



US00D865995S

(12) **United States Design Patent** (10) **Patent No.:** **US D865,995 S**  
**Benarieh et al.** (45) **Date of Patent:** **\*\* Nov. 5, 2019**

(54) **ELECTROBLOTTING APPARATUS**  
(71) Applicant: **LIFE TECHNOLOGIES CORPORATION**, Carlsbad, CA (US)

4,452,901 A 6/1984 Gordon et al.  
4,589,965 A 5/1986 Kreisher  
4,657,655 A 4/1987 Smoot et al.  
4,757,022 A 7/1988 Shults et al.  
(Continued)

(72) Inventors: **Ronen Benarieh**, Givat brener (IL);  
**Raviv Lifshitz**, Tel Aviv (IL)

**FOREIGN PATENT DOCUMENTS**

(73) Assignee: **LIFE TECHNOLOGIES CORPORATION**, Carlsbad, CA (US)

JP 2002257721 9/2002  
WO 2005029055 5/2005  
(Continued)

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

**OTHER PUBLICATIONS**

(21) Appl. No.: **29/659,330**

Bio-Rad Laboratories, "Western Blotting Overview", <https://www.bio-rad.com>, Feb. 26, 2012.

(22) Filed: **Aug. 8, 2018**

(Continued)

**Related U.S. Application Data**

(62) Division of application No. 29/559,582, filed on Mar. 30, 2016, now Pat. No. Des. 828,578, which is a division of application No. 29/534,976, filed on Aug. 3, 2015, now Pat. No. Des. 757,295, which is a division of application No. 29/456,029, filed on May 28, 2013, now Pat. No. Des. 738,527.

*Primary Examiner* — Anhdao Doan

(51) **LOC (12) Cl.** ..... **24-01**

(57) **CLAIM**

(52) **U.S. Cl.**  
USPC ..... **D24/233**

The ornamental design for an electroblotting apparatus, as shown and described.

(58) **Field of Classification Search**  
USPC ..... D24/107, 185, 186, 216, 231-234;  
D10/81

**DESCRIPTION**

CPC ..... G01N 2035/00306; G01N 2035/00326;  
G01N 2035/00336; G01N 2035/00366;  
G01N 21/6428; G01N 21/645; G01N  
2201/068; C12Q 1/686; B01L 7/52  
See application file for complete search history.

FIG. 1 is a perspective view of an electroblotting apparatus;  
FIG. 2 is a right side view of the electroblotting apparatus of FIG. 1;  
FIG. 3 is a left side view of the electroblotting apparatus of FIG. 1;  
FIG. 4 is a front view of the electroblotting apparatus of FIG. 1;  
FIG. 5 is a back view of the electroblotting apparatus of FIG. 1;  
FIG. 6 is a top view of the electroblotting apparatus of FIG. 1; and,  
FIG. 7 is a bottom view of the electroblotting apparatus of FIG. 1.

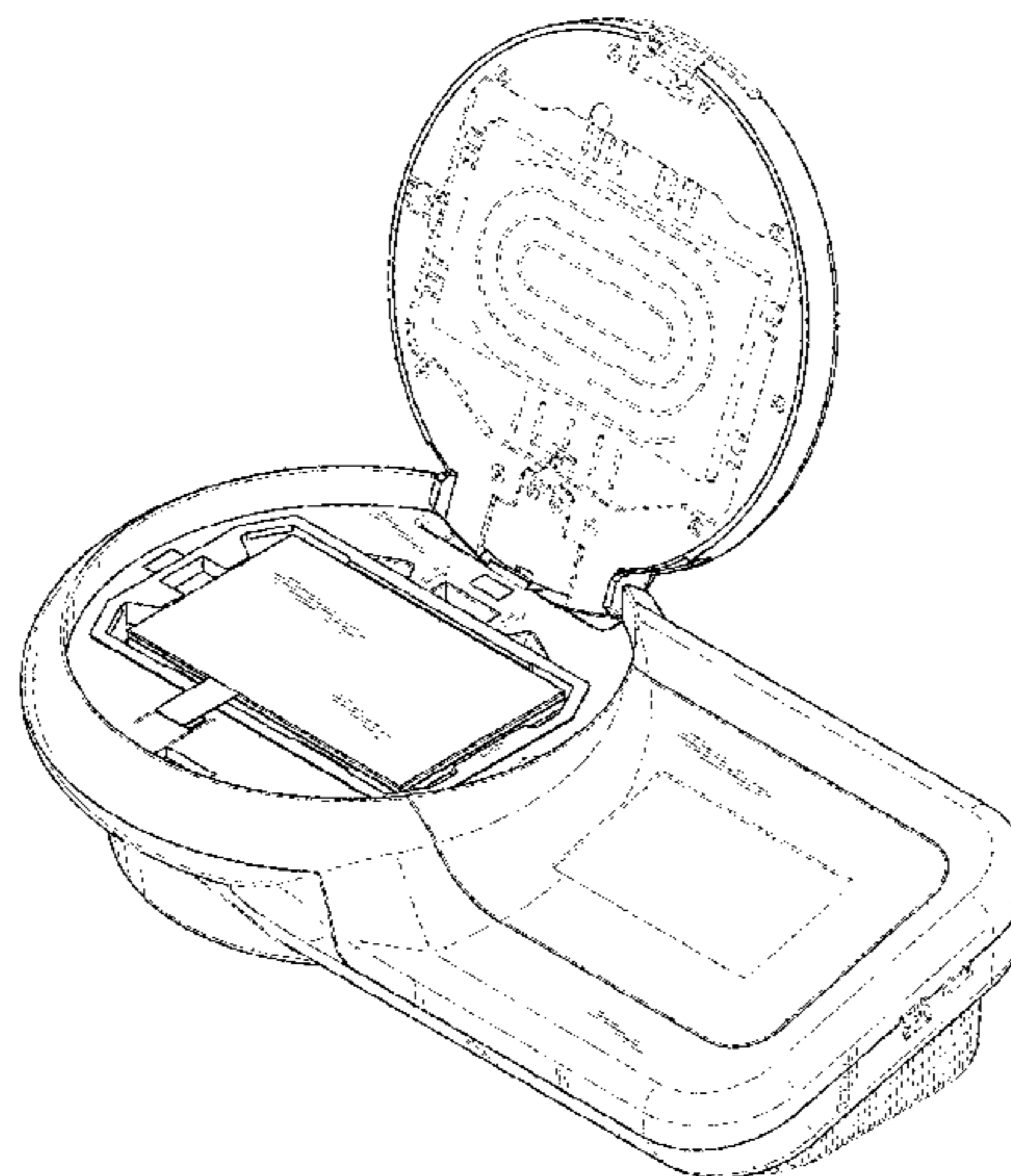
(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,879,280 A 4/1975 Peterson et al.  
4,139,440 A 2/1979 Chrambach et al.

The broken lines illustrate portions of the electroblotting apparatus that form no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

4,840,714 A 6/1989 Littlehales  
 4,889,606 A 12/1989 Dyson et al.  
 5,013,420 A 5/1991 Schuette  
 5,173,159 A 12/1992 Dutertre  
 5,256,772 A 10/1993 Ohtomo  
 5,273,906 A 12/1993 Shultz et al.  
 D351,910 S 10/1994 Anderson et al.  
 5,356,772 A 10/1994 Chan et al.  
 5,445,723 A 8/1995 Camacho  
 5,449,446 A 9/1995 Verma et al.  
 5,482,613 A 1/1996 Boquet  
 5,582,702 A 12/1996 Cabilly et al.  
 D378,782 S 4/1997 LaBarbera et al.  
 D381,748 S 7/1997 Matsuda et al.  
 D393,314 S 4/1998 Meisner et al.  
 5,738,244 A 4/1998 Charlton et al.  
 5,922,186 A 7/1999 Shukla et al.  
 6,007,691 A 12/1999 Klock, Jr.  
 6,162,338 A 12/2000 Updyke et al.  
 6,284,117 B1 9/2001 Smolko et al.  
 6,379,516 B1 4/2002 Cabilly et al.  
 D457,646 S 5/2002 Hool et al.  
 6,409,774 B1 6/2002 Kerschmann et al.  
 6,592,734 B2 7/2003 Chen  
 6,602,661 B1 8/2003 Knezevic et al.  
 D581,823 S 12/2008 Mori et al.  
 7,611,899 B2 11/2009 Whitson et al.  
 D618,353 S 6/2010 Sanga et al.  
 D651,925 S 1/2012 Faulkner et al.  
 8,173,002 B2 5/2012 Margalit et al.  
 D666,737 S 9/2012 Benarieh et al.  
 8,268,149 B2 9/2012 Margalit et al.  
 D671,851 S 12/2012 Treharne et al.  
 8,394,250 B2 3/2013 Margalit  
 D681,231 S 4/2013 Steinhauer et al.  
 D681,232 S 4/2013 Benarieh et al.  
 D681,234 S 4/2013 Benarieh et al.  
 8,608,930 B2 12/2013 Margalit et al.  
 D702,852 S 4/2014 Podhasky et al.  
 D719,276 S 12/2014 Ryan et al.  
 D729,660 S 5/2015 Dickinson et al.  
 D730,216 S 5/2015 McLaughlin et al.  
 9,034,639 B2 5/2015 Freeman et al.  
 D733,900 S 7/2015 Hagege  
 D733,917 S \* 7/2015 Klein ..... D24/232  
 D734,468 S 7/2015 Murakami et al.

D737,702 S 9/2015 Selberg et al.  
 D740,950 S 10/2015 Osness et al.  
 D744,086 S 11/2015 Yamashita et al.  
 D825,773 S \* 8/2018 Wan ..... D24/216  
 2002/0012920 A1 1/2002 Gardner et al.  
 2002/0089658 A1 7/2002 Seville et al.  
 2002/0110806 A1 8/2002 Merrill et al.  
 2002/0157953 A1 10/2002 Chen  
 2004/0050699 A1 3/2004 Goncalves  
 2005/0000811 A1 1/2005 Luka  
 2005/0009036 A1 1/2005 Montesclaros et al.  
 2005/0082168 A1 4/2005 Kang et al.  
 2005/0121325 A1 6/2005 Updyke et al.  
 2005/0230255 A1 10/2005 Sumner et al.  
 2006/0144708 A1 7/2006 Kitzler et al.  
 2006/0278531 A1 12/2006 Margalit et al.  
 2009/0026079 A1 1/2009 Margalit et al.  
 2009/0209040 A1 8/2009 Flora et al.  
 2011/0229373 A1 9/2011 Asakura et al.

FOREIGN PATENT DOCUMENTS

WO 2005094539 10/2005  
 WO 2007126506 11/2007  
 WO 2010006318 1/2010

OTHER PUBLICATIONS

Daban, "Fluorescent labeling of proteins with Nile red and 2-methoxy-2,4-diphenyl-3(2H)-furanone: Physicochemical basis and application to the rapid staining of sodium dodecyl sulfate polyacrylamide gels and Western blots", Electrophoresis, vol. 22, 2001, pp. 874-880.  
 Genscript Corporation, "One-Step Western Blot Kit", Technical Manual No. 0184, Version 0403200, pp. 1-5.  
 Kurien, et al., "Protein Blotting: a review", Journal of Immunological Methods, vol. 274, No. 1-2, 2003, pp. 1-15.  
 Life Technologies, NativePAGE Running Buffer Kit, downloaded <http://products.invitrogen.com/ivgn/product/BN2007> on Apr. 16, 2013, Apr. 24, 2013, pp. 1- 2.  
 Pachulski, et al, Production of Tablet-Like Solid Bodies Without Pressure by Sol-Gel Processes, Letters in Drug Design & Discovery, 4, 2007, pp. 78-81.  
 Zeng, et al., "Polyethylene Glycol Significantly Enhances the Transfer of Membrane Immunoblotting Analytical Biochemistry", vol. 189, 1990, pp. 197-201.

\* cited by examiner

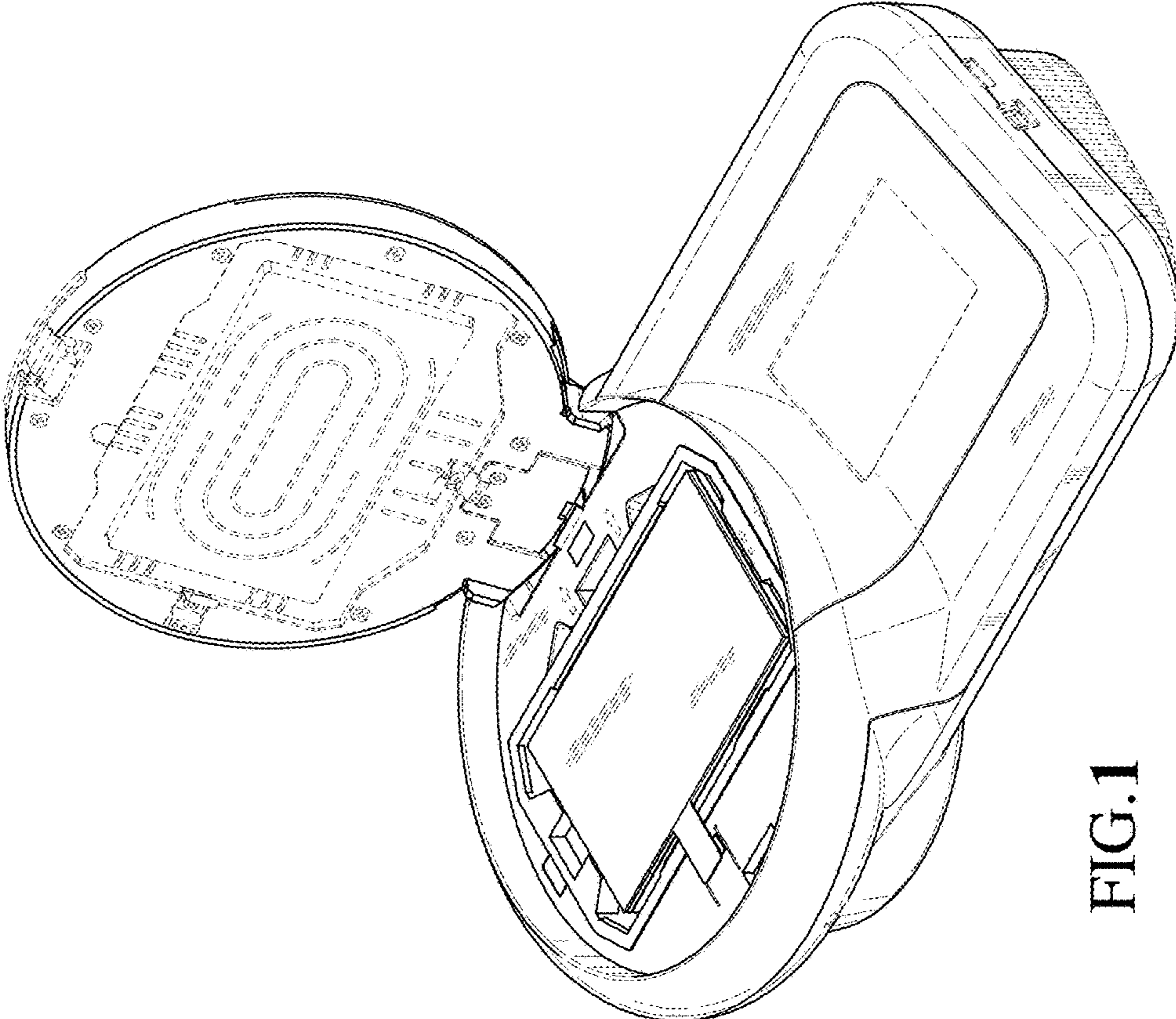


FIG.1

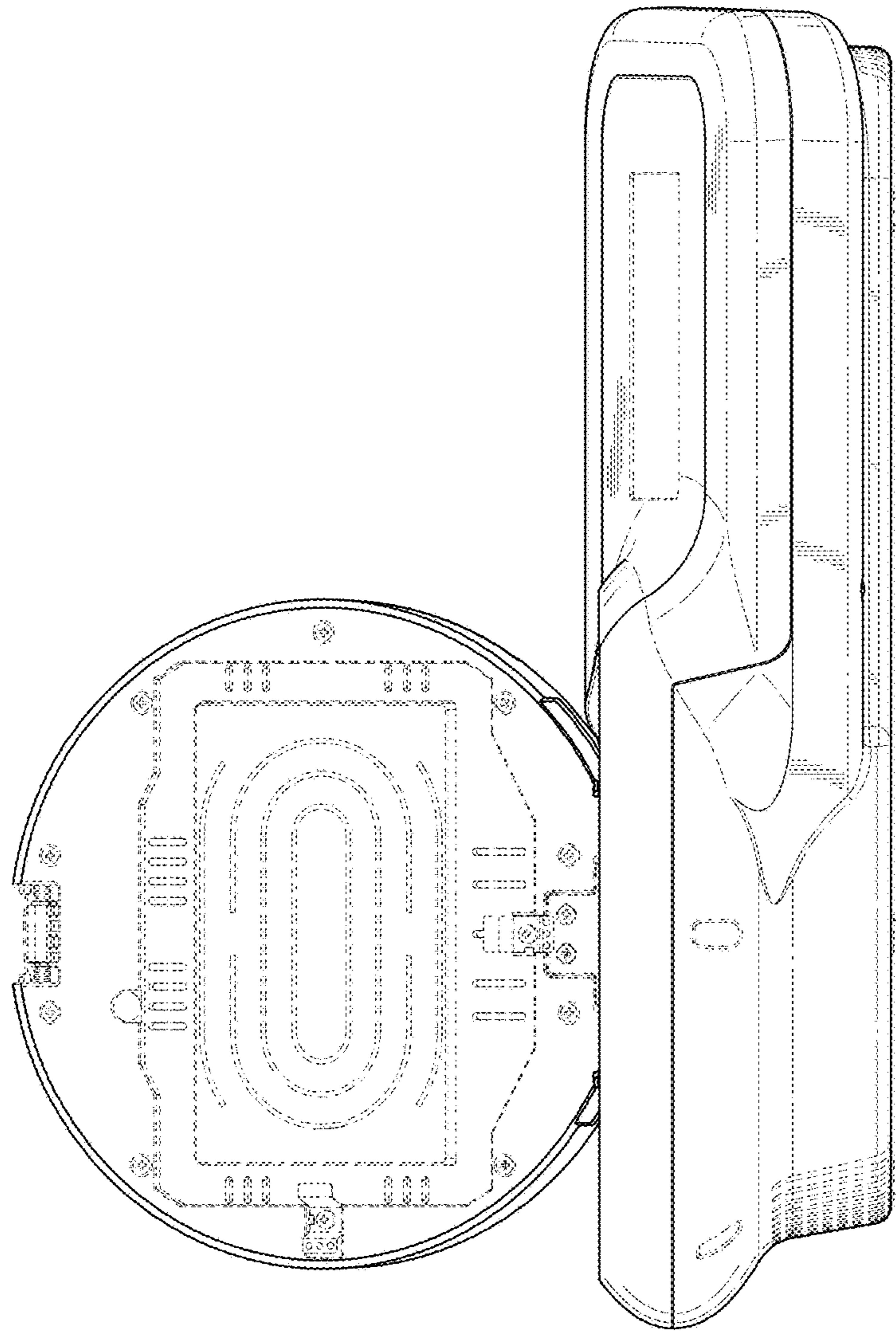


FIG. 2

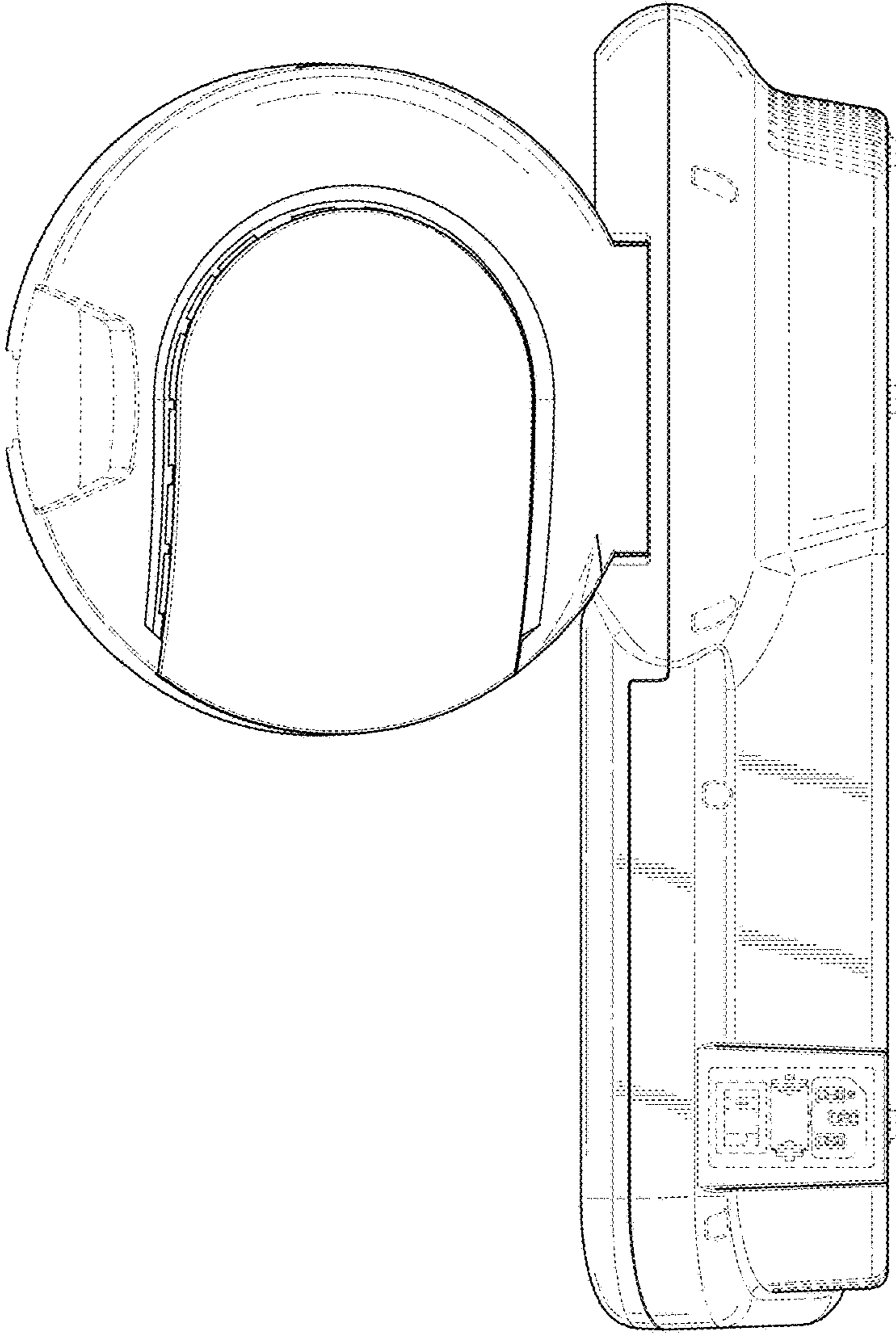


FIG. 3

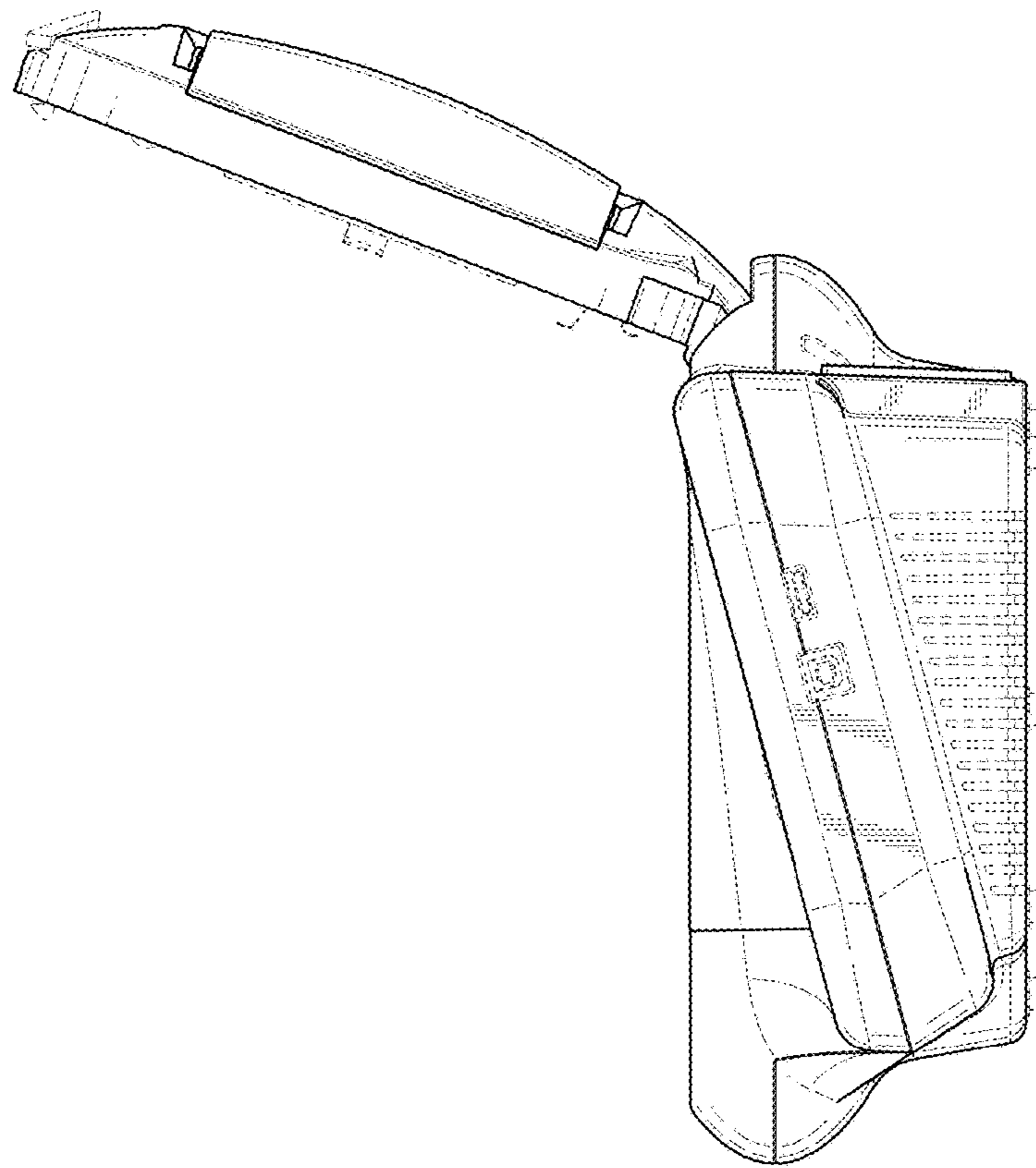


FIG. 4

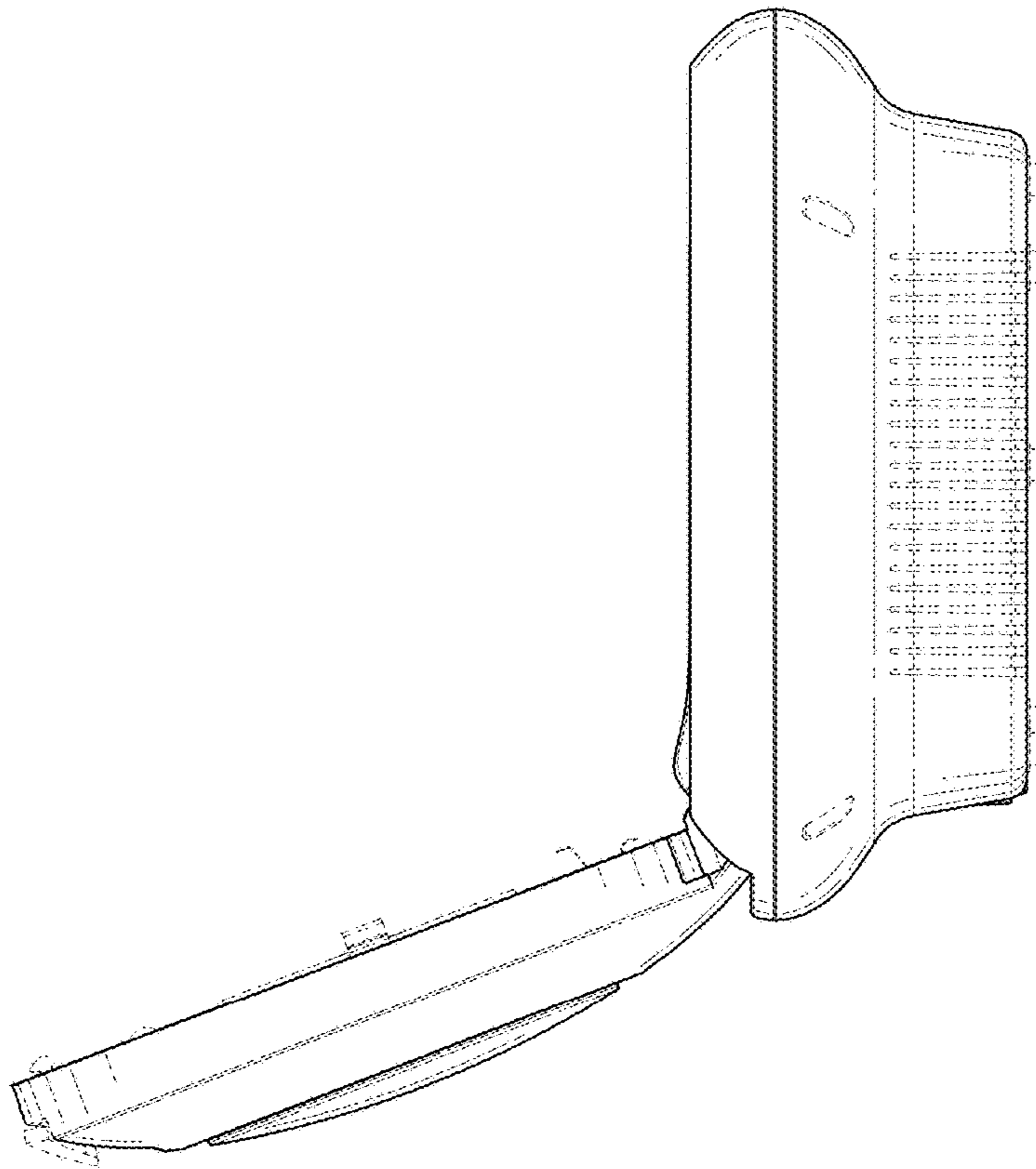


FIG. 5

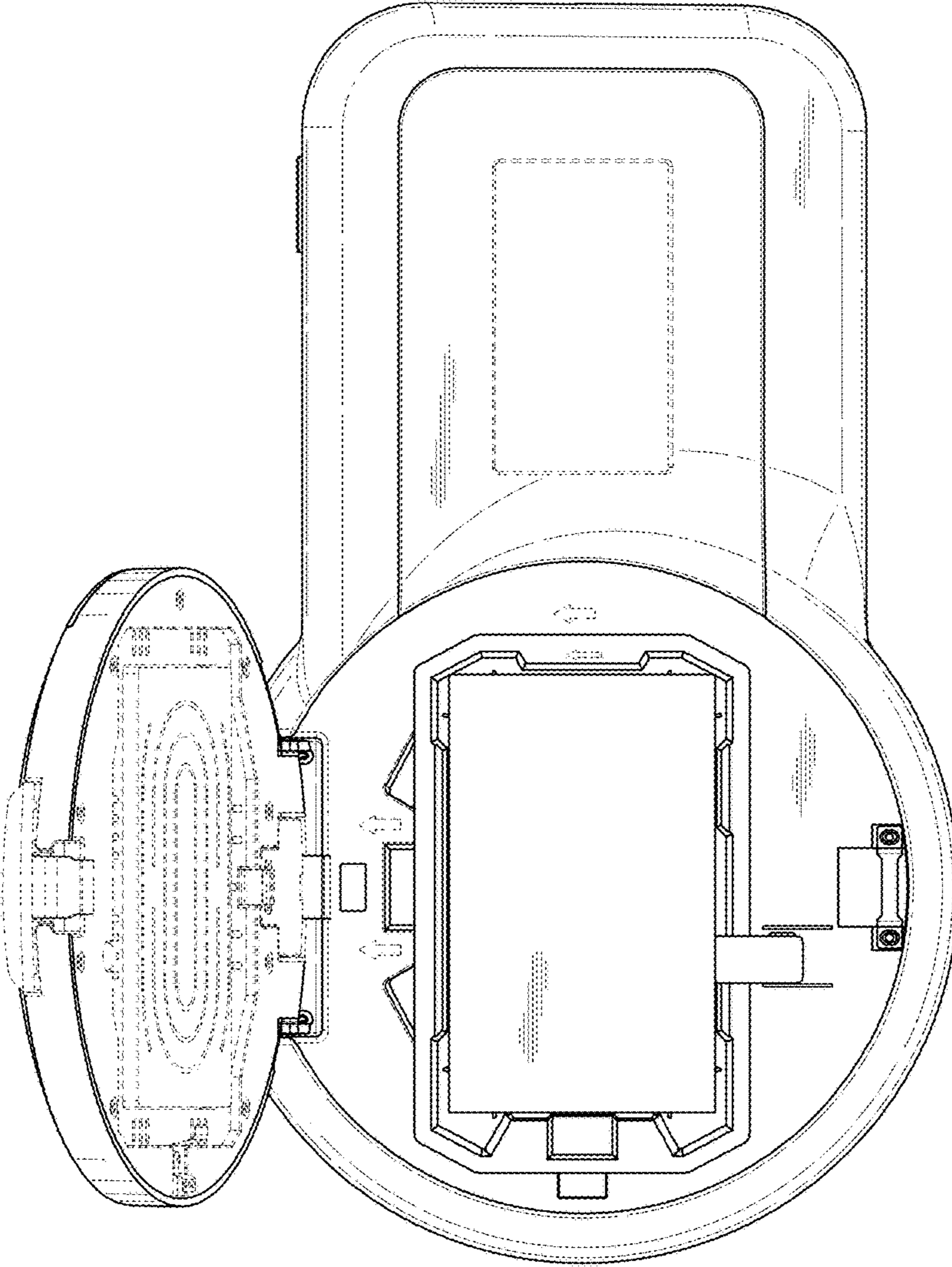


FIG. 6



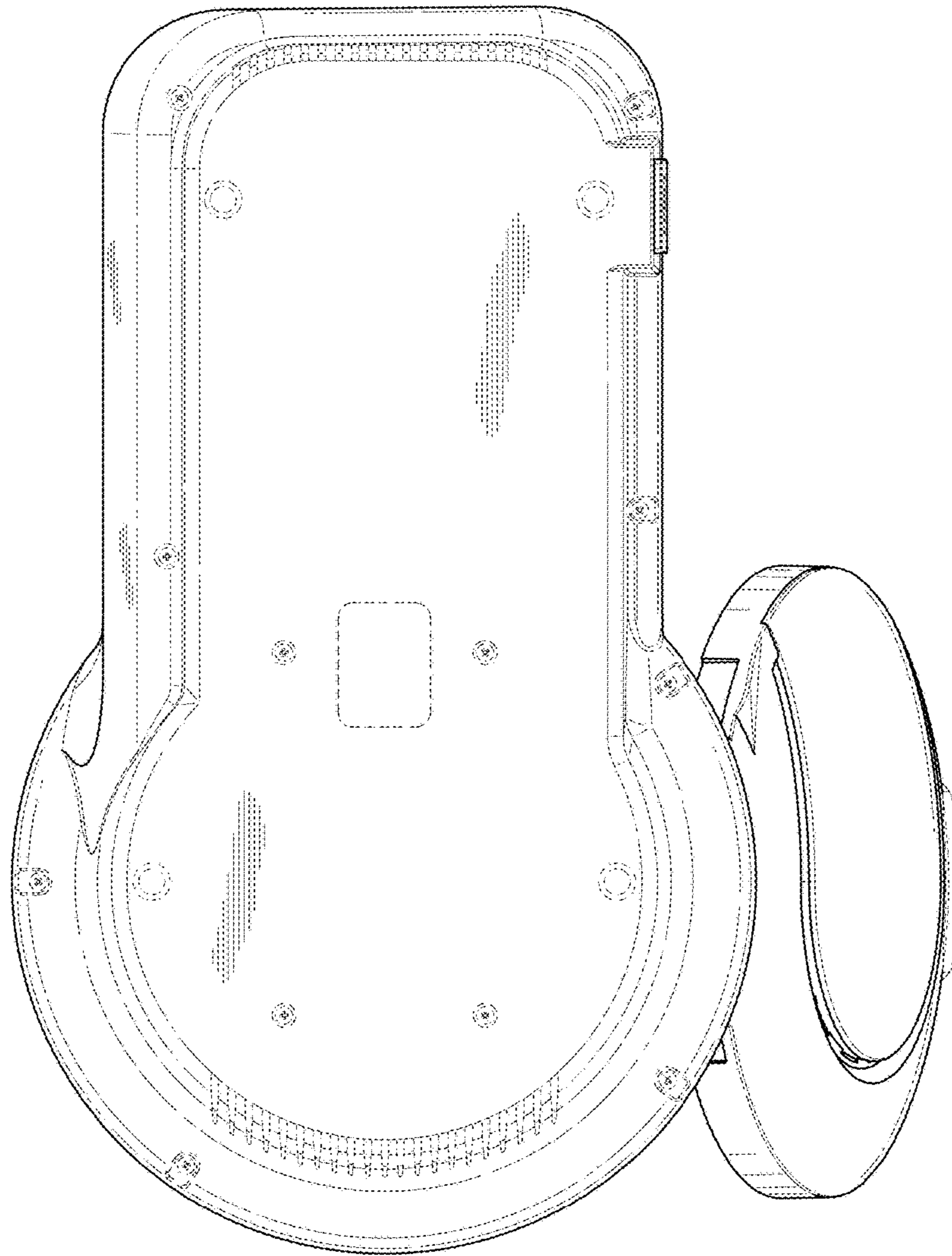


FIG. 7