



US00D912793S

(12) **United States Design Patent** (10) **Patent No.:** **US D912,793 S**
Riering-Czekalla et al. (45) **Date of Patent:** **** Mar. 9, 2021**

(54) **AIR PURIFIER**

(71) Applicant: **Molekule, Inc.**, San Francisco, CA (US)

(72) Inventors: **Peter Riering-Czekalla**, San Francisco, CA (US); **David Sanabria**, San Francisco, CA (US); **Jaya Rao**, San Francisco, CA (US); **Dilip Goswami**, San Francisco, CA (US); **Ryan Vinyard**, San Francisco, CA (US)

(73) Assignee: **Molekule, Inc.**, San Francisco, CA (US)

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

(21) Appl. No.: **29/605,090**

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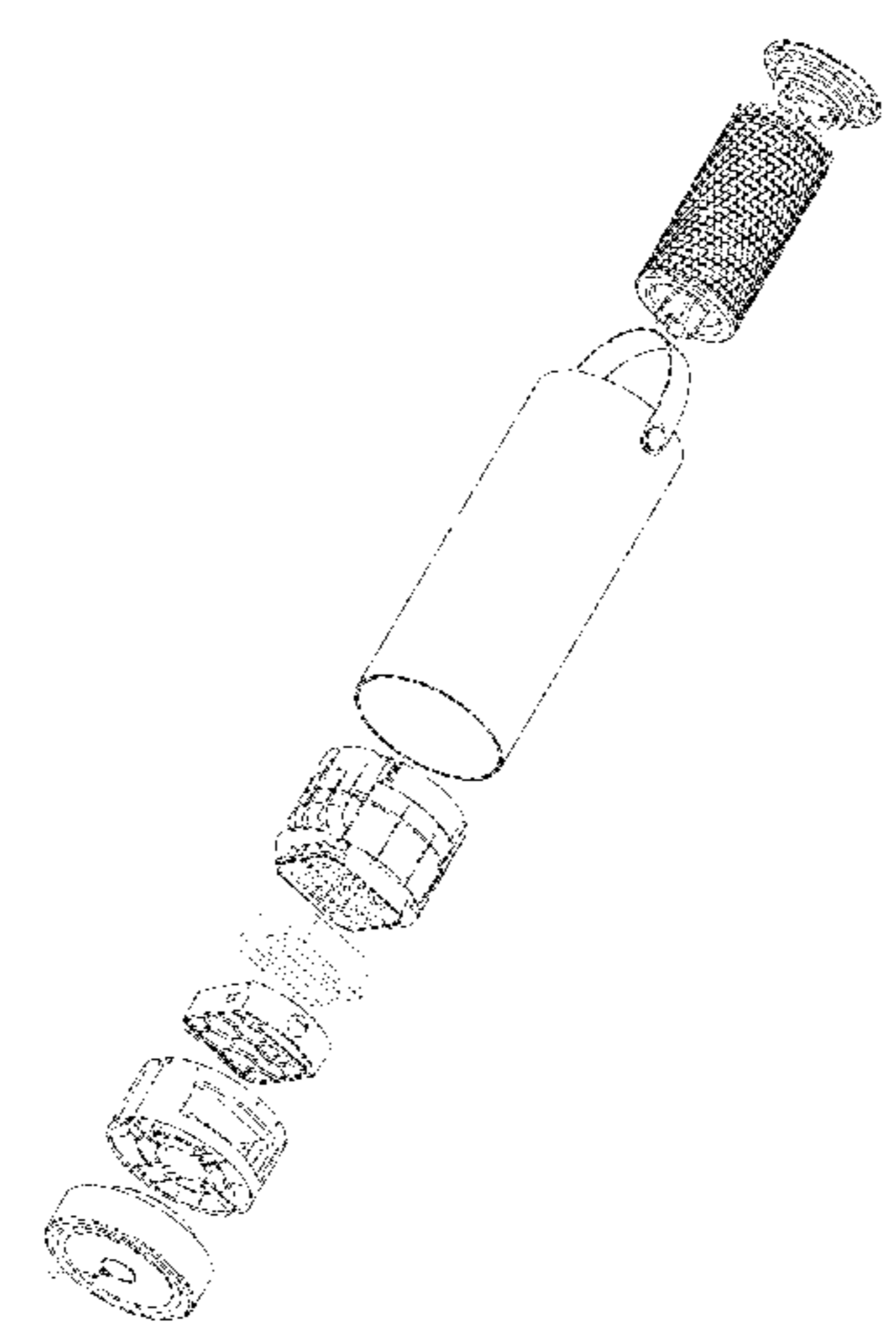
(51) **LOC (13) Cl.** **23-04**

(52) **U.S. Cl.**
USPC **D23/364**

(58) **Field of Classification Search**
USPC D23/355-366, 352, 369, 332, 333, 335, D23/336, 342, 351; 422/120, 122; 55/356, 473, 504; 96/97; 261/DIG. 17, 261/DIG. 65, DIG. 88, DIG. 31
CPC .. A61L 9/16; A61L 9/22; B01D 47/00; B01D 47/027; B01D 2221/02; B01D 2259/4508; B01D 46/0004; B01D 46/0032; B01D 46/00; B01D 46/0039; B03C 3/155; B03C 3/368; F24F 3/16; F24F 3/20; F24F 13/28; F24F 2001/0096; F24F 3/1405; F24F 3/1603; F04D 13/06; F04D 29/526; F04D 29/545; F04D 29/547
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS
4,065,276 A 12/1977 Nakaya et al.
4,896,590 A * 1/1990 Groos B60H 3/0641
454/107

4,931,654 A 6/1990 Horng
D328,946 S 8/1992 Havrilla
D360,635 S * 7/1995 Mark D14/212
D362,441 S * 9/1995 Mark D14/216
5,505,904 A 4/1996 Haidinger et al.
5,620,669 A 4/1997 Plinke et al.
D400,663 S 11/1998 Furlough
5,922,093 A * 7/1999 James A47L 9/181
55/322
6,531,100 B1 3/2003 Ogata et al.
6,607,702 B1 8/2003 Kang et al.
D493,874 S 8/2004 Woods
D505,999 S 6/2005 Song
D552,724 S * 10/2007 Chen D23/366
D611,579 S * 3/2010 Zlotnik D23/366
D648,429 S 11/2011 Choi et al.
D652,408 S * 1/2012 Chen D14/216
D687,017 S 7/2013 Ashcraft et al.
D697,496 S * 1/2014 Ashcraft D14/216
8,658,046 B2 2/2014 Barry et al.
D710,329 S * 8/2014 Holzer D14/216
D716,427 S 10/2014 Lim et al.
D717,420 S * 11/2014 Von Seggern D23/365
D744,541 S * 12/2015 Langhammer D14/203.1
D752,732 S 3/2016 Ansley et al.
D754,832 S * 4/2016 Seo D23/365
D766,213 S * 9/2016 Hinokio D14/216
D768,844 S * 10/2016 Koseoglu D23/386
D773,704 S 12/2016 Pardo et al.
D774,020 S * 12/2016 Hinokio D14/216
D796,019 S * 8/2017 Thompson, Jr. D23/355
D802,022 S * 11/2017 Yao D14/496
D803,369 S 11/2017 Kim et al.
D803,810 S * 11/2017 Lee D14/216
D804,002 S 11/2017 Huang
D805,622 S 12/2017 Lee
D806,843 S 1/2018 McDonnell
D807,327 S * 1/2018 Xiong D14/216
D808,927 S * 1/2018 Schaal D14/216
D810,049 S * 2/2018 Lee D14/216
D810,135 S * 2/2018 Langhammer D14/496
D810,137 S * 2/2018 Tsang D14/496
D810,265 S 2/2018 Chen
D810,266 S * 2/2018 Li D23/366
D818,097 S 5/2018 Cho et al.
D828,912 S 9/2018 Powell et al.
D829,312 S 9/2018 Riering-Czekalla et al.
D829,314 S 9/2018 Cho et al.
D831,810 S 10/2018 Cho et al.
D831,811 S 10/2018 Cho et al.
D832,414 S 10/2018 Sharma et al.
D834,694 S 11/2018 Walter et al.
10,137,216 B2 11/2018 Goswami et al.



D835,766	S	12/2018	Chen	
D836,760	S	12/2018	Fredäng et al.	
10,183,187	B2	1/2019	Li	
2002/0160913	A1	10/2002	Sangiovanni et al.	
2003/0180200	A1	9/2003	Reisfeld	
2004/0013583	A1	1/2004	Burkhardt	
2004/0166037	A1	8/2004	Youdell et al.	
2005/0061656	A1	3/2005	Benoit et al.	
2005/0138905	A1	6/2005	Kubokawa	
2006/0150818	A1	7/2006	Okamoto et al.	
2007/0199288	A1	8/2007	Paterson et al.	
2008/0112845	A1	5/2008	Dunn et al.	
2009/0002985	A1	1/2009	Peck et al.	
2009/0175757	A1	7/2009	Yao et al.	
2009/0229478	A1*	9/2009	Wu	A23N 1/02 99/495
2009/0245594	A1	10/2009	Abramovich et al.	
2010/0101413	A1	4/2010	Jones et al.	
2010/0143205	A1	6/2010	Engelhard	
2010/0196223	A1	8/2010	Hay et al.	
2010/0260644	A1	10/2010	Day et al.	
2011/0101712	A1	5/2011	Laconte	
2011/0117002	A1	5/2011	Dardas et al.	
2013/0036908	A1	2/2013	Jones et al.	
2014/0290489	A1*	10/2014	Uemura	F24F 13/28 96/4
2015/0008014	A1	1/2015	Zhou et al.	
2015/0320900	A1	11/2015	Goswami et al.	
2017/0043044	A1	2/2017	Sobhy	
2017/0122605	A1	5/2017	Lee et al.	
2017/0321717	A1	11/2017	Park et al.	
2018/0027809	A1	2/2018	Chiattello et al.	
2018/0117511	A1	5/2018	Yamauchi et al.	
2020/0109869	A1	4/2020	Mäkipää et al.	

FOREIGN PATENT DOCUMENTS

JP 2017148484 A 8/2017

OTHER PUBLICATIONS

Molekule Air Purifier found online—[Feb. 22, 2018]—https://molekule.com/?utm_source=google_search_search&utm_medium=rt&utm_campaign=brand&utm_term=term=molekule&utm_content=bmm_2&gclid=EAalQobChMI5ufdtbK62QIViYjICh3d8gvEAAAYASAAEgJcdPD_BwE.
 Hou, et al. “A review of surface plasmon resonance-enhanced photocatalysis.” *Advanced 4, 15 Functional Materials* 23.13 (Apr. 5, 2013): 1612-1619. p. 1 col. 2 para 1, p. 2 col. 1 para 2.
 International Search Report and Written Opinion for PCT Application No. PCT/US2019/043804 dated Dec. 2, 2019.
 “Molekule Website Screen Capture from Jun. 10, 2016 by Wayback Machine, (Year: 2016)”.
 Ochiai, et al. “Photoelectrochemical properties of TiO₂ photocatalyst and its applications for environmental purification.” *Journal of Photochemistry and Photobiology C: Photochemistry reviews* 13.4 (Dec. 1, 2012): 247-262.

* cited by examiner

Primary Examiner — Nathan M Johnston
 (74) *Attorney, Agent, or Firm* — Jeffrey Schox; Diana Lin

(57) **CLAIM**

We claim the ornamental design for an air purifier, as shown and described.

DESCRIPTION

FIG. 1 is an isometric view from the top, back, left of an exploded view of a first embodiment of the air purifier showing our new design.

FIG. 2 is an isometric view from the bottom, front, right of the exploded view thereof.
 FIG. 3 is a rear elevation view of the exploded view thereof.
 FIG. 4 is a front elevation view of the exploded view thereof.
 FIG. 5 is a left side elevation view of the exploded view thereof.
 FIG. 6 is a right side elevation view of the exploded view thereof.
 FIG. 7 is a top plan view of the first element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 8 is a bottom plan view thereof.
 FIG. 9 is a top plan view of a second element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 10 is a bottom plan view thereof.
 FIG. 11 is a top plan of a third element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 12 is a bottom plan view thereof.
 FIG. 13 is a top plan view of a fourth element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 14 is a bottom plan view thereof.
 FIG. 15 is a top plan view of a fifth element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 16 is a bottom plan view thereof.
 FIG. 17 is a top plan view of a sixth element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 18 is a bottom plan view thereof.
 FIG. 19 is a top plan view of a seventh element of the first embodiment of the air purifier shown separately for ease of illustration.
 FIG. 20 is a bottom plan view thereof.
 FIG. 21 is an illustrative assembly view from the top, back, left of an exploded view of the first embodiment of the air purifier.
 FIG. 22 is an isometric view from the top, back, left of an exploded view of a second embodiment of the air purifier showing our new design.
 FIG. 23 is an isometric view from the bottom, front, right of the exploded view thereof.
 FIG. 24 is a rear elevation view of the exploded view thereof.
 FIG. 25 is a front elevation view of the exploded view thereof.
 FIG. 26 is a left side elevation view of the exploded view thereof.
 FIG. 27 is a right side elevation view of the exploded view thereof.
 FIG. 28 is a top plan view of a first element of the second embodiment of the air purifier shown separately for ease of illustration.
 FIG. 29 is a bottom plan view thereof.
 FIG. 30 is a top plan view of a second element of the second embodiment of the air purifier shown separately for ease of illustration.
 FIG. 31 is a bottom plan view thereof.
 FIG. 32 is a top plan view of a third element of the second embodiment of the air purifier shown separately for ease of illustration.
 FIG. 33 is a bottom plan thereof.

FIG. 34 is a top plan view of a fourth element of the second embodiment of the air purifier shown separately for ease of illustration.

FIG. 35 is a bottom plan view thereof.

FIG. 36 is a top plan view of a fifth element of the second embodiment of the air purifier shown separately for ease of illustration.

FIG. 37 is a bottom plan view thereof.

FIG. 38 is a top plan view of a sixth element of the second embodiment of the air purifier shown separately for ease of illustration.

FIG. 39 is a bottom plan view thereof.

FIG. 40 is a top plan view of a seventh element of the second embodiment of the air purifier shown separately for ease of illustration.

FIG. 41 is a bottom plan view thereof; and,

FIG. 42 is an illustrative assembly view from the top, back, left of an exploded view of the second embodiment of the air purifier.

The broken lines show portions of the design that form no part of the claimed design.

1 Claim, 14 Drawing Sheets

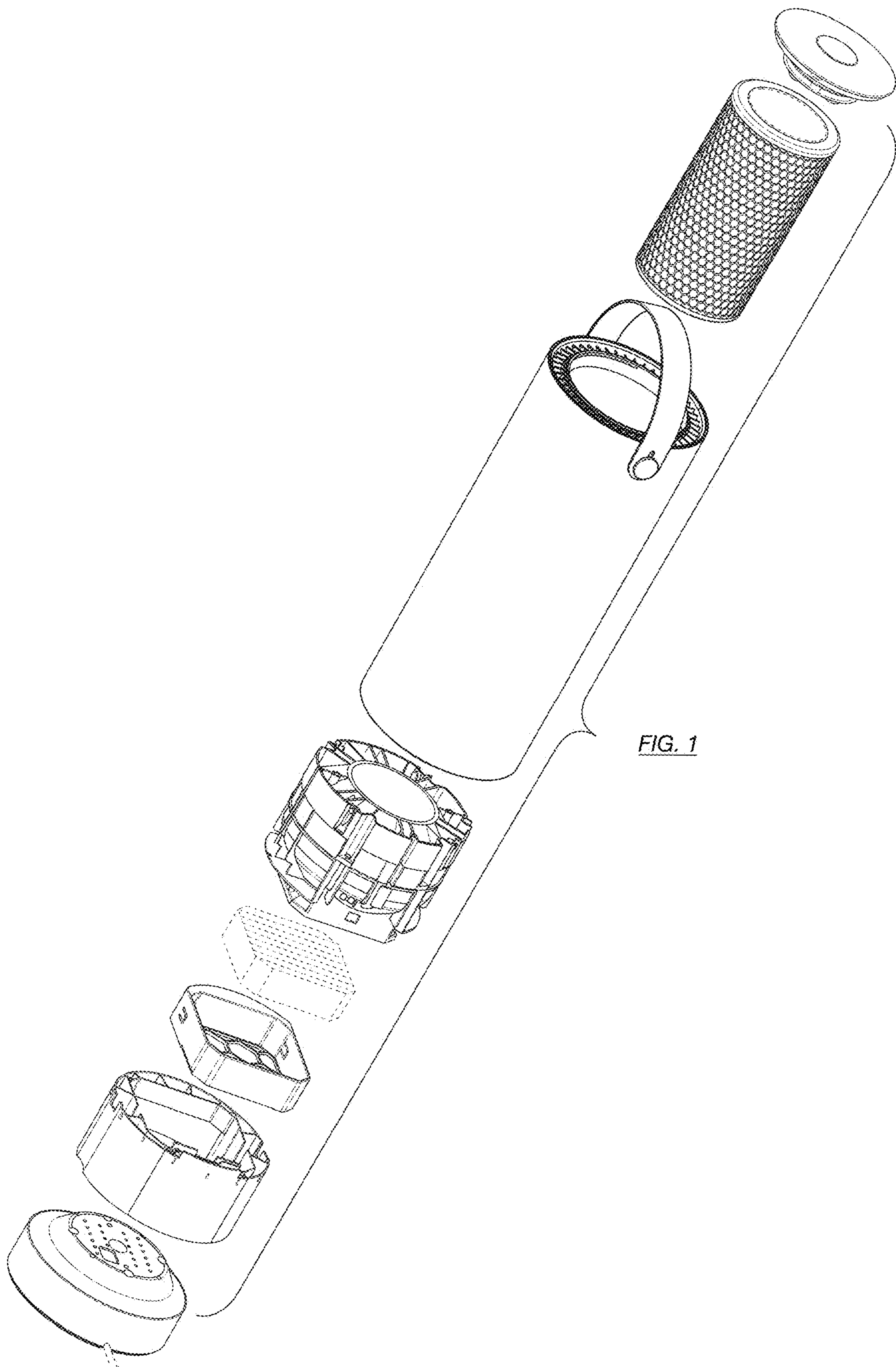


FIG. 1

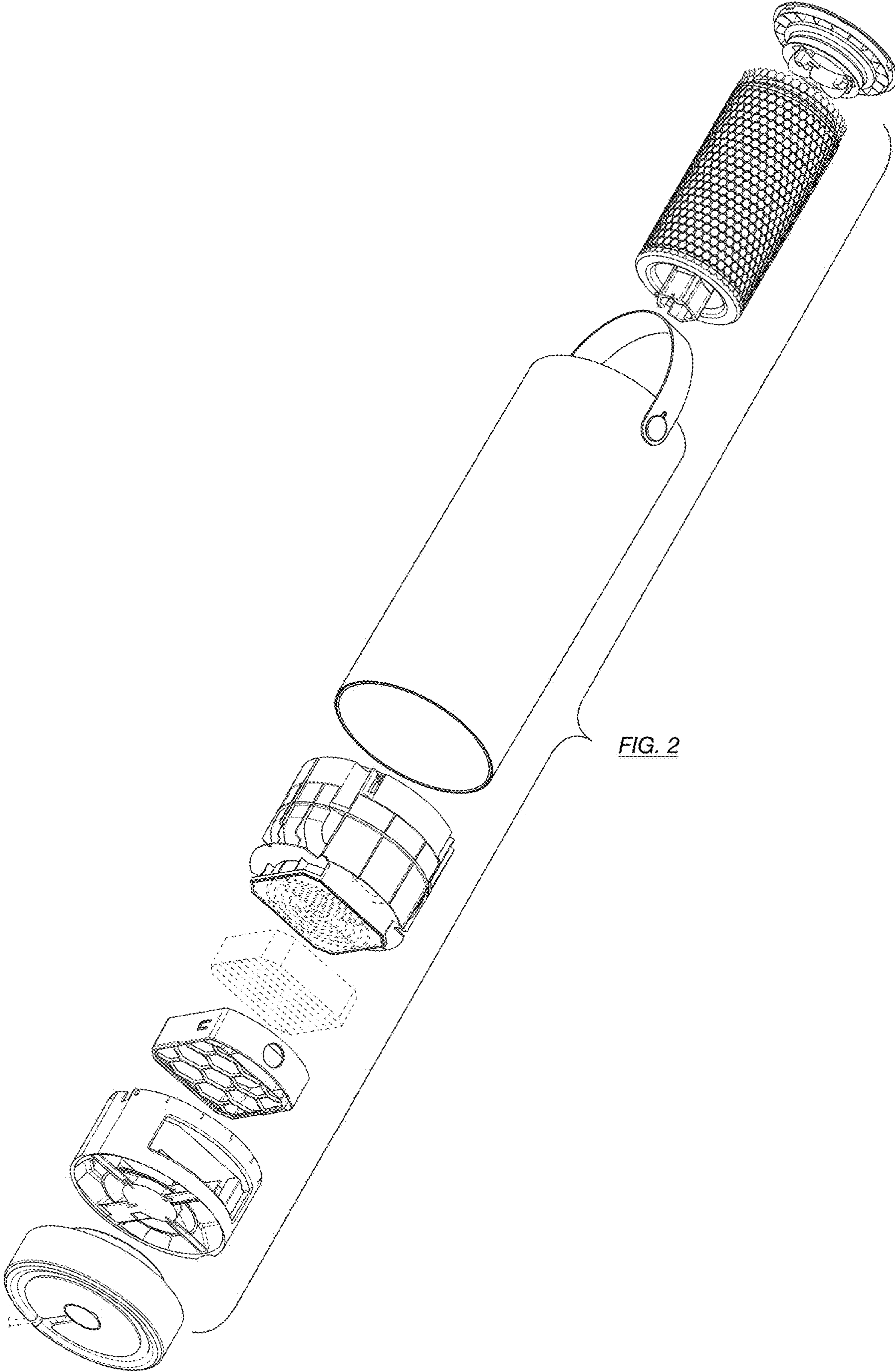


FIG. 2

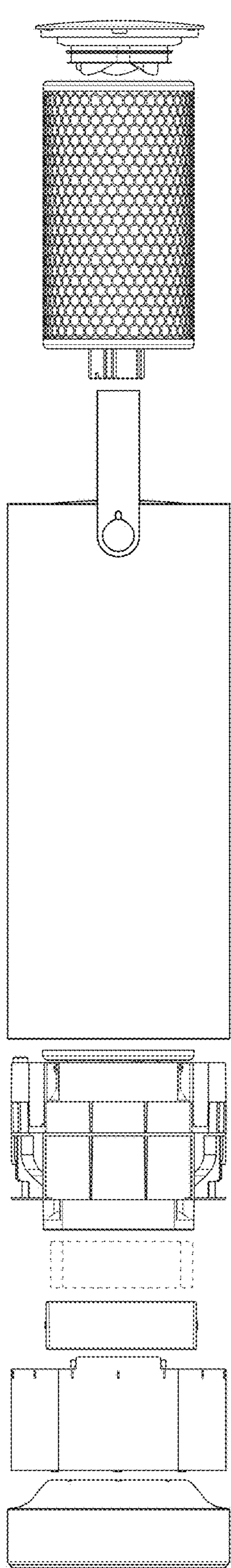


FIG. 3



FIG. 4

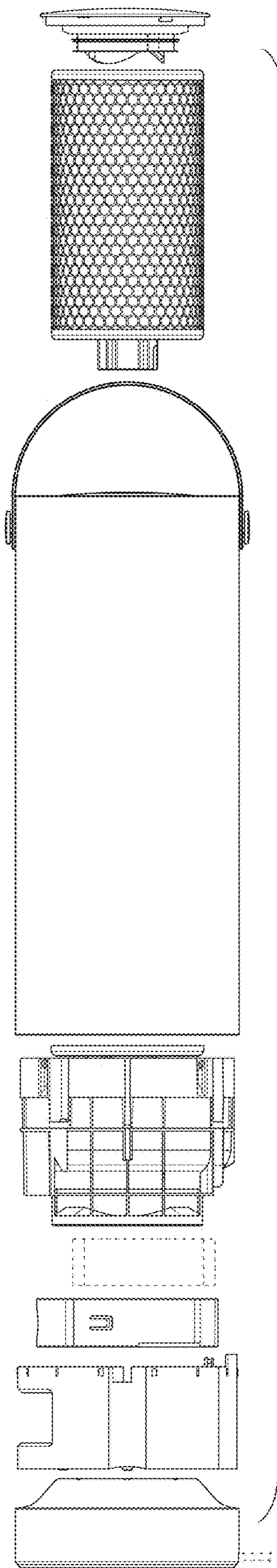


FIG. 5

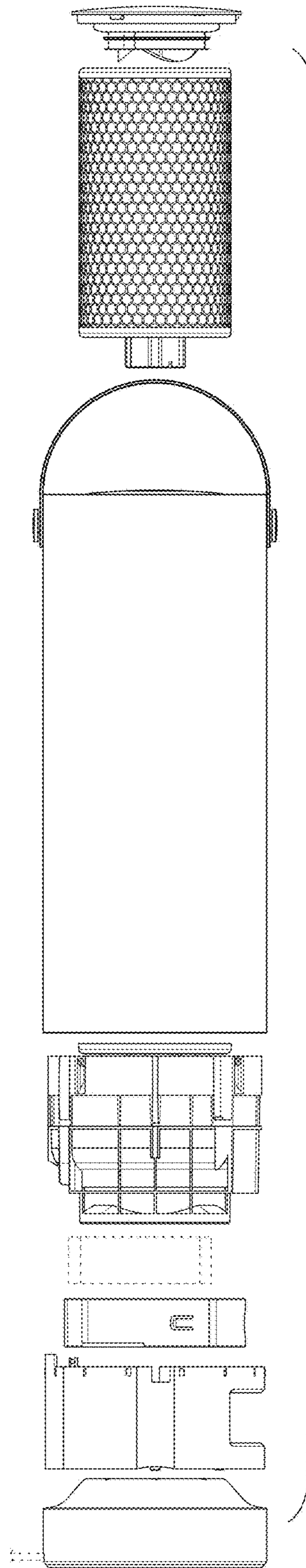


FIG. 6

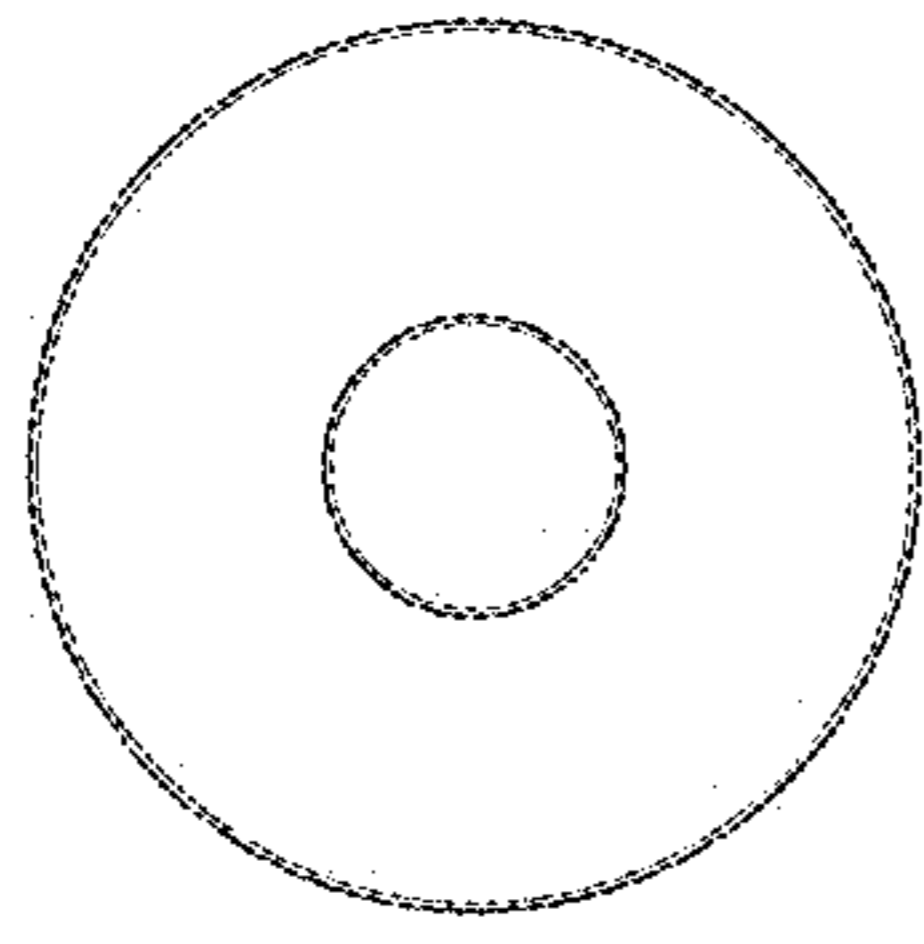


FIG. 7

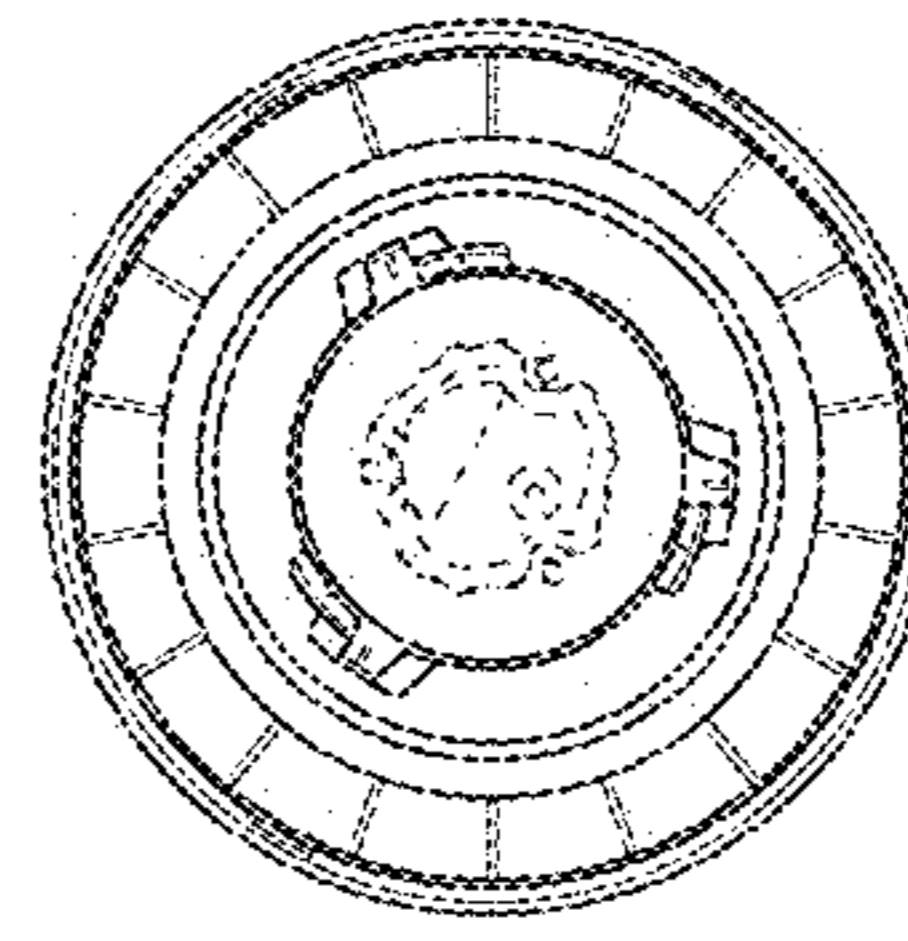


FIG. 8

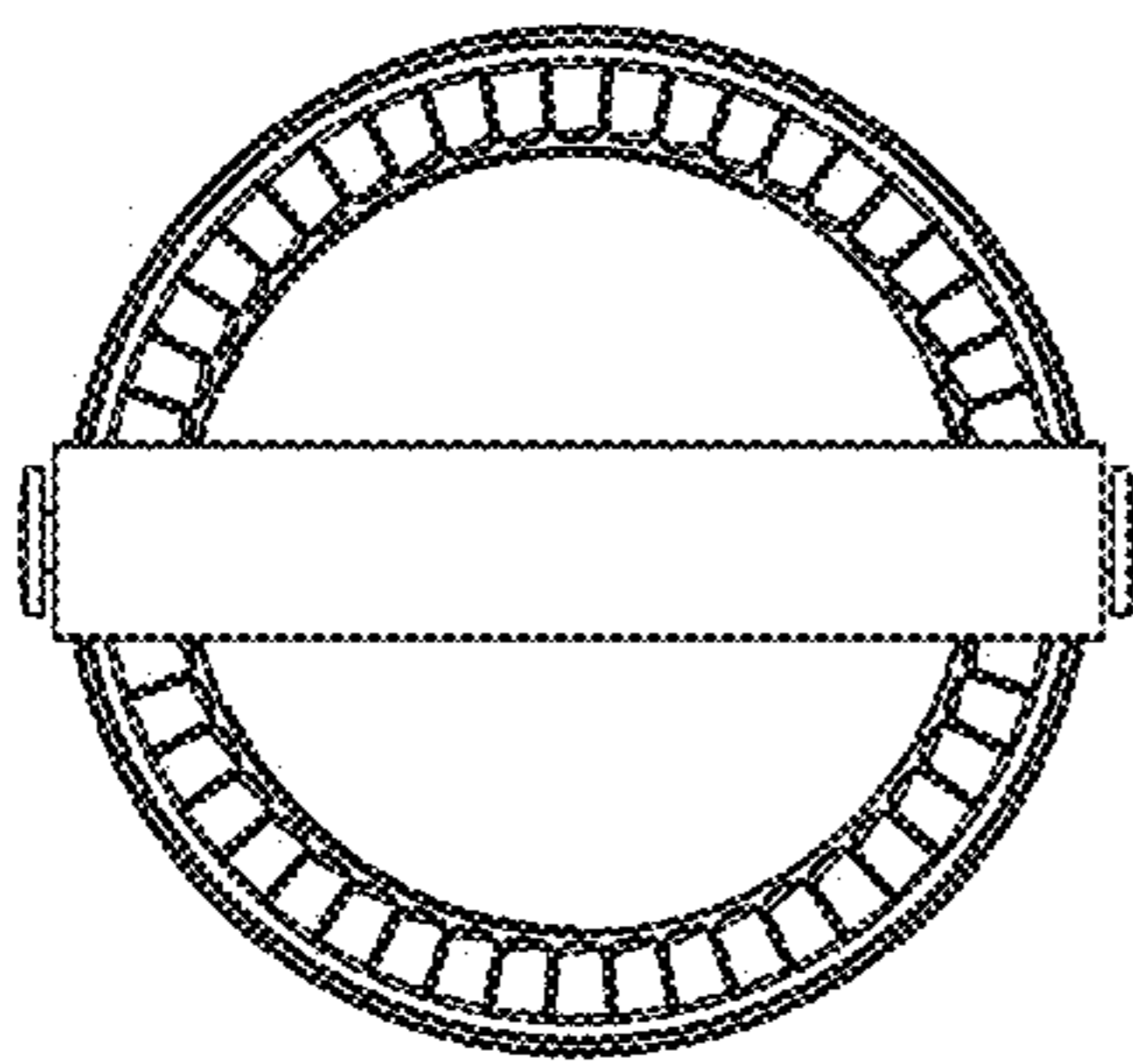


FIG. 9

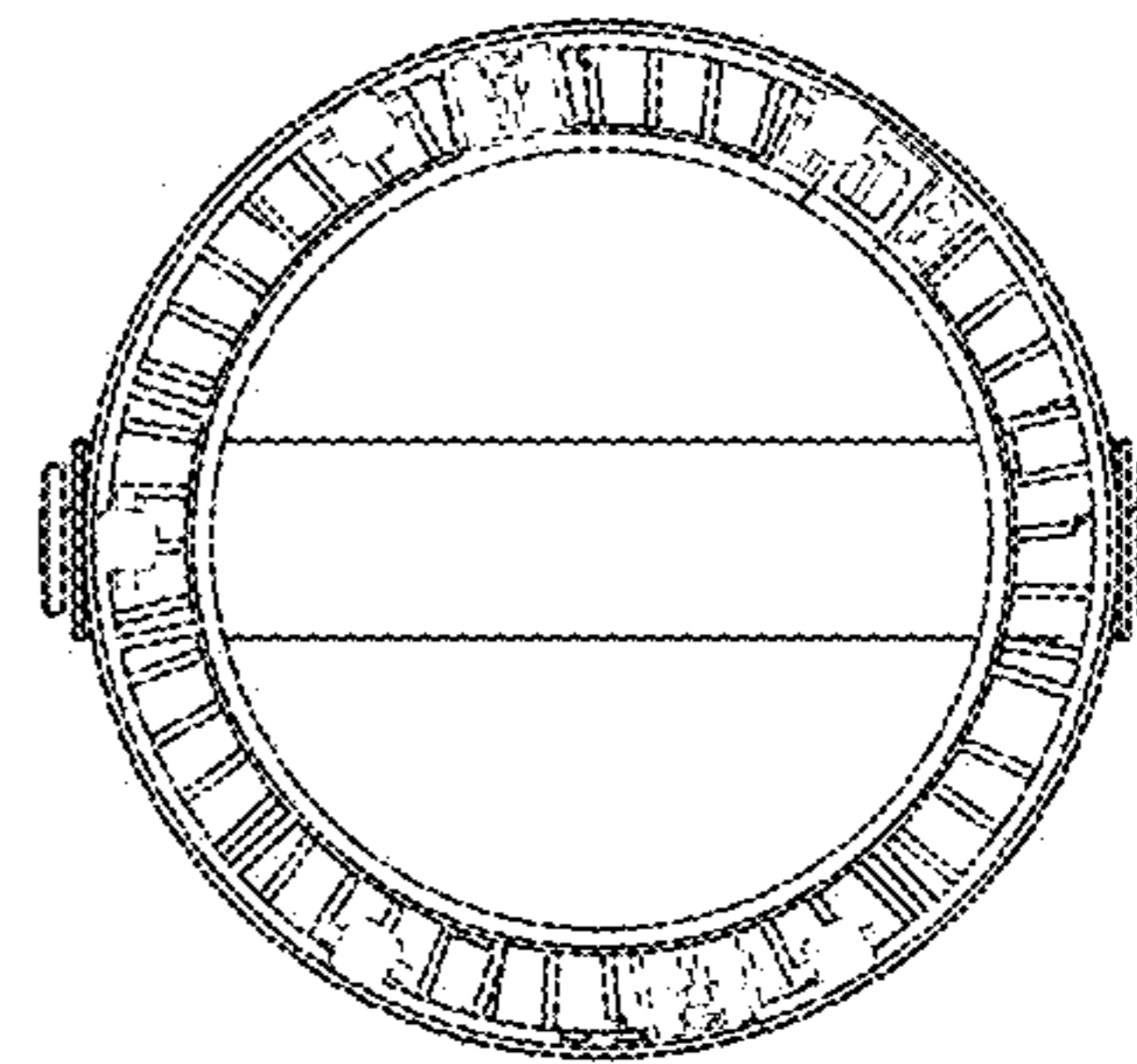


FIG. 10

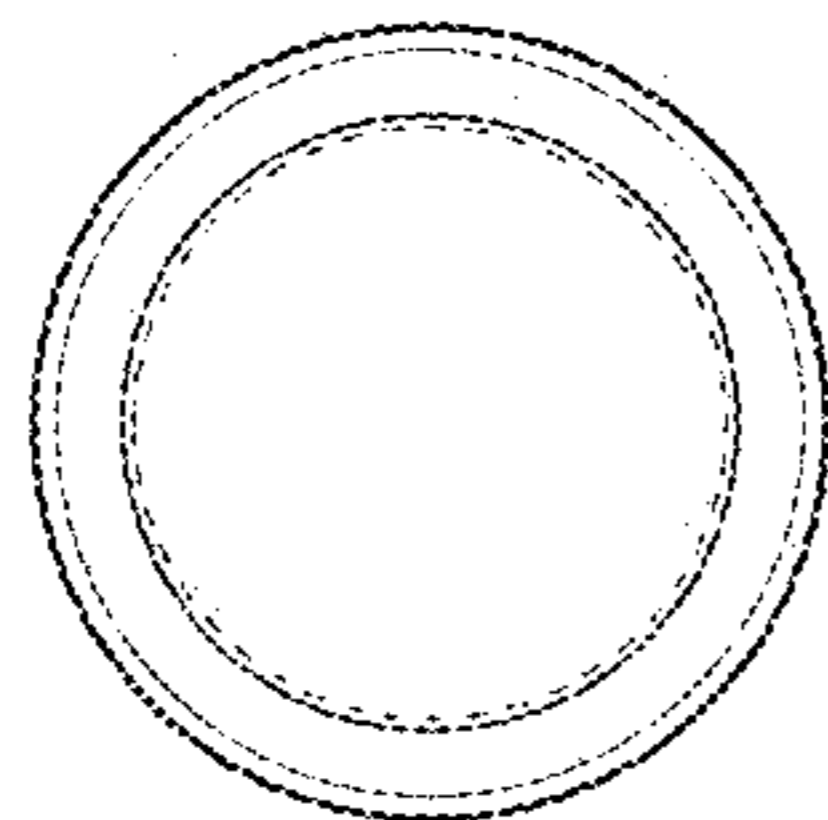


FIG. 11

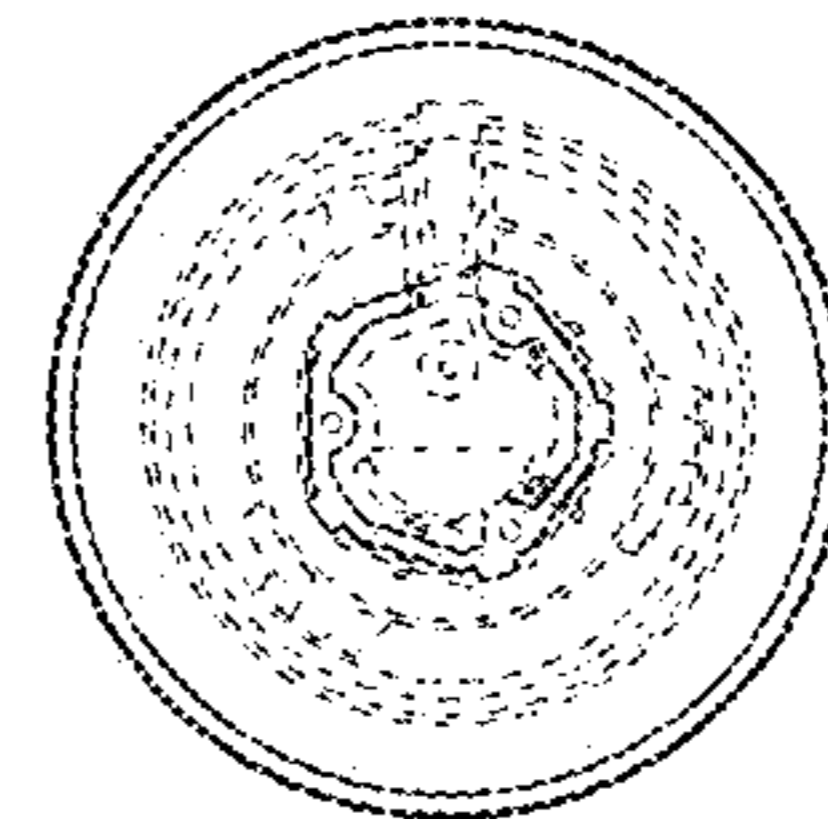


FIG. 12

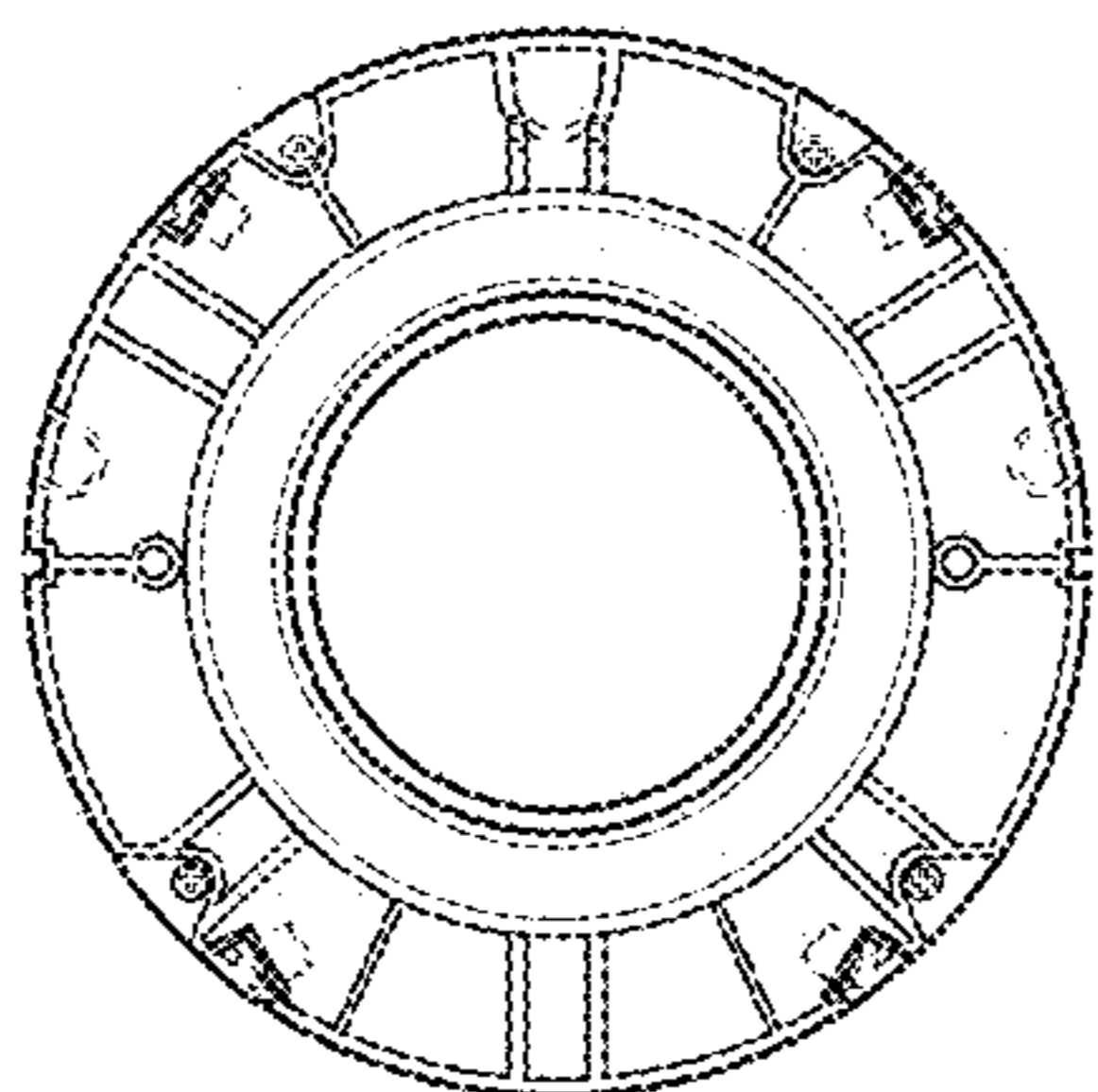


FIG. 13

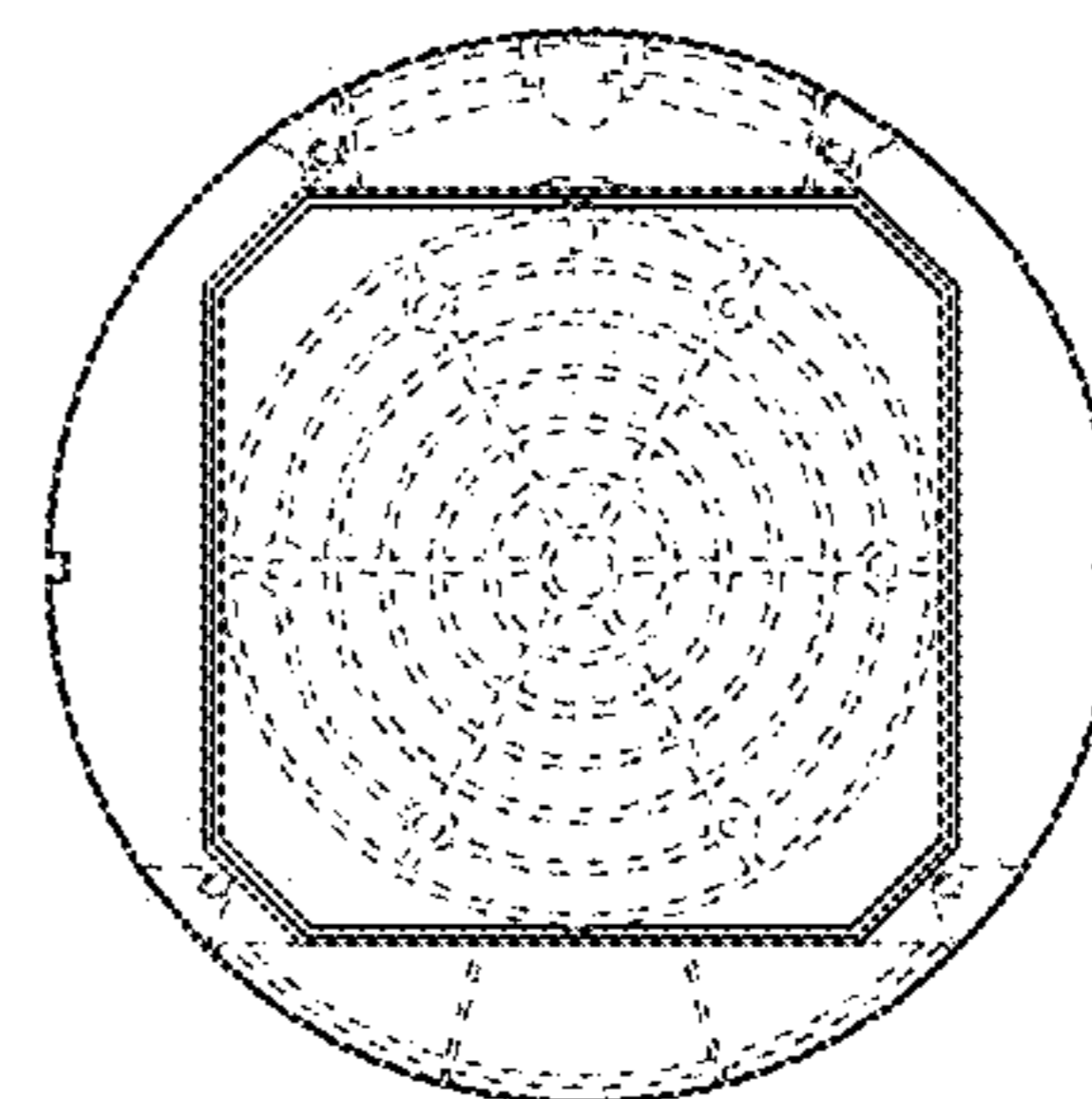


FIG. 14

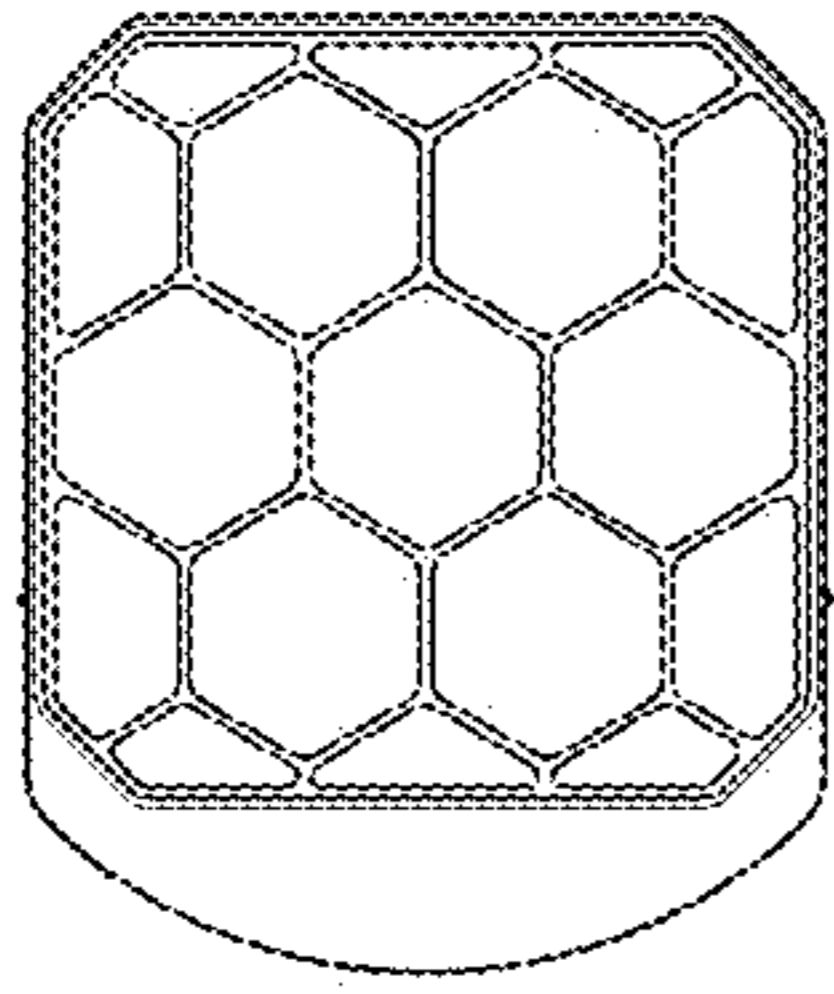


FIG. 15

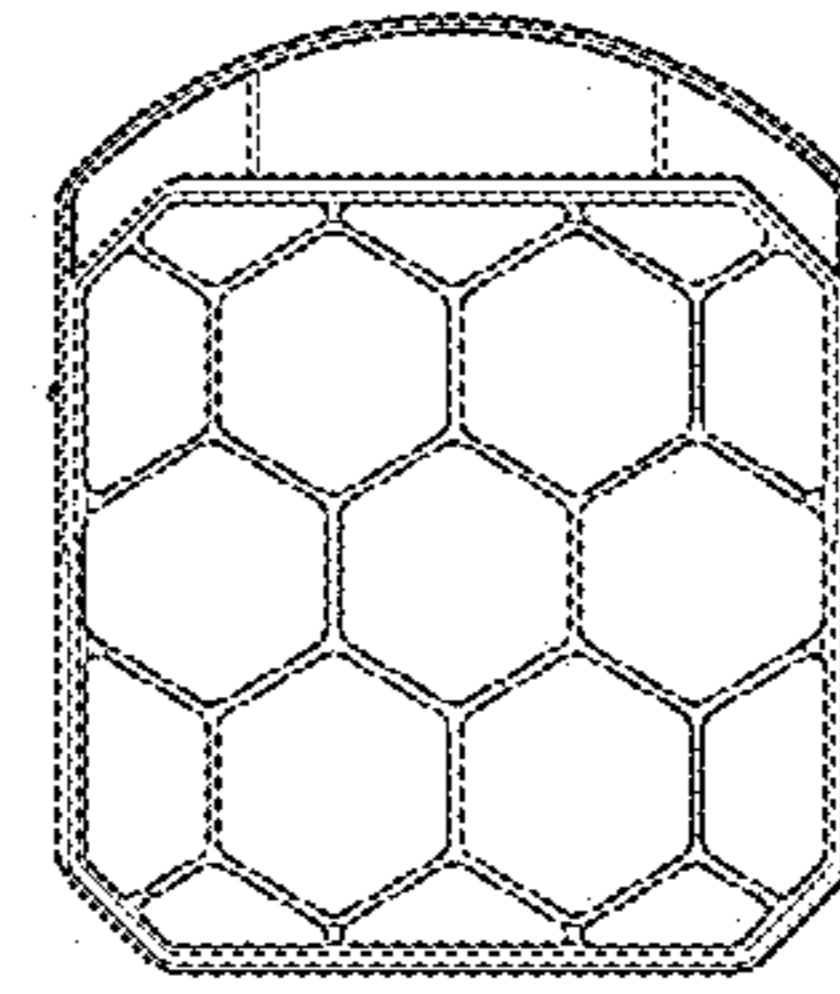


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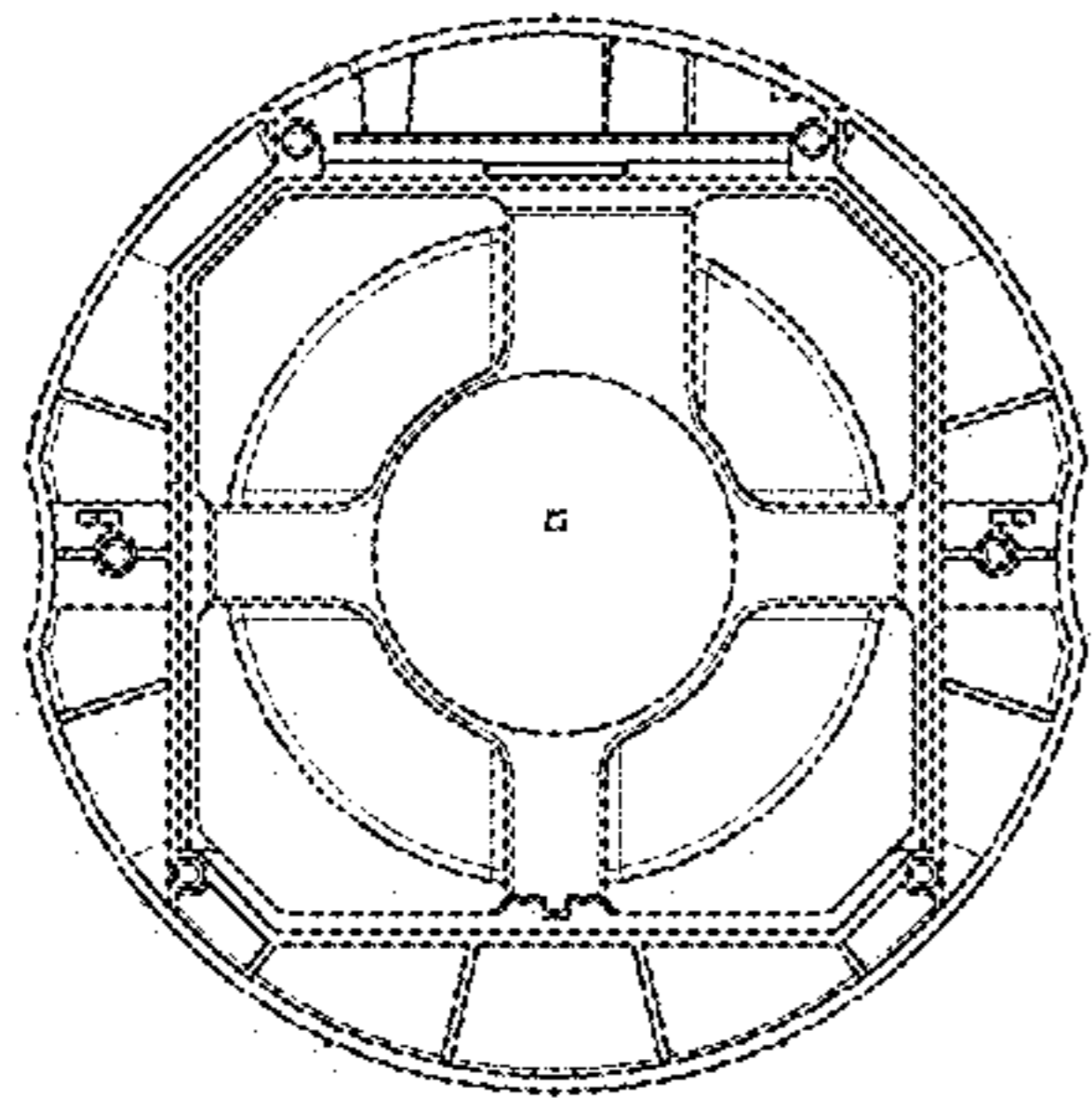


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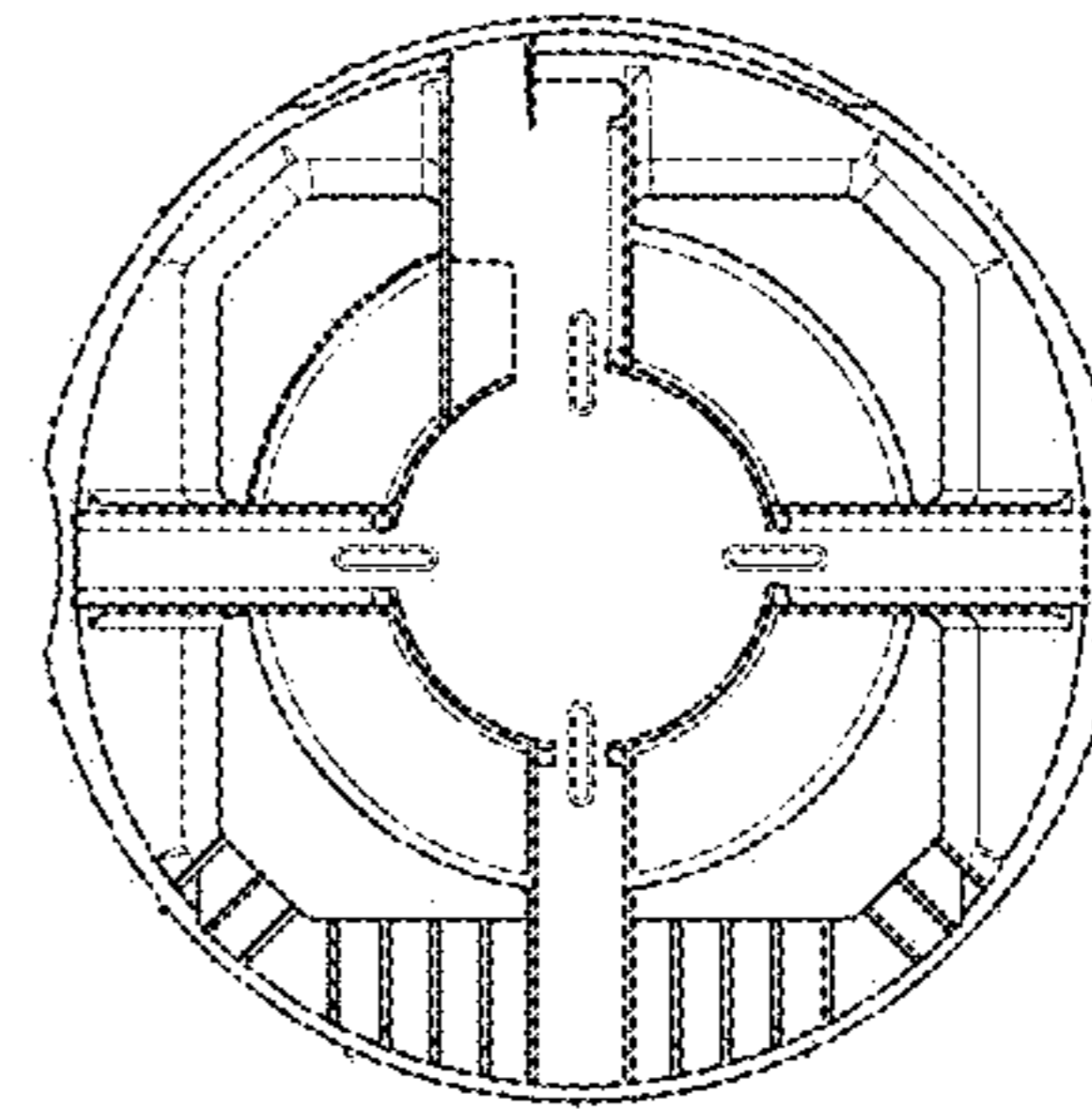


FIG. 18

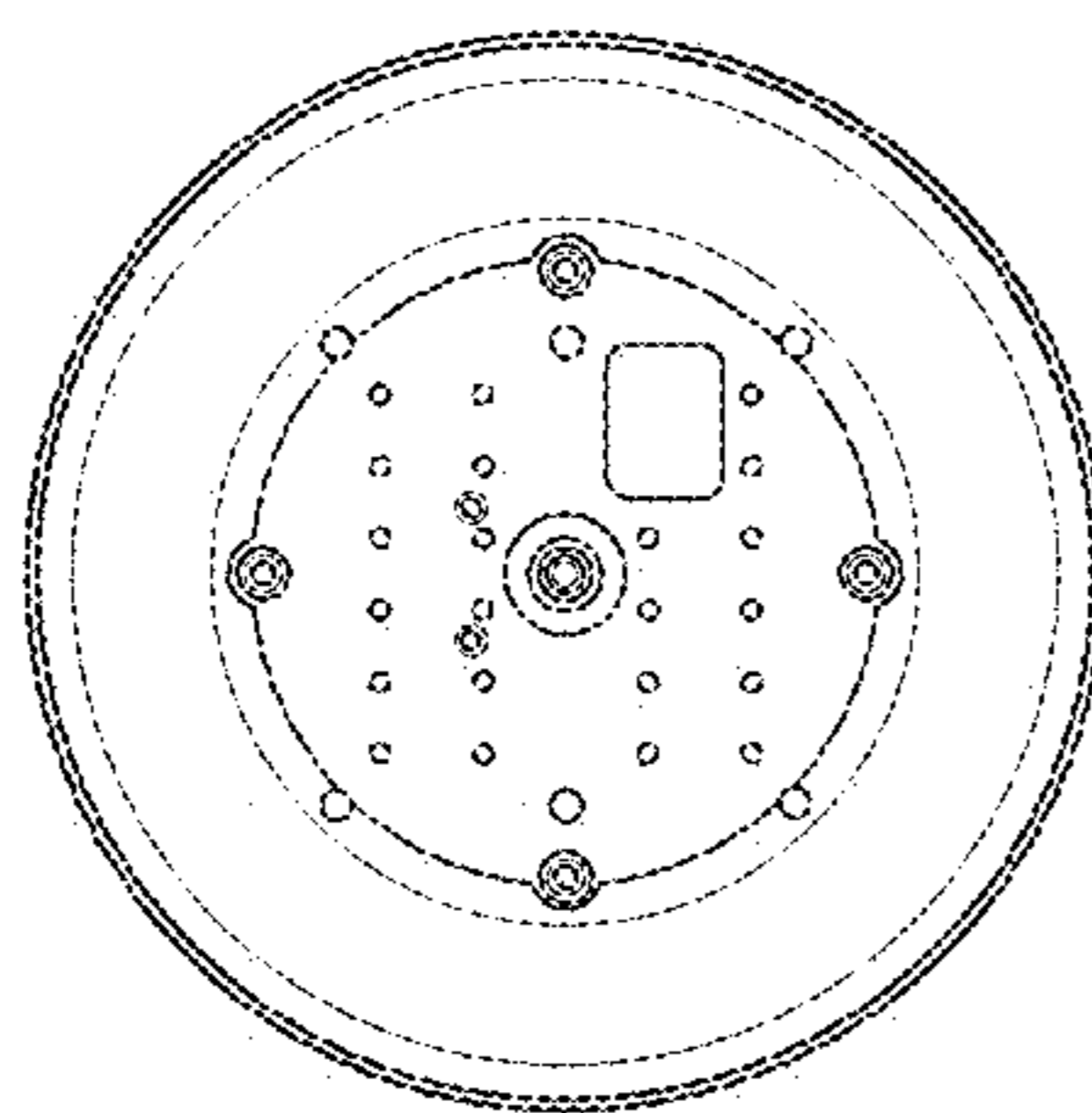


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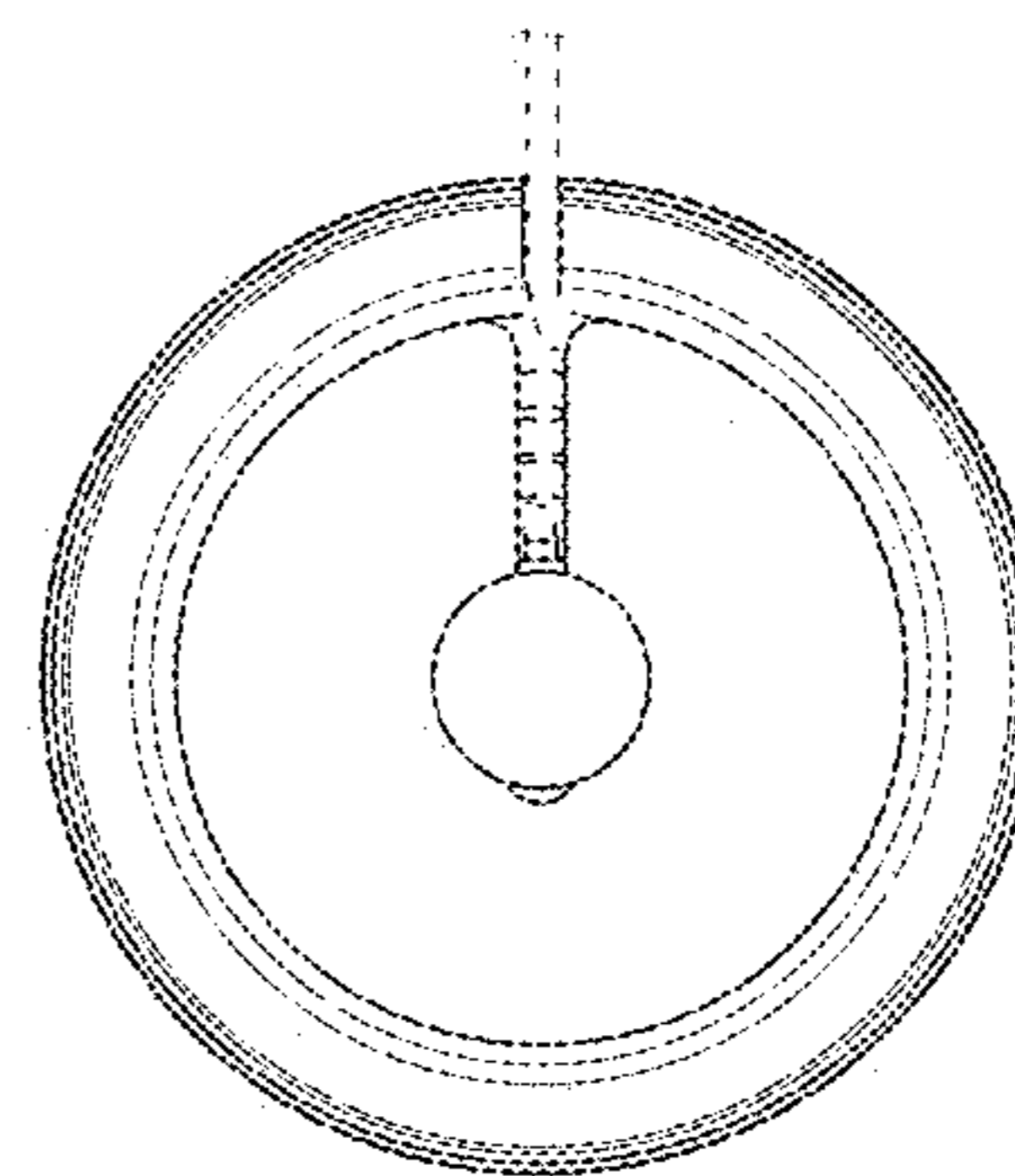


FIG. 20

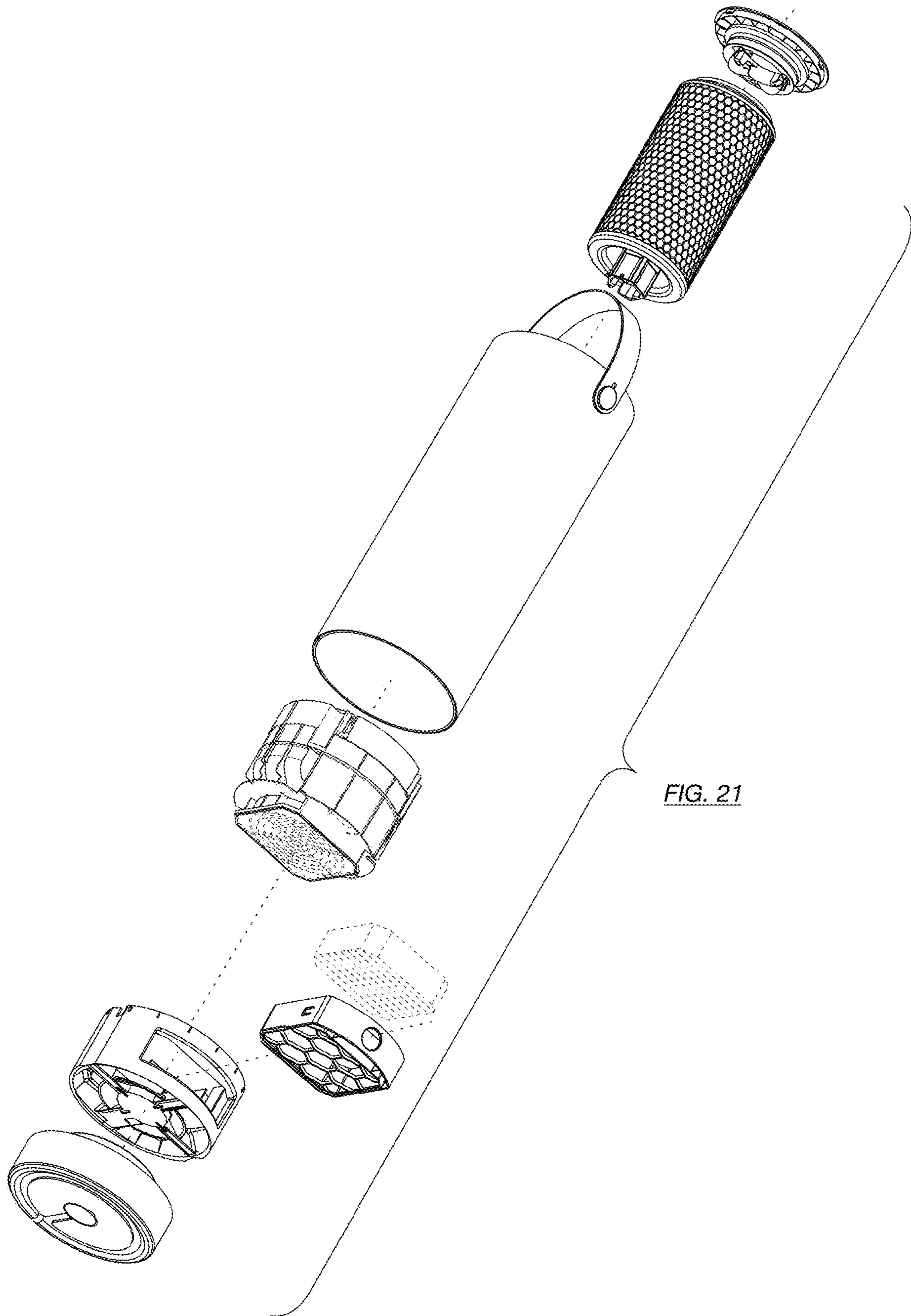


FIG. 21

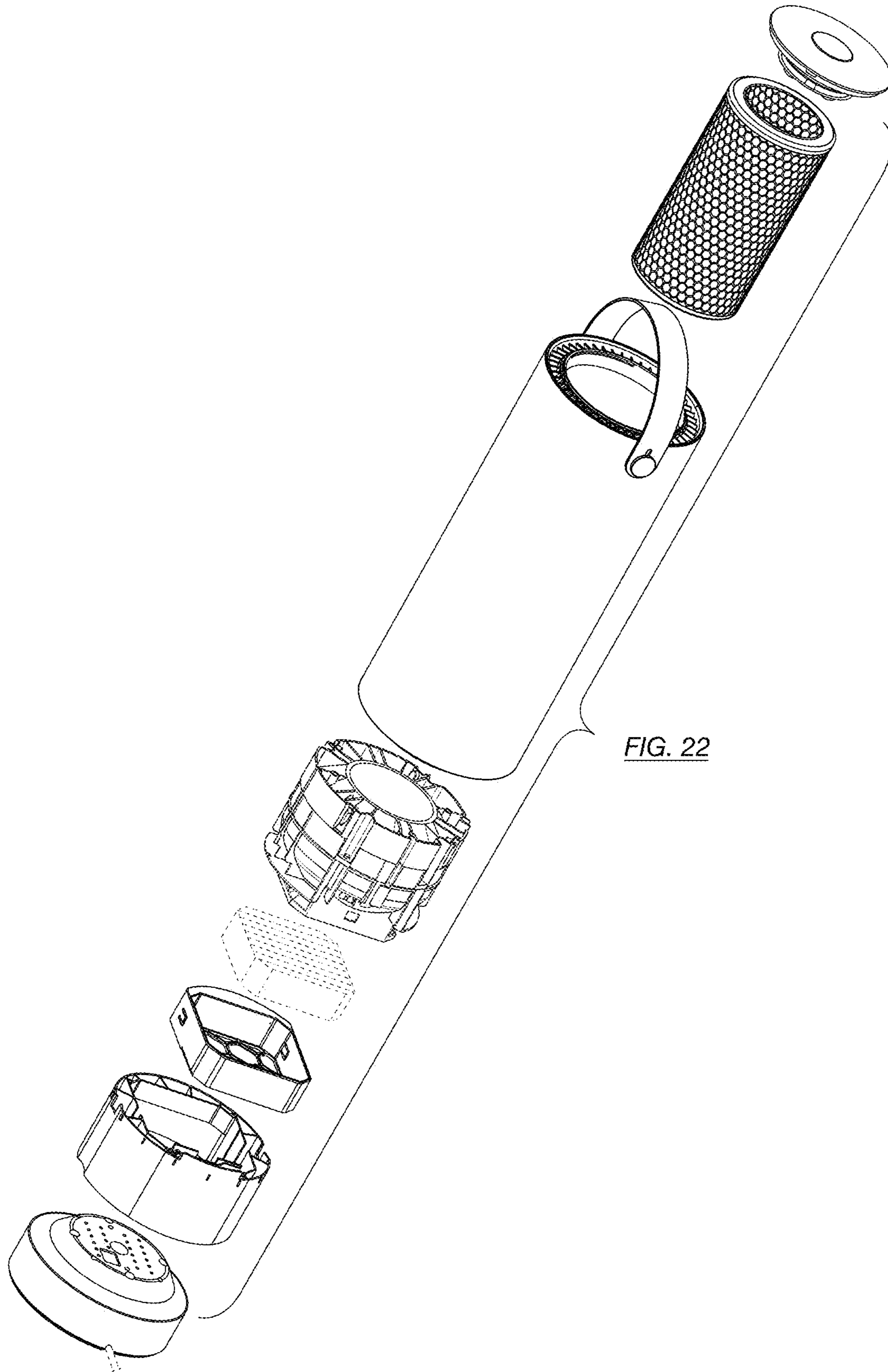


FIG. 22

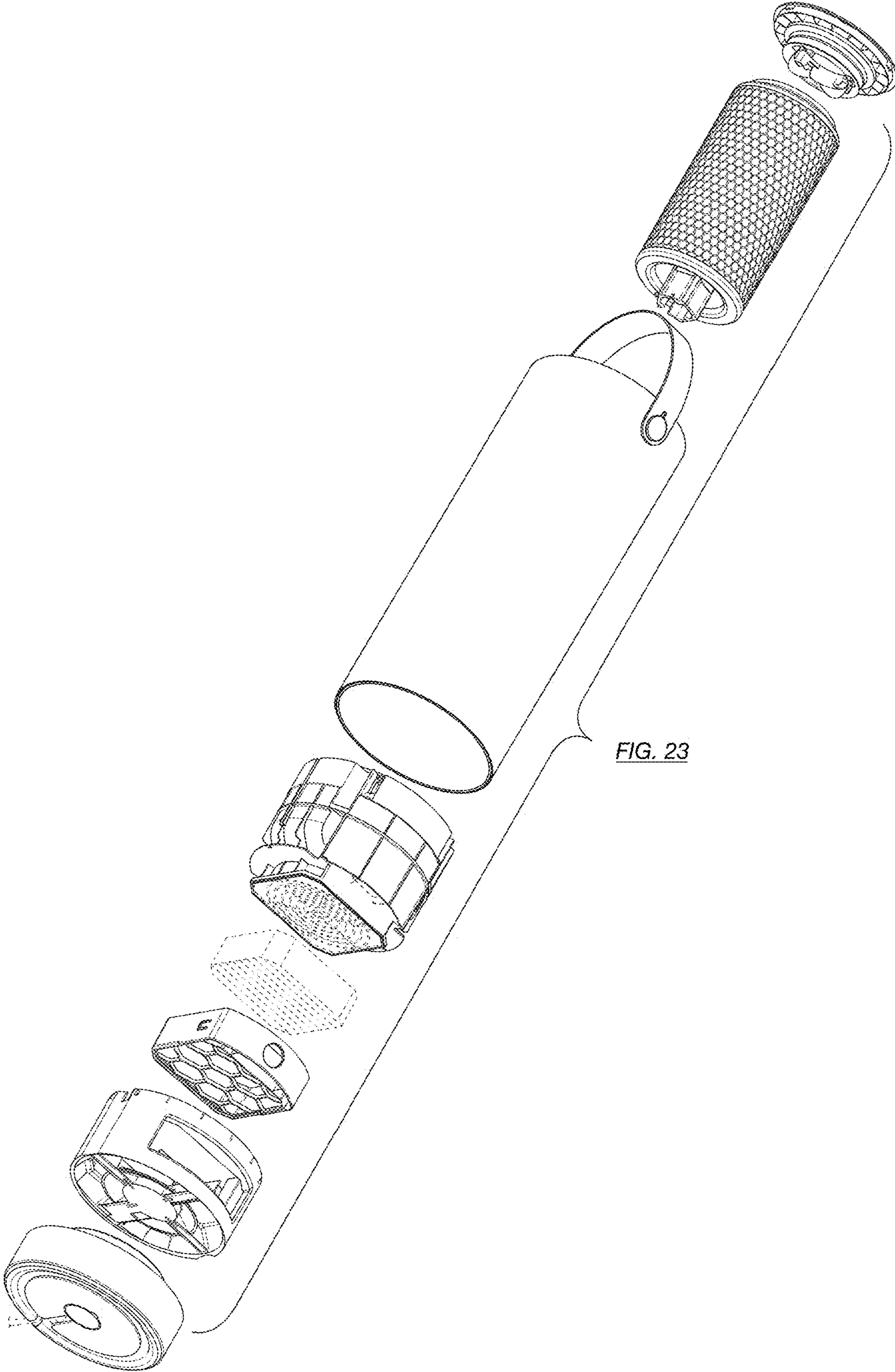


FIG. 23

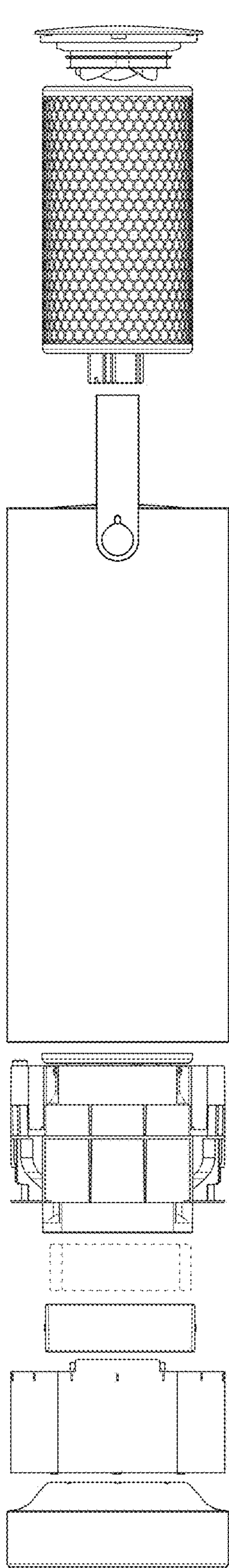


FIG. 24

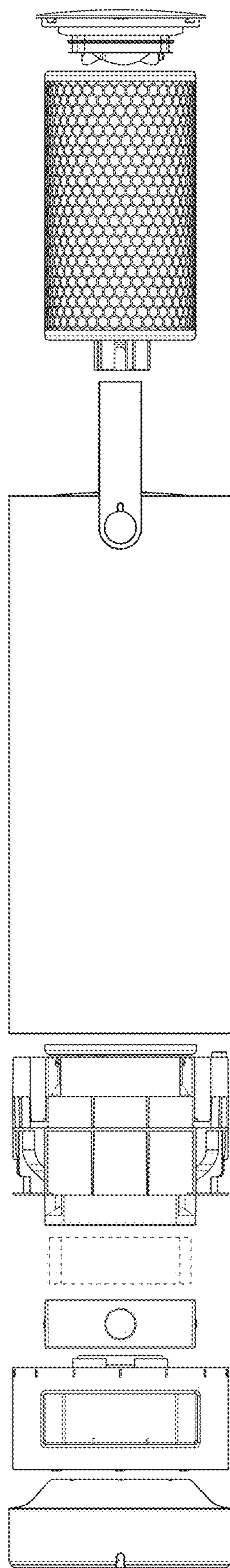


FIG. 25

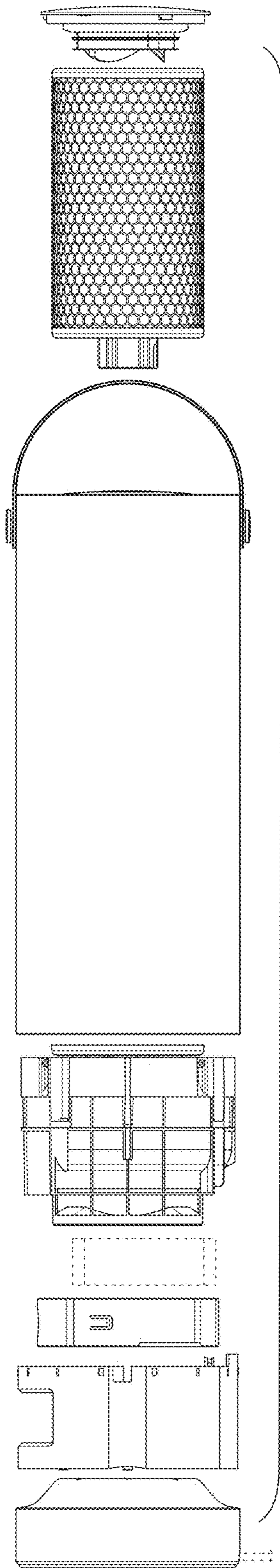


FIG. 26

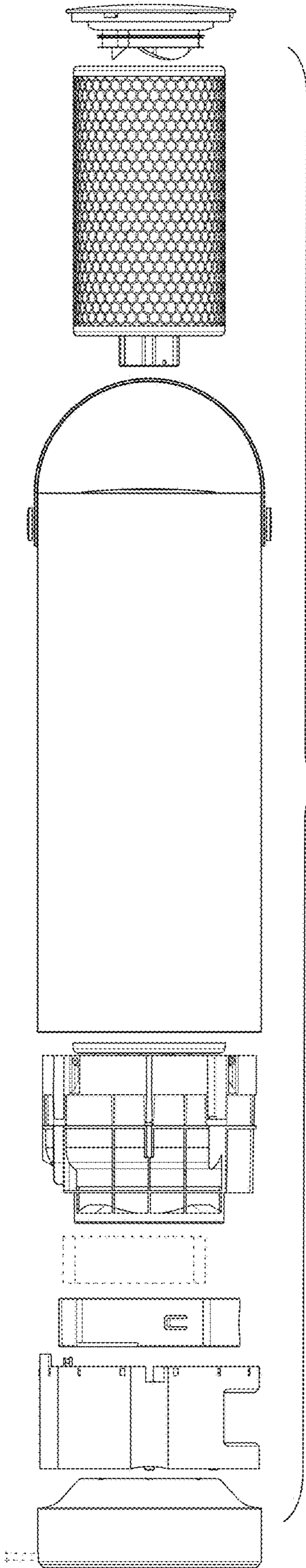


FIG. 27

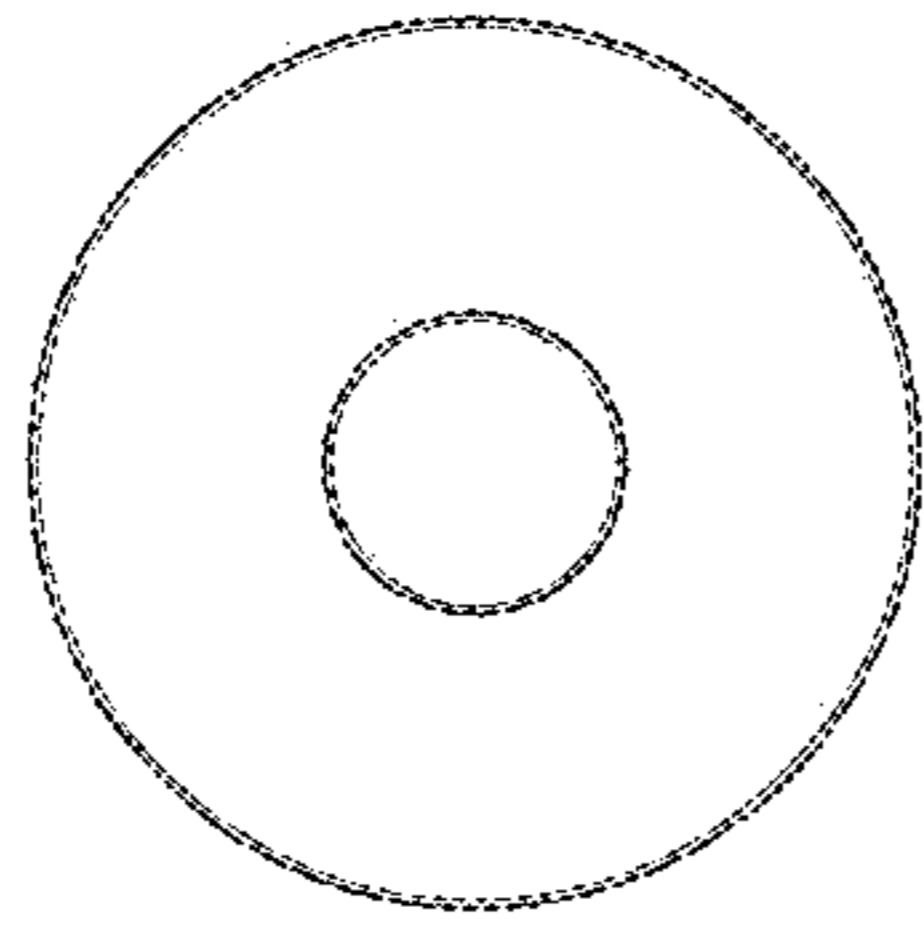


FIG. 28

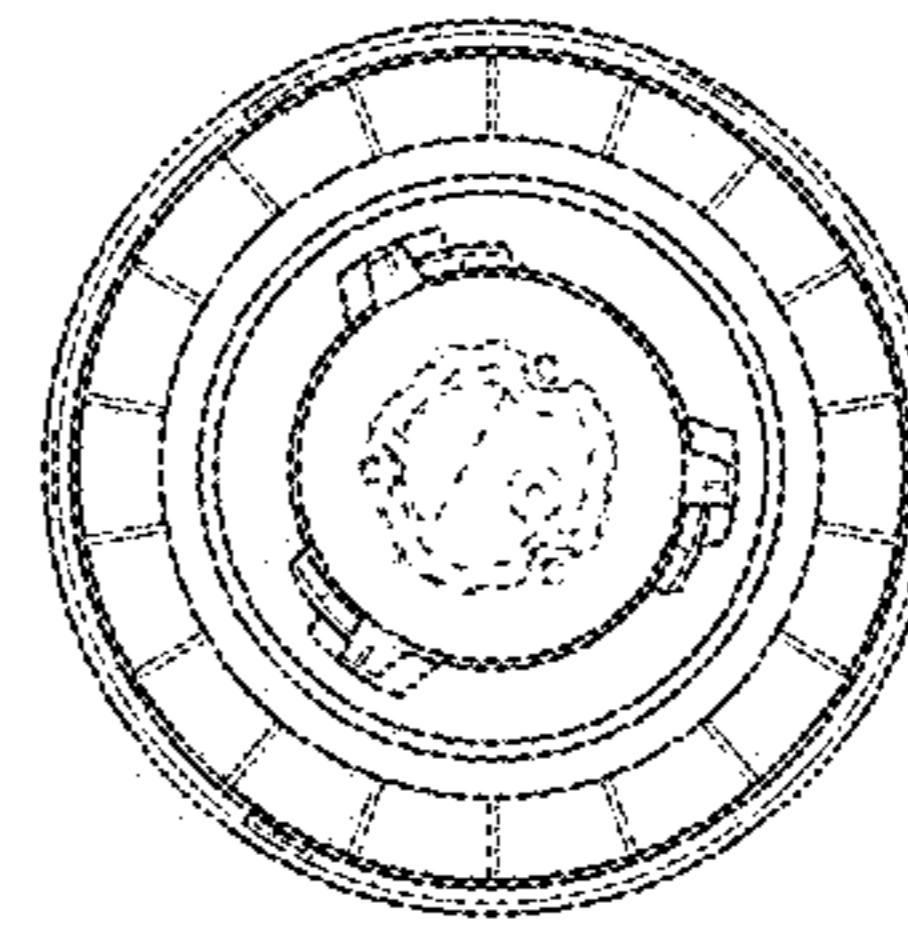


FIG. 29

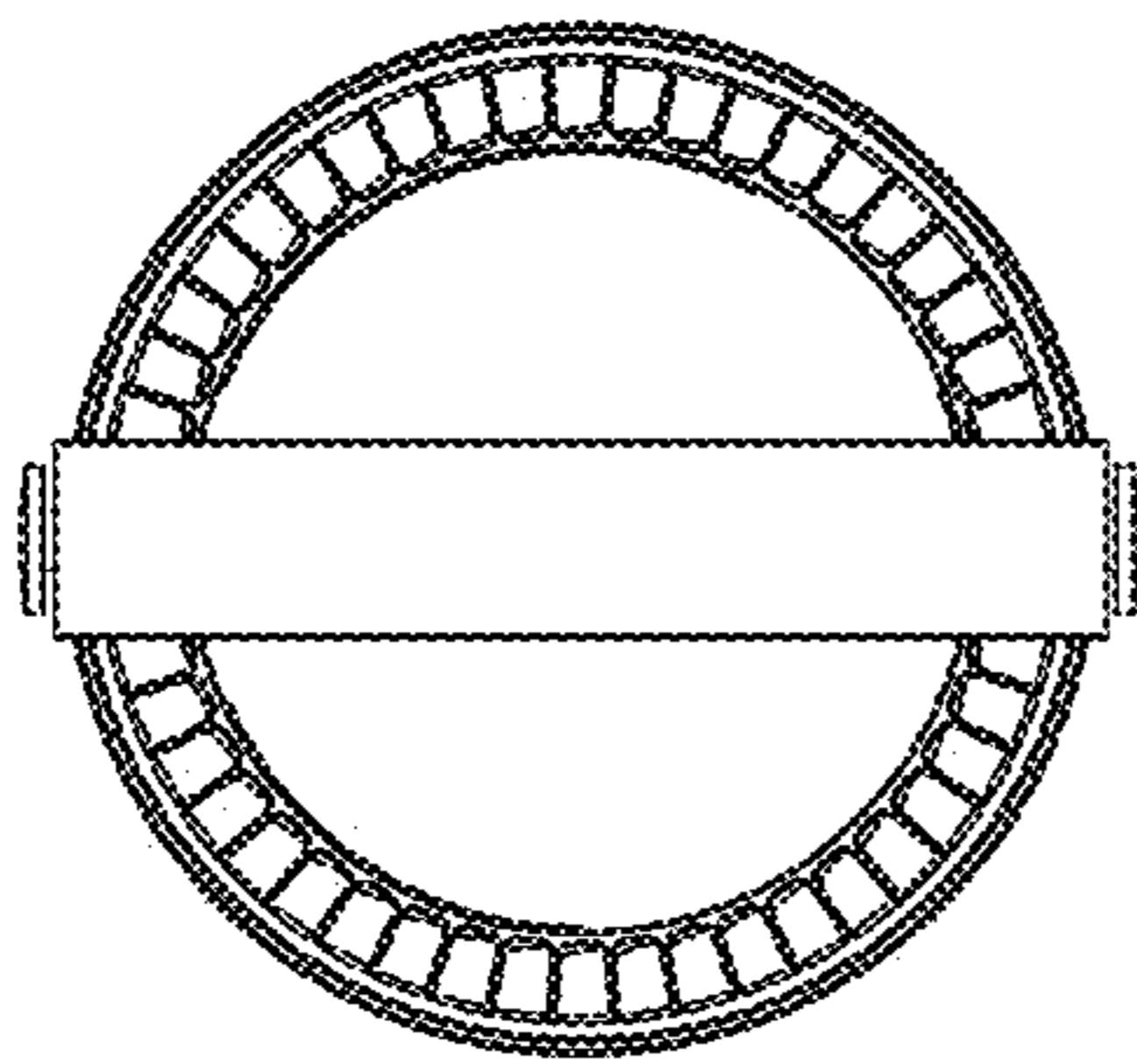


FIG. 30

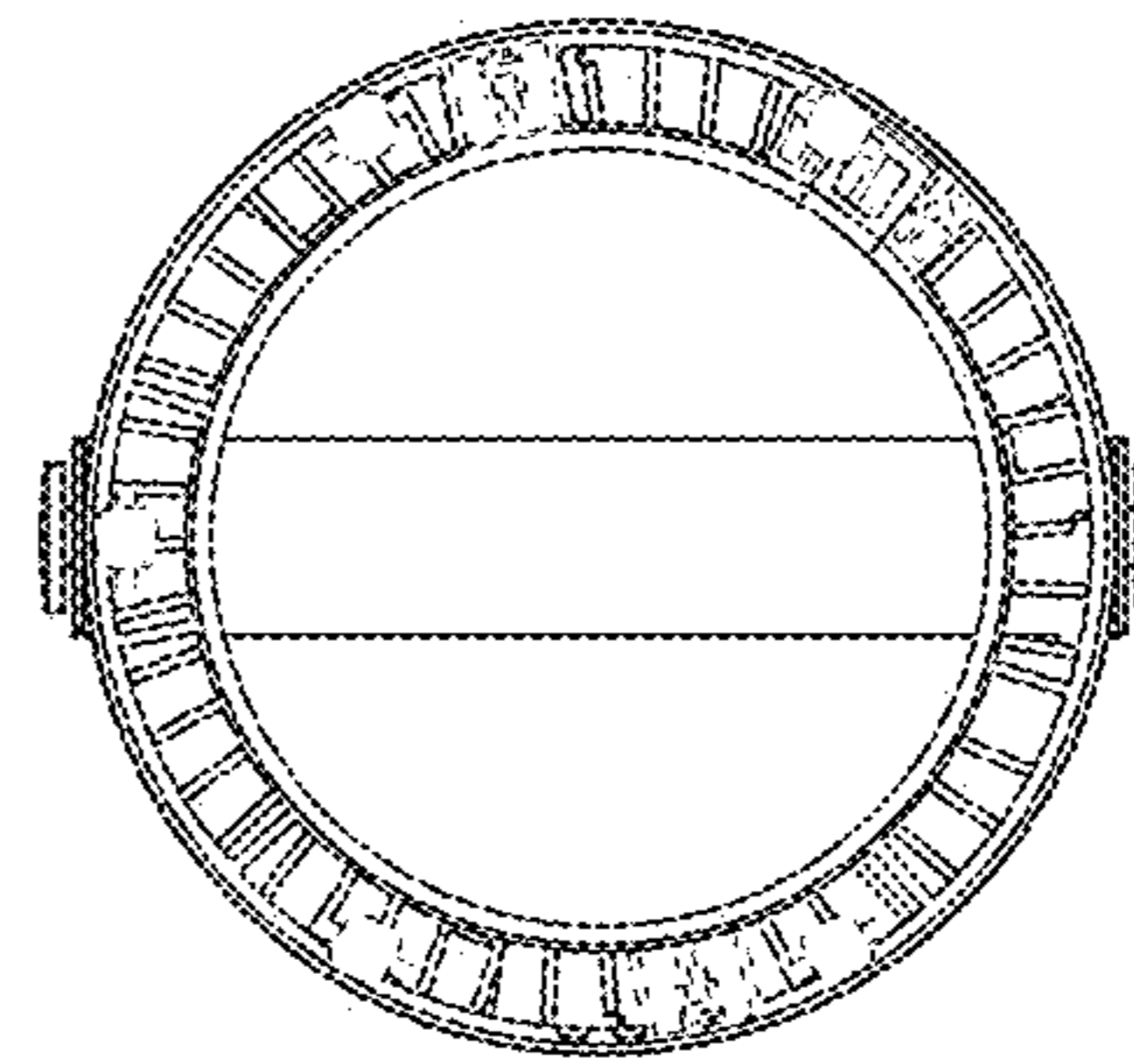


FIG. 31

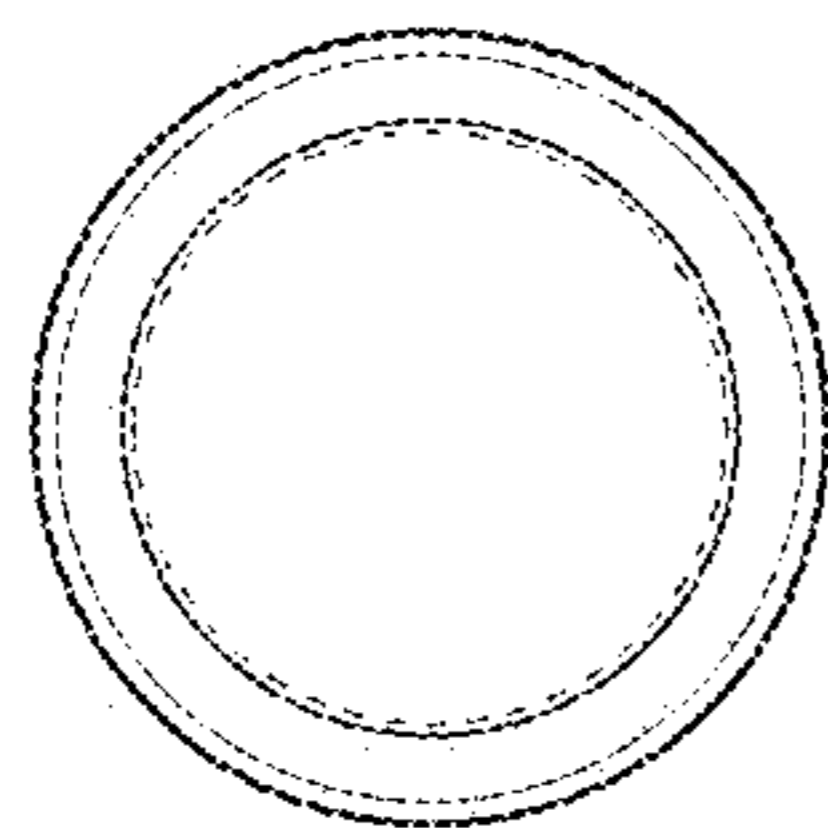


FIG. 32

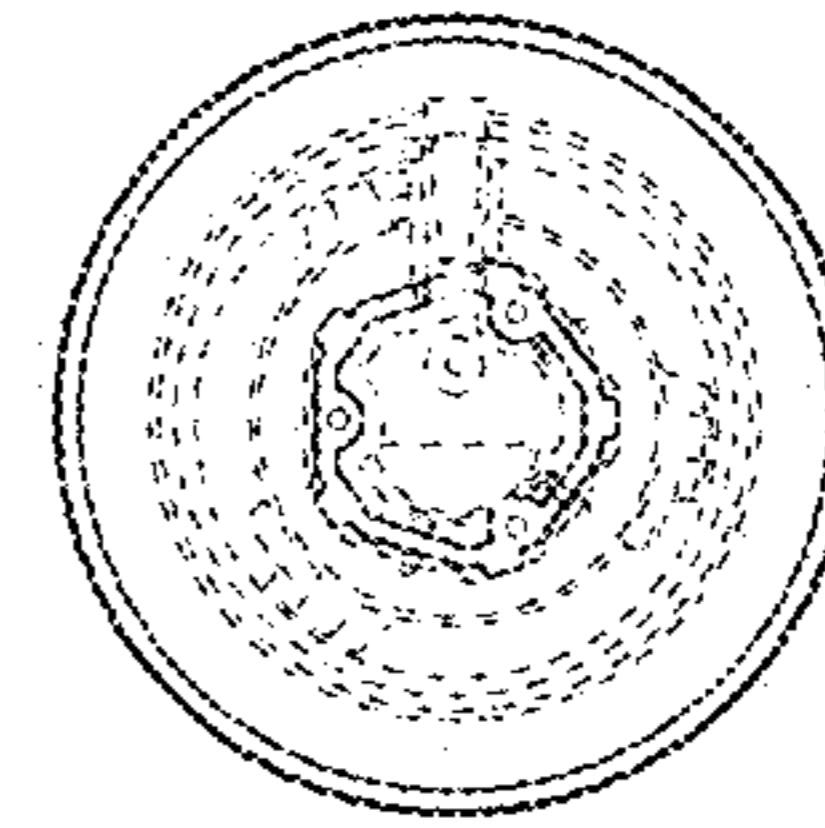


FIG. 33

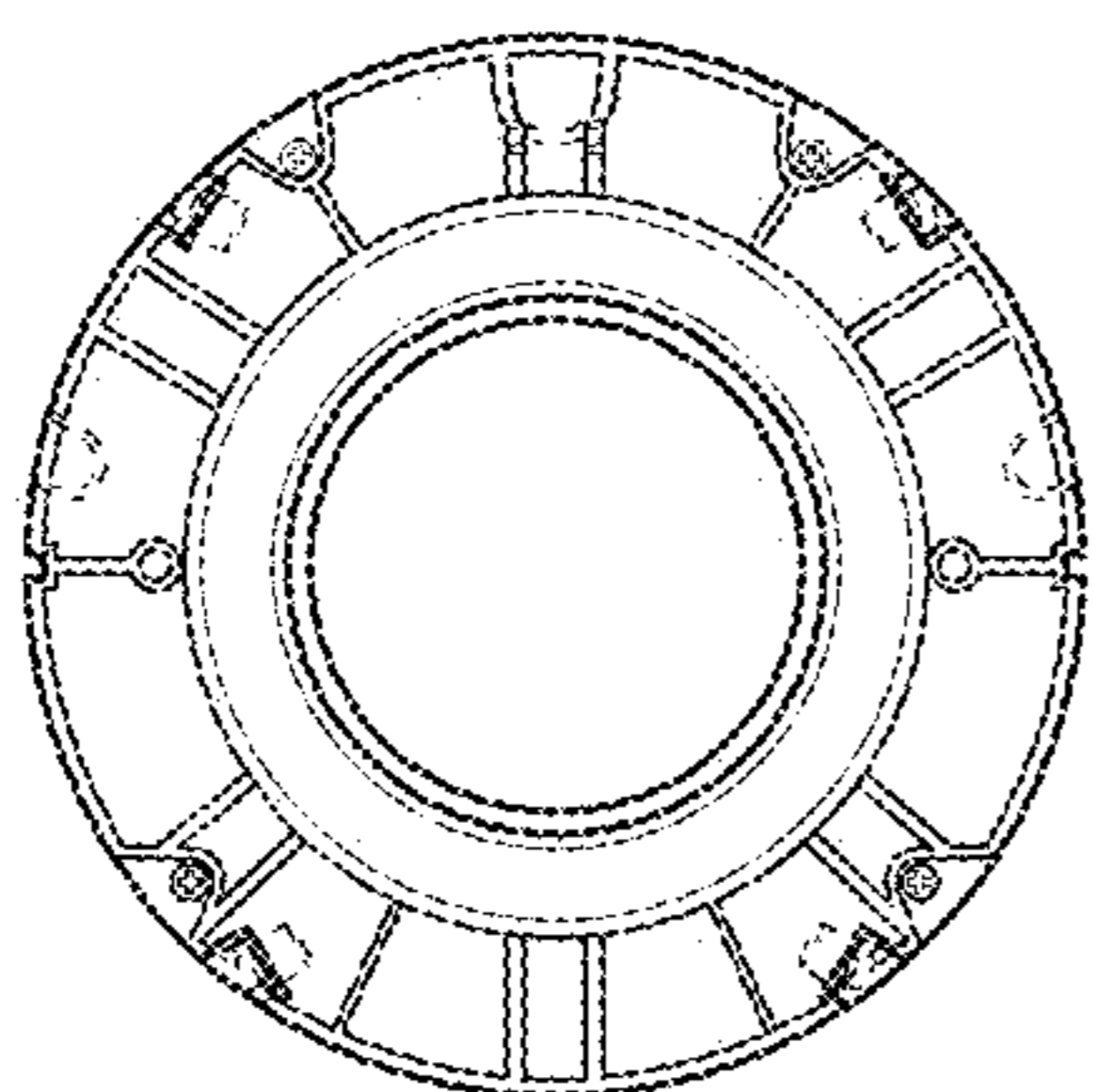


FIG. 34

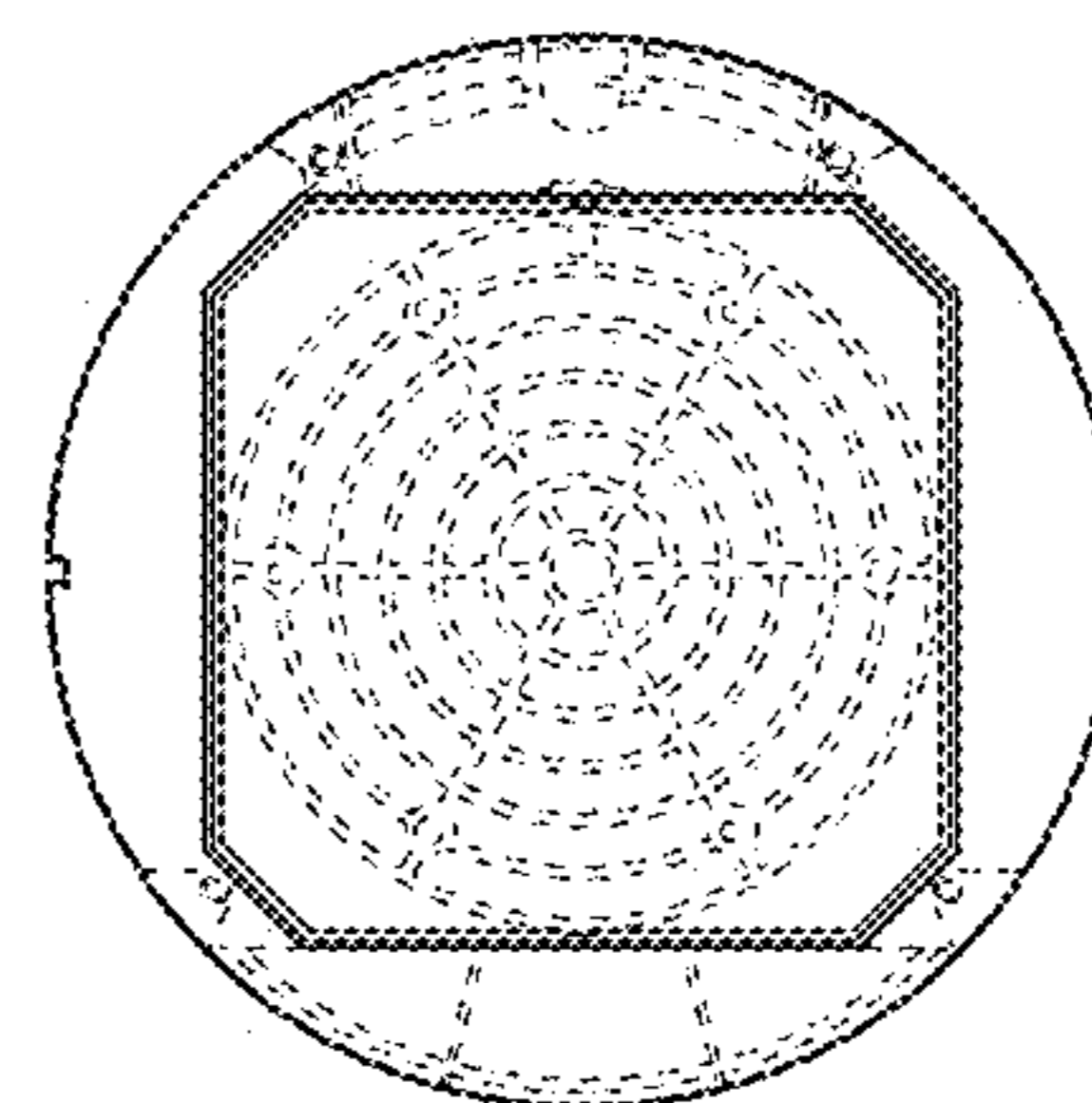


FIG. 35

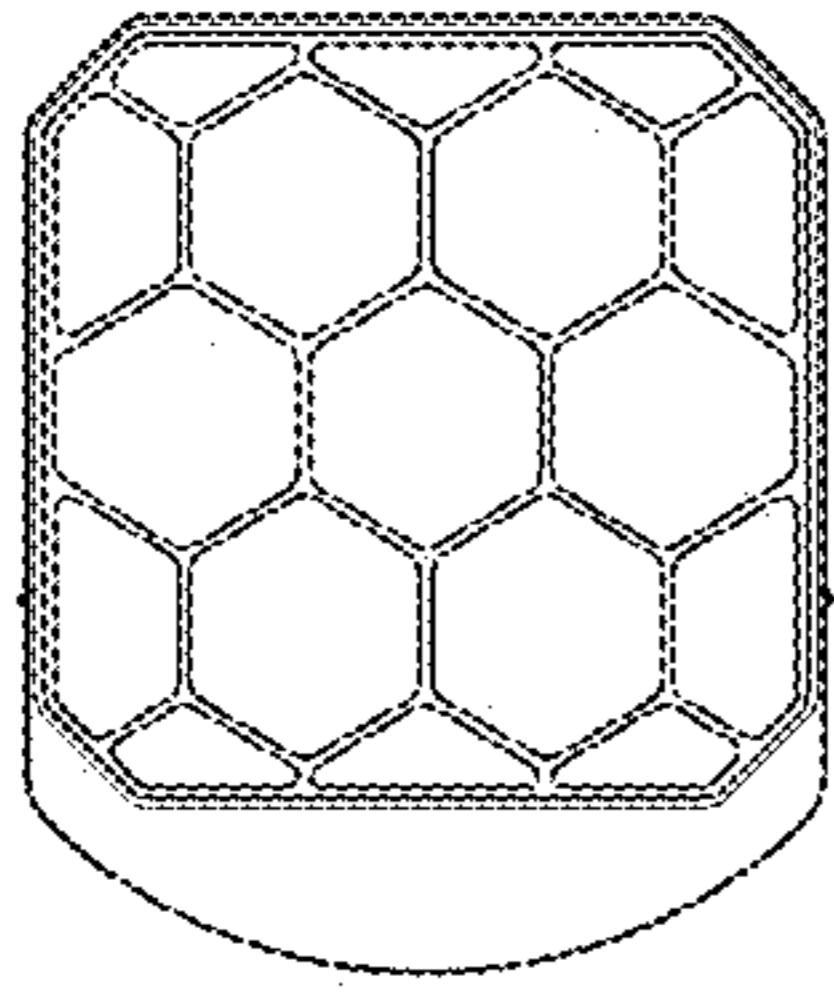


FIG. 36

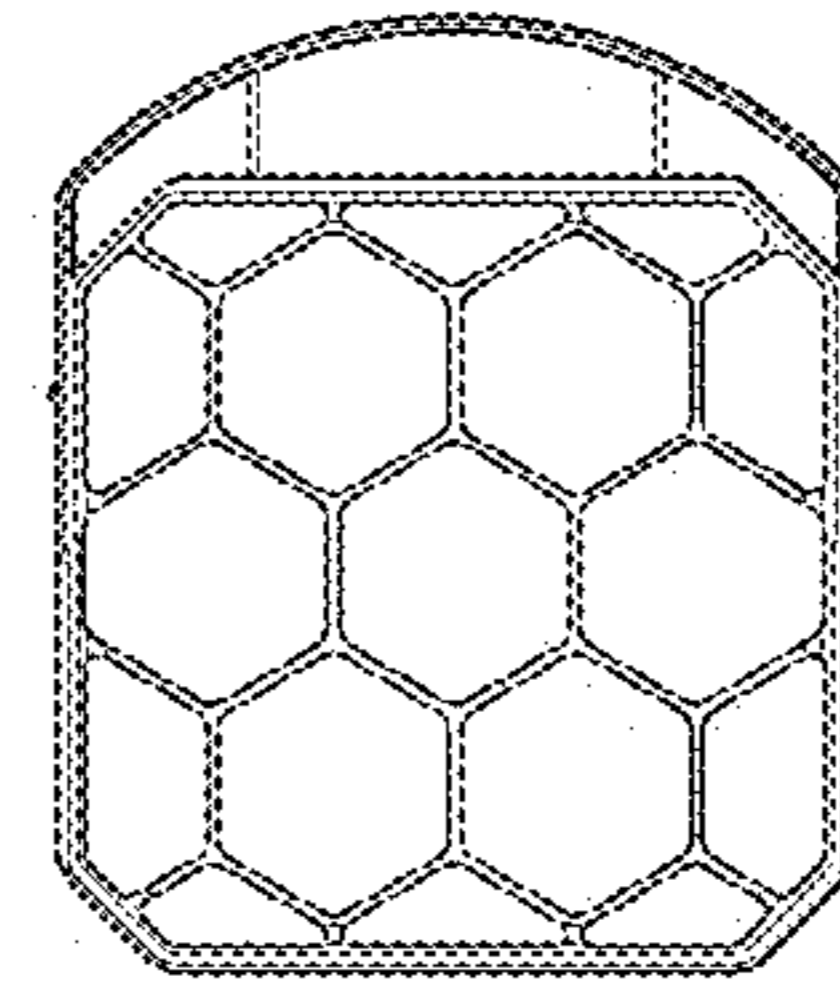


FIG. 37

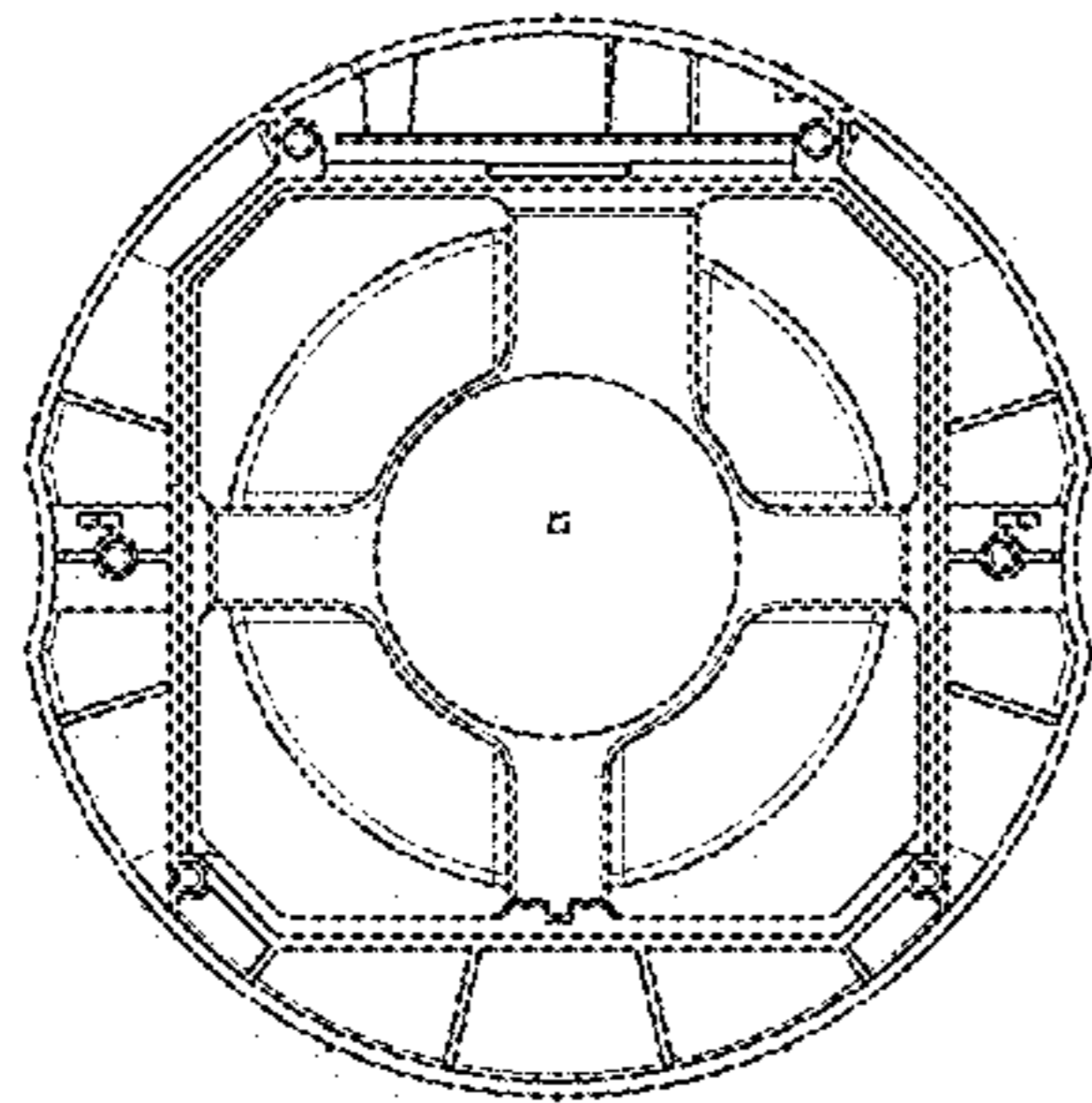


FIG. 38

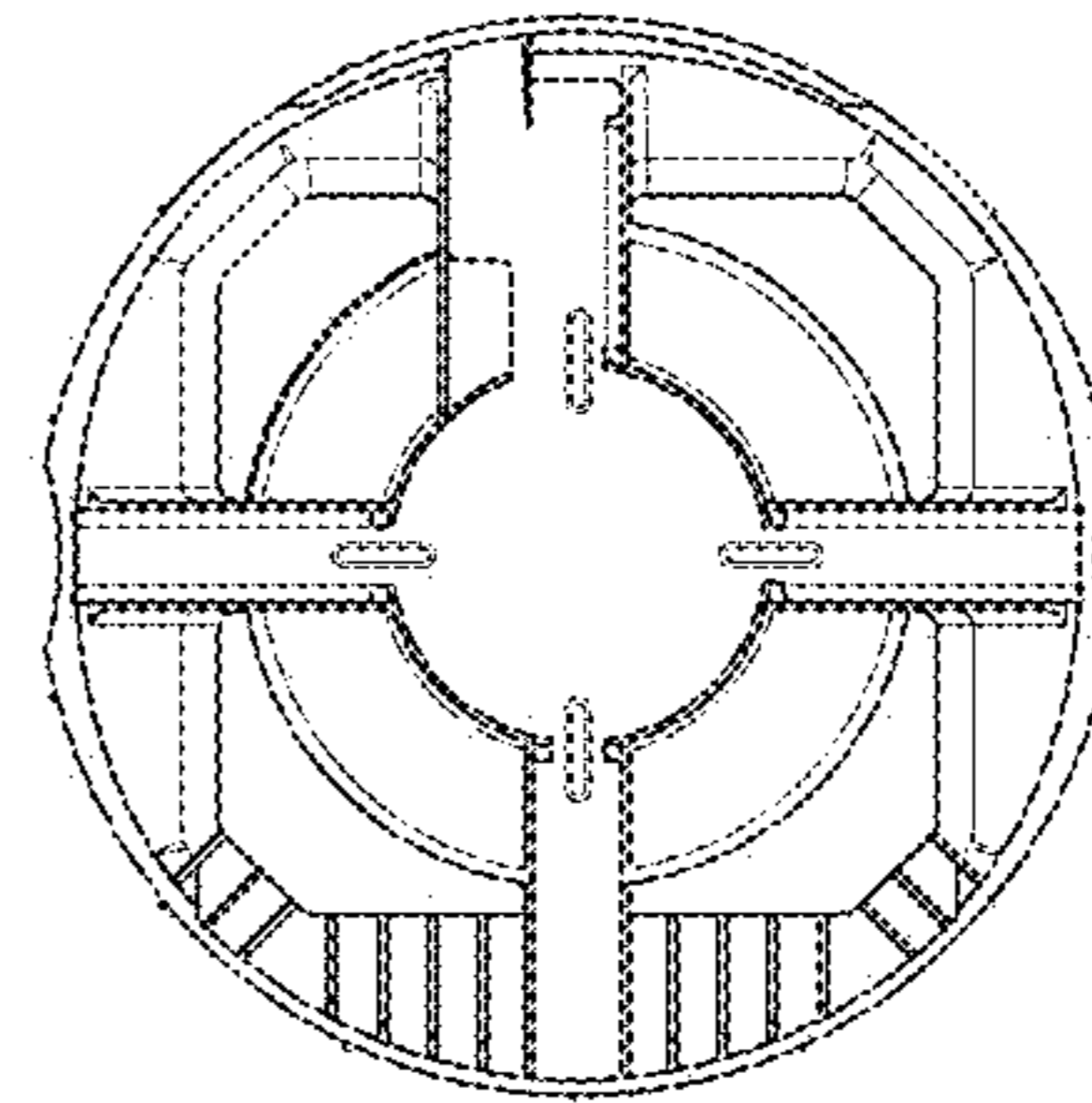


FIG. 39

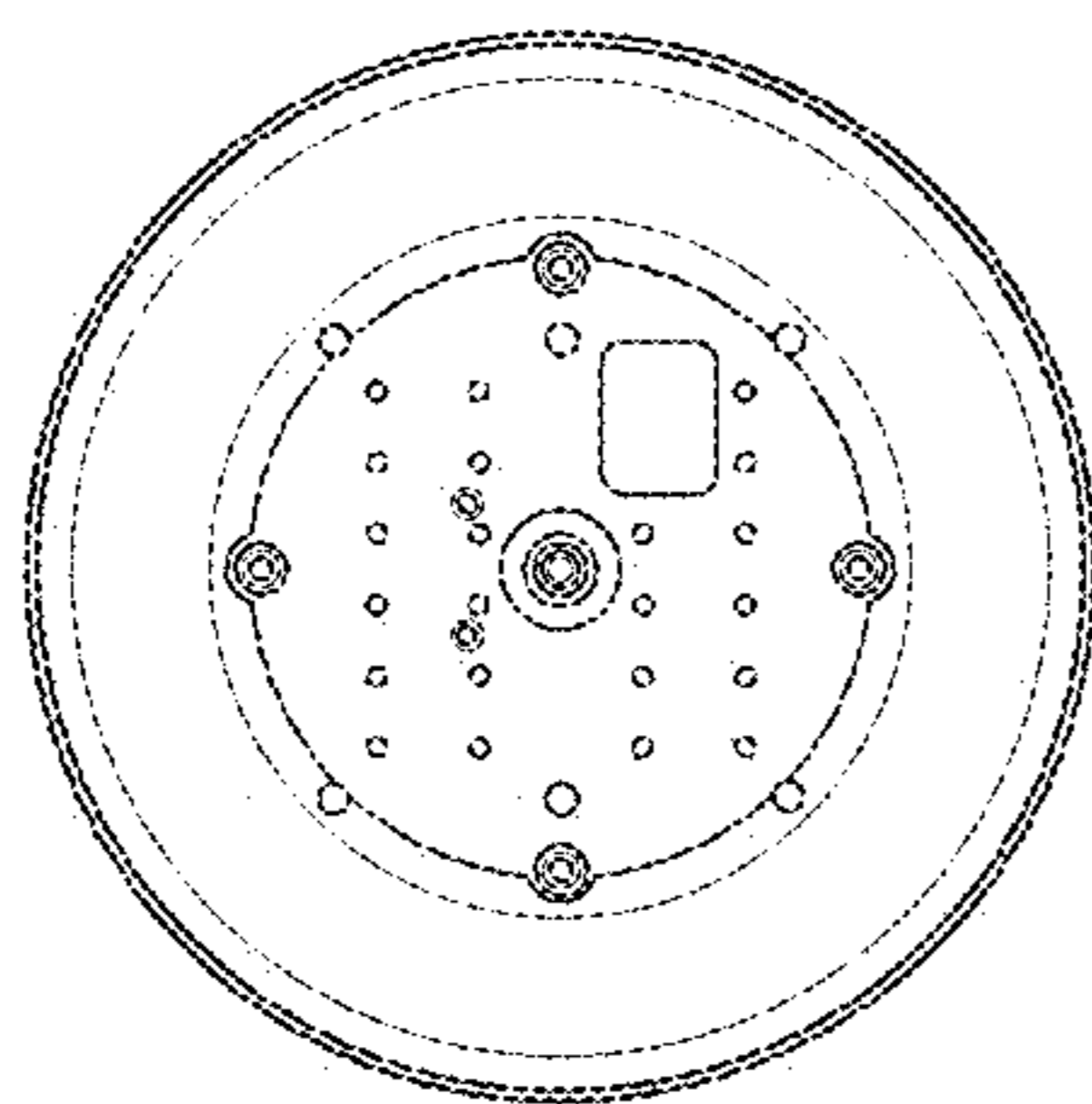


FIG. 40

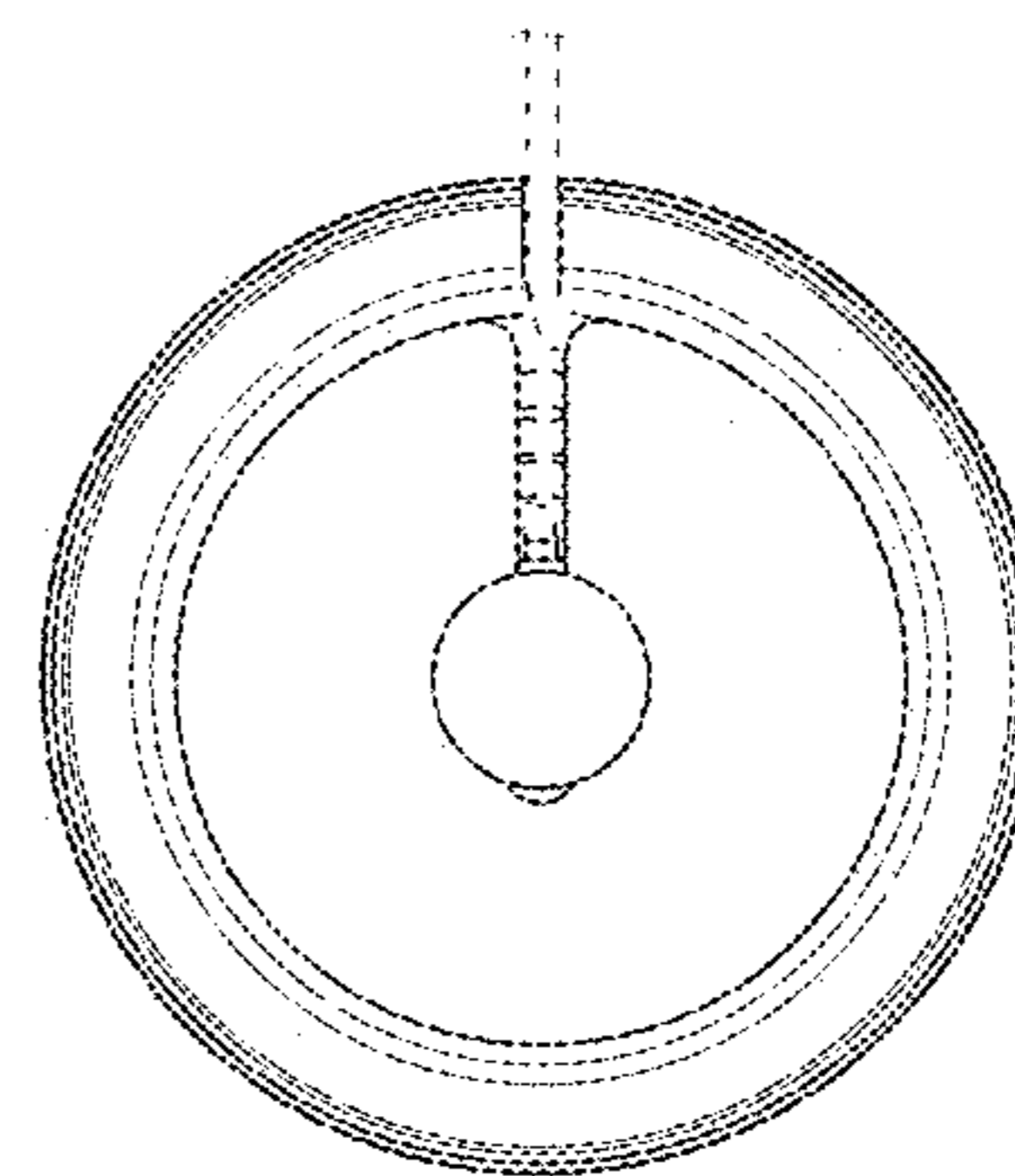


FIG. 41

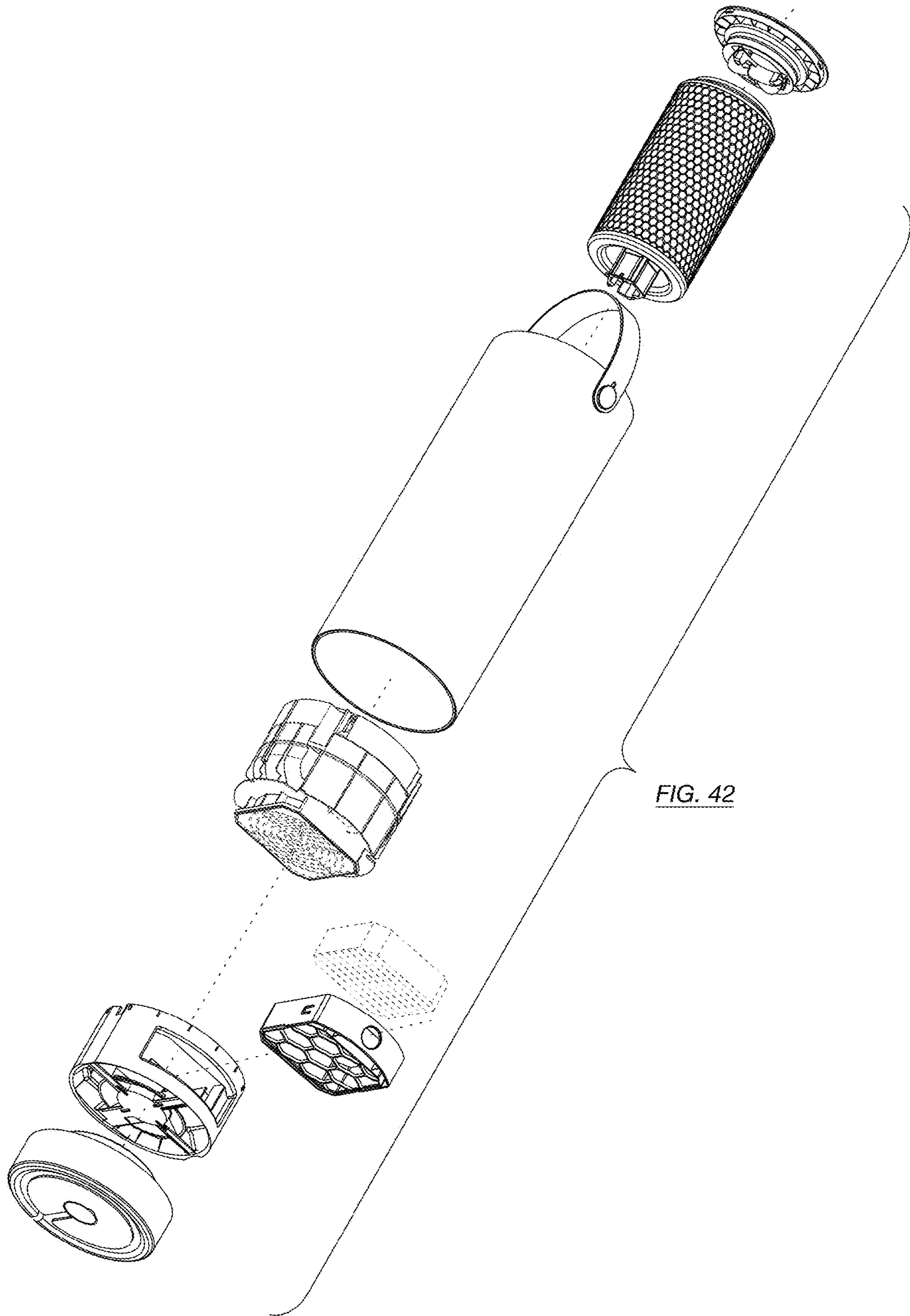


FIG. 42