



US00D836073S

(12) **United States Design Patent**
Sasaki

(10) **Patent No.:** **US D836,073 S**

(45) **Date of Patent:** **** Dec. 18, 2018**

(54) **SOLID STATE RELAY**

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

(21) Appl. No.: **29/591,940**

(22) Filed: **Jan. 25, 2017**

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

(52) **U.S. Cl.**
USPC **D13/159**

(58) **Field of Classification Search**
USPC D13/103, 110, 112, 118, 133, 146, 147,
D13/154, 158, 159-161, 173, 174, 178,
D13/182, 184, 199
CPC G02B 27/00; H01H 47/00; H01L 23/36;
H01L 23/49; H01L 25/16; H01R 4/02;
H01R 4/30; H01R 9/24; H01R 9/242;
H03K 17/687

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,361,371 A * 11/1982 Williams H01R 9/2425
361/752
D305,642 S * 1/1990 Kawashima D13/169
5,229,739 A * 7/1993 Oh H01H 69/02
337/255
D357,462 S * 4/1995 Terasawa D13/182
D518,792 S * 4/2006 Ohta D13/161
D539,761 S * 4/2007 Takahashi D13/182

D548,203 S * 8/2007 Takahashi D13/182
D717,253 S * 11/2014 Jo D13/182
D719,926 S * 12/2014 Sohn D13/182
D770,994 S * 11/2016 Hasegawa D13/182
2005/0194552 A1 * 9/2005 Yamaguchi H01L 25/167
250/551
2008/0128889 A1 * 6/2008 Jeong H01L 23/3121
257/691
2013/0286594 A1 * 10/2013 Onai H01L 21/563
361/717
2018/0160569 A1 * 6/2018 Yoshihara H01L 23/36

FOREIGN PATENT DOCUMENTS

JP 1587425 * 10/2017

* cited by examiner

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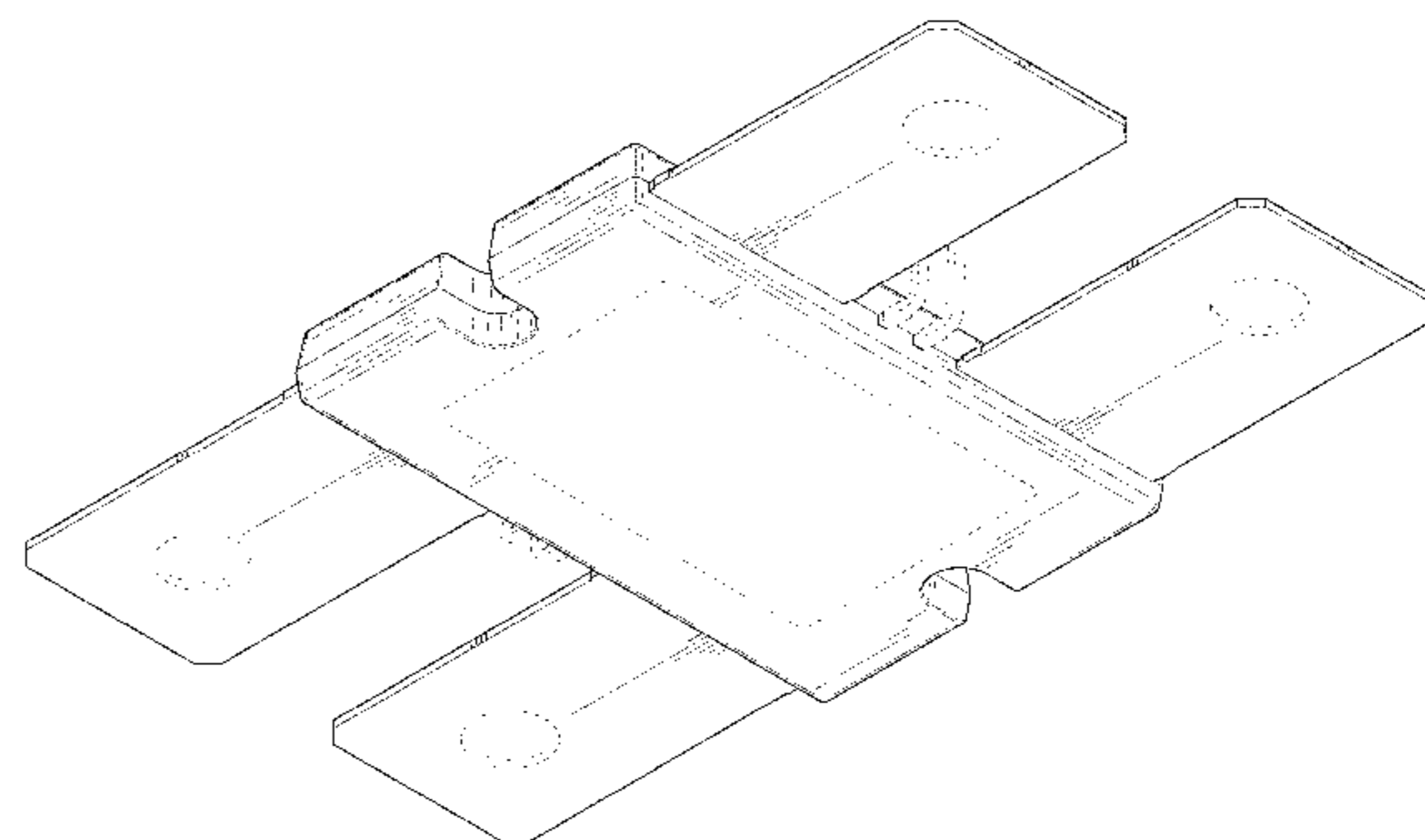
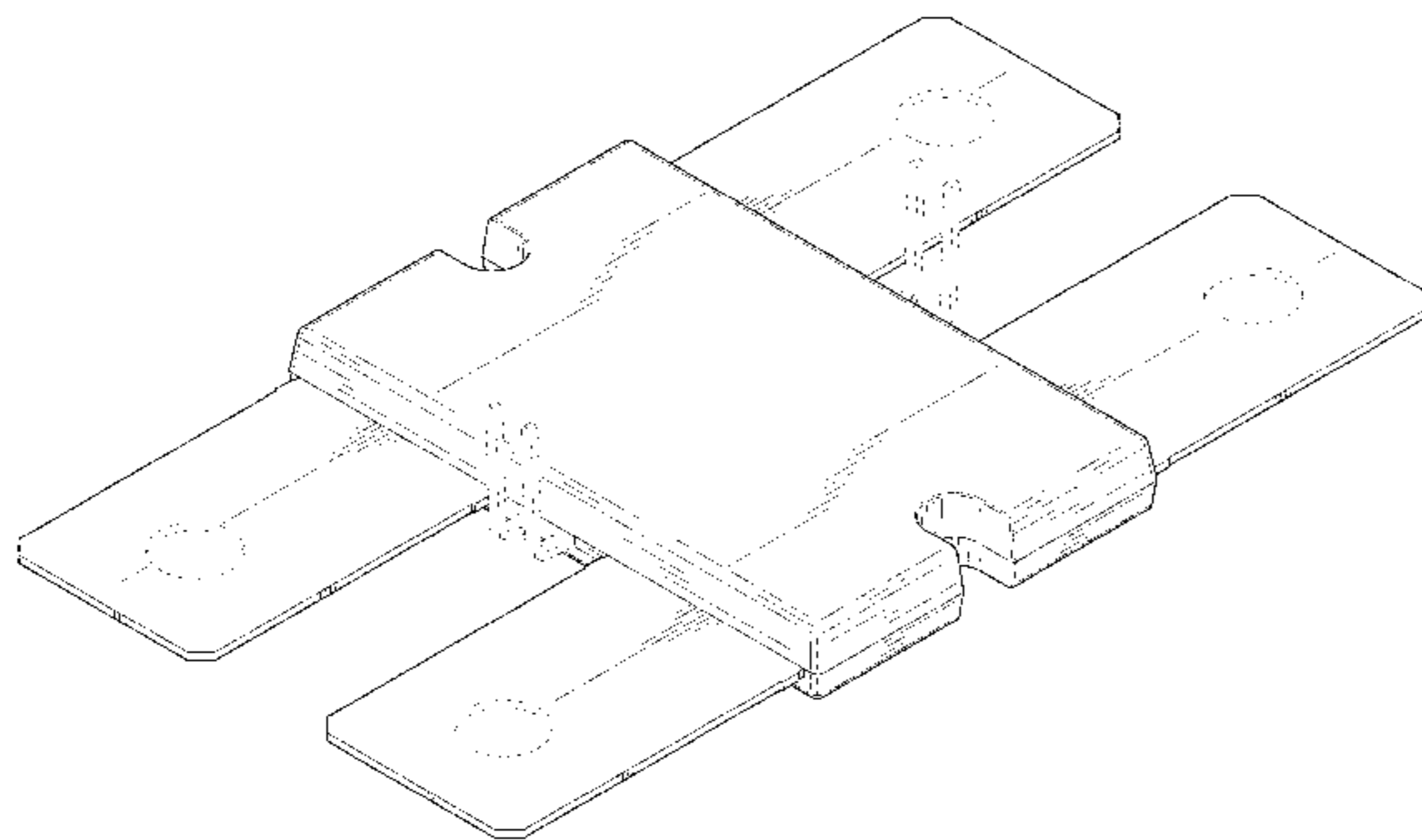
(57) **CLAIM**

The ornamental design for a solid state relay, as shown and described.

DESCRIPTION

FIG. 1 is a front, top, left-side perspective view of the solid state relay;
FIG. 2 is a front elevational view thereof, the rear elevational view (not provided) being a mirror image thereof;
FIG. 3 is a top plan view thereof;
FIG. 4 is a right-side elevational view thereof, the left-side elevational view (not provided) being a mirror image thereof;
FIG. 5 is a bottom plan view thereof; and,
FIG. 6 is a rear, bottom, left-side perspective view thereof.
The broken lines depict portions of the solid state relay that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



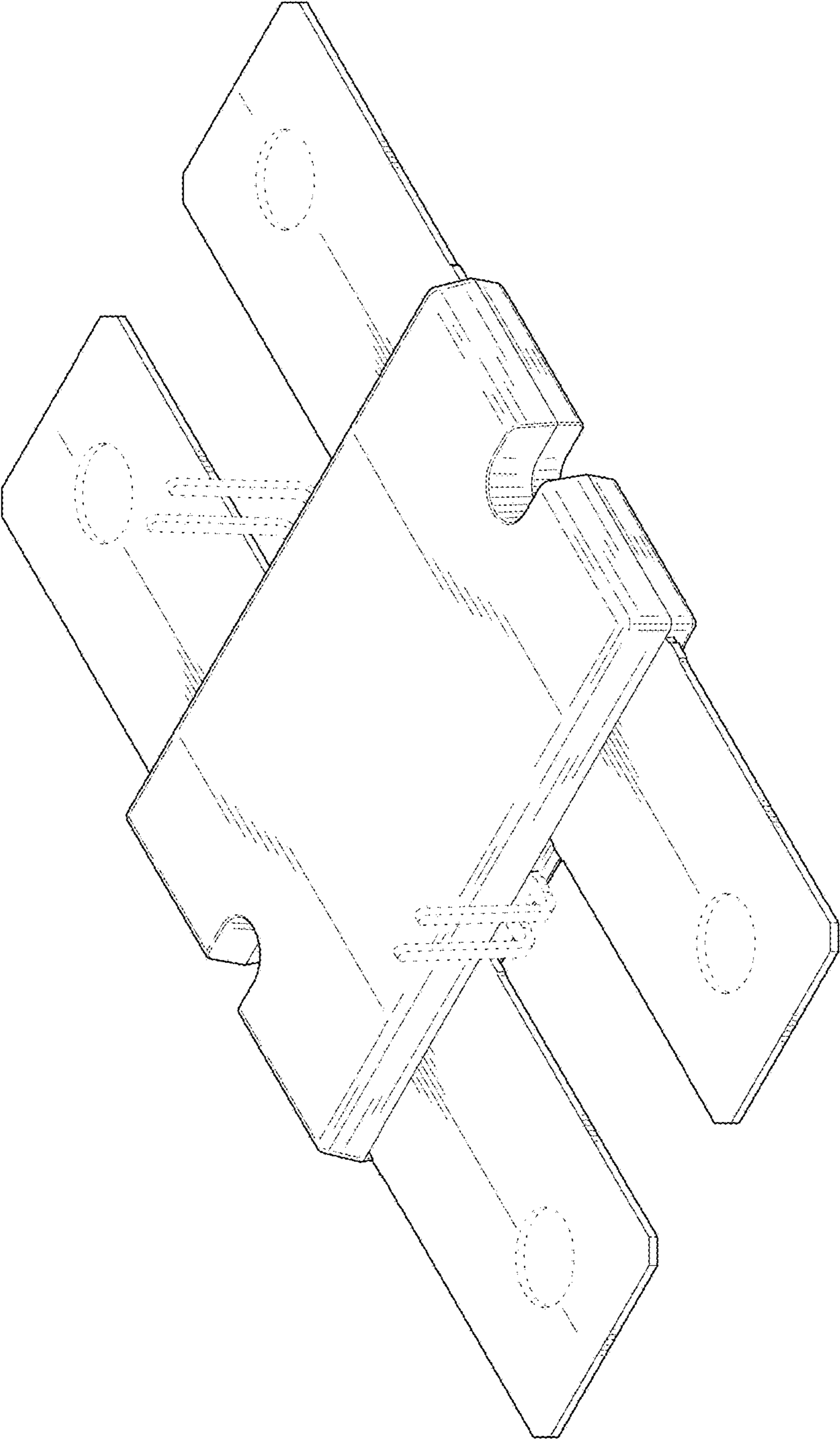


FIG. 1

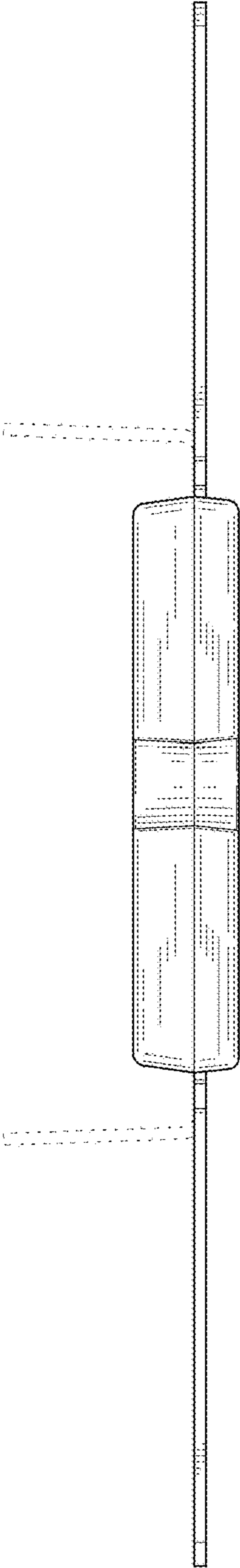


FIG.2

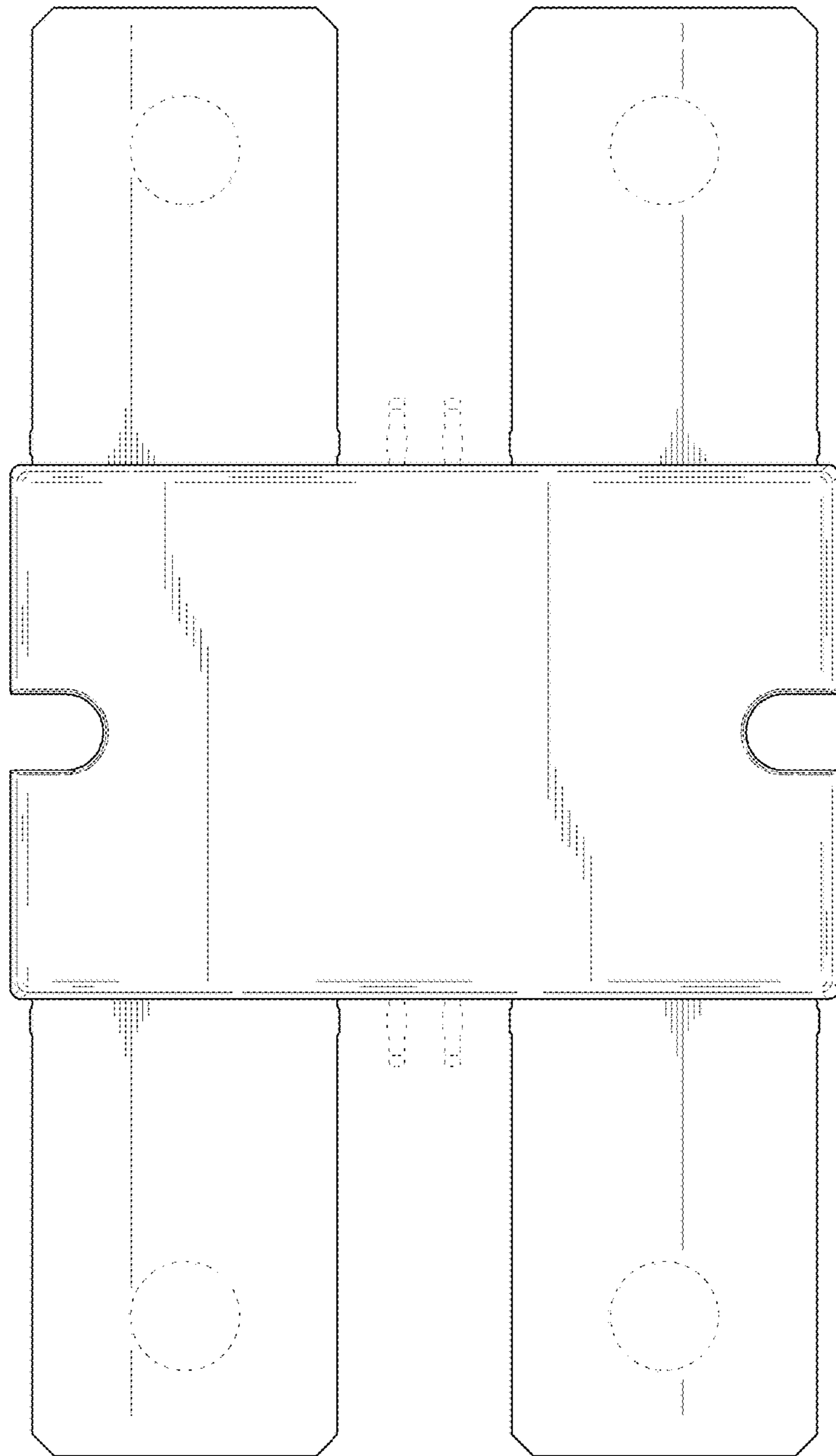


FIG. 3

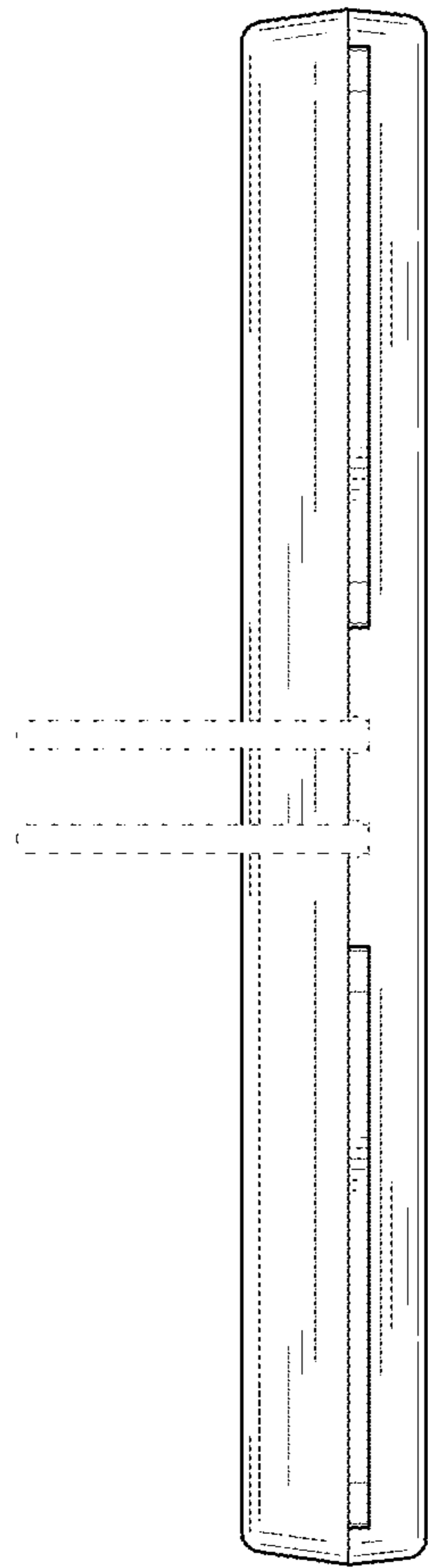


FIG. 4

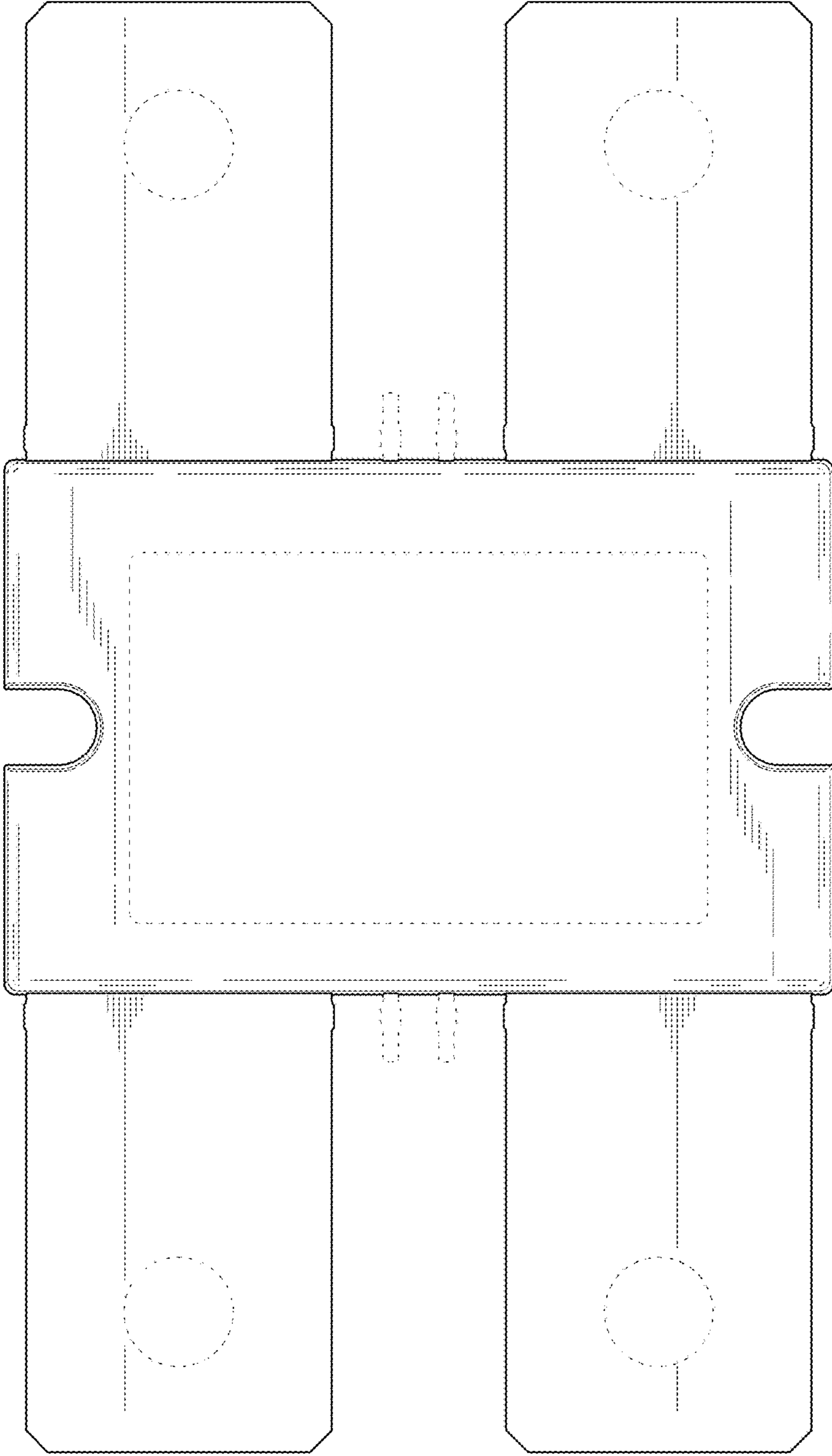


FIG. 5

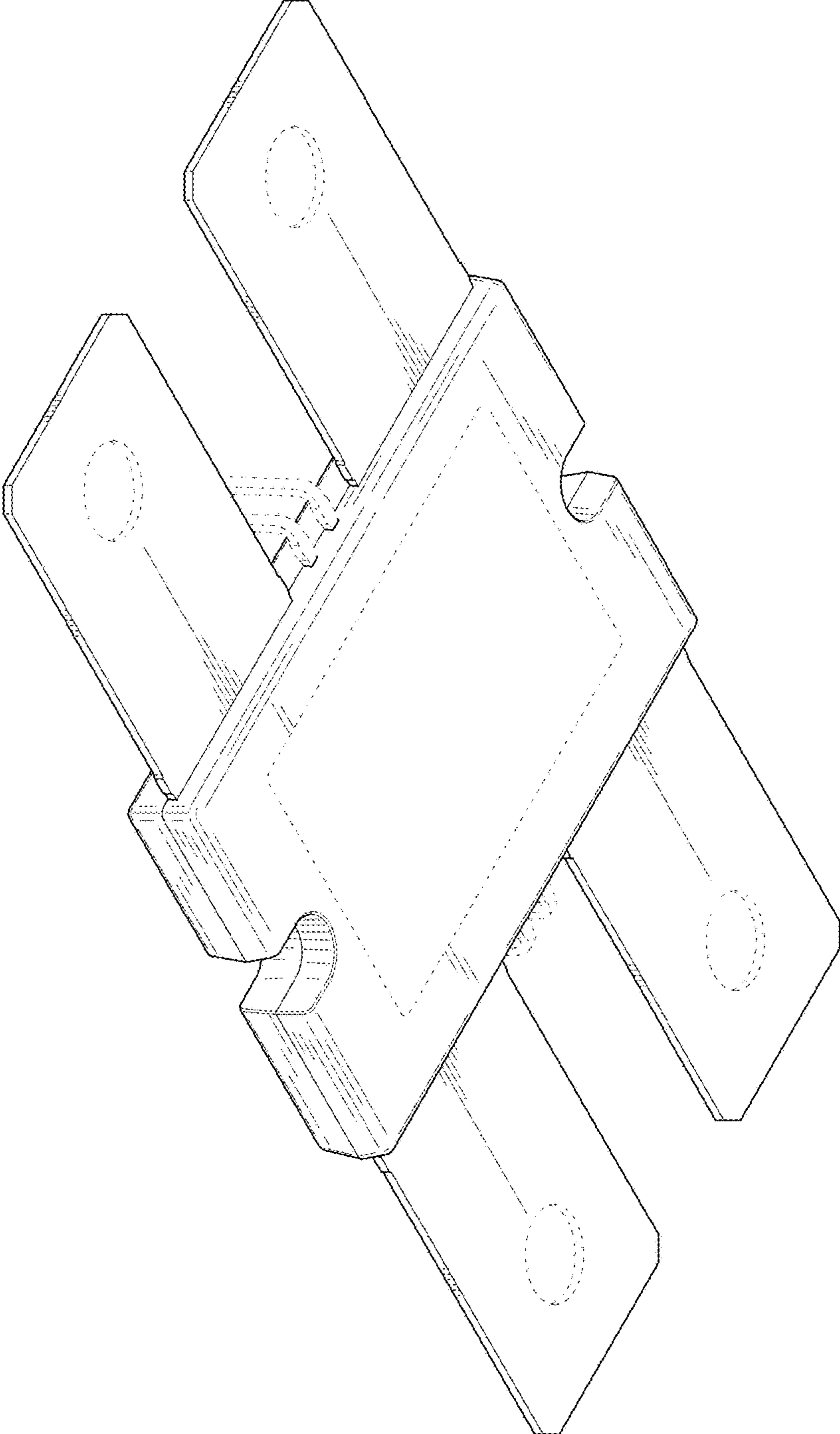


FIG. 6