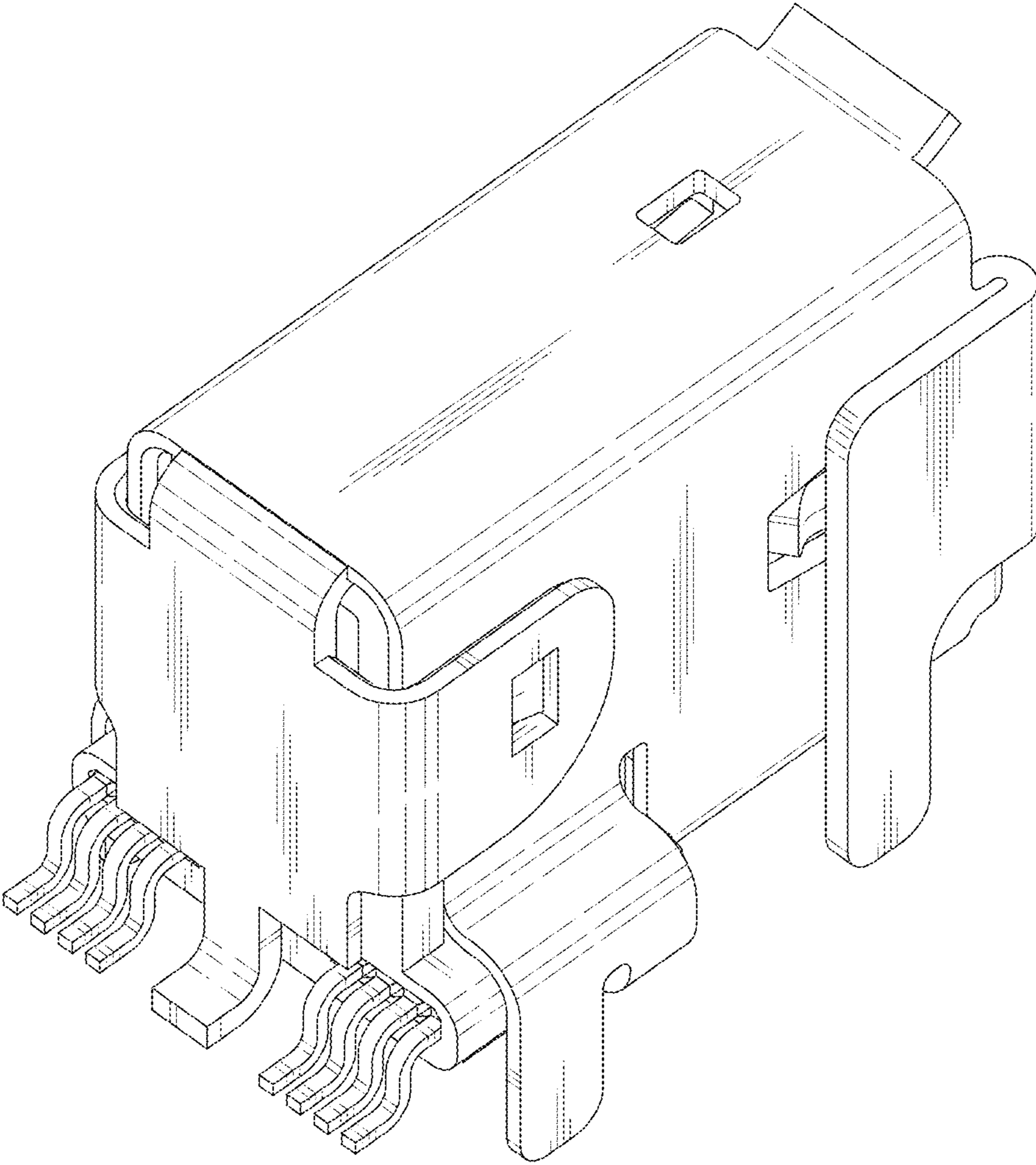


Fig. 14

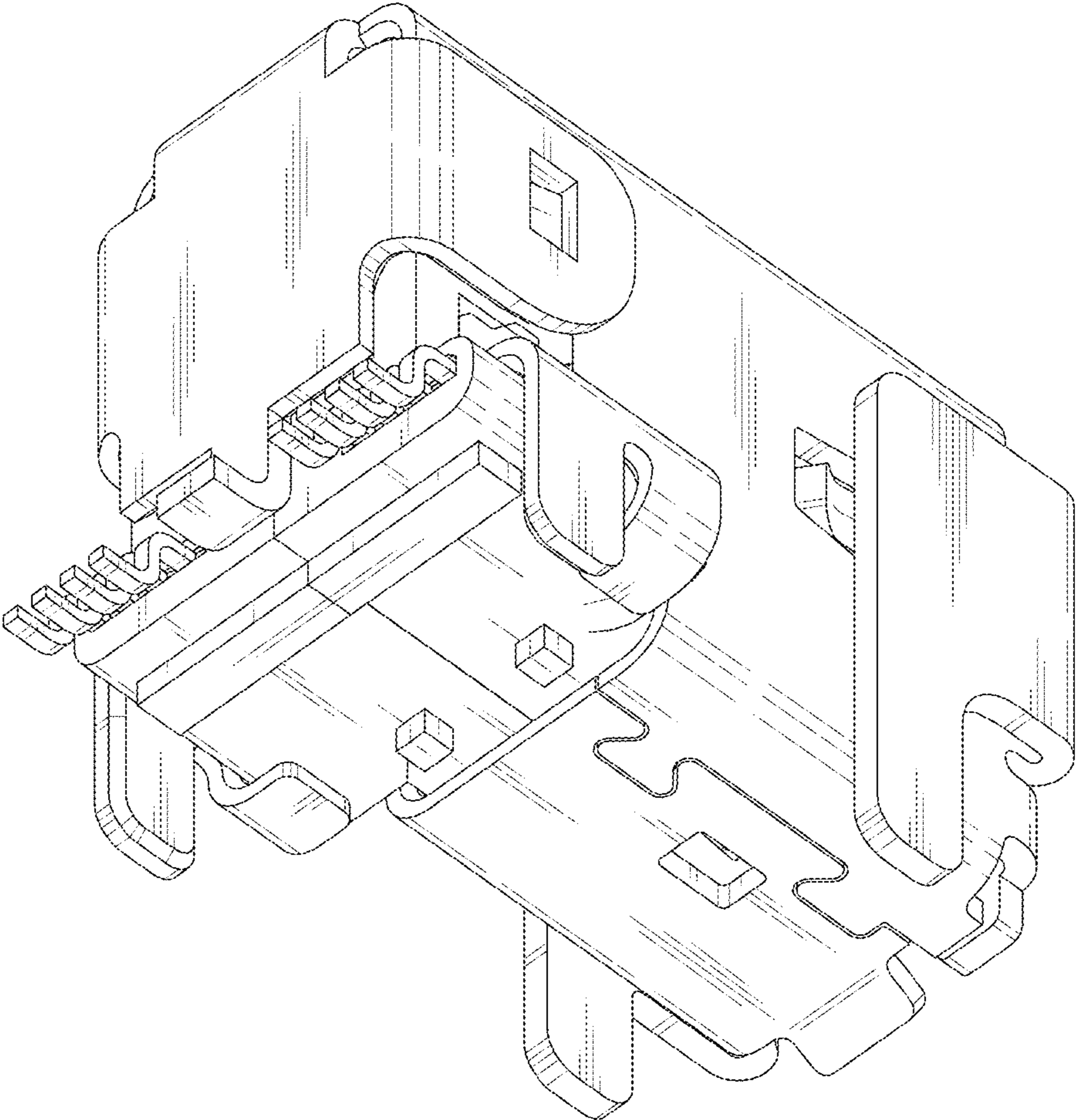


FIG. 15

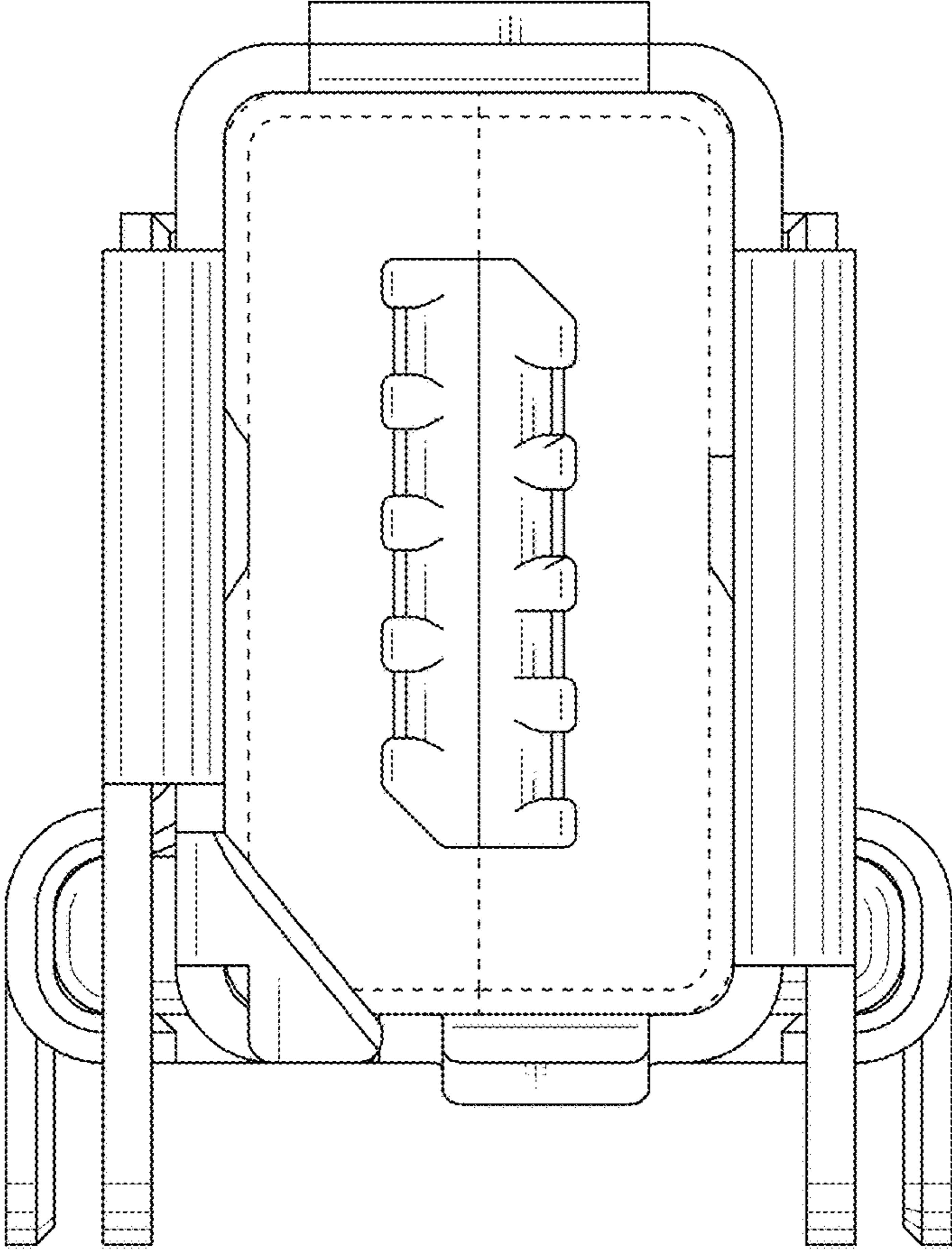


Fig. 16

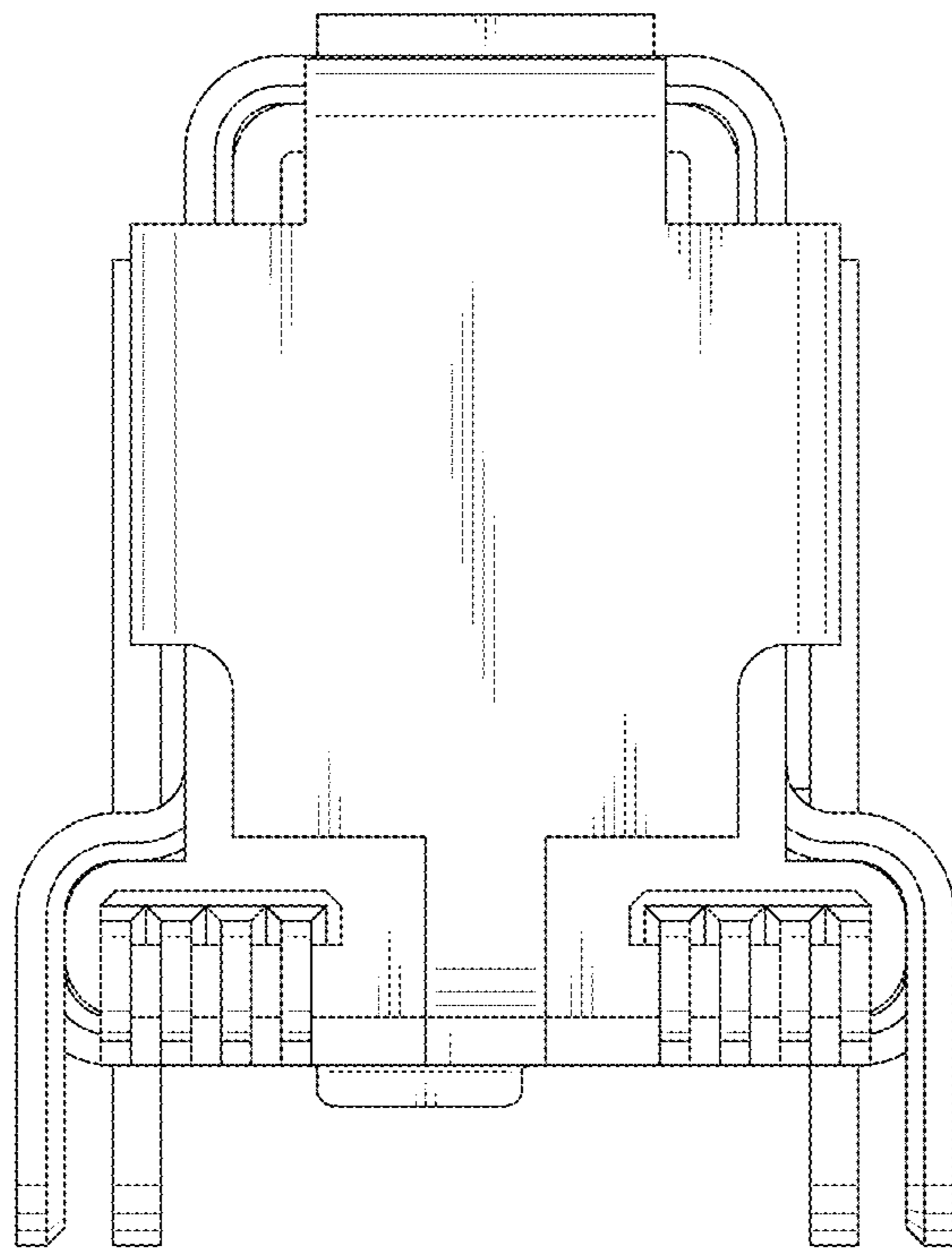


FIG. 17

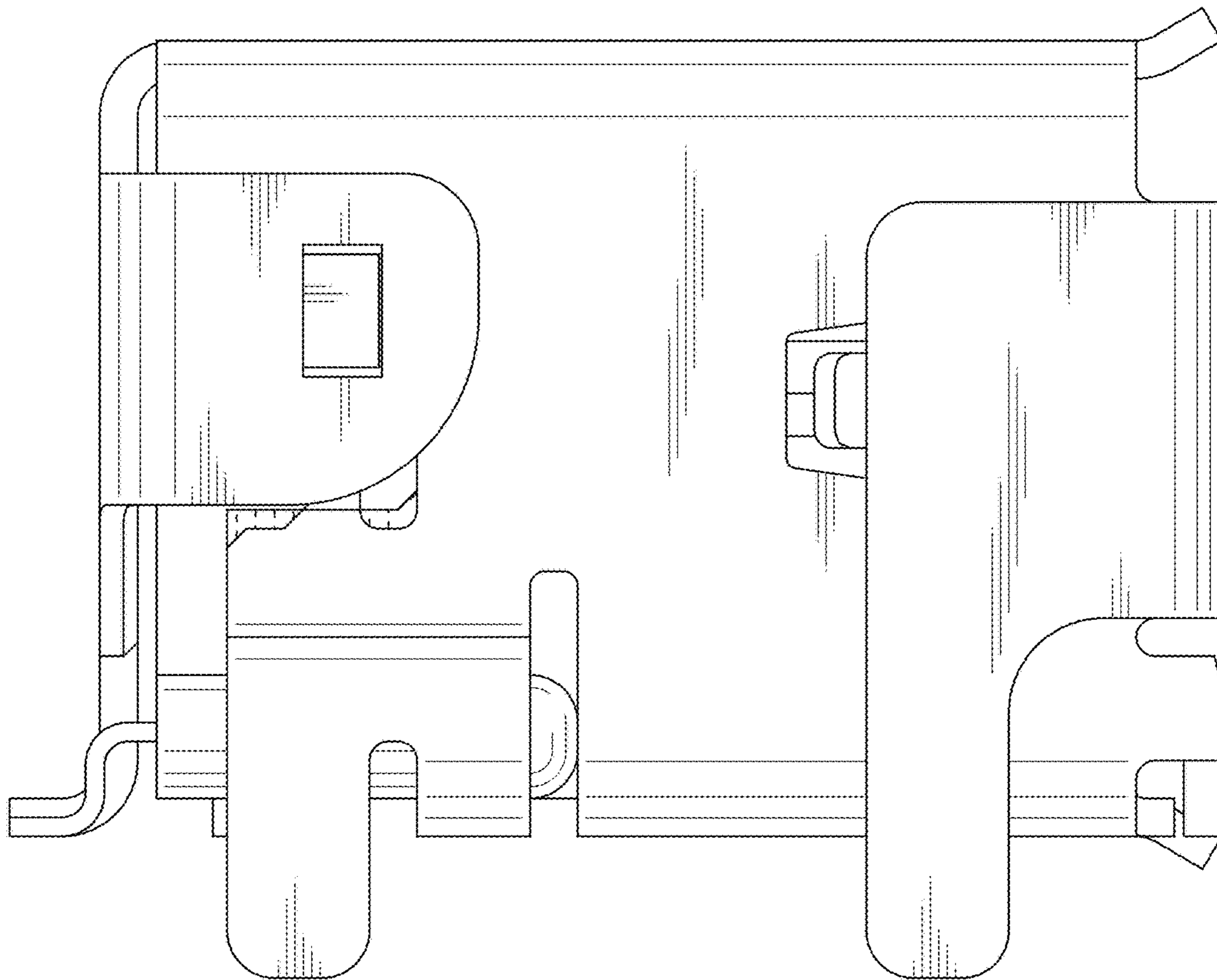


FIG. 18

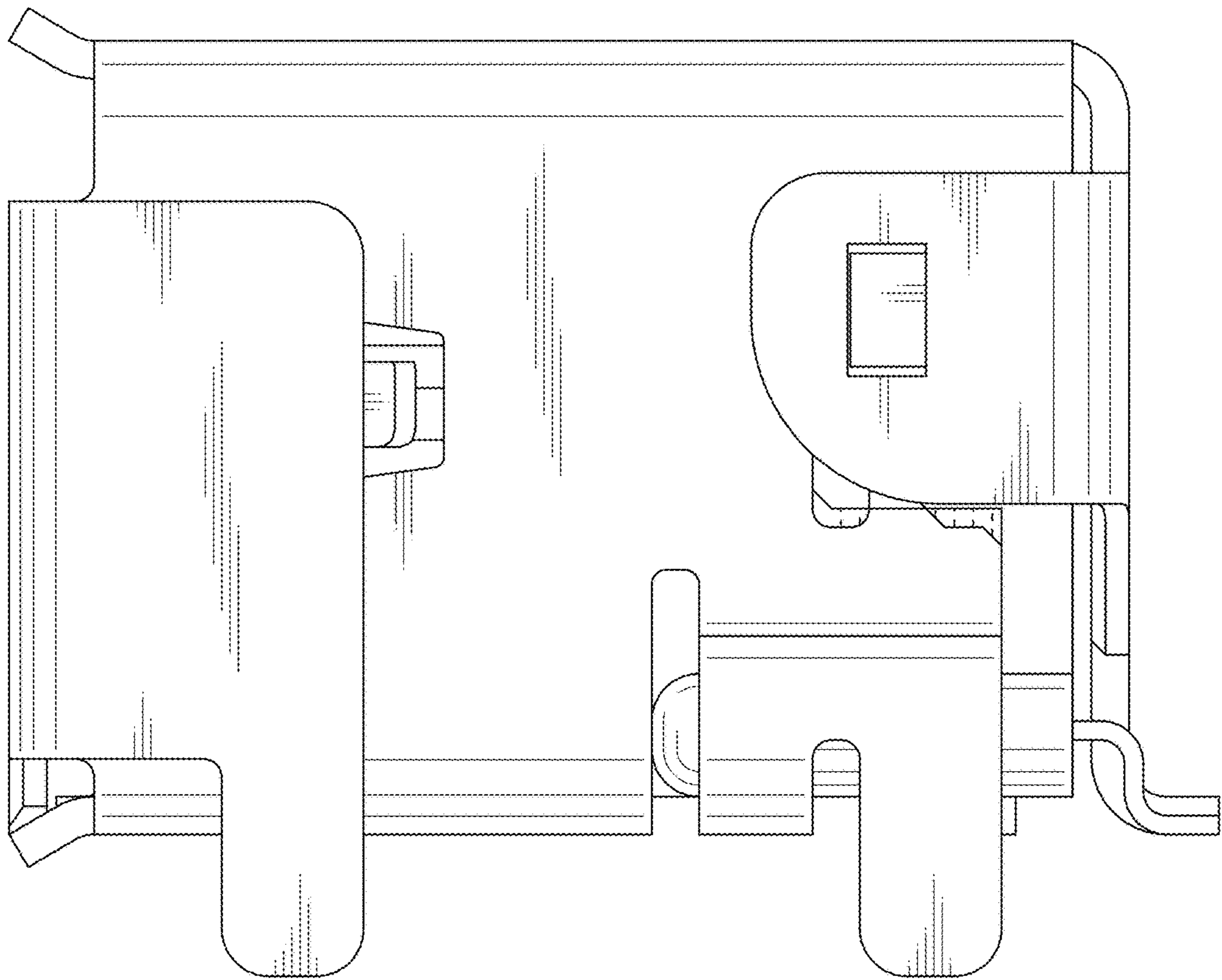


Fig. 19

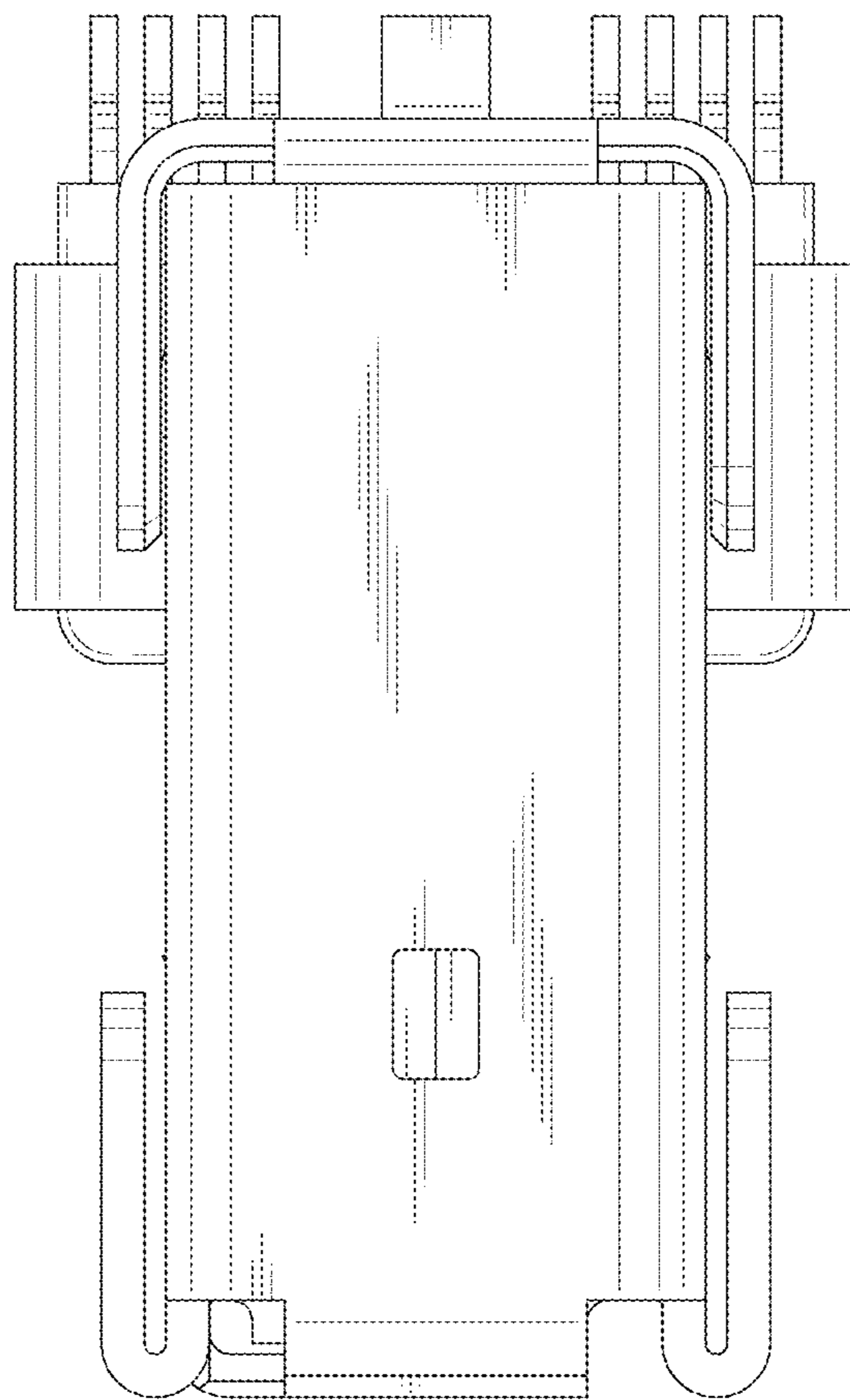


Fig. 20

