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(12) **United States Design Patent** (10) **Patent No.:** **US D769,831 S**
Chen et al. (45) **Date of Patent:** **** Oct. 25, 2016**

(54) **LIGHT-EMITTING DIODE UNIT**

(71) Applicant: **EPISTAR CORPORATION**, Hsinchu (TW)

(72) Inventors: **Chao Hsing Chen**, Hsinchu (TW); **Tzu Yao Tseng**, Hsinchu (TW); **Min Yen Tsai**, Hsinchu (TW); **Bo Jiun Hu**, Hsinchu (TW); **Kuan Yi Lee**, Hsinchu (TW); **Jia Kuen Wang**, Hsinchu (TW); **Tsung Hsun Chiang**, Hsinchu (TW); **Chien Chih Liao**, Hsinchu (TW); **Wen Hung Chuang**, Hsinchu (TW)

(73) Assignee: **EPISTAR CORPORATION**, Hsinchu (TW)

(**) Term: **14 Years**

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(30) **Foreign Application Priority Data**

Oct. 28, 2014 (TW) 103306292

(51) **LOC (10) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/180**

(58) **Field of Classification Search**

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CPC . H01L 25/167; H01L 25/0753; H01L 27/15;
H01L 27/156; H01L 31/02; H01L 33/00;
H01L 33/04; H01L 33/08; H01L 33/10;
H01L 33/20; H01L 33/38; H01L 33/42;
H01L 33/48; H01L 33/483; H01L 33/486
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,015,512 B2 * 3/2006 Park H01L 27/156
257/773
D681,566 S * 5/2013 Chen D13/180

D686,581 S * 7/2013 Lim D13/180
D687,396 S * 8/2013 Chen D13/180
8,704,249 B2 * 4/2014 Kamiya H01L 33/38
257/91
D721,663 S * 1/2015 Chen D13/180
D725,052 S * 3/2015 Chen D13/180
D733,079 S * 6/2015 Chen D13/180
D745,472 S * 12/2015 Feng D13/180
D745,473 S * 12/2015 Feng D13/180
D745,474 S * 12/2015 Feng D13/180
D745,475 S * 12/2015 Feng D13/180
D752,527 S * 3/2016 Chen D13/180
D754,619 S * 4/2016 Feng D13/180
D755,135 S * 5/2016 Feng D13/180
2006/0160409 A1 * 7/2006 Shimizu F21K 9/13
439/490

(Continued)

Primary Examiner — Selina Sikder

(74) *Attorney, Agent, or Firm* — Muncy, Geissler, Olds & Lowe, P.C.

(57) **CLAIM**

The ornamental design for a light-emitting diode unit, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a light-emitting diode unit showing our new design;

FIG. 2 is another perspective view thereof;

FIG. 3 is a front elevational view thereof;

FIG. 4 is a rear elevational view thereof;

FIG. 5 is a left side view thereof;

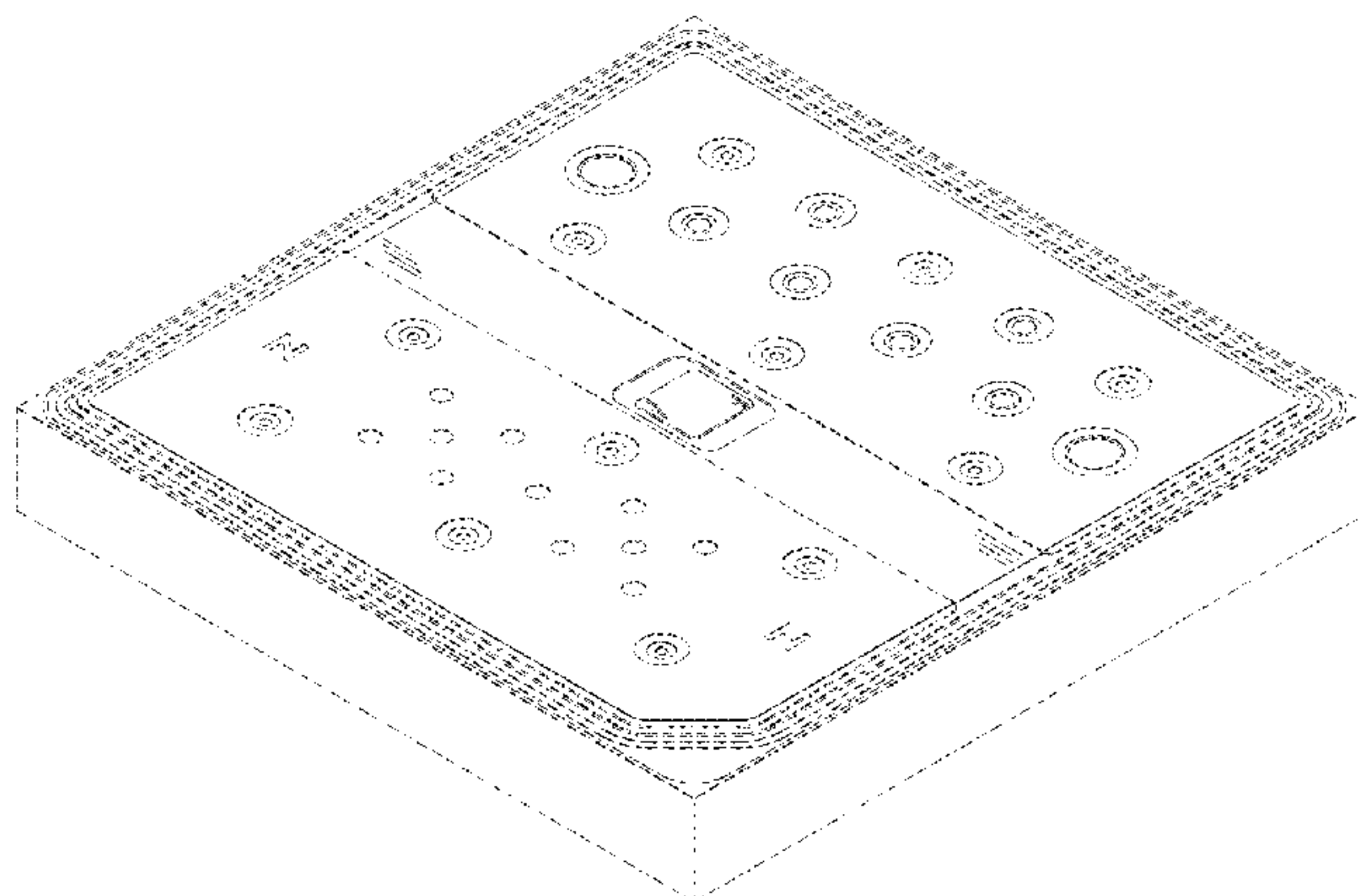
FIG. 6 is a right side view thereof;

FIG. 7 is a top plan view thereof; and,

FIG. 8 is a bottom plan view thereof.

The broken line showing is for the purpose of illustrating environmental structure only and forms no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0261725 A1* 11/2006 Lee H01J 3/021
313/495

2007/0176206 A1* 8/2007 Choi H01J 9/025
257/198

2008/0116782 A1* 5/2008 Kim H01J 3/021
313/496

2011/0284883 A1* 11/2011 Suda H01L 27/153
257/88

2011/0291070 A1* 12/2011 Won H01L 33/0066
257/13

2011/0291120 A1* 12/2011 Tak H01L 33/08
257/88

2016/0005926 A1* 1/2016 Chen H01L 33/38
257/98

2016/0133615 A1* 5/2016 Park H01L 25/16
257/98

* cited by examiner

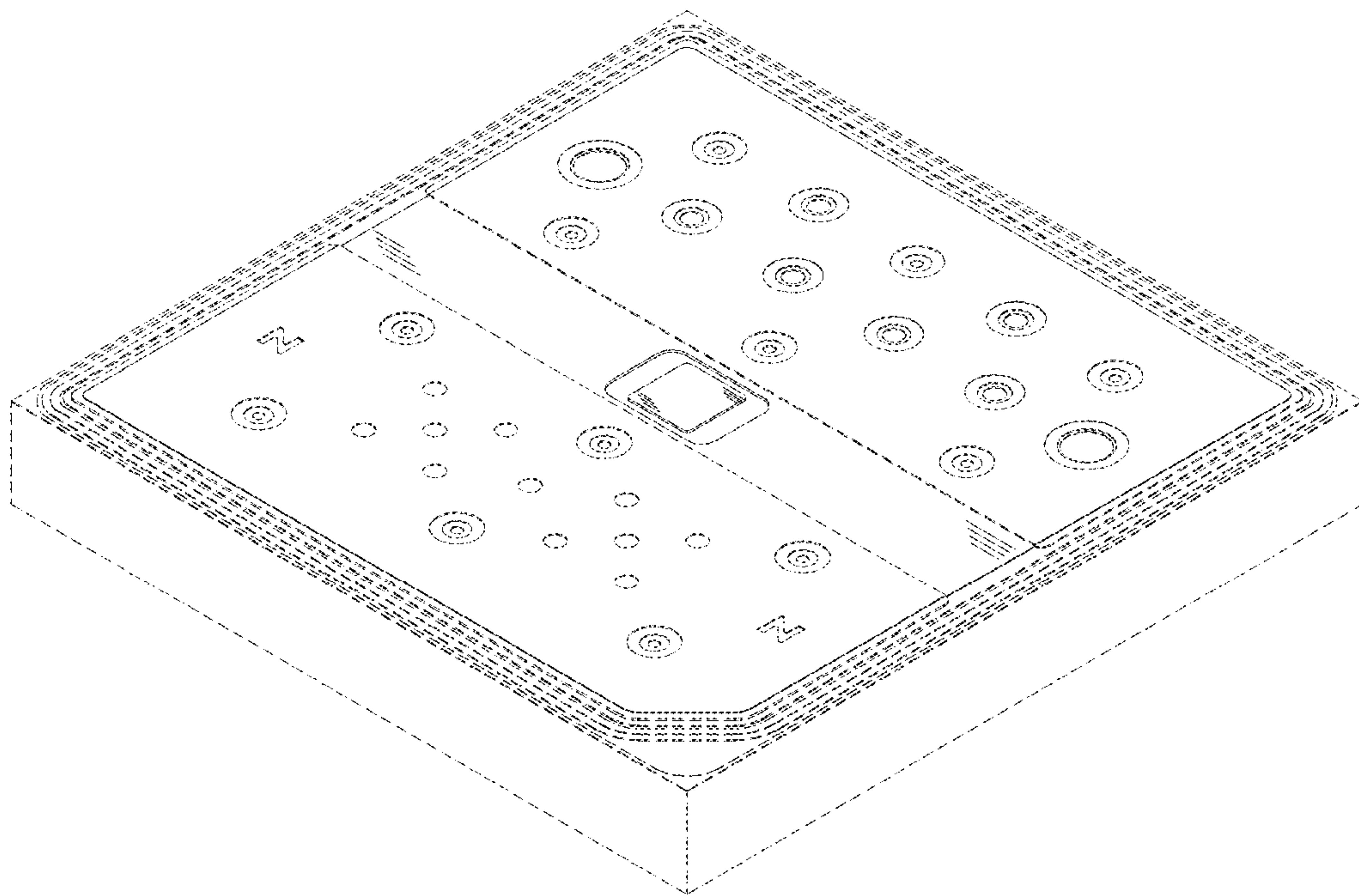


FIG. 1

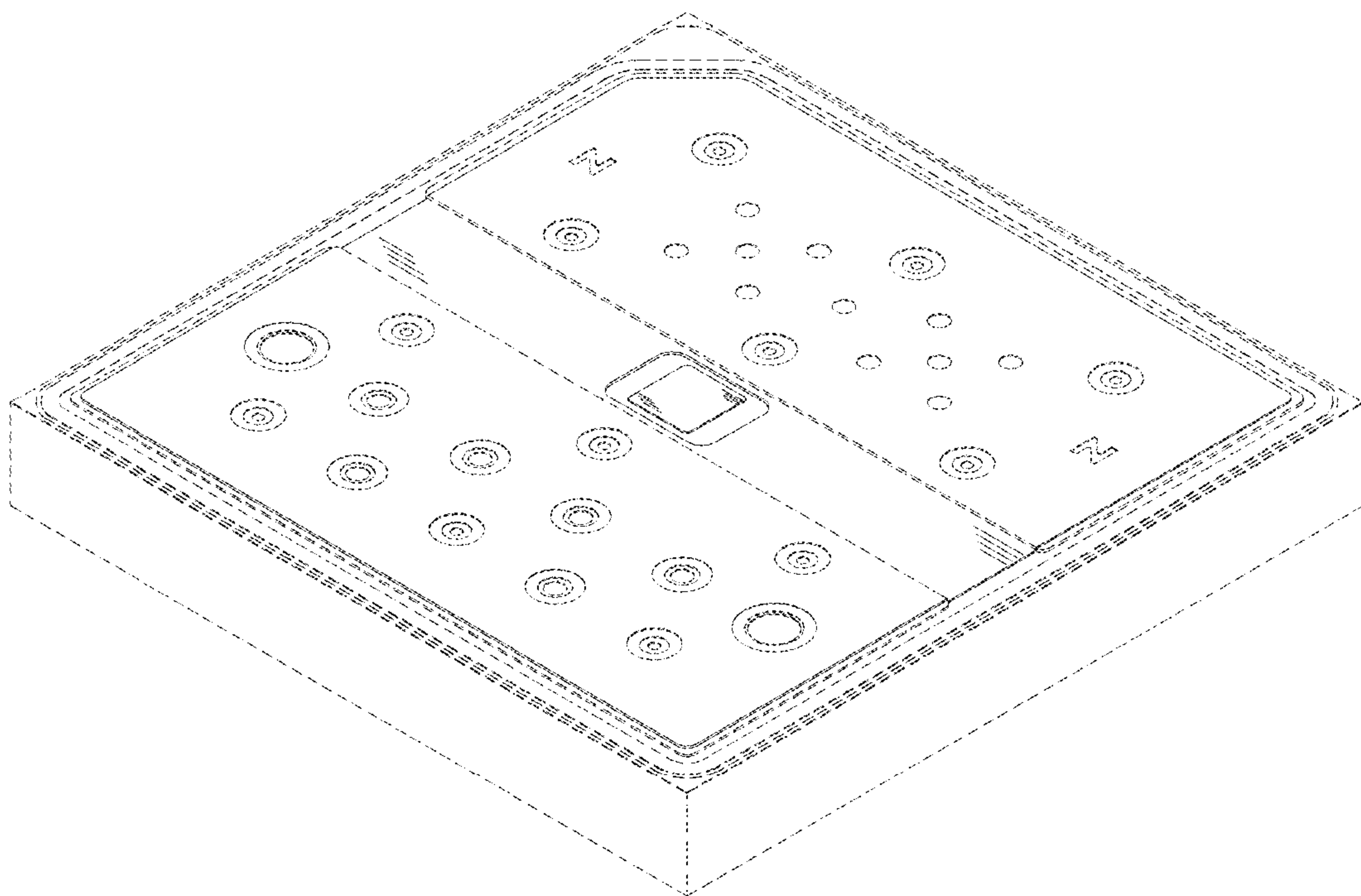


FIG. 2

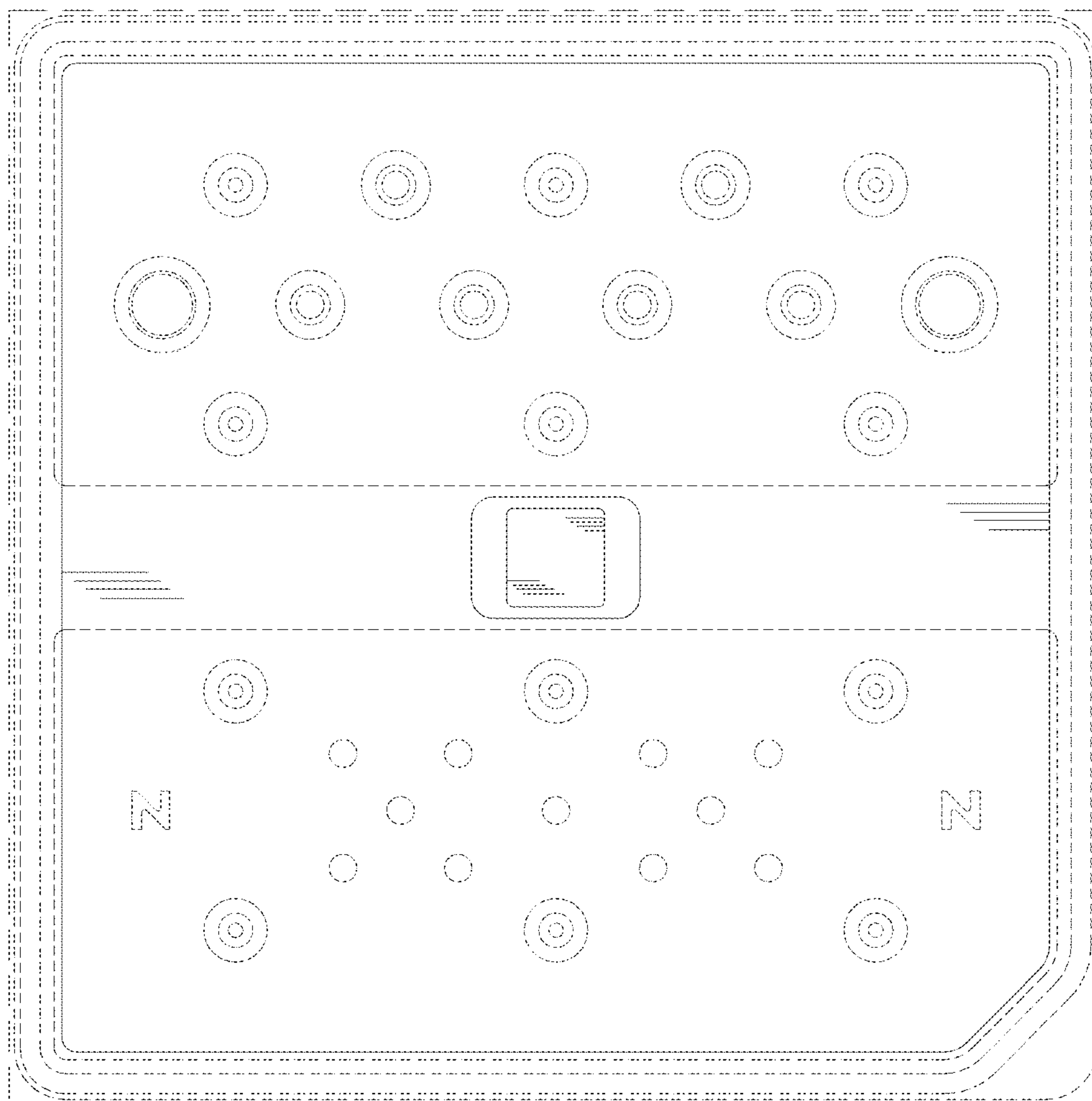


FIG. 3

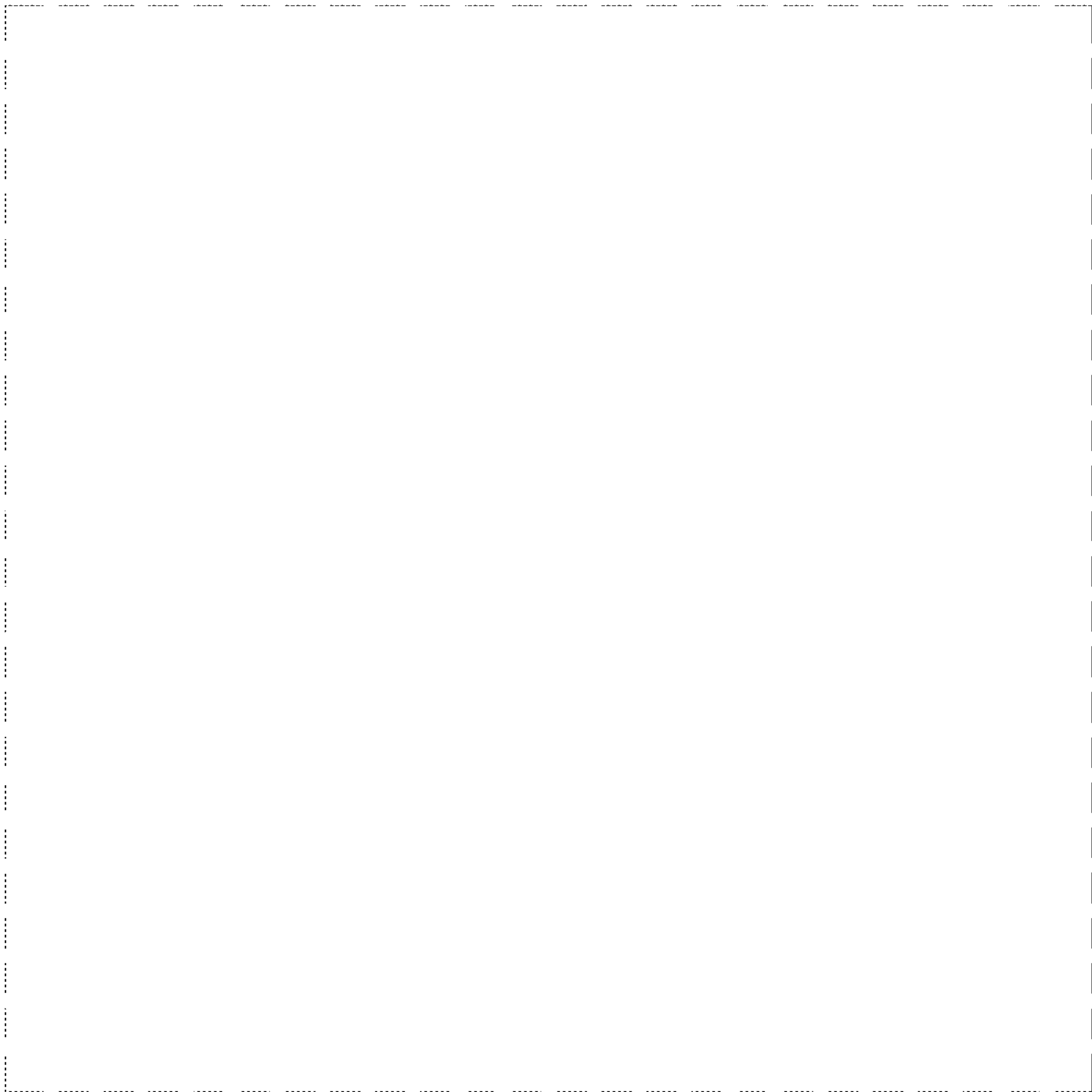


FIG. 4

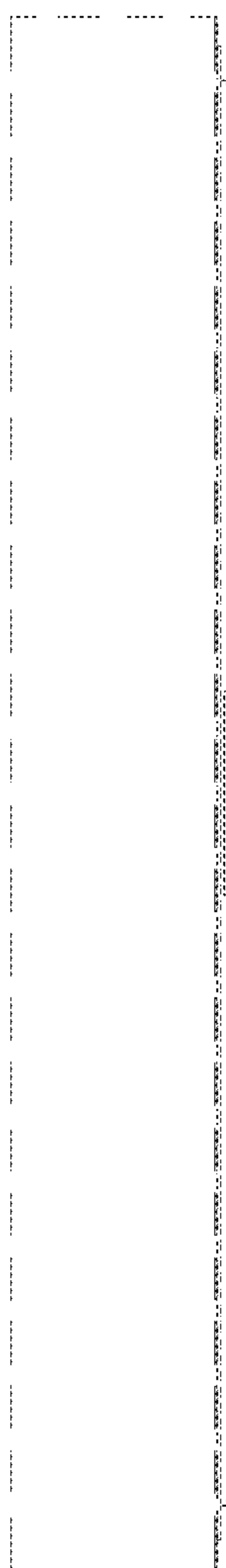


FIG. 5



FIG. 6

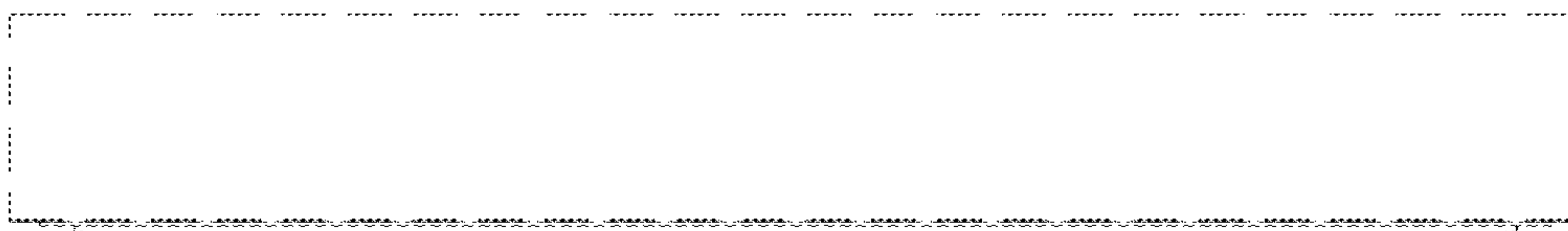


FIG. 7

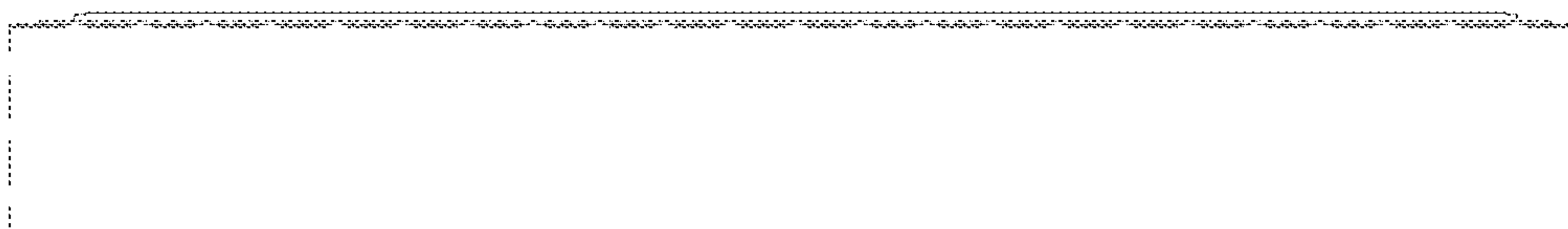


FIG. 8