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(12) **United States Design Patent** (10) **Patent No.:** **US D904,991 S**
Aoki et al. (45) **Date of Patent:** **** Dec. 15, 2020**

(54) **SEMICONDUCTOR ELEMENT**

H05K 1/141; H05K 1/142; H05K 1/144;
H05K 1/18; H05K 1/181; H05K 1/182;
H05K 1/026

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See application file for complete search history.

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(56) **References Cited**

U.S. PATENT DOCUMENTS

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(JP)

5,347,160 A * 9/1994 Sutrina H01L 24/72
257/678
D401,567 S * 11/1998 Farnworth D13/182

(Continued)

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

Primary Examiner — Elizabeth J Oswecki

(21) Appl. No.: **29/705,412**

(74) *Attorney, Agent, or Firm* — JCIPRNET

(22) Filed: **Sep. 11, 2019**

(57) **CLAIM**

(30) **Foreign Application Priority Data**

The ornamental design for a semiconductor element, as shown and described.

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DESCRIPTION

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

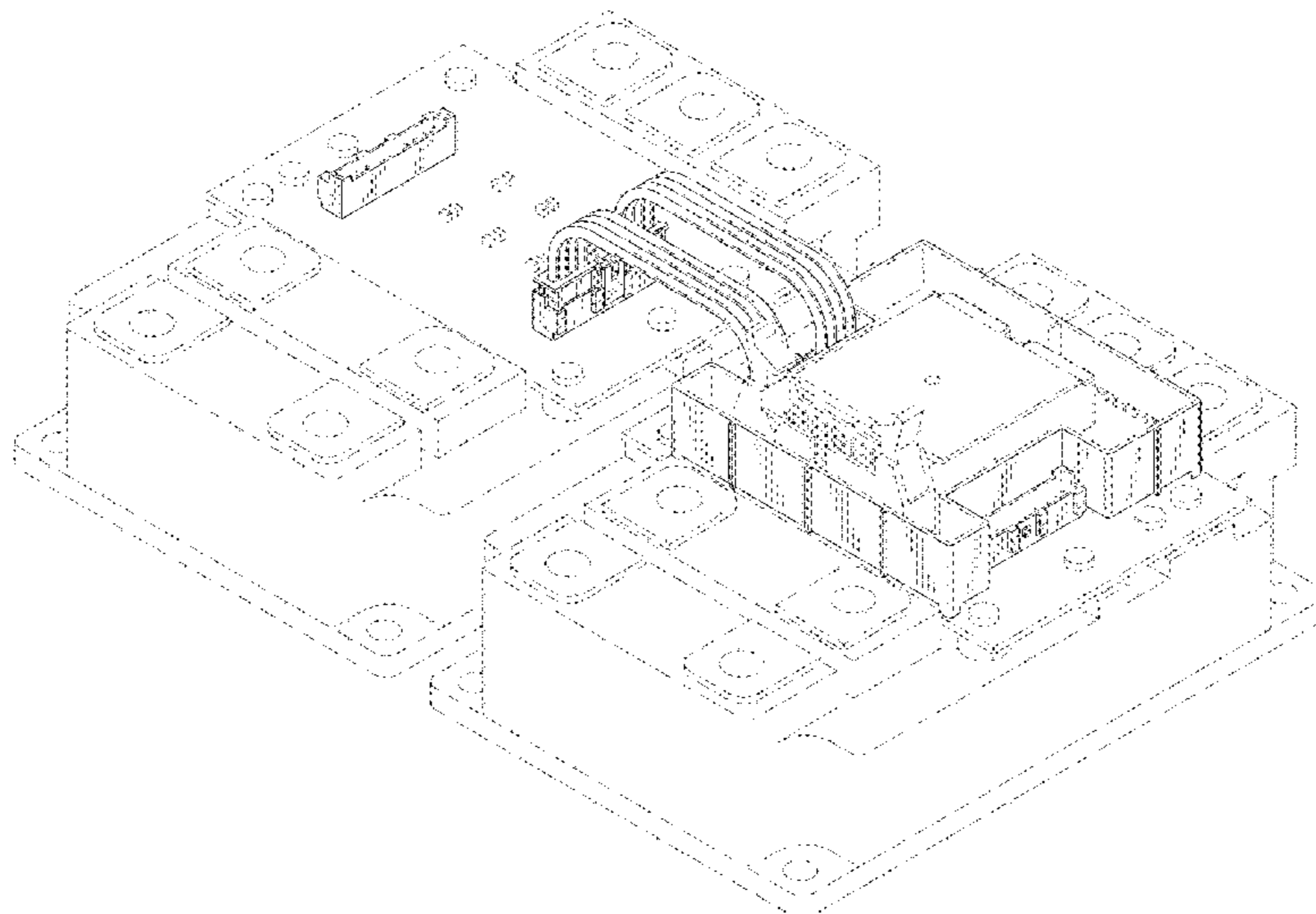
(52) **U.S. Cl.**
USPC **D13/182**

(58) **Field of Classification Search**
USPC D13/182; 257/678, 684, 690, 691;
361/679.01, 713, 728, 736, 760, 761, 772,
361/775, 783, 820; 174/250, 253;
438/15, 25, 26, 51, 55, 63, 64, 106
CPC . H01L 21/00; H01L 2224/42; H01L 2224/43;
H01L 2021/00; H01L 2021/02; H01L
2021/04; H01L 21/4814; H01L 21/4846;
H01L 21/4871; H01L 21/67144; H01L
23/12; H01L 23/13; H01L 23/14; H01L
23/147; H01L 2924/171; H01L
2924/1711; H01L 2924/1715; H01L
2924/17151; H01L 2924/181; H01L
2924/1811; H01L 2924/1815; H01L
2924/19042; H01L 2924/1905; H01L
2224/08054; H01L 23/58; H05B 41/14;
H02B 6/4201; G02B 6/4256; G02B
6/4257; G02B 6/4261; G02B 6/4262;
G02B 6/428; G02B 6/4281; H05K 1/14;

FIG. 1 is a perspective view of a semiconductor element showing our new design;
FIG. 2 is a front view of the semiconductor element of FIG. 1;
FIG. 3 is a rear view of the semiconductor element of FIG. 1;
FIG. 4 is a left side view of the semiconductor element of FIG. 1;
FIG. 5 is a right side view of the semiconductor element of FIG. 1;
FIG. 6 is a top view of the semiconductor element of FIG. 1; and,
FIG. 7 is a bottom view of the semiconductor element of FIG. 1.

The dash-dash broken line portions of the semiconductor element in FIGS. 1-7 represent unclaimed portions of the claimed design and form no part thereof. The dot-dash broken lines at the left sides of the cables in FIG. 1 represent the boundary of the claimed design and form no part thereof.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D432,096	S *	10/2000	Jeon	D13/182
D441,726	S *	5/2001	Sofue	D13/182
D699,693	S *	2/2014	Otsuka	D13/182
D704,670	S *	5/2014	Chen	D13/182
D704,671	S *	5/2014	Chen	D13/182
D710,317	S *	8/2014	Chen	D13/182
D710,318	S *	8/2014	Chen	D13/182
D710,319	S *	8/2014	Chen	D13/182
D748,595	S *	2/2016	Bertalan	D13/182
D762,185	S *	7/2016	Muehlensiep	D13/182
9,418,975	B1 *	8/2016	Yoneyama	H01L 23/5386
D824,866	S *	8/2018	Matsubara	D13/182
D884,662	S *	5/2020	Itoh	D13/182
2001/0038143	A1 *	11/2001	Sonobe	H01L 24/49 257/690
2008/0142948	A1 *	6/2008	Matsumoto	H01R 12/52 257/690
2016/0190915	A1 *	6/2016	Horiuchi	H01L 25/072 363/132

* cited by examiner

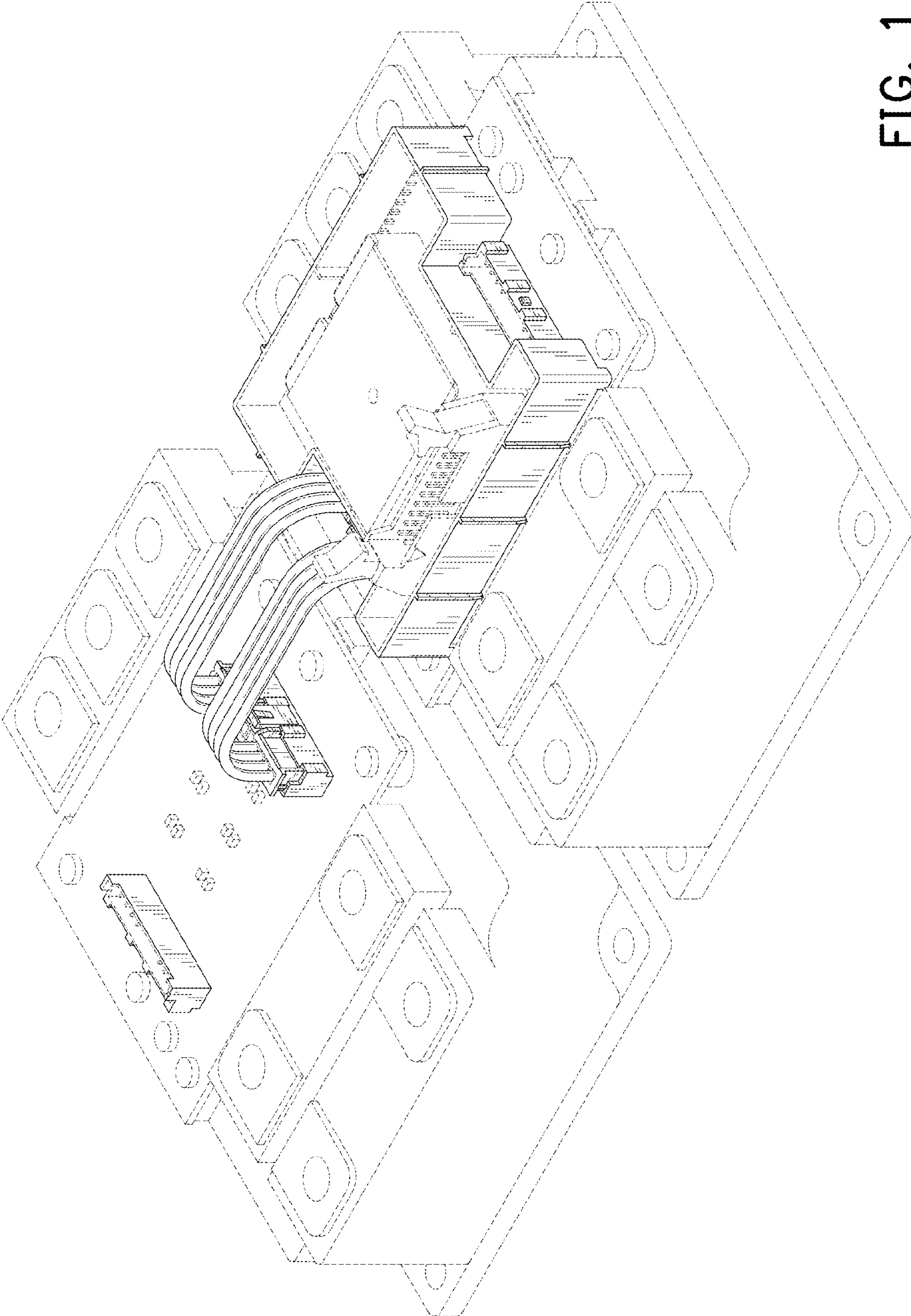


FIG. 1

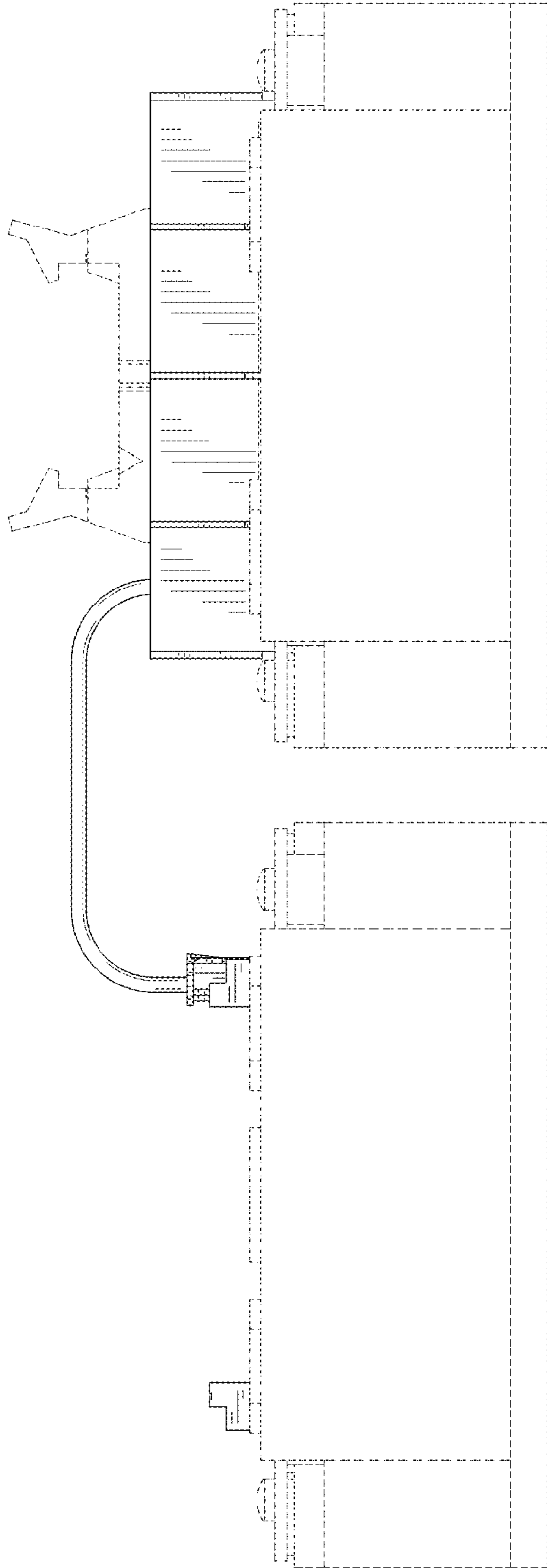


FIG. 2

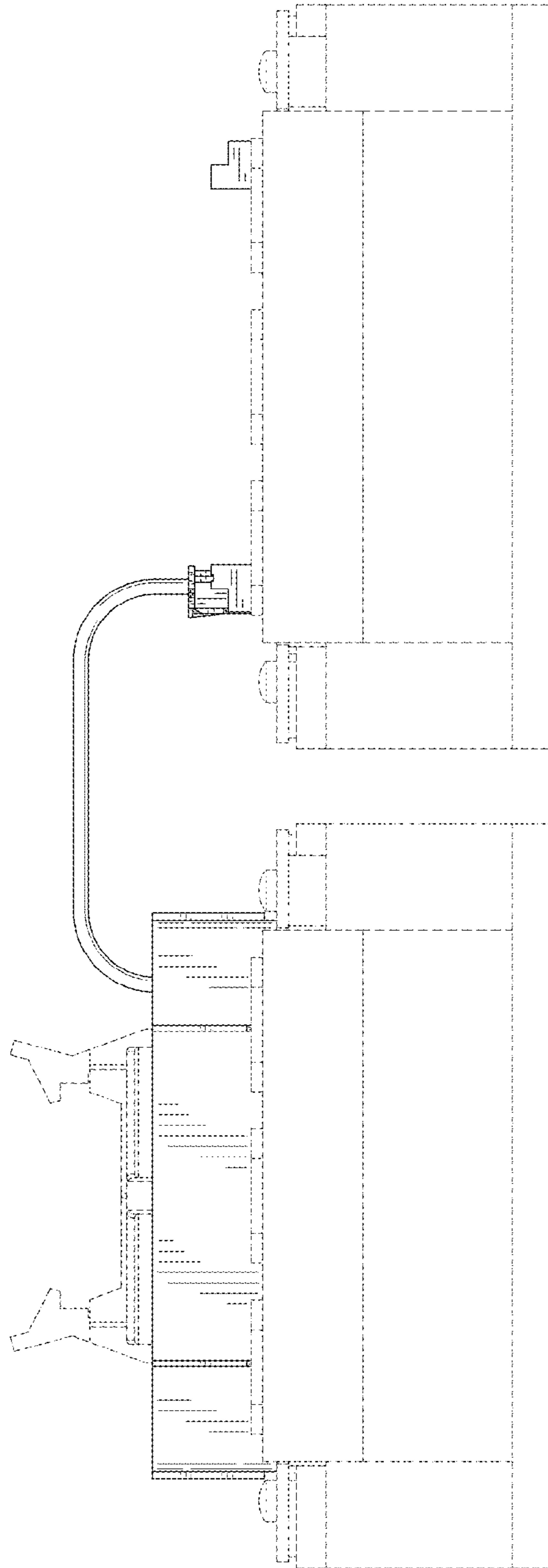


FIG. 3

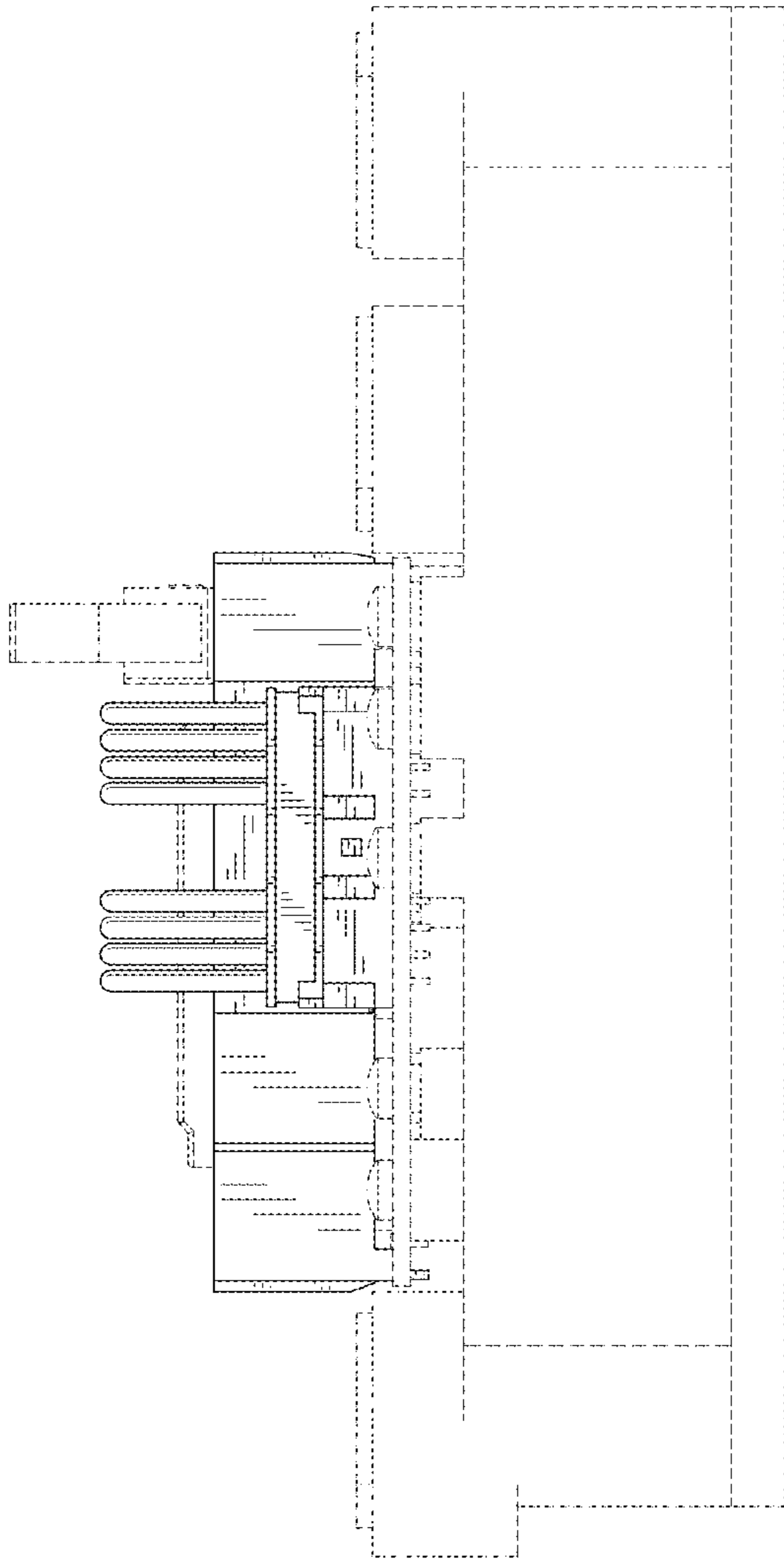


FIG. 4

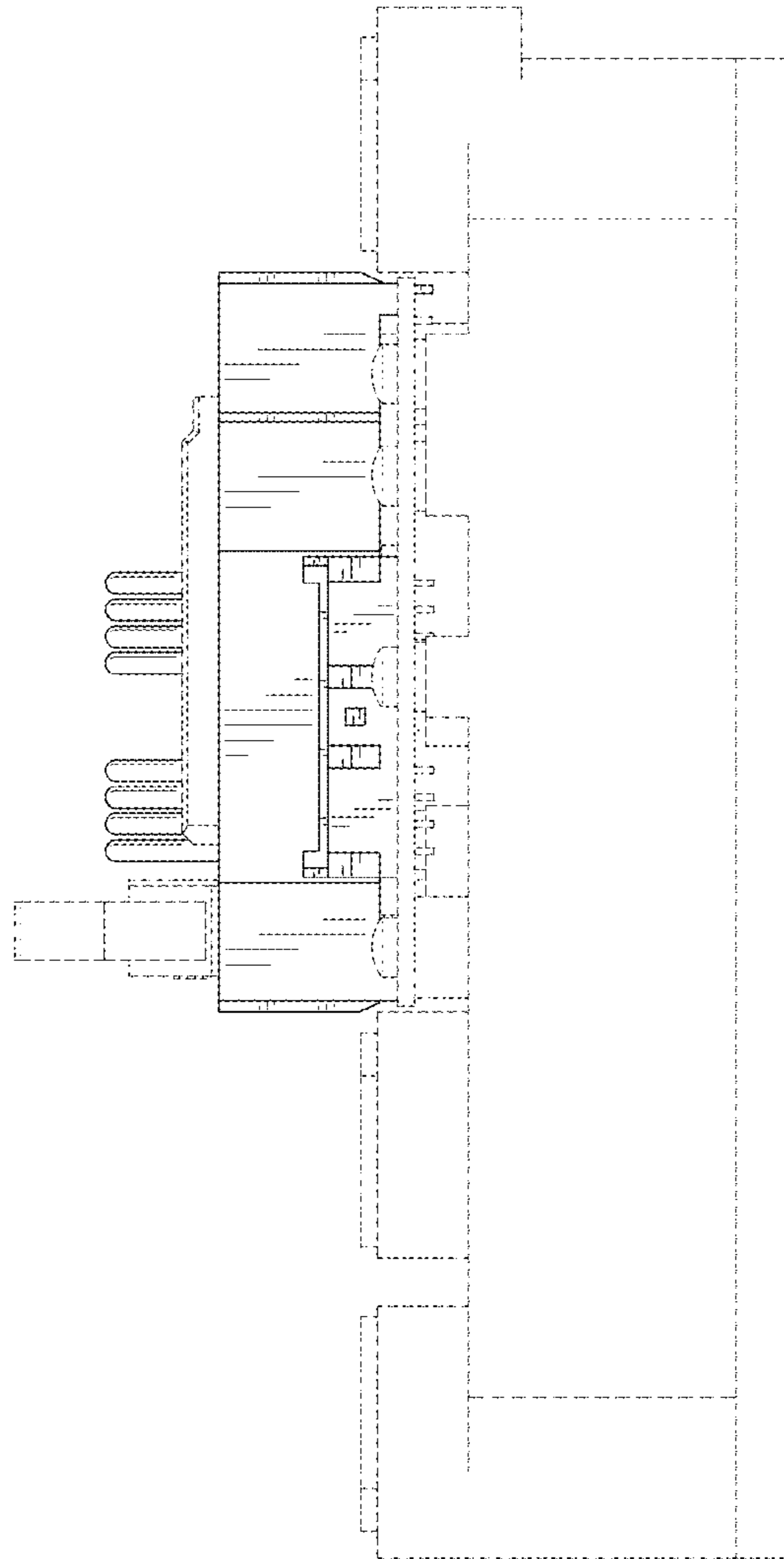


FIG. 5

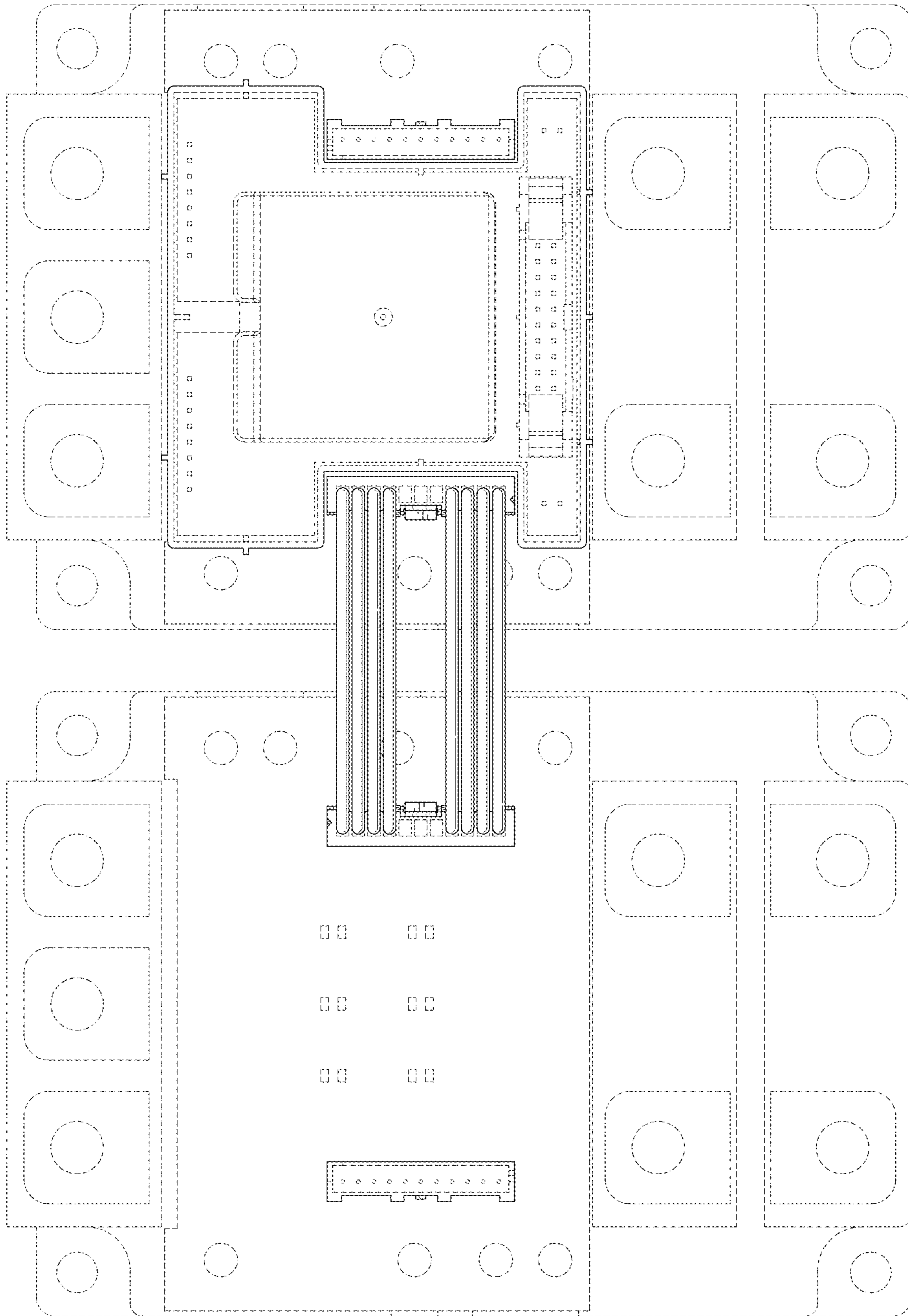


FIG. 6

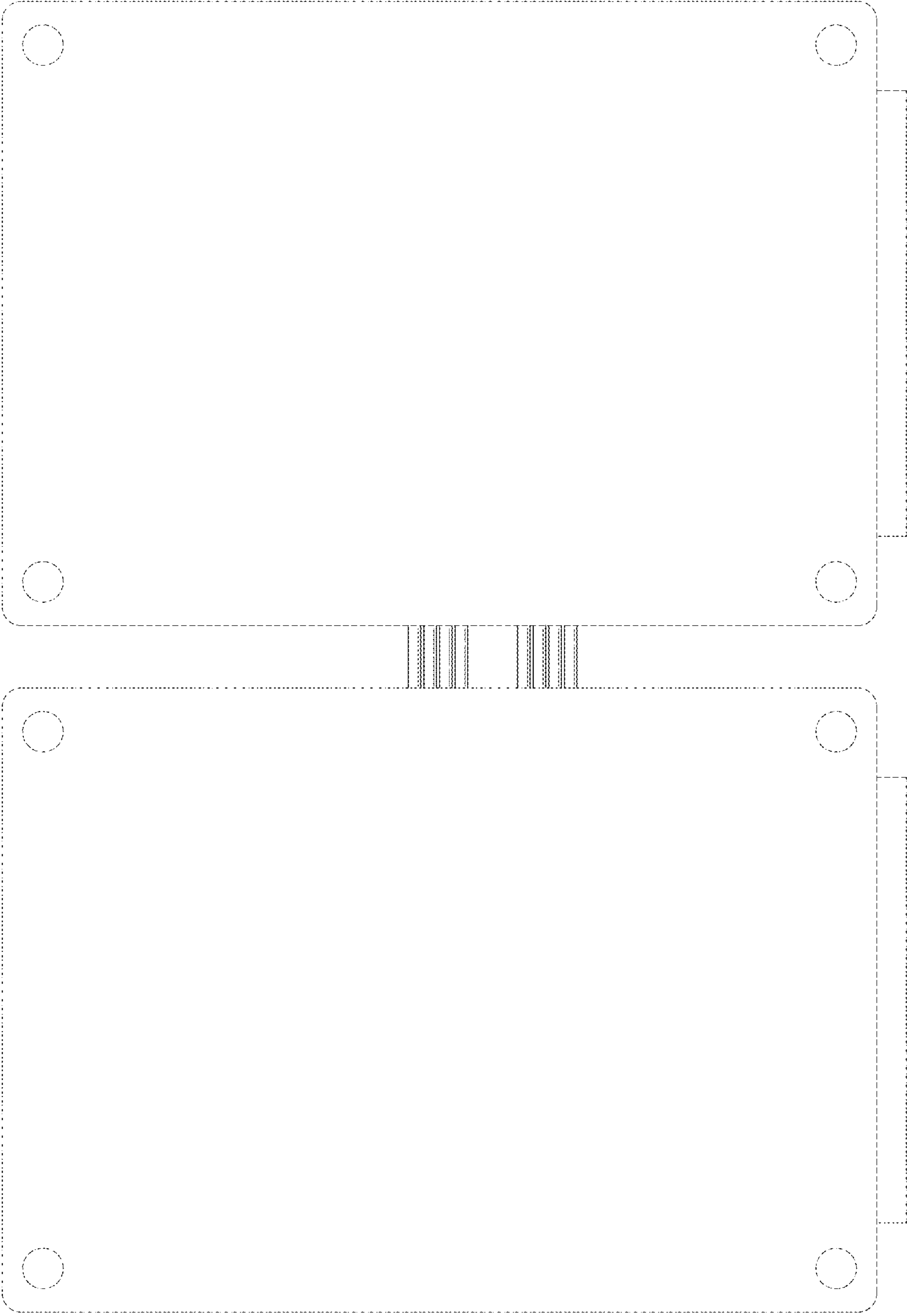


FIG. 7