



US00D978807S

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

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(45) **Date of Patent:** **** Feb. 21, 2023**

(54) **MODULE-BASED FIELD TERMINATION ASSEMBLY**

FOREIGN PATENT DOCUMENTS

EP 3751972 A1 * 12/2020 H01R 9/2433
FR 2677779 A1 * 12/1992 H02B 1/056

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(Continued)

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OTHER PUBLICATIONS

Gao, Yezhi, Chinese design No. 303770722, published at Orbit, publication date Aug. 3, 2016. Site visited Jun. 10, 2021. Available from Internet. (Year: 2016).*

(Continued)

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

(57) **CLAIM**

The ornamental design for a module-based field termination assembly, as shown and described.

(21) Appl. No.: **29/678,898**

DESCRIPTION

(22) Filed: **Jan. 31, 2019**

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

(52) **U.S. Cl.**
USPC **D13/164; D13/123; D13/184; D14/313; D14/367**

(58) **Field of Classification Search**
USPC D14/300–304, 308–314, 328, 348–370, D14/388, 432, 435, 439–446, 450,
(Continued)

FIG. 1 is a front perspective view of a module-based field termination assembly;
FIG. 2 is another front perspective view of the module-based field termination assembly of FIG. 1;
FIG. 3 is a rear perspective view of the module-based field termination assembly of FIG. 1;
FIG. 4 is a front view of the module-based field termination assembly of FIG. 1;
FIG. 5 is a left side view of the module-based field termination assembly of FIG. 1;
FIG. 6 is a right side view of the module-based field termination assembly of FIG. 1;
FIG. 7 is a rear view of the module-based field termination assembly of FIG. 1;
FIG. 8 is a top view of the module-based field termination assembly of FIG. 1;
FIG. 9 is a bottom view of the module-based field termination assembly of FIG. 1;
FIG. 10 is an enlarged view of a portion of the front of the module-based field termination assembly of FIG. 1;

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D314,385 S * 2/1991 Karan D14/140.4
D379,973 S * 6/1997 Yoshimoto D14/308
(Continued)

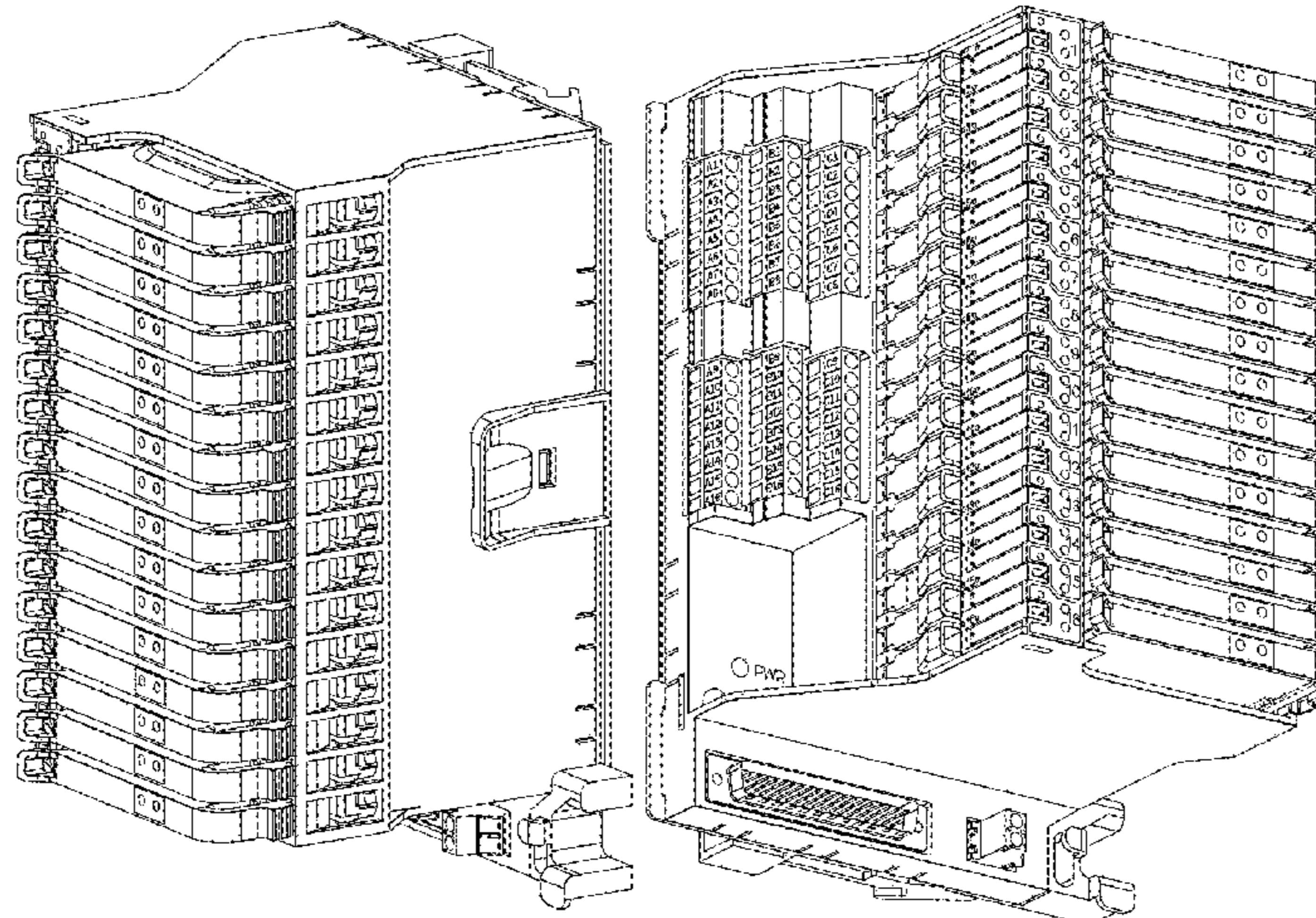


FIG. 11 is an enlarged view of another portion of the front of the module-based field termination assembly of FIG. 1; FIG. 12 is an enlarged view of a portion of the right side of the module-based field termination assembly of FIG. 1; FIG. 13 is an enlarged bottom perspective view of a portion of the rear of the module-based field termination assembly of FIG. 1; FIG. 14 is an enlarged bottom perspective view of another portion of the rear of the module-based field termination assembly of FIG. 1; and, FIG. 15 is an enlarged top perspective view of a portion of the rear of the module-based field termination assembly of FIG. 1.

The broken lines shown in FIGS. 10-15 indicating outer limits of the enlarged portions of the module-based field termination assembly as well as the broken lines showing portions of the module-based field termination assembly form no part of the claimed design.

1 Claim, 15 Drawing Sheets

(58) **Field of Classification Search**

USPC D14/479-483, 140.1-140.4, 164, 193, D14/500-502, 257-258, 265; D13/123, D13/162, 162.1, 184
CPC H05K 7/00; H05K 7/14; H05K 7/1464; H05K 7/1465; H05K 7/1467; H05K 7/1469; H05K 7/1474; H05K 7/1471; H05K 7/1475

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D410,653 S * 6/1999 Roy D14/140.4
D418,821 S * 1/2000 Ikenaga D14/311
D448,028 S * 9/2001 McAllister D14/363
D465,465 S * 11/2002 Chapman D13/184
D481,384 S * 10/2003 Alo D14/301
D490,803 S * 6/2004 Ng D14/140.2
D545,819 S * 7/2007 Chang D14/369
D555,161 S * 11/2007 Cox D14/445
D559,844 S * 1/2008 Slotin D14/300
D565,560 S * 4/2008 Alo D14/313
D585,447 S * 1/2009 Chen D14/349
D597,519 S * 8/2009 Nakano D14/140.3
D664,959 S * 8/2012 Terwilliger D14/444
D677,254 S * 3/2013 Crisp D14/300
D688,248 S * 8/2013 Tsuda D14/439
D702,242 S * 4/2014 Tsuda D14/439

D717,733 S * 11/2014 Cech D13/147
D750,033 S * 2/2016 Privitera D13/184
D750,561 S * 3/2016 Ravi D13/123
D814,425 S * 4/2018 Stray D13/162.1
D835,092 S * 12/2018 Fu D14/301
D835,098 S * 12/2018 Fu D14/349
D880,472 S * 4/2020 Dearborn D14/313
D897,294 S * 9/2020 Kato D13/162.1
D900,040 S * 10/2020 Pakimo D13/162.1
D919,580 S * 5/2021 Nada D13/162.1
D936,000 S * 11/2021 Tyson D13/108
11,412,632 B2 * 8/2022 Chakraborty H01R 9/245
11,445,623 B2 * 9/2022 Pakimo H05K 5/0204
2004/0004812 A1 * 1/2004 Curlee G06F 1/183
361/679.48
2004/0130867 A1 * 7/2004 Huettner G06F 1/181
361/679.53
2015/0139223 A1 * 5/2015 Mayenburg H04L 49/10
370/357
2015/0362964 A1 * 12/2015 Correll G06F 1/26
361/679.4
2019/0079565 A1 * 3/2019 Adrian G11B 33/10
2020/0253076 A1 * 8/2020 Pakimo H05K 7/1465
2021/0089417 A1 * 3/2021 Rao G01R 31/67

FOREIGN PATENT DOCUMENTS

JP 2004039023 A * 2/2004 G06F 1/181
WO WO-2004114466 A1 * 12/2004 H05K 7/1468

OTHER PUBLICATIONS

Humio Tanaka, Kudankita, Japanese design No. D1274882, published at Orbit, publication date Jun. 26, 2006. Site visited Jun. 10, 2021. Available from Internet. (Year: 2006).*

Dawa, Pakimo, Chinese design No. 305964911, published at Orbit, publication date Aug. 4, 2020. Site visited Jun. 10, 2021. Available from Internet. (Year: 2020).*

VIP-ER with input/output accessories, posted at Phoenix Contact, copyright 2018. Site visited Jun. 10, 2021. URL: <https://www.phoenixcontact.com/assets/downloads_ed/local_us/web_dw1_promotion/1068843-00_VIPER_Marshalling_Honeywell_Brochure.pdf?filesize=1315> (Year: 2018).*

GE Intelligent Platforms, "PAC8000 Modular I/O", General Electric Company, 2014, 66 pages (see esp. pp. 3 and 5-6).
Installation Instructions, "Point I/O 4 Channel High Density Current Input Module", Rockwell Automation, Inc., 2016, 24 pages (see esp. pp. 6-8).
"S800 I/O Modules and Termination Units", ABB, 2010, 590 pages (see esp. pp. 15, 18-21, 36, 60, 66, 79, 91, 100, 107, 118, 129, 139, 152, 165, 171, 180, 189, 198, 208, 213, 219, 225, 237, 248, 258, 267, 276, 286, 298, 309, 321, 333, 343, 348, 354, 363, 373, 383, 392, 401, 411, 423, 443, 458, 461, 466, 471, 476, 483, 490, 498, 503, 509, 514, 520, 526, 532, 538, 544, 549, 554, 559, and 564).

* cited by examiner

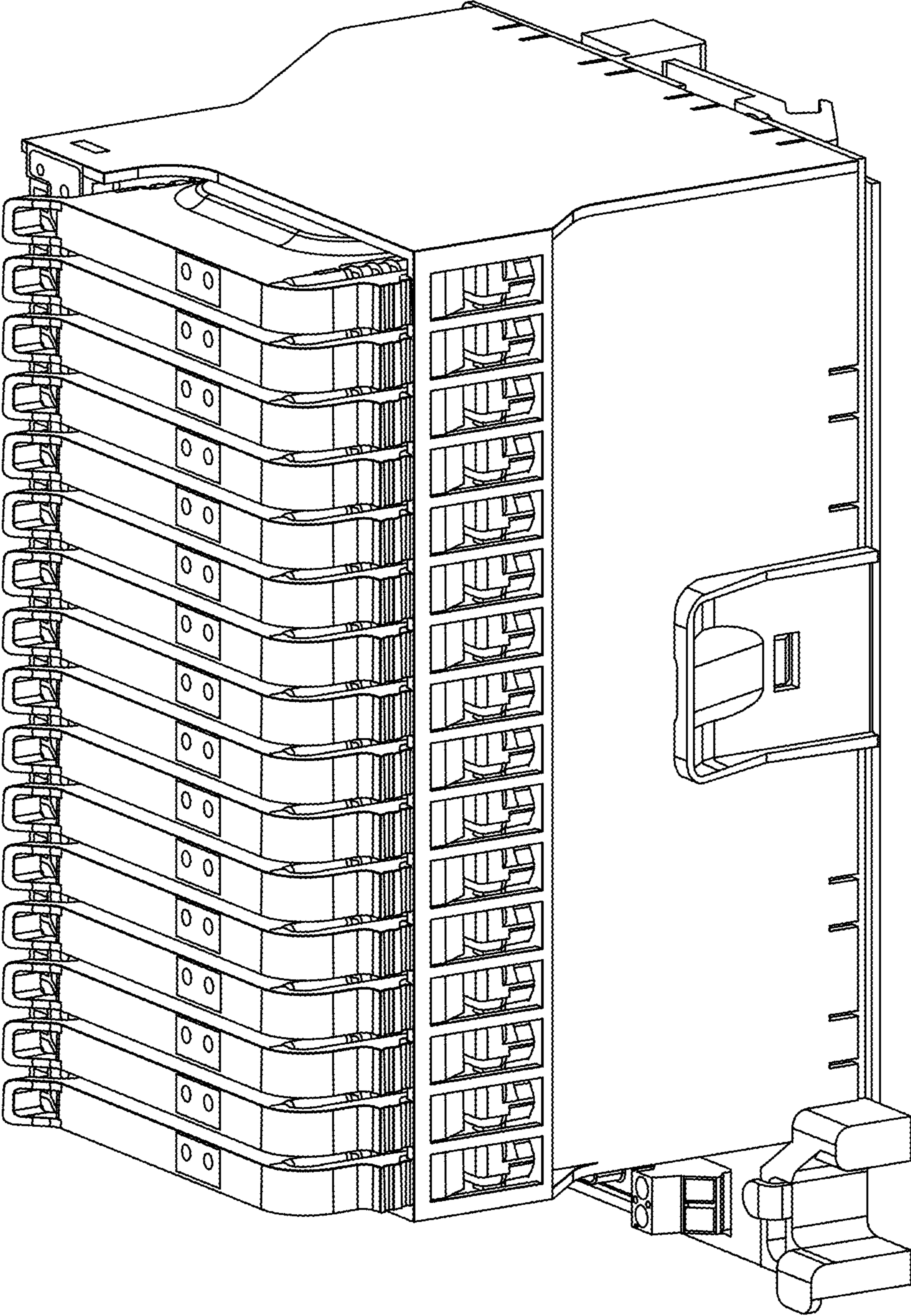


FIG. 1

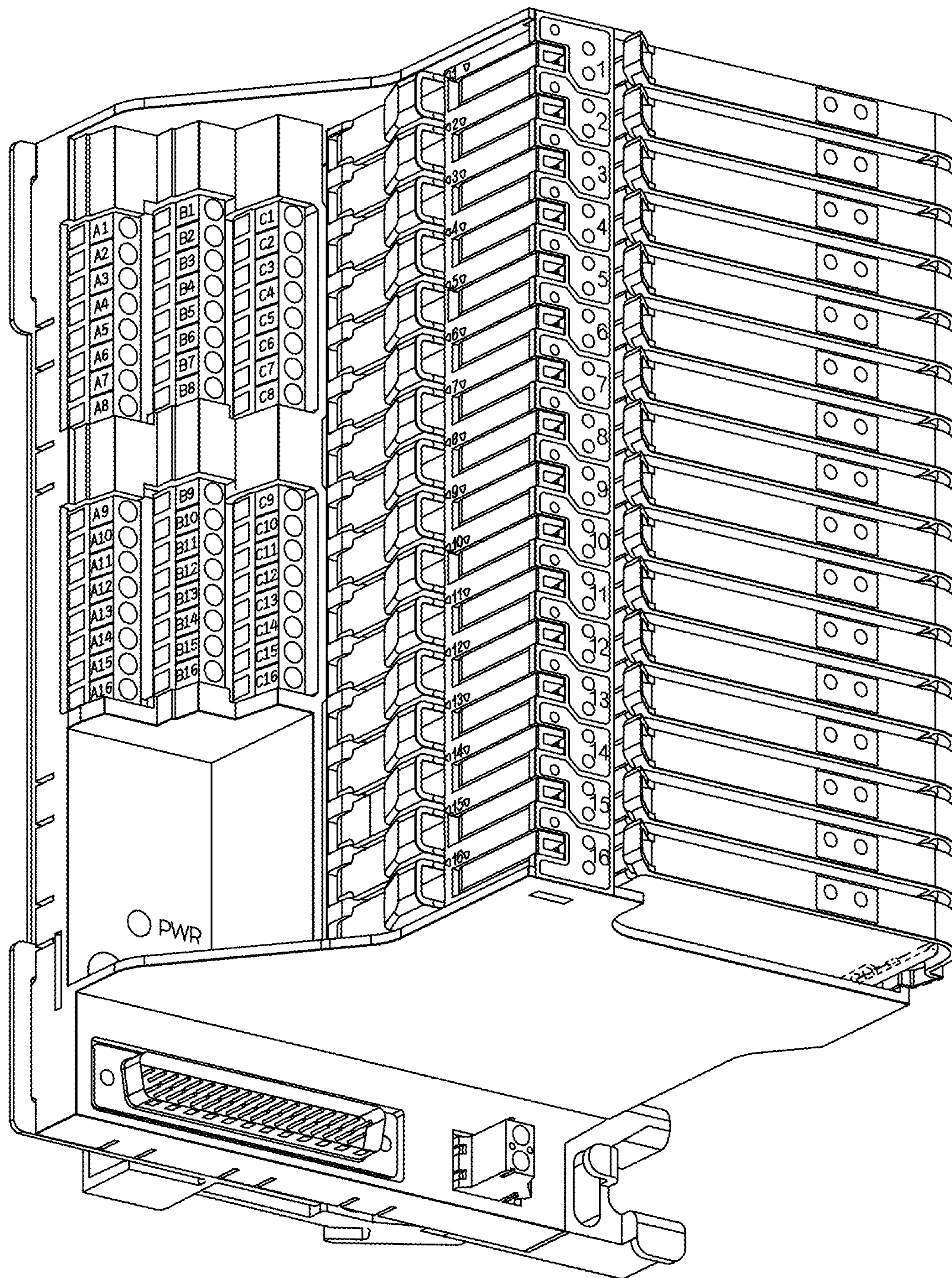


FIG. 2

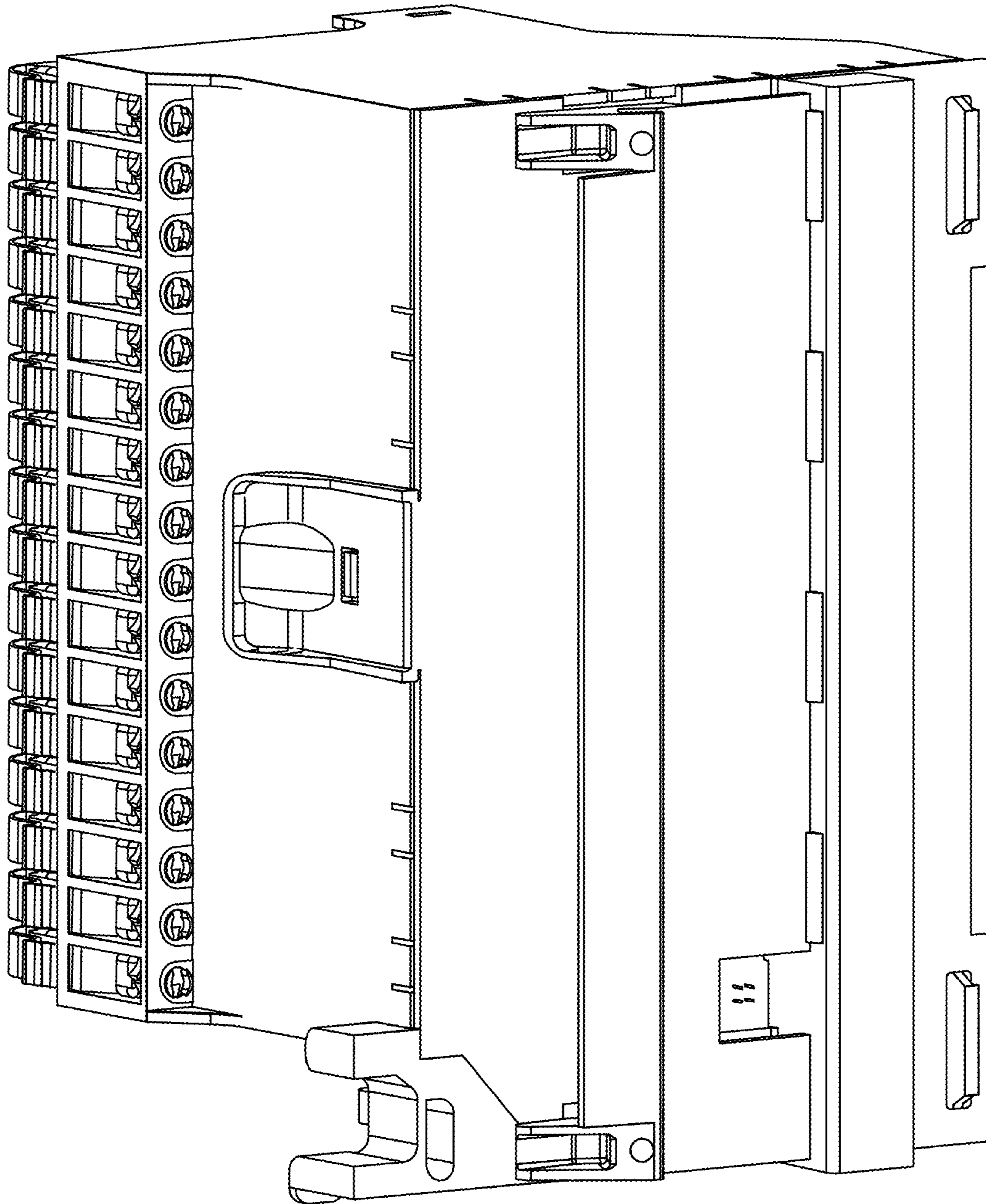


FIG. 3

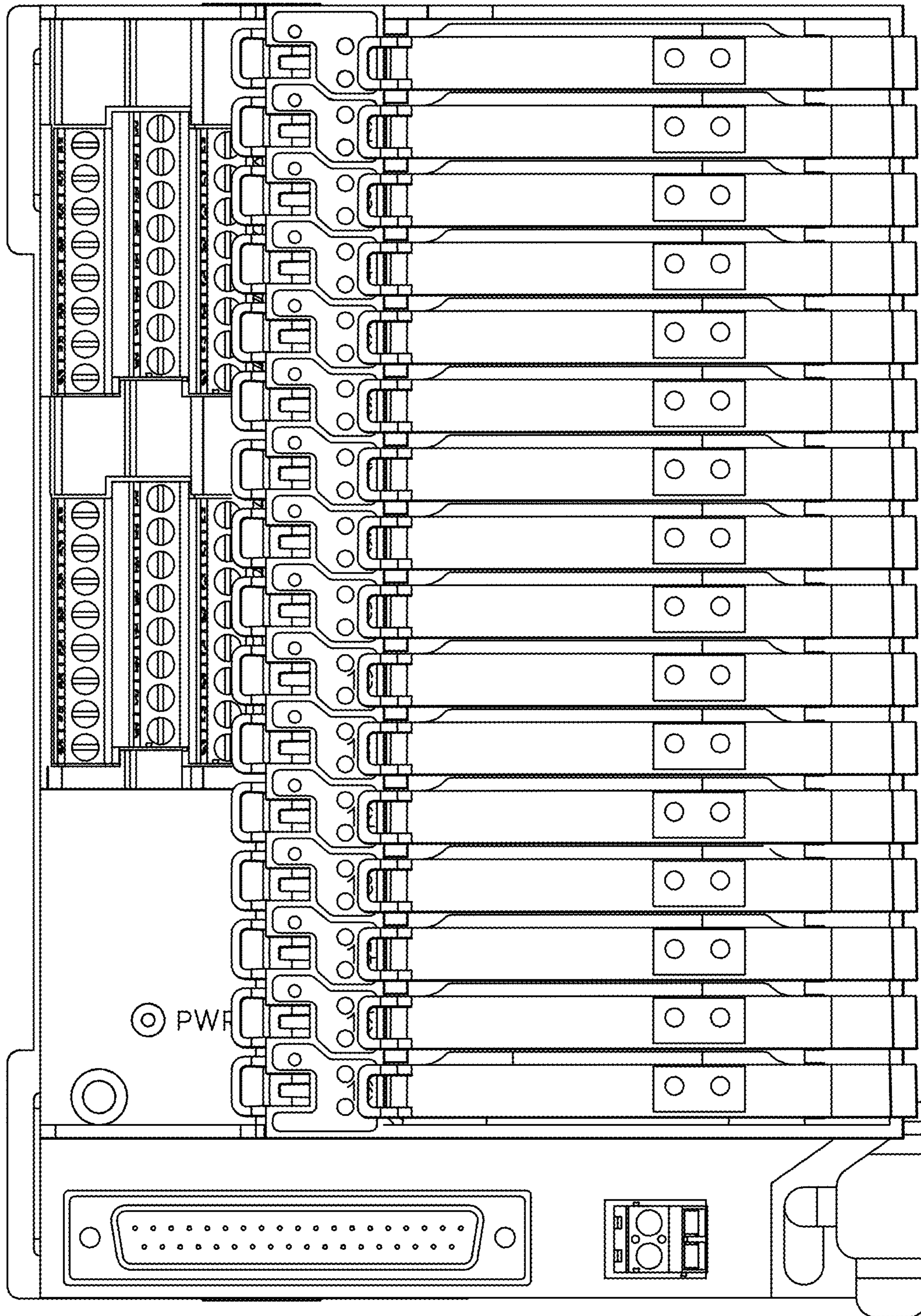


FIG. 4

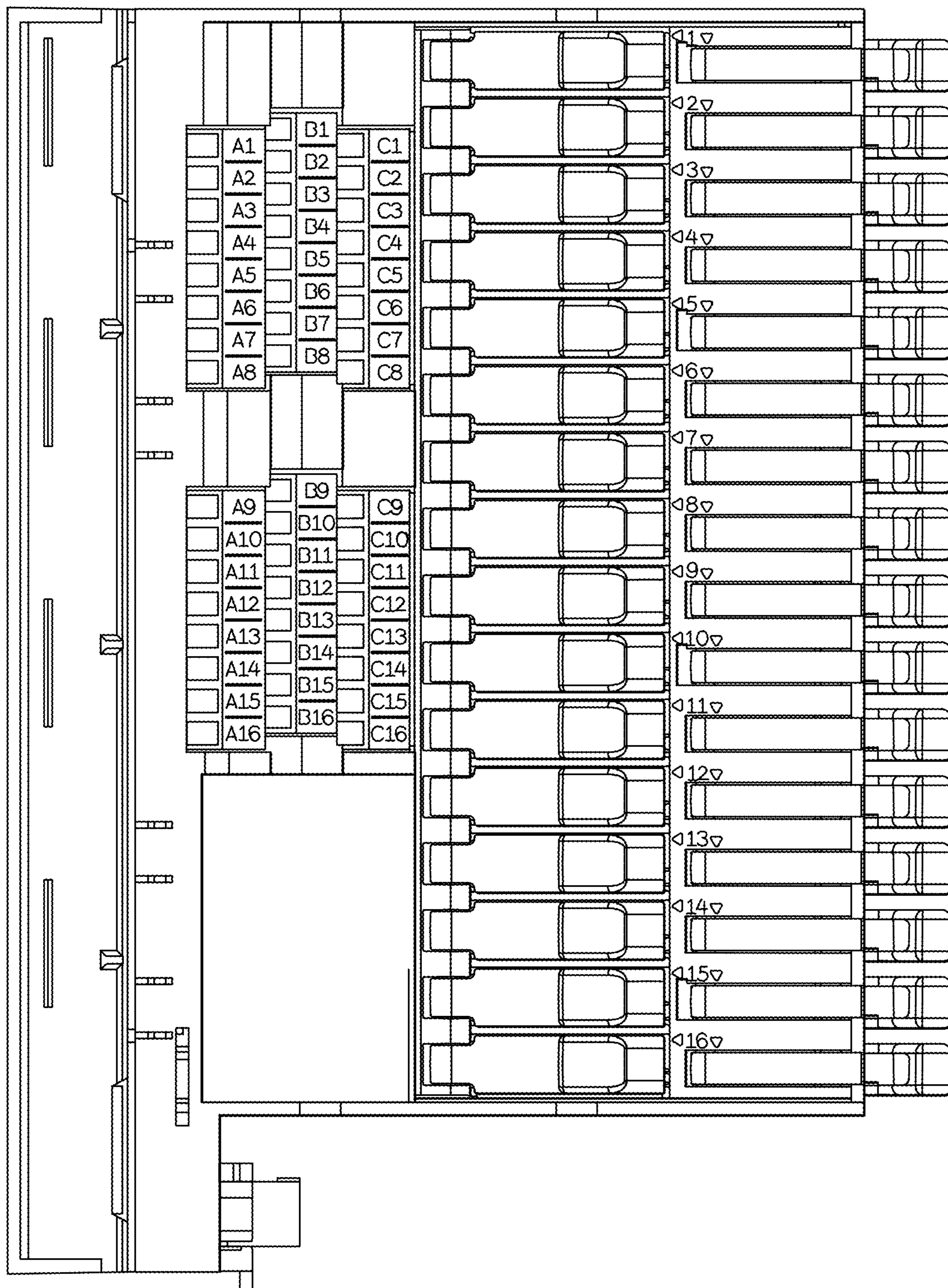


FIG. 5

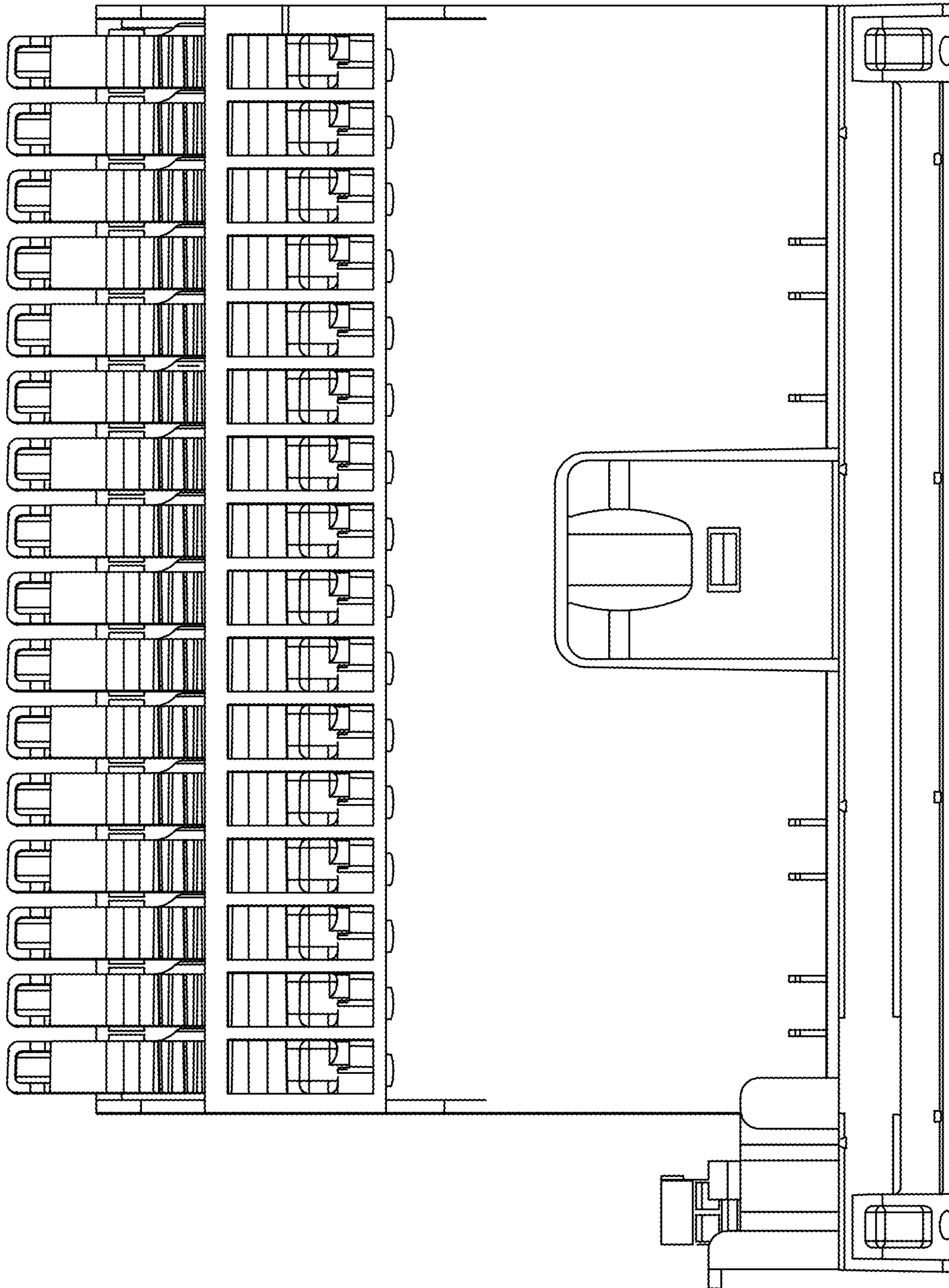


FIG. 6

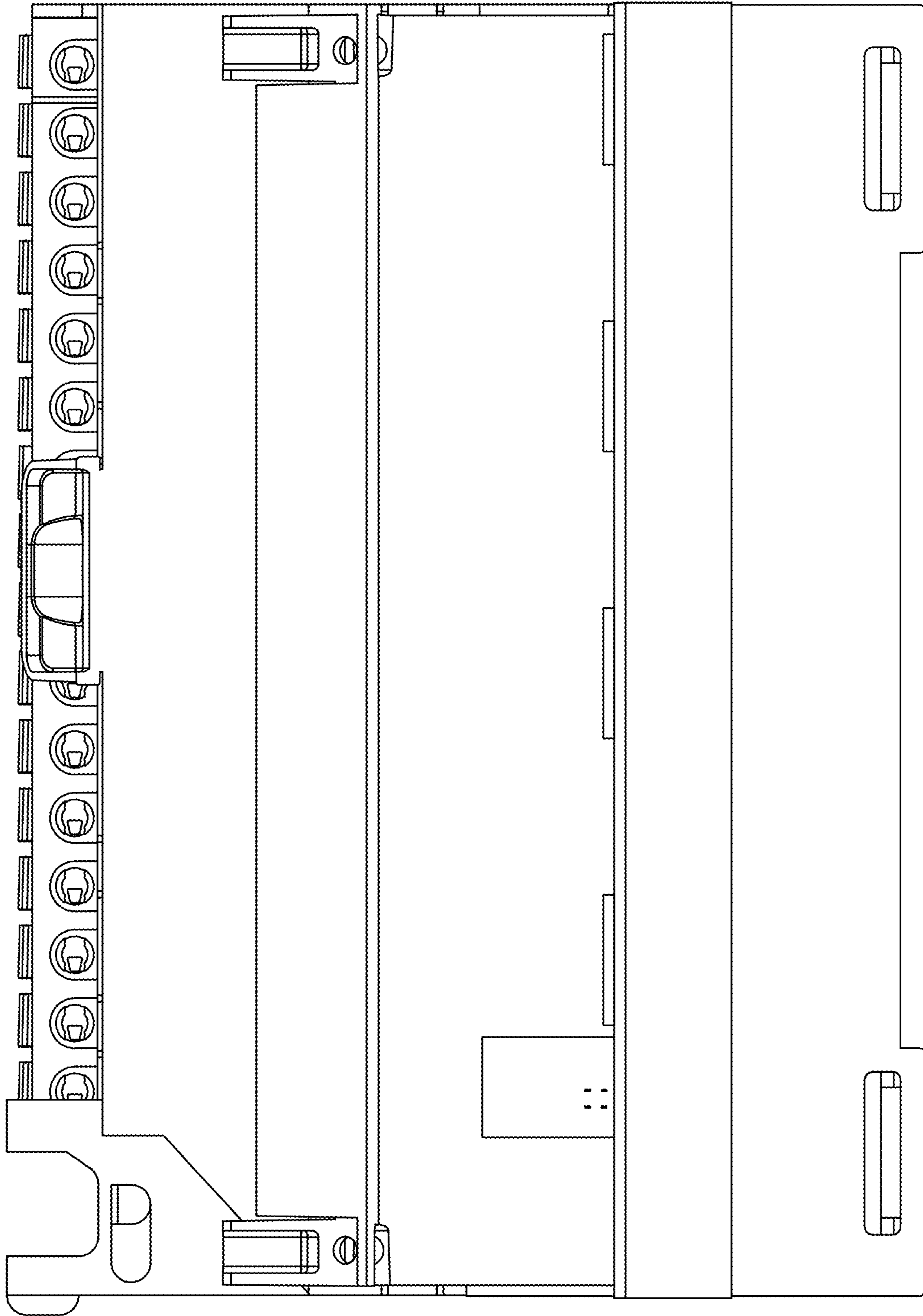


FIG. 7

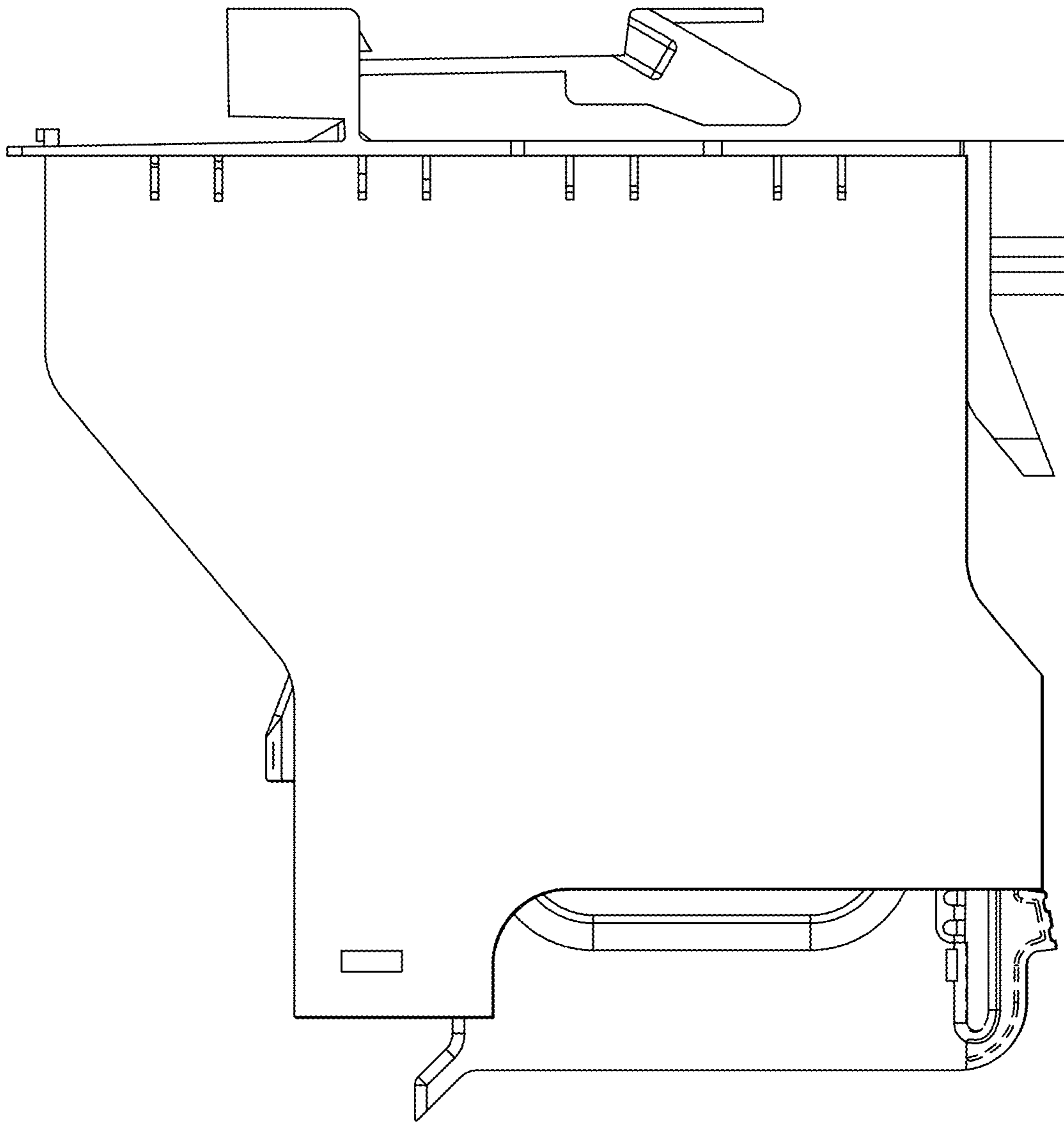


FIG. 8

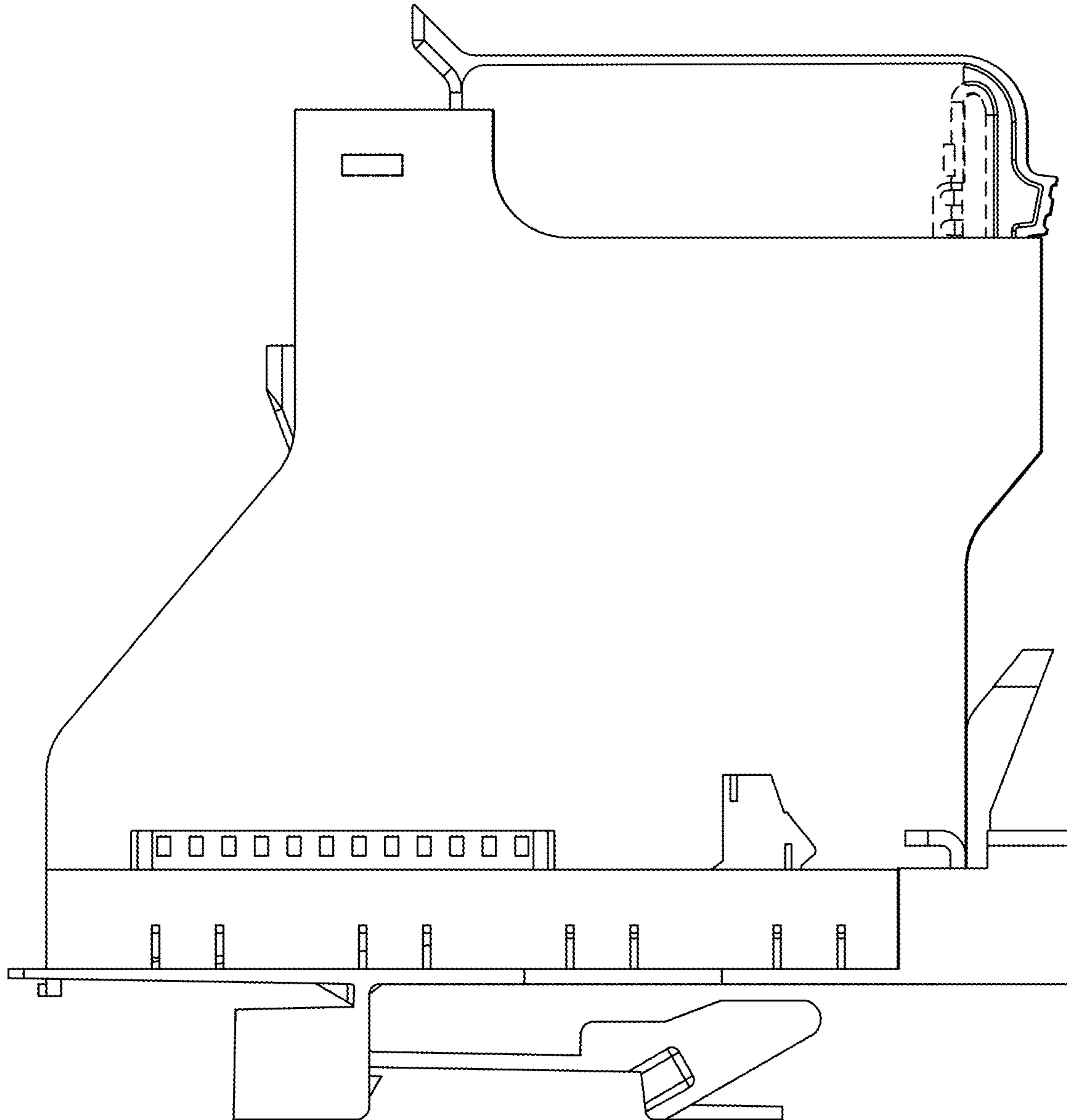


FIG. 9

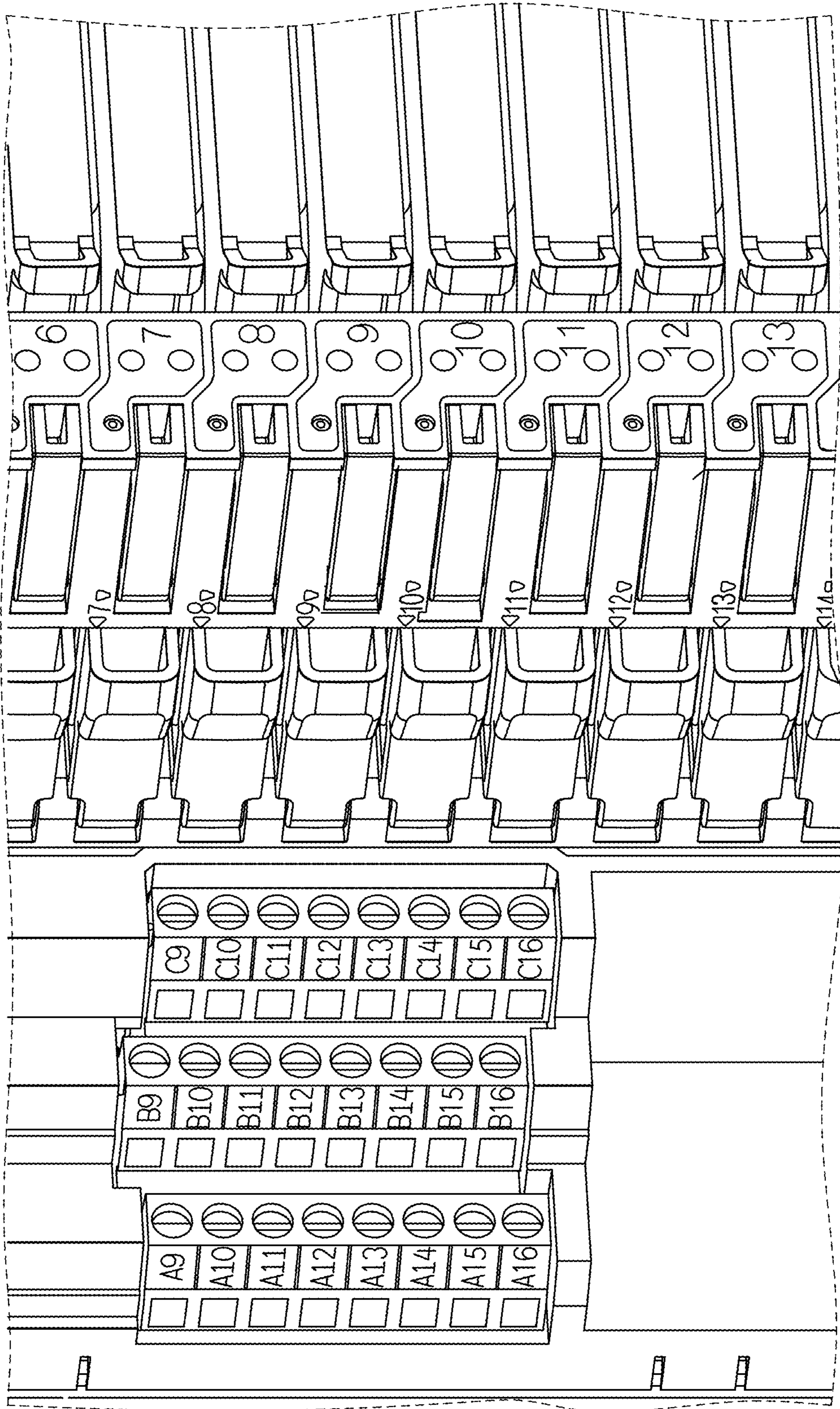


FIG. 10

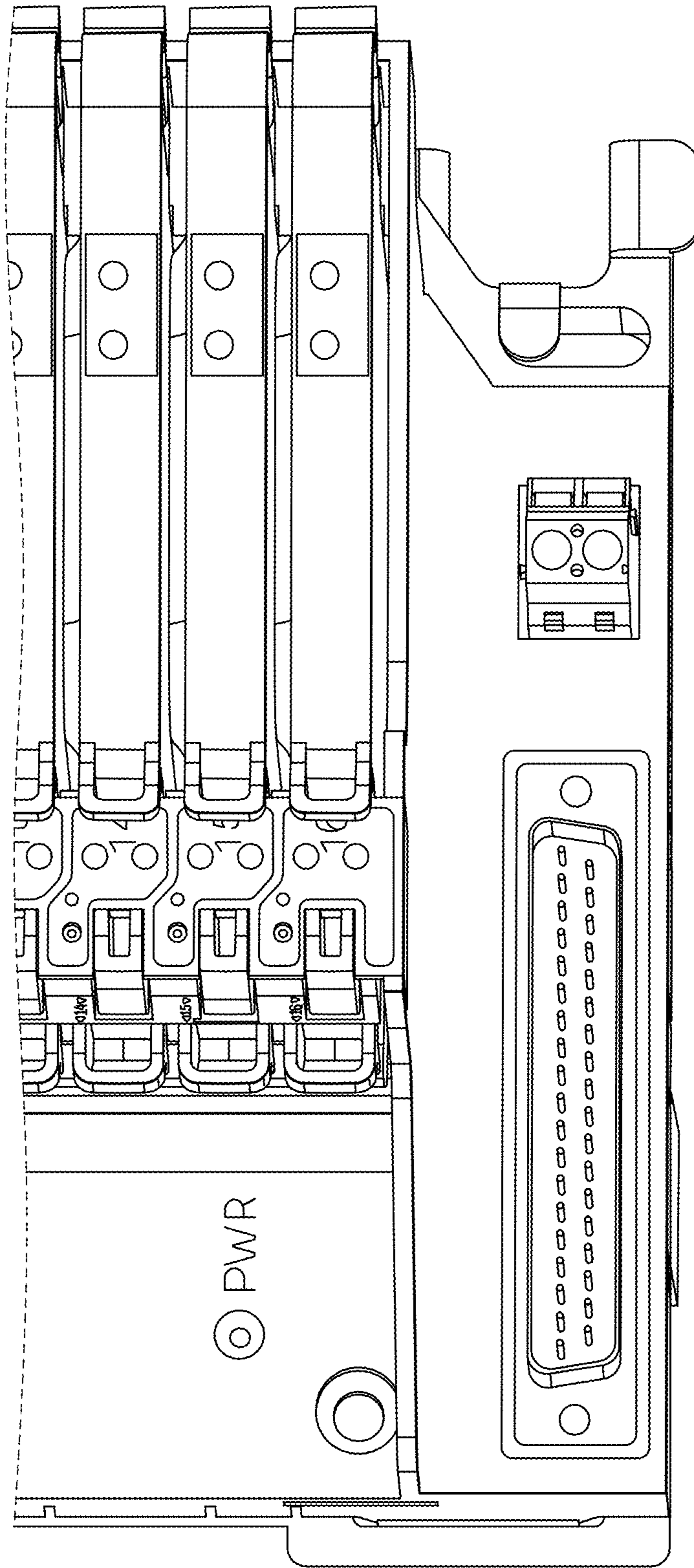


FIG. 11

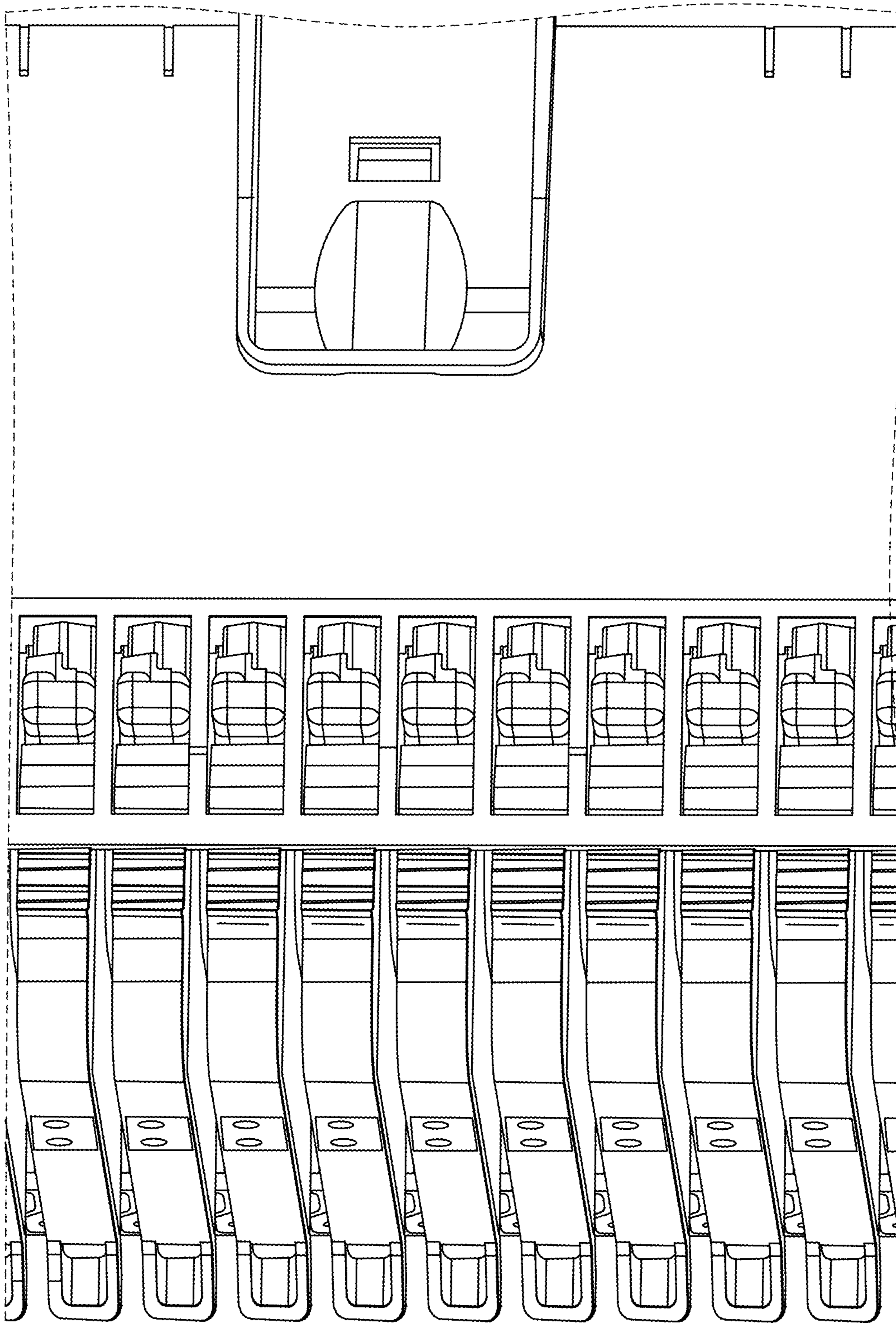


FIG. 12

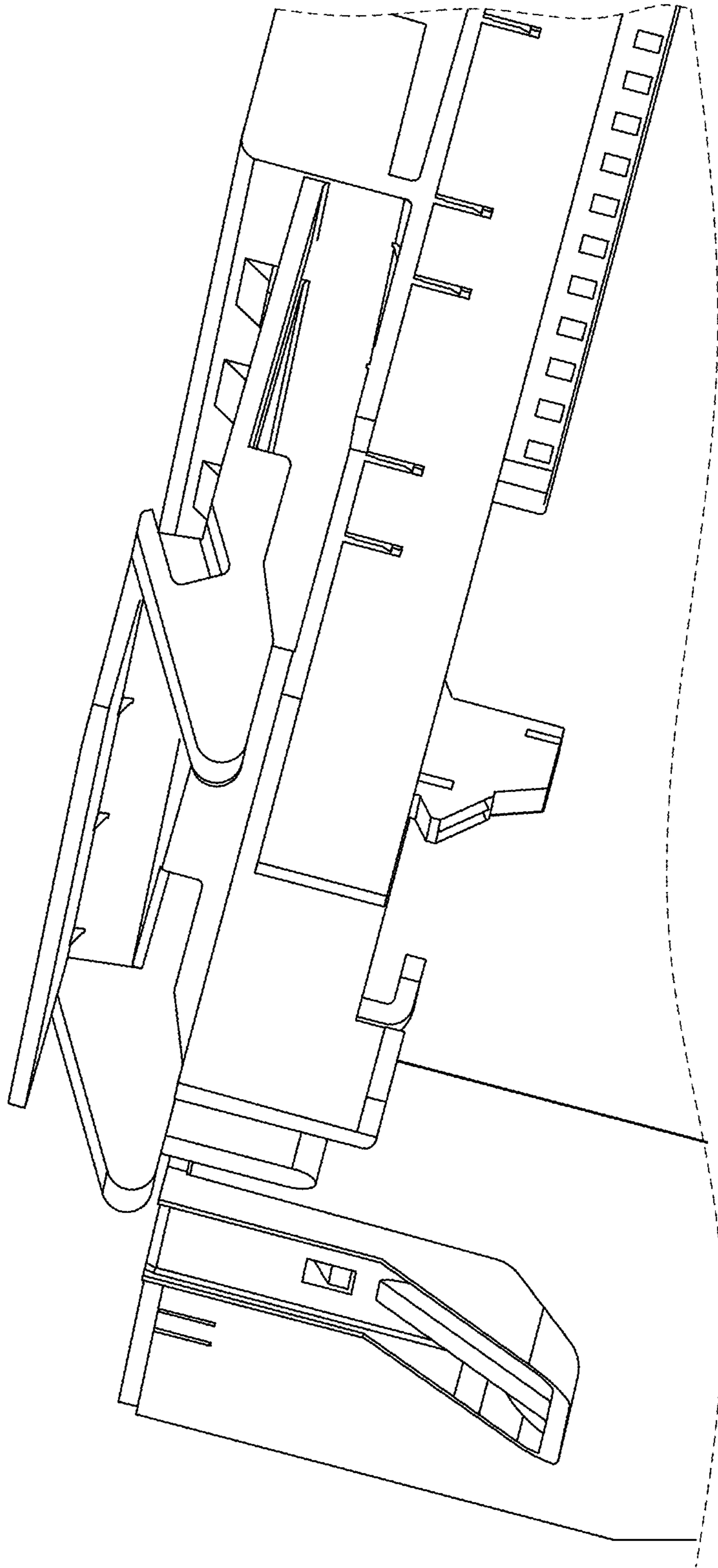


FIG. 13

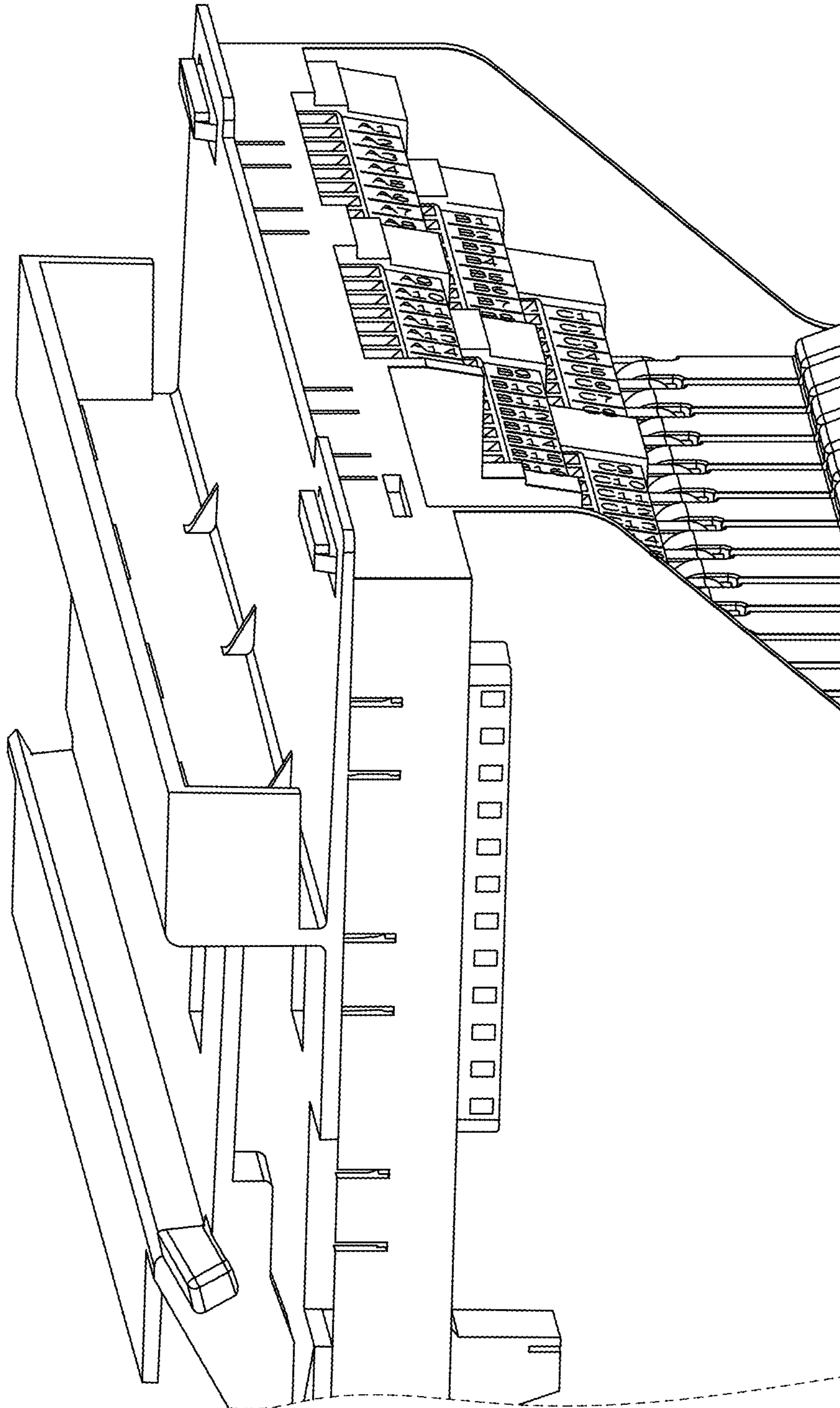


FIG. 14

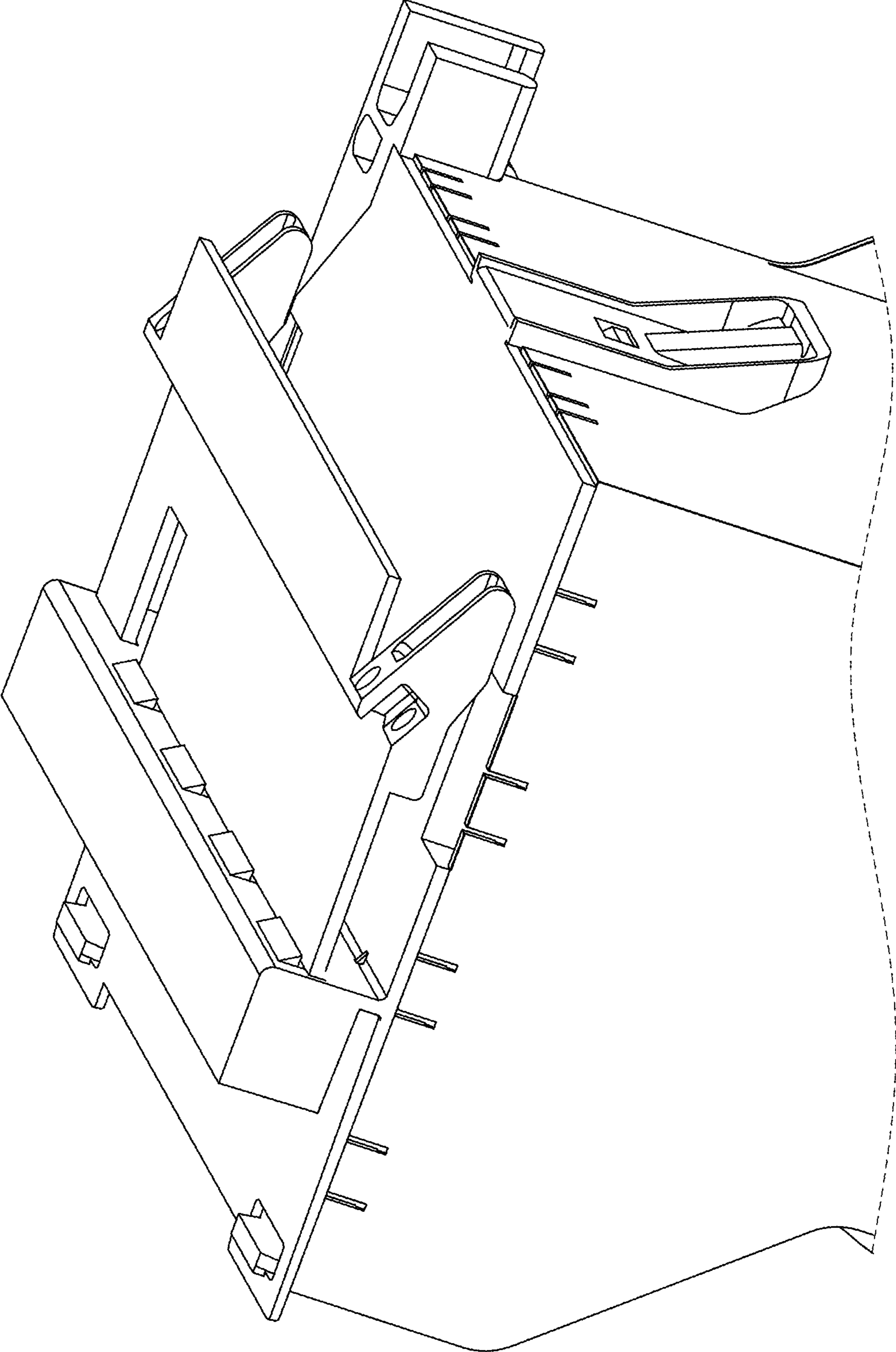


FIG. 15