



US00D709038S

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

(10) **Patent No.:** **US D709,038 S**  
(45) **Date of Patent:** **\*\* Jul. 15, 2014**

(54) **CONTROLLER FOR A WEARABLE  
HUMAN-MOTION-SUPPORT APPARATUS**

(71) Applicant: **CYBERDYNE Inc.**, Tsukuba (JP)

(72) Inventors: **Masahiro Takama**, Tsukuba (JP); **Shinji  
Kitauchi**, Tsukuba (JP); **Fumiyuki  
Ichihashi**, Tsukuba (JP)

(73) Assignee: **CYBERDYNE Inc.**, Tsukuba-Shi (JP)

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

(21) Appl. No.: **29/465,824**

(22) Filed: **Aug. 30, 2013**

(51) **LOC (10) Cl.** ..... **14-03**

(52) **U.S. Cl.**  
USPC ..... **D13/168**

(58) **Field of Classification Search**  
CPC ..... H03J 1/0025; H03J 9/00; H03J 9/02;  
H03J 9/04; H03J 9/06; H01H 9/0235; H04B  
1/202; G05B 11/01; G05B 2219/2642; G06F  
1/163; G06F 3/017; G08C 17/00; G08C  
17/02; G08C 19/28; G08C 23/04; G08C  
2201/20; G08C 2201/30; G08C 2201/32;  
G08C 2201/33; G08C 2201/91; G08C 2201/92  
USPC ..... D13/162; D14/218, 138 AA, 247, 346,  
D14/455, 456; 340/4.3, 4.42, 12.22, 12.23,  
340/12.24, 12.29, 12.3, 12.55, 13.2, 13.21,  
340/13.24; 341/176; 345/156, 158, 169;  
348/734; 361/679.03; 455/352; 700/17,  
700/65, 83  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D416,881 S \* 11/1999 Ross ..... D14/456  
D440,970 S \* 4/2001 Henderson et al. .... D14/399  
6,336,126 B1 \* 1/2002 Bjorklund et al. .... 708/139

D516,545 S \* 3/2006 Lai ..... D14/218  
7,154,408 B2 \* 12/2006 Ku et al. .... 340/815.6  
D564,499 S \* 3/2008 Ohta ..... D14/218  
D571,308 S \* 6/2008 Gastelum et al. .... D13/168  
D593,508 S \* 6/2009 Petersen et al. .... D13/168  
D617,802 S \* 6/2010 Holliday et al. .... D14/455  
7,764,488 B2 \* 7/2010 Calvarese ..... 361/679.03  
D630,952 S \* 1/2011 Nies et al. .... D10/40

(Continued)

**OTHER PUBLICATIONS**

Hannah Davidsson, Dagens Medicin, "Draktroboten Knut testas av  
strokedrabbade", Sep. 6, 2012 [http://www.dagensmedicin.se/Pages/  
PrintNewsArticle.aspx?printPageId=130335](http://www.dagensmedicin.se/Pages/PrintNewsArticle.aspx?printPageId=130335).

(Continued)

*Primary Examiner* — Selina Sikder

(74) *Attorney, Agent, or Firm* — Procopio, Cory, Har-  
greaves & Savitch LLP

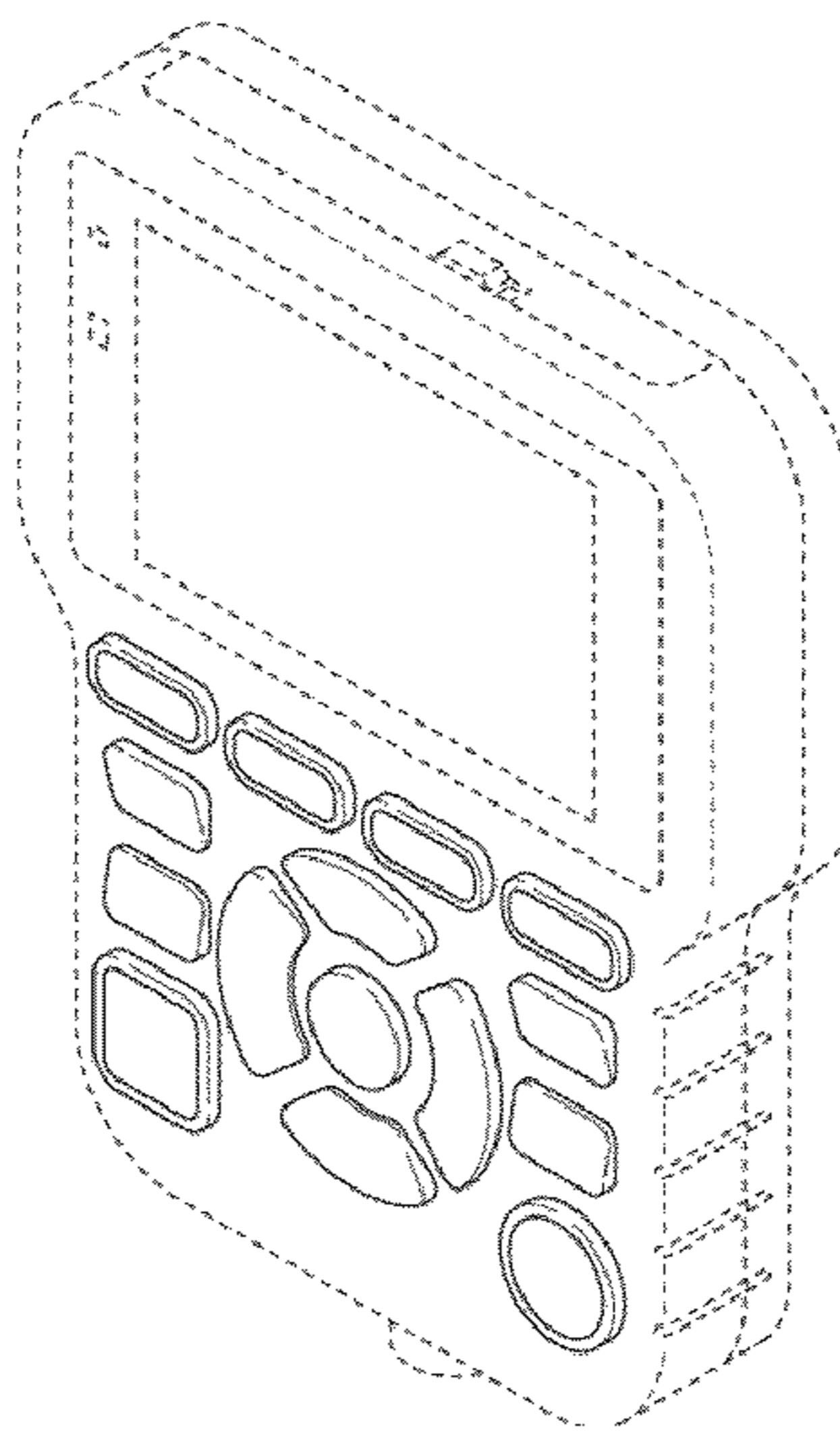
(57) **CLAIM**

The ornamental design for a controller for a wearable human-  
motion-support apparatus, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of the controller for a wearable  
human-motion-support apparatus;  
FIG. 2 is a front view thereof;  
FIG. 3 is a rear view thereof;  
FIG. 4 is a left side view thereof;  
FIG. 5 is a right side view thereof;  
FIG. 6 is a top plan view thereof;  
FIG. 7 is a bottom plan view thereof;  
FIG. 8 is a sectional view along A-A' as illustrated in FIG. 2;  
and,  
FIG. 9 is a sectional view along B-B' as illustrated in FIG. 2.  
The broken lines showing the environment are provided in the  
drawing views for illustrative purposes only and form no part  
of the claimed design.

**1 Claim, 9 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D636,352 S \* 4/2011 Rodriguez et al. .... D13/164  
D641,735 S \* 7/2011 Santa Maria et al. .... D14/218  
D671,917 S \* 12/2012 Gibbens, Jr. .... D14/218  
2010/0124949 A1\* 5/2010 Demuynck et al. .... 455/569.1  
2010/0309113 A1\* 12/2010 Trantow ..... 345/156  
2012/0007807 A1\* 1/2012 Zheng ..... 345/167

2012/0092264 A1\* 4/2012 Cheney et al. .... 345/169  
2013/0141313 A1\* 6/2013 Zhou et al. .... 345/8

OTHER PUBLICATIONS

Franck Robichon, Washington Post, "Photos of the day", Aug. 5, 2013, [http://www.washingtonpost.com/world/photos-of-the-day/2013/08/05/e8432068-fdbe-11e2-9711-3708310f6f4d\\_gallery.html#photo=4](http://www.washingtonpost.com/world/photos-of-the-day/2013/08/05/e8432068-fdbe-11e2-9711-3708310f6f4d_gallery.html#photo=4).

\* cited by examiner

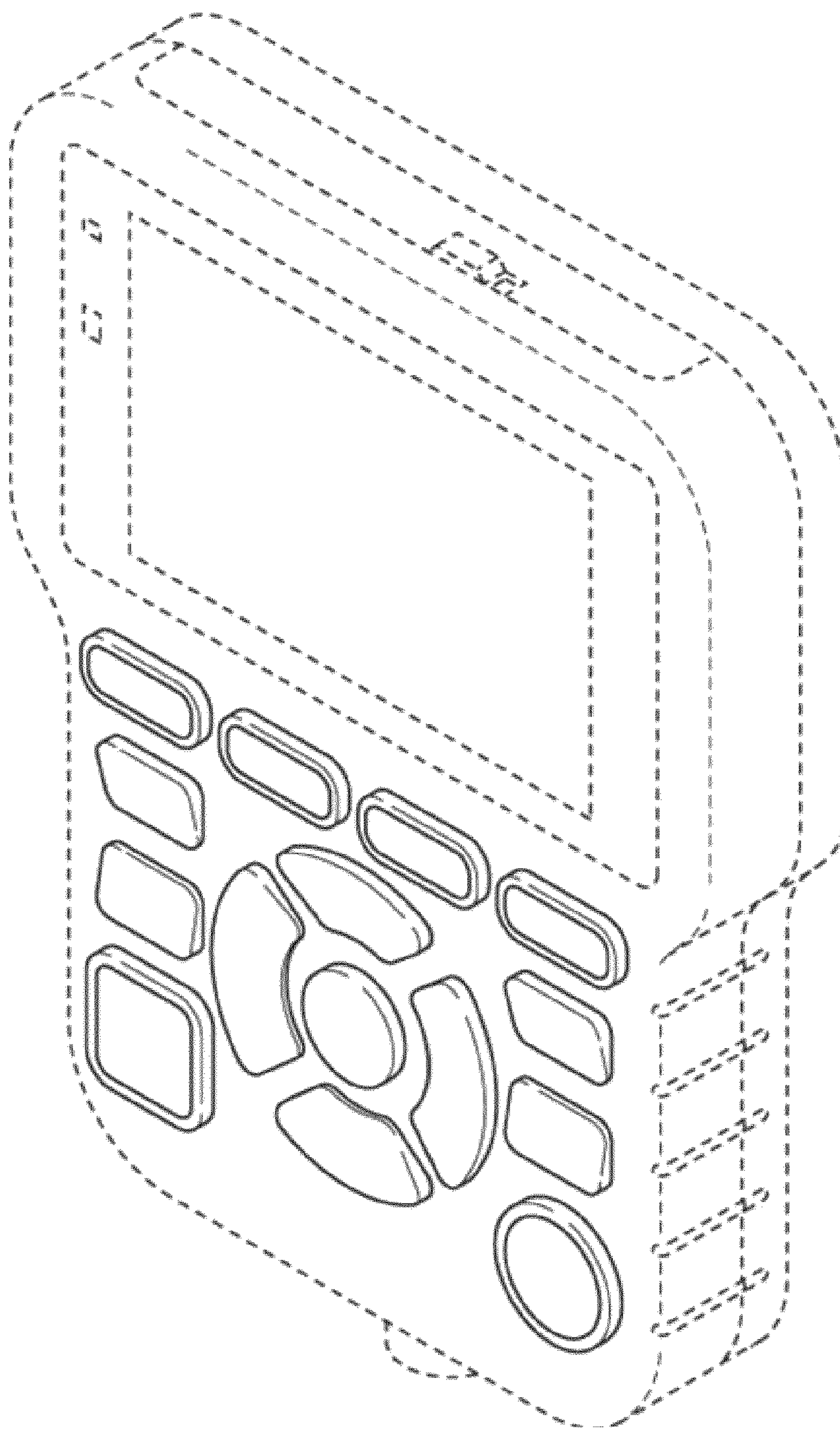


FIG. 1

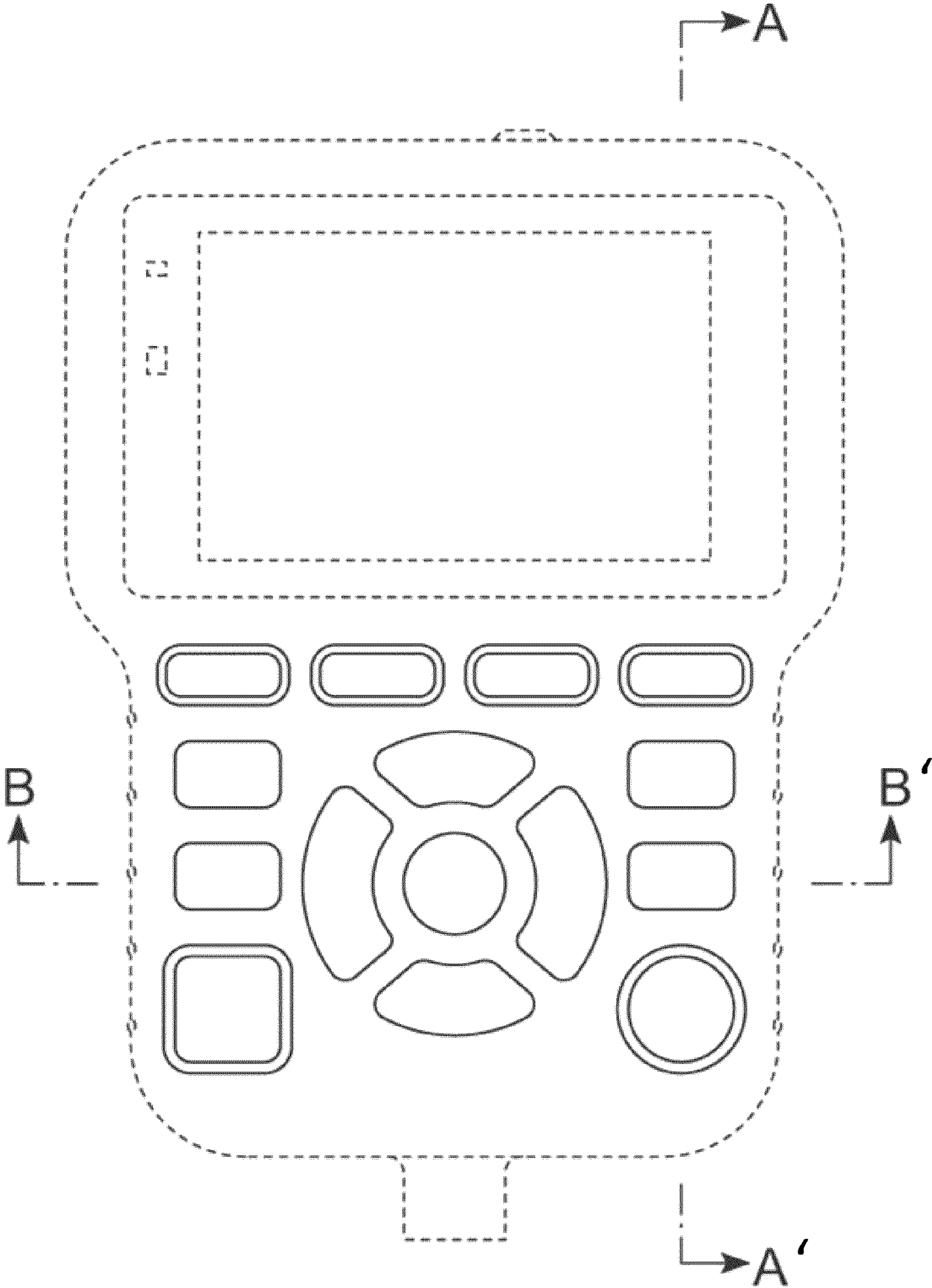


FIG. 2

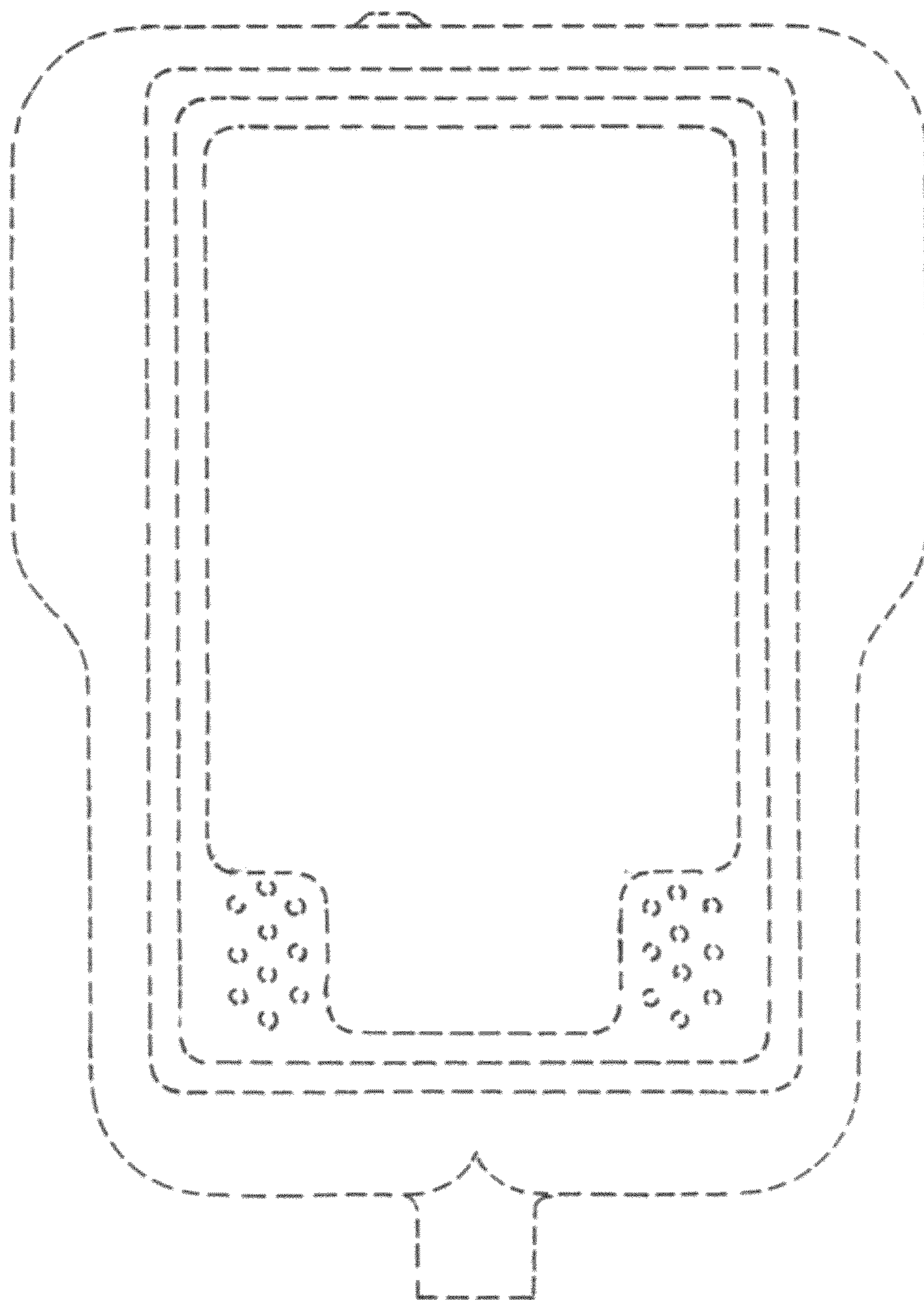


FIG. 3

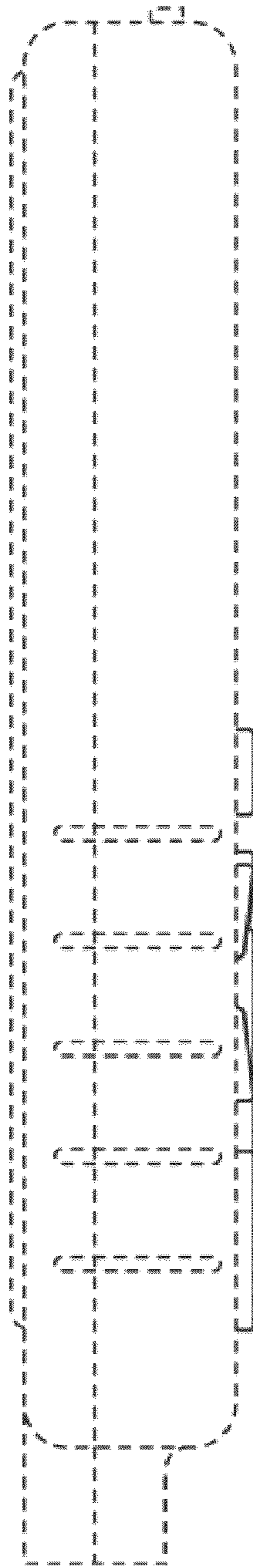


FIG. 4

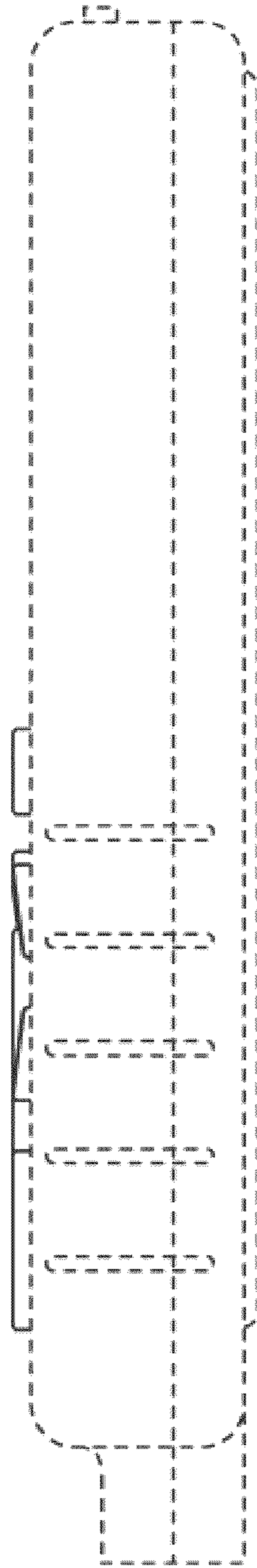


FIG. 5

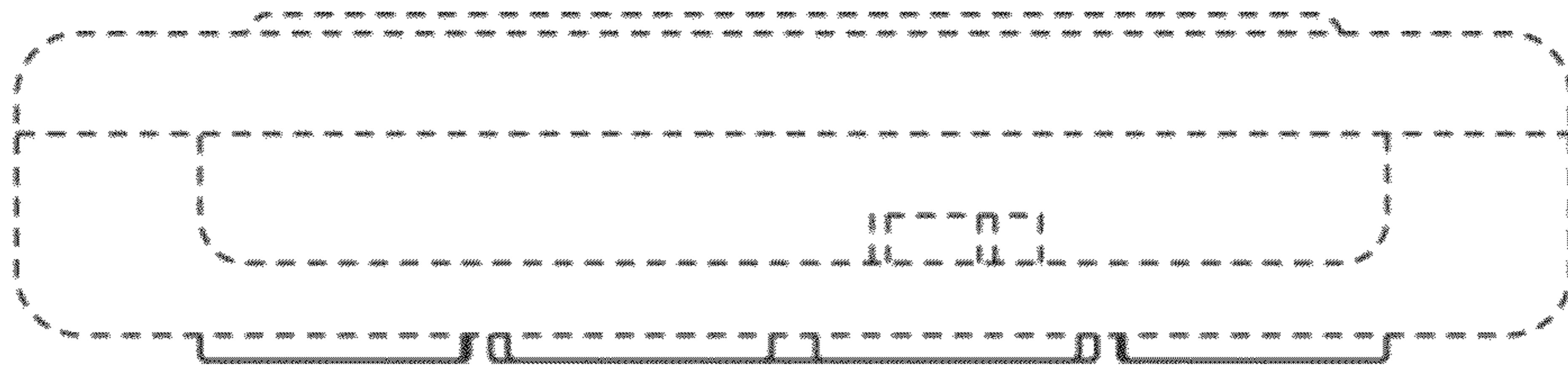


FIG. 6



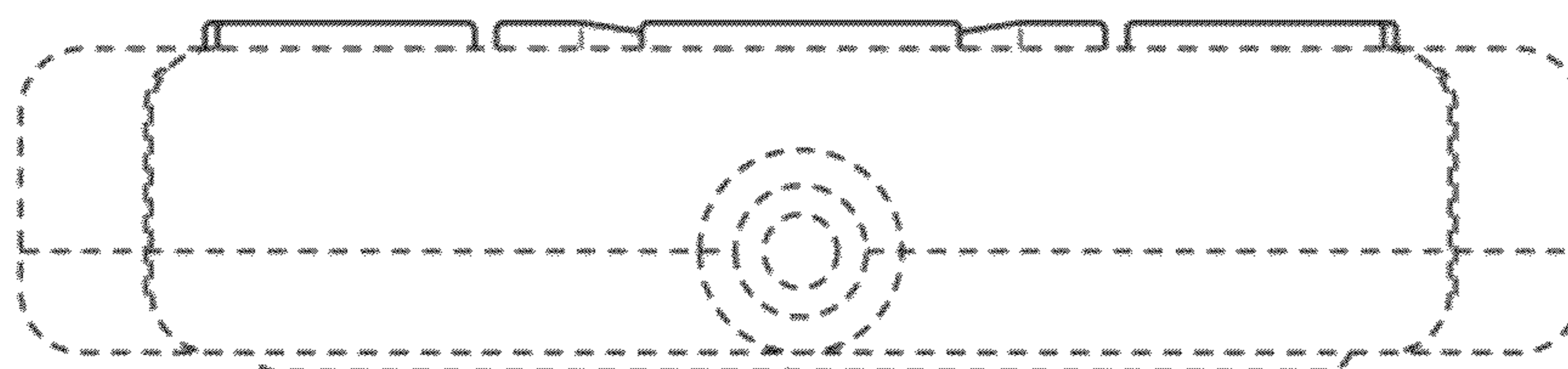


FIG. 7

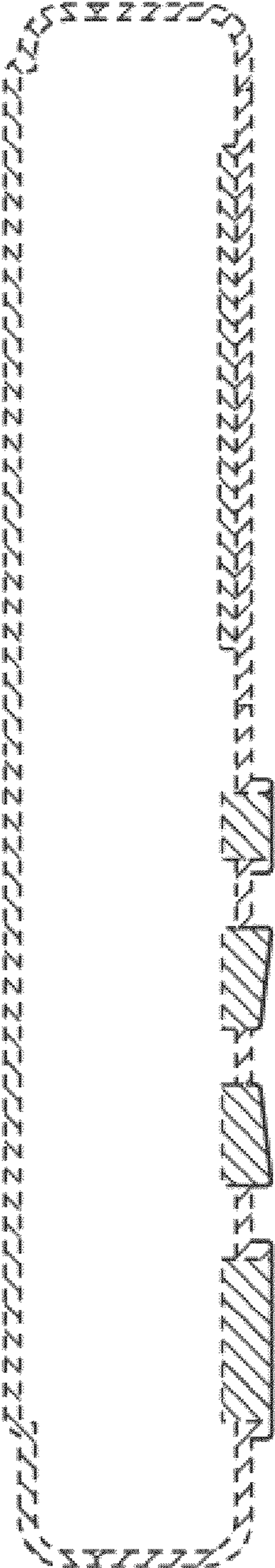


FIG. 8

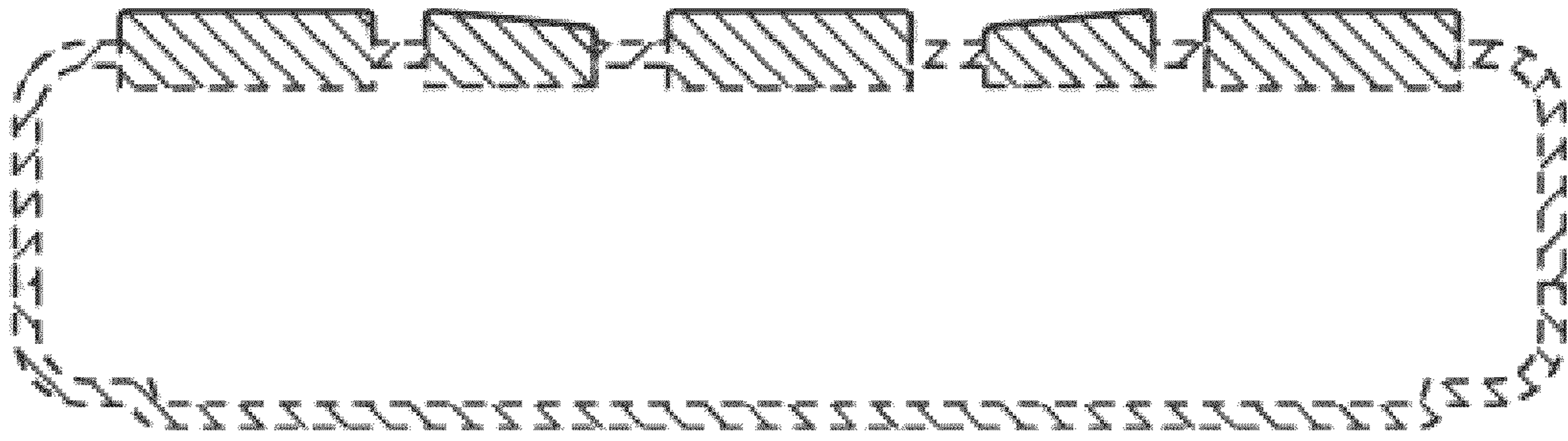


FIG. 9