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

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(54) **THREE PHASE BUS MOUNTED SURGE PROTECTION DEVICE**

D798,244 S * 9/2017 Lecoanet D13/158
(Continued)

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

(21) Appl. No.: **29/617,453**

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

(52) **U.S. Cl.**

USPC **D13/160**; D13/158

(58) **Field of Classification Search**

USPC D13/110, 112, 122, 123, 156, 158-162.1, D13/173, 177, 178, 184, 199

CPC H01H 9/00; H01H 71/00; H01H 71/02; H01H 71/12; H01H 1/06; H01H 1/20; H01H 3/32; H01H 9/02; H01H 9/28;

H01H 21/04; H01H 21/22; H01H 33/02; H01H 33/08; H01H 33/10; H01H 33/18; H01H 36/00; H01H 47/00; H01H 50/14;

H01H 50/16; H01H 1/64; H01H 3/26; H01H 33/53; H01H 71/04; H01H 71/08; H01H 71/10; H01H 71/24; H05K 7/00;

H05K 7/14; H05K 7/18; H05K 7/20; H01R 4/26; H01R 4/48; H01R 25/00; H01R 9/24

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,862,125 A * 8/1989 Maier H01H 9/22
200/43.01
5,483,213 A * 1/1996 Mueller H01H 71/08
335/132
8,587,240 B2 * 11/2013 Wolfe H02P 1/28
318/430

OTHER PUBLICATIONS

Eaton Surge Protection (SPD) and Power Conditioning Products, dated Sep. 2016, [online], [site visited May 22, 2018]. Available from Internet, <URL: <http://www.eaton.com/ecm/groups/public/@pub/@electrical/documents/content/tb04800003e.pdf>> (Year: 2016).*

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(57) **CLAIM**

The ornamental design for a three phase bus mounted surge protection device, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of the three phase bus mounted surge protection device showing our design;

FIG. 2 is an exploded view thereof;

FIG. 3 is first side view of the surge protection device;

FIG. 4 is an opposing side view of FIG. 3;

FIG. 5 is a second side view thereof;

FIG. 6 is an opposing side view of FIG. 5;

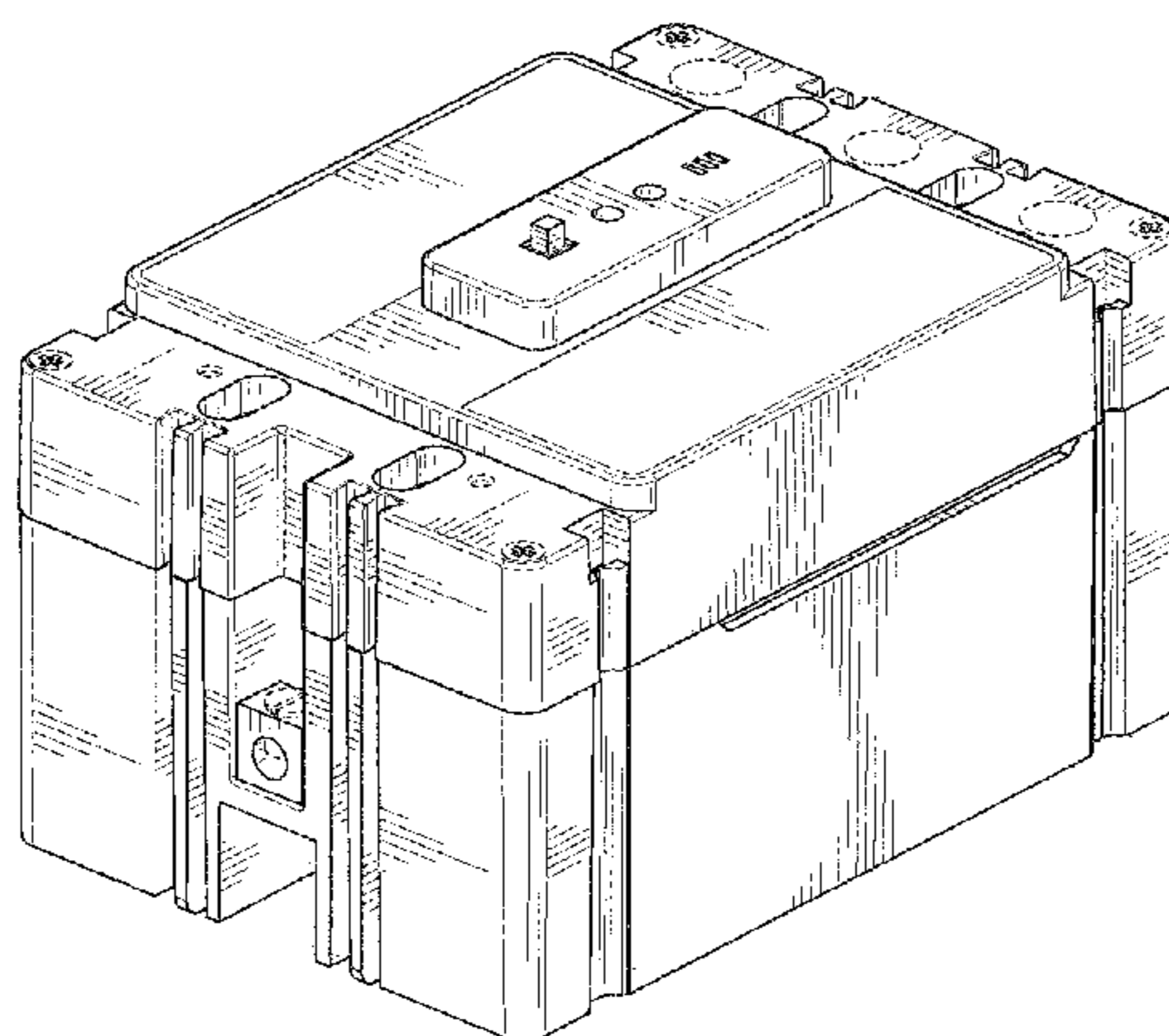
FIG. 7 is a top view of the surge protection device;

FIG. 8 is a bottom view of the surge protection device; and,

FIG. 9 is an environmental view of the three phase bus mounted surge protection device positioned in a circuit breaker panel with similarly sized circuit breaker modules.

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

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0071750 A1* 4/2006 Marks H01H 71/0207
336/172
2012/0182664 A1* 7/2012 Wan H01H 71/10
361/115
2013/0203302 A1* 8/2013 Grunwald H01R 4/36
439/814
2013/0306454 A1* 11/2013 Nickerson H01H 9/446
200/48 R
2015/0349513 A1* 12/2015 Kim H01H 1/62
361/93.1
2015/0371790 A1* 12/2015 Sippel H01H 1/62
200/284
2016/0260560 A1* 9/2016 Mishra H01H 21/04
2018/0062285 A1* 3/2018 Eberts H01R 9/2416
2018/0082799 A1* 3/2018 Zhang H01H 9/0264
2018/0166241 A1* 6/2018 Gottschalk H01H 71/082

* cited by examiner

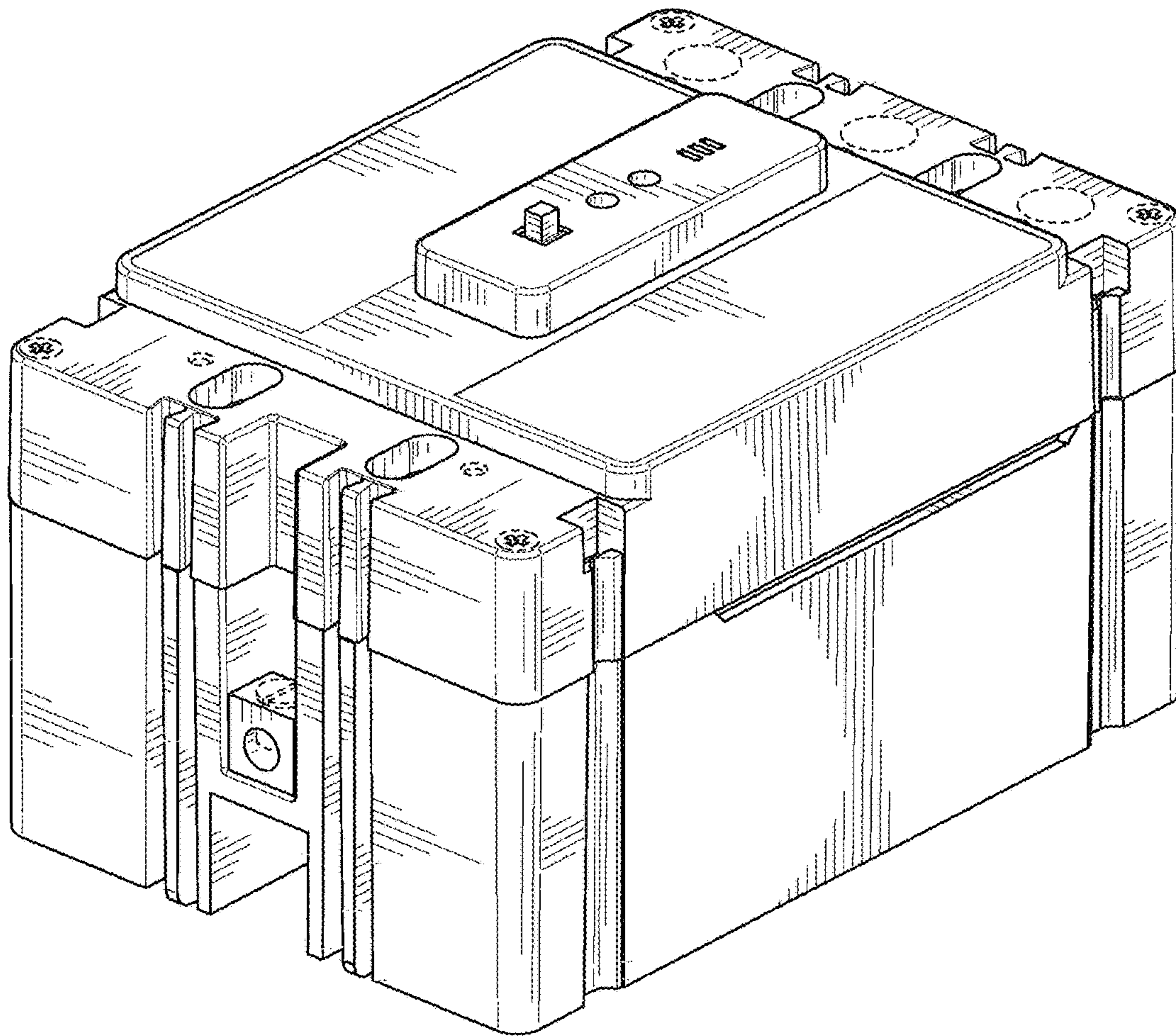
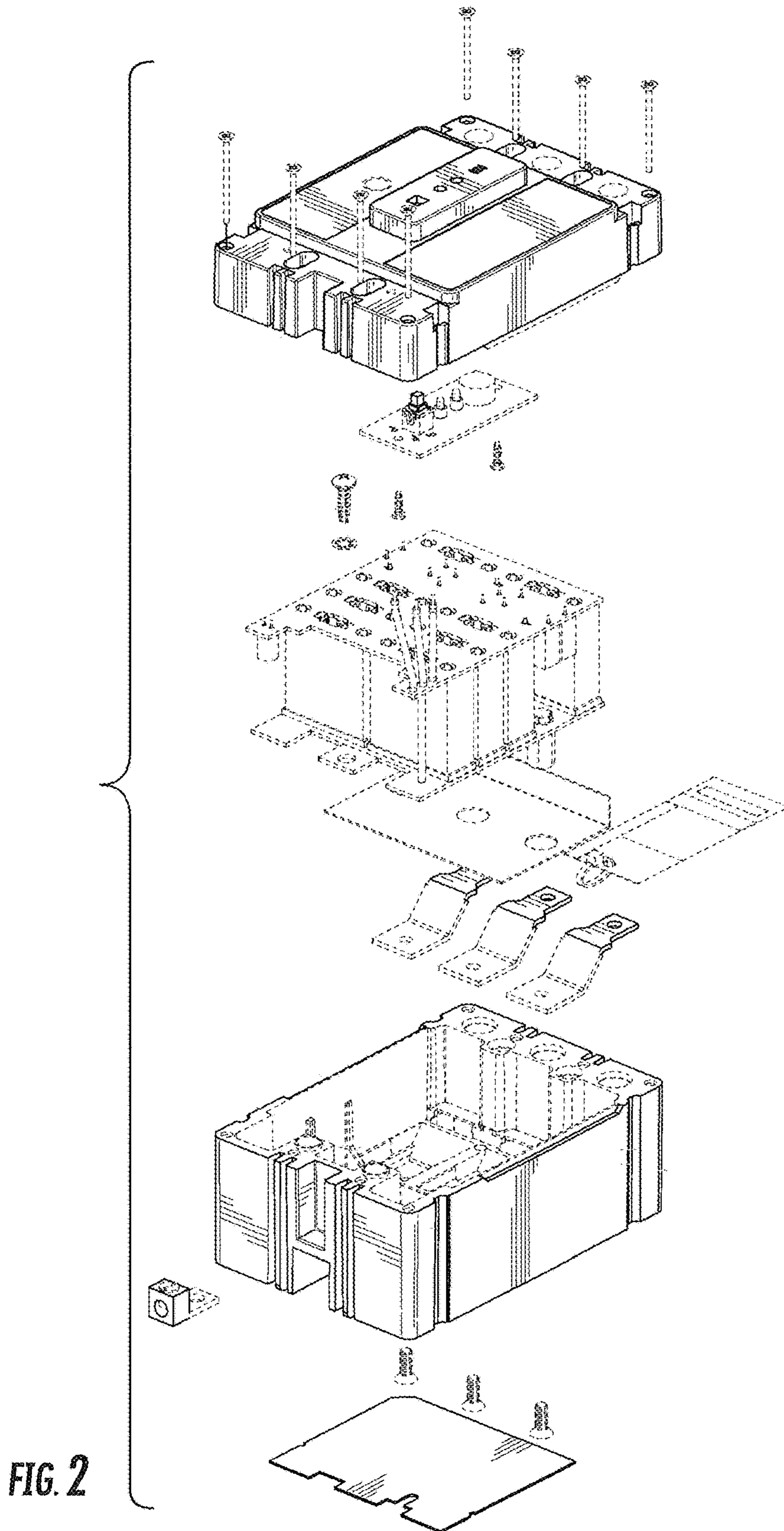


FIG. 1



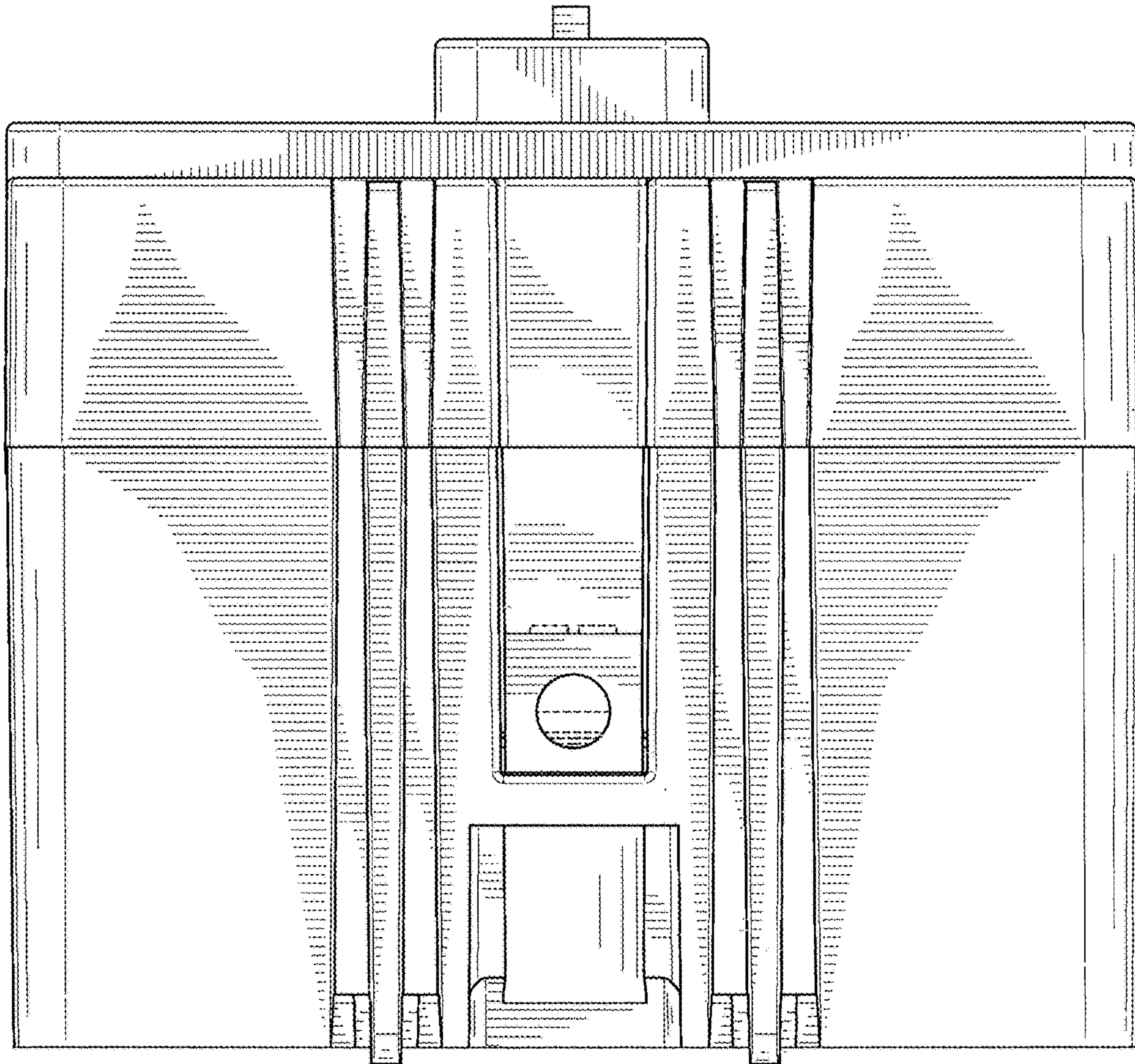


FIG. 3

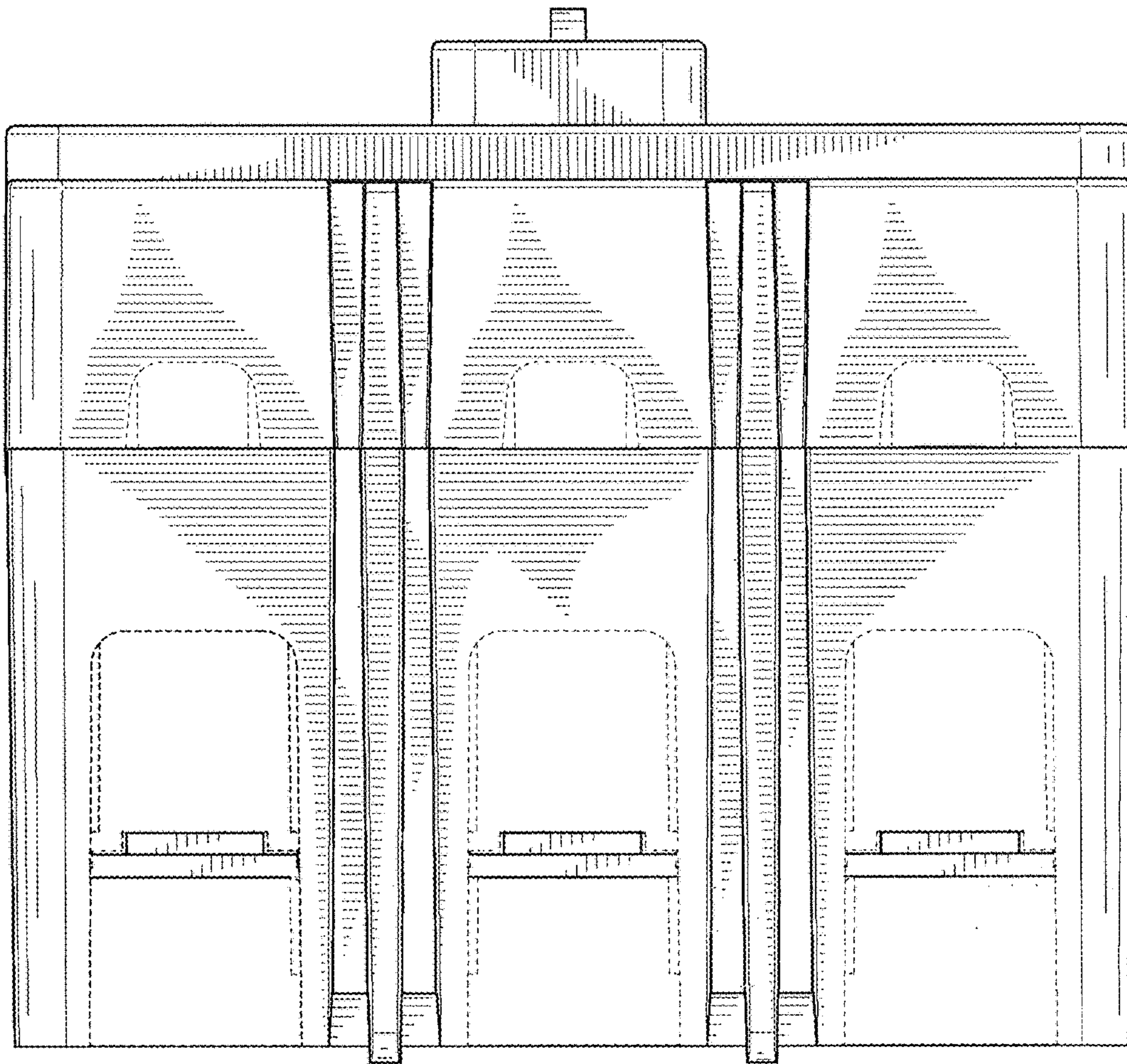


FIG. 4

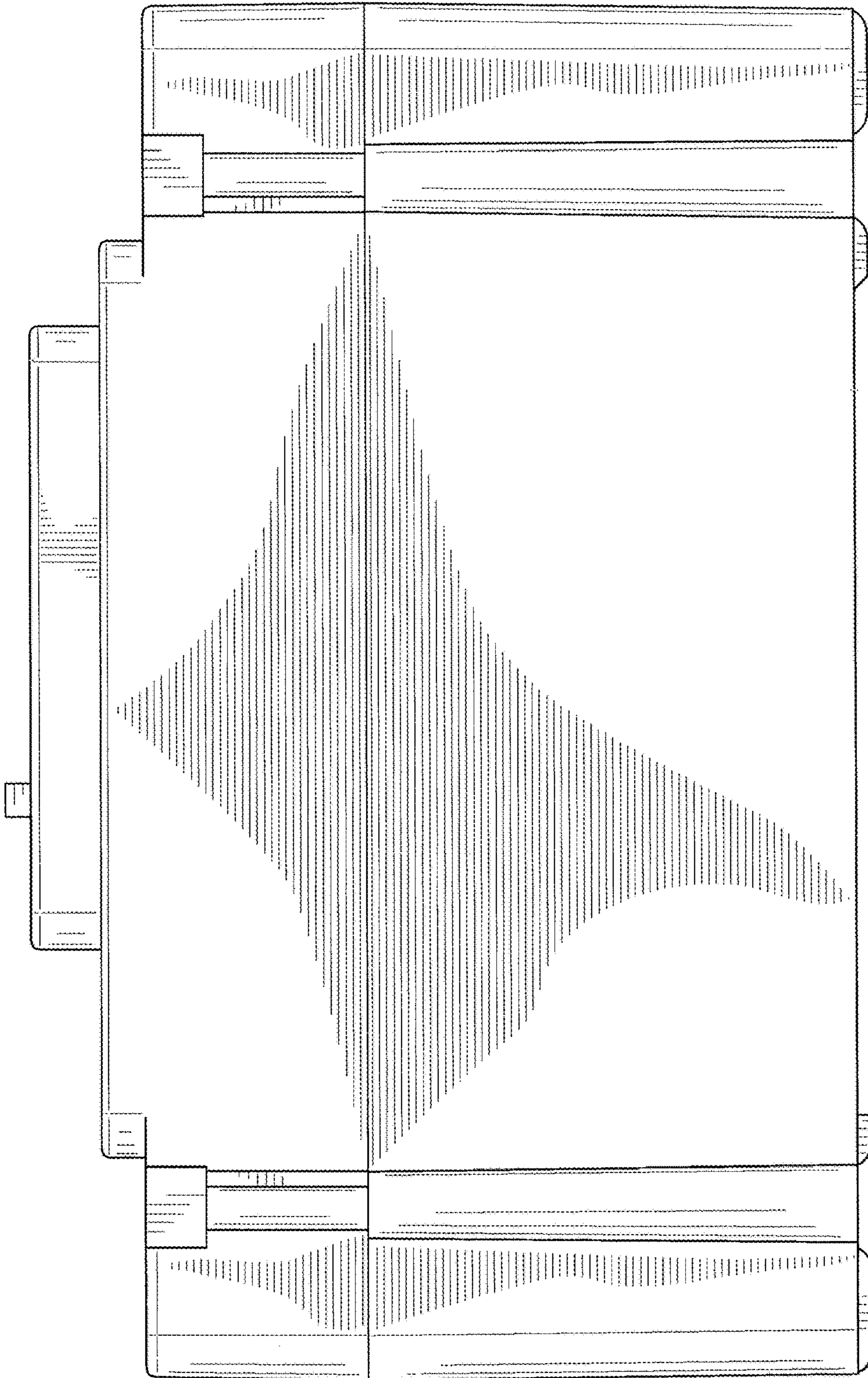


FIG. 5

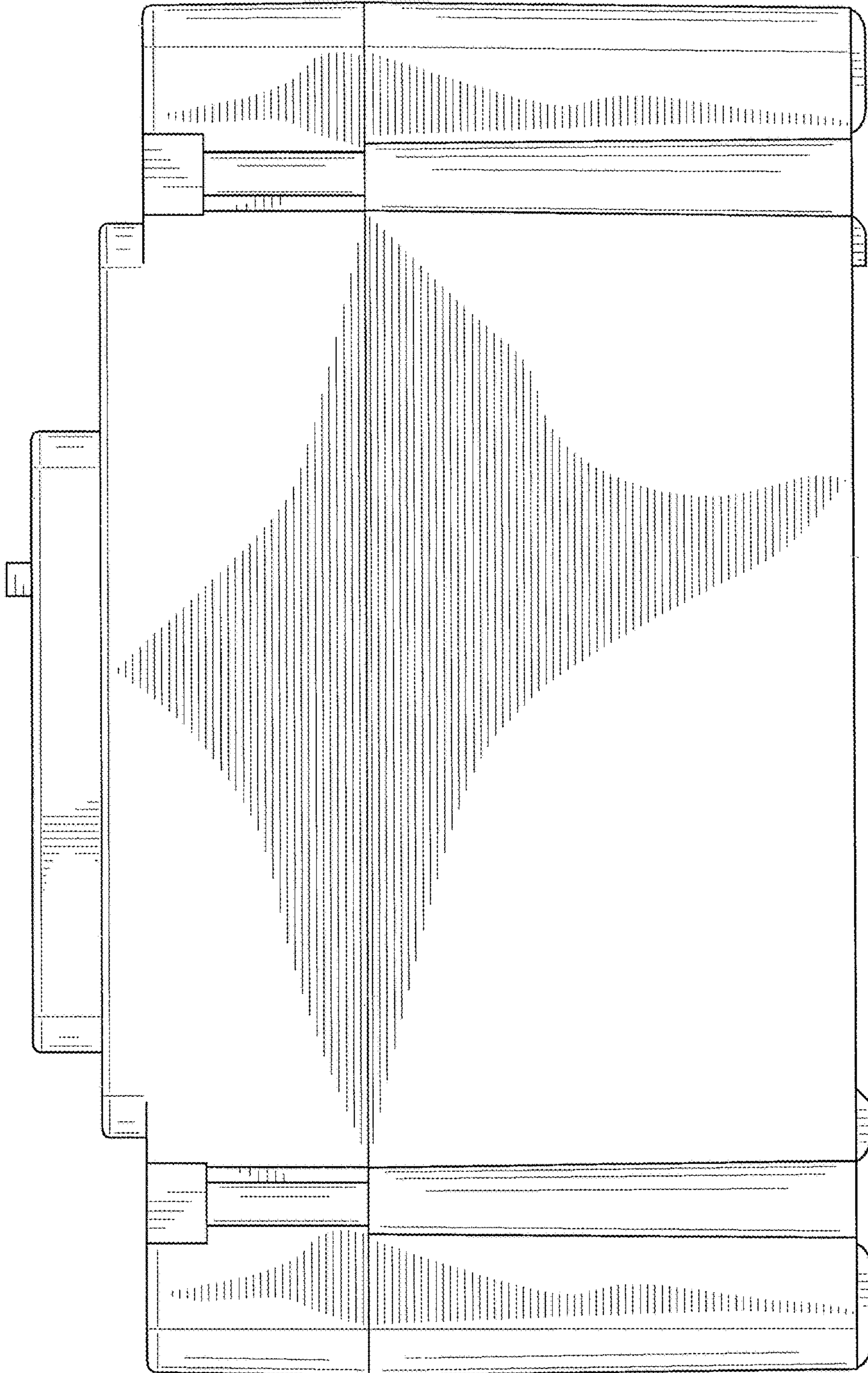


FIG. 6

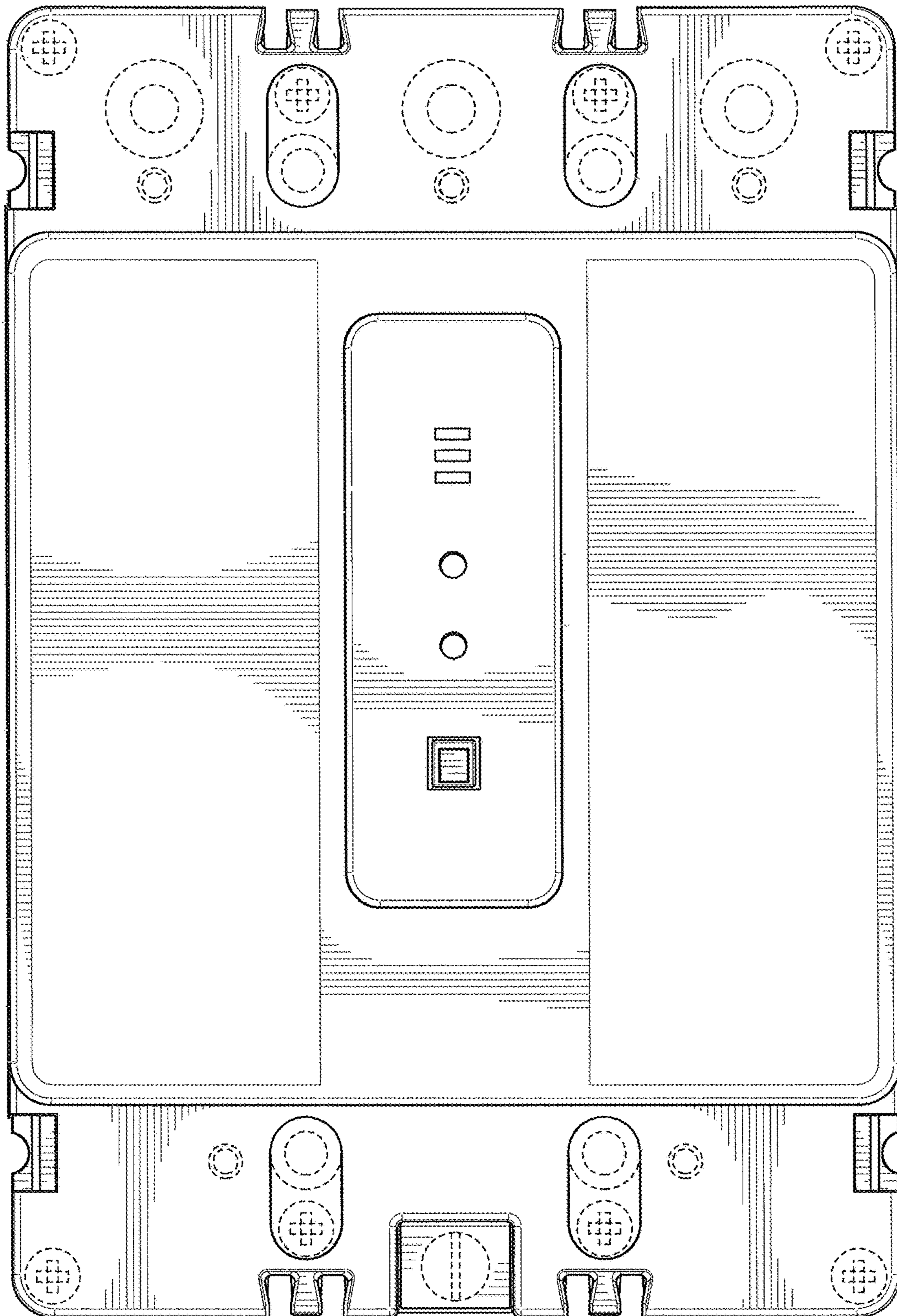


FIG. 7

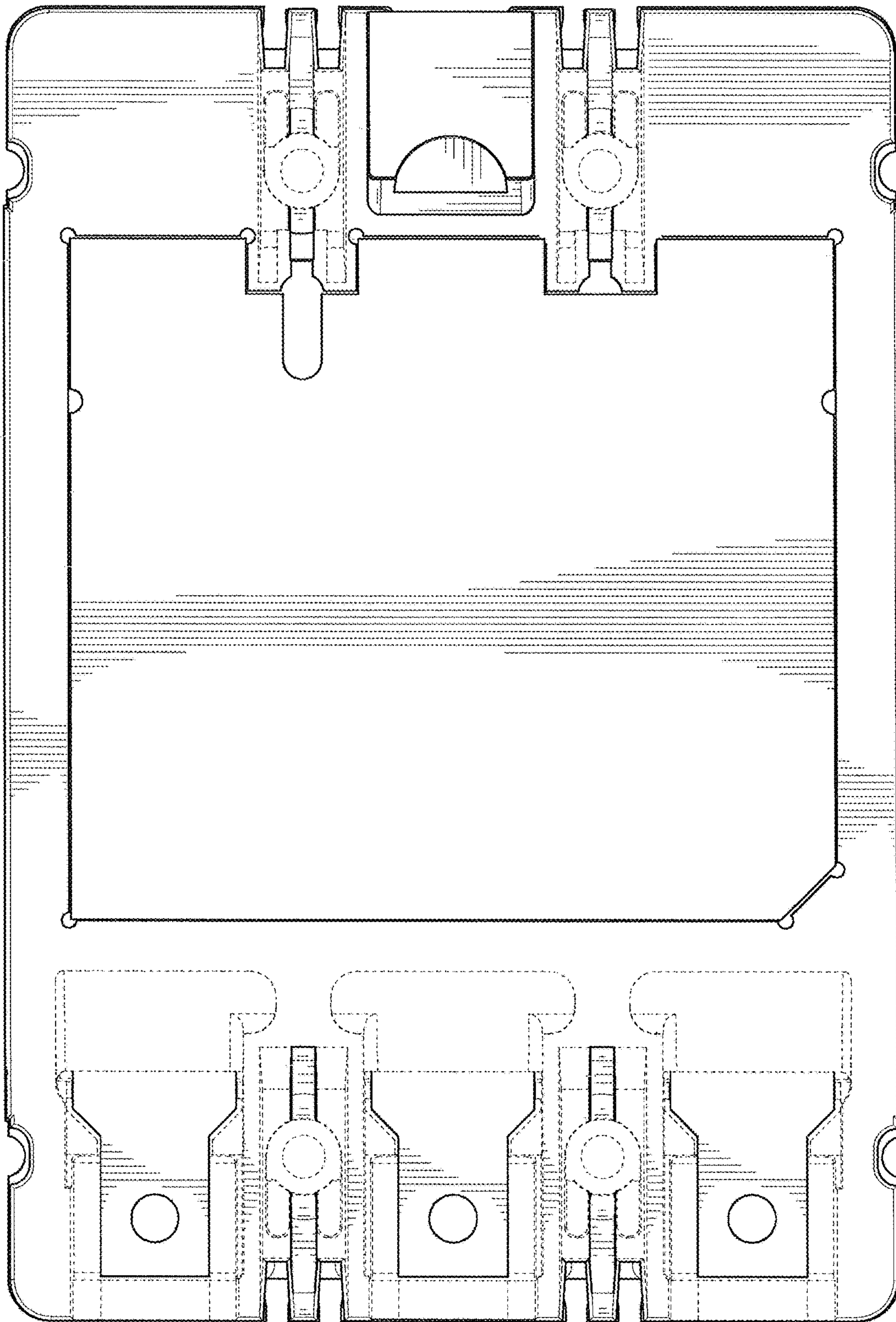


FIG. 8

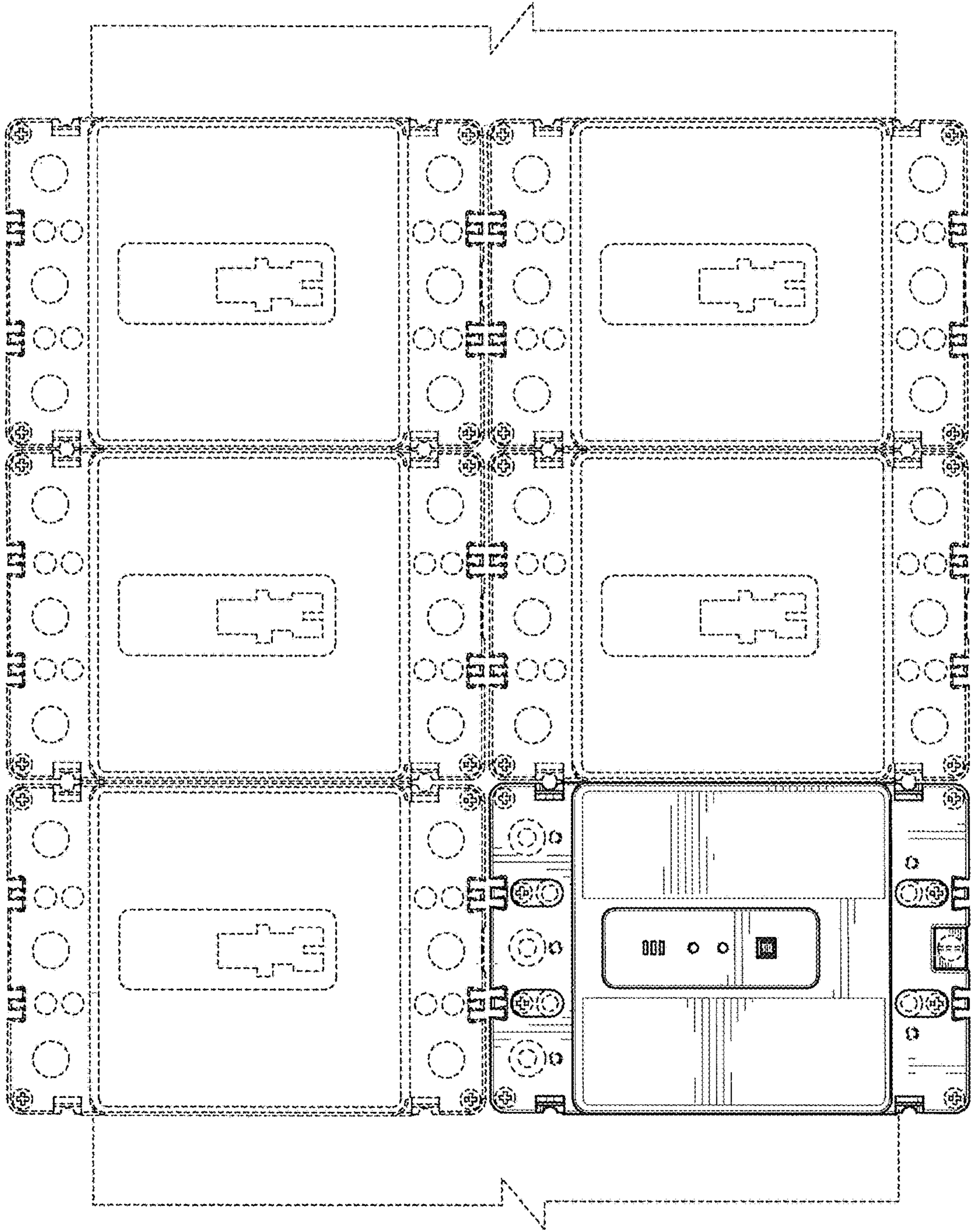


FIG. 9