



US00D822196S

(12) **United States Design Patent** (10) **Patent No.:** **US D822,196 S**
Kim (45) **Date of Patent:** **** Jul. 3, 2018**

(54) **ORAL IRRIGATOR**
(71) Applicant: **WATER PIK, INC.**, Fort Collins, CO (US)
(72) Inventor: **Hyunchul Kim**, Chicago, IL (US)
(73) Assignee: **Water Pik, Inc.**, Fort Collins, CO (US)
(**) Term: **15 Years**

1,977,782 A 10/1934 Roy
2,107,686 A 2/1938 Bramsen et al.
D159,872 S 8/1950 Skold
2,531,730 A 11/1950 Henderson
2,595,666 A 5/1952 Hutson
2,669,233 A 2/1954 Friend
2,709,227 A 5/1955 Foley et al.
2,783,919 A 3/1957 Ansell
2,794,437 A 6/1957 Tash
(Continued)

(21) Appl. No.: **29/551,615**
(22) Filed: **Jan. 14, 2016**
(51) **LOC (11) Cl.** **24-02**
(52) **U.S. Cl.**
USPC **D24/111**
(58) **Field of Classification Search**
USPC D24/108, 111-113, 133, 152, 176;
D4/101, 138
CPC A61C 17/0205; A61C 17/0202; A61C
17/224; A61C 17/20; A61C 17/005; A61C
17/028; A61C 17/02; A61C 17/36; A61C
17/00; A61C 17/0211; A61C 17/0214;
A61C 17/28; A61C 17/043; A61C 17/22;
A61C 17/222; A61C 17/225
See application file for complete search history.

FOREIGN PATENT DOCUMENTS

CA 851479 9/1970
CH 655237 4/1986
(Continued)

OTHER PUBLICATIONS

US RE27,274, 01/1972, Mattingly (withdrawn)
(Continued)

Primary Examiner — Karen E Kearney
Assistant Examiner — Lilyana Bekic
(74) *Attorney, Agent, or Firm* — Dorsey & Whitney LLP

(57) **CLAIM**

I claim the ornamental design for an oral irrigator, as shown and described.

(56) **References Cited**

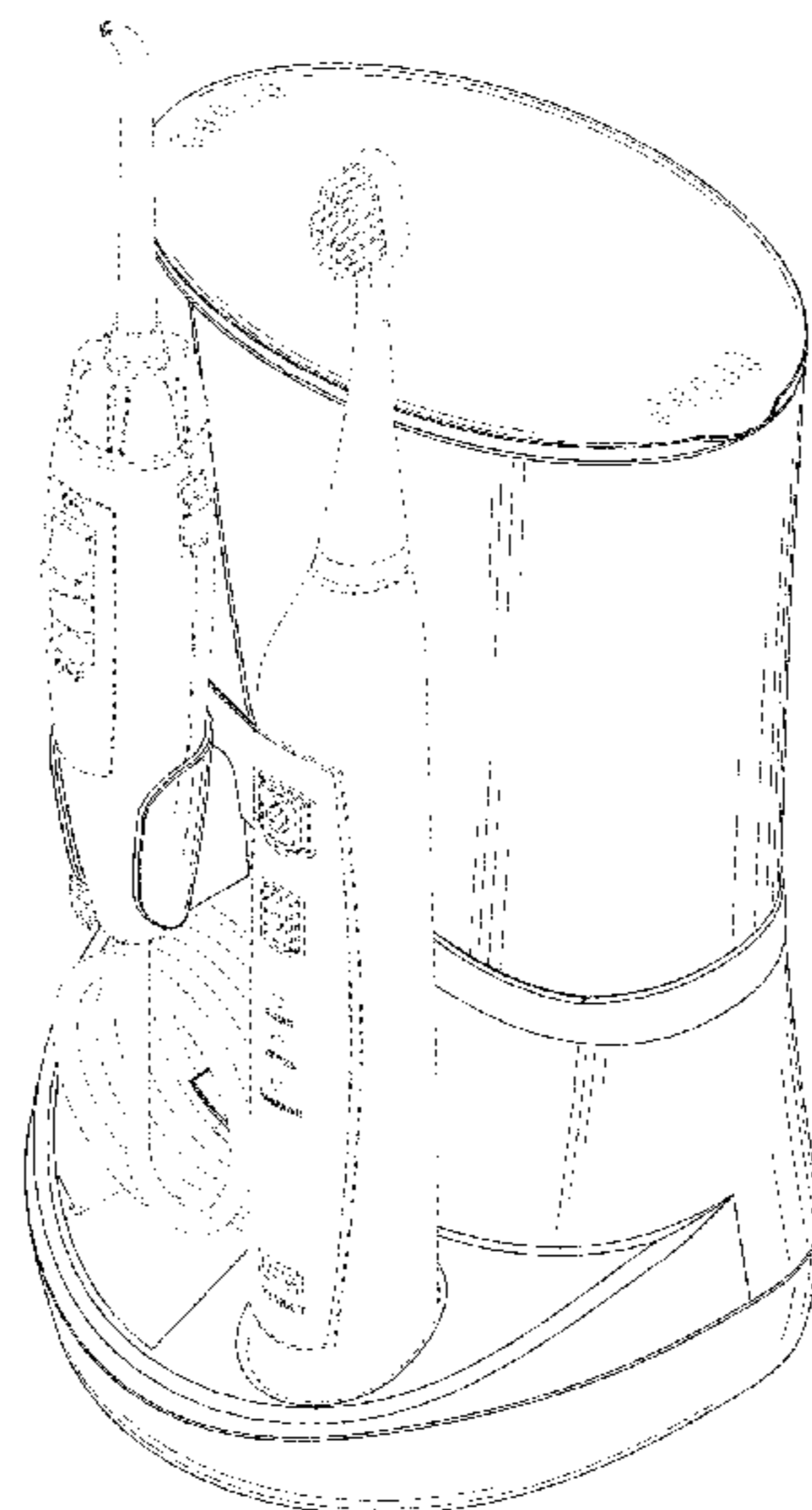
U.S. PATENT DOCUMENTS

555,588 A 3/1896 Spencer
1,278,225 A 9/1918 Schamberg
1,452,258 A 4/1923 Smith
1,464,419 A 8/1923 Gill
1,480,310 A 1/1924 Smith
1,498,267 A 6/1924 Hachman
1,650,686 A 11/1927 Binks
1,669,889 A 5/1928 Andrews et al.
1,681,320 A 8/1928 Bergl et al.
1,933,454 A 10/1933 Sidney
1,940,111 A 12/1933 Austin
D93,019 S 8/1934 Hose

DESCRIPTION

FIG. 1 is a front perspective of an oral irrigator;
FIG. 2 is a front elevation thereof;
FIG. 3 is a rear elevation thereof;
FIG. 4 is a left side elevation view thereof;
FIG. 5 is a right side elevation view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.
The broken lines in the drawings illustrate portions of the oral irrigator that form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2,870,932 A	1/1959	Davis	3,959,883 A	6/1976	Walls et al.
2,984,452 A	5/1961	Hooper	3,973,558 A	8/1976	Stouffer et al.
3,089,490 A	5/1963	Goldberg	3,977,084 A	8/1976	Sloan
3,096,913 A	7/1963	Jousson	4,001,526 A	1/1977	Olson
3,144,867 A	8/1964	Trupp et al.	4,004,302 A	1/1977	Hori
D202,041 S	8/1965	Burzlaff	4,007,739 A	2/1977	Bron et al.
3,209,956 A	10/1965	McKenzie	4,013,227 A	3/1977	Herrera
3,216,619 A	11/1965	Richards et al.	4,052,002 A	10/1977	Stouffer et al.
3,225,759 A	12/1965	Drapen et al.	D246,667 S	12/1977	Mackay et al.
3,227,158 A	1/1966	Mattingly	4,060,870 A	12/1977	Cannarella
3,266,623 A	8/1966	Poferl	4,075,761 A	2/1978	Behne et al.
3,297,558 A	1/1967	Hillquist	4,078,558 A	3/1978	Woog et al.
D208,778 S	10/1967	Koch	4,094,311 A	6/1978	Hudson
D209,204 S *	11/1967	St. Clair 601/162	4,108,167 A	8/1978	Hickman et al.
D209,395 S	11/1967	Gilbert	4,108,178 A	8/1978	Betush
D210,018 S	1/1968	Mattingly et al.	4,109,650 A	8/1978	Peclard
D210,019 S	1/1968	Johnson et al.	4,122,845 A	10/1978	Stouffer et al.
3,370,214 A	2/1968	Aymar	4,135,501 A	1/1979	Leunissan
3,391,696 A	7/1968	Woodward	4,141,352 A	2/1979	Ebner et al.
3,393,673 A	7/1968	Mattingly et al.	4,144,646 A	3/1979	Takemoto et al.
3,400,999 A	9/1968	Goldstein	4,149,315 A	4/1979	Page, Jr. et al.
3,418,552 A	12/1968	Holmes	4,154,375 A	5/1979	Bippus
3,420,228 A	1/1969	Kalbfeld	4,160,383 A	7/1979	Rauschenberger
3,425,410 A	2/1969	Cammack	4,171,572 A	10/1979	Nash
3,453,969 A	7/1969	Mattingly	4,182,038 A	1/1980	Fleer
3,465,751 A	9/1969	Powers	4,200,235 A	4/1980	Monschke
3,467,083 A	9/1969	Mattingly	4,201,200 A	5/1980	Hubner
D215,920 S	11/1969	McCarty et al.	4,215,476 A	8/1980	Armstrong
3,487,828 A	1/1970	Troy	4,219,618 A	8/1980	Leonard
3,489,268 A	1/1970	Meierhoefer	4,227,878 A	10/1980	Lohn
3,495,587 A	2/1970	Freedman	4,229,634 A	10/1980	Hickman et al.
3,496,933 A	2/1970	Lloyd	4,236,889 A	12/1980	Wright
3,499,440 A	3/1970	Gibbs	D258,097 S	2/1981	Wistrand
3,500,824 A	3/1970	Gilbert	4,248,589 A	2/1981	Lewis
3,501,203 A	3/1970	Falk	4,249,899 A	2/1981	Davis
3,502,072 A	3/1970	Stillman	4,257,458 A	3/1981	Kondo et al.
3,517,669 A	6/1970	Buono et al.	4,262,799 A	4/1981	Perrett
D218,270 S	8/1970	Soper	4,266,934 A	5/1981	Pernot
3,522,801 A	8/1970	Robinson	4,276,023 A	6/1981	Phillips et al.
3,532,221 A	10/1970	Kaluhiokalani et al.	4,276,880 A	7/1981	Malmin
3,536,065 A	10/1970	Moret	4,302,186 A	11/1981	Cammack et al.
3,537,444 A	11/1970	Garn	4,303,064 A	12/1981	Buffa
3,538,950 A	11/1970	Porteners	4,303,070 A	12/1981	Ichikawa et al.
3,547,110 A	12/1970	Balamuth	4,306,862 A	12/1981	Knox
3,561,433 A	2/1971	Kovach	4,315,741 A	2/1982	Reichl
D220,334 S	3/1971	Mackay et al.	4,319,568 A	3/1982	Tregoning
3,570,525 A	3/1971	Borsum	4,331,422 A	5/1982	Heyman
3,572,375 A	3/1971	Rosenberg	4,337,040 A	6/1982	Cammack et al.
3,578,884 A	5/1971	Jacobson	4,340,365 A	7/1982	Pisanu
D220,996 S	6/1971	Irons	4,340,368 A	7/1982	Lococo
3,583,609 A	6/1971	Oppenheimer	D266,117 S	9/1982	Oberheim
3,590,813 A	7/1971	Roszyk	4,353,694 A	10/1982	Pelerin
3,608,548 A	9/1971	Lewis	4,363,626 A	12/1982	Schmidt et al.
D222,862 S	1/1972	Cook	4,365,376 A	12/1982	Oda et al.
3,636,947 A	1/1972	Balamuth	4,370,131 A	1/1983	Banko
3,651,576 A	3/1972	Massa	4,374,354 A	2/1983	Petrovic et al.
3,669,101 A	6/1972	Kleiner	4,382,167 A	5/1983	Maruyama et al.
3,703,170 A	11/1972	Ryckman, Jr.	4,382,786 A	5/1983	Lohn
3,747,595 A	7/1973	Grossan	D270,000 S	8/1983	Ketler
3,768,472 A	10/1973	Hodosh et al.	4,412,823 A	11/1983	Sakai et al.
3,783,364 A	1/1974	Gallanis et al.	4,416,628 A	11/1983	Cammack
3,809,506 A	5/1974	Malcosky	4,442,830 A	4/1984	Markau
3,809,977 A	5/1974	Balamuth et al.	4,442,831 A	4/1984	Trenary
3,811,432 A	5/1974	Moret	4,452,238 A	6/1984	Kerr
3,820,532 A	6/1974	Eberhardt et al.	4,454,866 A	6/1984	Fayen
3,827,147 A	8/1974	Condon	4,512,769 A	4/1985	Kozam et al.
3,837,166 A	9/1974	Hiraoka	4,517,962 A	5/1985	Heckele
3,840,795 A	10/1974	Roszyk et al.	4,531,912 A	7/1985	Schuss et al.
3,847,145 A	11/1974	Grossan	4,531,913 A	7/1985	Taguchi
3,854,209 A	12/1974	Franklin et al.	4,534,340 A	8/1985	Kerr et al.
3,863,628 A	2/1975	Vit	4,552,130 A	11/1985	Kinoshita
3,871,560 A	3/1975	Crippa	4,561,214 A	12/1985	Inoue
3,874,506 A	4/1975	Hill et al.	D283,374 S	4/1986	Cheuk-Yiu
3,912,125 A	10/1975	Acklin	4,585,415 A	4/1986	Hommann
3,943,628 A	3/1976	Kronman et al.	4,591,777 A	5/1986	McCarty et al.
			4,592,728 A	6/1986	Davis
			4,602,906 A	7/1986	Grunenfelder
			4,607,627 A	8/1986	Leber et al.
			4,613,074 A	9/1986	Schulze

(56)

References Cited

U.S. PATENT DOCUMENTS

4,619,009 A	10/1986	Rosenstatter	5,064,168 A	11/1991	Raines et al.
4,619,612 A	10/1986	Weber et al.	D322,314 S	12/1991	Ohbayashi
4,629,425 A	12/1986	Detsch	5,071,346 A	12/1991	Domaas
4,636,198 A	1/1987	Stade	5,082,115 A	1/1992	Hutcheson
4,642,037 A	2/1987	Fritchman	5,082,443 A	1/1992	Lohn
4,644,937 A	2/1987	Hommann	5,085,317 A	2/1992	Jensen et al.
4,645,488 A	2/1987	Matukas	5,086,756 A	2/1992	Powell
4,647,831 A	3/1987	O'Malley et al.	5,095,893 A	3/1992	Rawden, Jr.
4,648,838 A	3/1987	Schlachter	5,098,291 A	3/1992	Curtis et al.
4,650,475 A	3/1987	Smith et al.	5,098,676 A	3/1992	Brooks, Jr.
4,655,198 A	4/1987	Hommann	5,100,319 A	3/1992	Baum
4,669,453 A	6/1987	Atkinson et al.	5,117,871 A	6/1992	Gardner et al.
4,672,953 A	6/1987	DiVito	5,125,835 A	6/1992	Young
4,673,396 A	6/1987	Urbaniak	5,127,831 A	7/1992	Bab
D291,354 S	8/1987	Camens	5,142,723 A	9/1992	Lustig et al.
4,716,352 A	12/1987	Hurn et al.	5,150,841 A	9/1992	Silvenis et al.
4,749,340 A	6/1988	Ikeda et al.	5,172,810 A	12/1992	Brewer
4,770,632 A	9/1988	Ryder et al.	5,173,273 A	12/1992	Brewer
D298,565 S	11/1988	Kohler, Jr. et al.	5,183,035 A	2/1993	Weir
4,783,321 A	11/1988	Spence	5,197,458 A	3/1993	Ito et al.
4,787,845 A	11/1988	Valentine	5,197,460 A	3/1993	Ito et al.
4,787,847 A	11/1988	Martin et al.	5,199,871 A	4/1993	Young
4,798,292 A	1/1989	Hauze	5,203,697 A	4/1993	Malmin
4,803,974 A	2/1989	Powell	5,203,769 A	4/1993	Clement et al.
4,804,364 A	2/1989	Dieras et al.	5,204,004 A	4/1993	Johnston et al.
4,818,229 A	4/1989	Vasile	5,208,933 A	5/1993	Lustig et al.
4,820,152 A	4/1989	Warrin et al.	5,215,193 A	6/1993	Dennis
4,821,923 A	4/1989	Skorka	5,218,956 A	6/1993	Handler et al.
4,824,368 A	4/1989	Hickman	5,220,914 A	6/1993	Thompson
4,826,431 A	5/1989	Fujimura et al.	5,228,646 A	7/1993	Raines
4,827,551 A	5/1989	Maser et al.	5,230,624 A	7/1993	Wolf et al.
4,832,683 A	5/1989	Idemoto et al.	5,232,687 A	8/1993	Geimer
4,854,869 A	8/1989	Lawhorn	5,235,968 A	8/1993	Woog
4,861,340 A	8/1989	Smith et al.	5,241,714 A	9/1993	Barry
4,862,876 A	9/1989	Lih-Sheng	5,246,367 A	9/1993	Ito et al.
4,869,720 A	9/1989	Chernack	5,252,064 A	10/1993	Baum et al.
4,880,382 A	11/1989	Moret et al.	D341,200 S	11/1993	Yoshimoto
4,886,452 A	12/1989	Lohn	5,257,933 A	11/1993	Jousson
4,900,252 A	2/1990	Liefke et al.	5,261,448 A	11/1993	Furuya et al.
4,902,225 A	2/1990	Lohn	D341,943 S	12/1993	Si-Hoe
4,903,687 A	2/1990	Lih-Sheng	5,267,586 A	12/1993	Jankavaara
4,906,187 A	3/1990	Amadera	5,269,684 A	12/1993	Fischer
4,907,744 A	3/1990	Jousson	5,281,137 A	1/1994	Jousson
4,925,450 A	5/1990	Imonti et al.	5,281,139 A	1/1994	Frank et al.
4,928,675 A	5/1990	Thornton	5,282,745 A	2/1994	Wiltrout et al.
4,930,660 A	6/1990	Porteous	5,286,192 A	2/1994	Dixon
4,941,459 A	7/1990	Mathur	5,286,201 A	2/1994	Yu
4,950,159 A	8/1990	Hansen	5,295,832 A	3/1994	Evans
4,958,629 A	9/1990	Peace et al.	5,297,962 A	3/1994	O'Connor et al.
4,958,751 A	9/1990	Curtis et al.	D346,212 S	4/1994	Hosl
4,959,199 A	9/1990	Brewer	5,301,381 A	4/1994	Klupt
4,961,698 A	10/1990	Vlock	5,302,123 A	4/1994	Bechard
4,966,551 A	10/1990	Betush	5,317,691 A	5/1994	Traeger
4,969,874 A	11/1990	Michel et al.	5,321,865 A	6/1994	Kaeser
4,973,246 A	11/1990	Black	5,331,704 A	7/1994	Rosen et al.
4,973,247 A	11/1990	Varnes et al.	5,344,317 A	9/1994	Pacher et al.
4,973,250 A	11/1990	Milman	5,346,677 A	9/1994	Risk
4,975,054 A	12/1990	Esrock	D351,892 S	10/1994	Wolf et al.
4,979,503 A	12/1990	Chernack	5,360,338 A	11/1994	Waggoner
4,979,504 A	12/1990	Mills	5,368,548 A	11/1994	Jousson
4,989,590 A	2/1991	Baum et al.	5,370,534 A	12/1994	Wolf et al.
4,998,880 A	3/1991	Nerli	D354,168 S	1/1995	Hartwein
5,013,241 A	5/1991	Von Gutfeld et al.	D354,559 S	1/1995	Knute
5,014,884 A	5/1991	Wunsch	5,378,149 A	1/1995	Stropko
5,019,054 A	5/1991	Clement et al.	5,380,201 A	1/1995	Kawata
5,027,798 A	7/1991	Primiano	D356,864 S	3/1995	Woog
5,029,576 A	7/1991	Evans, Sr.	5,399,089 A	3/1995	Eichman et al.
5,033,617 A	7/1991	Hartwein et al.	D358,883 S	5/1995	Vos
5,033,961 A	7/1991	Kandler et al.	5,456,672 A	10/1995	Diederich et al.
D318,918 S *	8/1991	Hartwein D24/111	5,465,445 A	11/1995	Yeh
5,046,486 A	9/1991	Grulke et al.	5,467,495 A	11/1995	Boland et al.
5,049,071 A	9/1991	Davis et al.	5,468,148 A	11/1995	Ricks
5,060,825 A	10/1991	Palmer et al.	5,470,305 A	11/1995	Arnett et al.
5,061,180 A	10/1991	Wiele	5,474,450 A	12/1995	Chronister
5,062,795 A	11/1991	Woog	5,474,451 A	12/1995	Dalrymple et al.
			5,476,379 A	12/1995	Disel
			5,484,281 A	1/1996	Renow et al.
			5,487,877 A	1/1996	Choi
			5,490,779 A	2/1996	Malmin

(56)

References Cited

U.S. PATENT DOCUMENTS

5,505,916 A	4/1996	Berry, Jr.		D435,905 S	1/2001	Bachman et al.	
D369,656 S	5/1996	Vos		D437,049 S *	1/2001	Hartwein	D24/111
D370,125 S	5/1996	Craft et al.		6,193,512 B1	2/2001	Wallace	
5,525,058 A	6/1996	Gallant et al.		6,193,932 B1	2/2001	Wu et al.	
5,526,841 A	6/1996	Detsch et al.		6,199,239 B1	3/2001	Dickerson	
5,540,587 A	7/1996	Malmin		6,200,134 B1	3/2001	Kovac	
5,547,374 A	8/1996	Coleman		D439,781 S	4/2001	Spore	
D373,631 S	9/1996	Maeda et al.		6,217,835 B1	4/2001	Riley et al.	
5,554,014 A	9/1996	Becker		D441,861 S	5/2001	Hafliger	
5,554,025 A	9/1996	Kinsel		6,233,773 B1	5/2001	Karge et al.	
5,556,001 A	9/1996	Weissman et al.		6,234,205 B1	5/2001	D'Amelio et al.	
5,564,629 A	10/1996	Weissman et al.		6,237,178 B1	5/2001	Krammer et al.	
D376,893 S	12/1996	Gornet		6,247,929 B1	6/2001	Bachman et al.	
D377,091 S	12/1996	Scott, Sr.		6,280,190 B1	8/2001	Hoffman	
5,613,259 A	3/1997	Craft et al.		D448,236 S	9/2001	Murray	
5,616,028 A	4/1997	Hafele et al.		6,293,792 B1	9/2001	Hanson	
5,626,472 A	5/1997	Pennetta		D449,884 S *	10/2001	Tobin	D24/111
5,634,791 A	6/1997	Matsuura et al.		D453,453 S	2/2002	Lun	
5,636,987 A	6/1997	Serfaty		D455,201 S	4/2002	Jones	
5,640,735 A	6/1997	Manning		D455,203 S	4/2002	Jones	
D382,407 S	8/1997	Craft et al.		6,363,565 B1	4/2002	Paffrath	
5,653,591 A	8/1997	Loge		D457,949 S	5/2002	Krug	
5,659,995 A	8/1997	Hoffman		D464,799 S	10/2002	Crossman et al.	
5,667,483 A	9/1997	Santos		6,468,482 B1	10/2002	Frieze et al.	
D386,576 S	11/1997	Wang et al.		6,475,173 B1	11/2002	Bachman et al.	
5,683,192 A	11/1997	Kilfoil		6,485,451 B1	11/2002	Roberts et al.	
5,685,829 A	11/1997	Allen		6,497,375 B1	12/2002	Srinath et al.	
5,685,851 A	11/1997	Murphy et al.		6,497,572 B2	12/2002	Hood et al.	
5,697,784 A	12/1997	Hafele et al.		6,502,584 B1	1/2003	Fordham	
D388,612 S *	1/1998	Stutzer	D24/111	D470,660 S	2/2003	Schaber	
D388,613 S *	1/1998	Stutzer	D24/111	6,558,344 B2	5/2003	McKinnon et al.	
D389,091 S	1/1998	Dickinson		6,561,808 B2	5/2003	Neuberger et al.	
5,709,545 A	1/1998	Johnston et al.		D475,346 S	6/2003	McCurrach et al.	
D390,934 S	2/1998	McKeone		D476,743 S *	7/2003	D'Silva	D24/177
5,716,007 A	2/1998	Nottingham et al.		6,589,477 B1	7/2003	Frieze et al.	
5,718,668 A	2/1998	Arnett et al.		6,602,071 B1	8/2003	Ellion et al.	
5,746,595 A	5/1998	Ford		6,632,091 B1	10/2003	Cise et al.	
5,749,726 A	5/1998	Kinsel		D482,451 S	11/2003	Page et al.	
5,759,502 A	6/1998	Spencer et al.		6,640,999 B2	11/2003	Peterson	
5,779,471 A *	7/1998	Tseng	A61C 19/063 433/80	6,647,577 B2	11/2003	Tam	
5,779,654 A	7/1998	Foley et al.		6,659,674 B2	12/2003	Carlucci et al.	
5,795,153 A	8/1998	Rechmann		6,669,059 B2	12/2003	Mehta	
5,796,325 A	8/1998	Lundell et al.		D484,971 S	1/2004	Hartwein	
5,833,065 A	11/1998	Burgess		6,681,418 B1	1/2004	Bierend	
5,836,030 A	11/1998	Hazeu et al.		D486,573 S	2/2004	Callaghan et al.	
D402,744 S	12/1998	Zuege		6,689,078 B1	2/2004	Rehkemper et al.	
5,851,079 A	12/1998	Horstman et al.		6,699,208 B2	3/2004	Bachman et al.	
D403,511 S *	1/1999	Serbinski	D24/111	6,719,561 B2	4/2004	Gugel et al.	
D406,334 S	3/1999	Rosenthal et al.		D489,183 S	5/2004	Akahori et al.	
5,876,201 A	3/1999	Wilson et al.		6,739,782 B1	5/2004	Rehkemper et al.	
D408,511 S	4/1999	Allen et al.		6,740,053 B2	5/2004	Kaplowitz	
5,901,397 A	5/1999	Häfele et al.		D490,899 S	6/2004	Gagnon	
5,934,902 A	8/1999	Abahusayn		D491,728 S	6/2004	Jimenez	
D413,975 S	9/1999	Maeda		D492,996 S	7/2004	Rehkemper et al.	
D416,999 S	11/1999	Miyamoto		6,761,324 B2	7/2004	Chang	
D417,082 S	11/1999	Classen et al.		6,766,549 B2	7/2004	Klupt	
5,993,402 A	11/1999	Sauer et al.		D495,142 S	8/2004	Berde	
6,030,215 A	2/2000	Ellion et al.		D495,143 S	8/2004	Berde	
6,038,960 A	3/2000	Fukushima et al.		6,779,216 B2	8/2004	Davies et al.	
6,039,180 A	3/2000	Grant		6,783,004 B1	8/2004	Rinner	
6,047,429 A	4/2000	Wu		6,783,505 B1	8/2004	Lai	
D424,181 S	5/2000	Caplow		6,796,796 B2	9/2004	Segal	
D425,615 S	5/2000	Bachman et al.		D498,643 S	11/2004	Pryor	
D425,981 S	5/2000	Bachman et al.		6,814,259 B1	11/2004	Foster et al.	
6,056,710 A *	5/2000	Bachman	A61C 17/02 601/162	D499,885 S	12/2004	Xi	
D426,633 S	6/2000	Bachman et al.		6,835,181 B2	12/2004	Hippensteel	
6,089,865 A	7/2000	Edgar		D500,599 S	1/2005	Callaghan	
6,116,866 A	9/2000	Tomita et al.		6,837,708 B2	1/2005	Chen et al.	
6,120,755 A	9/2000	Jacobs		6,884,069 B2	4/2005	Goldman	
6,124,699 A	9/2000	Suzuki et al.		6,902,337 B1	6/2005	Kuo	
D434,500 S	11/2000	Pollock et al.		6,907,879 B2	6/2005	Drinan et al.	
6,159,006 A	12/2000	Cook et al.		D509,585 S	9/2005	Kling et al.	
6,164,967 A	12/2000	Sale et al.		D513,638 S	1/2006	Pan	
				D515,215 S	2/2006	Wang	
				D522,652 S	6/2006	Massey	
				7,080,980 B2	7/2006	Klupt	
				D529,661 S	10/2006	Schmidt	
				D530,010 S	10/2006	Luettgen et al.	
				7,117,555 B2	10/2006	Fattori et al.	

(56)

References Cited

U.S. PATENT DOCUMENTS

D532,570 S	11/2006	Vizcarra	D717,427 S	11/2014	Kim	
7,131,838 B2	11/2006	Suzuki	D718,855 S	12/2014	Kim et al.	
D533,720 S	12/2006	Vu	D723,387 S	3/2015	Fath	
D538,474 S	3/2007	Sheppard et al.	D725,770 S	3/2015	Kim et al.	
D548,334 S	8/2007	Izumi	D731,640 S	6/2015	Kim et al.	
D550,097 S	9/2007	Lepoitevin	D735,305 S	7/2015	Obara	
D553,980 S	10/2007	VerWeyst	D740,936 S *	10/2015	Kim	D24/111
7,276,035 B2	10/2007	Lu	D745,329 S	12/2015	Ong	
7,314,456 B2	1/2008	Shaw	D746,975 S	1/2016	Schenck	
D565,175 S *	3/2008	Boyd	D747,464 S	1/2016	Taylor	
7,344,510 B1	3/2008	Yande	D754,330 S	4/2016	Kim et al.	
D565,713 S	4/2008	Gao	D756,122 S	5/2016	Taylor	
7,367,803 B2	5/2008	Egeresi	D764,051 S *	8/2016	Wang	D24/111
D574,952 S	8/2008	Boyd et al.	D766,423 S	9/2016	Kim et al.	
D577,198 S	9/2008	Jimenez	D772,396 S	11/2016	Kim et al.	
D577,814 S	9/2008	Seki et al.	D772,397 S	11/2016	Kim et al.	
D581,279 S	11/2008	Oates	D774,651 S	12/2016	Kaib	
7,455,521 B2	11/2008	Fishburne, Jr.	D776,253 S	1/2017	Li	
7,469,440 B2	12/2008	Boland et al.	D782,326 S	3/2017	Fath	
D585,132 S	1/2009	Pukall	D798,440 S *	9/2017	Kim	D24/111
D588,262 S	3/2009	Pukall	2002/0090252 A1	7/2002	Hall et al.	
7,500,584 B2	3/2009	Schutz	2002/0108193 A1	8/2002	Gruber	
D590,492 S	4/2009	Powell	2002/0119415 A1	8/2002	Bailey	
D592,748 S	5/2009	Boulton	2002/0152565 A1	10/2002	Klupt	
D595,136 S	6/2009	Canamasas Puigbo	2003/0060743 A1	3/2003	Chang	
D601,694 S	10/2009	Rocklin	2003/0098249 A1	5/2003	Rollock	
D601,697 S	10/2009	Sobeich et al.	2003/0204155 A1	10/2003	Egeresi	
D603,708 S	11/2009	Handy	2003/0213075 A1	11/2003	Hui et al.	
D608,430 S	1/2010	Slothower	2004/0045107 A1	3/2004	Egeresi	
7,670,141 B2	3/2010	Thomas et al.	2004/0076921 A1	4/2004	Gofman et al.	
7,677,888 B1	3/2010	Halm	2004/0122377 A1	6/2004	Fischer et al.	
D613,550 S	4/2010	Picozza et al.	2004/0126730 A1	7/2004	Panagotacos	
D621,949 S	8/2010	Seki et al.	2004/0209222 A1	10/2004	Snyder	
D622,928 S	9/2010	Griebel	2005/0049620 A1	3/2005	Chang	
D623,376 S	9/2010	Griebel	2005/0064371 A1	3/2005	Soukos et al.	
D625,406 S	10/2010	Seki et al.	2005/0101894 A1	5/2005	Hippensteel	
7,814,585 B1	10/2010	Reich	2005/0102773 A1	5/2005	Obermann et al.	
D629,884 S	12/2010	Stephens	2005/0144745 A1	7/2005	Russell	
7,857,623 B2	12/2010	Grez	2005/0177079 A1	8/2005	Pan	
7,862,536 B2	1/2011	Chen et al.	2005/0271531 A1	12/2005	Brown et al.	
7,959,597 B2	6/2011	Baker et al.	2006/0008373 A1	1/2006	Schutz	
D640,872 S	7/2011	Nanda	2006/0010624 A1	1/2006	Cleland	
D648,539 S	11/2011	Wai	2006/0026784 A1	2/2006	Moskovich et al.	
D651,409 S	1/2012	Papenfu	2006/0057539 A1	3/2006	Sodo	
D651,805 S	1/2012	Hay	2006/0078844 A1	4/2006	Goldman et al.	
D653,340 S	1/2012	Goerge et al.	2006/0079818 A1	4/2006	Yande	
8,113,832 B2	2/2012	Snyder et al.	2007/0082316 A1	4/2007	Zhadanov et al.	
D655,380 S	3/2012	Taylor	2007/0082317 A1 *	4/2007	Chuang	A61C 17/0202 433/80
D658,381 S	5/2012	Gebski	2007/0113360 A1	5/2007	Tsai	
D658,538 S	5/2012	Korzeniowski	2007/0202459 A1 *	8/2007	Boyd	A61C 17/02 433/80
8,220,726 B2	7/2012	Qiu et al.	2007/0203439 A1 *	8/2007	Boyd	A61C 1/0084 601/162
D666,912 S	9/2012	Kawai	2007/0254260 A1	11/2007	Alden	
8,256,979 B2	9/2012	Hilscher et al.	2008/0189951 A1	8/2008	Molema et al.	
D668,339 S	10/2012	Luoto	2008/0213719 A1	9/2008	Giniger et al.	
D669,169 S	10/2012	Washington et al.	2009/0070949 A1	3/2009	Sagel et al.	
8,297,534 B2	10/2012	Li et al.	2009/0082706 A1	3/2009	Shaw	
D670,373 S	11/2012	Taylor et al.	2009/0124945 A1	5/2009	Reich et al.	
D670,958 S	11/2012	Picozza et al.	2009/0163839 A1	6/2009	Alexander	
D671,637 S	11/2012	Gebski et al.	2009/0188780 A1	7/2009	Watanabe	
D672,018 S	12/2012	Bucher	2009/0281454 A1	11/2009	Baker et al.	
8,366,024 B2	2/2013	Leber et al.	2010/0010524 A1	1/2010	Barrington	
8,403,577 B2	3/2013	Khoshnevis	2010/0015566 A1	1/2010	Shaw	
8,403,665 B2	3/2013	Thomas et al.	2010/0190132 A1	7/2010	Taylor et al.	
8,408,483 B2	4/2013	Boyd et al.	2010/0239998 A1 *	9/2010	Snyder	A61C 17/02 433/29
D686,311 S	7/2013	Mori	2010/0261134 A1	10/2010	Boyd et al.	
D694,378 S	11/2013	Bates	2010/0261137 A1	10/2010	Boyd et al.	
D694,398 S	11/2013	Taylor	2010/0326536 A1	12/2010	Nan	
D700,343 S	2/2014	Liu	2010/0330527 A1	12/2010	Boyd et al.	
D702,819 S	4/2014	Garland	2011/0027749 A1	2/2011	Syed	
D702,821 S	4/2014	Garland	2011/0076090 A1	3/2011	Wu et al.	
D707,350 S	6/2014	Woodard	2011/0097683 A1	4/2011	Boyd et al.	
D709,183 S	7/2014	Kemlein	2011/0139826 A1	6/2011	Hair et al.	
D714,929 S	10/2014	Kim et al.	2011/0144588 A1	6/2011	Taylor et al.	
D714,930 S	10/2014	Kim et al.	2011/0184341 A1	7/2011	Baker et al.	
D717,412 S	11/2014	Bucher	2011/0307039 A1	12/2011	Cornell	

(56)

References Cited

OTHER PUBLICATIONS

U.S. PATENT DOCUMENTS

2012/0021374 A1* 1/2012 Cacka A61C 17/02
433/82
2012/0045730 A1* 2/2012 Sayder A61C 17/02
433/29
2012/0064480 A1 3/2012 Hegemann
2012/0077145 A1 3/2012 Tsurukawa
2012/0141952 A1 6/2012 Snyder et al.
2012/0179118 A1 7/2012 Hair
2012/0189976 A1 7/2012 McDonough et al.
2012/0266396 A1 10/2012 Leung
2012/0277677 A1 11/2012 Taylor et al.
2012/0277678 A1 11/2012 Taylor et al.
2012/0279002 A1 11/2012 Sokol et al.
2012/0295220 A1 11/2012 Thomas et al.
2013/0295520 A1 11/2013 Hsieh
2014/0106296 A1 4/2014 Woodard et al.
2014/0193774 A1 7/2014 Snyder et al.
2014/0259474 A1 9/2014 Sokol et al.
2014/0272769 A1 9/2014 Luetngen et al.
2014/0272782 A1* 9/2014 Luetngen A61H 13/005
433/80
2014/0352088 A1 12/2014 Wu
2015/0004559 A1 1/2015 Luetngen et al.
2015/0147717 A1* 5/2015 Taylor A61C 17/0205
433/80
2015/0173850 A1* 6/2015 Garrigues A61C 1/0092
433/80
2015/0182319 A1* 7/2015 Wagner A61C 17/0202
132/308
2016/0100921 A1 4/2016 Ungar
2016/0151133 A1 6/2016 Luetngen et al.

FOREIGN PATENT DOCUMENTS

CN 204049908 12/2014
DE 1466963 5/1969
DE 2019003 11/1971
DE 2409752 9/1975
DE 2545936 4/1977
DE 2714876 10/1978
DE 2910982 2/1980
EP 0023672 7/1980
EP 0515983 2/1992
FR 2556954 6/1985
FR 2654627 5/1991
GB 838564 6/1960
GB 1182031 2/1970
GB 2018605 10/1979
JP 2-134150 5/1990
JP 2009-39455 2/2009
KR 20120126265 11/2012
WO WO95/016404 6/1995
WO WO01/10327 2/2001
WO WO04/021958 3/2004
WO WO04/039205 5/2004
WO WO2004/060259 7/2004
WO WO2004/062518 7/2004
WO WO2008/070730 6/2008
WO WO2008/157585 12/2008
WO WO2013/124691 8/2013

The Right Tool, Electron Fusion Devices, Inc., 2 pages, at least as early as Feb. 1991.
Japanese Packaging, 2 pages, at least as early as Dec. 2002.
Japanese Instruction Brochure, 20 pages, at least as early as Dec. 2002.
Brochure: Woog International, "You have a 98% chance of getting gum disease. Unless you read this.", Lancaster, Pennsylvania, 5 pages, Feb. 1987.
Brochure: Woog International, "We put the control of home dental care back into the hands of the professional", Lancaster, Pennsylvania, 2 pages, Feb. 1987.
Brochure: Woog International, "Products at a Glance: Home Dental Care System" Woog Orajet, 3 pages, at least as early as Dec. 18, 1998.
Website: http://www.just4teeth.com/product/Panasonic/Panasonic_Portable_Irrigator.htm, 2 pages, at least as early as Jun. 20, 2003.
Website: http://www.videodirectstore.com/store/merchant.mv?Screen=PROD&Product_Code=EW1' . . . ", 2 pages, at least as early as Jun. 20, 2003.
Website: <http://products.consumerguide.com/cp/family/review/index.cfm/id/18742>, 2 pages, at least as early as Jun. 20, 2003.
Website: <http://www.racekarteng.com/images/walbroparts.gif> and <http://www.muller.net/mullermachine/docs/walbro1.html>, 4 pages, at least as early as Jun. 20, 2003.
European Search Report, EPO Application No. 07250799.9, dated Jul. 5, 2007.
European Search Report, EPO Application No. 07252693.2, 14 pages, dated Apr. 28, 2008.
European Examination Report, EPO Application No. 07250799.9, dated Feb. 5, 2009.
International Search Report, Application No. PCT/US2010/028180, 2 pages, dated May 18, 2010.
International Search Report, PCT/US2010/060800, 2 pages, dated Feb. 11, 2011.
International Search Report, PCT/US2011/052795, 10 pages, dated Jan. 17, 2012.
Waterpik SinuSense Website: <http://www.insightsbyapril.com/2012/03/waterpik-natural-remedy-for-sinus.html>, 8 pages, retrieved on May 31, 2012.
Website: <https://www.waterpik.com/about-us/>, 3 pages.
Waterpik WP 350W Oral Irrigator. Dentist.net. Copyright date 2013. Date accessed: Mar. 30, 2017, 2 pages <<http://www.dentalhoo.com/waterpik-wp350.asp>>.
iPik Portable Oral Irrigator. AliExpress. Date reviewed: Oct. 5, 2016. <https://www.aliexpress.com/...e-Oral-Care-Product-Nasal-Irrigator-Tooth-Flosser-Water/1525541997.html?aff_platform=aaf&cpt=1490913714609&sk=yfAeyJa&aff_trace_key=c5a300c4f02e46d08c042f5292e1762f-1490913714609-07517-yfAeyJa>, 18 pages.
Brite Leafs Professional Portable 2-in-1 Nasal Sinus & Oral Irrigator. Brite Leafs. Copyright date 2012, <<http://www.briteleafs.com/product6.html>>, 1 page.
AliExpress. Date reviewed: Jan. 12, 2017. <<https://www.aliexpress.com/item/Cordless-Water-Floss-Portable-Oral-Irrigator-Dental-Water-Flosser-Waterpic-Whatpick-Dental-Water-Pic-Whater-Pick/32769416341.html?spm=2114.40010308.4.75.Owuzfj>>.

* cited by examiner

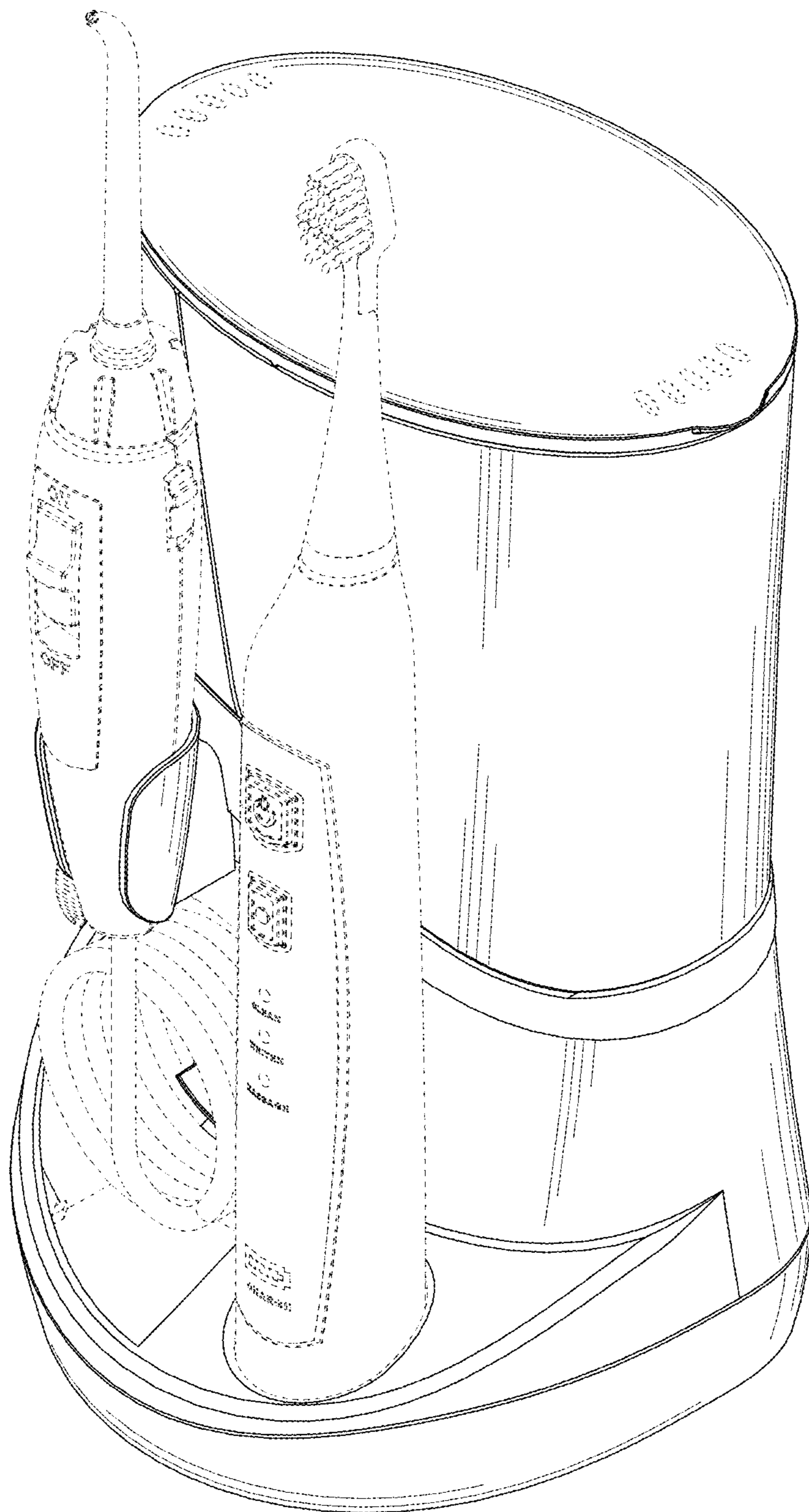


FIG. 1

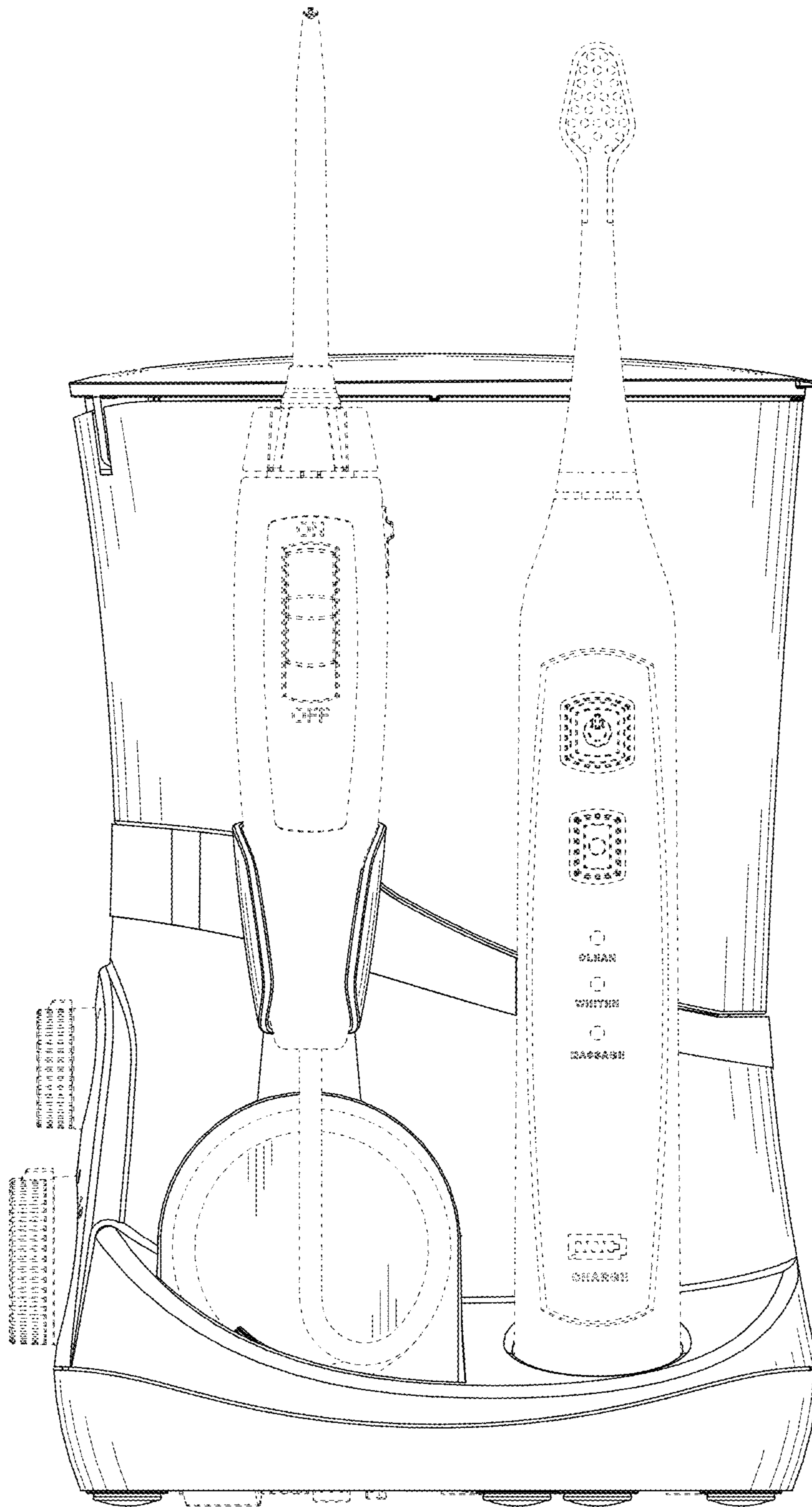


FIG. 2

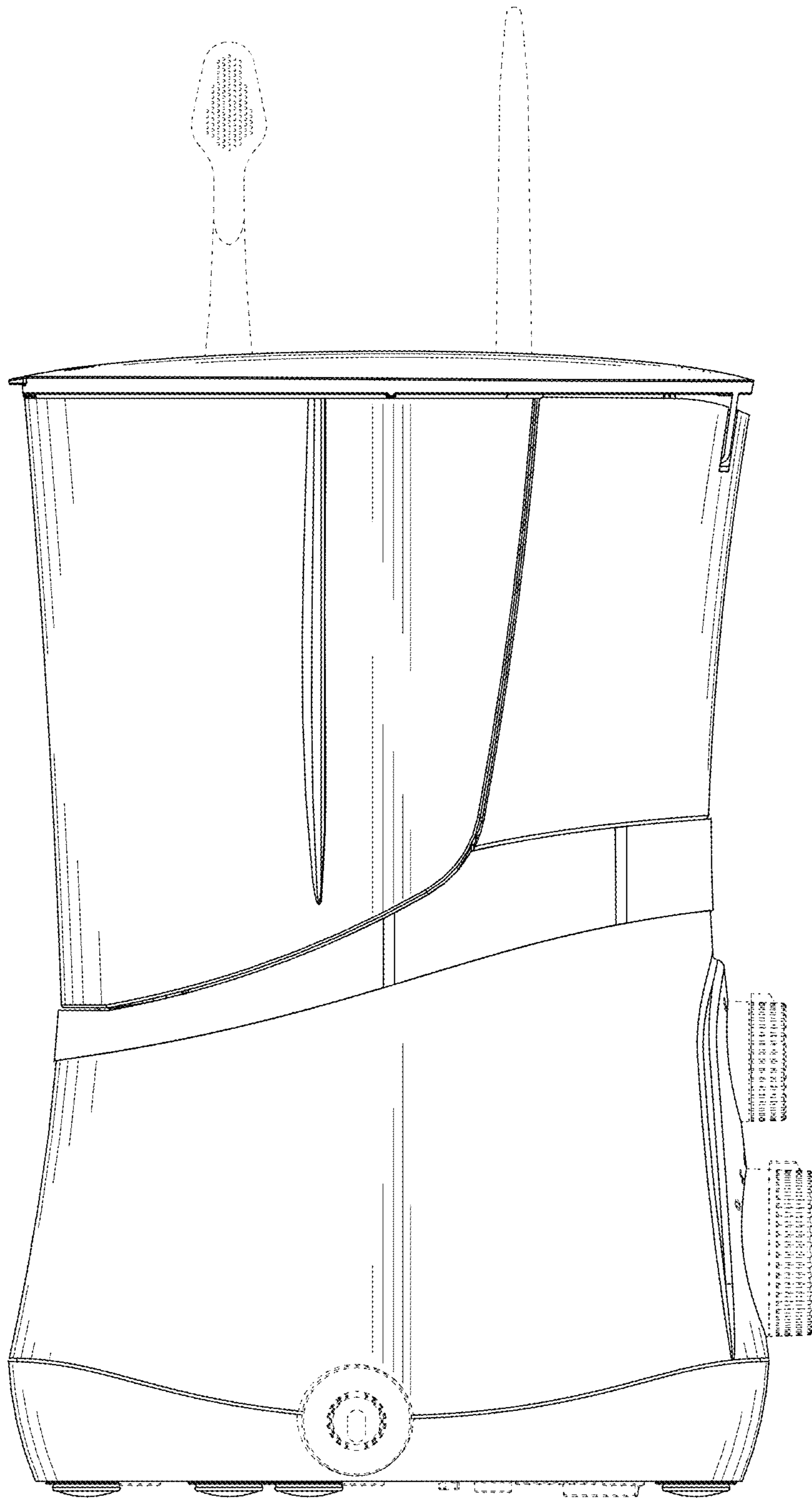


FIG. 3

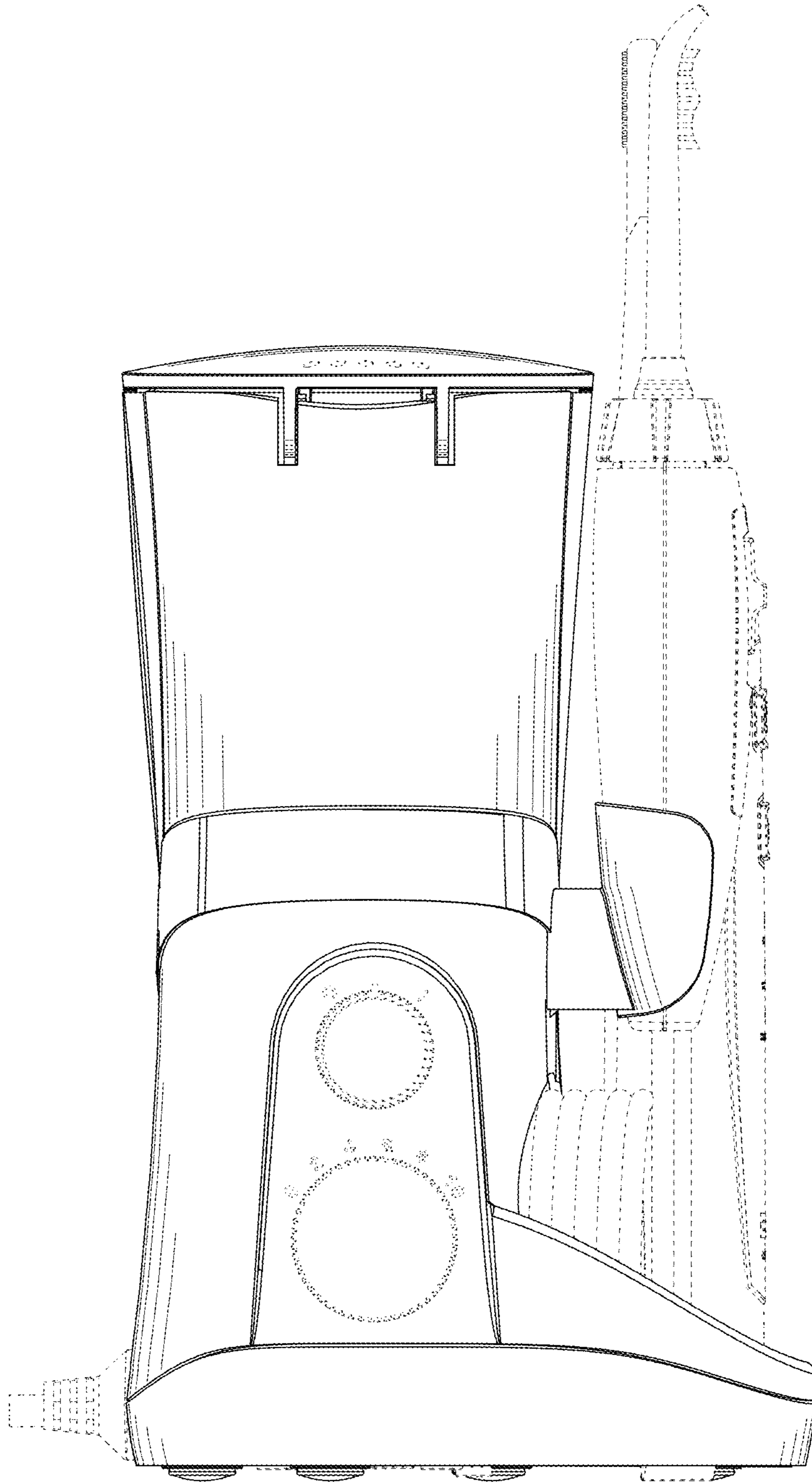


FIG. 4

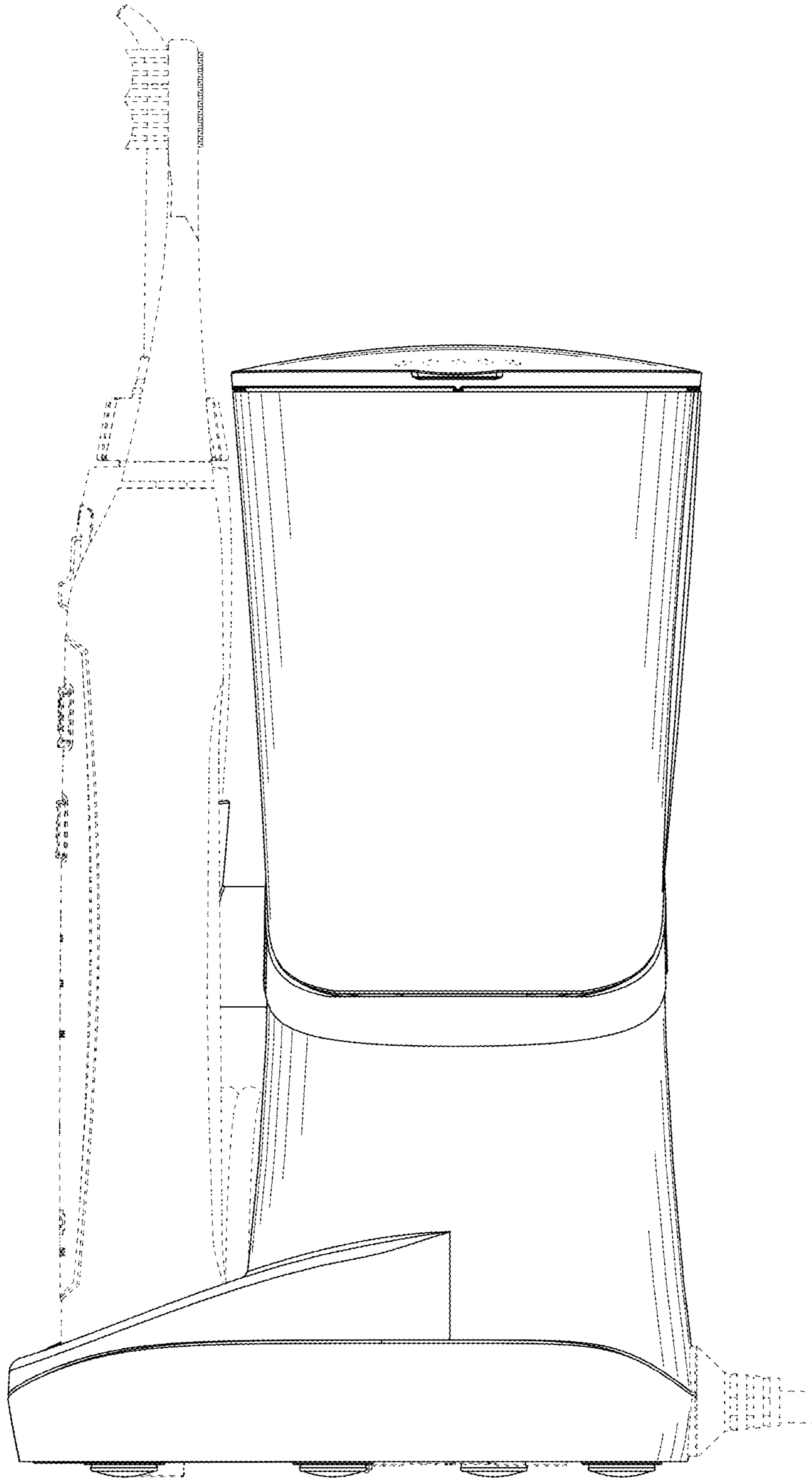


FIG. 5

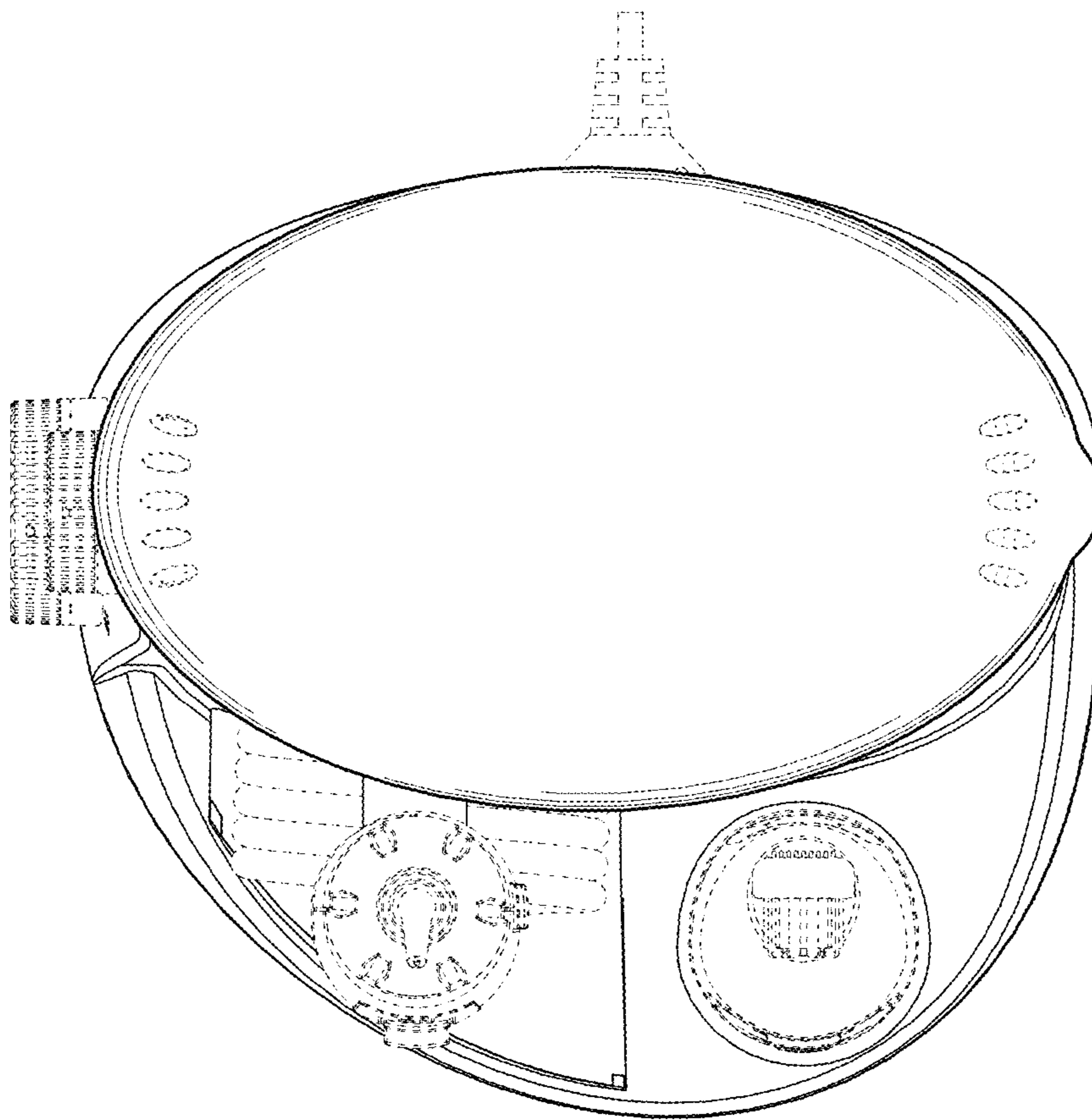


FIG. 6

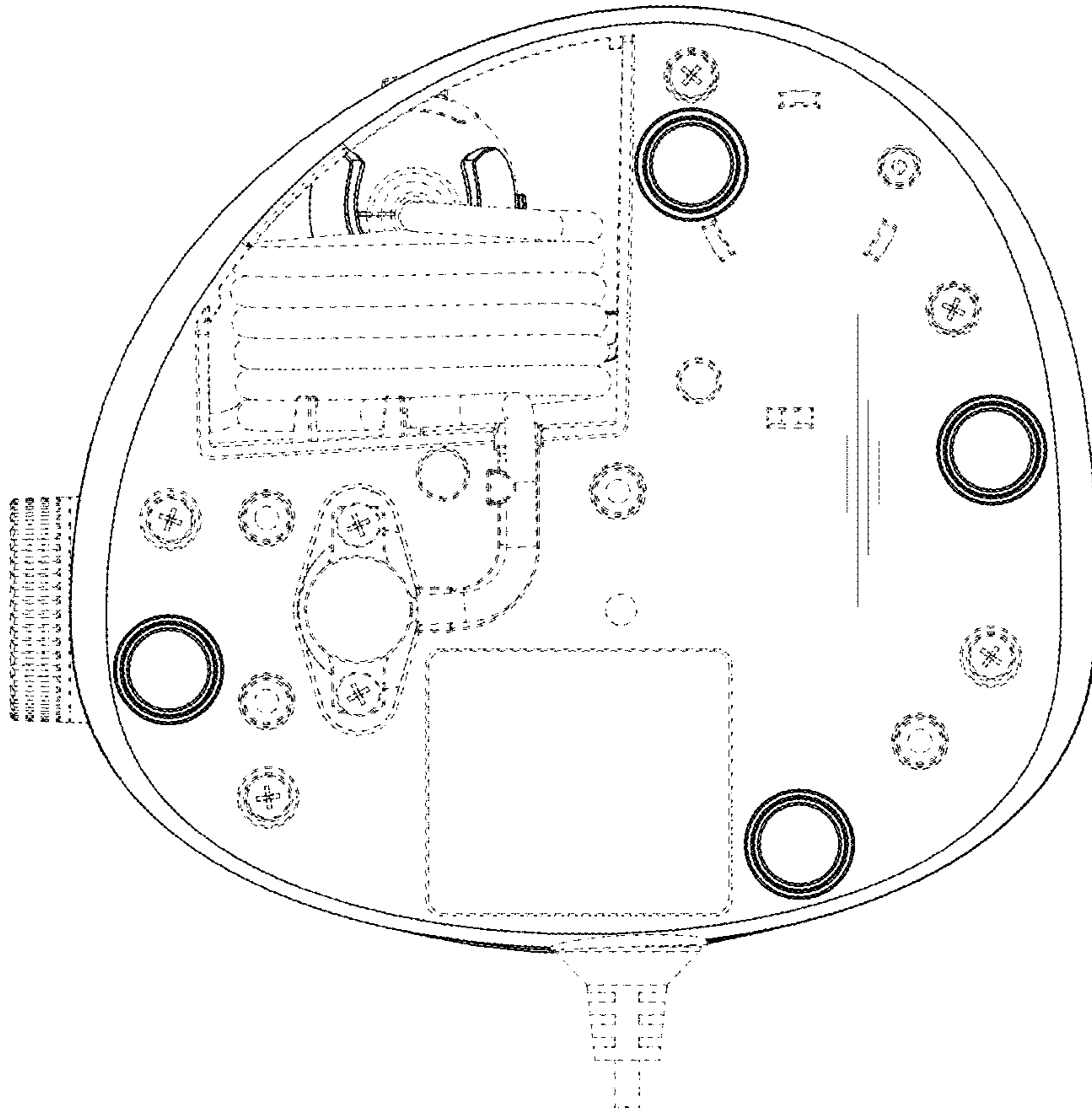


FIG. 7