



US00D941468S

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

(10) **Patent No.: US D941,468 S**  
(45) **Date of Patent: \*\* Jan. 18, 2022**

(54) **ELECTRONIC STETHOSCOPE DEVICE**

(71) Applicant: **Eko Devices, Inc.**, Berkeley, CA (US)

(72) Inventors: **Daniel Freschl**, Berkeley, CA (US);  
**Philip Goolkasian**, Berkeley, CA (US);  
**Connor Landgraf**, Berkeley, CA (US)

(73) Assignee: **Eko Devices, Inc.**, Berkeley, CA (US)

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

(21) Appl. No.: **29/706,640**

(22) Filed: **Sep. 23, 2019**

(51) **LOC (13) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/134**

(58) **Field of Classification Search**

USPC ..... D24/133, 134, 135, 136, 140, 167, 189;  
D8/308, 315, 316, 318; D10/60, 78, 80  
CPC .. A61B 7/02; A61B 7/04; A61B 7/003; A61B  
5/024; A61B 5/7282; A61B 5/742; A61B  
17/17; A61B 17/16; A61B 17/11; A61B  
17/00; A61B 17/1675; A61B 17/1764;  
A61B 17/1767; A61B 18/00; A61B  
19/00; A61F 2/46; A61F 2/4601; A61F  
2/4603; A61F 2/461; A61F 2/3868; A61F  
2002/4631

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,087,016 A \* 4/1963 Dahl ..... A61B 7/02  
381/1  
3,182,129 A \* 5/1965 Clark et al. .... A61B 7/04  
381/67  
3,233,041 A \* 2/1966 Croslin ..... A61B 7/04  
381/67  
3,247,324 A 4/1966 Ralph et al.

D207,616 S \* 5/1967 King ..... D24/134  
4,254,302 A \* 3/1981 Walshe ..... A61B 7/04  
381/67  
4,783,813 A \* 11/1988 Kempka ..... A61B 7/04  
381/67

(Continued)

**FOREIGN PATENT DOCUMENTS**

JP D1575867 \* 5/2017  
WO WO-2015105641 A1 7/2015

(Continued)

**OTHER PUBLICATIONS**

Eko Core Attachment, [site visited Jul. 1, 2021]. Available from  
Internet. URL: <https://vimeo.com/514402560> (Year: 2021).\*

(Continued)

*Primary Examiner* — T Chase Nelson

*Assistant Examiner* — Kelly L Gross

(74) *Attorney, Agent, or Firm* — McCoy Russell LLP

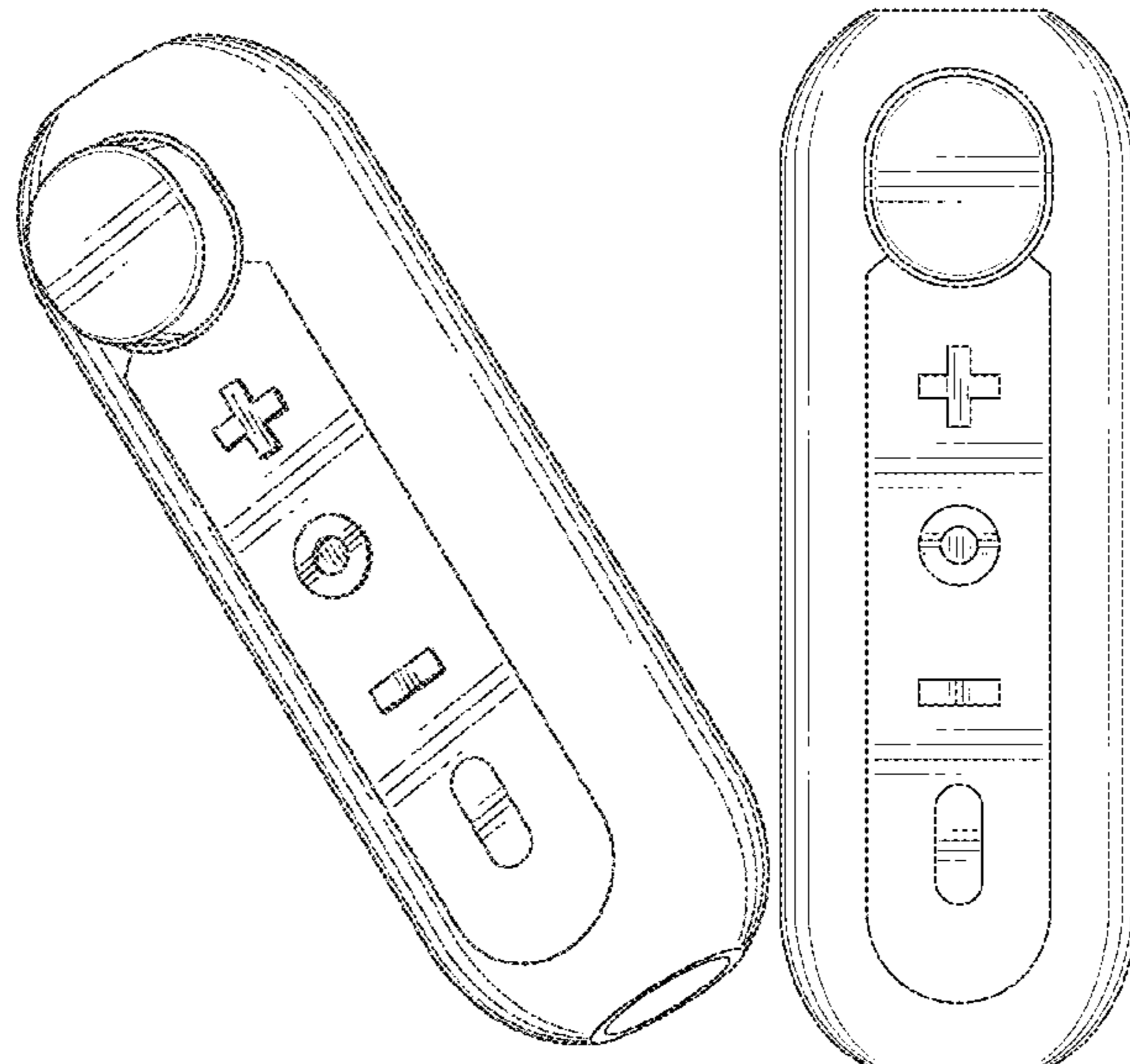
(57) **CLAIM**

We claim the design for an electronic stethoscope device, as  
shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of an electronic stethoscope  
device showing our new 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 view thereof;  
FIG. 6 is a top side view thereof;  
FIG. 7 is a bottom side view thereof; and,  
FIG. 8 is a perspective view thereof, showing the environ-  
ment, in which the design or article may be placed. The  
broken line showing of the environment is for illustrative  
purposes only and forms no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



(56)

## References Cited

U.S. PATENT DOCUMENTS					
5,025,809	A *	6/1991	Johnson	A61B 7/04	D738,757 S * 9/2015 Gross
				600/528	D10/57
D337,536	S *	7/1993	Epstein	D10/78	D739,035 S * 9/2015 Tavidian
D353,195	S *	12/1994	Savage	D24/134	D744,109 S 11/2015 Yoneta et al.
D362,063	S *	9/1995	Savage	D24/134	D748,273 S * 1/2016 Chang
5,561,275	A *	10/1996	Savage	A61B 7/04	D748,785 S * 2/2016 Denison
				181/131	D750,979 S * 3/2016 Roth
D376,366	S	12/1996	Patton et al.		D752,229 S 3/2016 Chen et al.
5,623,131	A *	4/1997	Earnest	A61B 7/02	D755,974 S 5/2016 Chen et al.
				181/131	D756,814 S * 5/2016 Pankewich, Jr.
D389,576	S *	1/1998	Grasfield	D24/134	D760,903 S 7/2016 Lin et al.
5,717,769	A	2/1998	Williams		D761,434 S 7/2016 Nelson et al.
5,737,429	A *	4/1998	Lee	A61B 7/04	D765,264 S * 8/2016 Zin
				381/67	9,404,829 B1 * 8/2016 Tien
5,774,563	A	6/1998	Deslauriers et al.		9,439,599 B2 * 9/2016 Thompson
5,909,495	A *	6/1999	Andrea	A61B 7/04	D787,684 S * 5/2017 Vezina
				381/67	D789,817 S * 6/2017 Shen
D416,201	S *	11/1999	Pinchuk	D10/2	D791,952 S 7/2017 Florescu et al.
6,002,777	A *	12/1999	Grasfield	A61B 7/04	D794,201 S * 8/2017 Newhouse
				181/131	D794,805 S 8/2017 Kranz et al.
6,139,505	A	10/2000	Murphy		D796,350 S 9/2017 Bone
D445,184	S *	7/2001	Meyer	D24/134	D800,313 S 10/2017 Chang
6,409,675	B1	6/2002	Turcott		D808,285 S 1/2018 Bone
6,533,736	B1	3/2003	Moore		D808,930 S 1/2018 Lee et al.
D477,405	S *	7/2003	Sommerfeld	D24/134	D810,593 S 2/2018 Liu
D477,874	S *	7/2003	Sommerfeld	D24/134	D810,944 S 2/2018 Goolkasian
D479,712	S	9/2003	Ng		D815,292 S * 4/2018 Goldman
D490,717	S *	6/2004	Cetera	D10/2	D817,930 S 5/2018 Kim et al.
D512,028	S *	11/2005	Martin	D13/168	D819,221 S * 5/2018 Lei
6,966,400	B1 *	11/2005	Rollins	A61B 7/02	D819,619 S * 6/2018 Li
				181/131	D825,356 S * 8/2018 Yu
D527,819	S *	9/2006	Poulsen	A61B 7/02	D830,556 S * 10/2018 Sebban
				D24/134	D24/167
D557,624	S	12/2007	Coster et al.		D830,968 S * 10/2018 Wang
D559,266	S	1/2008	Oh		D831,195 S * 10/2018 Guillermo
D564,368	S *	3/2008	Molyneux	D10/31	
D584,974	S	1/2009	Fukuda et al.		D836,472 S 12/2018 Zhiyuan
D595,415	S	6/2009	Fukuzawa		D838,923 S * 1/2019 Ni
D602,466	S	10/2009	Hibino et al.		D840,531 S * 2/2019 Guillermo
D609,197	S *	2/2010	Koskela	A61B 7/04	D841,497 S * 2/2019 Blair
				D13/168	A61B 5/150099
D613,137	S *	4/2010	Wieberdink	A61B 7/026	D10/78
				D8/14	D841,498 S * 2/2019 Blair
D616,990	S *	6/2010	Suzuki	D24/186	D843,249 S * 3/2019 Blair
D618,681	S *	6/2010	Richter	D14/358	
D628,560	S *	12/2010	Bodley	D14/217	D850,626 S * 6/2019 Gardner
D629,319	S *	12/2010	Tian	D10/78	D851,253 S 6/2019 Goolkasian
D635,667	S *	4/2011	Soerensen	D24/134	D851,256 S * 6/2019 Newhouse
D659,836	S	5/2012	Bensch et al.		D853,572 S * 7/2019 Yi
D682,718	S	5/2013	Azuma		D854,434 S * 7/2019 Blair
8,491,488	B1	7/2013	Criley et al.		D854,953 S * 7/2019 Blair
D688,706	S	8/2013	Lee et al.		D854,954 S * 7/2019 Blair
D689,386	S *	9/2013	Stegmann	A61B 5/002	D855,484 S * 8/2019 Plested
				D10/81	D860,154 S * 9/2019 Hu
D693,710	S	11/2013	Bachel et al.		D866,784 S * 11/2019 Peck
D700,083	S *	2/2014	Brigham	A61B 7/04	D870,305 S * 12/2019 Yamazaki
				D10/70	D871,510 S * 12/2019 Martisauskas
D701,610	S *	3/2014	Thomas	G01M 3/243	D875,691 S * 2/2020 Zu
				D24/200	D13/168
D701,782	S *	4/2014	Lekgoathi	A61B 5/0022	D875,927 S * 2/2020 Ohashi
				D10/81	D876,247 S * 2/2020 Hernandez
D707,827	S *	6/2014	Tseng	A61B 5/282	D879,290 S * 3/2020 Harman
				D24/186	A61B 7/04
D711,532	S *	8/2014	Habboushe	D24/134	D24/138
D715,249	S *	10/2014	Zhou	A61B 5/0022	D880,703 S * 4/2020 Emery
				D14/159	D880,720 S * 4/2020 Ou Yang
D715,665	S *	10/2014	Park	G01M 3/243	
				D10/98	D885,937 S * 6/2020 Hazan
8,855,757	B2	10/2014	Kapoor		D887,544 S * 6/2020 Inoue
D720,245	S *	12/2014	Neigher	D10/70	
D723,952	S *	3/2015	Gross	H04R 1/46	D894,415 S * 8/2020 Blank
				D10/57	A61B 7/04
D733,888	S *	7/2015	Tuhkanen	D24/167	D24/214
					D897,110 S * 9/2020 Blank
					A61B 7/003
					D4/102
					D899,610 S * 10/2020 Yang
					A61B 7/026
					D24/200
					D900,325 S * 10/2020 Emery
					A61B 7/04
					D24/187
					D901,031 S * 11/2020 Yoon
					A61B 7/04
					D24/209



(56)

References Cited

U.S. PATENT DOCUMENTS

D901,705 S \* 11/2020 Du ..... A61B 7/02  
D24/214  
D910,162 S \* 2/2021 Inoue ..... D24/107  
D910,720 S \* 2/2021 Breuvar ..... A61B 7/04  
D15/7  
D911,520 S \* 2/2021 Lin ..... A61B 7/04  
D24/134  
D915,229 S \* 4/2021 King ..... A61B 7/04  
D10/70  
D917,314 S \* 4/2021 Wu ..... A61B 7/04  
D10/57  
D921,120 S \* 6/2021 Martisaukas ..... A61B 7/02  
D21/423  
2002/0186850 A1 12/2002 Deslauriers et al.  
2004/0032957 A1 2/2004 Mansy et al.  
2004/0076303 A1 4/2004 Vyshedskiy et al.  
2005/0014999 A1 1/2005 Rahe-Meyer  
2005/0078533 A1 4/2005 Vyshedskiy et al.  
2005/0209523 A1 9/2005 Umeda et al.  
2006/0047215 A1 3/2006 Newman et al.  
2007/0208233 A1 9/2007 Kovacs  
2007/0273504 A1 11/2007 Tran  
2008/0228095 A1\* 9/2008 Richardson ..... A61B 7/026  
600/528  
2008/0232605 A1\* 9/2008 Bagha ..... A61B 7/04  
381/67  
2008/0298603 A1 12/2008 Smith  
2012/0190303 A1\* 7/2012 Wong ..... A61B 7/02  
455/41.2  
2012/0215077 A1\* 8/2012 Geissler ..... A61B 7/003  
600/301  
2012/0310115 A1\* 12/2012 Bedingham ..... A61B 5/002  
600/586  
2013/0116584 A1 5/2013 Kapoor  
2013/0150754 A1\* 6/2013 Rogers ..... A61B 7/04  
600/586  
2014/0012149 A1 1/2014 Trice  
2014/0153730 A1\* 6/2014 Habboushe ..... H04R 1/46  
381/67  
2014/0270218 A1\* 9/2014 Wang ..... A61B 7/04  
381/67  
2014/0328210 A1 11/2014 Knaappila  
2015/0057512 A1 2/2015 Kapoor  
2015/0065814 A1 3/2015 Kapoor  
2016/0014550 A1 1/2016 Chiddarwar et al.  
2016/0100817 A1 4/2016 Hussain  
2016/0144192 A1 5/2016 Sanghera et al.

2018/0116626 A1 5/2018 Darbari et al.  
2018/0168473 A1 6/2018 Du et al.  
2018/0256061 A1 9/2018 Landgraf et al.

FOREIGN PATENT DOCUMENTS

WO WO-2018118935 A1 6/2018  
WO WO-2018182956 A1 10/2018  
WO WO-2020041363 A1 2/2020

OTHER PUBLICATIONS

Dan et al. Playing and Acquiring Heart Sounds and Electrocardiogram Simultaneously Based on LabVIEW, 2008 World Automation Congress, Hawaii, HI, 2008, pp. 1-4 (<http://ieeexplore.ieee.org/stamp/stamp.jsp?p=&arnumber=4699304&isnumber=4698939>).  
PR Newswire. Smart Heart Monitor Keeps the Cardiologist a Heartbeat Away. MPO. (Jun. 7, 2017) retrieved from [https://http://www.mpo-mag.com/contents/view\\_breaking-news/2017-06-07/smart-heart-monitor-keeps-the-cardiologist-a-learthead-away](https://http://www.mpo-mag.com/contents/view_breaking-news/2017-06-07/smart-heart-monitor-keeps-the-cardiologist-a-learthead-away).  
PCT/US2014/070476 International Search Report and Written Opinion issued dated Apr. 30, 2015.  
PCT/US2017/067337 International Search Report and Written Opinion dated Jan. 30, 2018.  
PCT/US2018/021964 International Search Report and Written Opinion dated May 30, 2018.  
PCT/US2019/047333 International Invitation to Pay Additional Fees dated Sep. 30, 2019.  
PCT/US2019/047333 International Search Report and Written Opinion dated Dec. 6, 2019.  
Portable ECG Monitor FL10/PM10 with Bluetooth Wireless Transmission Dec. 28, 2016; Retrieved from [http://www.pulseoximeter.org/fl10.html?utm\\_source=googlepepla&utm\\_medium=adwords&id=18283950120](http://www.pulseoximeter.org/fl10.html?utm_source=googlepepla&utm_medium=adwords&id=18283950120); Jun. 5, 2017.  
Rijjuven Corp., i2Dtx CardioSleeve, downloaded from <http://djuven.com/medicaldevices/cardiosleeve> on Mar. 5, 2017.  
U.S. Appl. No. 14/152,278 Office Action dated Jun. 15, 2016.  
U.S. Appl. No. 14/152,278 Office Action dated Jun. 29, 2017.  
U.S. Appl. No. 14/152,278 Office Action dated Oct. 16, 2015.  
U.S. Appl. No. 15/455,987 Office Action dated Jun. 6, 2019.  
U.S. Appl. No. 15/455,987 Office Action dated Sep. 20, 2018.  
U.S. Appl. No. 29/566,812 Office Action dated Aug. 22, 2017.  
U.S. Appl. No. 29/566,812 Office Action dated Jun. 15, 2017.

\* cited by examiner

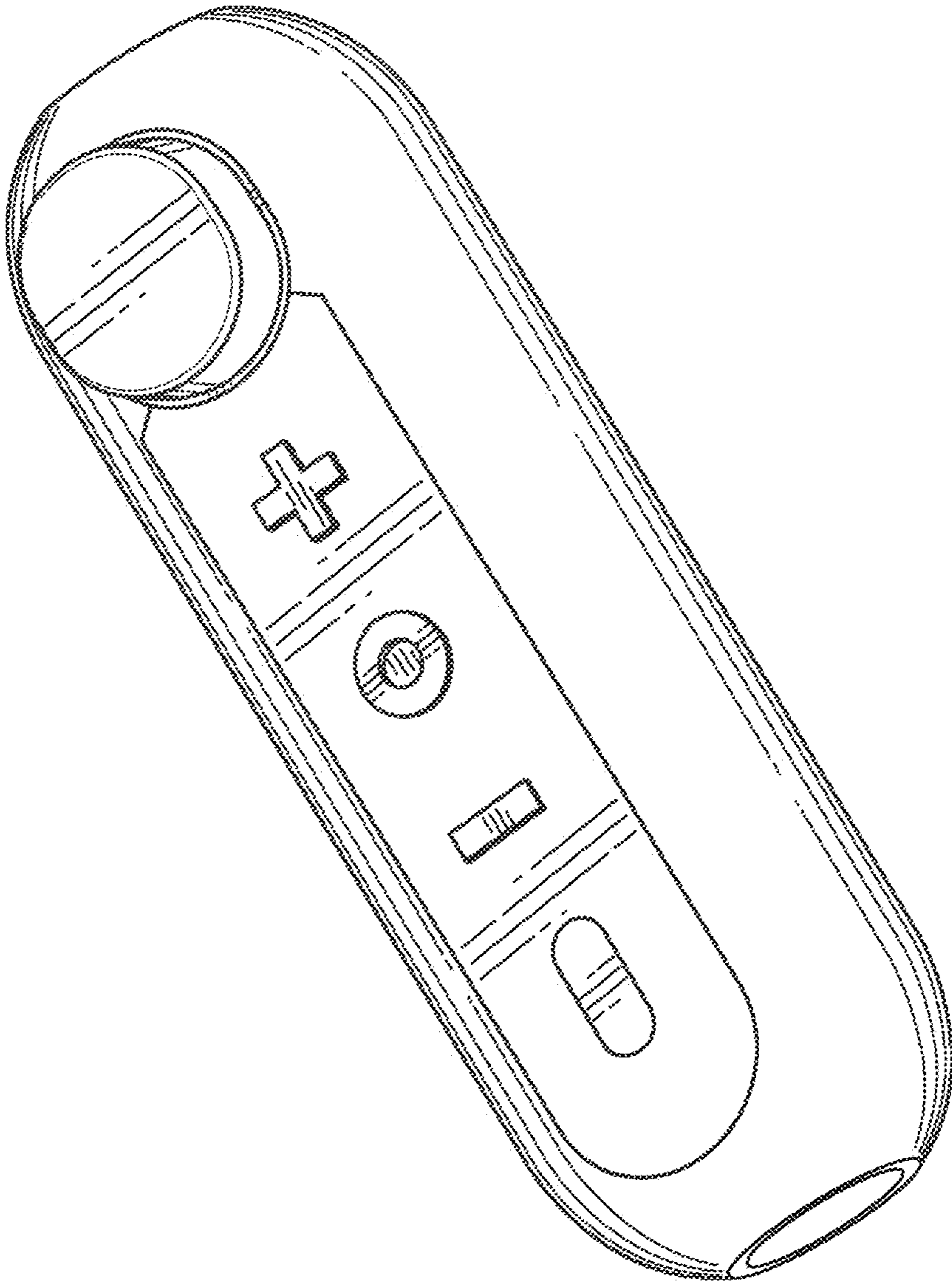


FIG. 1

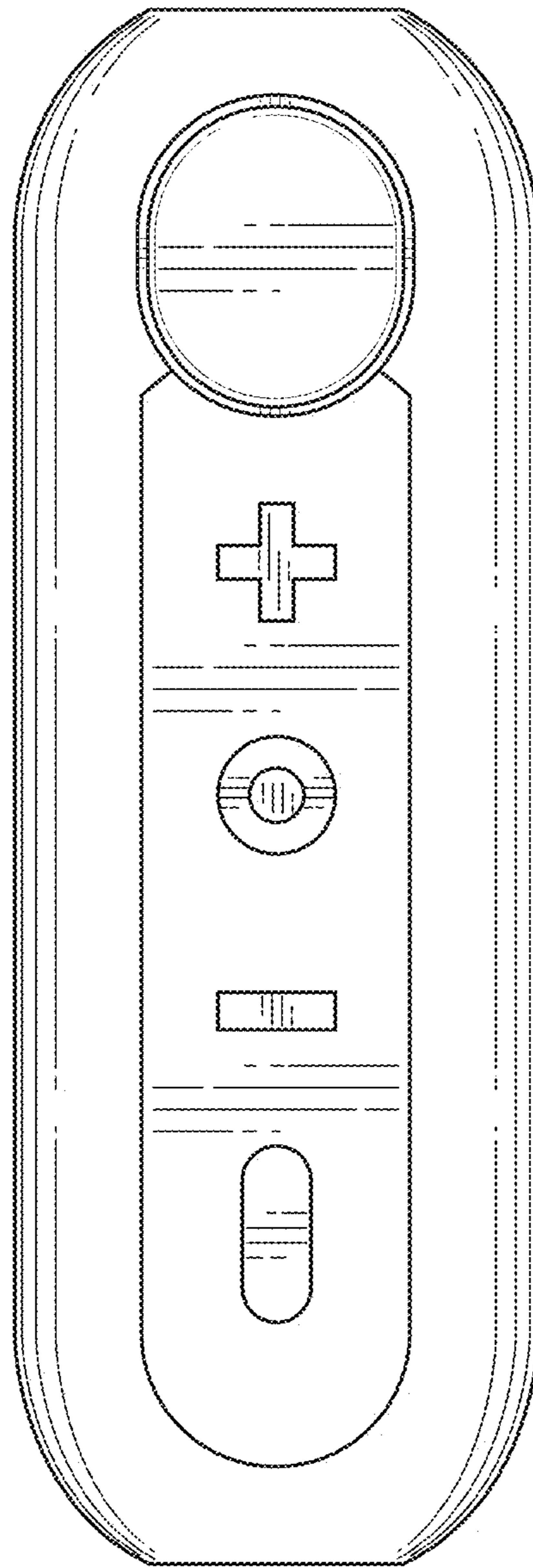


FIG. 2

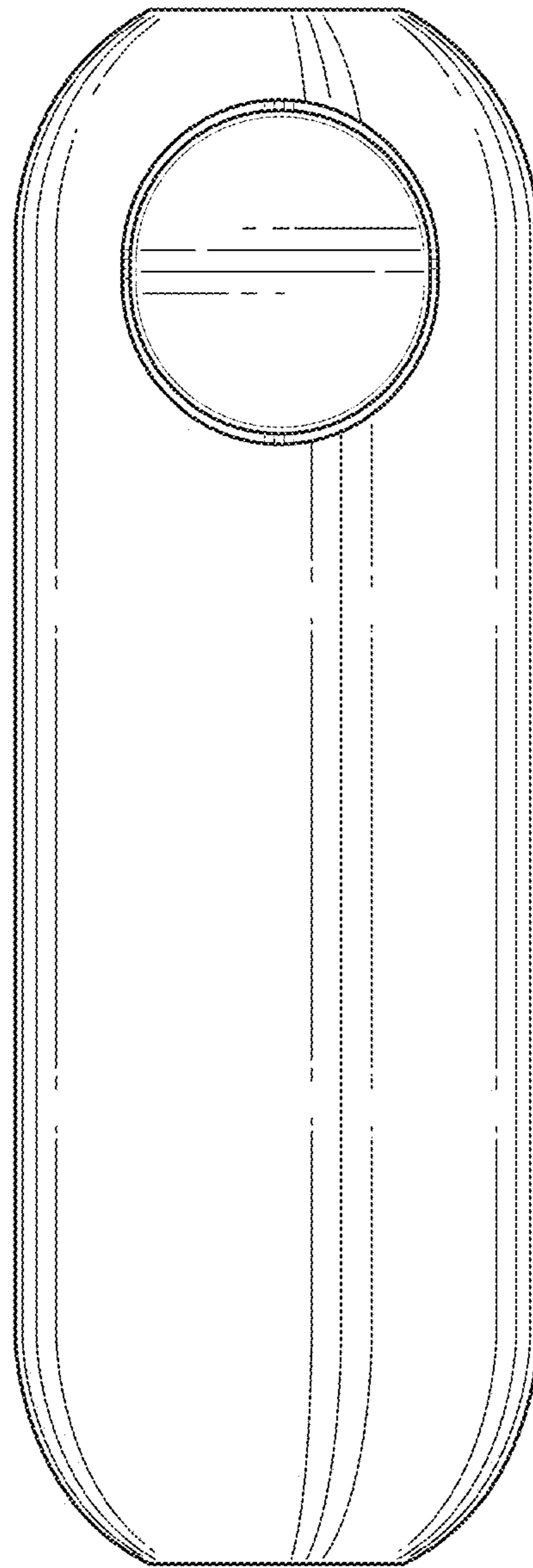


FIG. 3

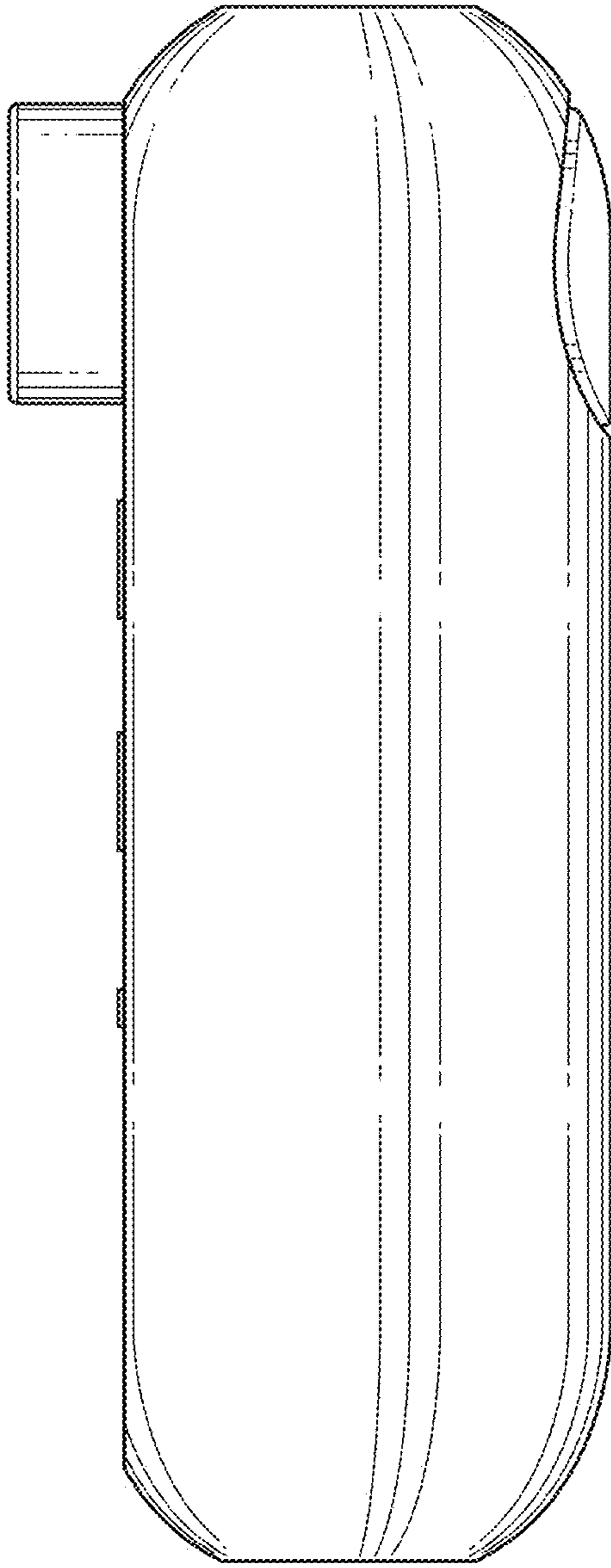


FIG. 4



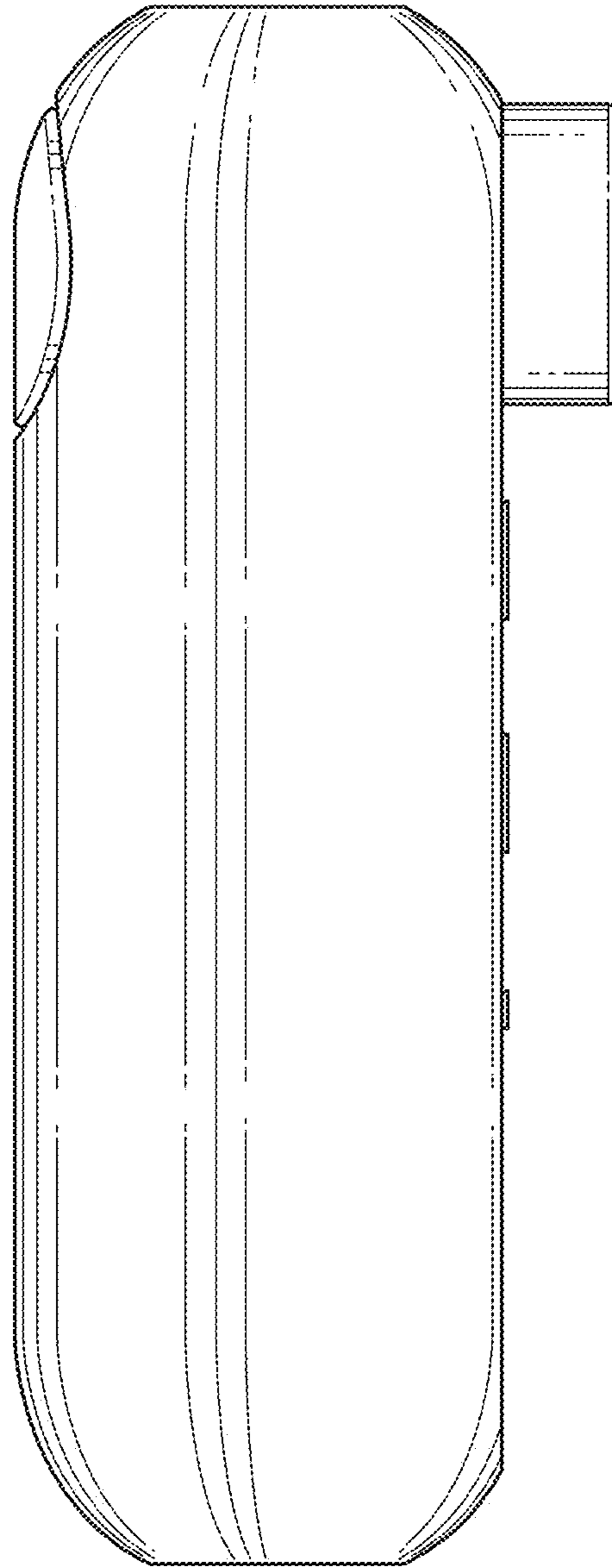


FIG. 5



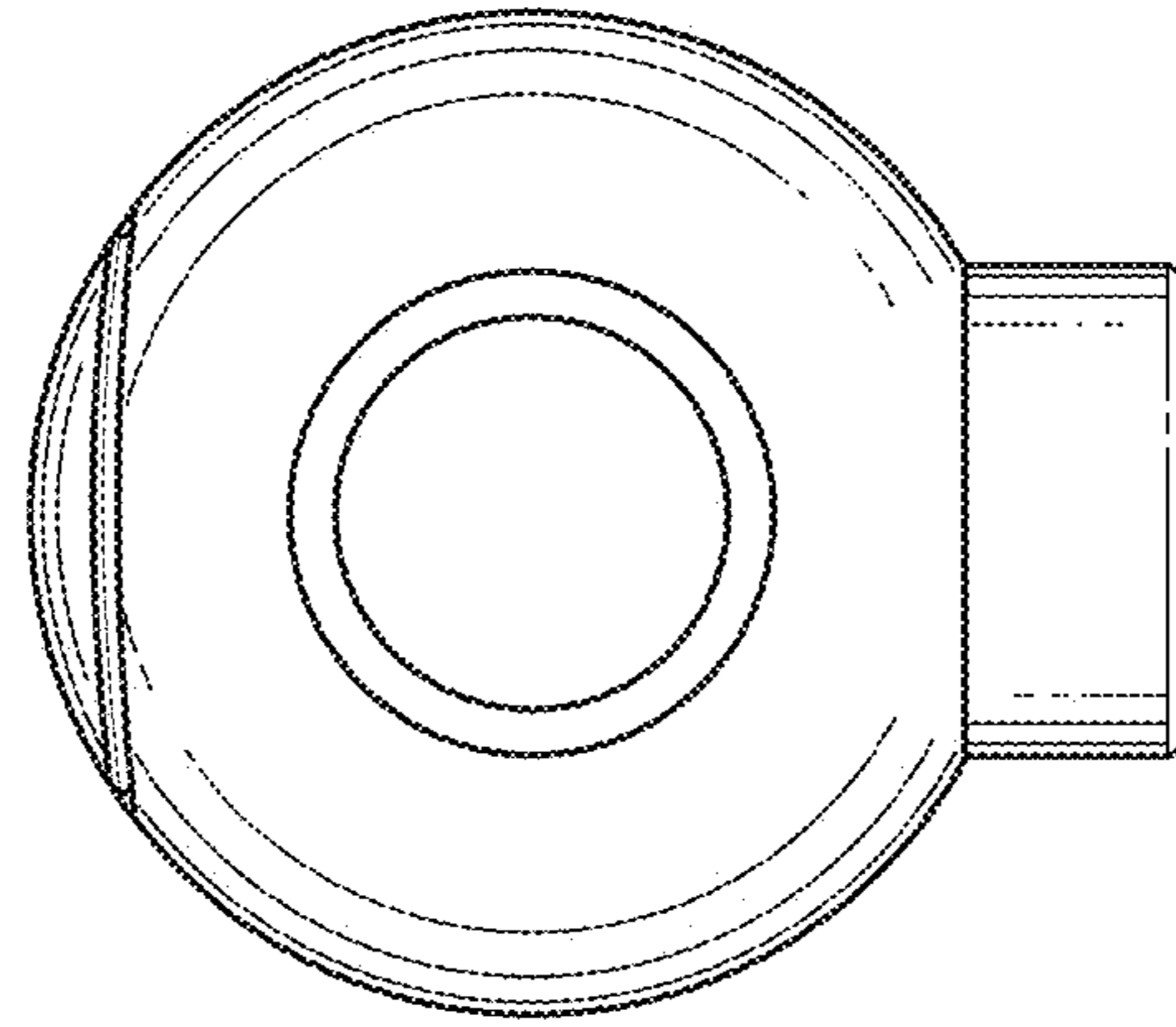


FIG. 6

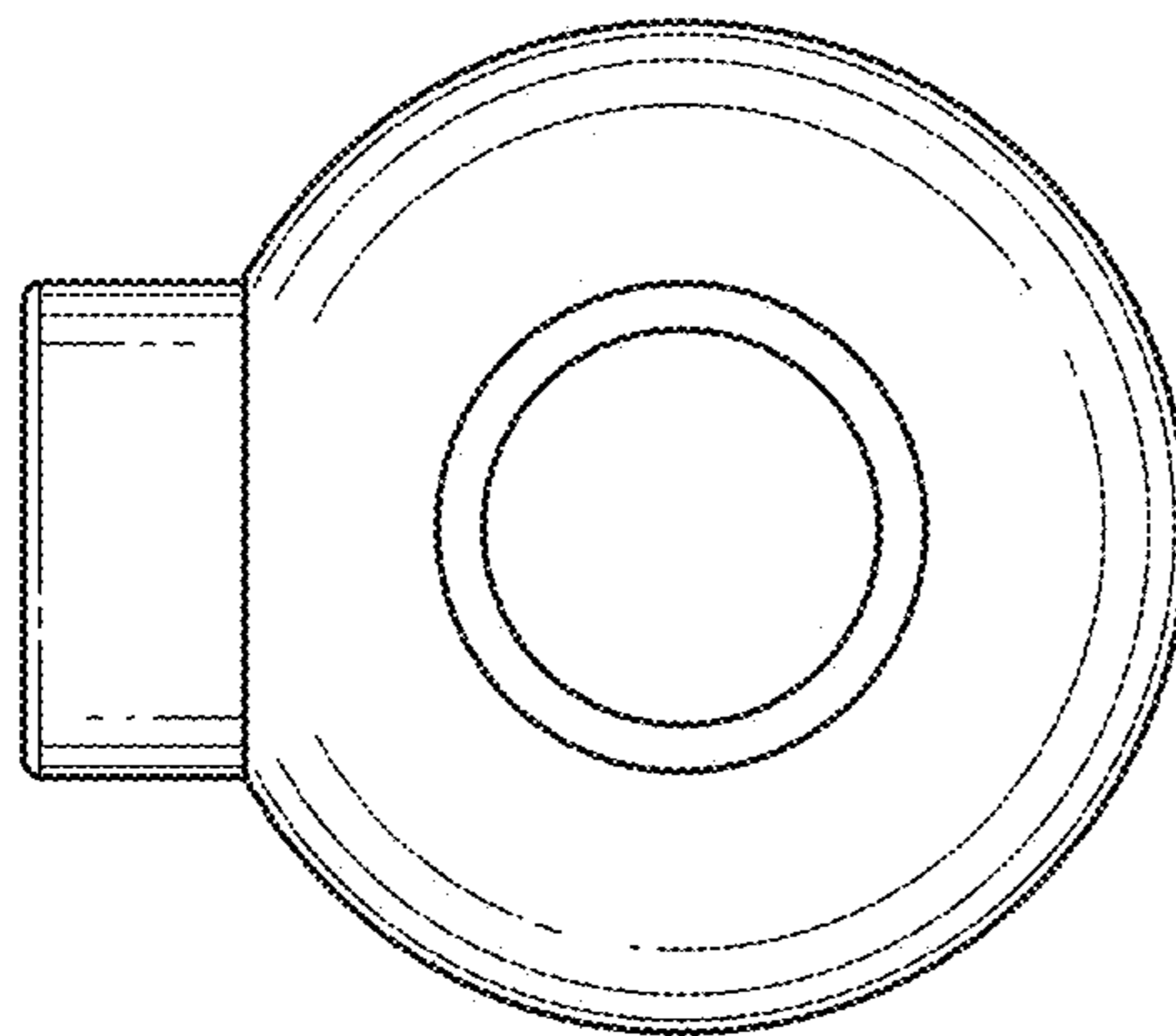


FIG. 7

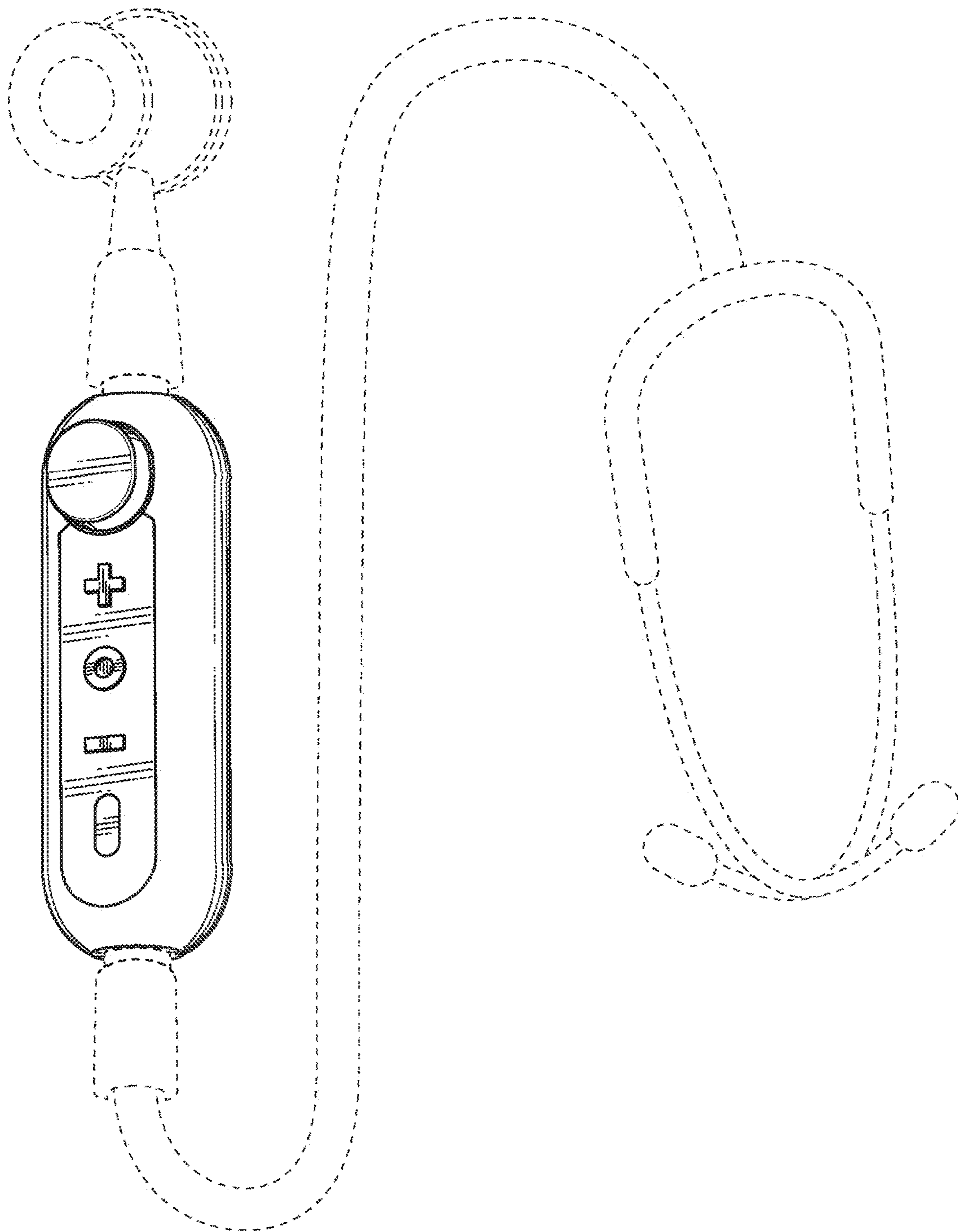


FIG. 8