



US00D654561S

(12) **United States Design Patent**
Kruckenber et al.

(10) **Patent No.:** **US D654,561 S**

(45) **Date of Patent:** **** Feb. 21, 2012**

(54) **FILTER UNIT**

(75) Inventors: **Christopher A. Kruckenber**,
Newburgh, IN (US); **Jeffrey A.**
Spindler, Haubstadt, IN (US)

(73) Assignee: **Whirlpool Corporation**, Benton Harbor,
MI (US)

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

(21) Appl. No.: **29/401,784**

(22) Filed: **Sep. 15, 2011**

(51) **LOC (9) Cl.** **23-01**

(52) **U.S. Cl.** **D23/209; D9/538; D9/540**

(58) **Field of Classification Search** D23/207,
D23/209; D7/510; D9/516, 552, 523, 556,
D9/538, 540, 682, 688, 690, 692, 693; 210/232,
210/282, 429, 435

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,955,712 A	10/1960	Gutkowski	
3,388,801 A	6/1968	Boyd et al.	
3,557,958 A	1/1971	Baldwin	
3,774,764 A	11/1973	Baldwin	
D234,940 S *	4/1975	Mexquita	D9/523
3,980,457 A	9/1976	Smith	
4,052,307 A	10/1977	Humbert, Jr.	
D264,811 S *	6/1982	Weckman	D9/523
4,398,562 A	8/1983	Saarem et al.	
4,601,821 A	7/1986	Sherman et al.	
4,608,166 A	8/1986	Cain	
4,615,812 A	10/1986	Darling	
4,735,716 A	4/1988	Petrucci et al.	
4,764,275 A	8/1988	Robichaud	
4,915,831 A	4/1990	Taylor	
D322,836 S	12/1991	Petrucci et al.	
5,133,382 A	7/1992	Nielsen	

5,139,050 A	8/1992	Otto	
5,273,255 A	12/1993	Klicek et al.	
5,350,506 A	9/1994	Dombek et al.	
D351,337 S *	10/1994	Bonnema et al.	D9/690
5,362,390 A	11/1994	Widenhoefer et al.	
D356,625 S	3/1995	Petrucci et al.	
5,456,830 A	10/1995	Stanford et al.	
5,545,315 A *	8/1996	Lonneman	210/120
5,560,824 A	10/1996	Sann et al.	
5,567,310 A	10/1996	Nakashima	

(Continued)

FOREIGN PATENT DOCUMENTS

CN 2889448 Y 4/2007

(Continued)

Primary Examiner — Robin V Webster

(74) *Attorney, Agent, or Firm* — Kirk W. Goodwin; Price
Heneveld LLP

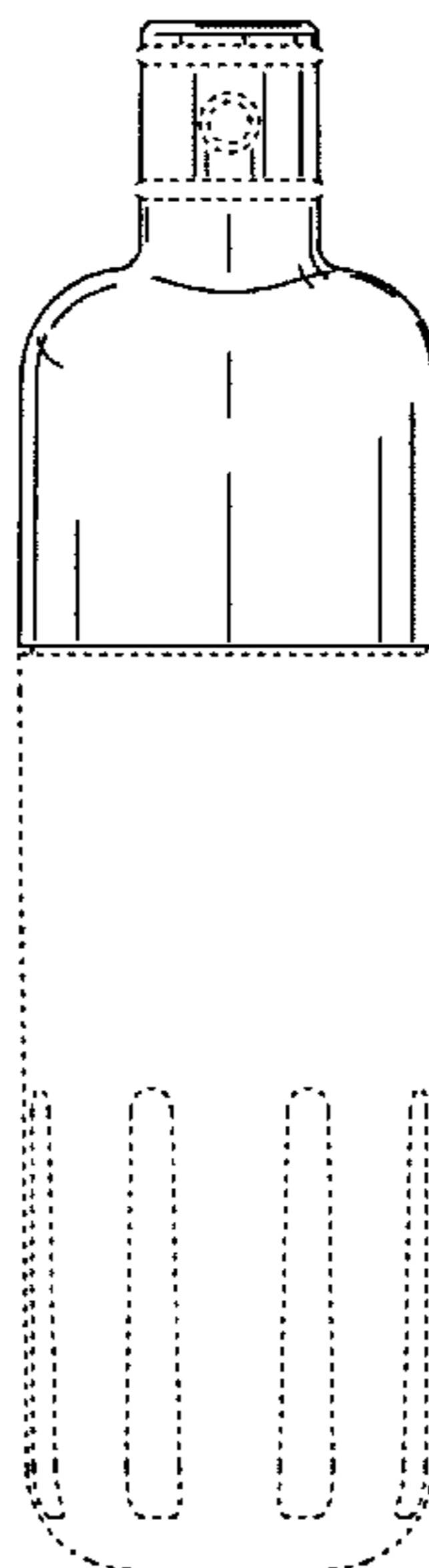
(57) **CLAIM**

We claim the ornamental design for a filter unit, as shown and
described.

DESCRIPTION

FIG. 1 is a top perspective view of a filter unit of the present
invention;
FIG. 2 is a front elevational view of the filter unit of FIG. 1;
FIG. 3 is a rear elevational view of the filter unit of FIG. 1;
FIG. 4 is a first side elevational view of the filter unit of FIG.
1;
FIG. 5 is a second side elevational view of the filter unit of
FIG. 1;
FIG. 6 is a top plan view of the filter unit of FIG. 1; and,
FIG. 7 is a bottom plan view of the filter unit of FIG. 1.
The broken line showing is included for the purpose of illus-
trating and forms no part of the claimed design.

1 Claim, 3 Drawing Sheets



US D654,561 S

U.S. PATENT DOCUMENTS

5,591,332	A	1/1997	Reid et al.	
5,607,582	A	3/1997	Yamazaki et al.	
5,611,923	A	3/1997	Suri et al.	
5,698,093	A	12/1997	Pyle et al.	
5,800,702	A	9/1998	Taylor-McCune et al.	
5,826,854	A	10/1998	Janvrin et al.	
5,846,417	A	12/1998	Jiang et al.	
5,858,227	A	1/1999	Stone et al.	
5,914,037	A	6/1999	Yen	
6,000,674	A	12/1999	Cheng	
6,024,869	A	2/2000	Stifelman	
6,027,644	A	2/2000	Magnusson et al.	
6,068,770	A	5/2000	Niermeyer et al.	
D429,312	S *	8/2000	Poirier et al.	D7/510
6,132,176	A	10/2000	Higgins	
D433,729	S *	11/2000	Poirier et al.	D7/511
D435,631	S	12/2000	Janik et al.	
RE37,216	E	6/2001	Koslow	
6,303,031	B1	10/2001	Senner	
6,360,764	B1	3/2002	Fritze	
6,458,269	B1	10/2002	Bassett et al.	
D472,299	S	3/2003	Fritze	
D472,604	S	4/2003	Fritze	
6,579,455	B1	6/2003	Muzik et al.	
6,632,355	B2	10/2003	Fritze	
6,651,823	B1 *	11/2003	Memmer et al.	210/435
D484,568	S	12/2003	Janik et al.	
6,789,691	B2	9/2004	Martin et al.	
6,977,039	B2	12/2005	Knoll et al.	
7,000,894	B2	2/2006	Olson et al.	
7,067,054	B2	6/2006	Fritze	
7,147,772	B2	12/2006	Fritze	
7,147,773	B2	12/2006	Mitchell et al.	
D567,898	S	4/2008	Miller	
7,407,148	B2	8/2008	Bassett et al.	
7,419,060	B2 *	9/2008	Arthur et al.	210/429
7,442,301	B2	10/2008	Huda	
7,459,078	B2	12/2008	Klein et al.	
7,481,926	B2	1/2009	Dworatzek	
7,481,928	B2	1/2009	Fritze	
D592,066	S *	5/2009	Bourne	D9/538

D592,514	S *	5/2009	Schwartz et al.	D9/526
D594,088	S *	6/2009	Pritchard	D23/207
D595,139	S *	6/2009	Darr et al.	D9/538
D599,880	S	9/2009	Rampen et al.	
D604,616	S *	11/2009	Farrell et al.	D9/516
7,610,932	B2	11/2009	Olson et al.	
D606,411	S *	12/2009	Mongeon et al.	D9/522
D610,906	S *	3/2010	Simmons et al.	D9/504
D612,244	S *	3/2010	Farrell et al.	D9/516
D613,172	S *	4/2010	Masters et al.	D9/523
7,695,619	B2	4/2010	Kurth et al.	
D614,967	S *	5/2010	Chertoff et al.	D9/682
D615,870	S *	5/2010	Bourne	D9/538
7,744,758	B2	6/2010	Dworatzek et al.	
7,763,170	B2	7/2010	Bassett et al.	
D624,153	S *	9/2010	Shani	D23/207
D634,160	S *	3/2011	Cetera	D7/510
7,955,500	B2	6/2011	Abdalla et al.	
7,959,010	B2	6/2011	Hawkins et al.	
D644,489	S *	9/2011	Trombly	D7/510
D646,319	S *	10/2011	Popracova	D17/11
D647,805	S *	11/2011	Broen et al.	D9/685
D648,177	S *	11/2011	Eyal	D7/510
2006/0070942	A1	4/2006	An	
2006/0272995	A1	12/2006	Fritze	
2007/0295667	A1	12/2007	Ruprecht	
2008/0000820	A1	1/2008	Mitchell	
2008/0185330	A1	8/2008	Sinur et al.	
2008/0223775	A1	9/2008	An	
2009/0014381	A1	1/2009	South et al.	
2009/0020470	A1	1/2009	Bassett et al.	
2009/0127172	A1	5/2009	Abdalla et al.	
2009/0184043	A1	7/2009	Stankowski et al.	
2009/0230063	A1	9/2009	Hawkins et al.	
2009/0236276	A1	9/2009	Kurth et al.	
2009/0321340	A1	12/2009	Rampen et al.	
2010/0064646	A1	3/2010	Smith et al.	
2010/0170841	A1	7/2010	An et al.	

FOREIGN PATENT DOCUMENTS

WO	2010056711	A2	5/2010	
* cited by examiner				

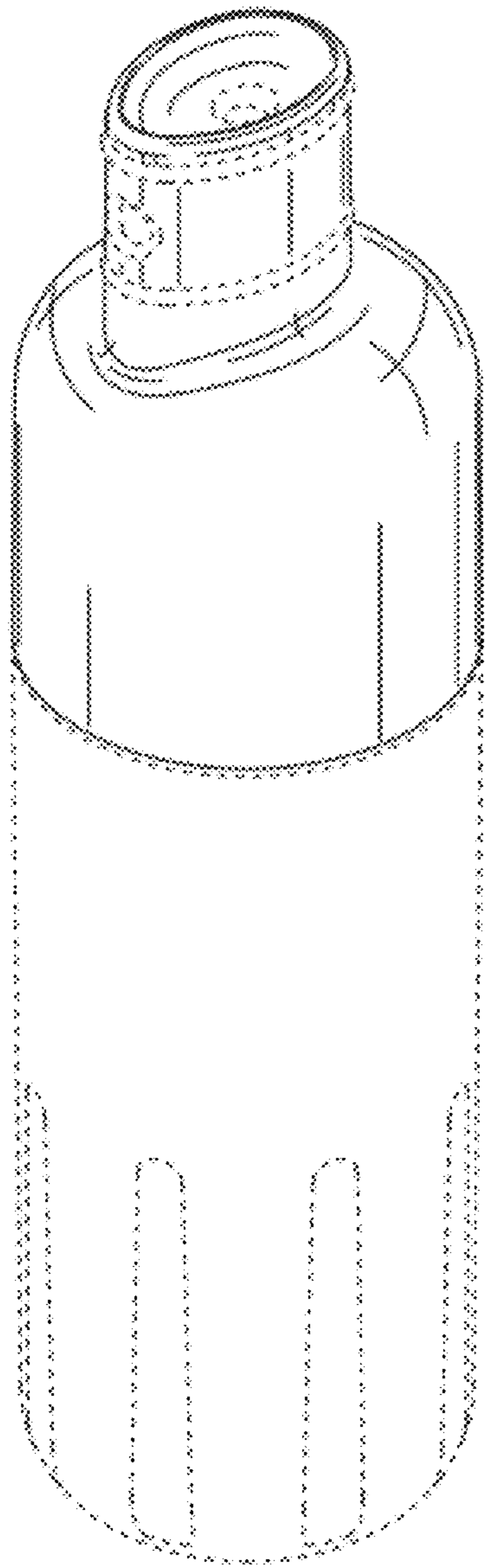


FIG. 1

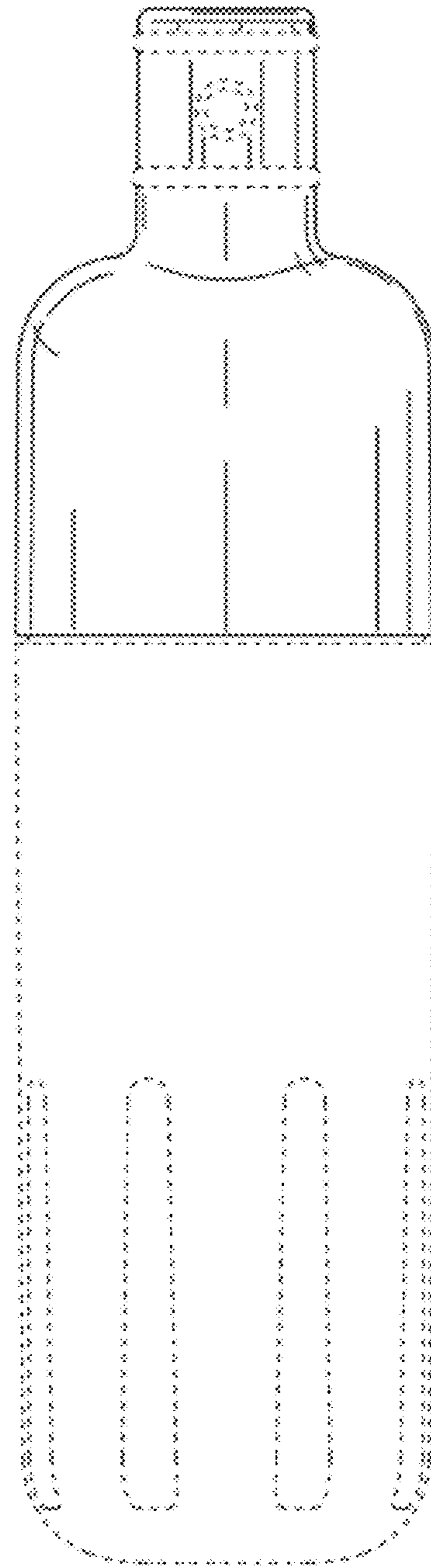


FIG. 2

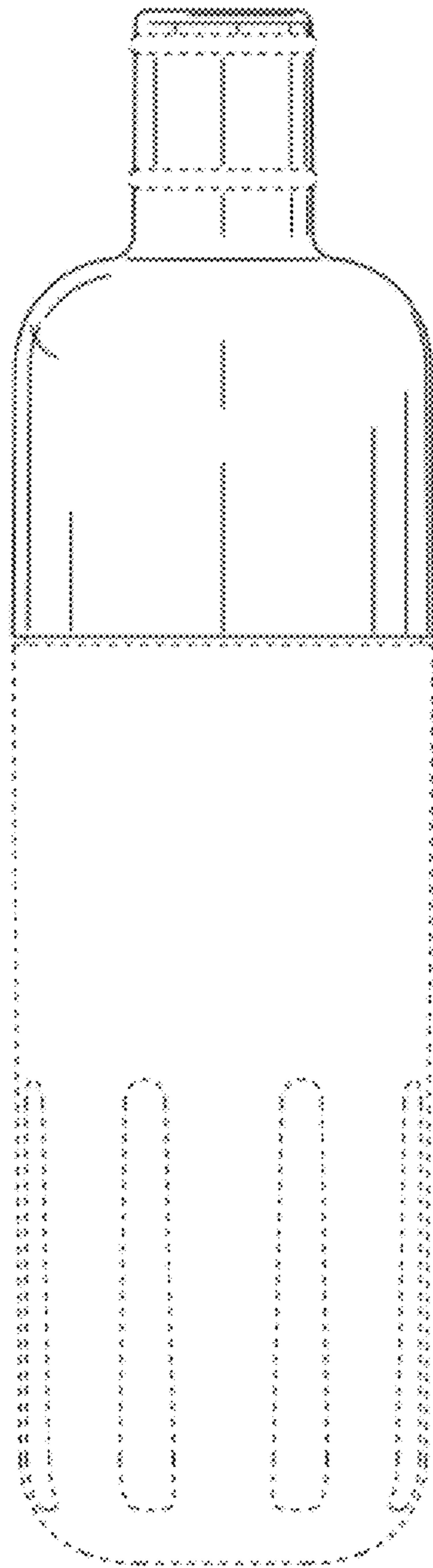


FIG. 3

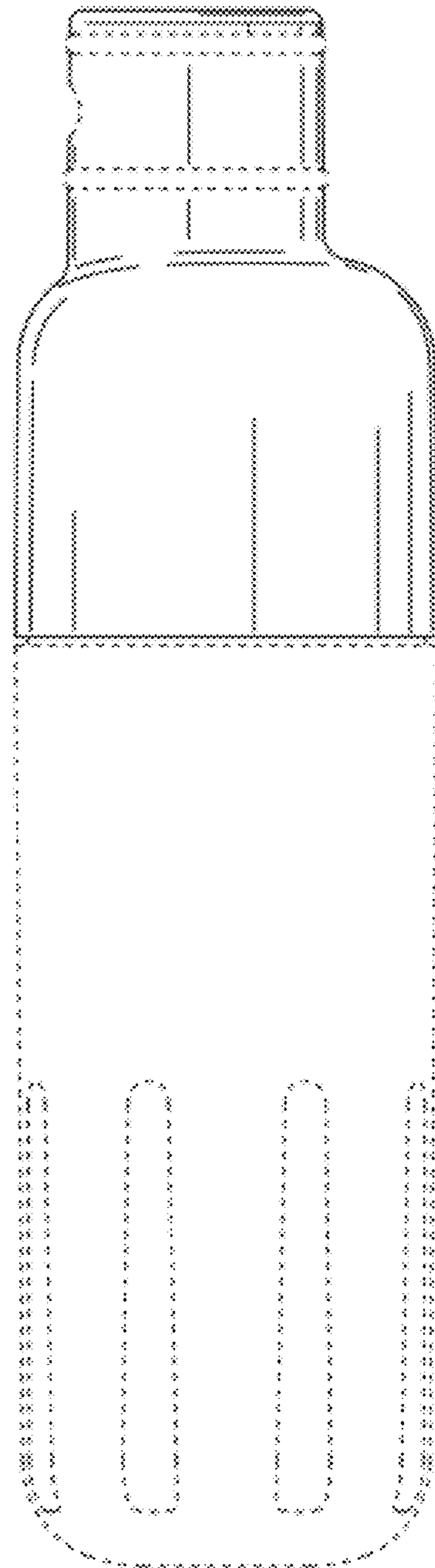


FIG. 4

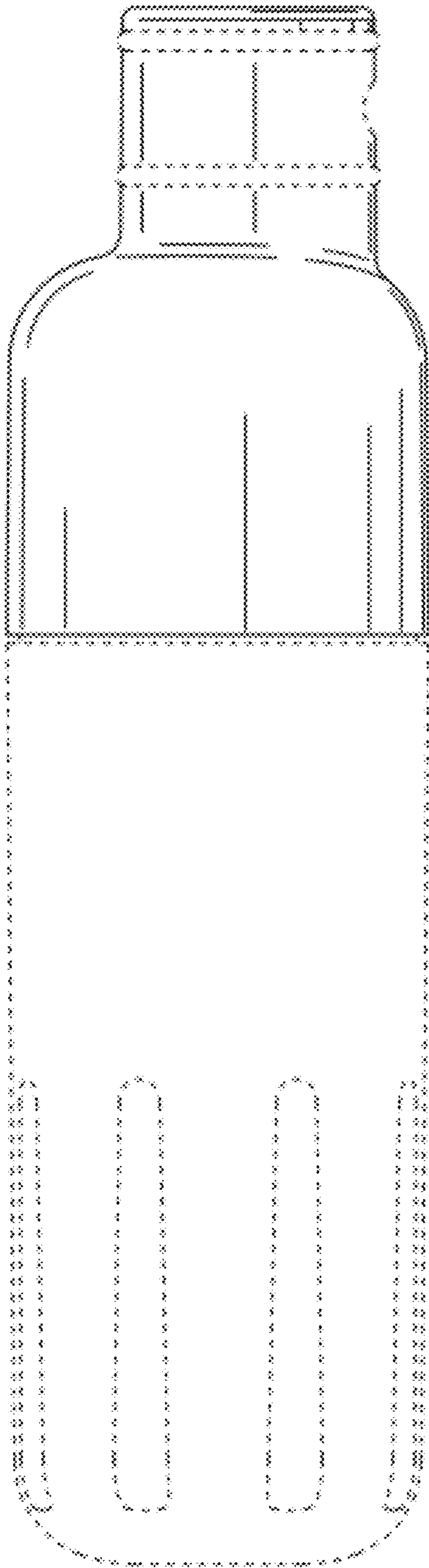


FIG. 5

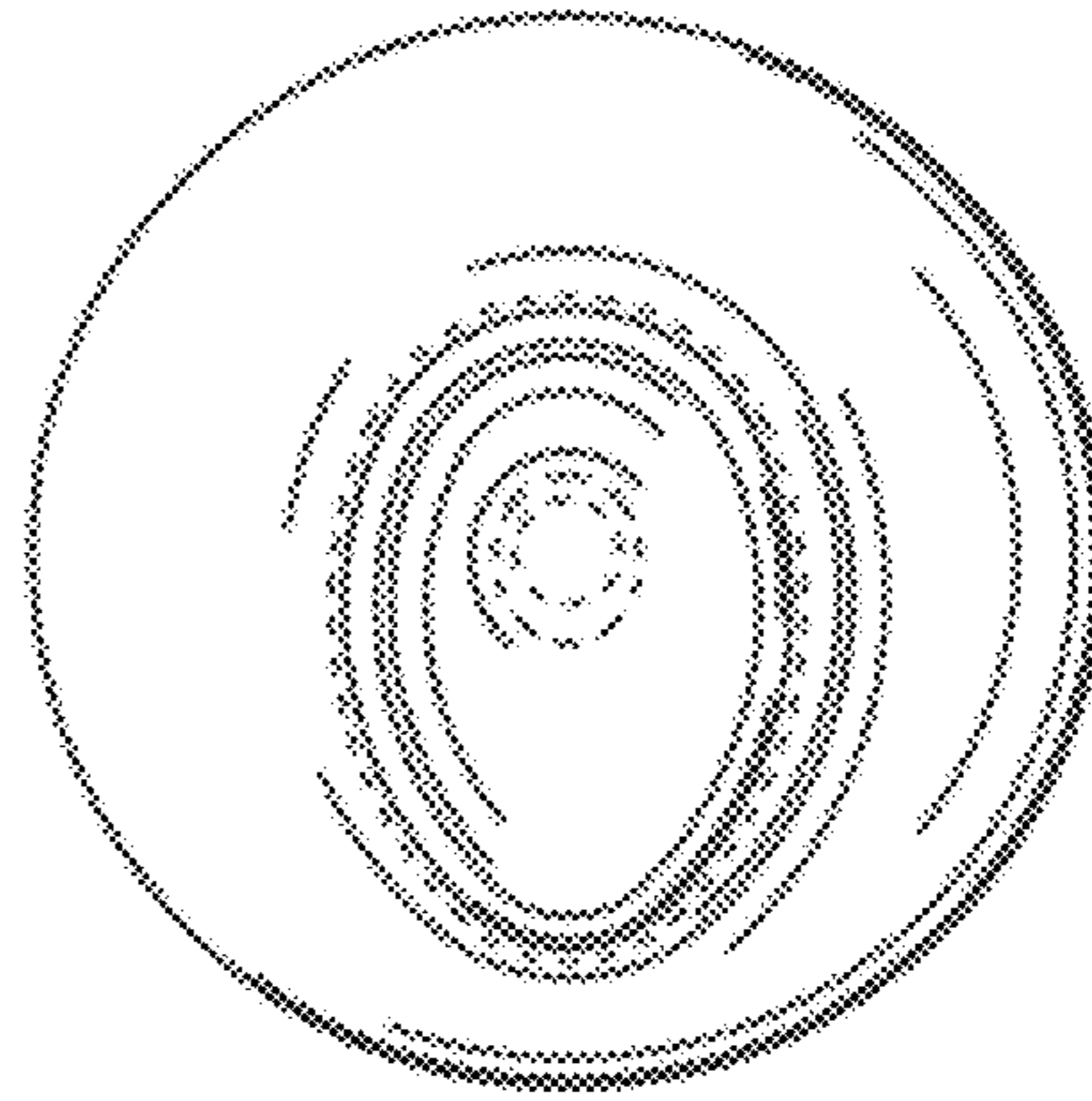


FIG. 6

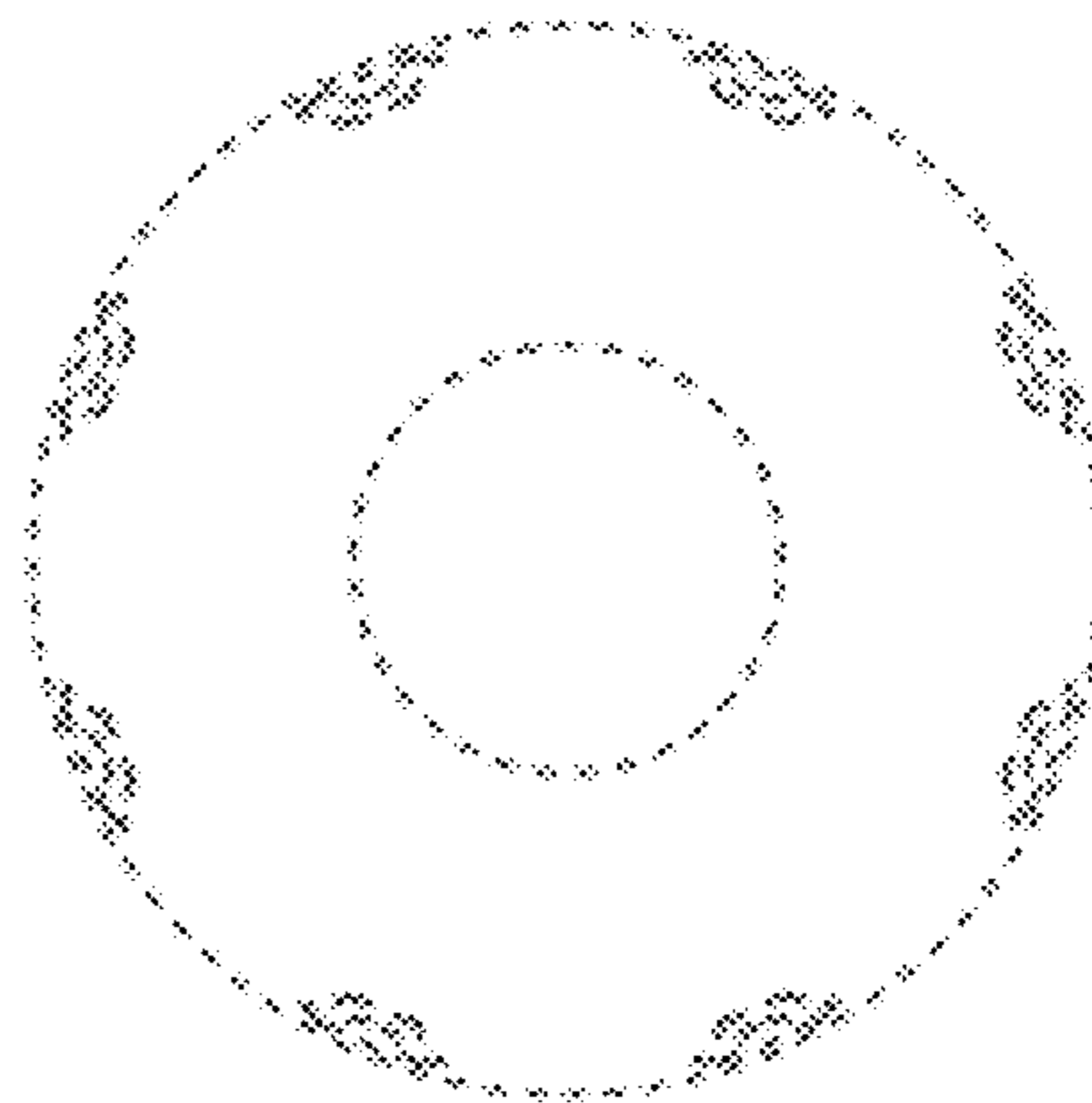


FIG. 7