



US00D848747S

(12) **United States Design Patent** (10) **Patent No.:** **US D848,747 S**
Courtney et al. (45) **Date of Patent:** **** May 21, 2019**

(54) **DENTAL APPLIANCE**

(71) Applicant: **Dyson Technology Limited**, Wiltshire (GB)

(72) Inventors: **Stephen Benjamin Courtney**, Bath (GB); **Timothy Nicholas Stickney**, Gloucester (GB); **Thomas James Dunning Follows**, Swindon (GB)

(73) Assignee: **Dyson Technology Limited**, Malmesbury, Wiltshire (GB)

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

(21) Appl. No.: **29/602,369**

(22) Filed: **May 1, 2017**

(30) **Foreign Application Priority Data**

Nov. 2, 2016 (GB) 6002230
Nov. 2, 2016 (GB) 6002235

(51) **LOC (11) Cl.** **04-02**

(52) **U.S. Cl.**
USPC **D4/101; D4/116**

(58) **Field of Classification Search**
USPC D4/100, 101, 102, 104, 105, 106, 107, D4/108, 109, 110, 111, 112, 113, 114,
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,051,815 A 1/1913 Morgan
D84,131 S 5/1931 D' Ayrenx et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 304361403 * 11/2017
GB 2538299 A * 11/2016
(Continued)

OTHER PUBLICATIONS

“Dyson’s next device could be a smart Toothbrush . . . ” by Harry Pettit [on-line]. Published Nov. 24, 2016; updated Dec. 1, 2016; retrieved from Internet Apr. 14, 2018. URL: <http://www.dailymail.co.uk/sciencetech/article-3968756/Dyson-s-invention-smart-TOOTBRUSH-flosses-teeth-water-clean-them.html>. (5 pgs) (Year: 2016).*

(Continued)

Primary Examiner — Karen E Eldridge Powers

(74) *Attorney, Agent, or Firm* — Morrison & Foerster LLP

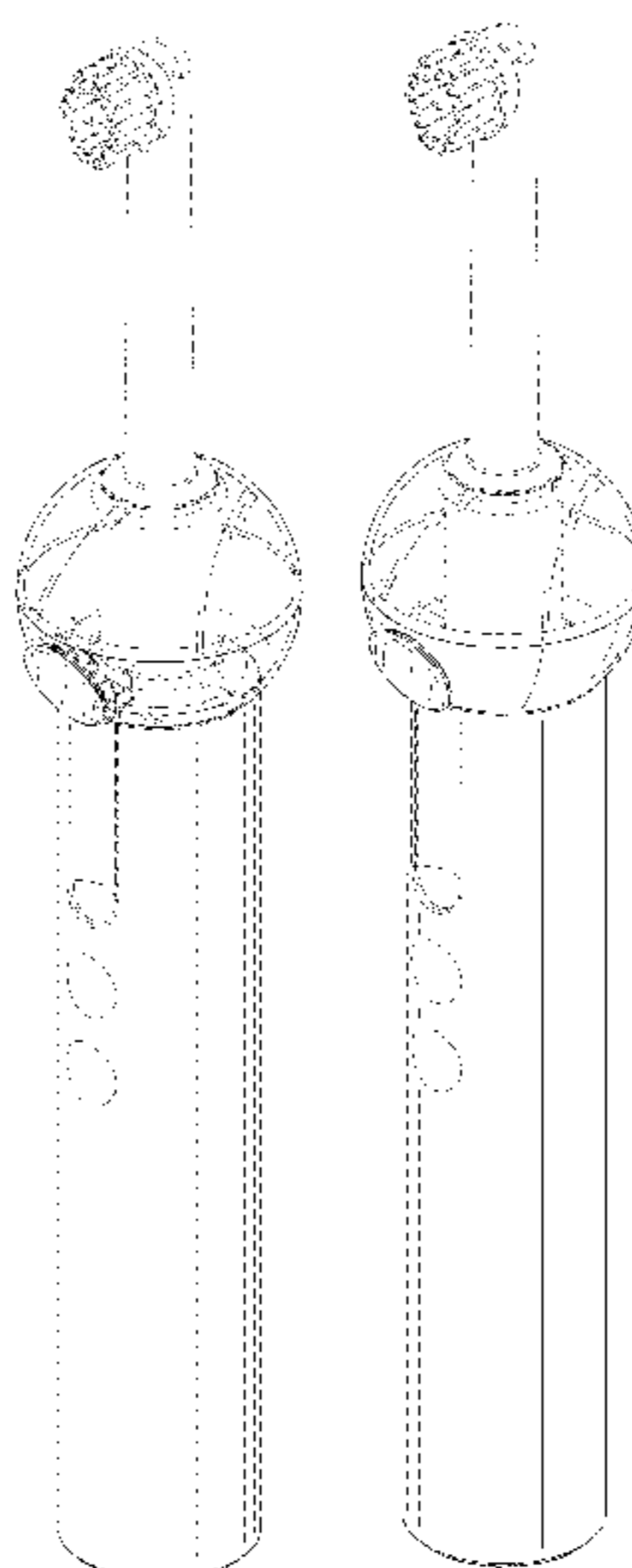
(57) **CLAIM**

We claim the ornamental design for a dental appliance, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a dental appliance showing our new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a side elevational view thereof;
FIG. 5 is a side elevational view of the opposite side of the design as that shown in FIG. 4;
FIG. 6 is a top plan view thereof;
FIG. 7 is a bottom plan view thereof;
FIG. 8 is a perspective view of another embodiment of a dental appliance showing our new design;
FIG. 9 is a front elevational view thereof;
FIG. 10 is a rear elevational view thereof;
FIG. 11 is a side elevational view thereof;
FIG. 12 is a side elevational view of the opposite side of the design as that shown in FIG. 11;
FIG. 13 is a top plan view thereof; and,
FIG. 14 is a bottom plan view thereof.
The broken lines shown in the drawings illustrate portions of a dental appliance that form no part of the claimed design.

1 Claim, 14 Drawing Sheets



US D848,747 S

(58) **Field of Classification Search**

USPC D4/115, 116, 117, 118, 119, 120, 121,
D4/122, 123, 124, 125, 126, 127, 128,
D4/129, 130, 132, 133, 134, 136, 138,
D4/199; D24/111, 127, 152, 177
CPC A46B 11/0062; A46B 13/04; A46B
2200/1066; A46B 11/00; A46B 13/00;
A46B 15/0097

See application file for complete search history.

6,047,429 A * 4/2000 Wu A61C 17/36
15/29
D423,784 S 5/2000 Joulin
D428,704 S 8/2000 Wildman
D433,232 S 11/2000 Stützer et al.
D433,813 S 11/2000 Stützer et al.
D433,814 S 11/2000 Blaustein et al.
D436,254 S 1/2001 Kling et al.
D440,766 S 4/2001 Hartwein et al.
6,220,772 B1 * 4/2001 Taylor A61C 17/227
401/150
D445,831 S * 7/2001 Lindner D19/162
D446,022 S 8/2001 Vonarburg et al.
D451,244 S 11/2001 Chen et al.
6,332,233 B1 * 12/2001 Proulx A46B 5/02
15/143.1

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,847,495 A 3/1932 Priest
1,959,601 A * 5/1934 Schulse G04B 19/2534
362/809
2,036,706 A 4/1936 Law
D113,432 S 2/1939 Newman
2,318,460 A 5/1943 Brief
D153,130 S 3/1949 Fischer
2,490,185 A * 12/1949 Work G09B 27/08
362/809
D197,763 S * 3/1964 Aymar D4/101
3,370,415 A * 2/1968 McIlvaine G04B 19/22
368/24
3,728,035 A * 4/1973 Reitknecht A46B 11/0079
401/175
3,734,106 A * 5/1973 Zimmerman A46B 5/0095
132/311
D230,654 S 3/1974 Fishbein
D258,237 S 2/1981 Anspach
4,277,194 A * 7/1981 Smith A46B 11/0027
222/326
D264,359 S * 5/1982 Grubb D21/406
4,344,184 A 8/1982 Edwards
D276,935 S 12/1984 Fattaleh
4,761,138 A * 8/1988 Niesyn G04B 19/26
434/136
D301,400 S 6/1989 Berendsen et al.
4,949,875 A * 8/1990 Kuo A46B 11/0006
222/156
D310,368 S 9/1990 Derhaag et al.
D315,831 S 4/1991 Kawano
D319,170 S 8/1991 Franke
D320,275 S 9/1991 Wada et al.
D321,285 S 11/1991 Hirabayashi
5,062,728 A * 11/1991 Kuo A46B 11/0017
401/150
D323,326 S 1/1992 Takawo
D323,745 S 2/1992 Stuart
D336,567 S 6/1993 Glover et al.
5,303,109 A 4/1994 Takao
5,349,480 A 9/1994 Takao
D353,490 S 12/1994 Hartwein
D354,168 S 1/1995 Hartwein
5,379,271 A * 1/1995 Moedt G04B 19/226
368/24
D357,016 S 4/1995 Li et al.
D359,607 S 6/1995 Yun
D379,472 S * 5/1997 Smith D19/131
D384,207 S 9/1997 Underwood
D385,702 S 11/1997 Okada
D387,805 S * 12/1997 Hsu D19/61
D388,958 S 1/1998 Hartwein
D393,016 S 3/1998 Young
D396,957 S 8/1998 Allende
5,815,872 A 10/1998 Meginniss, III et al.
D401,270 S * 11/1998 Cockram D18/16
D403,864 S 1/1999 Holland et al.
D411,483 S 6/1999 Greene, Jr.
D411,769 S 7/1999 Wright
D413,729 S 9/1999 Jansheski, Jr.
D417,082 S * 11/1999 Classen D24/111
D419,305 S 1/2000 Porter et al.

D453,996 S 3/2002 Kling et al.
D455,010 S 4/2002 Kling
D455,556 S 4/2002 Kling
D456,608 S 5/2002 Lim
D456,996 S * 5/2002 McCurrach D4/101
D458,028 S 6/2002 McCurrach
D458,029 S 6/2002 Li
6,422,974 B1 * 7/2002 Schimmel A63B 23/16
446/15
D462,174 S 9/2002 Schaber
6,461,164 B1 * 10/2002 Ramelli A46B 5/00
15/167.1
D465,279 S 11/2002 Etter et al.
D468,422 S * 1/2003 McCurrach D24/111
D476,156 S 6/2003 Ferber et al.
D477,716 S 7/2003 Roberson
D478,212 S * 8/2003 Winkler D4/104
D478,214 S * 8/2003 Winkler D4/104
D478,423 S 8/2003 Mulder et al.
D483,182 S 12/2003 Blaustein et al.
D487,911 S * 3/2004 Cheney D21/713
D492,717 S 7/2004 Cohen
D492,996 S * 7/2004 Rehkemper D24/111
6,766,549 B2 * 7/2004 Klupt A61C 17/28
15/22.1
D497,481 S 10/2004 Porter et al.
D499,554 S * 12/2004 Ramelli D4/107
D500,136 S 12/2004 Rehkemper et al.
D500,209 S 12/2004 Kellogg
D500,599 S 1/2005 Callaghan
D501,605 S * 2/2005 Brown, Jr. D4/101
D503,852 S 4/2005 Hensel
D504,911 S * 5/2005 Ng D19/135
D508,776 S 8/2005 Kling et al.
D509,362 S 9/2005 Maeda
7,007,331 B2 3/2006 Davics et al.
D521,681 S * 5/2006 Xu D21/713
D527,187 S 8/2006 Ramelli
D527,527 S * 9/2006 Ramelli D4/107
D528,176 S * 9/2006 Milliken D21/713
D531,240 S * 10/2006 Geisendorfer D21/713
D531,811 S 11/2006 Cochran
D532,974 S 12/2006 Zhuan
D533,720 S 12/2006 Vu
D534,728 S 1/2007 Vu
D541,049 S * 4/2007 Huang D28/63
D549,209 S 8/2007 Bauman et al.
D556,453 S 12/2007 Sprosta et al.
D556,455 S * 12/2007 Williams D4/108
D562,488 S 2/2008 Weiser
D569,623 S 5/2008 Beedham
7,389,781 B2 6/2008 Kemp et al.
D572,007 S * 7/2008 Lamason D4/101
D577,199 S 9/2008 Zhuan
D579,664 S 11/2008 Fisher et al.
D579,666 S 11/2008 Jamson
D580,173 S * 11/2008 Beedham D4/101
D583,052 S 12/2008 Kagawa
D586,125 S 2/2009 Winkler et al.
D588,364 S 3/2009 Nanda
D589,255 S 3/2009 Taylor et al.
7,527,446 B2 * 5/2009 Johnson Papa A46B 11/001
401/123

(56)

References Cited

U.S. PATENT DOCUMENTS

D595,366 S * 6/2009 Katzke D21/713
 D595,771 S * 7/2009 Oas D19/177
 D598,653 S * 8/2009 Crossman D4/101
 D598,806 S 8/2009 Rosenkötter
 D599,555 S * 9/2009 Oliphant D4/101
 D612,611 S * 3/2010 Brown, Jr. D4/101
 D621,455 S * 8/2010 Chernick D21/398
 D627,971 S * 11/2010 Battaglia D4/104
 D634,547 S 3/2011 Botelho
 D636,604 S 4/2011 Zhuan
 D637,817 S 5/2011 Smith
 D645,922 S * 9/2011 Wu D21/398
 D649,787 S 12/2011 Ivarsson
 D657,954 S * 4/2012 Gebski D4/101
 D658,883 S 5/2012 Winkler et al.
 D669,274 S 10/2012 Meurrens
 D669,978 S 10/2012 Gebski et al.
 8,317,424 B2 * 11/2012 Chenvainu A61C 1/0061
 401/188 R
 D673,225 S * 12/2012 Heidrich D21/400
 8,434,190 B2 * 5/2013 Stief A46B 3/16
 15/167.1
 8,444,416 B2 * 5/2013 Chenvainu A46B 11/0079
 15/167.1
 D688,464 S 8/2013 Hara
 D688,877 S 9/2013 Li
 D689,125 S 9/2013 Lochen
 D689,698 S 9/2013 Dickie et al.
 D690,369 S * 9/2013 Wu D21/464
 D693,581 S * 11/2013 Ballmaier D4/104
 D694,524 S 12/2013 Erskine-Smith
 D696,024 S * 12/2013 Shigeno D4/101
 D696,517 S * 12/2013 Gebski D4/101
 D701,388 S 3/2014 Chuanzhou et al.
 D702,946 S * 4/2014 Shigeno D4/101
 D704,337 S 5/2014 Dunn
 D706,033 S 6/2014 Dickie et al.
 D707,764 S * 6/2014 Deveaux D21/713
 D708,440 S * 7/2014 Owen D4/102
 D711,988 S * 8/2014 Gubany D21/709
 D712,988 S * 9/2014 Sagedahl D21/713
 D713,391 S 9/2014 Ibuki et al.
 D718,056 S 11/2014 Masee et al.
 D718,057 S 11/2014 Masee et al.
 D719,737 S 12/2014 Adriaenssen et al.
 D724,679 S * 3/2015 Martyn D21/707
 D727,445 S * 4/2015 Virannontez D21/713
 9,039,642 B2 5/2015 Lee
 D735,280 S * 7/2015 O'Malley D21/713
 D736,870 S * 8/2015 Nagi D21/707
 D738,968 S * 9/2015 Oz D21/659
 D741,423 S * 10/2015 Holland D21/713
 9,154,025 B2 10/2015 Schaefer et al.
 D742,649 S 11/2015 Thompson
 D749,851 S 2/2016 Watkins
 D749,852 S 2/2016 Since
 9,265,334 B1 2/2016 Fung-A-Wing
 D751,821 S 3/2016 Since
 D752,868 S 4/2016 McGarry et al.
 D757,439 S 5/2016 Shigeno et al.
 D758,079 S 6/2016 Since
 D758,080 S 6/2016 Since
 D758,736 S * 6/2016 Shigeno D4/101
 D759,382 S * 6/2016 Watkins D4/101
 D761,567 S * 7/2016 Uchida D4/101
 D766,580 S 9/2016 Kollar et al.
 D766,581 S * 9/2016 Bloch D4/101
 D767,895 S 10/2016 Stebila et al.
 D768,386 S 10/2016 Demarest et al.
 D773,192 S 12/2016 Nabavi
 D773,822 S * 12/2016 Sikora D4/101
 D774,144 S * 12/2016 Fjelstad D21/373
 D775,288 S * 12/2016 Spiegler D21/713
 D777,442 S 1/2017 White et al.
 D780,456 S 3/2017 Shigeno et al.

D787,189 S * 5/2017 Fretwell D4/101
 9,668,598 B2 * 6/2017 Wartersian A47G 21/04
 D790,859 S 7/2017 McGarry et al.
 D790,861 S 7/2017 Demarest et al.
 D791,485 S 7/2017 McGarry et al.
 9,700,129 B2 * 7/2017 Follows A61C 17/0202
 D795,419 S 8/2017 Kohler
 9,743,749 B2 8/2017 Follows et al.
 D798,060 S * 9/2017 Shigeno D4/101
 D799,217 S * 10/2017 Masee D4/101
 D799,756 S 10/2017 Fox
 D801,696 S 11/2017 McGarry et al.
 9,814,302 B2 11/2017 Follows et al.
 9,820,563 B2 11/2017 Follows et al.
 D804,918 S 12/2017 Lipford
 D806,228 S 12/2017 Yan
 9,839,284 B2 12/2017 Follows et al.
 D810,513 S 2/2018 McCoy et al.
 D814,195 S 4/2018 Sikora et al.
 2001/0034917 A1 11/2001 DuCey
 2004/0187889 A1 9/2004 Kemp et al.
 2006/0078844 A1 * 4/2006 Goldman A61C 1/0084
 433/80
 2006/0133885 A1 * 6/2006 Kaminski A46B 11/0058
 401/125
 2009/0007357 A1 1/2009 Meadows et al.
 2012/0272468 A1 11/2012 Weisman et al.
 2013/0007969 A1 1/2013 Driesen et al.
 2013/0091645 A1 4/2013 Suwanbutr
 2014/0246049 A1 9/2014 Ikkink et al.
 2014/0259474 A1 * 9/2014 Sokol A61C 17/0202
 15/22.2
 2015/0150664 A1 * 6/2015 Crossman A61C 17/3418
 15/22.1
 2015/0230898 A1 8/2015 Miller
 2015/0310763 A1 10/2015 Miller et al.
 2016/0015163 A1 1/2016 Newman et al.
 2016/0157596 A1 6/2016 Fifield
 2016/0331113 A1 11/2016 Follows et al.
 2016/0331114 A1 11/2016 Follows et al.
 2016/0331115 A1 11/2016 Follows et al.
 2016/0331116 A1 11/2016 Follows et al.
 2016/0331117 A1 11/2016 Follows et al.
 2016/0331497 A1 11/2016 Follows et al.
 2016/0331498 A1 11/2016 Follows et al.
 2017/0119510 A1 5/2017 Tomori et al.
 2018/0021116 A1 1/2018 Störkel et al.
 2018/0055212 A1 3/2018 Follows et al.
 2018/0084898 A1 3/2018 Vincent et al.
 2018/0085207 A1 3/2018 Tweedie et al.

FOREIGN PATENT DOCUMENTS

GB 2538308 A * 11/2016
 GB 2538309 A * 11/2016
 JP 1595568 * 1/2018
 JP 1595649 * 1/2018
 WO WO-2005/076818 A2 * 8/2005

OTHER PUBLICATIONS

Courtney et al., U.S. Office Action dated May 16, 2018, directed to U.S. Appl. No. 29/602,343; 9 pages.
 Courtney et al., U.S. Office Action dated May 16, 2018, directed to U.S. Appl. No. 29/602,351; 9 pages.
 Courtney et al., U.S. Office Action dated May 16, 2018, directed to U.S. Appl. No. 29/602,360; 7 pages.
 Courtney et al., U.S. Office Action dated Apr. 19, 2018, directed to U.S. Appl. No. 29/602,366; 14 pages.
 Courtney et al., U.S. Office Action dated Apr. 20, 2018, directed to U.S. Appl. No. 29/602,376; 16 pages.
 Courtney et al., U.S. Office Action dated Apr. 19, 2018, directed to U.S. Appl. No. 29/602,381; 17 pages.
 Courtney et al., U.S. Office Action dated May 18, 2018, directed to U.S. Appl. No. 29/602,340; 13 pages.

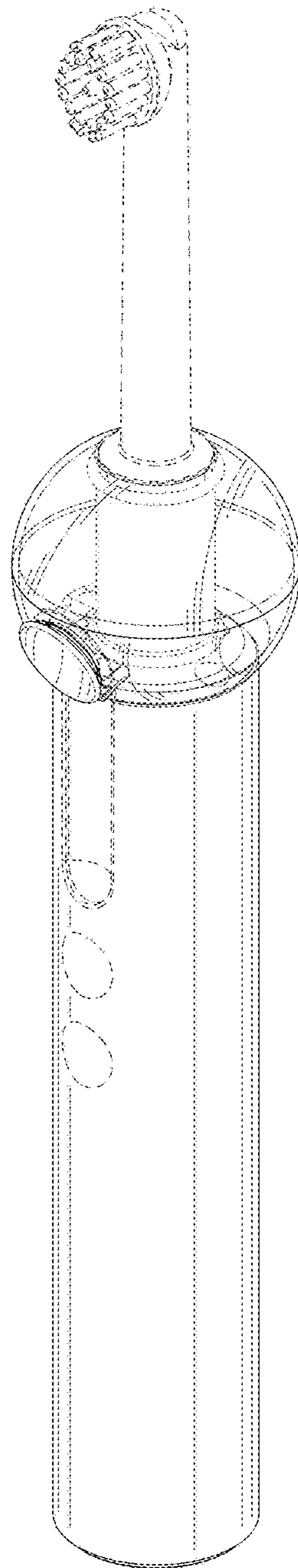


FIG. 1

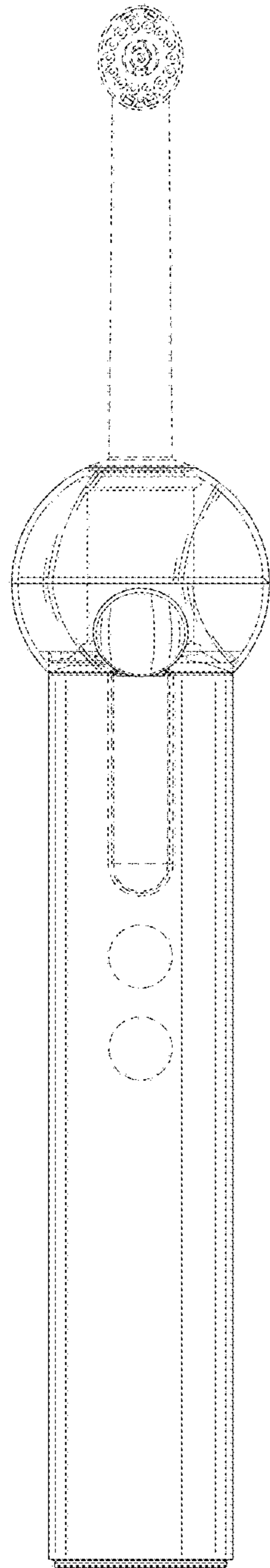


FIG. 2

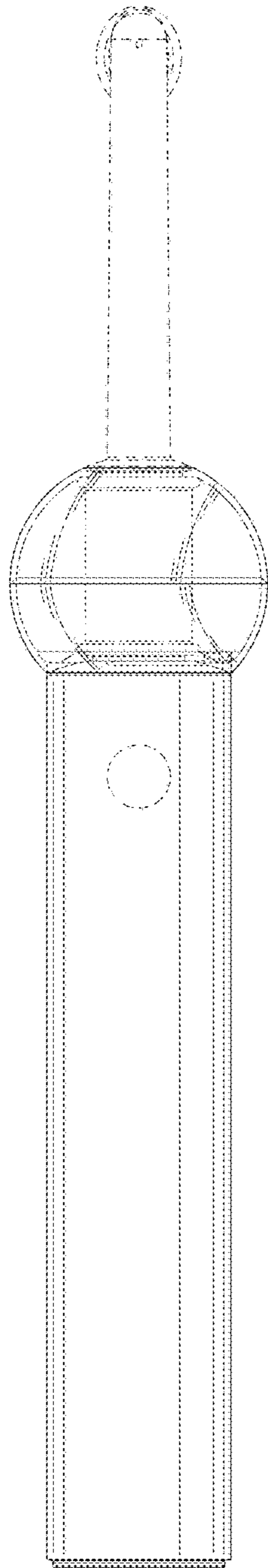


FIG. 3

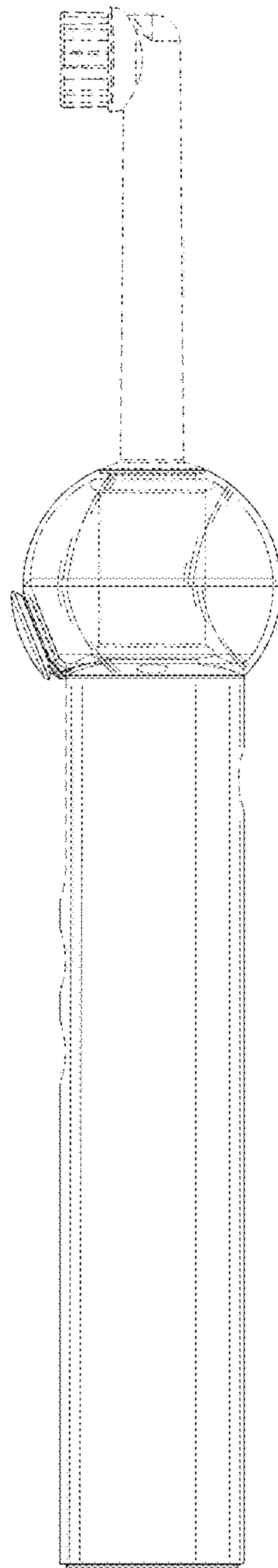


FIG. 4

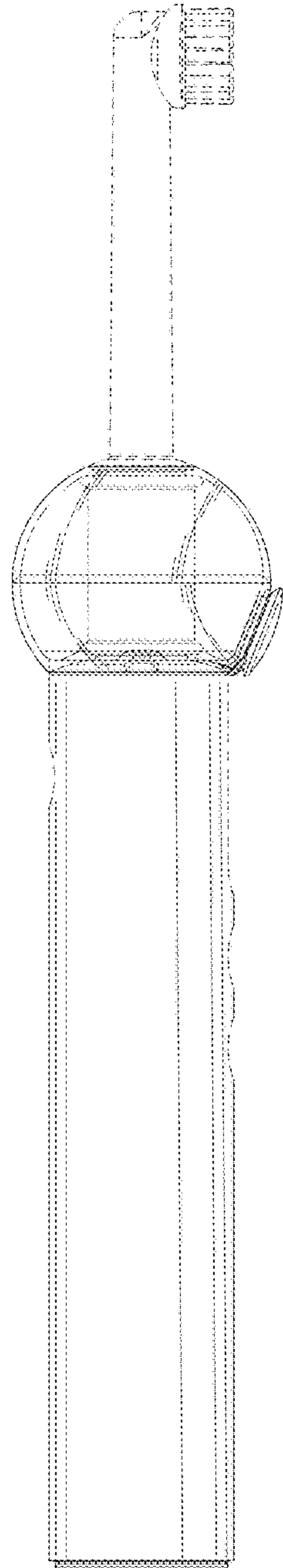


FIG. 5

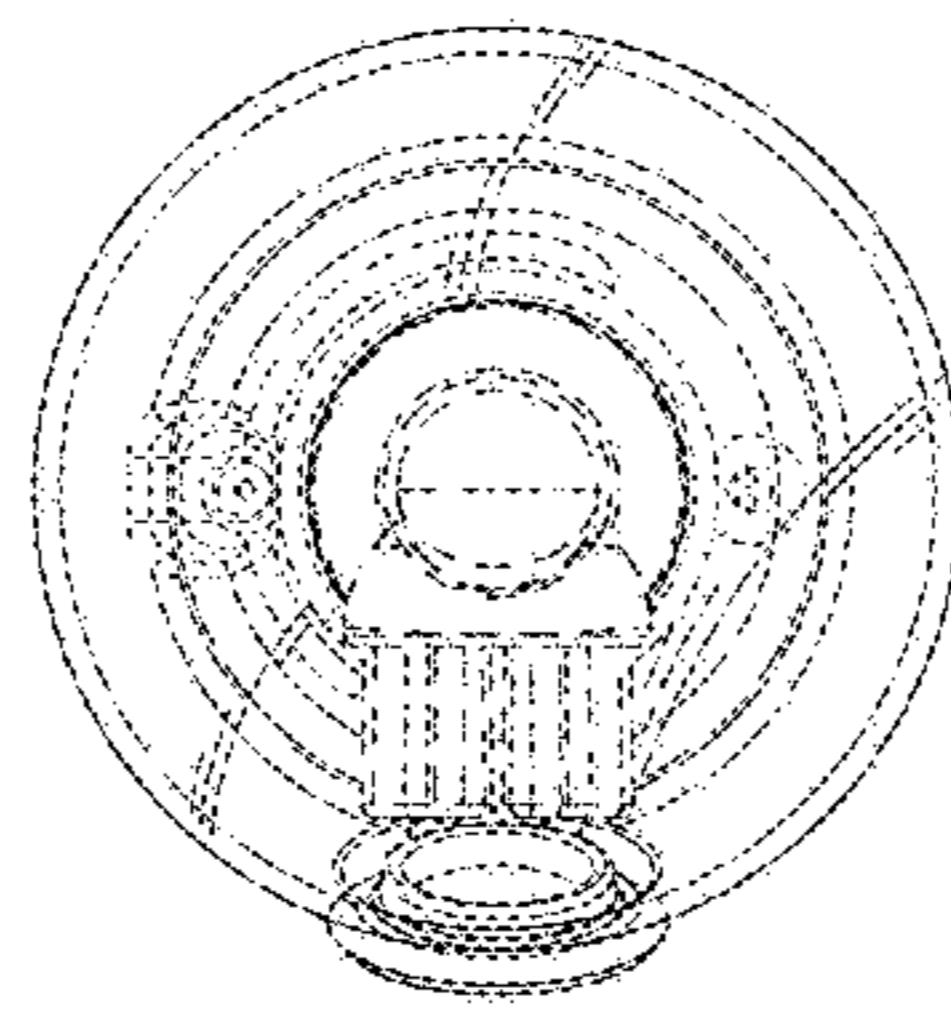


FIG. 6

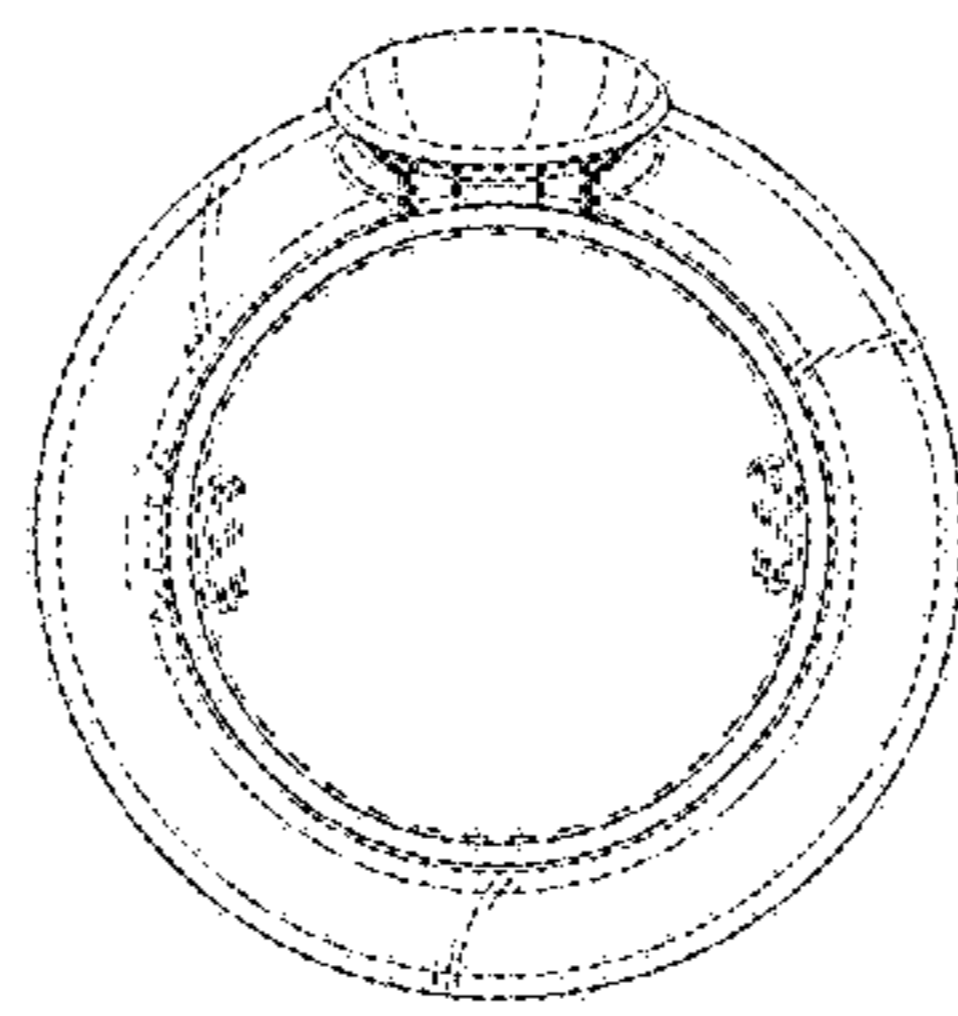


FIG. 7

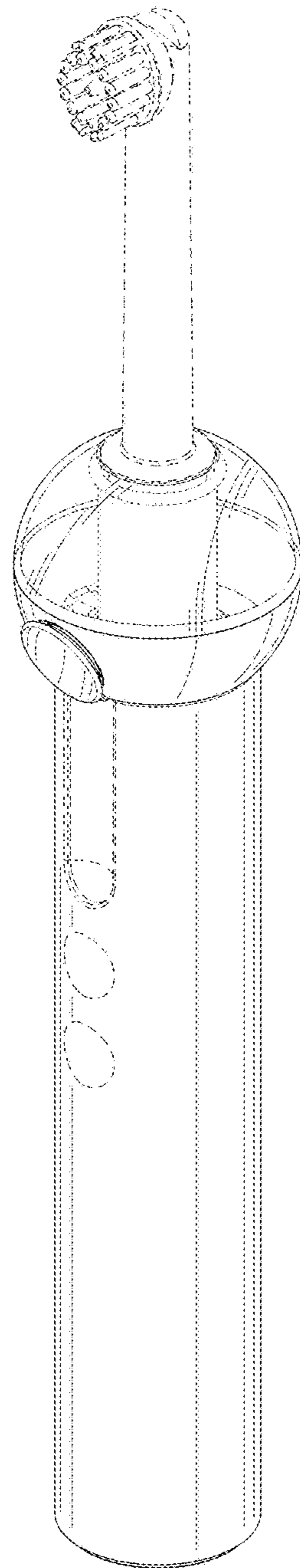


FIG. 8

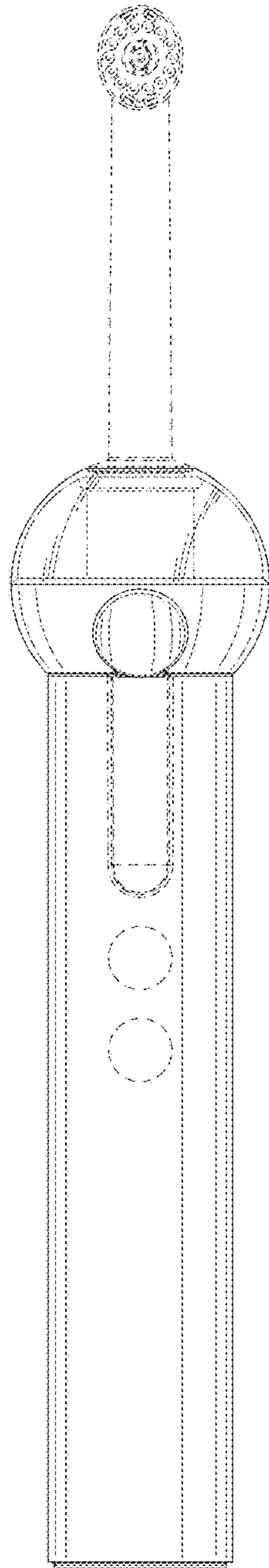


FIG. 9

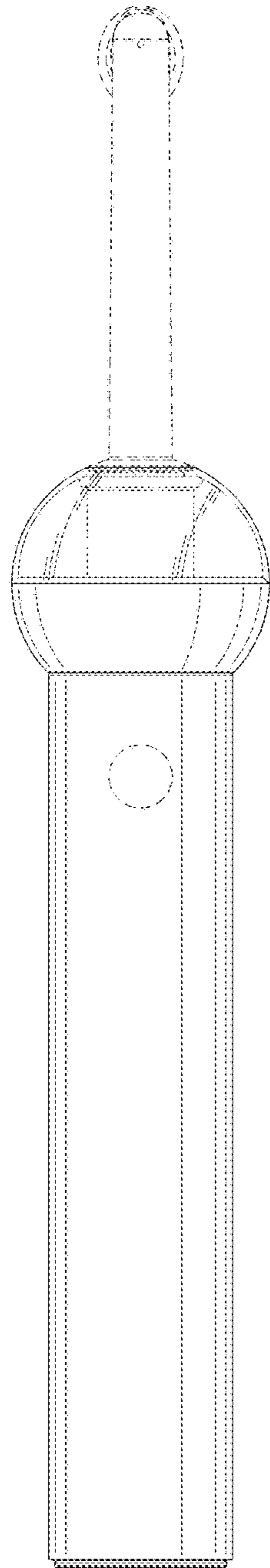


FIG. 10

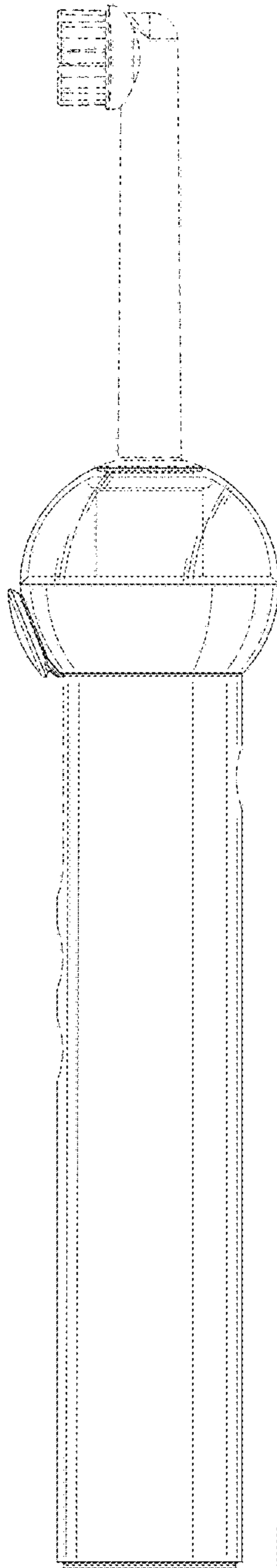


FIG. 11

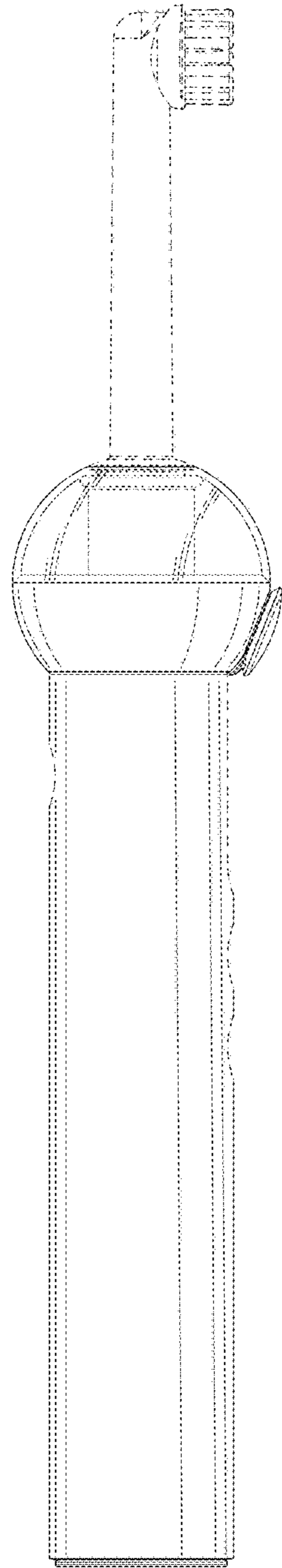


FIG. 12

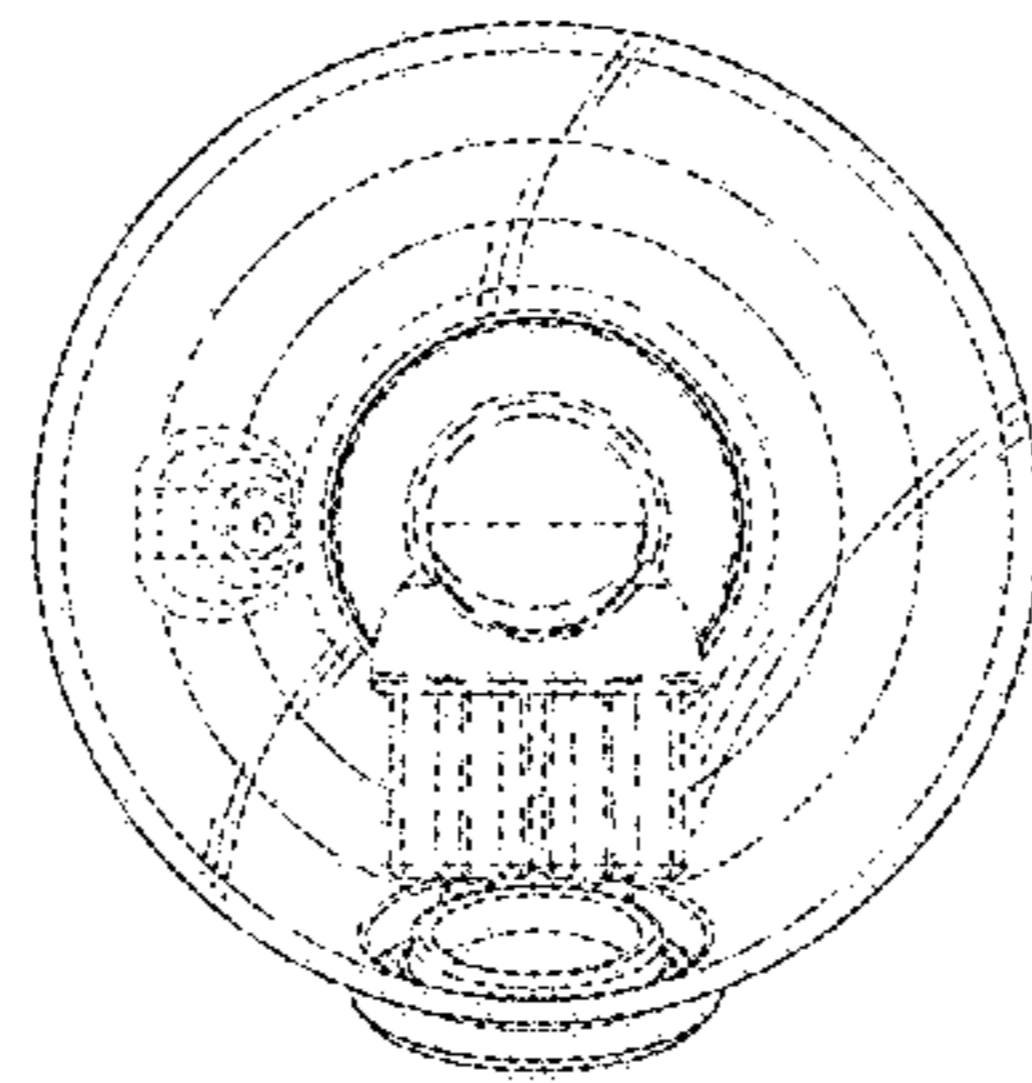


FIG. 13

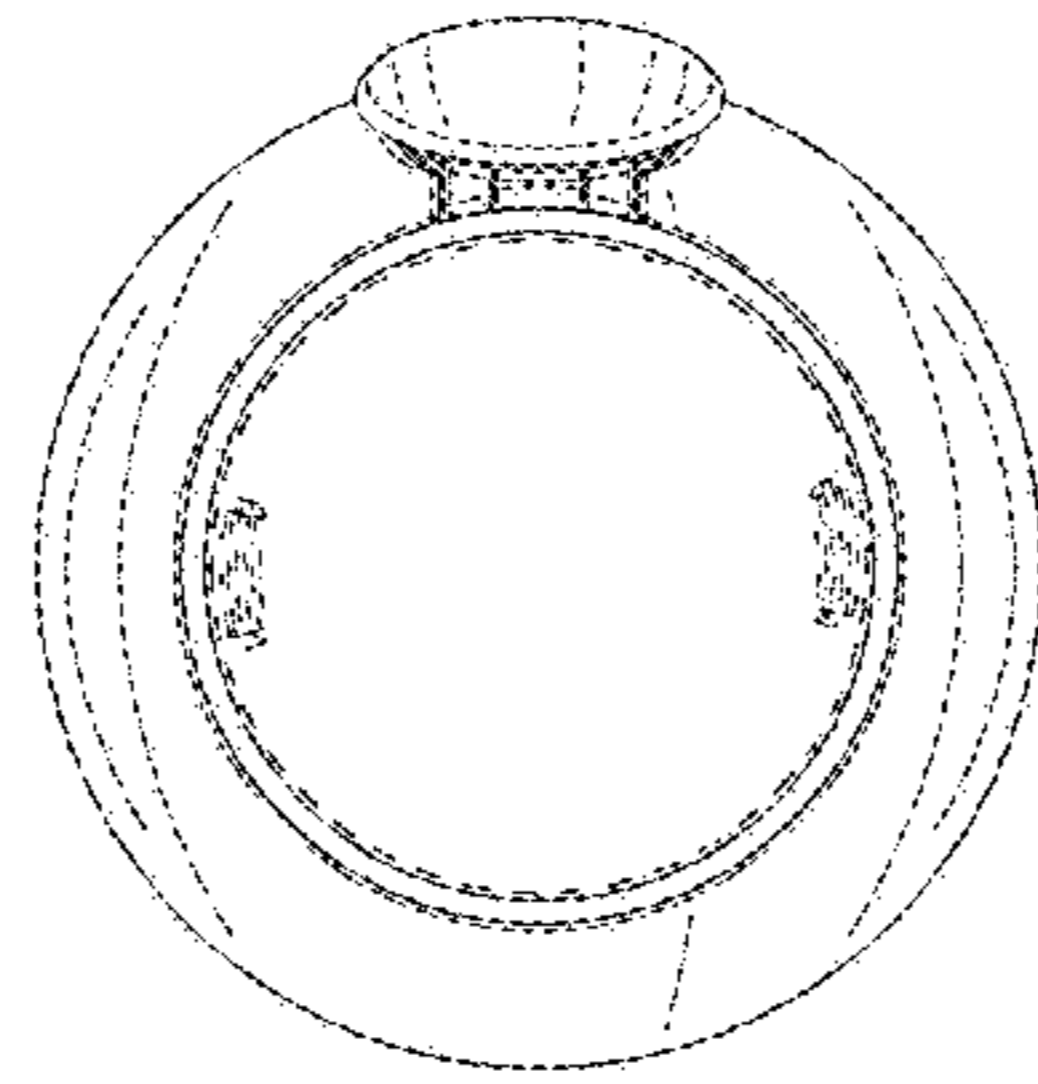


FIG. 14