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(12) **United States Design Patent** (10) **Patent No.:** **US D884,638 S**
Kim et al. (45) **Date of Patent:** **** May 19, 2020**

(54) **ELECTRICAL CONNECTOR**

(71) Applicant: **J.S.T. CORPORATION**, Farmington Hills, MI (US)

(72) Inventors: **Jong Soo Kim**, Naperville, IL (US);
Gwendolyn Upson, Ypsilanti, MI (US);
Ping Chen, Novi, MI (US)

(73) Assignee: **J.S.T. CORPORATION**, Farmington Hills, MI (US)

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

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(51) **LOC (12) Cl.** **13-03**

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

(58) **Field of Classification Search**

USPC D13/101, 118, 123, 133, 145–147, 149,
D13/154, 184, 199
CPC . G02B 6/36; G02B 6/38; H01R 13/43; H01R
13/44; H01R 13/436; H01R 13/514;
H01R 13/62; H01R 13/627; H01R
13/629; H01R 13/63; H01R 13/639;
H01R 13/641

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D323,143 S * 1/1992 Ohkura D13/133
5,628,648 A * 5/1997 Higgins, Jr. H01R 13/6272
439/489
D454,334 S * 3/2002 Okada D13/133
6,712,636 B2 * 3/2004 Fukuda H01R 13/6271
439/353
D535,620 S * 1/2007 Mace D13/133
D747,689 S * 1/2016 Endo D13/147
D803,161 S * 11/2017 Li D13/147
D840,938 S * 2/2019 Hsu D13/147

D847,756 S * 5/2019 Endo D13/147
D850,382 S * 6/2019 Hisada D13/133
D854,500 S * 7/2019 Asano D13/133

(Continued)

FOREIGN PATENT DOCUMENTS

JP 2007334103 A * 12/2007

Primary Examiner — Angela J Lee

Assistant Examiner — Shawn T Gingrich

(74) *Attorney, Agent, or Firm* — Kratz, Quintos &
Hanson, LLP

(57) **CLAIM**

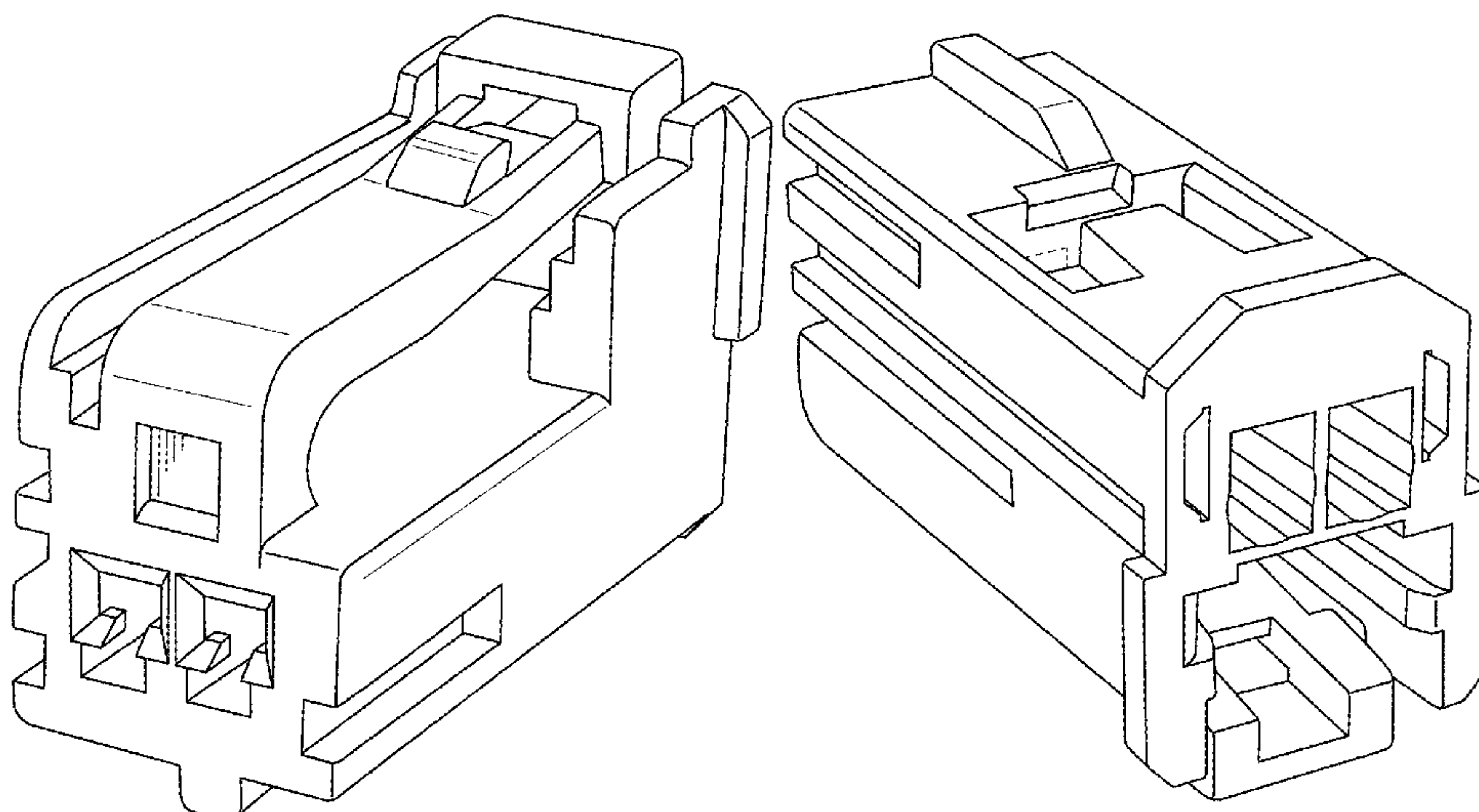
The ornamental design for electrical connector, as shown and described.

DESCRIPTION

FIG. 1 is a top and front perspective view of an electrical connector according to the claimed design;
FIG. 2 is a top and back perspective view of the electrical connector according to the claimed design;
FIG. 3 is a bottom and front perspective view of the electrical connector according to the claimed design;
FIG. 4 is a bottom and back perspective view of the electrical connector according to the claimed design;
FIG. 5 is a front elevational view of the electrical connector according to the claimed design;
FIG. 6 is a back elevational view of the electrical connector according to the claimed design;
FIG. 7 is a left side elevational view of the electrical connector according to the claimed design;
FIG. 8 is a right side elevational view of the electrical connector according to the claimed design;
FIG. 9 is a top plan view of the electrical connector according to the claimed design; and,
FIG. 10 is a bottom plan view of the electrical connector according to the claimed design.

The broken lines in the drawings illustrate portions of the electrical connector that form no part of the claimed design.

1 Claim, 9 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D854,501	S	*	7/2019	Asano	.....	D13/133
10,461,458	B2	*	10/2019	Kim	.....	H01R 13/639
2002/0114583	A1	*	8/2002	Asada	.....	G02B 6/3849
						385/78
2018/0034185	A1	*	2/2018	Nagasaka	.....	H01R 13/428
2018/0062314	A1	*	3/2018	Schmidt	.....	H01R 13/639
2019/0109399	A1	*	4/2019	Kim	.....	H01R 13/4362
2019/0199036	A1	*	6/2019	Kanemura	.....	H01R 13/639
2019/0319400	A1	*	10/2019	Azad	.....	H01R 43/26
2019/0393639	A1	*	12/2019	Chiba	.....	H01R 13/11
2020/0006891	A1	*	1/2020	Miyamura	.....	H01R 13/6463

* cited by examiner

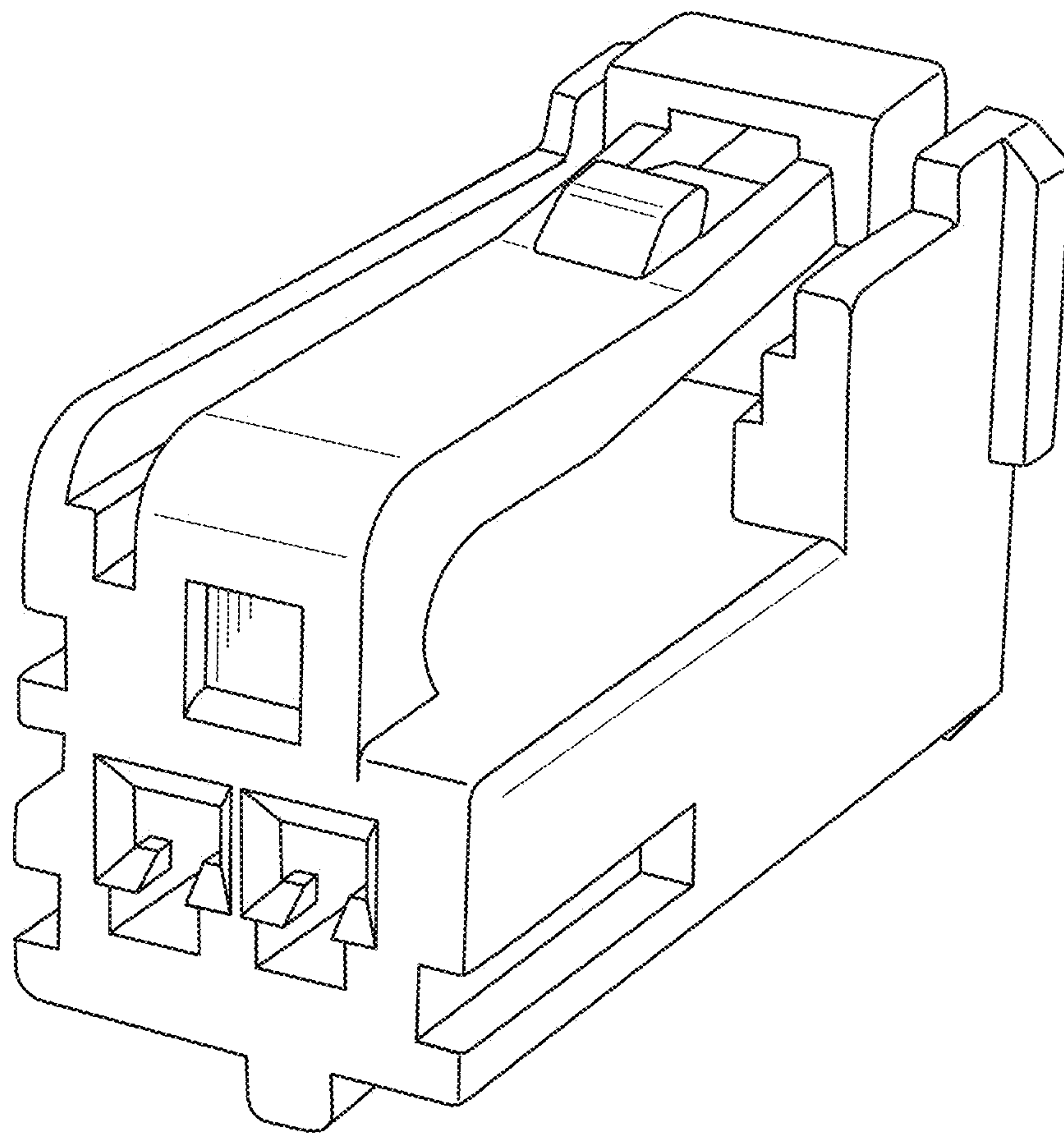


FIG. 1

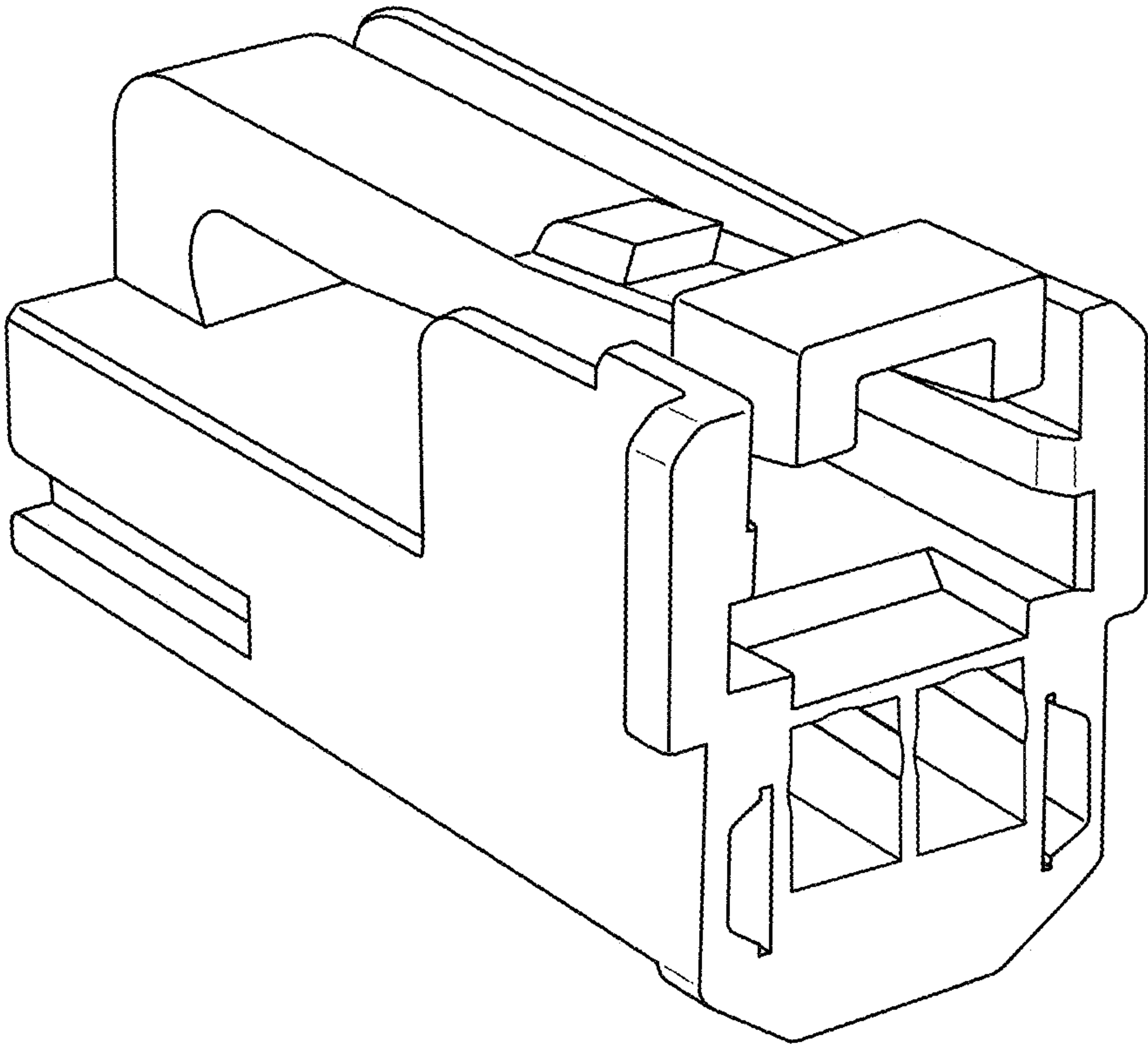


FIG. 2

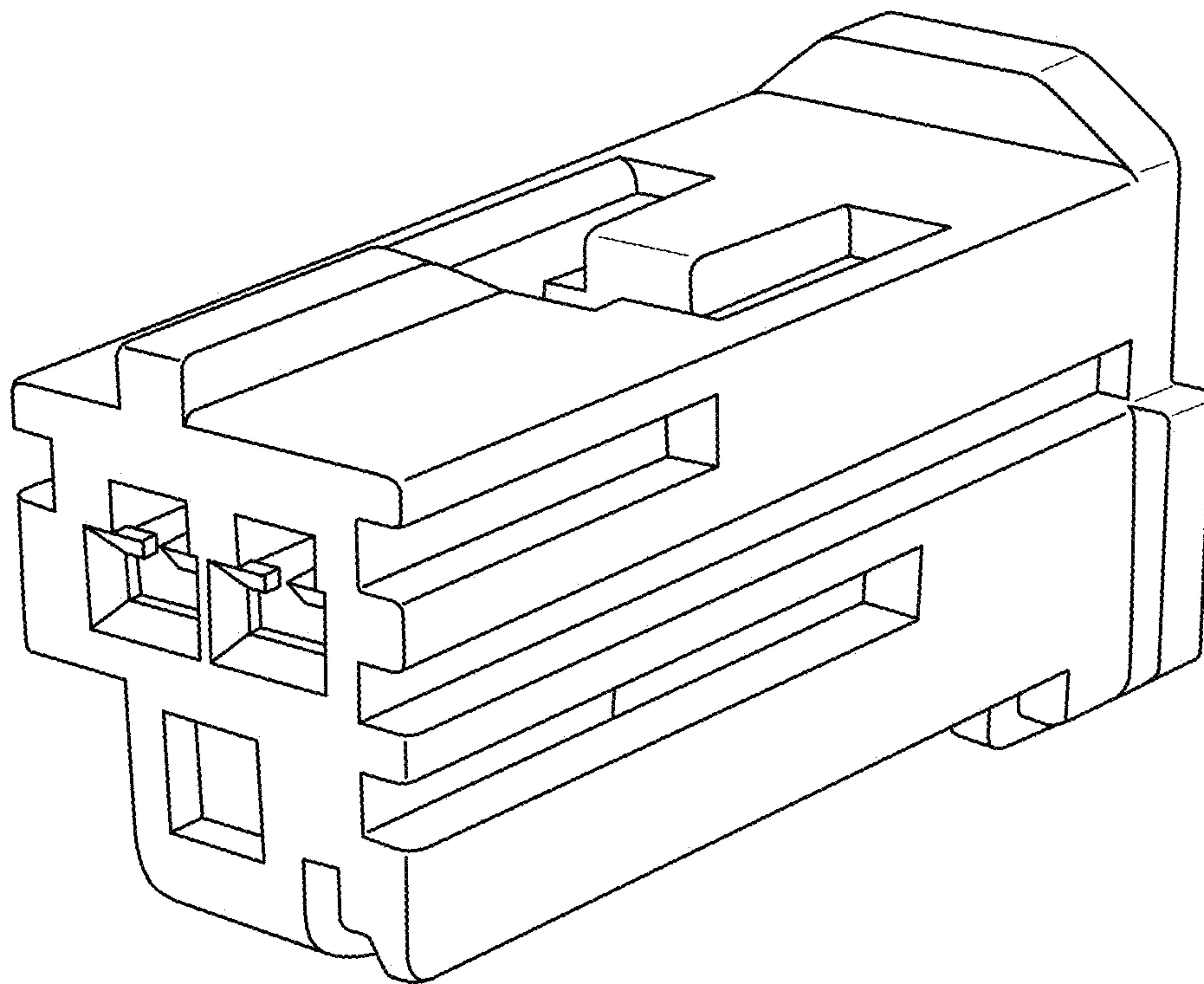


FIG. 3

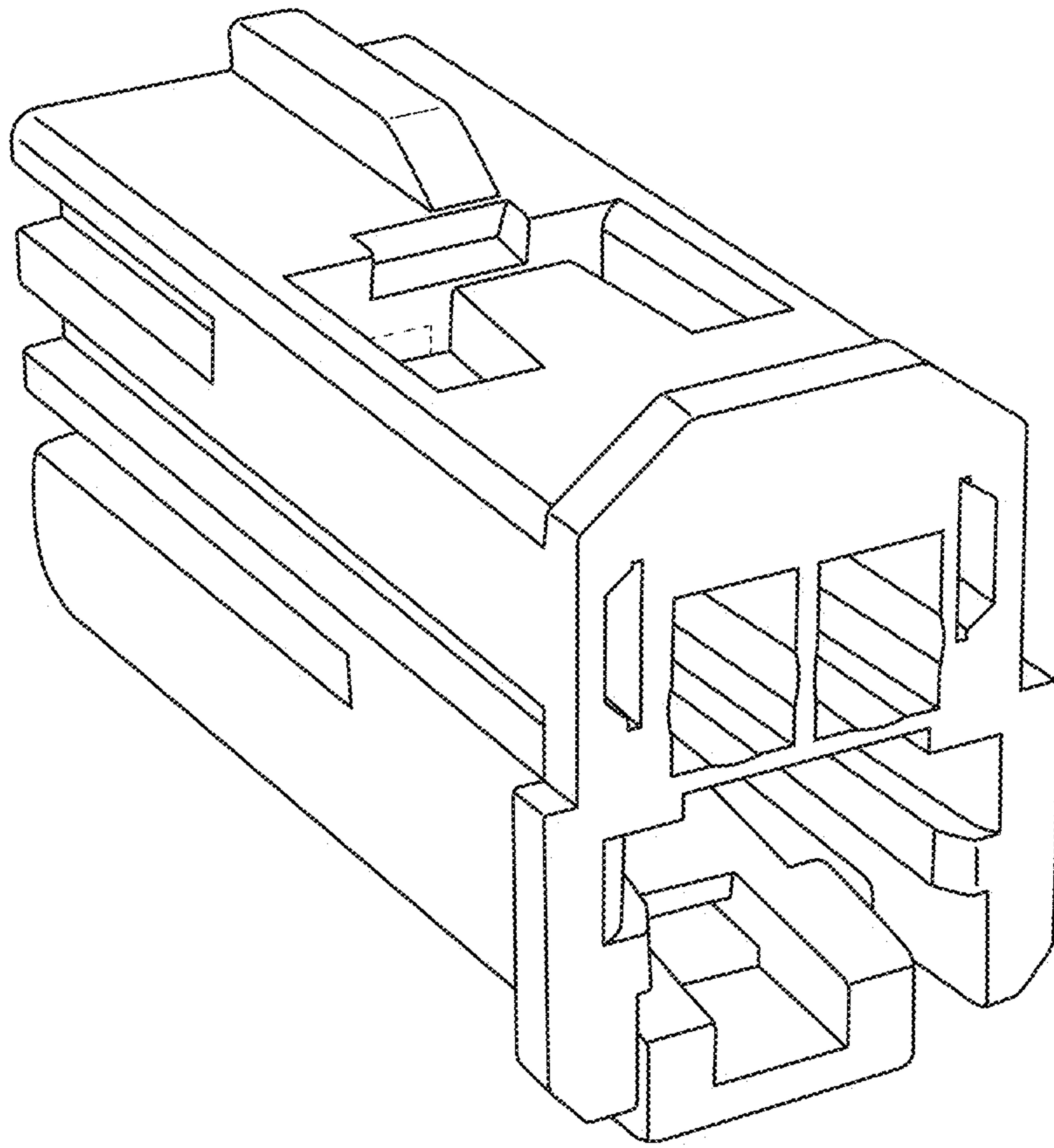


FIG. 4

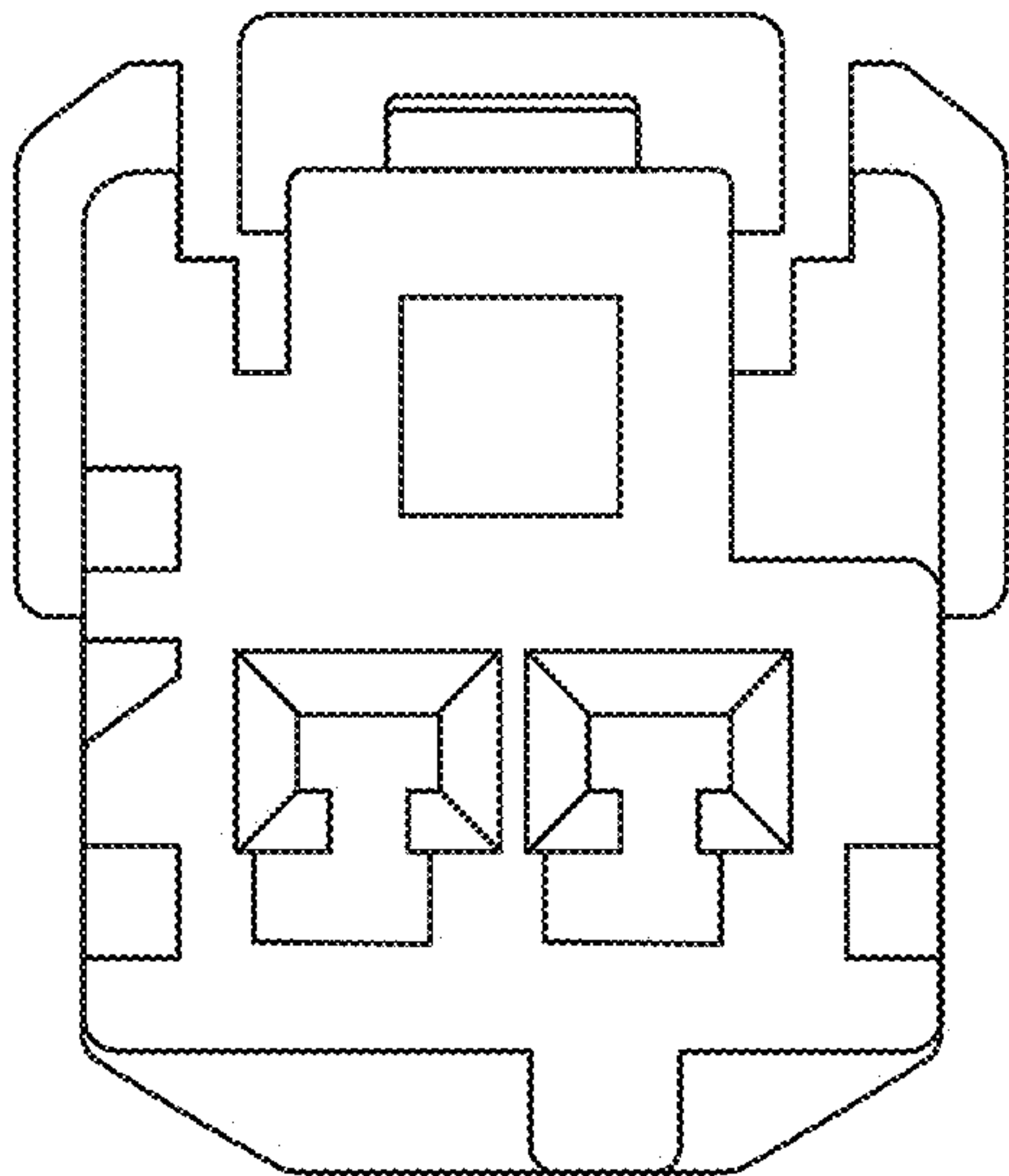


FIG. 5

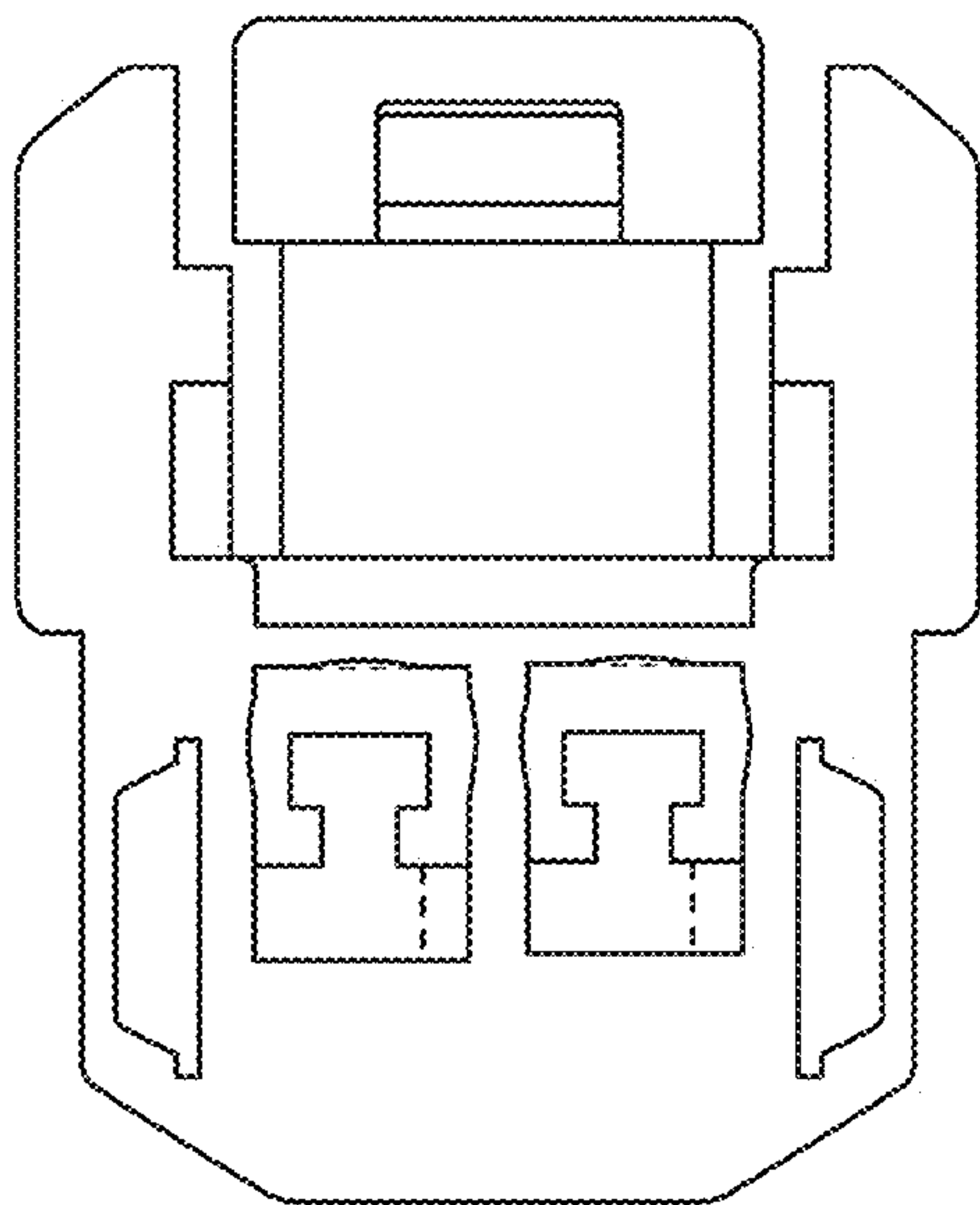


FIG. 6

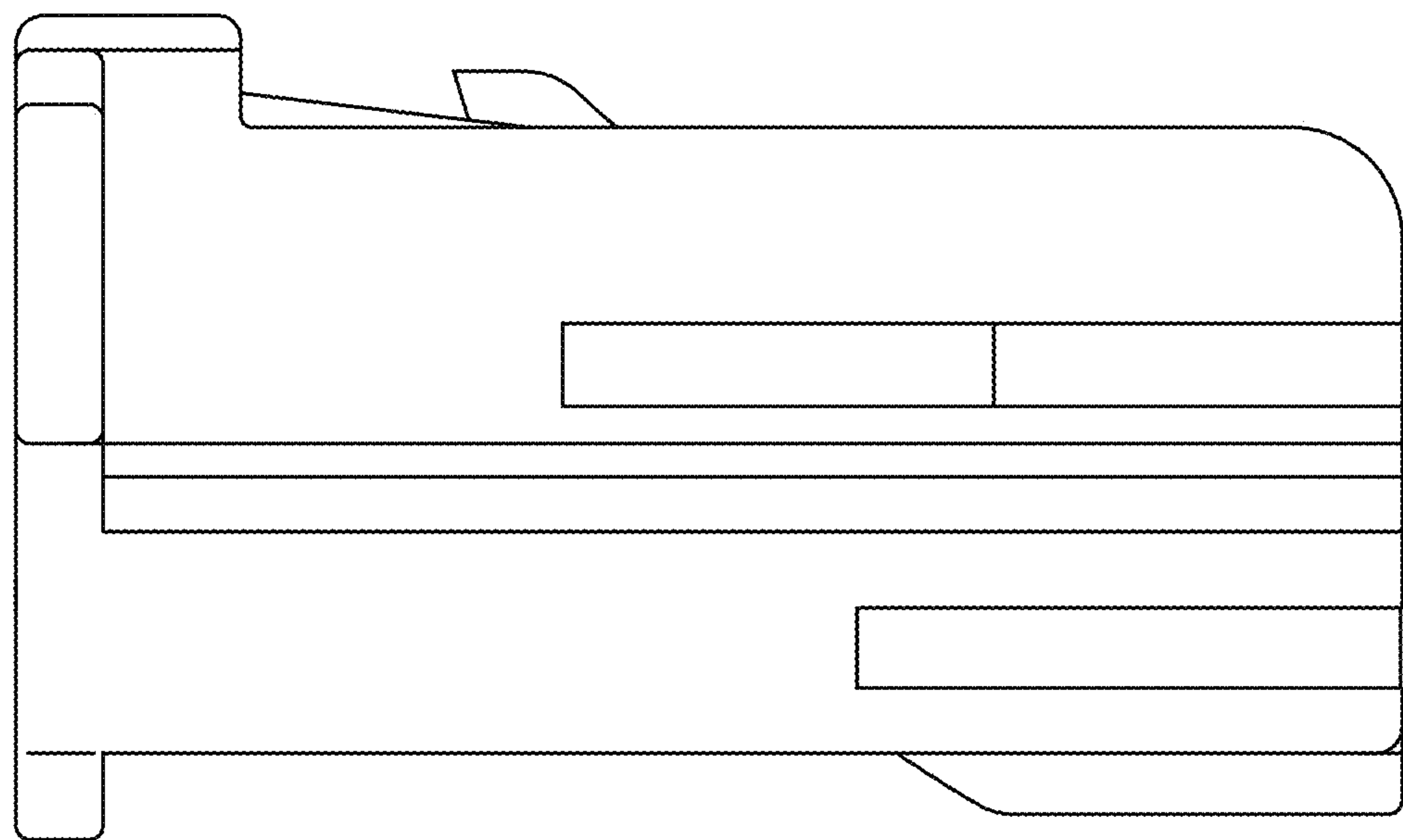


FIG. 7

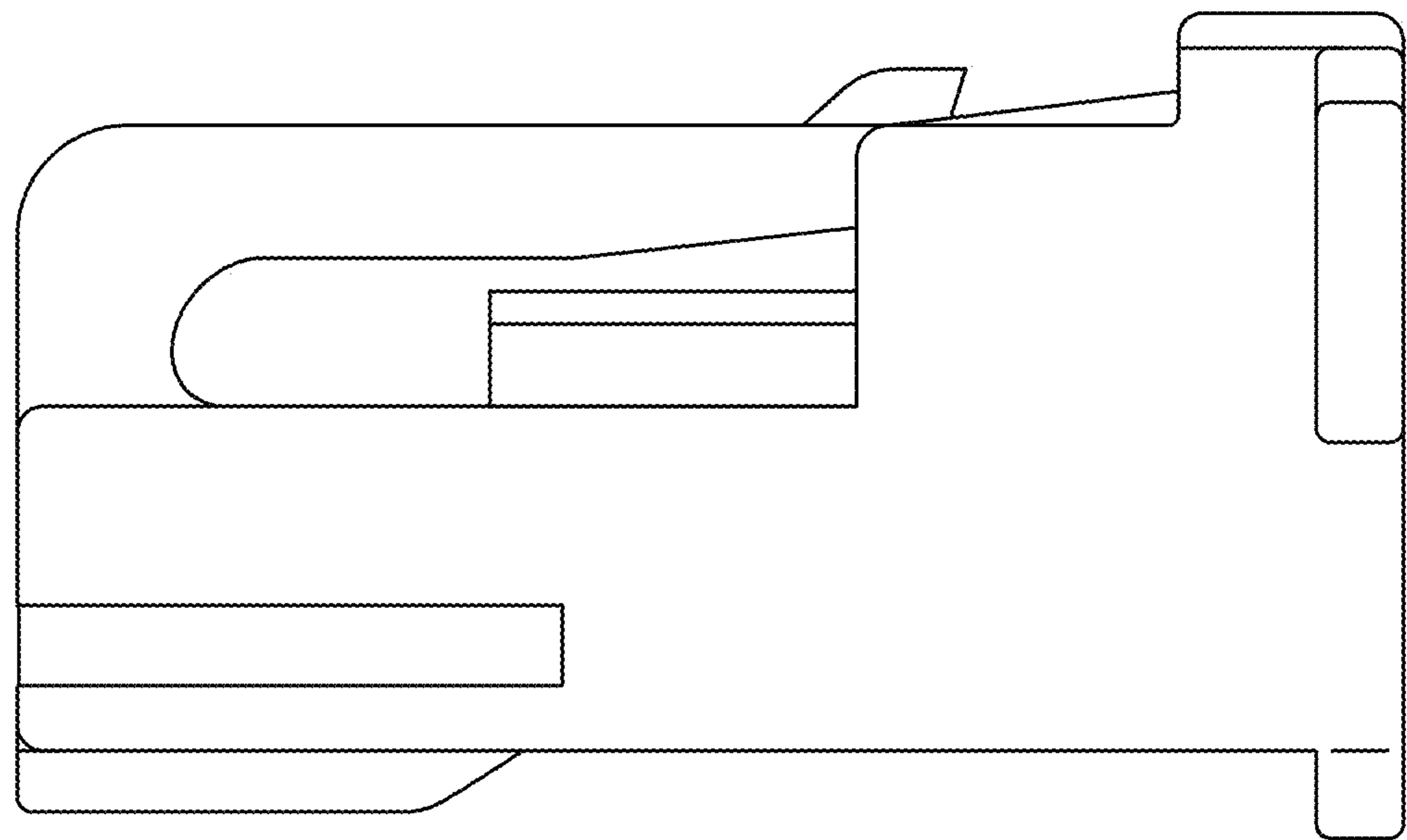


FIG. 8

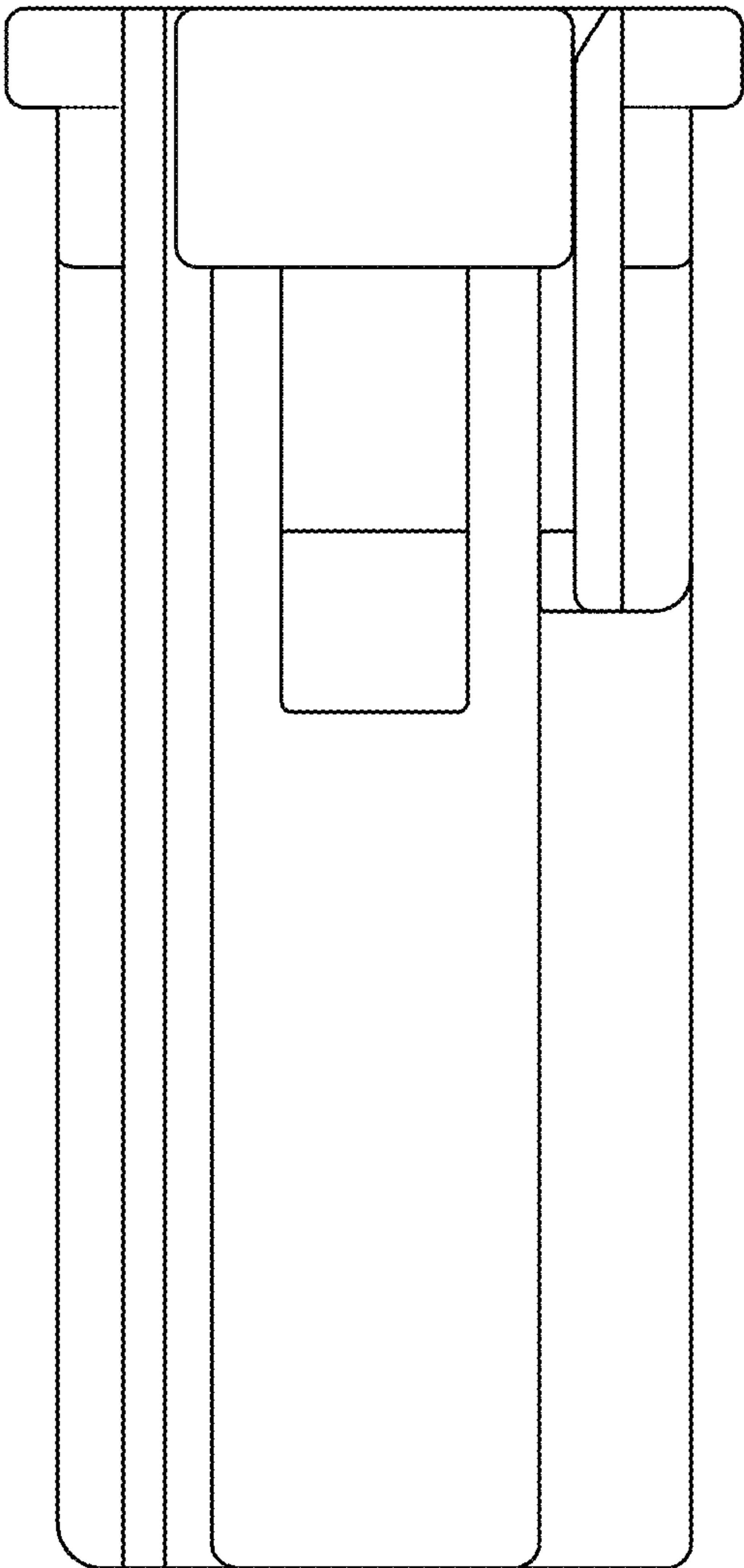


FIG. 9

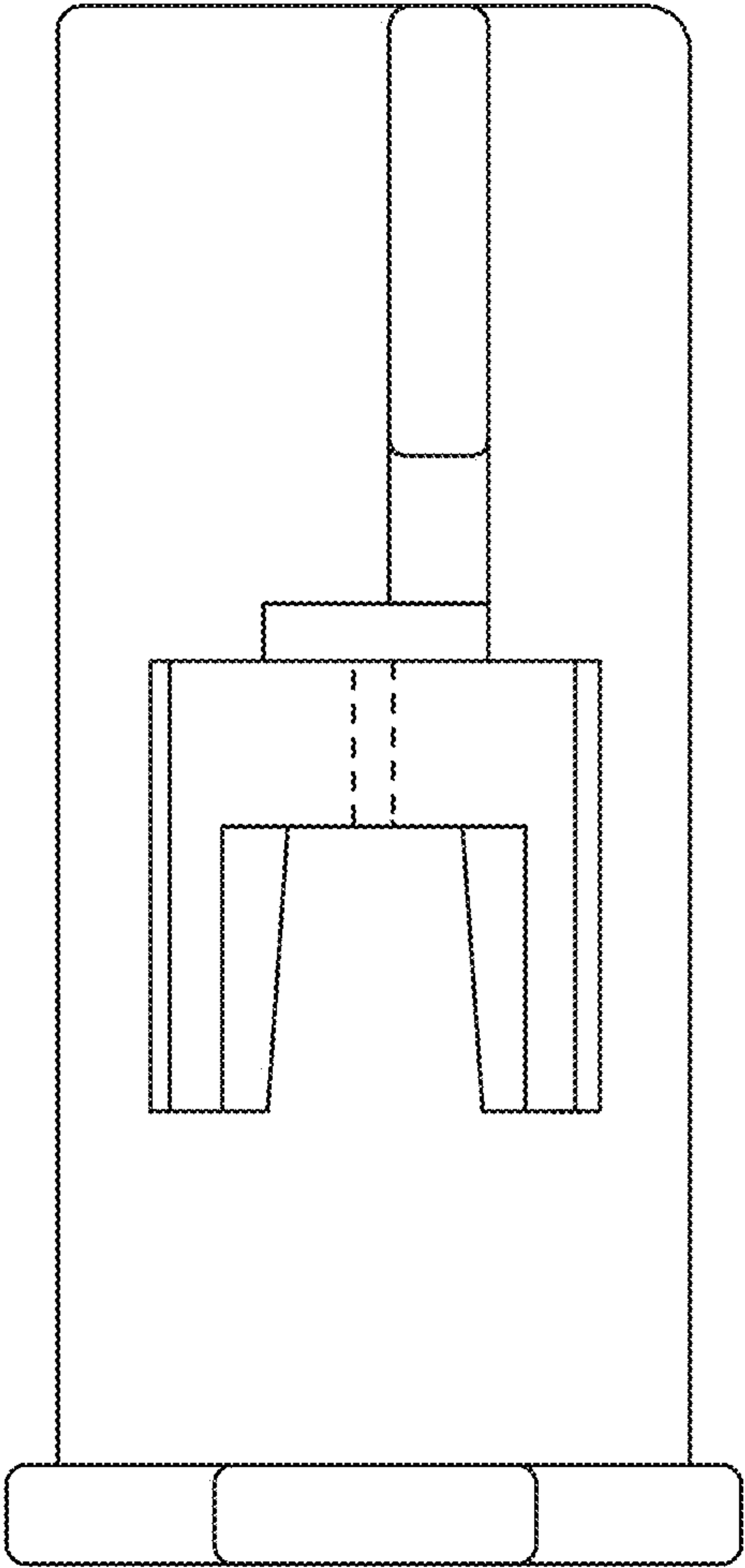


FIG. 10