



US00D987026S

(12) **United States Design Patent** (10) **Patent No.:** **US D987,026 S**  
**Ehrenberg et al.** (45) **Date of Patent:** **\*\* May 23, 2023**

(54) **RADIAL SEAL FILTER** D773,014 S \* 11/2016 Pale ..... D23/209  
D849,899 S \* 5/2019 Bryant ..... D23/341  
(71) Applicant: **THE SY-KLONE COMPANY, LLC,** D855,755 S \* 8/2019 Coelho ..... D23/209  
Jacksonville, FL (US) (Continued)

(72) Inventors: **Eric L. Ehrenberg,** Jacksonville, FL  
(US); **James G. Moredock,** Saint  
Augustine, FL (US)

**FOREIGN PATENT DOCUMENTS**

CN 205287916 U 6/2016  
DE 2824280 A1 12/1978  
(Continued)

(73) Assignee: **THE SY-KLONE COMPANY, LLC,**  
Jacksonville, FL (US)

**OTHER PUBLICATIONS**

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

Culligan Water Filter, Sep. 20, 2004, Amazon.com, Apr. 20, 2021.  
URL: [https://www.amazon.com/Culligan-R50-BBSA-Sediment-  
Replacement-Cartridge/dp/B000BQWYDO](https://www.amazon.com/Culligan-R50-BBSA-Sediment-<br/>Replacement-Cartridge/dp/B000BQWYDO) (Year: 2004).\*  
(Continued)

(21) Appl. No.: **29/797,345**

(22) Filed: **Jun. 30, 2021**

**Related U.S. Application Data**

*Primary Examiner* — Keith J Wilson  
(74) *Attorney, Agent, or Firm* — Oliff PLC

(63) Continuation of application No. 17/138,052, filed on  
Dec. 30, 2020.

(57) **CLAIM**

(51) **LOC (14) Cl.** ..... **23-01**

The ornamental design for a radial seal filter, as shown and  
described.

(52) **U.S. Cl.**  
USPC ..... **D23/209**

**DESCRIPTION**

(58) **Field of Classification Search**  
USPC ..... D23/209, 235, 341, 358, 363–365;  
D15/5  
CPC .... B01D 46/0002; B01D 46/10; F02M 35/04;  
F02M 35/10; F02M 35/024  
See application file for complete search history.

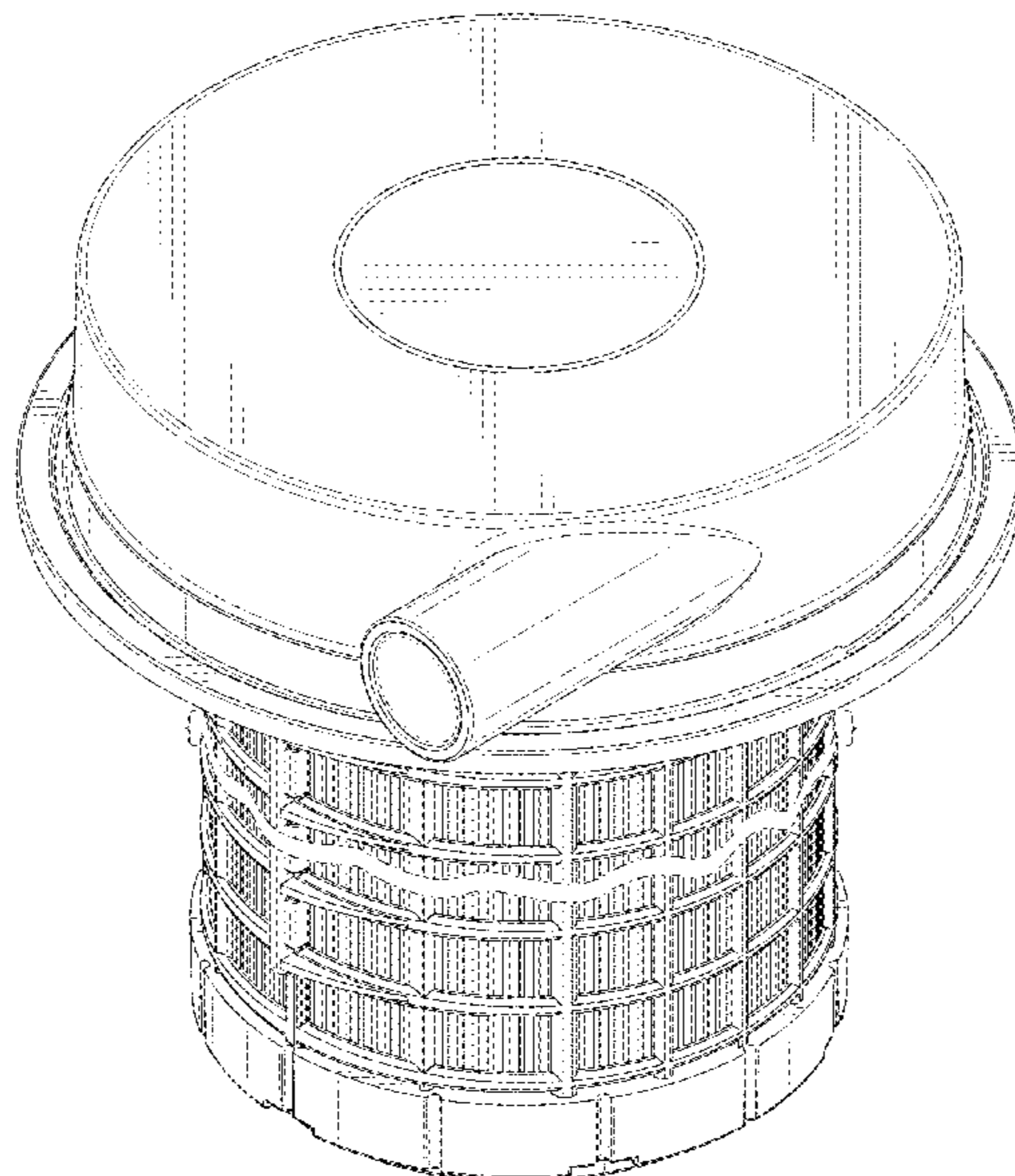
FIG. 1 is a top, left perspective view of the radial seal filter,  
showing the new design;  
FIG. 2 is a front elevational view thereof;  
FIG. 3 is a rear elevational view thereof;  
FIG. 4 is a left-side elevational view thereof;  
FIG. 5 is a right-side elevational view thereof;  
FIG. 6 is a top plan view thereof;  
FIG. 7 is a bottom plan view thereof; and,  
FIG. 8 is a bottom, left perspective view thereof.  
The evenly spaced broken lines depict unclaimed parts of  
the radial seal filter and form no part of the claimed design.  
The appearance of any portion of the radial seal filter  
between the jagged break lines, regardless of length, forms  
no part of the claimed design.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D306,640 S \* 3/1990 Kott ..... D23/209  
5,211,846 A \* 5/1993 Kott ..... B01D 29/21  
210/232  
D403,740 S \* 1/1999 Kott ..... D23/209  
5,954,849 A 9/1999 Berkhoel et al.  
6,447,567 B1 9/2002 Ehrenberg  
D638,034 S \* 5/2011 Jiang ..... D15/5

**1 Claim, 8 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D885,519	S *	5/2020	Suzuki .....	D23/209
D913,417	S *	3/2021	Huaping .....	D23/209
D916,238	S *	4/2021	Coelho .....	D23/209
D967,370	S *	10/2022	Han .....	D23/364
11,486,339	B2	11/2022	Lejestrang et al.	
2004/0124129	A1 *	7/2004	Booth .....	B01D 29/96 210/232
2010/0051537	A1	3/2010	Amesoeder et al.	
2010/0146920	A1	6/2010	Iddings et al.	
2010/0243554	A1 *	9/2010	Herrin .....	B01D 29/232 210/457
2010/0263339	A1	10/2010	Steins et al.	
2011/0168647	A1 *	7/2011	Wieczorek .....	B01D 29/21 210/799
2012/0080372	A1 *	4/2012	Ries .....	B01D 35/005 210/440
2014/0102058	A1	4/2014	Kaufmann et al.	
2014/0224129	A1	8/2014	Kaufmann et al.	
2014/0260982	A1	9/2014	Williams et al.	
2015/0113931	A1	4/2015	Bartel et al.	
2018/0036667	A1	2/2018	Neef et al.	
2018/0112429	A1 *	4/2018	Coelho .....	C02F 1/001
2018/0264382	A1 *	9/2018	Dani .....	B01D 29/96
2019/0054410	A1 *	2/2019	Tanaka .....	B01D 46/52
2019/0060814	A1	2/2019	Donauer et al.	
2019/0060815	A1	2/2019	Movia et al.	
2019/0070549	A1	3/2019	Fritzsching et al.	
2020/0023296	A1	1/2020	Stark et al.	
2021/0370215	A1 *	12/2021	Ehrenberg .....	B01D 46/009
2022/0410059	A1 *	12/2022	Ehrenberg .....	B01D 46/009

FOREIGN PATENT DOCUMENTS

DE	19547664	A1	6/1997
DE	102007017091	A1	10/2008
DE	102014009323	A1	12/2015
JP	2014-529483	A	11/2014
WO	2013/019364	A1	2/2013

OTHER PUBLICATIONS

Teirl Water Spa filtration. Jun. 5, 2018, Amazon.com, Apr. 21, 2021. URL: <https://www.amazon.com/dp/B00FW0UC9W> (Year: 2018).\*

Guardian Filtration Antimicrobial, Jul. 11, 2019, Amazon.com, Apr. 21, 2021. URL: <https://www.amazon.com/dp/B01L9M3VRG> (Year: 2019).\*

Dodge Ram 6.7 Liter Diesel Fuel Filter Water Separator Set, Dec. 31, 2016, amazon.ca, Jan. 13, 2023, URL: <https://www.amazon.ca/Dodge-Liter-Diesel-Filter-Separator/dp/B01MF70UW8/> (Year: 2016).\*

Notonmek New Filter Set Filters, Nov. 30, 2020, amazon.ca, Jan. 13, 2023, URL: <https://www.amazon.ca/Notonmek-SB190-SB210-SB230-SB330/dp/B08PB5GBSJ/> (Year: 2020).\*

Dec. 15, 2021 Extended Search Report issued in European Patent Application No. 21171390.4.

Oct. 4, 2021 Partial Search Report issued in European Patent Application No. 21171390.4.

Sep. 26, 2022 Office Action issued in Australian Patent Application No. 2021202580.

Jul. 15, 2022 Search Report issued in Chinese Patent Application No. 202110483726.5.

Jul. 21, 2022 Office Action issued in Chinese Patent Application No. 202110483726.5.

Nov. 10, 2022 Non-Final Office Action Issued in U.S. Appl. No. 17/138,052.

Nov. 1, 2022 Office Action issued in Japanese Patent Application No. 2021-076353.

Feb. 3, 2023 Notice of Allowance Issued In U.S. Appl. No. 29/797,339.

Feb. 14, 2023 Notice of Allowance Issued In Design U.S. Appl. No. 29/797,382.

Feb. 21, 2023 Notice of Allowance Issued In Design U.S. Appl. No. 29/797,348.

Feb. 8, 2023 Notice of Allowance Issued In U.S. Appl. No. 29/797,378.

Feb. 15, 2023 Notice of Allowance Issued In Design U.S. Appl. No. 29/797,376.

\* cited by examiner

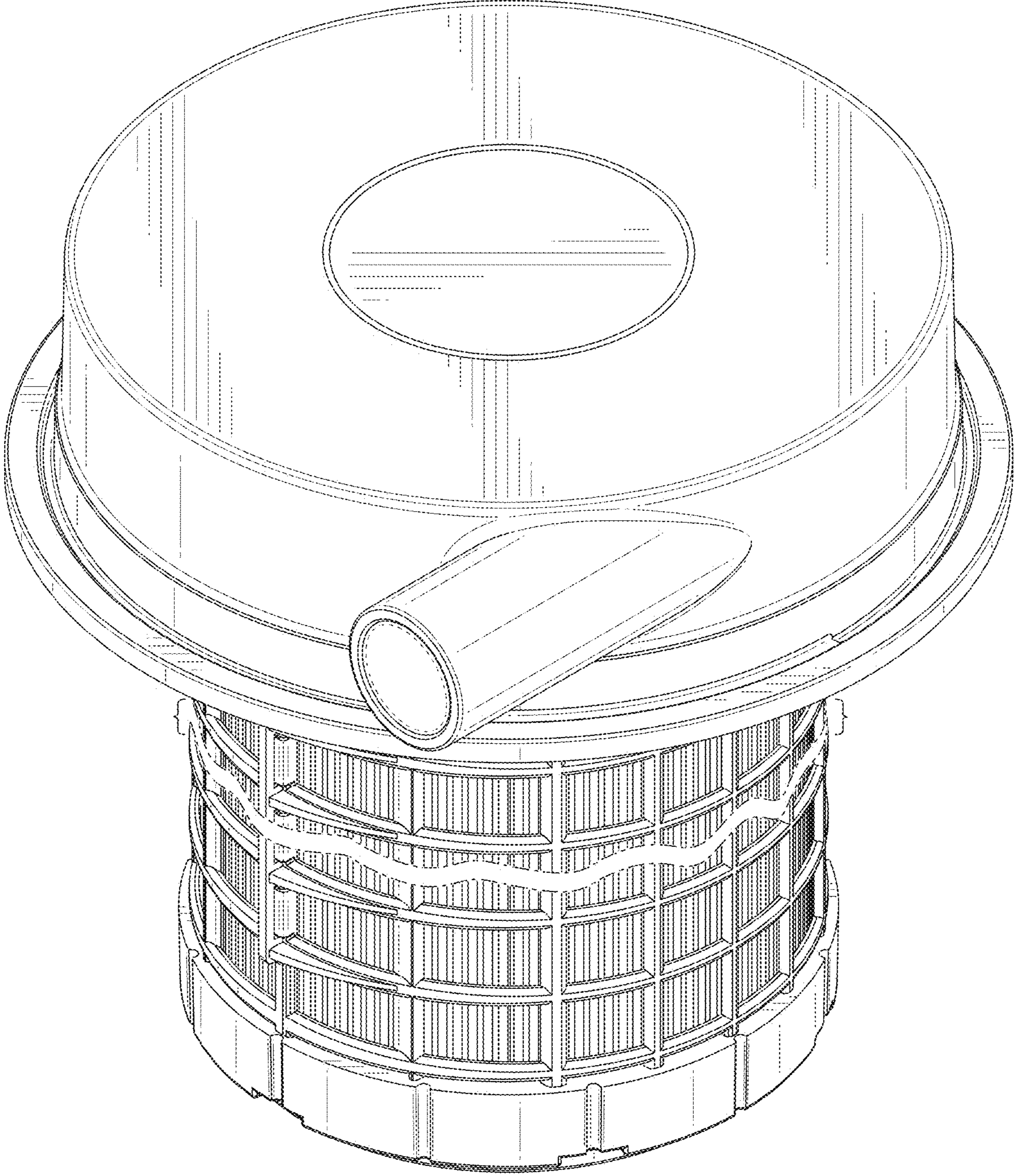


FIG. 1

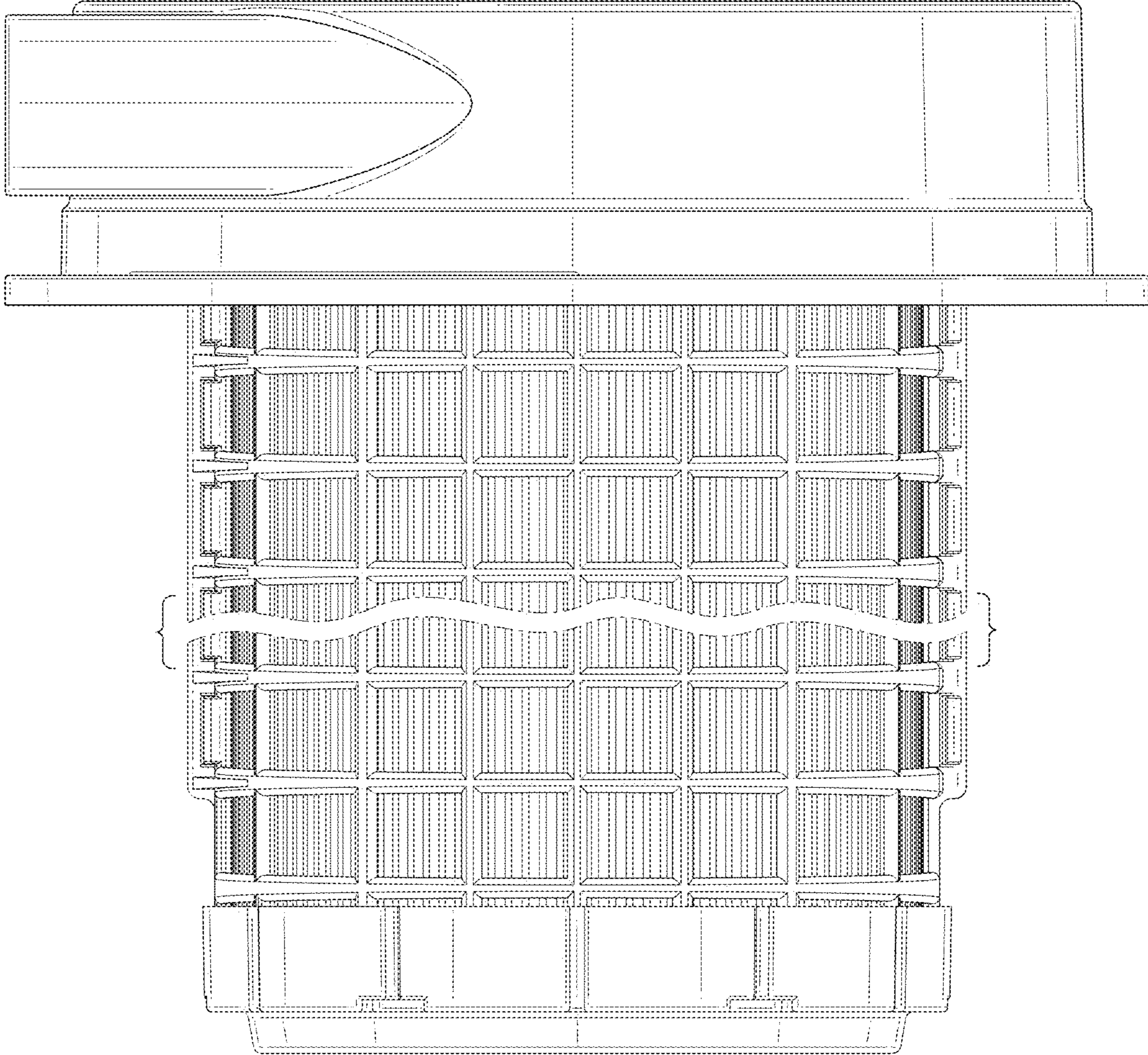


FIG. 2

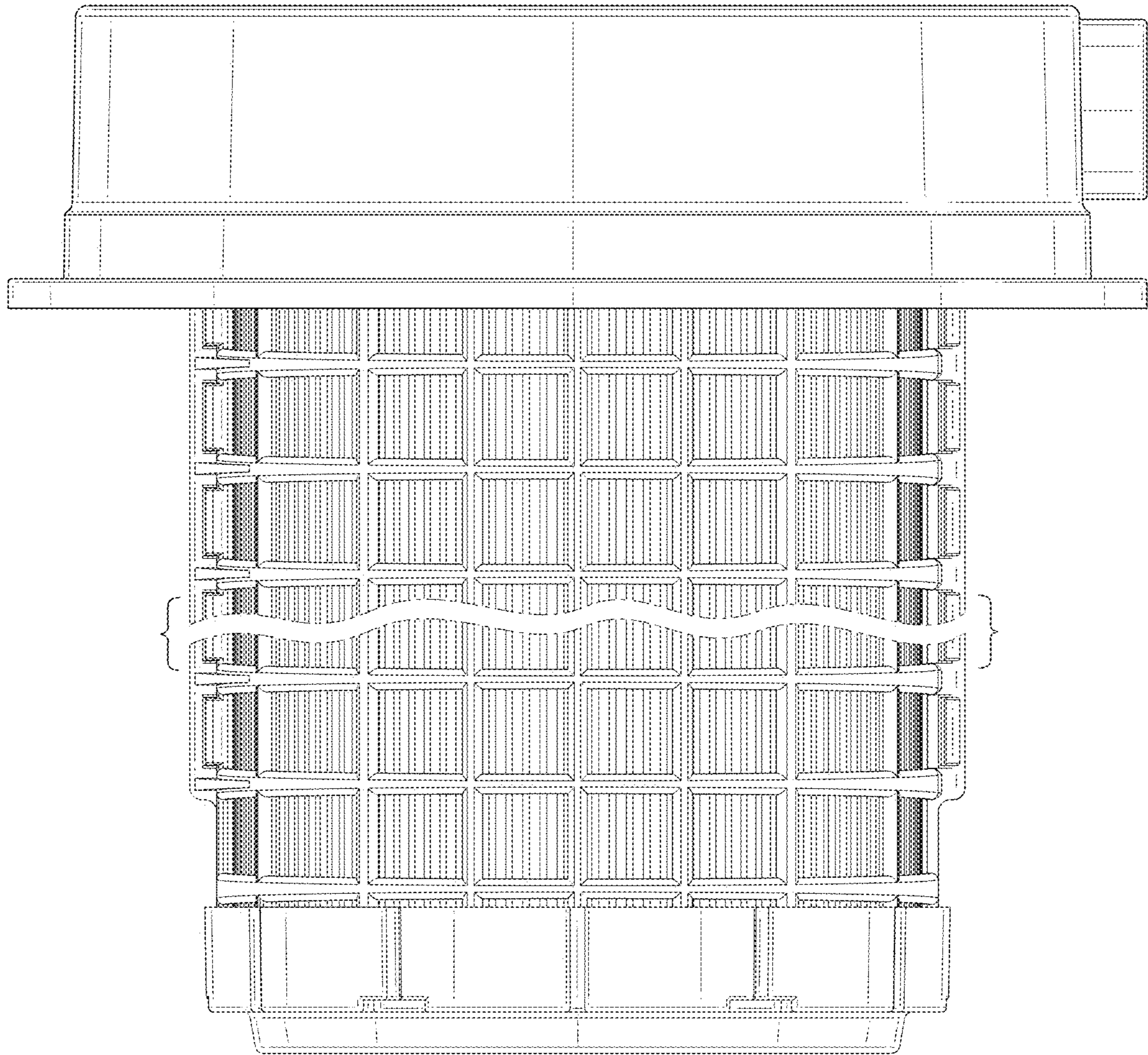


FIG. 3

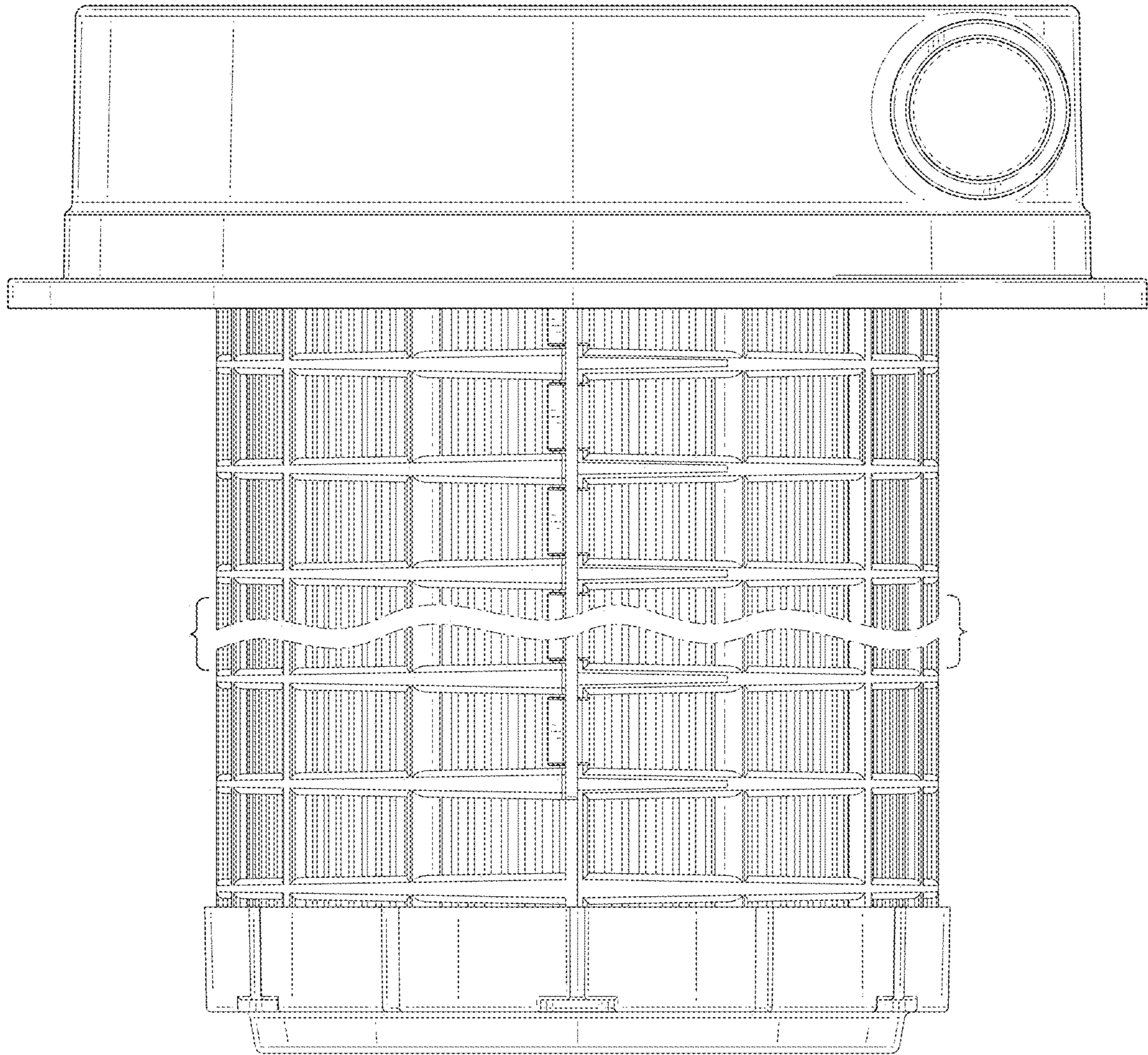


FIG. 4

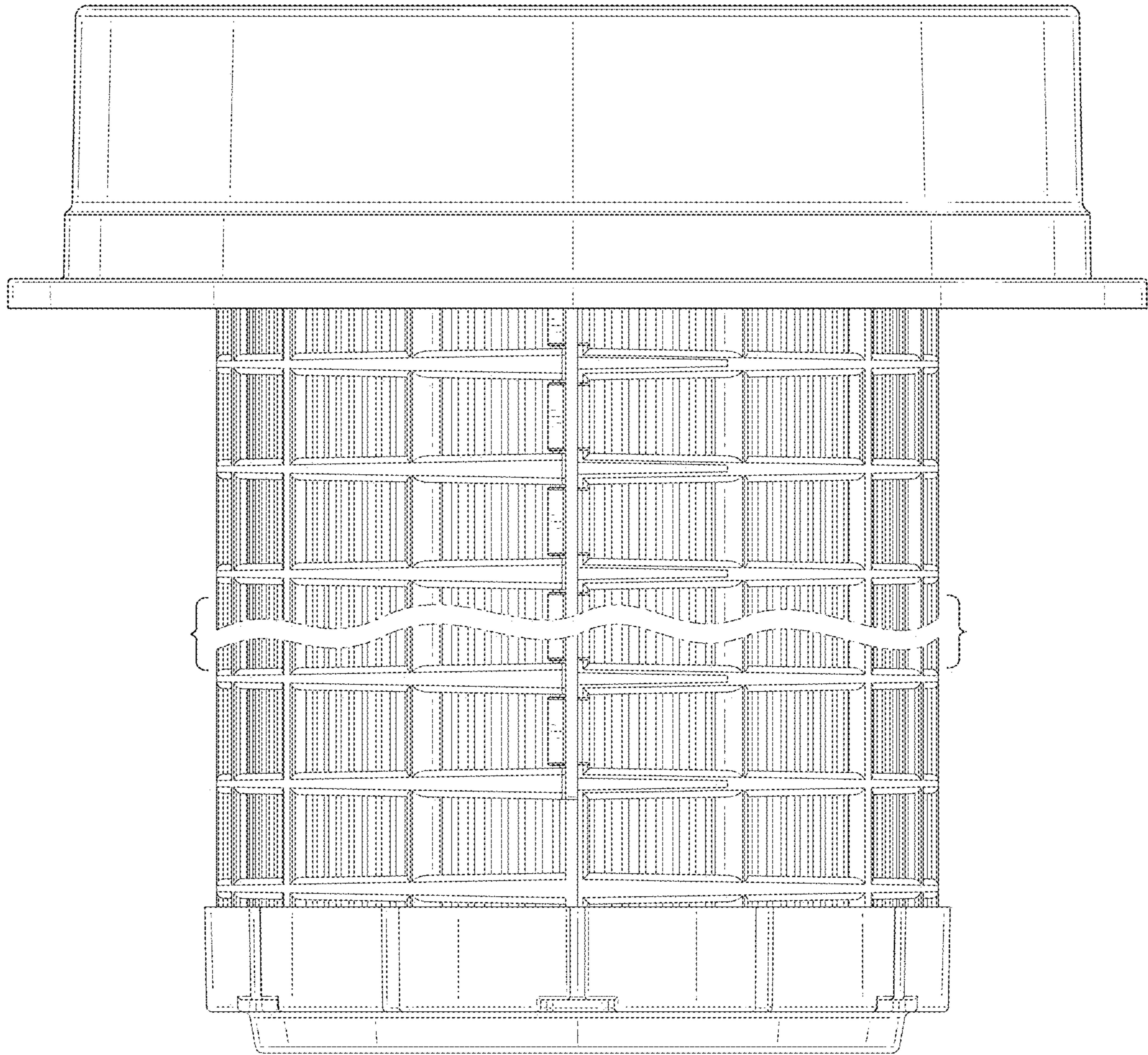


FIG. 5

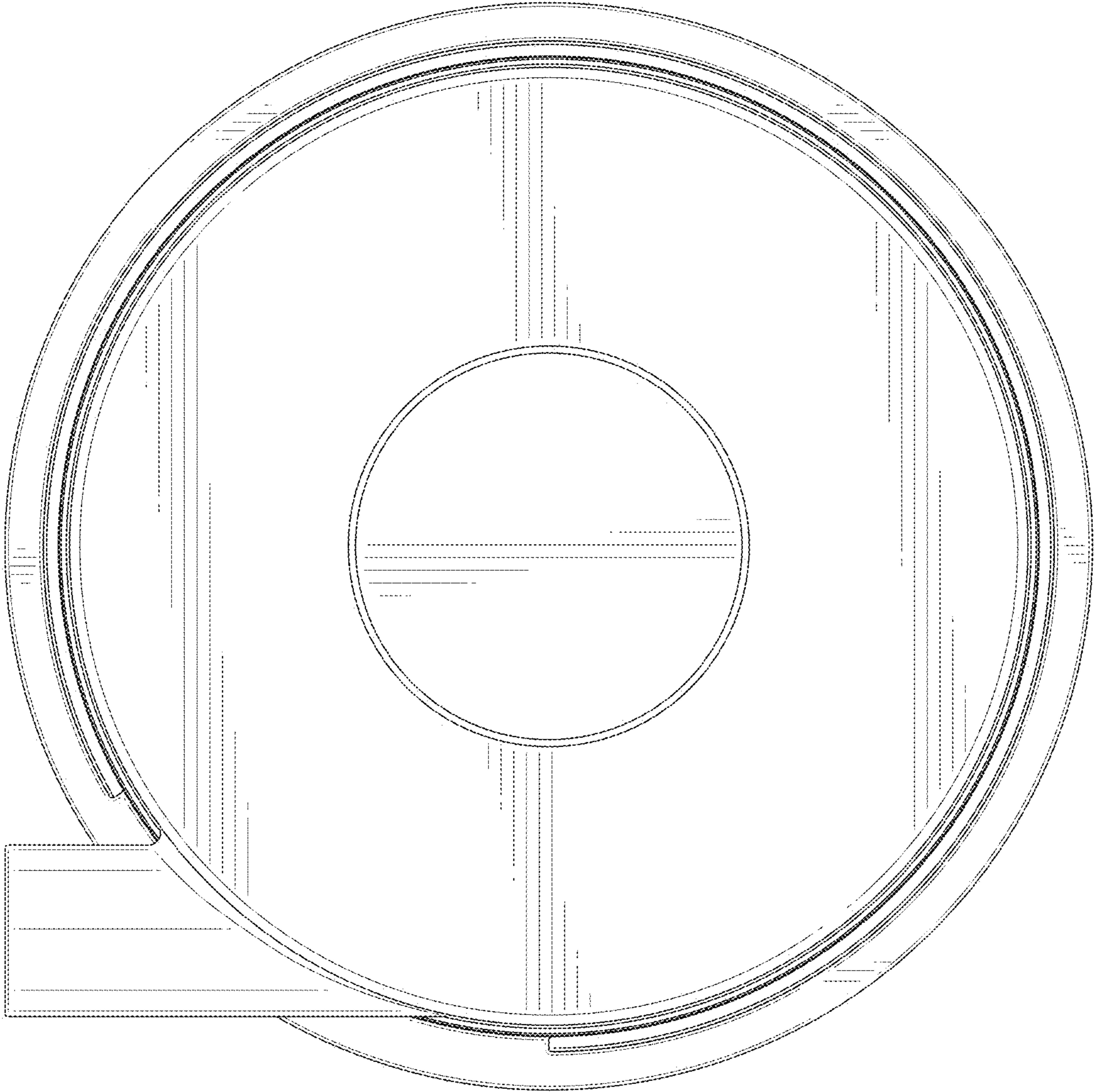


FIG. 6



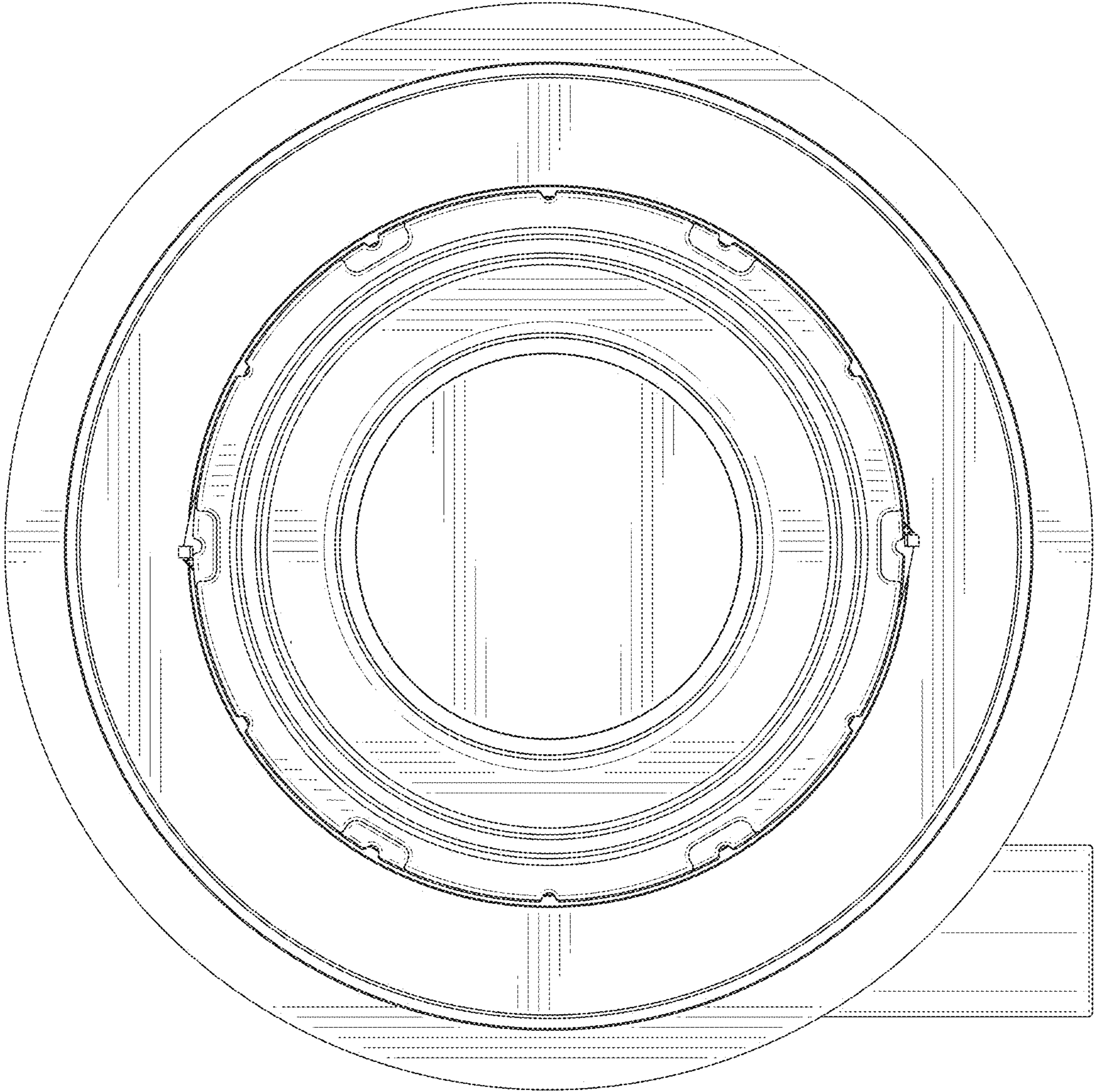


FIG. 7

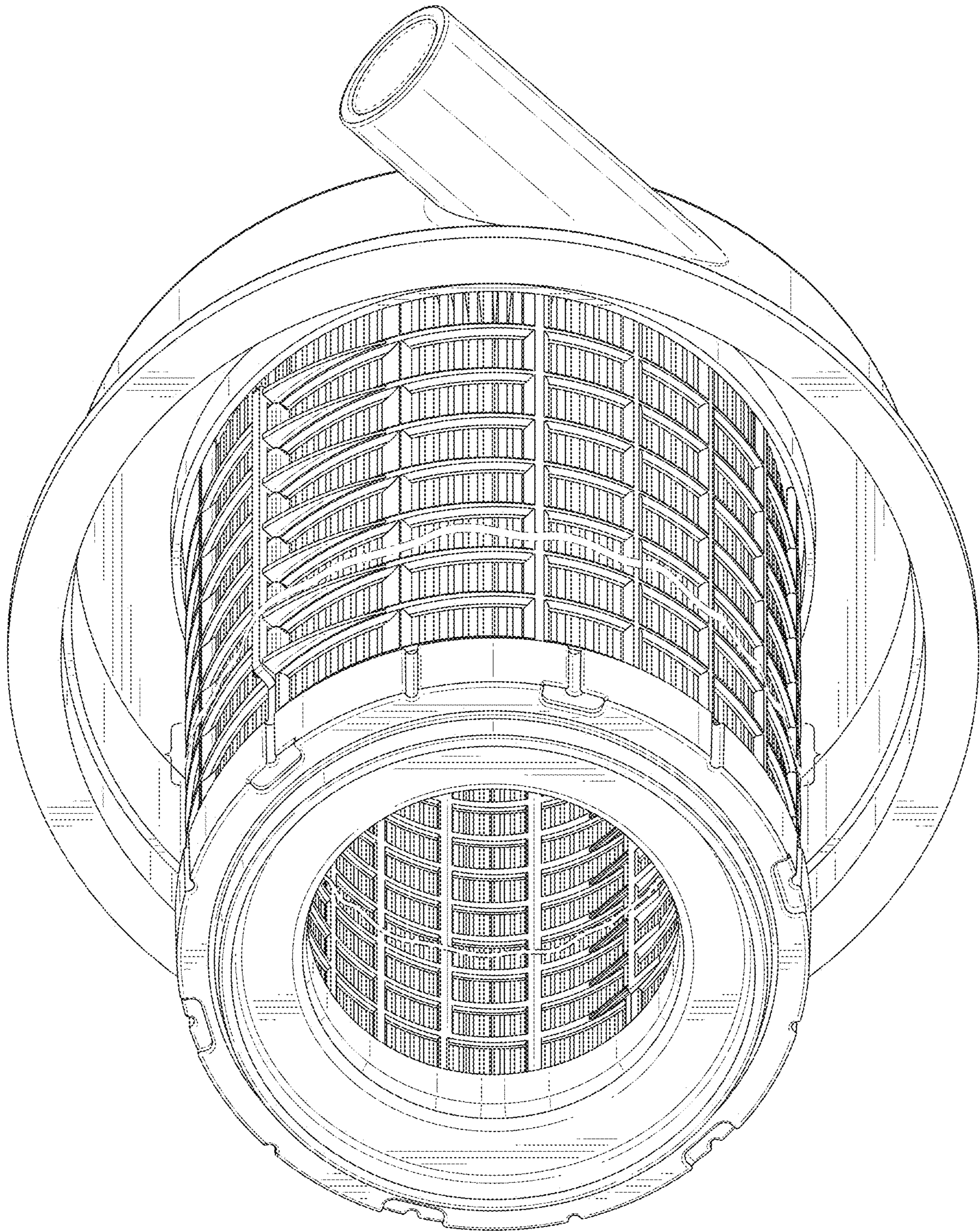


FIG. 8