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(12) **United States Design Patent** (10) **Patent No.:** **US D778,056 S**
Wada et al. (45) **Date of Patent:** **** Feb. 7, 2017**

(54) **ELECTRIC TOOTHBRUSH**

(56) **References Cited**

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U.S. PATENT DOCUMENTS

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D197,699 S * 3/1964 Hall D4/101
3,408,671 A * 11/1968 Klang A46B 5/0091
15/22.1

(Continued)

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(**) Term: **14 Years**

(57) **CLAIM**

(21) Appl. No.: **29/515,796**

The ornamental design for an electric toothbrush, as shown and described.

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DESCRIPTION

(30) **Foreign Application Priority Data**

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(51) **LOC (10) Cl.** **04-02**

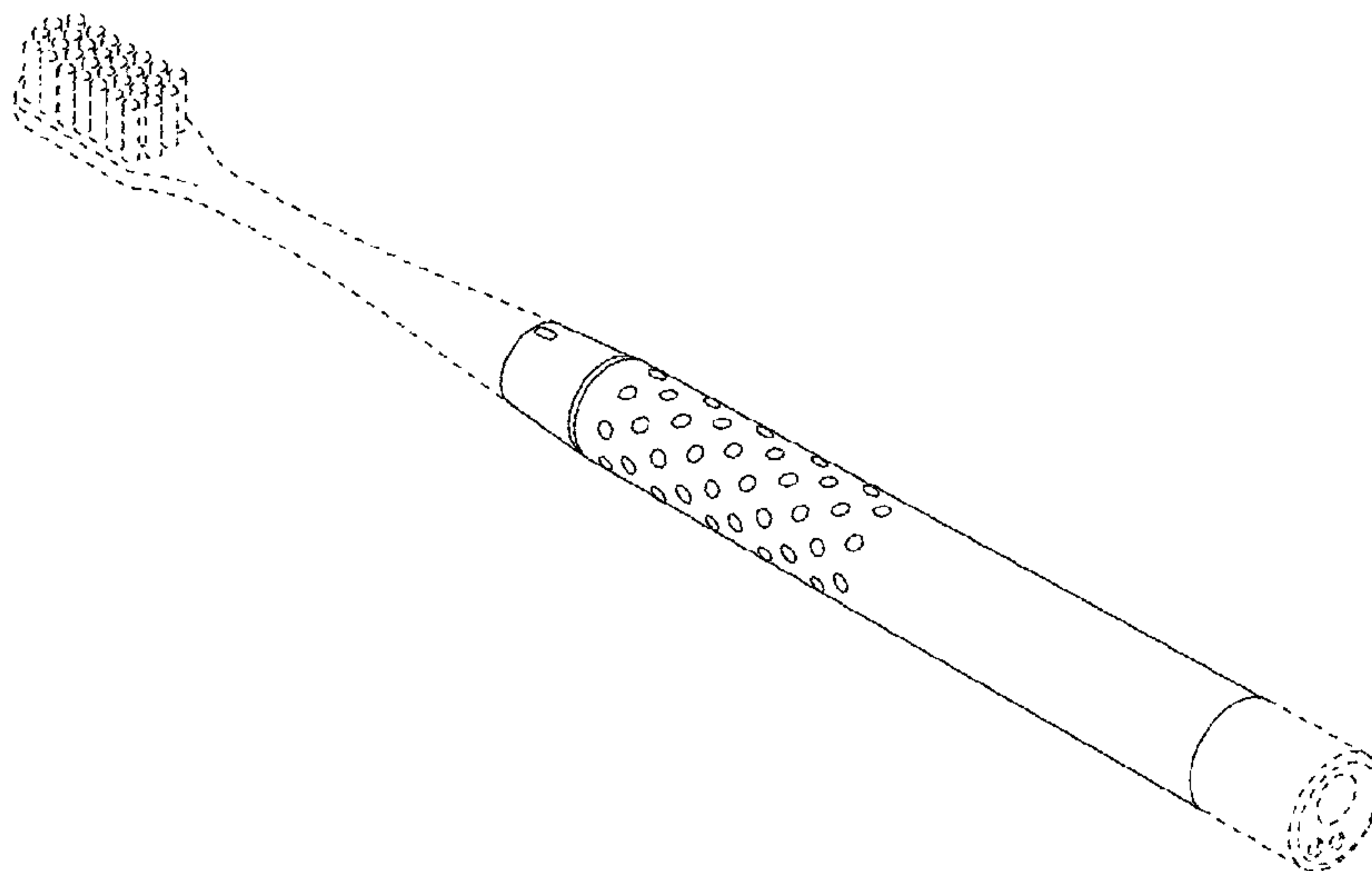
(52) **U.S. Cl.**
USPC **D4/101**; D4/138

(58) **Field of Classification Search**
USPC D4/101, 104–112, 114, 138; 15/110,
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15/145, 143.1; 132/308–311; 601/139,
601/141, 142; D8/61; 81/57.11–57.14,
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CPC A46B 5/0095; A46B 7/04; A46B 7/042;
A46B 7/044; A46B 9/04; A46B
2200/1066; A61C 17/16; A61C
17/22; A61C 17/222; A61C 17/32; A61C
17/34; A61C 17/3409; A61C
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A61C 17/3472; A61C 17/40

FIG. 1 is a perspective view of the electric toothbrush showing our new design;
FIG. 2 is a front view thereof;
FIG. 3 is a back view thereof;
FIG. 4 is a right side view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a plan view thereof;
FIG. 7 is a bottom view thereof;
FIG. 8 is an enlarged right side view thereof;
FIG. 9 is an enlarged left side view thereof;
FIG. 10 is a cross-sectional view, omitting internal mechanism, taken along line 10-10 of FIG. 2;
FIG. 11 is an enlarged cross-sectional end view, without internal structure, taken along line 11-11 of FIG. 2;
FIG. 12 is an enlarged cross-sectional view, without internal structure, taken along line 12-12 of FIG. 2; and,
FIG. 13 is an enlarged cross-sectional view, without internal structure, taken along line 13-13 of FIG. 2.
The elements depicted in broken lines illustrate portions of the electric toothbrush that form no part of the claimed. The boundary of the unclaimed head piece, as well as of the base barrel, terminates just before the start of the solid lines.

See application file for complete search history.

1 Claim, 13 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

3,488,788	A *	1/1970	Robinson	A61C 17/20	D623,413	S *	9/2010	Blanchard	D4/104
				15/22.1	D632,490	S *	2/2011	Cobabe	D4/138
3,800,350	A *	4/1974	Francolino	A61C 17/349	7,901,153	B1 *	3/2011	Strider	A46B 5/0095
				15/23					401/176
D287,549	S *	1/1987	Arnaud	D4/107	8,079,109	B2 *	12/2011	Misner	A46B 15/0002
D288,628	S *	3/1987	Farrand	D4/104					15/105
D306,522	S *	3/1990	Stiller	D4/104	D658,885	S *	5/2012	Pereira	D4/104
4,974,278	A *	12/1990	Hommann	A61C 17/3472	D664,358	S *	7/2012	Behar	D4/104
				15/22.1	D670,504	S *	11/2012	Watanabe	D4/104
5,052,071	A *	10/1991	Halm	A46B 5/0062	8,448,287	B2 *	5/2013	Ponzini	A46B 7/042
				15/143.1					15/176.1
5,435,033	A *	7/1995	Millner	A61C 15/00	8,453,285	B2 *	6/2013	Dickie	A46B 5/0062
				132/321					15/22.1
5,504,959	A *	4/1996	Yukawa	A61C 17/349	8,529,150	B2 *	9/2013	Olson	A46B 5/02
				15/22.1					15/167.1
5,623,739	A *	4/1997	Thompson	A46B 5/02	D692,242	S *	10/2013	Jimenez	D4/101
				15/143.1	D696,024	S *	12/2013	Shigeno	D4/101
5,625,916	A *	5/1997	McDougall	A61C 17/3436	D702,946	S *	4/2014	Shigeno	D4/101
				15/22.1	D719,356	S *	12/2014	Blanchard	D4/104
D394,751	S *	6/1998	Eguchi	D4/101	D720,541	S *	1/2015	Behar	D4/104
5,794,296	A *	8/1998	Wong	A61C 17/26	9,265,338	B1 *	2/2016	Cygler	A61C 17/222
				15/22.1	D752,868	S *	4/2016	McGarry	D4/101
D401,069	S *	11/1998	Lamond	D4/104	D758,736	S *	6/2016	Shigeno	D4/101
5,903,949	A *	5/1999	Halm	A46B 5/0062	2003/0000033	A1 *	1/2003	Lev	A61C 17/22
				15/143.1					15/28
5,915,433	A *	6/1999	Hybler	A46B 5/02	2003/0115695	A1 *	6/2003	Lev	A61C 17/22
				15/111					15/22.1
D413,204	S *	8/1999	Mitchell	D4/108	2003/0135940	A1 *	7/2003	Lev	A61C 17/22
D416,136	S *	11/1999	Watanabe	D4/104					15/22.1
6,138,310	A *	10/2000	Porper	A46B 5/0012	2003/0150474	A1 *	8/2003	Doyscher	A61C 15/046
				15/22.1					132/325
6,140,723	A *	10/2000	Matsui	B06B 1/045	2005/0144748	A1 *	7/2005	Hohlbein	A46B 5/0029
				15/22.1					15/167.1
D451,287	S *	12/2001	Ingram	D32/42	2005/0193510	A1 *	9/2005	Kemp	A46B 5/00
D456,136	S *	4/2002	Roehrig	D4/104					15/143.1
D456,207	S *	4/2002	Zemel	D4/138	2006/0213018	A1 *	9/2006	Gross	A46B 5/02
D456,614	S *	5/2002	Zemel	D4/134					15/143.1
D456,667	S *	5/2002	Veltri	D7/387	2011/0047729	A1 *	3/2011	Iwahori	A61C 17/3481
D457,322	S *	5/2002	Ferber	D4/101					15/22.1
D460,861	S *	7/2002	Compton	D4/108	2011/0308029	A1 *	12/2011	Edelstein	A46B 5/026
D463,914	S *	10/2002	Ferber	D4/101					15/167.1
D463,952	S *	10/2002	Zemel	D7/395	2012/0036665	A1 *	2/2012	Cho	A46B 9/026
6,546,583	B1 *	4/2003	Rohrig	A46B 5/02					15/167.1
				15/110	2012/0138082	A1 *	6/2012	Pardue	A46B 7/04
D474,644	S *	5/2003	Zemel	D7/395					132/309
D476,156	S *	6/2003	Ferber	D4/101	2014/0332028	A1 *	11/2014	Tran	A46B 9/04
D482,201	S *	11/2003	Long	D4/108					134/6
D482,566	S *	11/2003	Zemel	D7/395	2014/0352719	A1 *	12/2014	Tran	A46B 5/026
D483,184	S *	12/2003	Geiberger	D4/104					134/6
D484,311	S *	12/2003	Cacka	D4/101	2015/0074926	A1 *	3/2015	Jang	A46B 5/0016
D497,257	S *	10/2004	Jamson	D4/108					15/106
7,140,059	B2 *	11/2006	Scherl	A61C 17/26	2015/0082564	A1 *	3/2015	Buchholz	A46B 9/04
				15/22.1					15/105
D542,493	S *	5/2007	Berti	D32/52	2015/0150366	A1 *	6/2015	Kim	A46B 9/04
7,464,715	B1 *	12/2008	Husted	A61C 3/06					15/167.1
				132/321	2015/0305482	A1 *	10/2015	Tran	A46B 9/04
7,703,179	B2 *	4/2010	Ferguson	A63B 53/14					15/22.1
				16/431	2016/0022393	A1 *	1/2016	Yoshida	A46B 15/0006
									15/22.1

* cited by examiner

FIG. 1

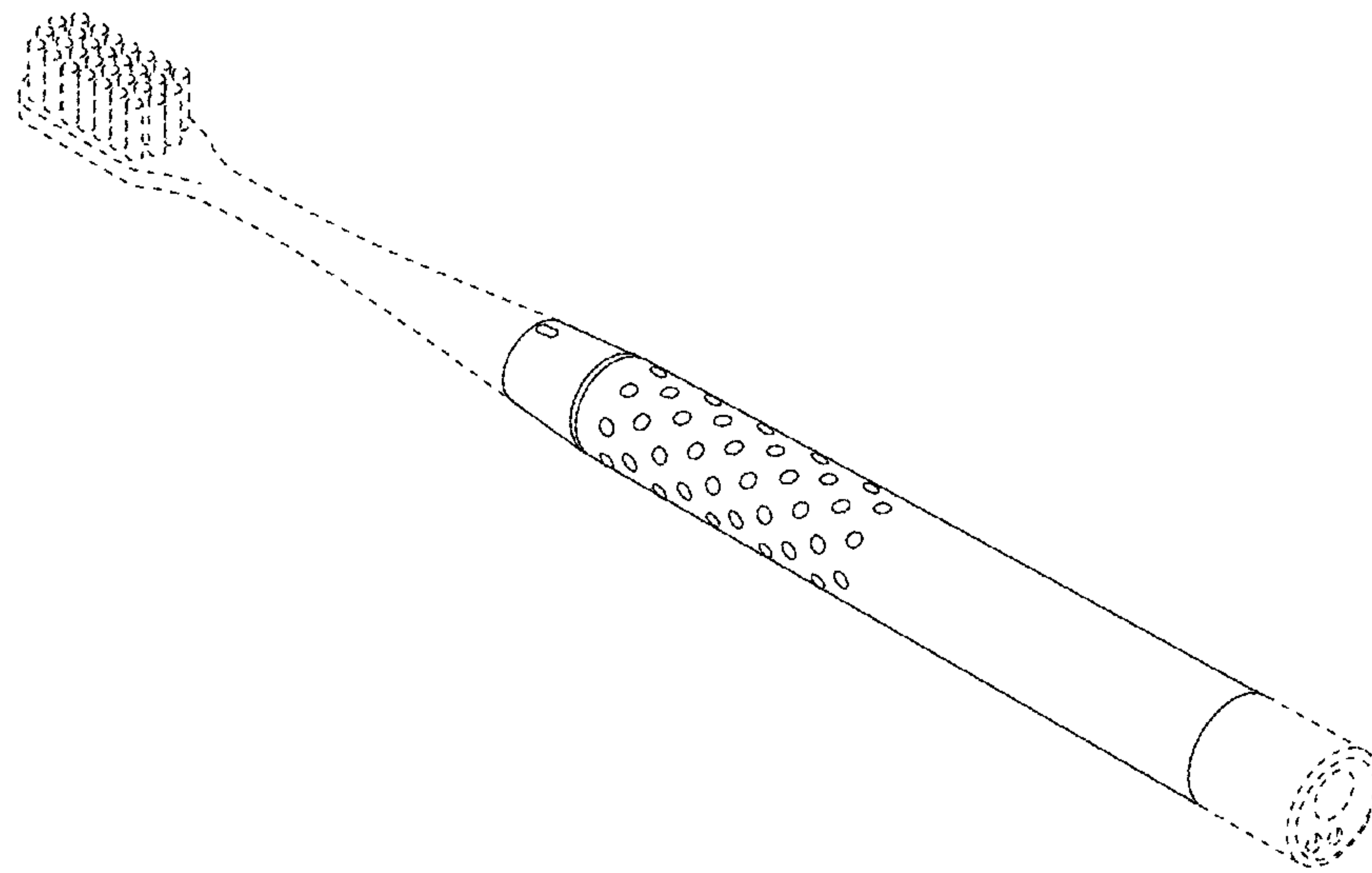


FIG. 2

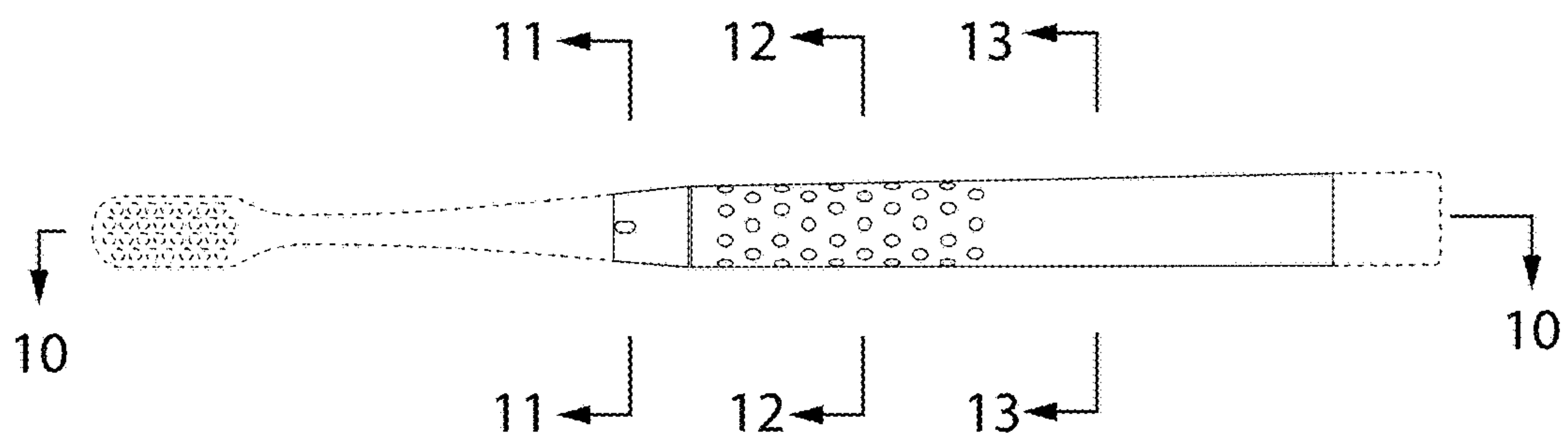


FIG. 3

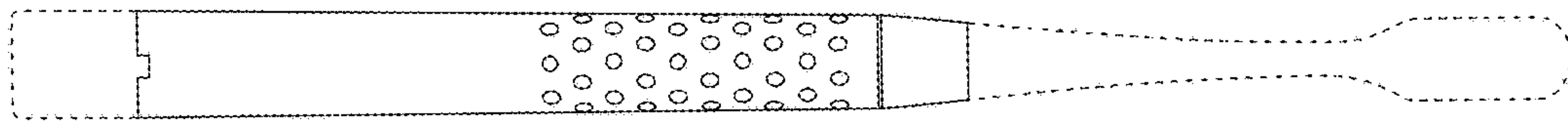


FIG. 4



FIG. 5

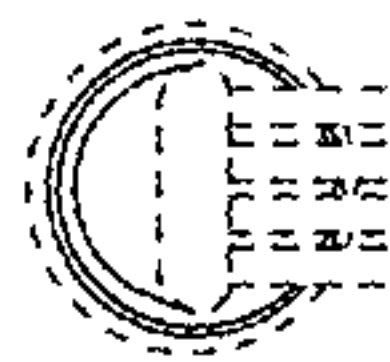


FIG. 6

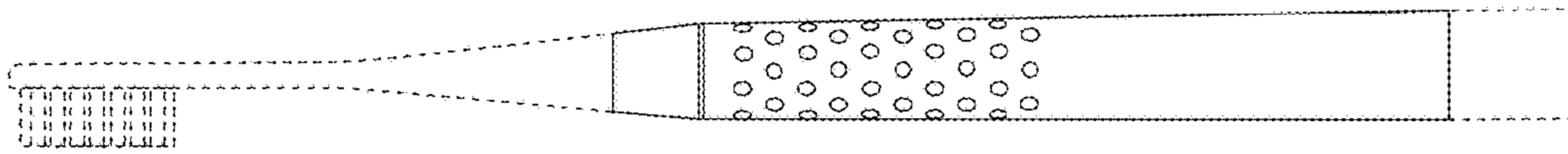


FIG. 7

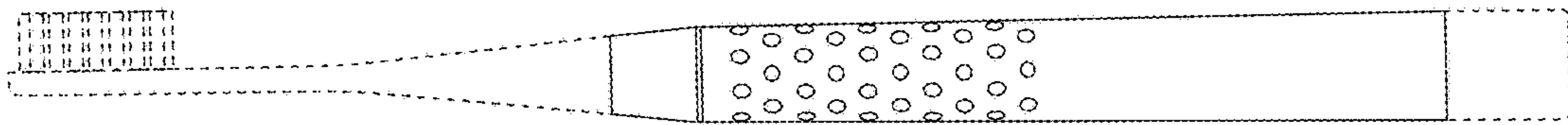


FIG. 8

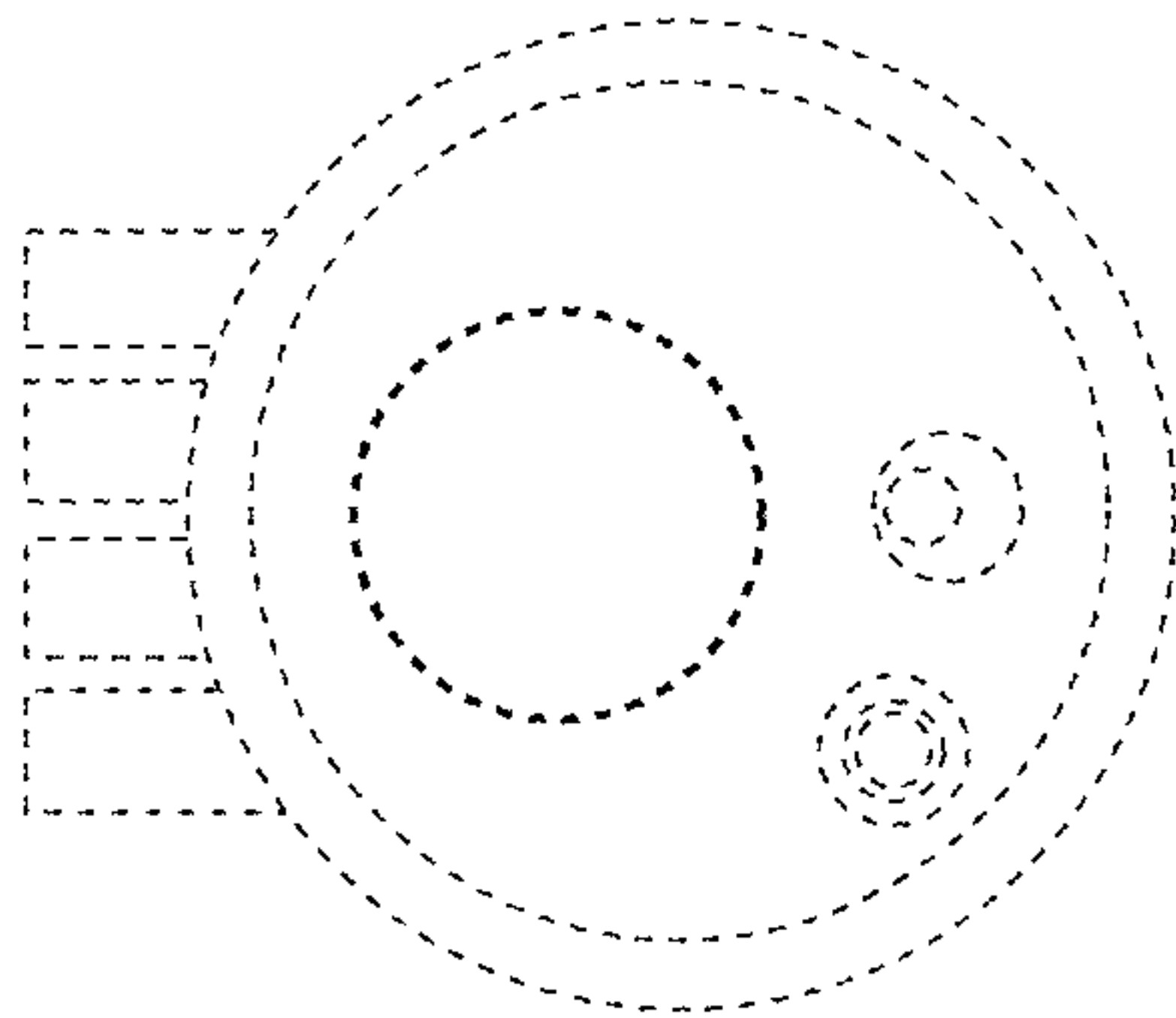


FIG. 9

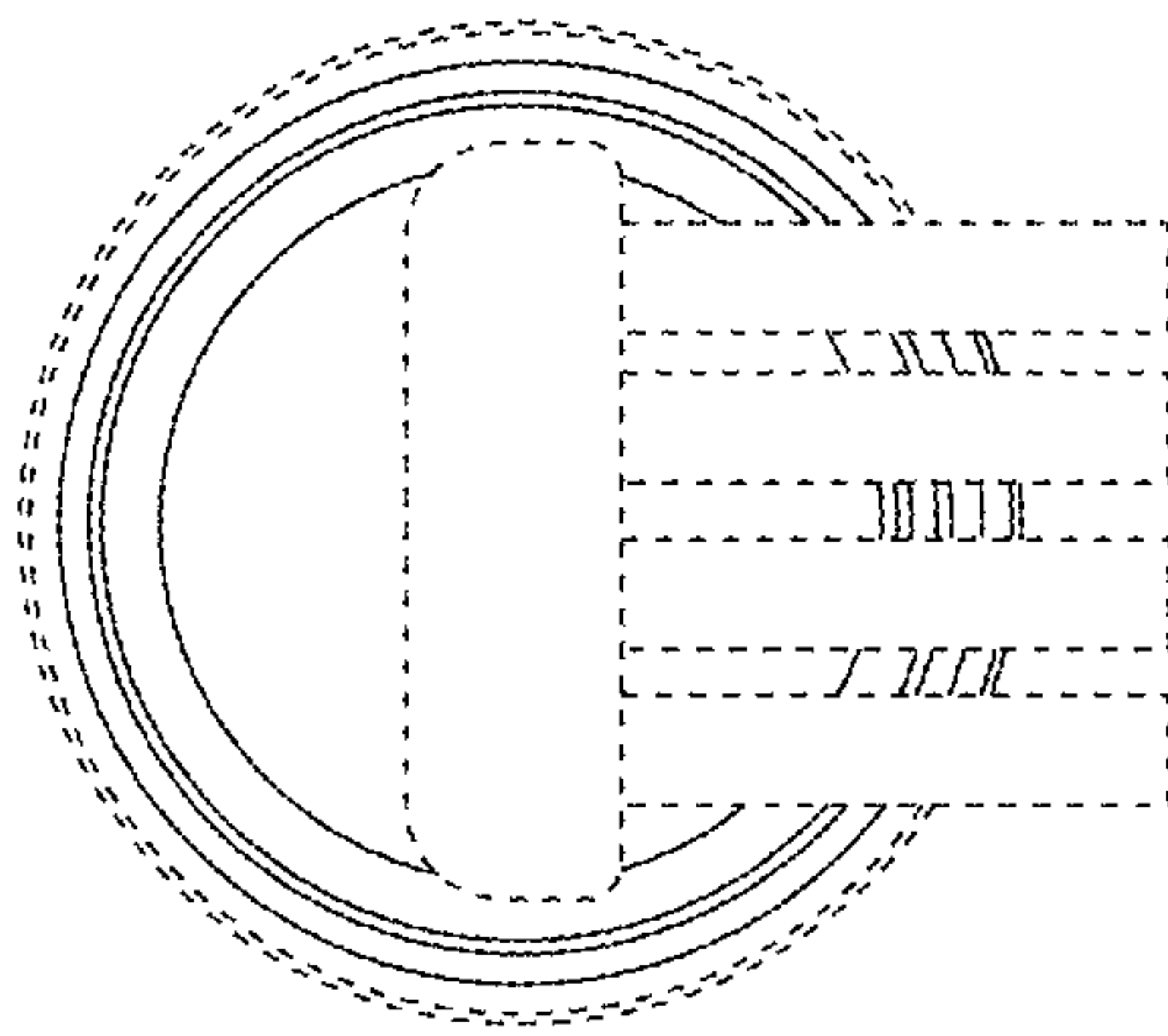


FIG. 10

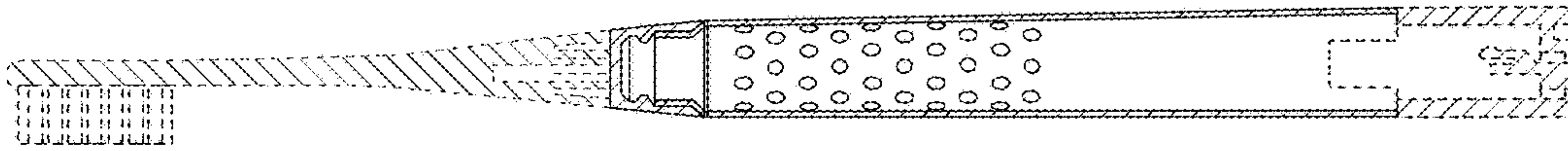


FIG. 11

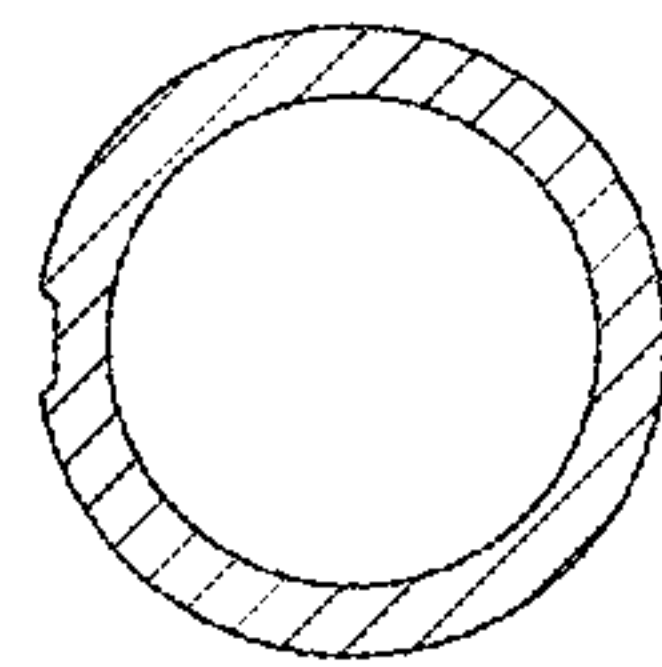


FIG. 12

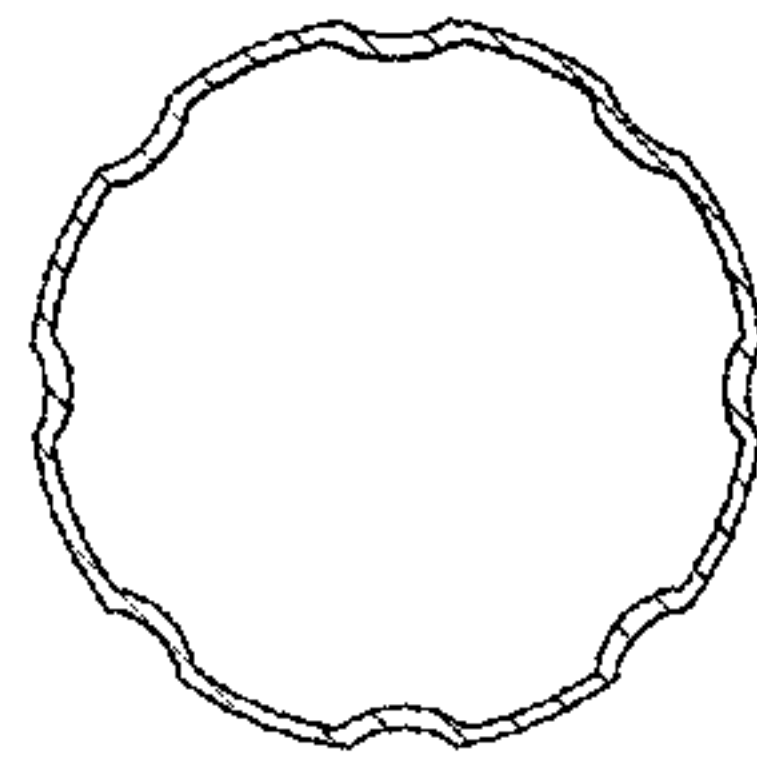


FIG. 13

