



US00D751213S

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

(10) **Patent No.:** **US D751,213 S**  
(45) **Date of Patent:** **\*\* Mar. 8, 2016**

(54) **NON-INVASIVE NEUROSTIMULATION  
DEVICE**

- (71) Applicant: **Neurohabilitation Corporation**,  
Newtown, PA (US)
- (72) Inventors: **Mark Guarraia**, Cranston, RI (US);  
**Justin Fisk**, Providence, RI (US);  
**Jeffrey Wallace**, Saunderstown, RI (US);  
**Aidan Petrie**, Jamestown, RI (US)
- (73) Assignee: **Neurohabilitation Corporation**,  
Newtown, PA (US)

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

(21) Appl. No.: **29/510,747**

(22) Filed: **Dec. 3, 2014**

(51) **LOC (10) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/200**

(58) **Field of Classification Search**  
USPC ..... D24/187, 200, 206, 209, 214, 186, 110,  
D24/110.4, 110.5; 607/1, 2, 45–47, 115,  
607/116, 134, 148; 433/6–7, 37; 128/848,  
128/866; 606/32, 33, 41, 204  
CPC . A61N 1/0548; A61N 1/0553; A61N 1/0529;  
A61N 1/36103; A61N 1/36075; A61N 1/20;  
A61N 1/32; A61N 1/36067; A61N 1/36082;  
A61N 1/36121; A61N 2001/36039; A61N  
1/36014; A61N 1/0456; A61N 1/40; A61N  
1/05; A61N 1/0551; A61N 1/375; A61N  
1/3756; A61N 1/3758; A61N 1/3787; A61B  
2562/0209; A61B 5/682; A61B 5/686; A61B  
5/0031; A61B 5/0215; A61B 5/6803; A61B  
5/6814; G06F 3/015; A61F 5/566; A61M  
2210/0643

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

|           |   |         |                 |
|-----------|---|---------|-----------------|
| 2,055,540 | A | 9/1936  | Karnofsky       |
| 3,851,651 | A | 12/1974 | Icenbice, Jr.   |
| 4,865,048 | A | 9/1989  | Eckerson        |
| 4,924,880 | A | 5/1990  | O'Neill et al.  |
| 4,995,404 | A | 2/1991  | Nemir           |
| 5,265,624 | A | 11/1993 | Bowman          |
| 5,269,303 | A | 12/1993 | Wernicke et al. |
| 5,299,569 | A | 4/1994  | Wernicke et al. |
| 5,540,734 | A | 7/1996  | Zabara          |
| 5,792,067 | A | 8/1998  | Karell          |

(Continued)

OTHER PUBLICATIONS

The PoNS Device. Helius Medical Technologies, Inc. 2015 [retrieved on Dec. 2, 2015] Retrieved from the Internet URL: <<http://www.heliusmedical.com/divisions/neurohabilitation/pons-device>>.\*

(Continued)

*Primary Examiner* — Catherine R. Oliver

*Assistant Examiner* — Rebekah Caruso

(74) *Attorney, Agent, or Firm* — Proskauer Rose LLP

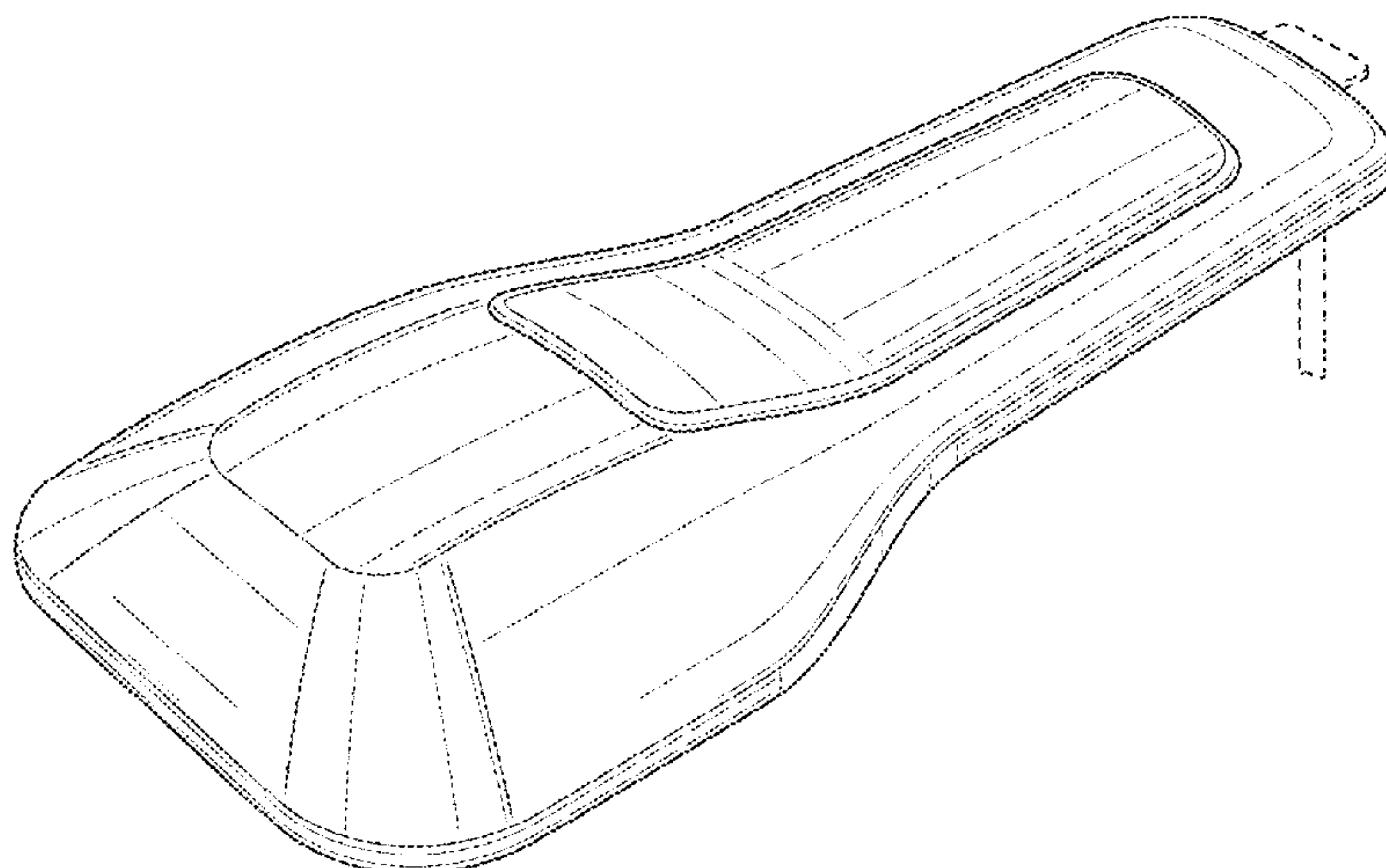
(57) **CLAIM**

The ornamental design for a non-invasive neurostimulation device, substantially as shown.

**DESCRIPTION**

FIG. 1 is a perspective view of a non-invasive neurostimulation device incorporating the design;  
FIG. 2 is a front view thereof;  
FIG. 3 is a back view thereof;  
FIG. 4 is a left-side view thereof;  
FIG. 5 is a right-side view thereof;  
FIG. 6 is a top view thereof; and,  
FIG. 7 is a bottom view thereof.  
The broken lines shown in the drawings illustrate portions of the non-invasive neurostimulation device that form no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

**References Cited****U.S. PATENT DOCUMENTS**

5,794,621 A 8/1998 Hogan et al.  
 5,878,154 A 3/1999 Schimmelpfennig  
 D409,307 S \* 5/1999 Phleps ..... D24/158  
 6,066,163 A 5/2000 John  
 6,161,044 A 12/2000 Silverstone  
 D437,058 S \* 1/2001 Gozani ..... D24/186  
 6,169,781 B1 \* 1/2001 Doeber ..... A61B 6/145  
 378/189  
 6,267,733 B1 7/2001 Peterson et al.  
 D449,376 S 10/2001 McDonald  
 D449,883 S 10/2001 McDonald  
 D451,598 S 12/2001 McDonald  
 6,326,901 B1 12/2001 Gonzales  
 6,339,725 B1 1/2002 Naritoku et al.  
 6,366,813 B1 4/2002 DiLorenzo  
 6,366,814 B1 4/2002 Boveja et al.  
 6,405,079 B1 6/2002 Ansarinia  
 6,430,450 B1 8/2002 Bach-y-Rita et al.  
 D462,357 S \* 9/2002 Jenkins ..... D14/347  
 6,463,328 B1 10/2002 John  
 6,526,318 B1 2/2003 Ansarinia  
 6,546,291 B2 4/2003 Merfeld et al.  
 6,556,868 B2 4/2003 Naritoku et al.  
 6,954,668 B1 10/2005 Cuzzo  
 D515,697 S 2/2006 Nakamura  
 D531,314 S 10/2006 Atkinson  
 D542,408 S 5/2007 Oldenburg  
 7,228,178 B2 6/2007 Carroll et al.  
 7,236,830 B2 6/2007 Gliner  
 D555,252 S \* 11/2007 Kitayama ..... D24/186  
 D557,685 S 12/2007 Lee  
 7,333,020 B2 2/2008 Cohen  
 D565,184 S \* 3/2008 Royzen ..... D24/168  
 D575,268 S 8/2008 Christopher et al.  
 D578,222 S 10/2008 Sakurai et al.  
 D579,552 S 10/2008 Oldenburg  
 7,483,747 B2 1/2009 Gliner et al.  
 D593,067 S 5/2009 Millora et al.  
 7,563,929 B2 7/2009 Hobbs et al.  
 7,640,062 B2 12/2009 Shalev  
 7,672,730 B2 3/2010 Firlik et al.  
 7,725,192 B2 5/2010 Eskandar et al.  
 D617,308 S 6/2010 Nousiainen et al.  
 7,747,325 B2 6/2010 Dilorenzo  
 D624,189 S \* 9/2010 Rutt ..... D24/158  
 D663,714 S 7/2012 Kang et al.  
 D669,881 S 10/2012 Clements et al.  
 8,290,582 B2 10/2012 Lin et al.  
 D687,018 S 7/2013 Afshar  
 D706,745 S 6/2014 Nakagawa et al.  
 D707,199 S 6/2014 Cepress et al.  
 D709,673 S 7/2014 Aimone et al.  
 D710,718 S \* 8/2014 Ichihashi ..... D10/78  
 8,805,548 B2 8/2014 Mignolet et al.  
 D713,531 S 9/2014 Way  
 8,849,407 B1 9/2014 Danilov et al.  
 D716,759 S 11/2014 Ha et al.  
 D721,673 S 1/2015 Park et al.  
 D723,510 S 3/2015 Ishikura  
 D724,197 S 3/2015 Hughes

D725,262 S 3/2015 Chowdhury  
 D728,109 S 4/2015 Ko  
 D730,867 S 6/2015 Park et al.  
 D731,999 S 6/2015 Cepress et al.  
 D739,122 S 9/2015 Aimone et al.  
 D744,658 S 12/2015 Hilkey-Boyatt  
 2004/0073270 A1 4/2004 Firlik et al.  
 2005/0089829 A1 4/2005 Wasowicz  
 2005/0240253 A1 10/2005 Tyler et al.  
 2006/0161218 A1 7/2006 Danilov  
 2006/0241718 A1 10/2006 Tyler et al.  
 2007/0250119 A1 10/2007 Tyler et al.  
 2007/0293917 A1 \* 12/2007 Thompson ..... A61N 1/0456  
 607/72  
 2008/0009772 A1 1/2008 Tyler et al.  
 2008/0027510 A1 1/2008 McClure et al.  
 2008/0082131 A1 4/2008 Llanos  
 2008/0208287 A1 8/2008 Palermo et al.  
 2008/0222670 A1 9/2008 Lee et al.  
 2008/0228239 A1 9/2008 Tyler et al.  
 2008/0233541 A1 9/2008 DeVreese et al.  
 2009/0048647 A1 2/2009 Tingey  
 2009/0082831 A1 3/2009 Paul et al.  
 2009/0082839 A1 3/2009 Lindquist et al.  
 2009/0312808 A1 12/2009 Tyler et al.  
 2009/0312817 A1 12/2009 Hogle et al.  
 2009/0326604 A1 12/2009 Tyler et al.  
 2011/0093036 A1 4/2011 Mashiach  
 2011/0125184 A1 5/2011 Allen  
 2011/0201944 A1 8/2011 Higgins et al.  
 2012/0010672 A1 1/2012 Crespi  
 2012/0165862 A1 6/2012 Allen  
 2013/0096641 A1 \* 4/2013 Strother ..... A61N 1/36021  
 607/46  
 2013/0273490 A1 10/2013 Way  
 2014/0135868 A1 \* 5/2014 Bashyam ..... A61N 1/3601  
 607/42  
 2014/0172041 A1 \* 6/2014 Draghici ..... A61N 1/0548  
 607/45  
 2014/0194946 A1 \* 7/2014 Thomas ..... A61N 1/36021  
 607/46

**OTHER PUBLICATIONS**

US Army. "Mouth Device in Clinical Trials as Possible Treatment for TBI." Feb. 14, 2013 [retrieved on Dec. 2, 2015] Retrieved from the Internet URL: <[http://www.army.mil/article/96521/Mouth\\_device\\_in\\_clinical\\_trials\\_as\\_possible\\_treatment\\_for\\_TBI](http://www.army.mil/article/96521/Mouth_device_in_clinical_trials_as_possible_treatment_for_TBI)>.\*  
 Interchange PoNS Unit. Helios Medical technologies, Inc. Listing Statement. Jun. 20, 2014 [retrieved on Nov. 16, 2015] Retrieved from the Internet: [http://www.cnsx.ca/cmsAssets/docs/Filings/2014/2014\\_06\\_20\\_20\\_39\\_31\\_HSM\\_Helios\\_Form\\_2A\\_Listing\\_Statement.pdf](http://www.cnsx.ca/cmsAssets/docs/Filings/2014/2014_06_20_20_39_31_HSM_Helios_Form_2A_Listing_Statement.pdf).  
 The PoNS Device, Helios Medical Technologies, Inc. 2015 [retrieved on Dec. 2, 2015]. Retrieved from the Internet URL: <http://www.heliosmedical.com/divisions/neurohabilitation/pons-device>.  
 US Army. "Mouth Device in Clinical Trials as Possible Treatment for TBI," Feb. 14, 2013 [retrieved on Dec. 2, 2015]. Retrieved from the Internet URL: [http://www.army.mil/article/96521/Mouth\\_device\\_in\\_clinical\\_trials\\_as\\_possible\\_treatment\\_for\\_TBI](http://www.army.mil/article/96521/Mouth_device_in_clinical_trials_as_possible_treatment_for_TBI).

\* cited by examiner

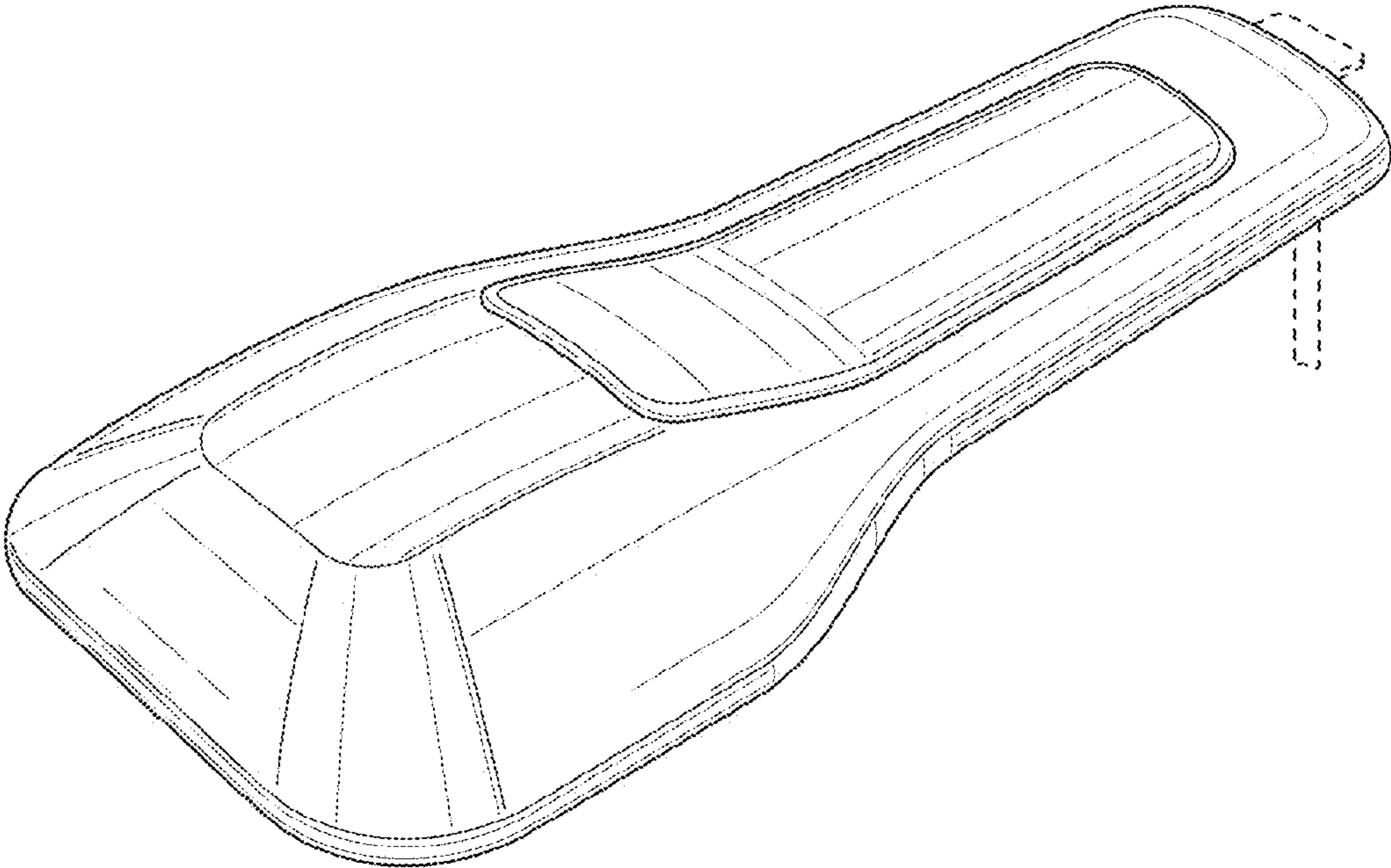


FIG. 1

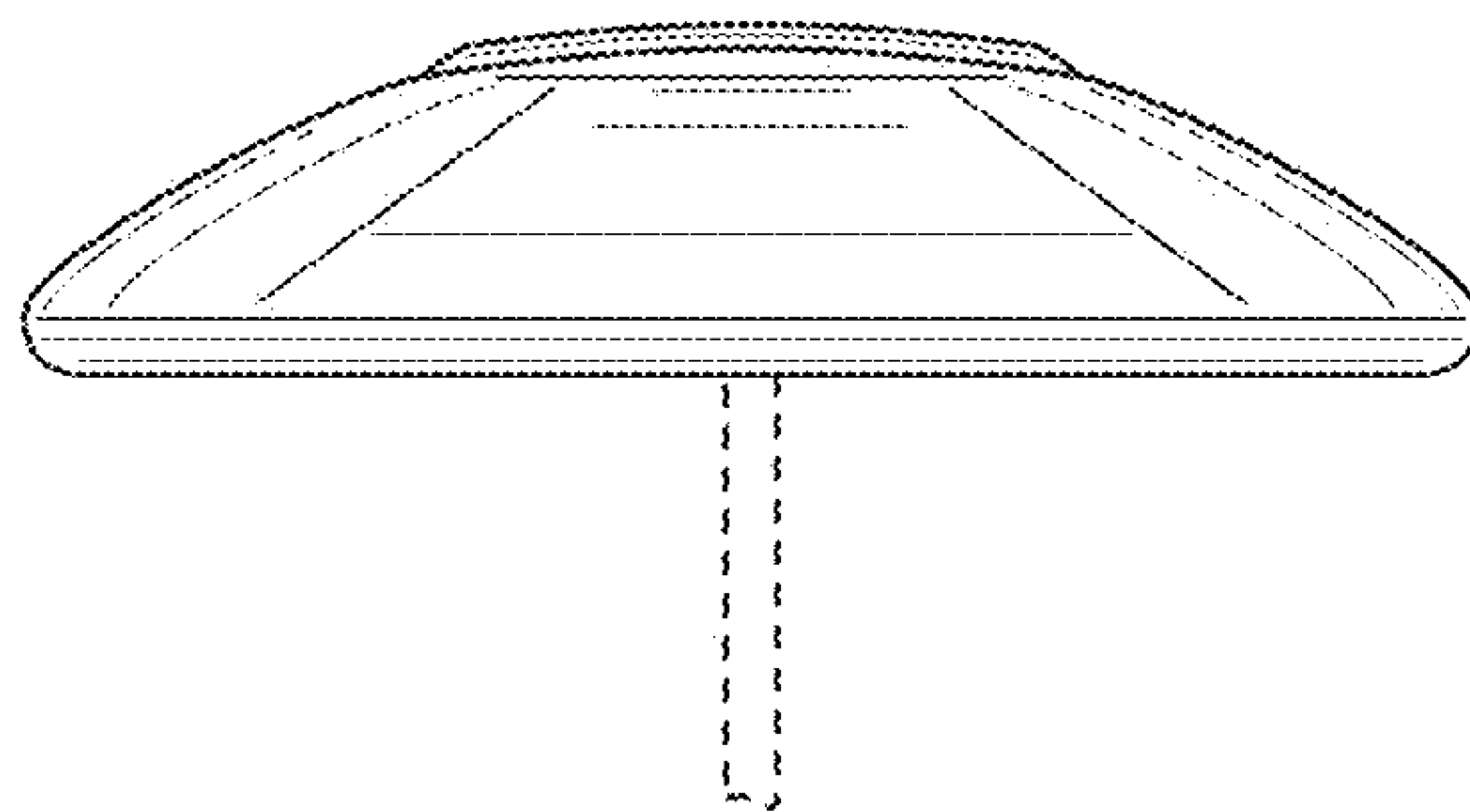


FIG. 2

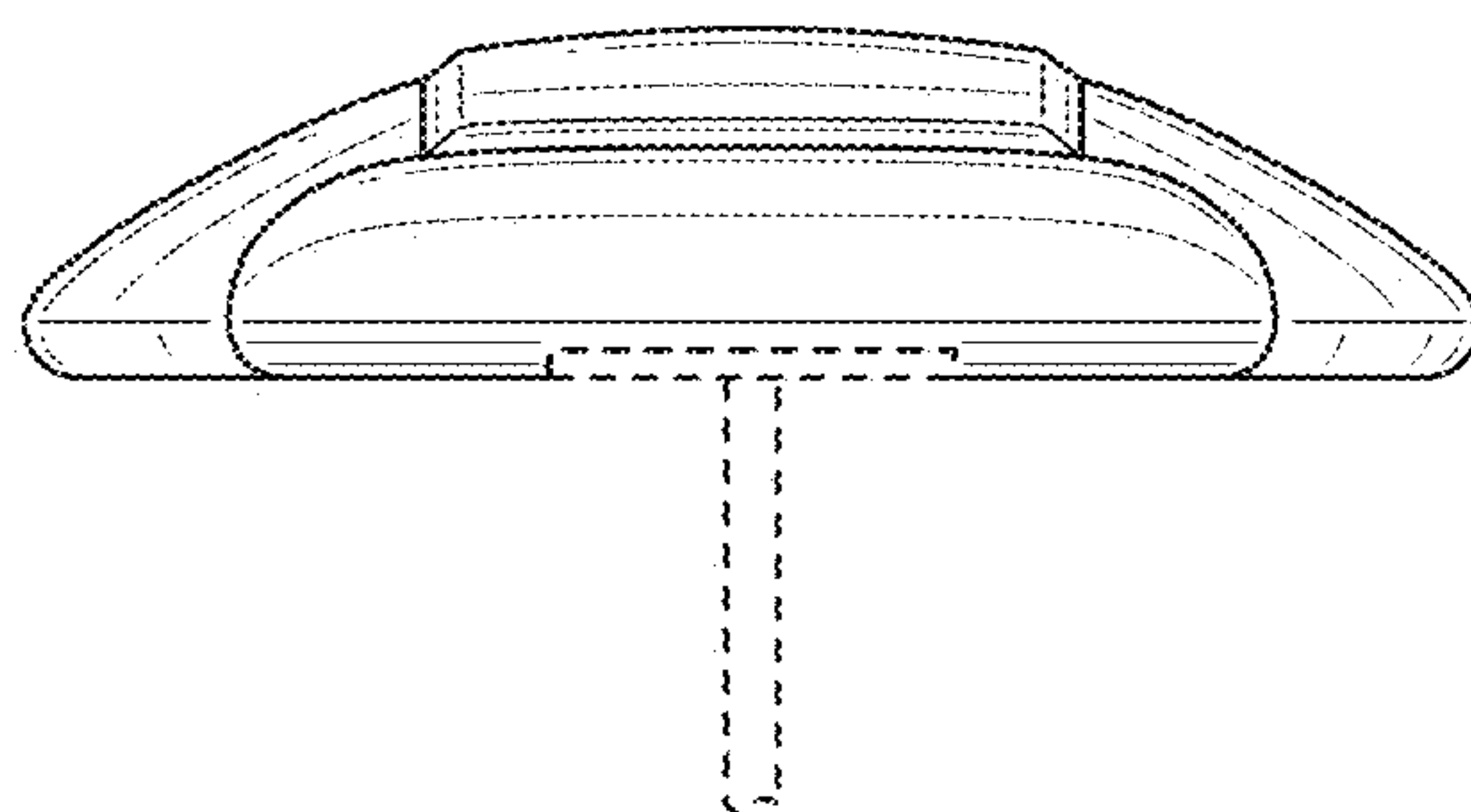


FIG. 3

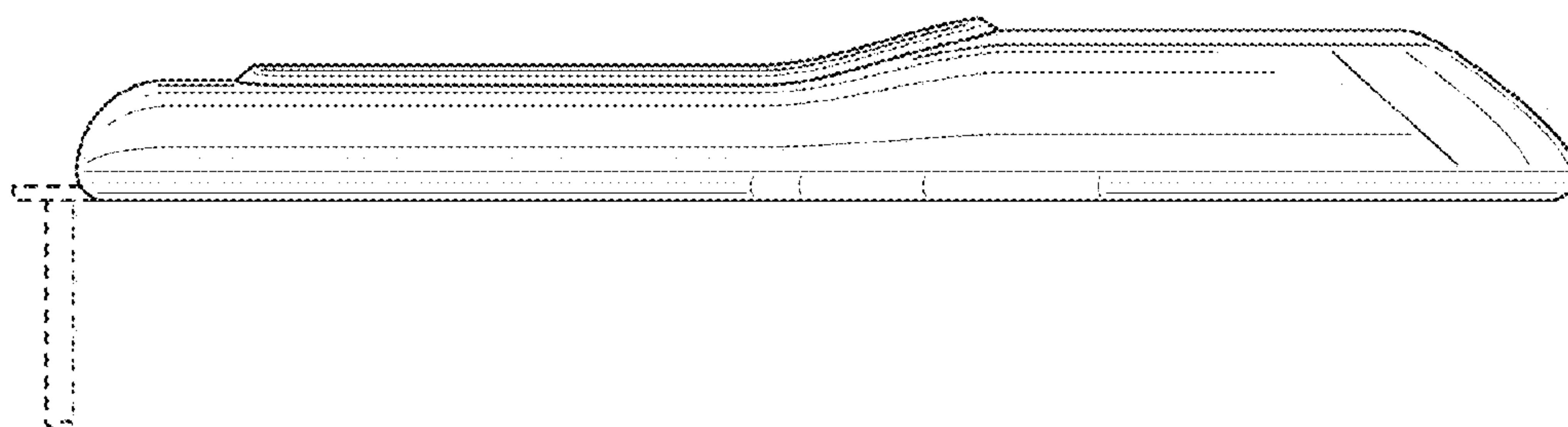


FIG. 4

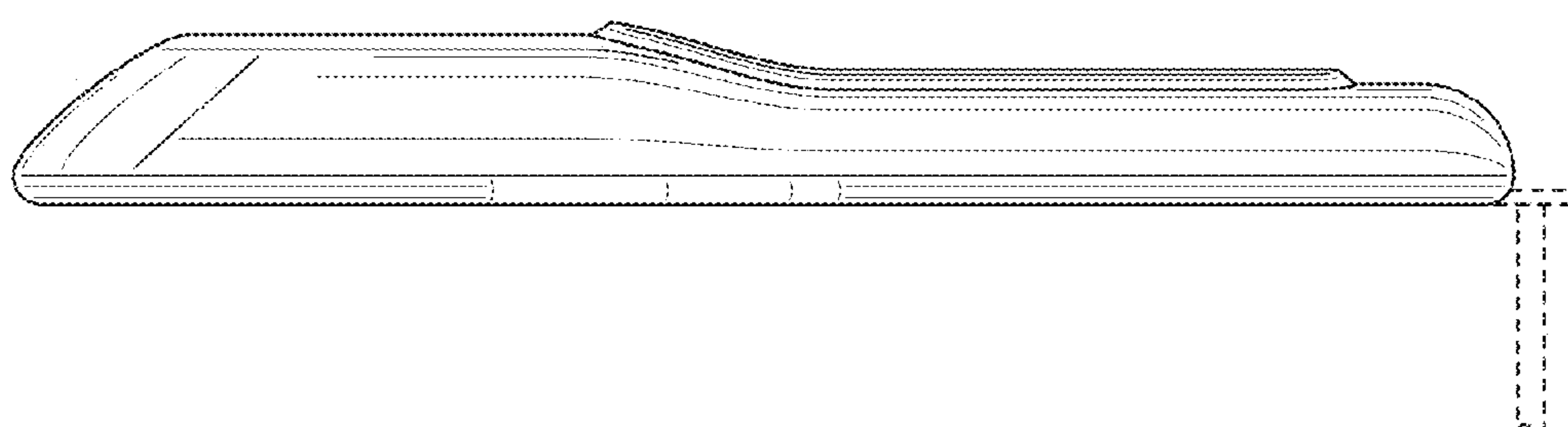


FIG. 5

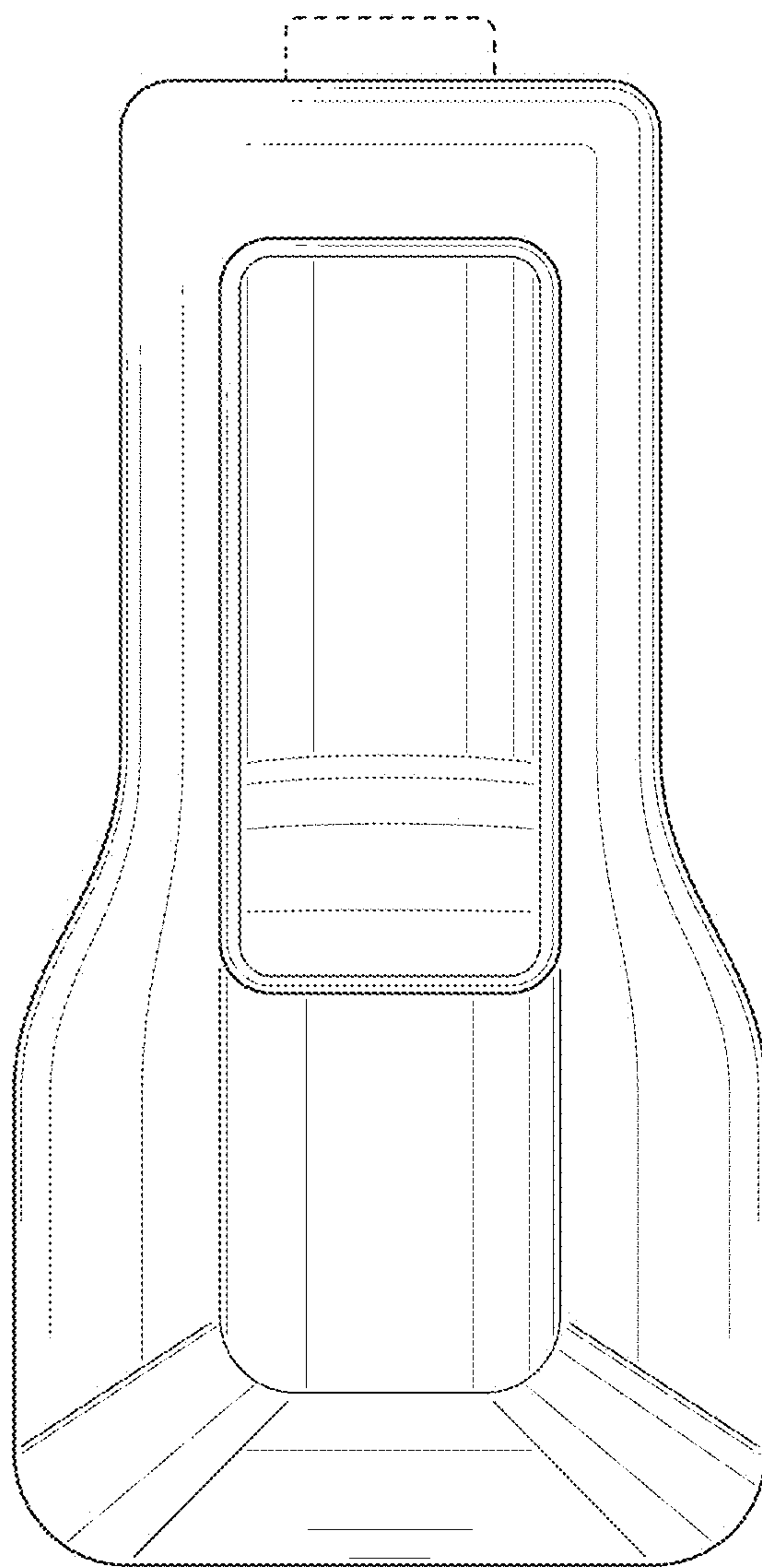


FIG. 6

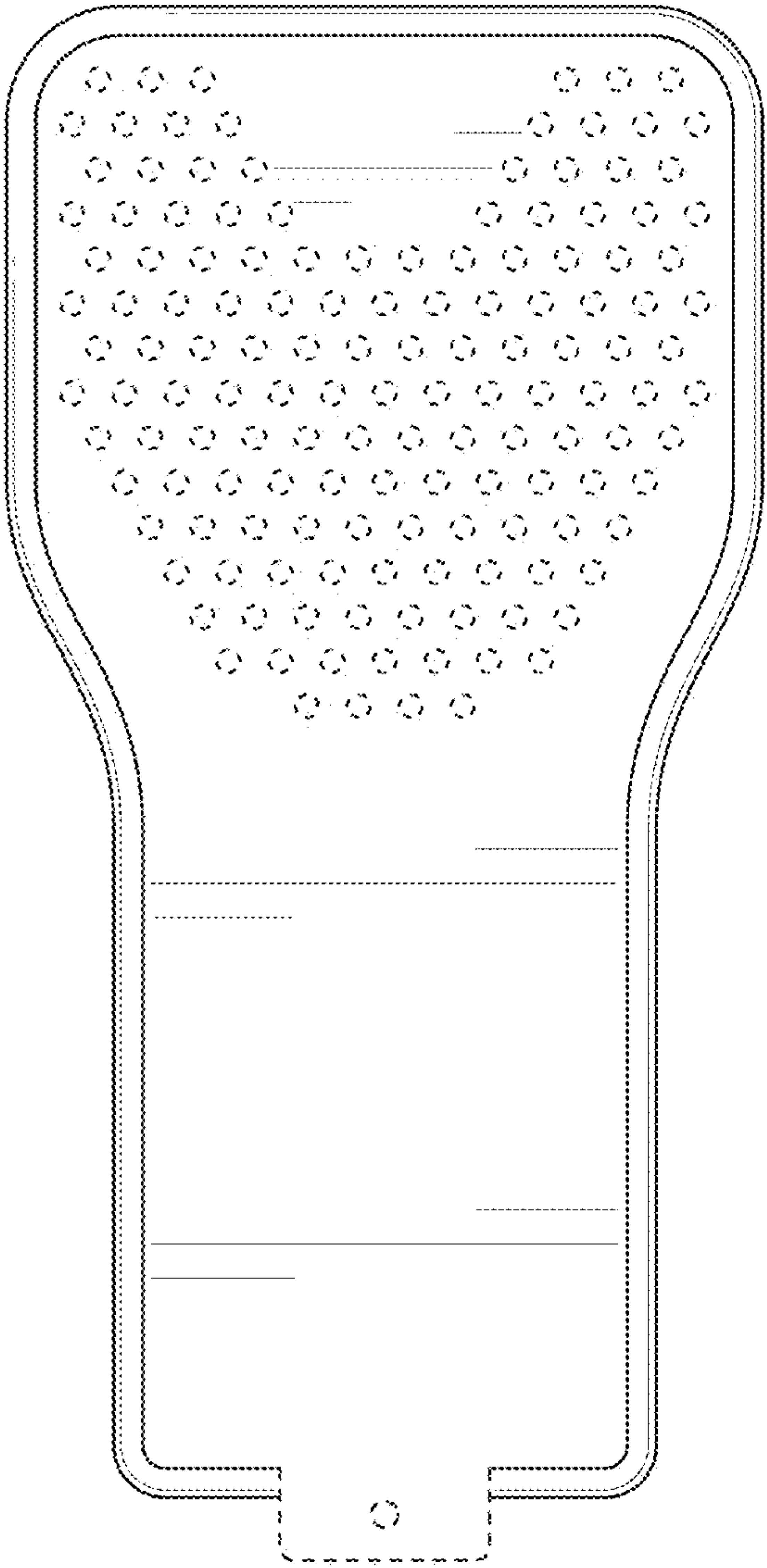


FIG. 7