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(12) **United States Design Patent**  
**Macan**

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(54) **DRENCHING SHOWER HEAD**

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(73) Assignee: **Water Pik, Inc.**, Fort Collins, CO (US)

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See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

203,094	A	4/1878	Wakeman
204,333	A	5/1878	Josias
309,349	A	12/1884	Hart
428,023	A	5/1890	Schoff
445,250	A	1/1891	Lawless
486,986	A	11/1892	Schinke
566,384	A	8/1896	Engelhart
566,410	A	8/1896	Schinke
570,405	A	10/1896	Jerguson et al.
694,888	A	3/1902	Pfluger
800,802	A	10/1905	Franquist
832,523	A	10/1906	Andersson
835,678	A	11/1906	Hammond
854,094	A	5/1907	Klein
926,929	A	7/1909	Dusseau
1,001,842	A	8/1911	Greenfield
1,003,037	A	9/1911	Crowe

(Continued)

**FOREIGN PATENT DOCUMENTS**

CA	659510	3/1963
CH	234248	3/1963
DE	352813	5/1922
DE	848627	9/1952

DE	854100	10/1952
DE	2360534	6/1974
DE	2806093	8/1979
DE	3107808	9/1982
DE	3246327	6/1984
DE	3440901	7/1985
DE	4034695	5/1991
DE	19608085	9/1996
EP	0167063	6/1985
EP	0478999	4/1992
EP	0617644	10/1994
EP	0683354	11/1995
EP	0687851	12/1995

(Continued)

**OTHER PUBLICATIONS**

Color Copy, Labeled 1A, Gemlo, available at least as early as Dec. 2, 1998.  
Color Copy, Labeled 1B, Gemlo, available at least as early as Dec. 2, 1998.

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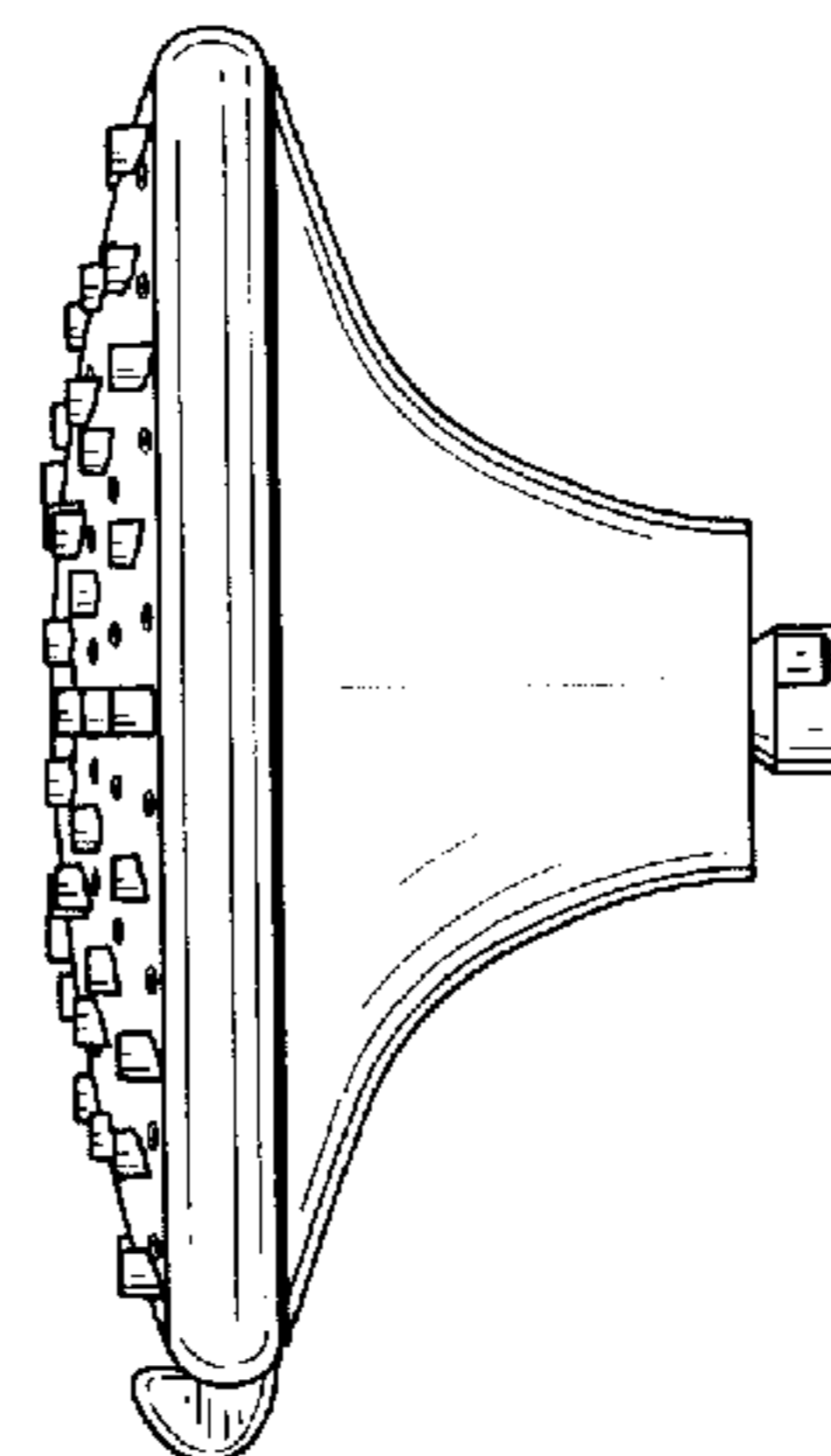
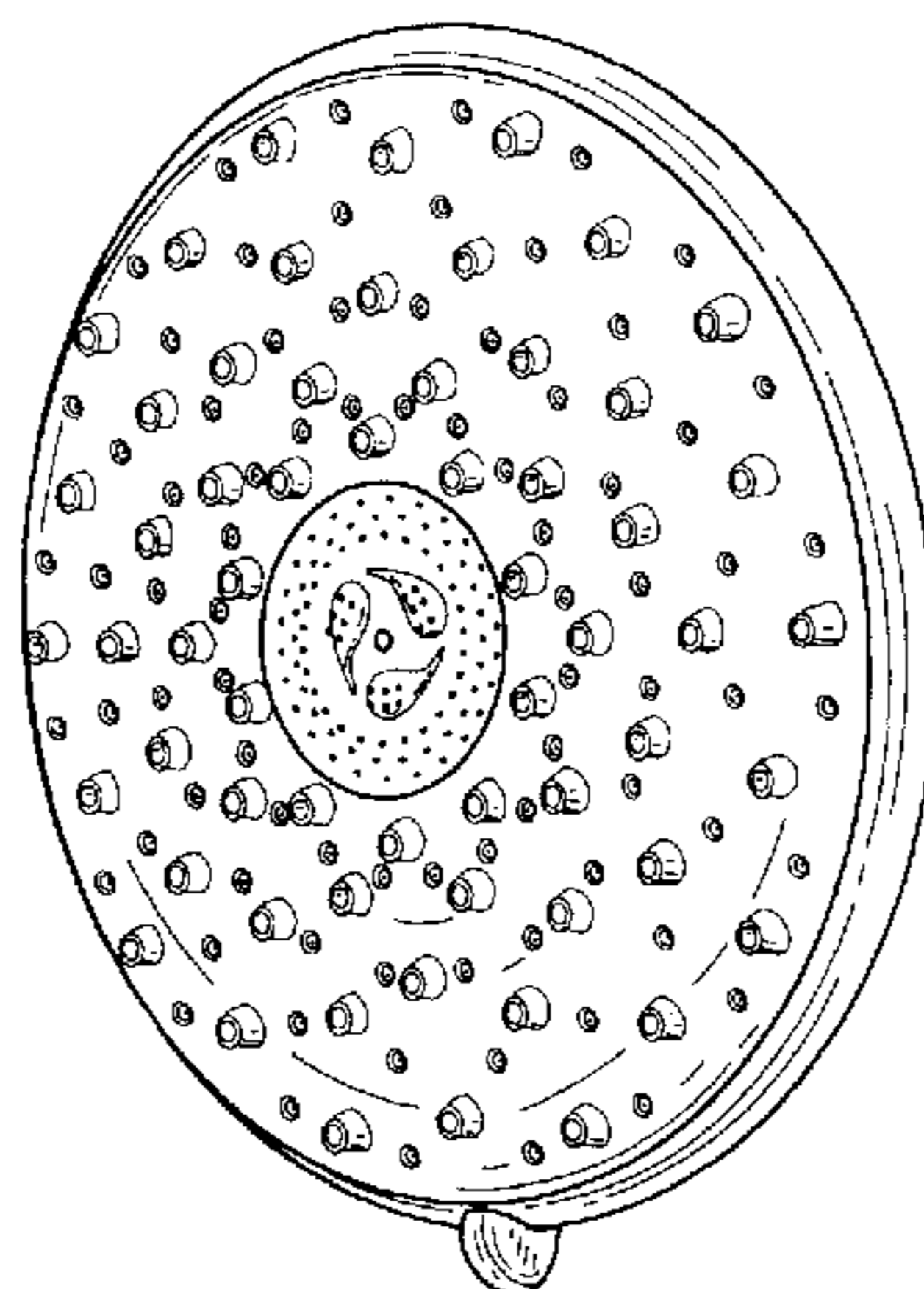
(57) **CLAIM**

The ornamental design for a drenching shower head, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view showing the bottom and left sides of a drenching shower head;  
FIG. 2 is a bottom plan view of the drenching shower head depicted in FIG. 1;  
FIG. 3 is a top plan view of the drenching shower head depicted in FIG. 1;  
FIG. 4 is a left side view of the drenching shower head depicted in FIG. 1;  
FIG. 5 is a right-side view of the drenching shower head depicted in FIG. 1;  
FIG. 6 is a front plan view of the drenching shower head depicted in FIG. 1; and,  
FIG. 7 is a back plan view of the drenching shower head depicted in FIG. 1.

**1 Claim, 4 Drawing Sheets**



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U.S. PATENT DOCUMENTS							
1,018,143	A	2/1912	Vissering	3,111,277	A	11/1963	Grimsley
1,046,573	A	12/1912	Ellis	3,143,857	A	8/1964	Eaton
1,203,466	A	10/1916	Benson	3,196,463	A	7/1965	Farneth
1,217,254	A	2/1917	Winslow	3,239,152	A	3/1966	Bachli et al.
1,218,895	A	3/1917	Porter	3,266,059	A	8/1966	Stelle
1,255,577	A	2/1918	Berry	3,306,634	A	2/1967	Groves et al.
1,260,181	A	3/1918	Garnero	3,329,967	A	7/1967	Martinez et al.
1,276,117	A	8/1918	Riebe	3,341,132	A	9/1967	Parkison
1,284,099	A	11/1918	Harris	3,342,419	A	9/1967	Weese
1,327,428	A	1/1920	Gregory	3,344,994	A	10/1967	Fife
1,451,800	A	4/1923	Agner	3,383,051	A	5/1968	Fiorentino
1,459,582	A	6/1923	Dubee	3,389,925	A	6/1968	Gottschald
1,469,528	A	10/1923	Owens	3,393,312	A	7/1968	Dahl
1,500,921	A	7/1924	Bramson et al.	3,393,331	A	7/1968	Dahl
1,560,789	A	11/1925	Johnson et al.	3,404,410	A	10/1968	Sumida
1,597,477	A	8/1926	Panhorst	3,492,029	A	1/1970	French et al.
1,633,531	A	6/1927	Keller	3,516,611	A	6/1970	Piggott
1,692,394	A	11/1928	Sundh	3,546,961	A	12/1970	Marton
1,695,263	A	12/1928	Jacques	3,550,863	A	12/1970	McDermott
1,724,147	A	8/1929	Russell	3,565,116	A	2/1971	Gabin
1,724,161	A	8/1929	Wuesthoff	3,584,822	A	6/1971	Oram
1,736,160	A	11/1929	Jonsson	3,596,835	A	8/1971	Smith et al.
1,754,127	A	4/1930	Srulowitz	3,612,577	A	10/1971	Pope
1,758,115	A	5/1930	Kelly	3,641,333	A	2/1972	Gendron
1,778,658	A	10/1930	Baker	3,663,044	A	5/1972	Contreras et al.
1,821,274	A	9/1931	Plummer	3,669,470	A	6/1972	Deurloo
1,890,156	A	12/1932	Konig	3,682,392	A	8/1972	Kint
1,906,575	A	5/1933	Goeriz	3,685,745	A	8/1972	Peschcke-koedt
2,011,446	A	8/1935	Judell	D224,834	S	9/1972	Laudell
2,024,930	A	12/1935	Judell	3,711,029	A	1/1973	Bartlett
2,044,445	A	6/1936	Price et al.	3,722,798	A	3/1973	Bletcher et al.
2,117,152	A	5/1938	Crosti	3,722,799	A	3/1973	Rauh
2,196,783	A	4/1940	Shook	3,731,084	A	5/1973	Trevorrow
2,197,667	A	4/1940	Shook	3,754,779	A	8/1973	Peress
2,216,149	A	10/1940	Weiss	3,768,735	A	10/1973	Ward
D126,433	S	4/1941	Enthof	3,786,995	A	1/1974	Manoogian et al.
2,251,192	A	7/1941	Krumsiek et al.	3,801,019	A	4/1974	Trenary et al.
2,268,263	A	12/1941	Newell et al.	3,810,580	A	5/1974	Rauh
2,342,757	A	2/1944	Roser	3,826,454	A	7/1974	Zieger
2,402,741	A	6/1946	Draviner	3,860,271	A	1/1975	Rodgers
D147,258	S	8/1947	Becker	3,861,719	A	1/1975	Hand
D152,584	S	2/1949	Becker	3,865,310	A	2/1975	Elkins et al.
2,467,954	A	4/1949	Becker	3,869,151	A	3/1975	Fletcher et al.
2,546,348	A	3/1951	Schuman	3,896,845	A	7/1975	Paker
2,567,642	A	9/1951	Penshaw	3,902,671	A	9/1975	Symmons
2,581,129	A	1/1952	Muldoon	3,910,277	A	10/1975	Zimmer
D166,073	S	3/1952	Dunkelberger	D237,708	S	11/1975	Grohe
2,648,762	A	8/1953	Dunkelberger	3,929,164	A	12/1975	Richter
2,664,271	A	12/1953	Arutunoff	3,958,756	A	5/1976	Trenary et al.
2,671,693	A	3/1954	Hyser et al.	D240,322	S	6/1976	Staub
2,676,806	A	4/1954	Bachman	3,967,783	A	7/1976	Halsted et al.
2,679,575	A	5/1954	Haberstump	3,979,096	A	9/1976	Zieger
2,680,358	A	6/1954	Zublin	3,998,390	A	12/1976	Peterson et al.
2,726,120	A	12/1955	Bletcher et al.	3,999,714	A	12/1976	Lang
2,759,765	A	8/1956	Pawley	4,005,880	A	2/1977	Anderson et al.
2,776,168	A	1/1957	Schweda	4,006,920	A	2/1977	Sadler et al.
2,873,999	A	2/1959	Webb	4,023,782	A	5/1977	Eifer
2,931,672	A	4/1960	Merritt et al.	4,045,054	A	8/1977	Arnold
2,935,265	A	5/1960	Richter	D245,858	S	9/1977	Grube
2,966,311	A	12/1960	Davis	D245,860	S	9/1977	Grube
D190,295	S	5/1961	Becker	4,068,801	A	1/1978	Leutheuser
3,007,648	A	11/1961	Fraser	4,081,135	A	3/1978	Tomaro
D192,935	S	5/1962	Becker	4,084,271	A	4/1978	Ginsberg
3,032,357	A	5/1962	Shames et al.	4,091,998	A	5/1978	Peterson
3,034,809	A	5/1962	Greenberg	D249,356	S	9/1978	Nagy
3,037,799	A	6/1962	Mulac	4,117,979	A	10/1978	Lagarelli et al.
3,092,333	A	6/1963	Gaiotto	4,133,486	A	1/1979	Fanella
3,098,508	A	7/1963	Gerdes	D251,045	S	2/1979	Grube
3,103,723	A	9/1963	Becker	4,141,502	A	2/1979	Grohe
3,104,827	A	9/1963	Aghnides	4,151,955	A	5/1979	Stouffer
				4,151,957	A	5/1979	Gecewicz et al.

# US D527,440 S

4,162,801 A	7/1979	Kresky et al.	D297,160 S	*	8/1988	Robbins .....	D23/213
4,165,837 A	8/1979	Rundzaitis	4,778,104 A		10/1988	Fisher	
4,174,822 A	11/1979	Larsson	4,787,591 A		11/1988	Villacorta	
4,185,781 A	1/1980	O'Brien	4,790,294 A		12/1988	Allred, III et al.	
4,190,207 A	2/1980	Fienhold et al.	4,801,091 A		1/1989	Sandvik	
4,191,332 A	3/1980	De Langis et al.	4,809,369 A		3/1989	Bowden	
4,203,550 A	5/1980	On	4,839,599 A		6/1989	Fischer	
4,209,132 A	6/1980	Kwan	4,842,059 A		6/1989	Tomek	
D255,626 S	7/1980	Grube	D302,325 S		7/1989	Charet et al.	
4,219,160 A	8/1980	Allred, Jr.	4,850,616 A		7/1989	Pava	
4,221,338 A	9/1980	Shames et al.	4,856,822 A		8/1989	Parker	
4,243,253 A	1/1981	Rogers, Jr.	4,865,362 A		9/1989	Holden	
4,244,526 A	1/1981	Arth	4,871,196 A		10/1989	Kingsford	
D258,677 S	3/1981	Larsson	D306,351 S		2/1990	Charet et al.	
4,254,914 A	3/1981	Shames et al.	4,901,927 A		2/1990	Valdivia	
4,258,414 A	3/1981	Sokol	4,903,178 A		2/1990	Englot et al.	
4,272,022 A	6/1981	Evans	4,903,897 A		2/1990	Hayes	
4,274,400 A	6/1981	Baus	4,903,922 A		2/1990	Harris, III	
4,282,612 A	8/1981	King	4,907,137 A		3/1990	Schladitz et al.	
D261,300 S	10/1981	Klose	4,914,759 A		4/1990	Goff	
D261,417 S	10/1981	Klose	4,946,202 A		8/1990	Perricone	
4,303,201 A	12/1981	Elkins et al.	4,951,329 A		8/1990	Shaw	
4,319,608 A	3/1982	Raikov et al.	4,953,585 A		9/1990	Rollini et al.	
4,330,089 A	5/1982	Finkbeiner	4,964,573 A		10/1990	Lipski	
D266,212 S	9/1982	Haug et al.	4,972,048 A		11/1990	Martin	
4,350,298 A	9/1982	Tada	D313,267 S		12/1990	Lenci et al.	
4,353,508 A	10/1982	Butterfield et al.	D314,246 S		1/1991	Bache	
D267,582 S	1/1983	Mackay et al.	D315,191 S		3/1991	Mikol	
D268,442 S	3/1983	Darmon	D317,348 S		6/1991	Geneve et al.	
D268,611 S	4/1983	Klose	5,022,103 A		6/1991	Faist	
4,383,554 A	5/1983	Merriman	5,032,015 A		7/1991	Christianson	
4,396,797 A	8/1983	Sakuragi et al.	5,033,528 A		7/1991	Volcani	
4,398,669 A	8/1983	Fienhold	5,033,897 A		7/1991	Chen	
4,425,965 A	1/1984	Bayh, III et al.	D320,064 S		9/1991	Presman	
D274,457 S	6/1984	Haug	5,046,764 A		9/1991	Kimura et al.	
4,461,052 A	7/1984	Mostul	D321,062 S		10/1991	Bonbright	
4,465,308 A	8/1984	Martini	D322,119 S		12/1991	Haug et al.	
4,467,964 A	8/1984	Kaeser	D322,681 S		12/1991	Yuen	
4,495,550 A	1/1985	Visciano	5,070,552 A		12/1991	Gentry et al.	
4,527,745 A	7/1985	Butterfield et al.	D323,545 S		1/1992	Ward	
4,540,202 A	9/1985	Amphoux et al.	5,082,019 A		1/1992	Tetrault	
4,545,081 A	10/1985	Nestor et al.	5,086,878 A		2/1992	Swift	
4,553,775 A	11/1985	Halling	5,090,624 A		2/1992	Rogers	
D281,820 S	12/1985	Oba et al.	5,100,055 A		3/1992	Rokitenetz et al.	
4,561,593 A	12/1985	Cammack et al.	D325,769 S		4/1992	Haug et al.	
4,571,003 A	2/1986	Roling et al.	D325,770 S		4/1992	Haug et al.	
D283,645 S	4/1986	Tanaka	5,103,384 A		4/1992	Drohan	
4,587,991 A	5/1986	Chorkey	D326,311 S		5/1992	Lenci et al.	
4,588,130 A	5/1986	Trenary et al.	D327,729 S		7/1992	Rogers	
4,598,866 A	7/1986	Cammack et al.	5,134,251 A		7/1992	Martin	
4,614,303 A	9/1986	Moseley, Jr. et al.	D328,944 S		8/1992	Robbins	
4,618,100 A	10/1986	White et al.	5,141,016 A		8/1992	Nowicki	
4,629,124 A	12/1986	Gruber	D329,504 S		9/1992	Yuen	
4,629,125 A	12/1986	Liu	5,143,300 A		9/1992	Cutler	
4,643,463 A	2/1987	Halling et al.	5,145,114 A		9/1992	Monch	
4,645,244 A	2/1987	Curtis	D330,068 S		10/1992	Haug et al.	
4,650,120 A	3/1987	Kress	D330,408 S		10/1992	Thacker	
4,650,470 A	3/1987	Epstein	D330,409 S		10/1992	Raffo	
4,652,025 A	3/1987	Conroy, Sr.	5,153,976 A		10/1992	Benchaar et al.	
4,657,185 A	4/1987	Rundzaitis	5,154,355 A		10/1992	Gonzalez	
4,669,666 A	6/1987	Finkbeiner	5,154,483 A		10/1992	Zeller	
4,669,757 A	6/1987	Bartholomew	5,163,752 A		11/1992	Copeland et al.	
4,674,687 A	6/1987	Smith et al.	5,172,860 A		12/1992	Yuch	
4,683,917 A	8/1987	Bartholomew	5,172,862 A		12/1992	Heimann et al.	
4,703,893 A	11/1987	Gruber	5,172,866 A		12/1992	Ward	
4,719,654 A	1/1988	Blessing	D332,303 S		1/1993	Klose	
4,733,337 A	3/1988	Bieberstein	D332,994 S		2/1993	Huen	
D295,437 S	4/1988	Fabian	D333,339 S		2/1993	Klose	
4,739,801 A	4/1988	Kimura et al.	5,197,767 A		3/1993	Kimura et al.	
D296,582 S	7/1988	Haug et al.	D334,794 S		4/1993	Klose	
4,754,928 A	7/1988	Rogers et al.	D335,171 S		4/1993	Lenci et al.	

# US D527,440 S

5,201,468 A	4/1993	Freier et al.	D366,710 S	1/1996	Szymanski
5,213,267 A	5/1993	Heimann et al.	5,481,765 A	1/1996	Wang
5,220,697 A	6/1993	Birchfield	D366,948 S	2/1996	Carbone
D337,839 S	7/1993	Zeller	D367,315 S	2/1996	Andrus
5,228,625 A	7/1993	Grassberger	D367,333 S	2/1996	Swyst
D338,542 S	8/1993	Yuen	D367,696 S	3/1996	Andrus
5,232,162 A	8/1993	Chih	D367,934 S	3/1996	Carbone
D339,492 S	9/1993	Klose	D368,146 S	3/1996	Carbone
D339,627 S	9/1993	Klose	D368,317 S	3/1996	Swyst
D339,848 S	9/1993	Gottwald	5,499,767 A	3/1996	Morand
5,246,169 A	9/1993	Heimann et al.	D368,539 S	4/1996	Carbone et al.
D340,376 S	10/1993	Klose	D368,540 S	4/1996	Santarsiero
5,254,809 A	10/1993	Martin	D368,541 S	4/1996	Kaiser et al.
D341,007 S	11/1993	Haug et al.	D368,542 S	4/1996	deBlois et al.
D341,191 S	11/1993	Klose	D369,204 S	4/1996	Andrus
D341,220 S	11/1993	Eagan	D369,205 S	4/1996	Andrus
5,263,646 A	11/1993	McCauley	5,507,436 A	4/1996	Ruttenberg
5,265,833 A	11/1993	Heimann et al.	D369,873 S	5/1996	deBlois et al.
5,268,826 A	12/1993	Greene	D369,874 S	5/1996	Santarsiero
5,276,596 A	1/1994	Krenzel	D369,875 S	5/1996	Carbone
5,277,391 A	1/1994	Haug et al.	D370,052 S	5/1996	Chan et al.
5,286,071 A	2/1994	Storage	D370,250 S	5/1996	Fawcett et al.
5,288,110 A	2/1994	Allread	D370,277 S	5/1996	Kaiser
5,294,054 A	3/1994	Benedict et al.	D370,278 S	5/1996	Nolan
5,297,735 A	3/1994	Heimann et al.	D370,279 S	5/1996	deBlois
D345,811 S	4/1994	Van Deursen et al.	D370,280 S	5/1996	Kaiser
D346,426 S	4/1994	Warshawsky	D370,281 S	5/1996	Johnstone et al.
D346,428 S	4/1994	Warshawsky	5,517,392 A	5/1996	Rouso et al.
D346,430 S	4/1994	Warshawsky	5,521,803 A	5/1996	Eckert et al.
D347,262 S	5/1994	Black et al.	D370,542 S	6/1996	Santarsiero
D347,265 S	5/1994	Gottwald	D370,735 S	6/1996	deBlois
5,316,216 A	5/1994	Cammack et al.	D370,987 S	6/1996	Santarsiero
D348,720 S	7/1994	Haug et al.	D370,988 S	6/1996	Santarsiero
D349,947 S	8/1994	Hing-Wah	D371,448 S	7/1996	Santarsiero
5,333,787 A	8/1994	Smith et al.	D371,618 S	7/1996	Nolan
5,340,064 A	8/1994	Heimann et al.	D371,619 S	7/1996	Szymanski
5,340,165 A	8/1994	Sheppard	D371,856 S	7/1996	Carbone
D350,808 S	9/1994	Warshawsky	D372,318 S	7/1996	Szymanski
5,344,080 A	9/1994	Matsui	D372,319 S	7/1996	Carbone
5,349,987 A	9/1994	Shieh	5,531,625 A	7/1996	Zhong
5,356,077 A	10/1994	Shames	D372,548 S	8/1996	Carbone
D352,347 S	11/1994	Dannenberg	D372,998 S	8/1996	Carbone
D352,766 S	11/1994	Hill et al.	D373,210 S	8/1996	Santarsiero
5,368,235 A	11/1994	Drozdoeff et al.	D373,434 S	9/1996	Nolan
5,369,556 A	11/1994	Zeller	D373,435 S	9/1996	Nolan
5,370,427 A	12/1994	Hoelle et al.	D373,645 S	9/1996	Johnstone et al.
5,385,500 A	1/1995	Schmidt	D373,646 S	9/1996	Szymanski et al.
D355,242 S	2/1995	Warshawsky	D373,647 S	9/1996	Kaiser
D355,703 S	2/1995	Duell	D373,648 S	9/1996	Kaiser
D356,626 S	3/1995	Wang	D373,649 S	9/1996	Carbone
5,397,064 A	3/1995	Heitzman	D373,651 S	9/1996	Szymanski
5,398,872 A	3/1995	Joubran	D373,652 S	9/1996	Kaiser
5,398,977 A	3/1995	Berger et al.	5,551,637 A	9/1996	Lo
5,402,812 A	4/1995	Moineau et al.	5,558,278 A	9/1996	Gallorini
5,405,089 A	4/1995	Heimann et al.	D374,271 S	10/1996	Fleischmann
5,423,348 A	6/1995	Jezek et al.	D374,297 S	10/1996	Kaiser
5,433,384 A	7/1995	Chan et al.	D374,298 S	10/1996	Swyst
D361,399 S	8/1995	Carbone et al.	D374,299 S	10/1996	Carbone
D361,623 S	8/1995	Huen	D374,493 S	10/1996	Szymanski
5,449,206 A	9/1995	Lockwood	D374,494 S	10/1996	Santarsiero
D363,360 S	10/1995	Santarsiero	D374,732 S	10/1996	Kaiser
5,454,809 A	10/1995	Janssen	D374,733 S	10/1996	Santarsiero
5,468,057 A	11/1995	Megerle et al.	5,560,548 A	10/1996	Mueller et al.
D364,935 S	12/1995	deBlois	5,567,115 A	10/1996	Carbone
D365,625 S	12/1995	Bova	D375,541 S	11/1996	Michaluk
D365,646 S	12/1995	deBlois	5,577,664 A	11/1996	Heitzman
5,476,225 A	12/1995	Chan	D376,217 S	12/1996	Kaiser
D366,309 S	1/1996	Huang	D376,860 S	12/1996	Santarsiero
D366,707 S	1/1996	Kaiser	D376,861 S	12/1996	Johnstone et al.
D366,708 S	1/1996	Santarsiero	D376,862 S	12/1996	Carbone
D366,709 S	1/1996	Szmanski	D378,401 S	3/1997	Neufeld et al.

# US D527,440 S

5,613,638 A	3/1997	Blessing	D422,337 S	4/2000	Chan	
5,613,639 A	3/1997	Storm et al.	D423,083 S	4/2000	Haug et al.	
5,615,837 A	4/1997	Roman	D424,160 S	5/2000	Haug et al.	
5,624,074 A	4/1997	Parisi	D424,161 S	5/2000	Haug et al.	
5,624,498 A	4/1997	Lee et al.	D427,661 S	7/2000	Haverstraw et al.	
D379,212 S	5/1997	Chan	D428,110 S	7/2000	Haug et al.	
D379,404 S	5/1997	Spelts	D428,125 S	7/2000	Chan	
5,632,049 A	5/1997	Chen	6,095,801 A	8/2000	Spiewak	
D381,405 S	7/1997	Waidele et al.	6,123,272 A	9/2000	Havican et al.	
D381,737 S	7/1997	Chan	D432,624 S	10/2000	Chan	
D382,936 S	8/1997	Shfaram	D433,096 S	10/2000	Tse	
5,653,260 A	8/1997	Huber	D433,097 S	10/2000	Tse	
5,667,146 A	9/1997	Pimentel et al.	6,126,091 A	10/2000	Heitzman	
D385,332 S	10/1997	Andrus	D434,109 S	11/2000	Ko	
D385,333 S	10/1997	Caroen et al.	6,164,569 A	12/2000	Hollinshead et al.	
D385,334 S	10/1997	Caroen et al.	6,164,570 A	12/2000	Smeltzer	
D385,616 S	10/1997	Dow et al.	D435,889 S	1/2001	Ben-Tsur et al.	
D385,947 S	11/1997	Dow et al.	D443,025 S	5/2001	Kollmann et al.	
D387,230 S	12/1997	von Buelow et al.	D443,029 S	5/2001	Kollmann et al.	
5,699,964 A	12/1997	Bergmann et al.	6,230,984 B1	5/2001	Jager	
5,702,057 A	12/1997	Huber	6,230,988 B1	5/2001	Chao et al.	
D389,558 S	1/1998	Andrus	6,230,989 B1	5/2001	Haverstraw et al.	
5,704,080 A	1/1998	Kuhne	6,250,572 B1	6/2001	Chen	
5,718,380 A	2/1998	Schorn et al.	6,254,014 B1	7/2001	Clearman et al.	
D392,369 S	3/1998	Chan	6,270,278 B1	8/2001	Mauro	
5,730,361 A	3/1998	Thonnes	6,276,004 B1	8/2001	Bertrand et al.	
5,730,362 A	3/1998	Cordes	D450,370 S	11/2001	Wales et al.	
5,730,363 A	3/1998	Kress	D450,805 S	11/2001	Lindholm et al.	
5,742,961 A	4/1998	Casperson et al.	D450,806 S	11/2001	Lindholm et al.	
D394,490 S	5/1998	Andrus et al.	D450,807 S	11/2001	Lindholm et al.	
5,746,375 A	5/1998	Guo	D451,169 S	11/2001	Lindholm et al.	
5,749,552 A	5/1998	Fan	D451,170 S	11/2001	Lindholm et al.	
5,749,602 A	5/1998	Delaney et al.	D451,171 S	11/2001	Lindholm et al.	
D394,899 S	6/1998	Caroen et al.	D451,172 S	11/2001	Lindholm et al.	
D395,074 S	6/1998	Neibrook et al.	D451,583 S	12/2001	Lindholm et al.	
D395,142 S	6/1998	Neibrook et al.	D451,980 S	12/2001	Lindholm et al.	
5,765,760 A	6/1998	Kuo	D452,553 S	12/2001	Lindholm et al.	
5,769,802 A	6/1998	Wang	D452,725 S	1/2002	Lindholm et al.	
5,772,120 A	6/1998	Huber	D452,897 S	1/2002	Gillette et al.	
5,778,939 A	7/1998	Hok-Yin	D453,370 S	2/2002	Lindholm et al.	
5,788,157 A	8/1998	Kress	D453,551 S	2/2002	Lindholm et al.	
D398,370 S	9/1998	Purdy	D457,937 S	5/2002	Lindholm et al.	
5,806,771 A	9/1998	Loschelder et al.	6,454,186 B1	9/2002	Haverstraw et al.	
5,819,791 A	10/1998	Chronister et al.	6,464,265 B1	10/2002	Mikol	
5,820,574 A	10/1998	Henkin et al.	D468,800 S	1/2003	Tse	
5,839,666 A	11/1998	Heimann et al.	D471,953 S	3/2003	Colligan et al.	
D402,350 S	12/1998	Andrus et al.	6,533,194 B1	3/2003	Marsh et al.	
D404,116 S	1/1999	Bosio	6,641,057 B1	11/2003	Thomas et al.	
5,855,348 A	1/1999	Fornara	D485,887 S	1/2004	Luetzgen et al.	
5,860,599 A	1/1999	Lin	D487,498 S	3/2004	Blomstrom	
5,862,543 A	1/1999	Reynoso et al.	D490,498 S	5/2004	Golichowski	
5,862,985 A	1/1999	Neibrook et al.	6,739,523 B1	5/2004	Haverstraw et al.	
D405,502 S	2/1999	Tse	D492,007 S	6/2004	Kollmann et al.	
5,865,375 A	2/1999	Hsu	6,742,725 B1	6/2004	Fan	
5,865,378 A	2/1999	Hollinshead et al.	D493,208 S	* 7/2004	Lin ..... D23/213	
D408,893 S	4/1999	Tse	D496,987 S	10/2004	Glunk	
D409,276 S	5/1999	Ratzlaff	D497,974 S	11/2004	Haug et al.	
D410,276 S	5/1999	Ben-Tsur	D498,514 S	11/2004	Haug et al.	
5,918,811 A	7/1999	Denham et al.	D500,121 S	12/2004	Blomstrom	
5,937,905 A	8/1999	Santos	D500,549 S	* 1/2005	Blomstrom ..... D23/229	
5,947,388 A	9/1999	Woodruff	D501,242 S	* 1/2005	Blomstrom ..... D23/229	
D415,247 S	10/1999	Haverstraw et al.	2004/0074993 A1	4/2004	Thomas et al.	
5,992,762 A	11/1999	Wang	2004/0195381 A1	10/2004	Luetzgen et al.	
D418,200 S	12/1999	Ben-Tsur	2005/0061896 A1	3/2005	Luetzgen et al.	
5,997,047 A	12/1999	Pimentel et al.	2005/0082824 A1	4/2005	Luetzgen et al.	
D418,902 S	1/2000	Haverstraw et al.				
D418,903 S	1/2000	Haverstraw et al.				
D422,053 S	3/2000	Brenner et al.				
6,042,027 A	3/2000	Sandvik	EP	0695907	2/1996	
6,042,155 A	3/2000	Lockwood	EP	0719588	7/1996	
D422,336 S	4/2000	Haverstraw et al.	EP	0721082	7/1996	
			EP	0733747	9/1996	

## FOREIGN PATENT DOCUMENTS

# US D527,440 S

Page 6

---

EP	0808661	11/1997	GB	2156932 A	10/1985
EP	0726811	1/1998	GB	2199771	7/1988
FR	538538	6/1922	GB	2298595	11/1996
FR	873808	7/1942	IT	327400	7/1935
FR	1039750	10/1953	IT	350359	7/1937
FR	1098836	8/1955	IT	563459	5/1957
FR	2695452	3/1994	JP	S63-181459	11/1988
GB	10086	of 1894	JP	H2-78660	6/1990
GB	3314	of 1914	NE	8902957	6/1991
GB	129812	7/1919	WO	WO93/12894	7/1993
GB	204600	10/1923	WO	WO93/25839	12/1993
GB	634483	3/1950	WO	WO98/30336	7/1998
GB	971866	10/1964			
GB	2066074	1/1980			
GB	2066704	7/1981			

\* cited by examiner

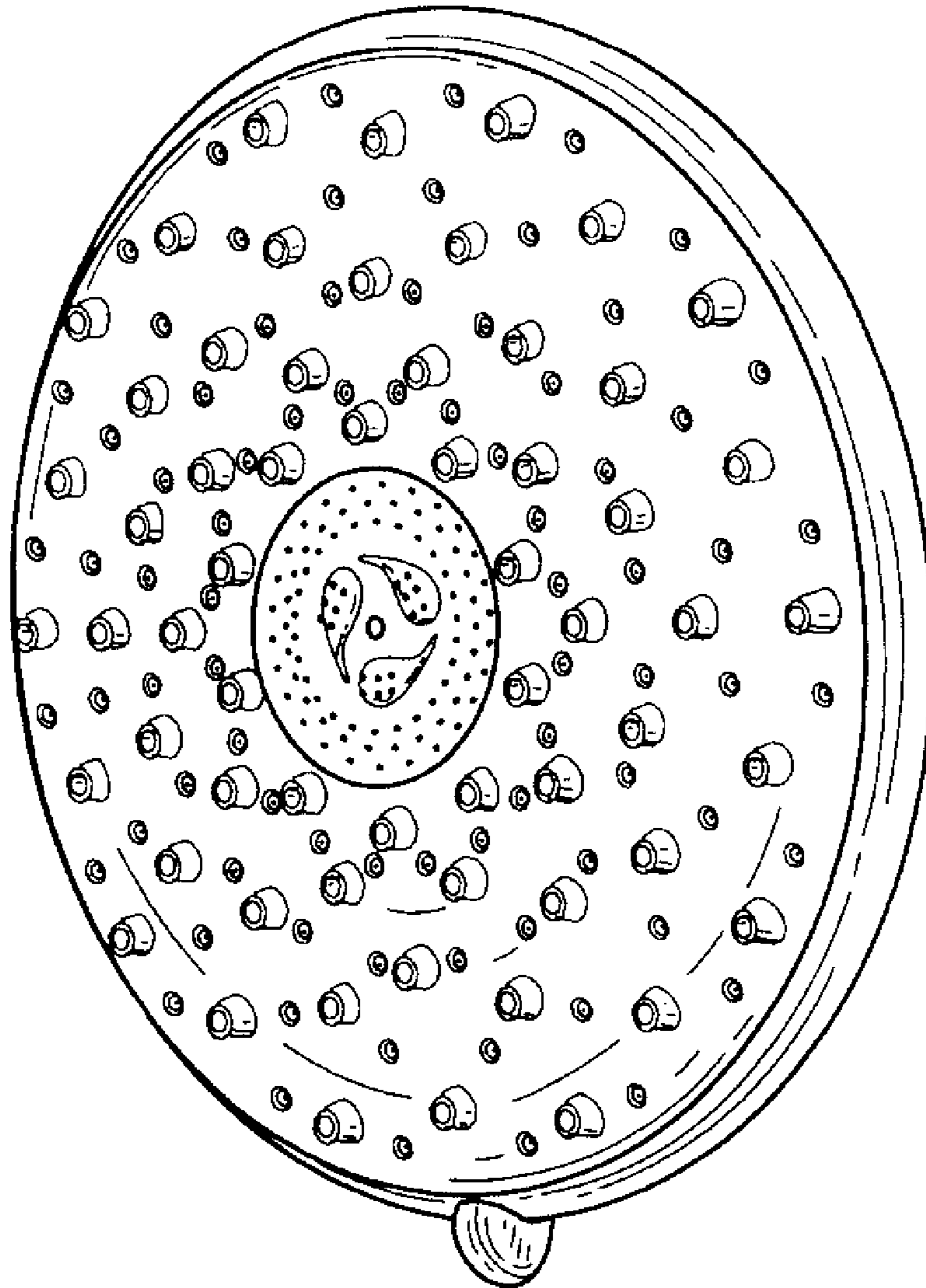


FIG. 1

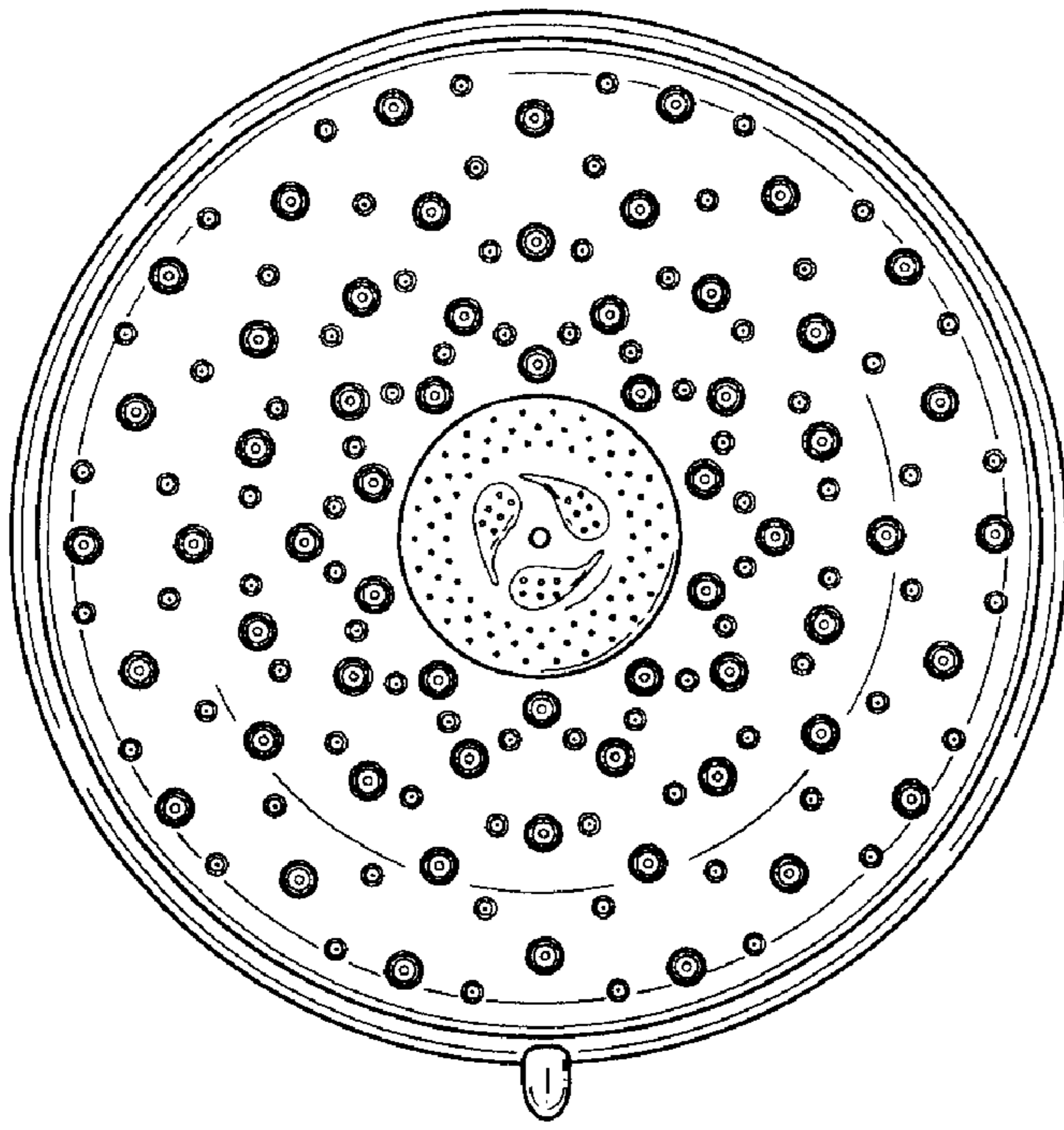


FIG.2

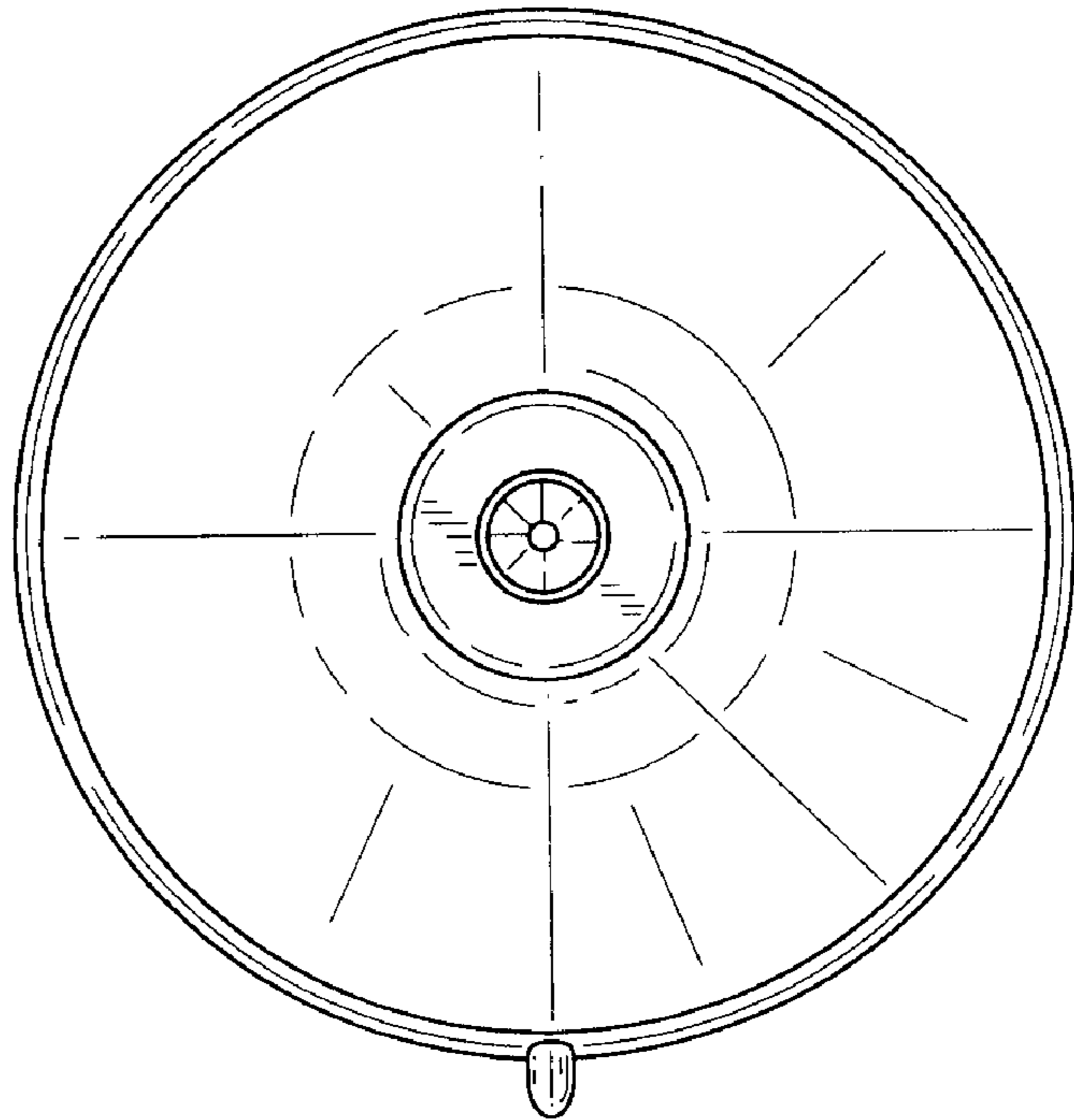


FIG.3



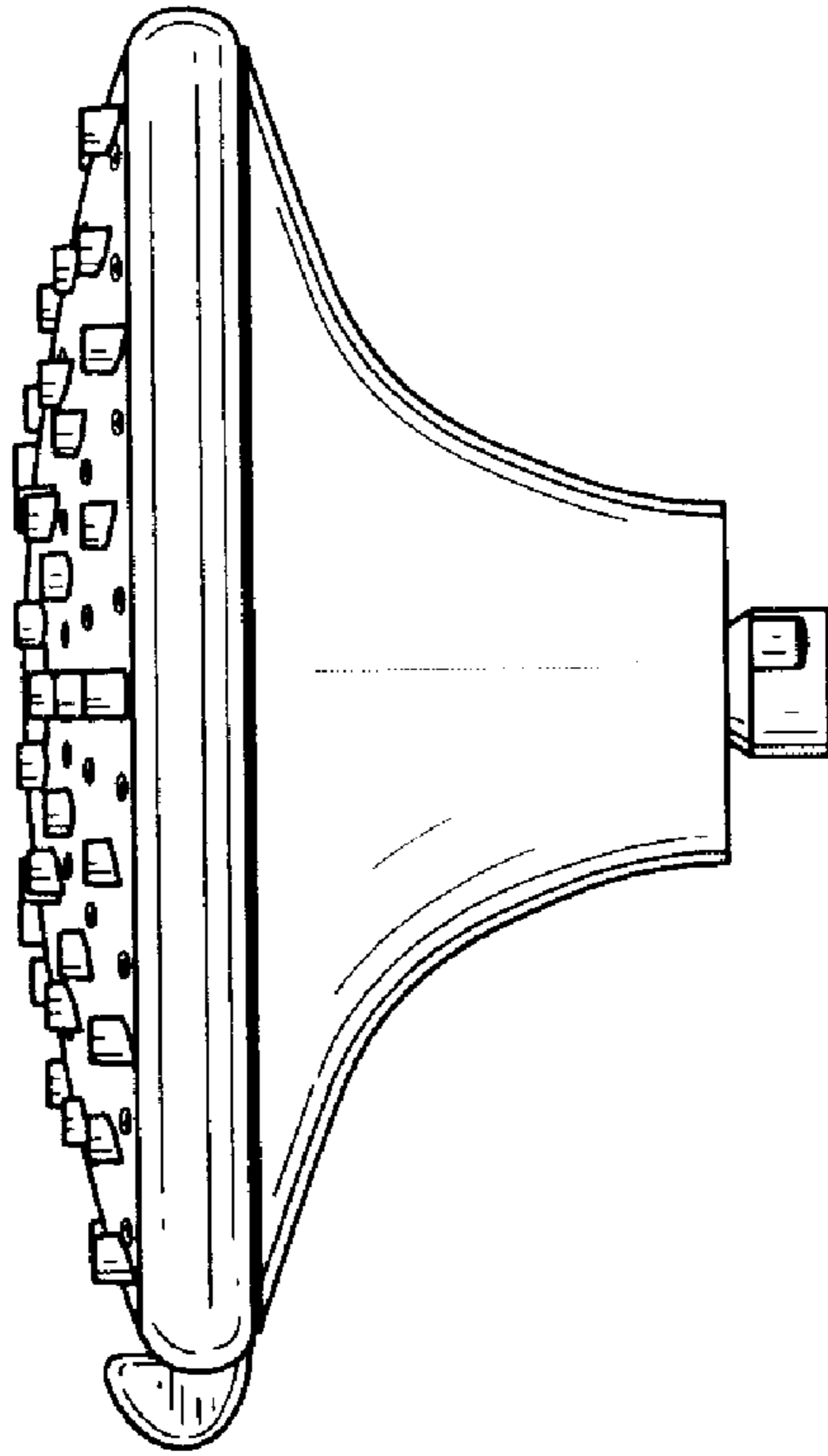


FIG. 4

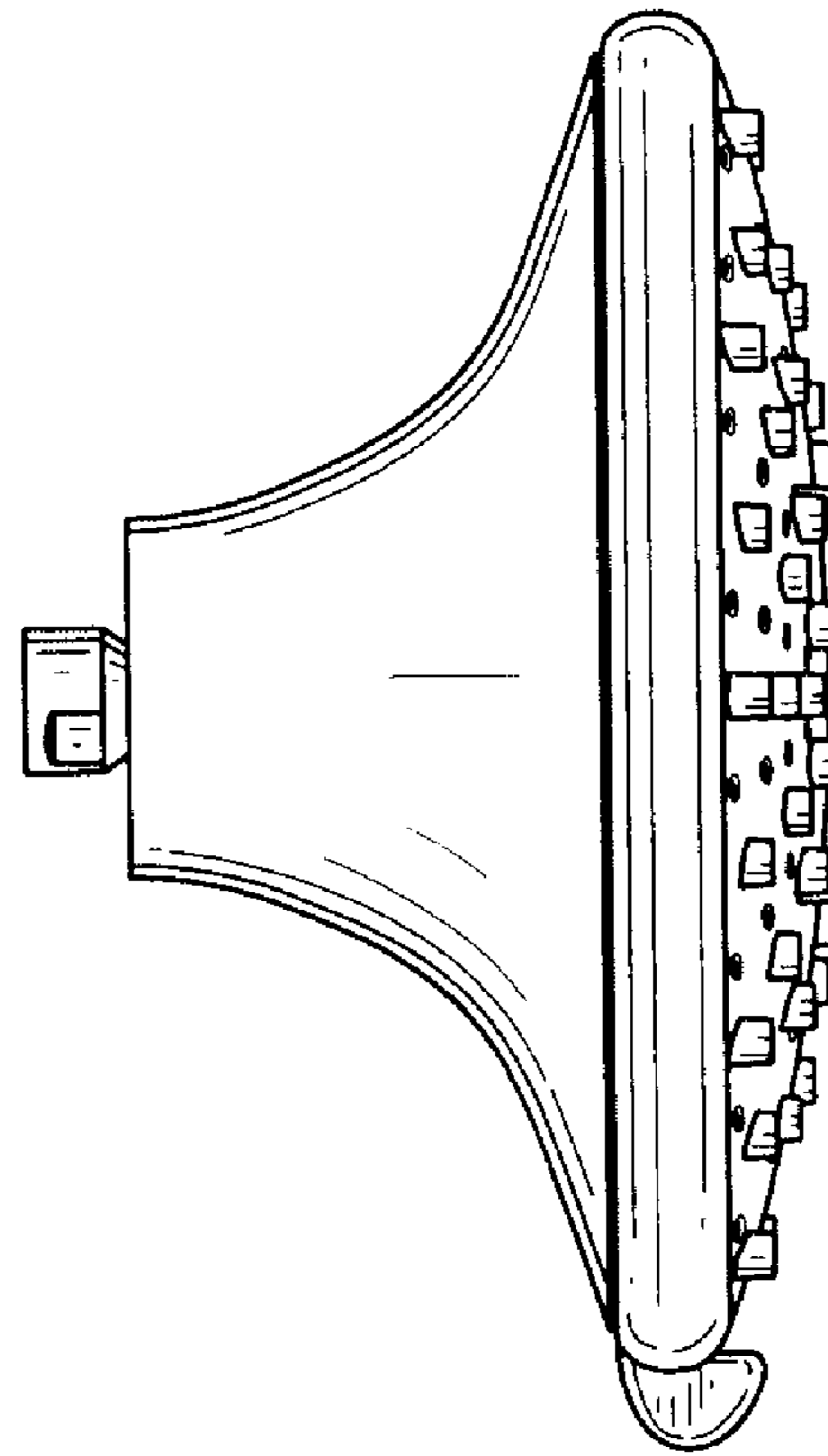


FIG. 5

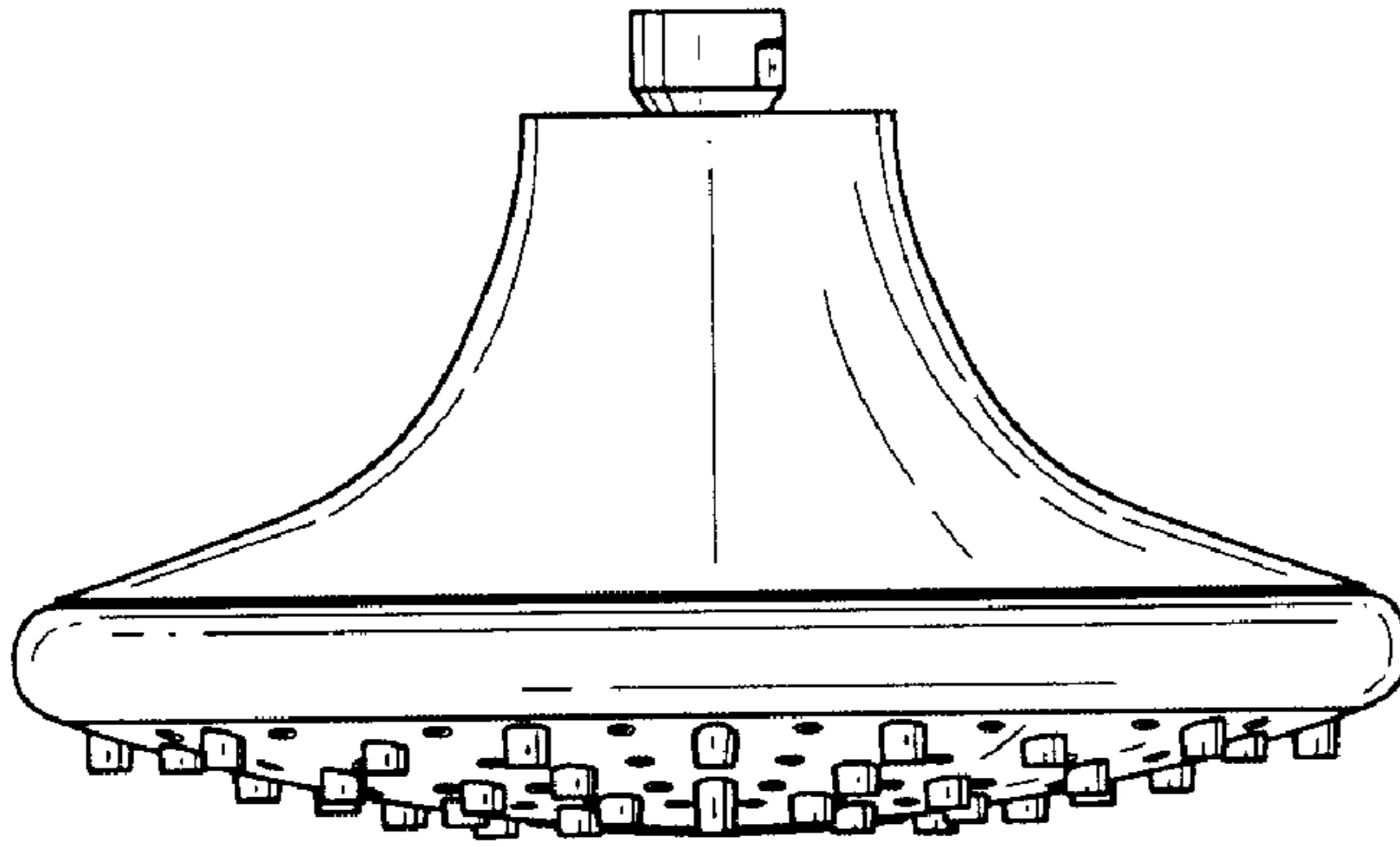


FIG. 6

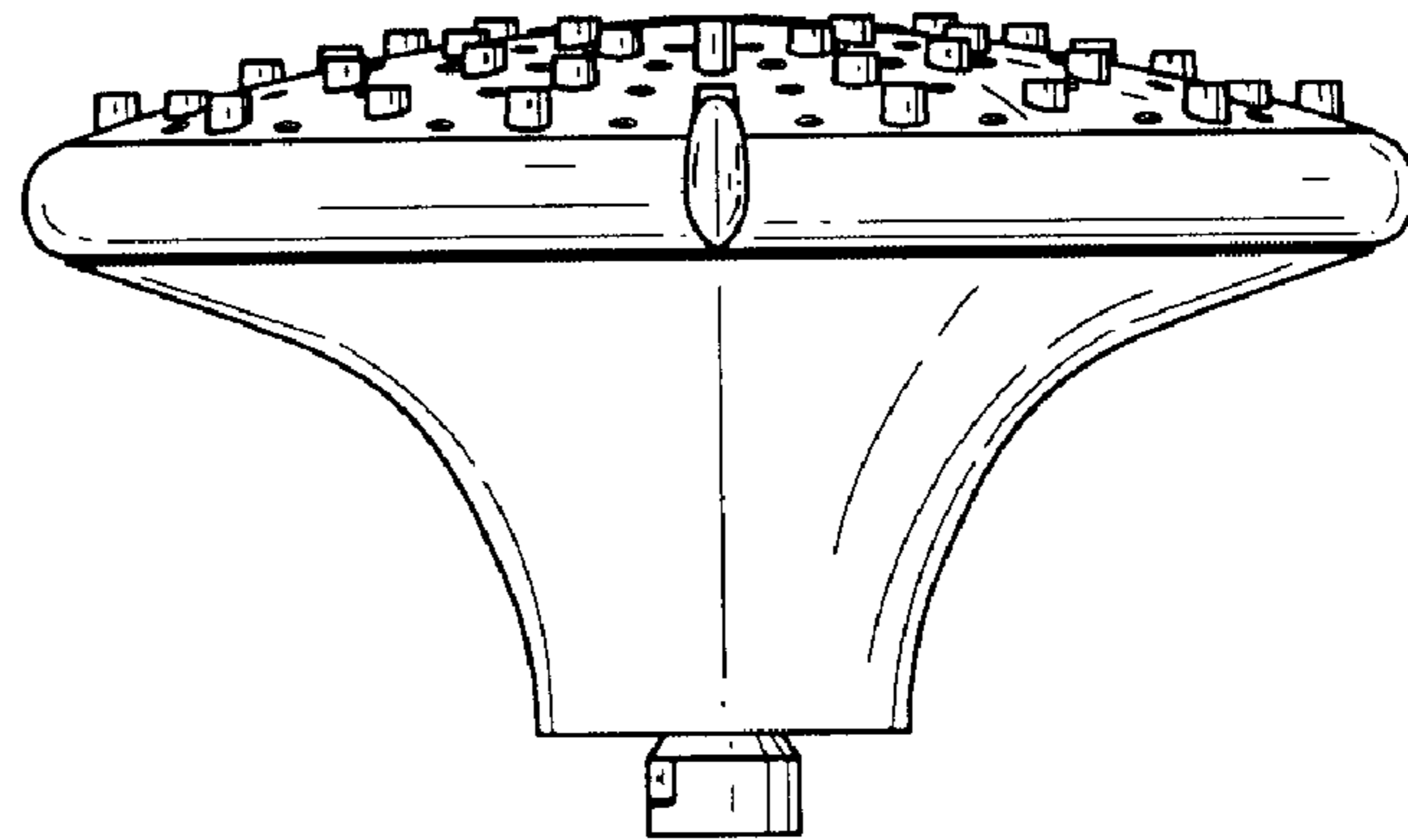


FIG. 7