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(12) **United States Design Patent** (10) **Patent No.:** **US D894,396 S**
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(54) **LEADLESS BIOSTIMULATOR ATTACHMENT FEATURE**

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(52) **U.S. Cl.**
USPC **D24/167**

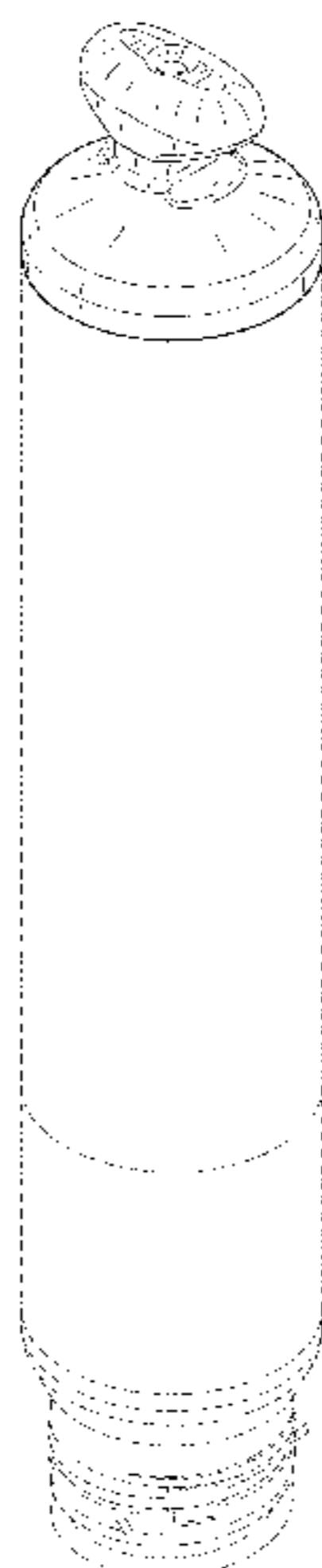
(58) **Field of Classification Search**
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CPC . A61B 5/0402; A61B 5/0404; A61B 5/04085; A61B 5/0416; A61B 5/0432; A61B 5/044; A61B 5/6805; A61B 5/6823; A61B 2560/0412; A61B 2560/0462; A61B 17/3468; A61B 1/372; A61B 1/3756; A61B 2017/22035
See application file for complete search history.

4,106,512 A	8/1978	Bisping	
4,311,153 A	1/1982	Smits	
4,972,848 A	11/1990	Di Domenico et al.	
5,003,992 A	4/1991	Holleman et al.	
5,076,285 A	12/1991	Hess et al.	
5,575,814 A	11/1996	Giele et al.	
5,702,437 A	12/1997	Baudino	
5,716,391 A	2/1998	Grandjean	
5,741,321 A	4/1998	Brennan	
D394,109 S *	5/1998	Miller	D24/133
5,776,178 A	7/1998	Pohndorf et al.	
5,837,006 A	11/1998	Ocel et al.	
5,948,015 A	9/1999	Hess et al.	
6,489,562 B1	12/2002	Hess et al.	
6,556,874 B2	4/2003	Audoglio	
6,647,292 B1 *	11/2003	Bardy	A61N 1/375 607/119
6,907,298 B2	6/2005	Smits et al.	
6,909,920 B2	6/2005	Lokhoff et al.	
6,931,285 B2	8/2005	Bischoff	
6,931,286 B2	8/2005	Sigg et al.	
7,027,876 B2	4/2006	Casavant et al.	
7,082,335 B2	7/2006	Klein et al.	
7,103,418 B2	9/2006	Laske et al.	
7,127,302 B2	10/2006	Palm	
7,158,838 B2	1/2007	Seifert et al.	
7,187,971 B2	3/2007	Sommer et al.	
7,274,966 B2	9/2007	Sommer et al.	
7,313,445 B2	12/2007	McVenes et al.	
D592,747 S *	5/2009	Weiler	D24/133
7,532,939 B2	5/2009	Sommer et al.	
7,580,758 B2	8/2009	Junge et al.	
7,599,747 B2	10/2009	Feldmann et al.	
7,657,325 B2	2/2010	Williams	
7,657,326 B2	2/2010	Bodner et al.	
7,720,550 B2	5/2010	Sommer et al.	
7,751,905 B2	7/2010	Feldmann et al.	
7,844,348 B2	11/2010	Swoyer et al.	
7,860,580 B2	12/2010	Falk et al.	
7,937,148 B2	5/2011	Jacobson	
7,937,161 B2	5/2011	Hastings et al.	
7,942,917 B2	5/2011	Nowak, Jr.	
7,945,333 B2	5/2011	Jacobson	
7,967,857 B2	6/2011	Lane	
D642,680 S *	8/2011	Brucker	D24/133
8,010,209 B2	8/2011	Jacobson	
8,057,459 B2	11/2011	Rioux et al.	
8,135,467 B2	3/2012	Markowitz et al.	
8,211,169 B2	7/2012	Lane et al.	
8,219,209 B2	7/2012	Arnholt et al.	
8,219,213 B2	7/2012	Sommer et al.	
8,239,039 B2	8/2012	Zarembo et al.	
8,313,621 B2	11/2012	Goad et al.	

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,943,936 A 3/1976 Rasor et al.
3,974,834 A 8/1976 Kane



8,346,374	B2	1/2013	Foster et al.	2015/0051612	A1	2/2015	Schmidt et al.
8,352,025	B2	1/2013	Jacobson	2015/0051614	A1	2/2015	Schmidt et al.
8,412,351	B2	4/2013	Zeijlemaker et al.	2015/0283376	A1	10/2015	Ollivier et al.
8,457,742	B2	6/2013	Jacobson	2016/0067446	A1	3/2016	Klenk et al.
8,478,429	B2	7/2013	Walker et al.	2016/0096001	A1	4/2016	Eidenschink et al.
8,478,430	B2	7/2013	Sommer et al.	2016/0213919	A1	7/2016	Suwito et al.
8,489,205	B2	7/2013	Stotts et al.	2016/0331325	A1	11/2016	Munsinger et al.
8,500,757	B2	8/2013	Miraki et al.	2016/0354600	A1	12/2016	Kolberg et al.
8,504,156	B2	8/2013	Bonner et al.	2017/0043155	A1	2/2017	Marshall et al.
8,527,068	B2	9/2013	Ostroff	2017/0072191	A1	3/2017	Ma et al.
8,543,224	B2	9/2013	Foster et al.	2017/0105762	A1*	4/2017	Bloom A61B 17/3468
D691,274	S *	10/2013	Buckels D24/167	2017/0106185	A1*	4/2017	Orts A61N 1/0573
8,560,087	B2	10/2013	Foster	2017/0119555	A1	5/2017	Bayer
8,694,128	B2	4/2014	Seifert et al.	2017/0120042	A1	5/2017	Becker et al.
8,755,909	B2	6/2014	Sommer et al.	2017/0143980	A1	5/2017	Soltis et al.
8,812,134	B2	8/2014	Foster et al.	2017/0165454	A1	6/2017	Tuohy et al.
8,874,232	B2	10/2014	Chen	2017/0189669	A1	7/2017	Kamarajugadda et al.
8,923,985	B2	12/2014	Clark et al.	2017/0239464	A1	8/2017	Taubert et al.
8,948,883	B2	2/2015	Eggen et al.	2017/0252035	A1	9/2017	Miraki
8,954,168	B2	2/2015	Foster	2017/0281261	A1	10/2017	Shuros et al.
9,020,611	B2	4/2015	Khairkhahan et al.	2018/0028805	A1	2/2018	Anderson et al.
9,056,180	B2	6/2015	Powell et al.	2018/0071543	A1	3/2018	Taff et al.
9,089,695	B2	7/2015	Seifert et al.	2018/0133464	A1	5/2018	Taubert et al.
9,126,032	B2	9/2015	Khairkhahan et al.	2018/0207434	A1	7/2018	Webb et al.
9,186,209	B2	11/2015	Weber et al.	2018/0221014	A1	8/2018	Darabian
9,216,298	B2	12/2015	Jacobson	2018/0236244	A1	8/2018	Stevenson et al.
9,242,102	B2	1/2016	Khairkhahan et al.	2018/0264274	A1	9/2018	Haasl et al.
9,272,155	B2	3/2016	Ostroff	2019/0275340	A1*	9/2019	Eby A61N 1/362
9,333,342	B2	5/2016	Haasl et al.	2019/0290323	A1*	9/2019	Chun A61N 1/372
9,333,344	B2	5/2016	Foster				
9,358,387	B2	6/2016	Suwito et al.				
9,358,400	B2	6/2016	Jacobson				
9,393,427	B2	7/2016	Schmidt et al.				
9,421,384	B2	8/2016	Taff et al.				
9,468,773	B1	10/2016	Anderson et al.				
9,480,850	B2	11/2016	Schmidt et al.				
9,492,674	B2	11/2016	Schmidt et al.				
9,517,336	B2	12/2016	Eggen et al.				
9,579,500	B2	2/2017	Rys et al.				
9,682,230	B2	6/2017	Zhang et al.				
9,694,172	B2	7/2017	Foster et al.				
9,700,732	B2	7/2017	Schmidt et al.				
9,724,126	B2	8/2017	Gerber et al.				
9,770,586	B2	9/2017	Doerr et al.				
9,775,982	B2	10/2017	Grubac et al.				
9,795,781	B2	10/2017	Schmidt et al.				
9,808,617	B2	11/2017	Ostroff et al.				
9,827,414	B2	11/2017	Doerr et al.				
9,867,964	B2	1/2018	Drake et al.				
9,899,778	B2	2/2018	Hanson et al.				
9,907,952	B2	3/2018	Sommer et al.				
9,907,953	B2	3/2018	Orts et al.				
9,943,682	B2	4/2018	Eggen et al.				
9,993,648	B2	6/2018	Kelly et al.				
10,028,832	B2	7/2018	Quill et al.				
10,046,167	B2	8/2018	Schmidt et al.				
10,071,243	B2	9/2018	Kuhn et al.				
10,080,887	B2	9/2018	Schmidt et al.				
10,080,888	B2	9/2018	Kelly et al.				
10,092,744	B2	10/2018	Sommer et al.				
10,099,050	B2	10/2018	Chen et al.				
10,188,425	B2	1/2019	Khairkhahan et al.				
2002/0103510	A1*	8/2002	Bardy A61N 1/375 607/5				
2003/0065374	A1	4/2003	Honeck				
2003/0114908	A1	6/2003	Flach				
2004/0102830	A1	5/2004	Williams				
2009/0118776	A1	5/2009	Kelsch et al.				
2009/0234368	A1	9/2009	Gore				
2010/0023095	A1*	1/2010	Stevenson A61N 1/08 607/63				
2010/0152799	A1*	6/2010	Sanghera A61N 1/0504 607/5				
2012/0109148	A1	5/2012	Bonner et al.				
2013/0331920	A1	12/2013	Ospka				
2014/0275919	A1*	9/2014	Katra A61B 5/0031 600/374				
2015/0025350	A1	1/2015	Schnittker				

FOREIGN PATENT DOCUMENTS

EP	1835962	A1	9/2007
EP	1835962	B1	4/2015
EP	2 651 502	B1	11/2016
EP	3 056 157	B1	3/2018
EP	3106201	B1	11/2018
WO	2006045073	A1	4/2006
WO	2007047681	A1	4/2007
WO	2012051235	A1	4/2012

OTHER PUBLICATIONS

U.S. Appl. No. 61/422,622, entitled "Pacemaker Retrieval Systems and Methods," Khairkhahan, et al., 32 3 pgs. (Dec. 13, 2010).

* cited by examiner

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(57) CLAIM

The ornamental design for a leadless biostimulator attachment feature, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a leadless biostimulator attachment feature showing our new design; FIG. 2 is a front elevation view thereof, the rear elevation view being a mirror image; FIG. 3 is a right side view thereof, the left side view being a mirror image; FIG. 4 is a top view thereof; and, FIG. 5 is a bottom view thereof. The broken lines illustrate portions of the leadless biostimulator attachment feature that form no part of the claimed design; the broken lines form no part of the claimed design.

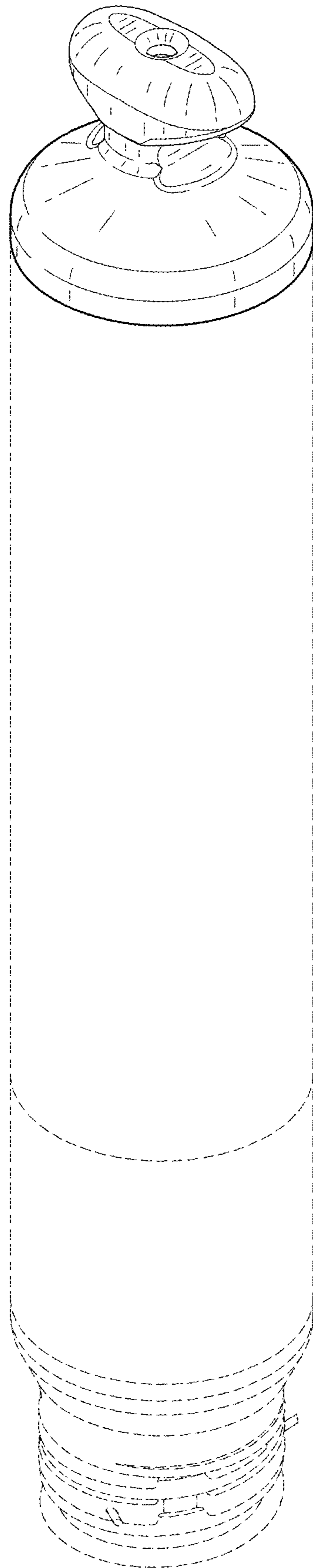


FIG. 1

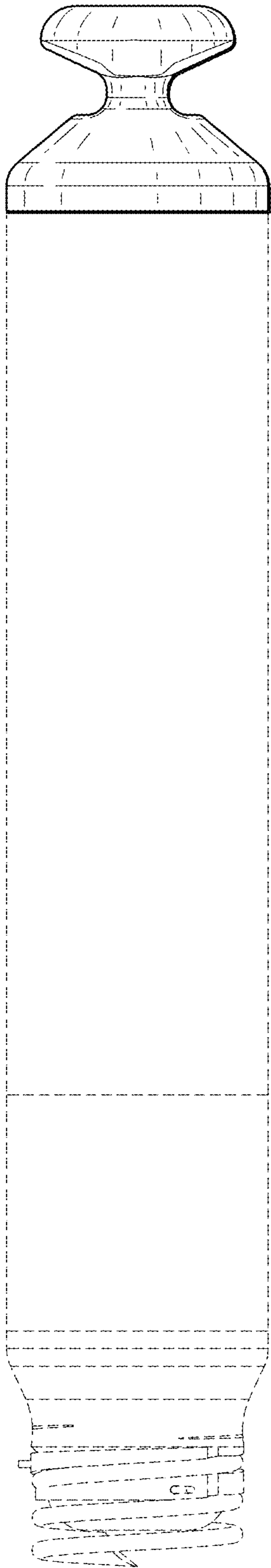


FIG. 2

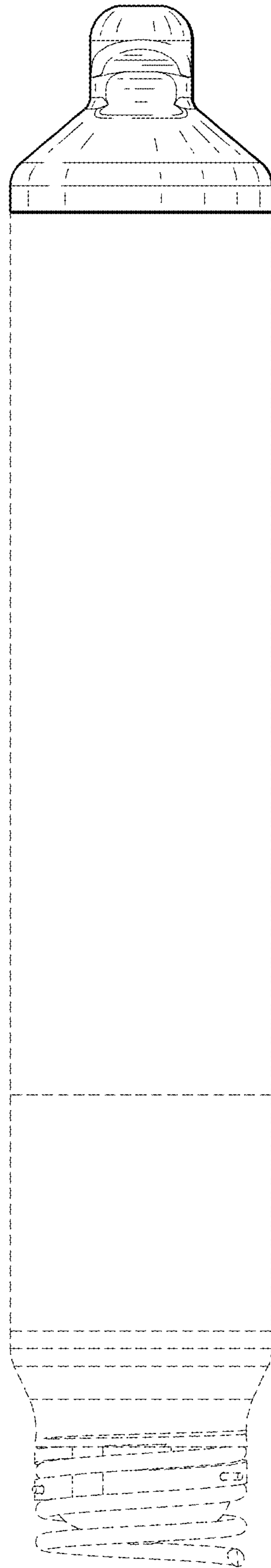


FIG. 3

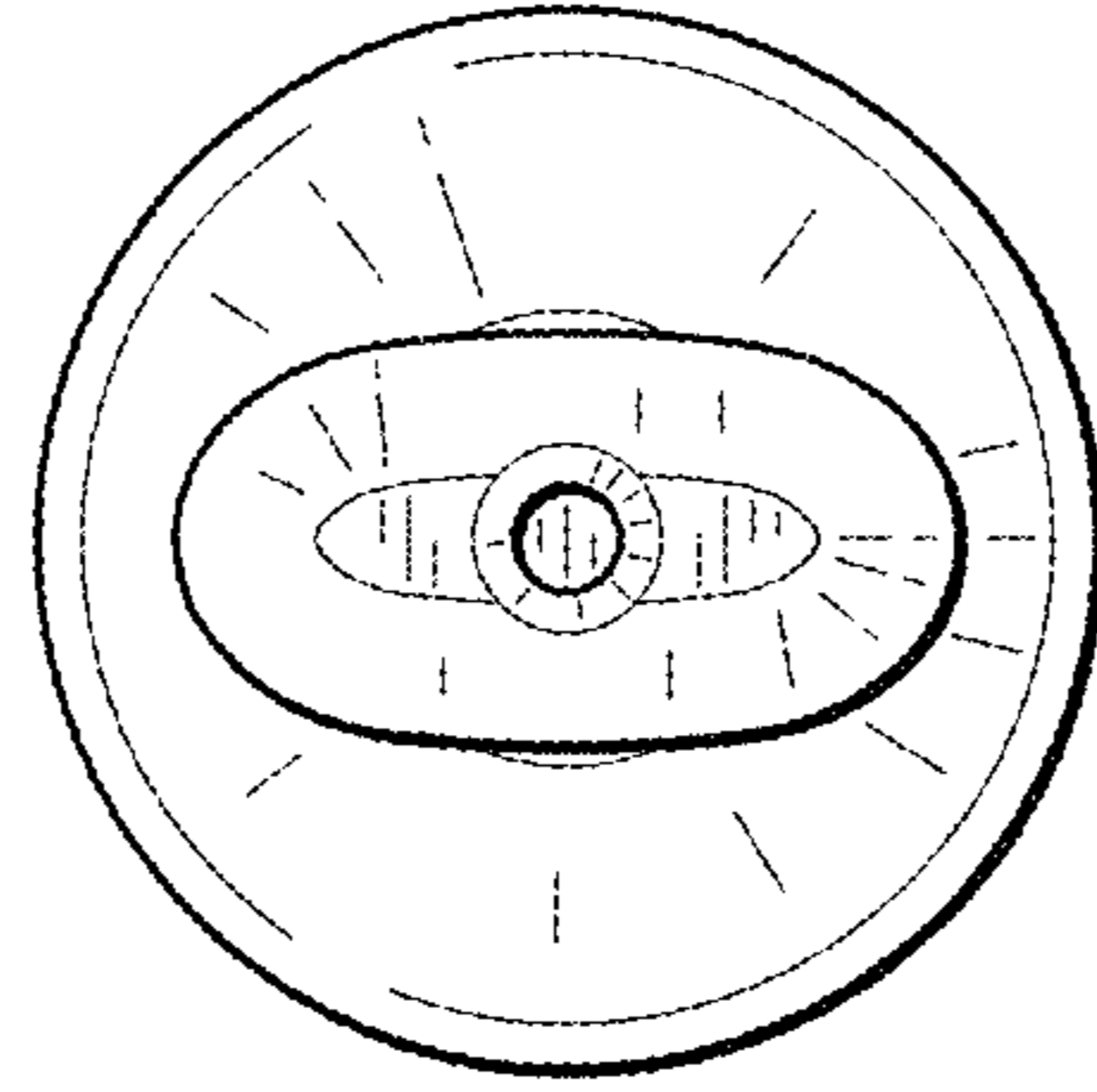


FIG. 4

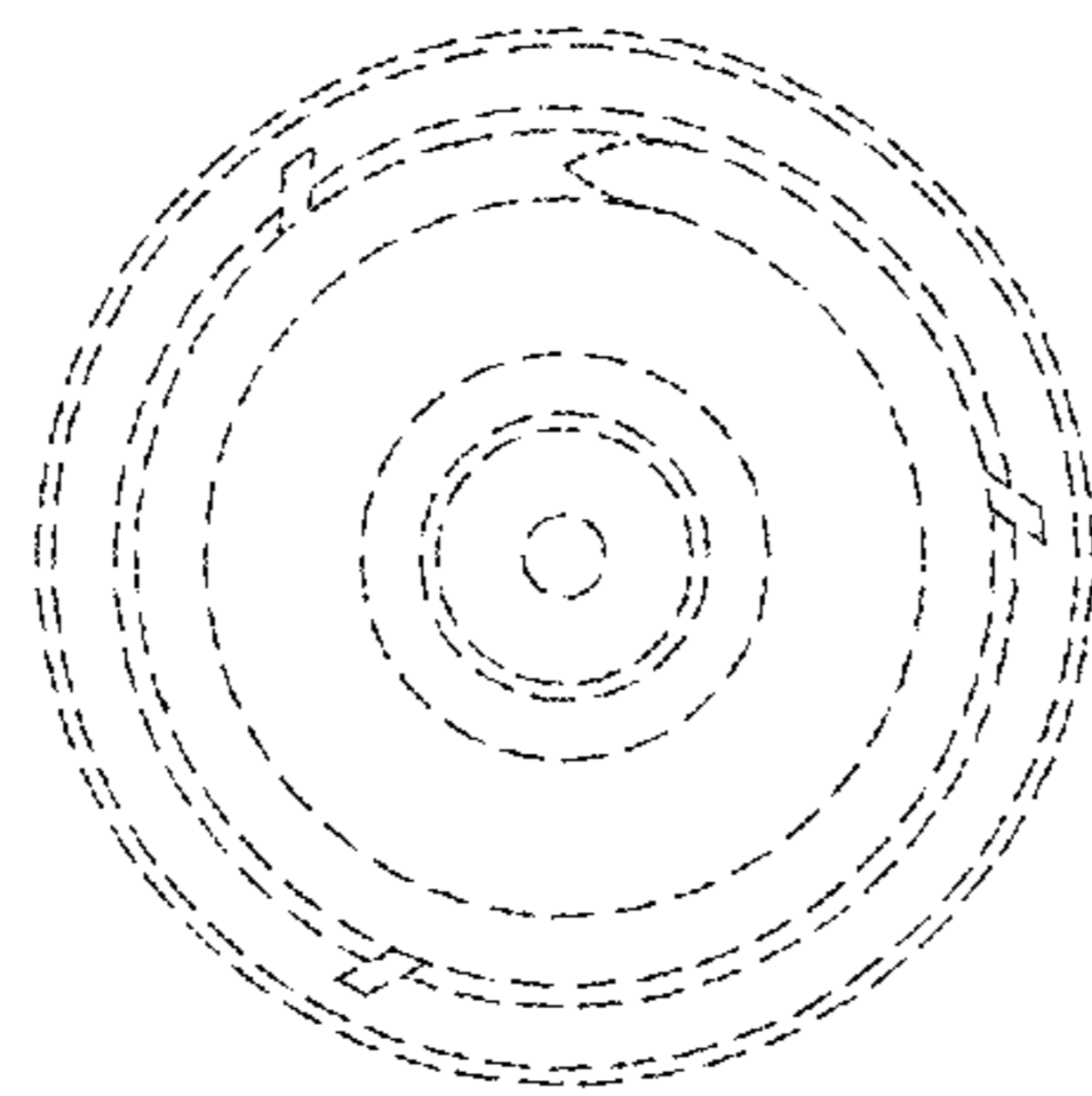


FIG. 5