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United States Patent [19]

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Ijiri et al.

[45] Date of Patent: **Aug. 20, 1996

[54] CENTRIFUGAL PUMP

FOREIGN PATENT DOCUMENTS

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804064	4/1951	Germany .
55-9560	3/1980	Japan .
4-336073	11/1992	Japan .
5-71490	3/1993	Japan .
5-212112	8/1993	Japan .
5-212111	8/1993	Japan .
5-212110	8/1993	Japan .

[73] Assignee: **Terumo Kabushiki Kaisha**, Tokyo, Japan

[**] Term: **14 Years**

OTHER PUBLICATIONS

[21] Appl. No.: **43,930**

“A Straight Path Centrifugal Blood Pump Concept in Capiox Centrifugal Pump”, T. Kijima et al., *Artificial Organs*, vol. 17, No. 7, 1993, pp. 1-6.

[22] Filed: **Jul. 3, 1995**

“Hydrodynamical and Hemodynamical Evaluation of Rotary Bloodpumps”, H. Engelhardt et al., *Proceedings of the International Workshop on Rotary Bloodpumps*, Vienna 1988, ISBN 3-900928-00-2, pp. 76-81.

Related U.S. Application Data

[63] Continuation of Ser. No. 24,620, Jun. 17, 1994, abandoned.

Primary Examiner—Ralf Seifert

[30] Foreign Application Priority Data

Dec. 20, 1993 [JP] Japan 5-38191

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[52] U.S. Cl. **D15/7**

[58] Field of Search D15/7-9.1; 415/170; 417/360, 362

[57] CLAIM

[56] References Cited

The ornamental design for a centrifugal pump, as shown and described.

U.S. PATENT DOCUMENTS

DESCRIPTION

D. 246,714	12/1977	Horvath	.....	D15/7
D. 295,047	4/1988	Price	.....	D15/7
D. 305,124	12/1989	Singhoff	.....	D15/7
D. 310,838	9/1990	Turbanisch	.....	D15/8
D. 354,495	1/1995	Tojo	.....	D15/7
4,253,798	3/1981	Sugiura	.....	415/213
4,589,822	5/1986	Clausen et al.	.....	415/170 A
4,606,698	8/1986	Clausen et al.	.....	415/170 A
4,643,641	2/1987	Clausen et al.	.....	415/170 A
5,263,924	11/1993	Mathewson	.....	604/4
5,290,236	3/1994	Mathewson	.....	604/131
5,316,440	5/1994	Kijima et al.	.....	415/206

FIG. 1 is a top and front perspective view of a centrifugal pump showing our 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; and, FIG. 7 is a bottom plan view thereof.

1 Claim, 4 Drawing Sheets

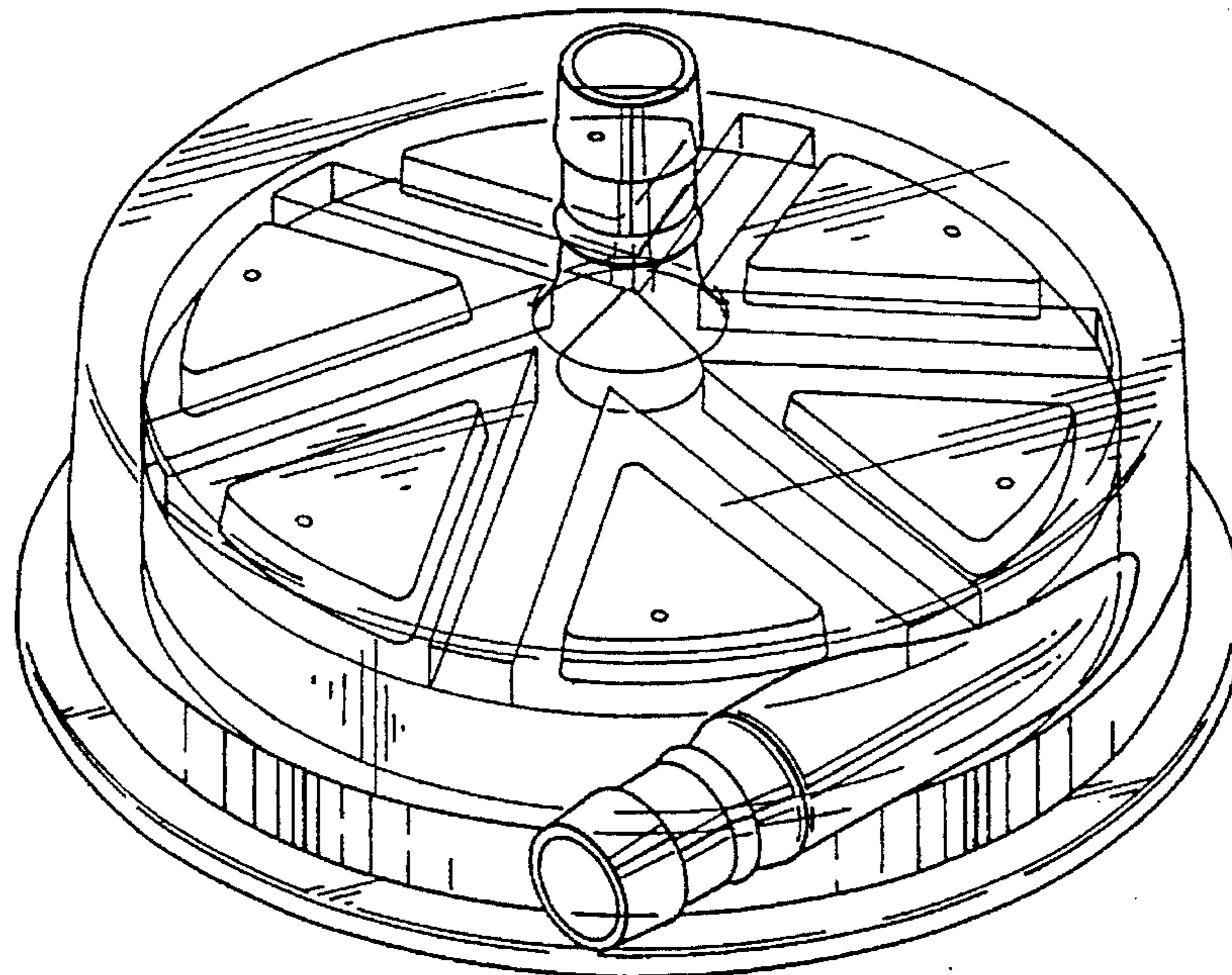


FIG. 1

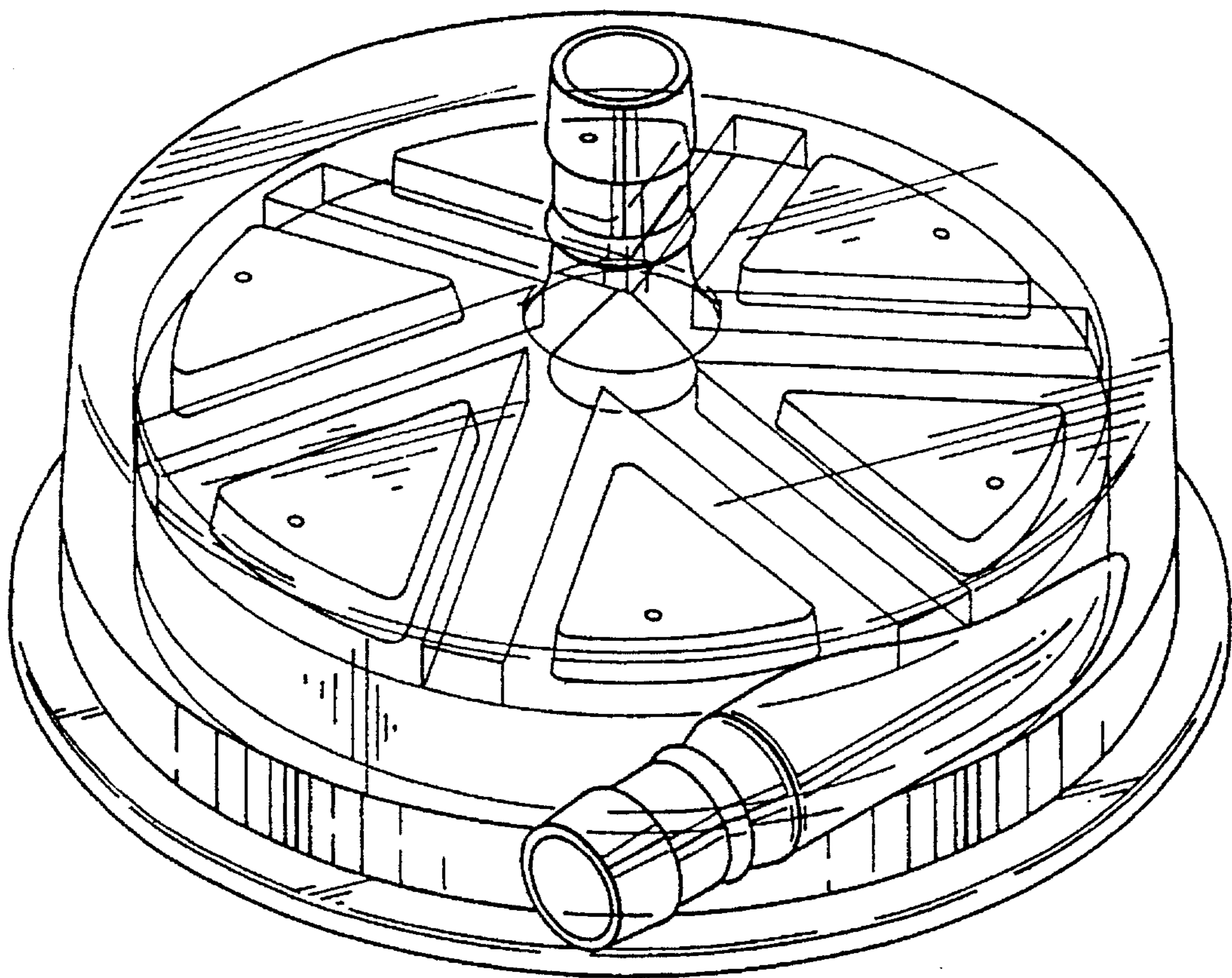


FIG. 2

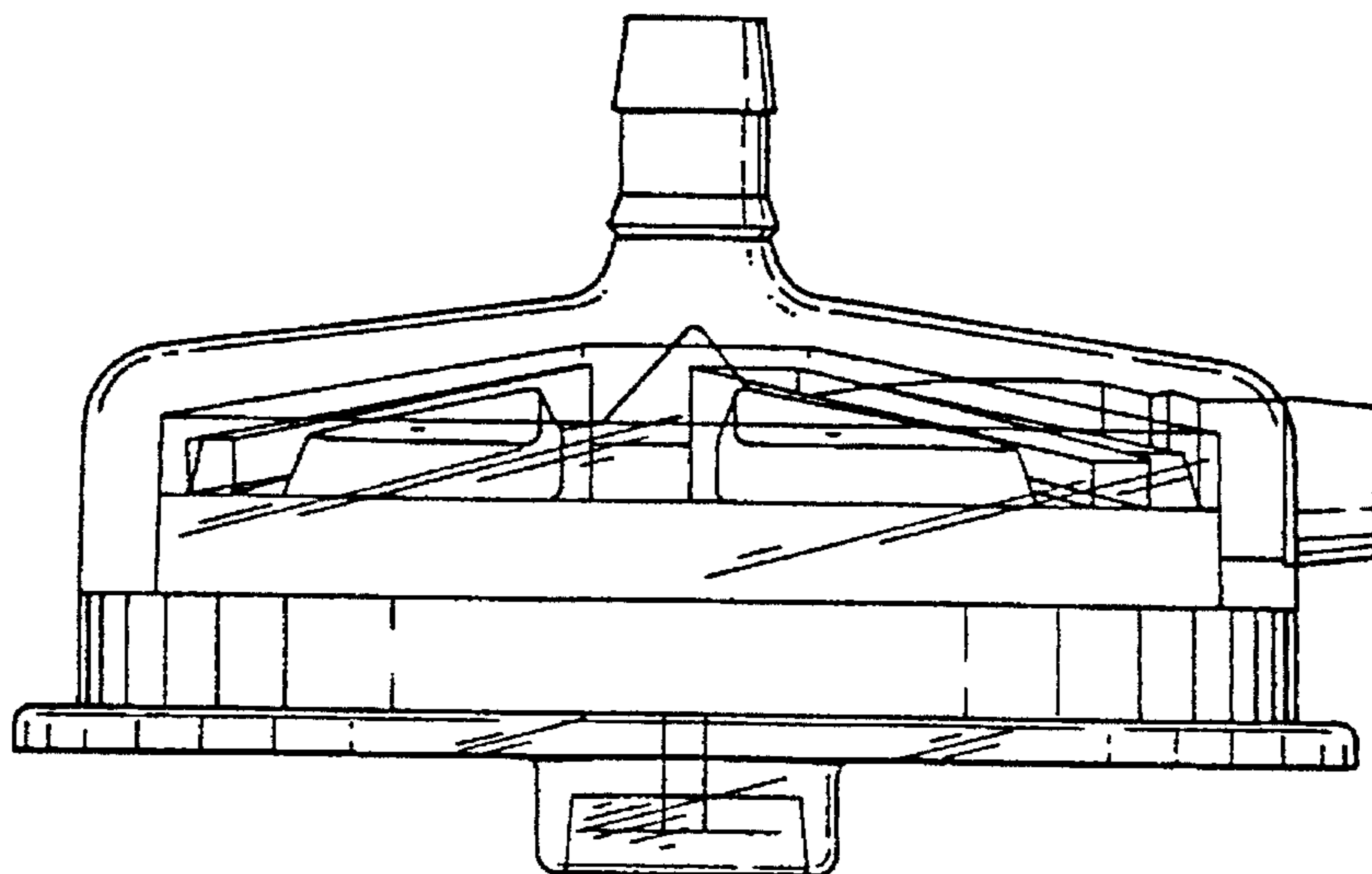


FIG. 3

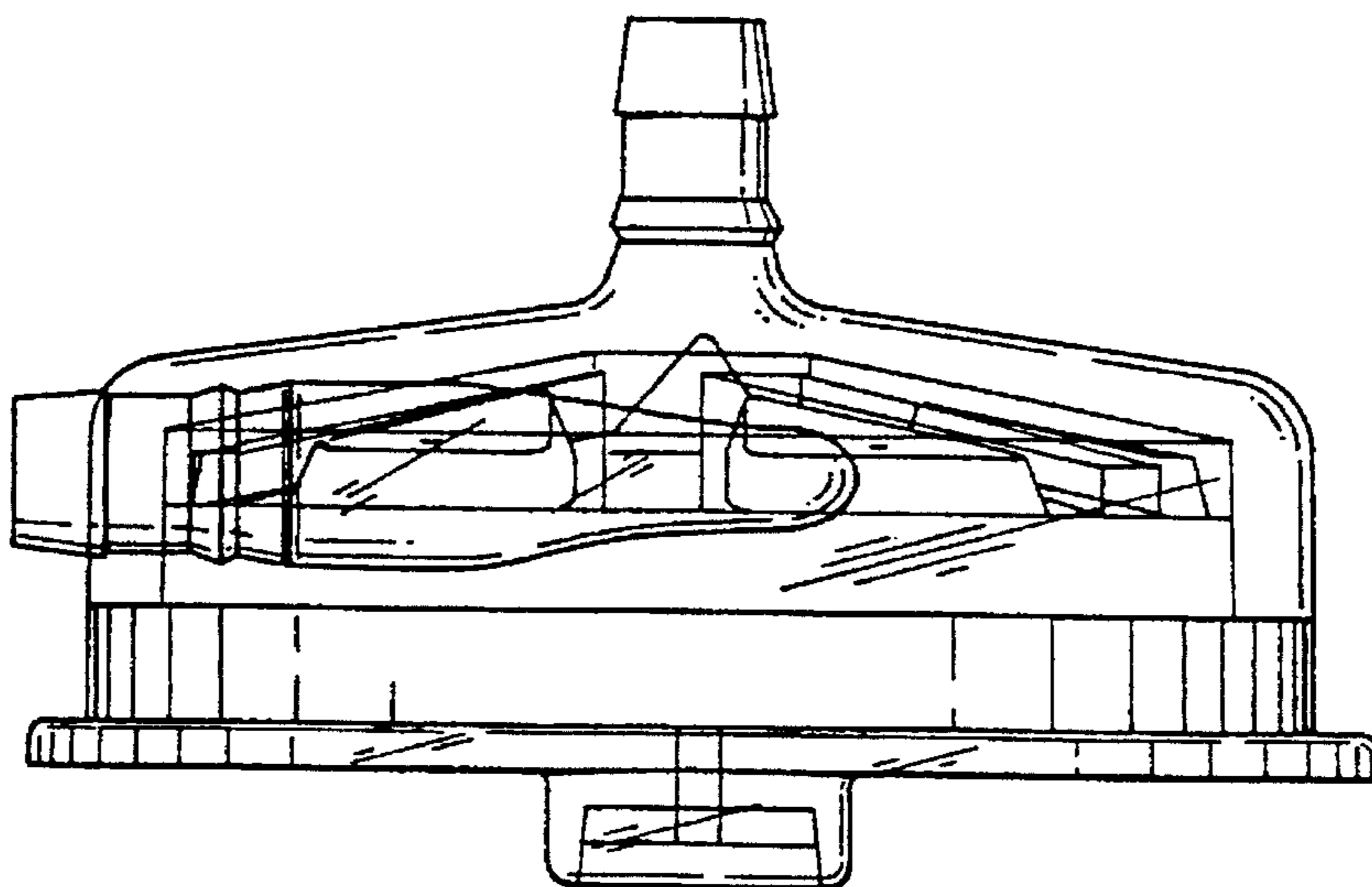


FIG. 4

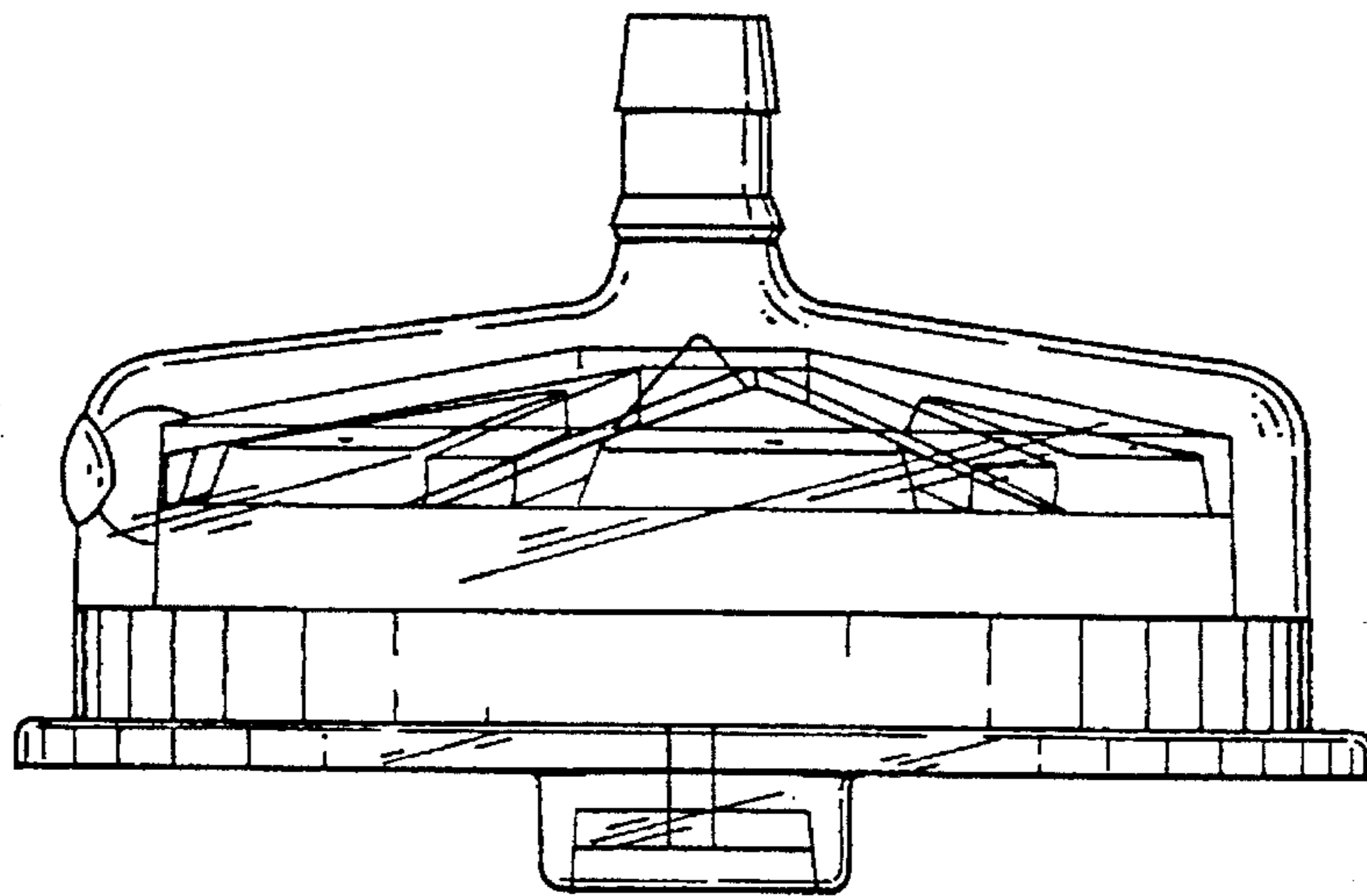


FIG. 5

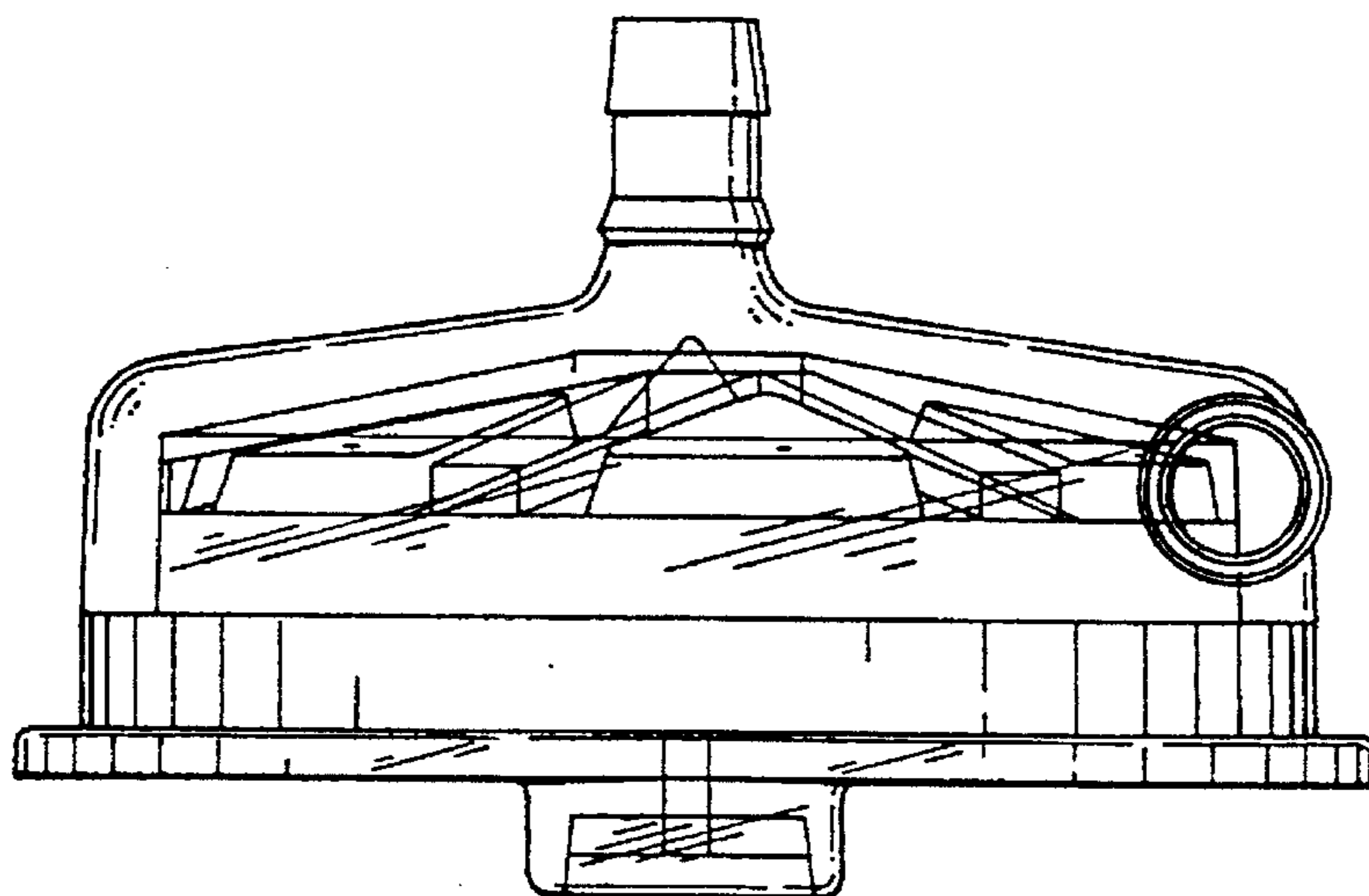


FIG. 6

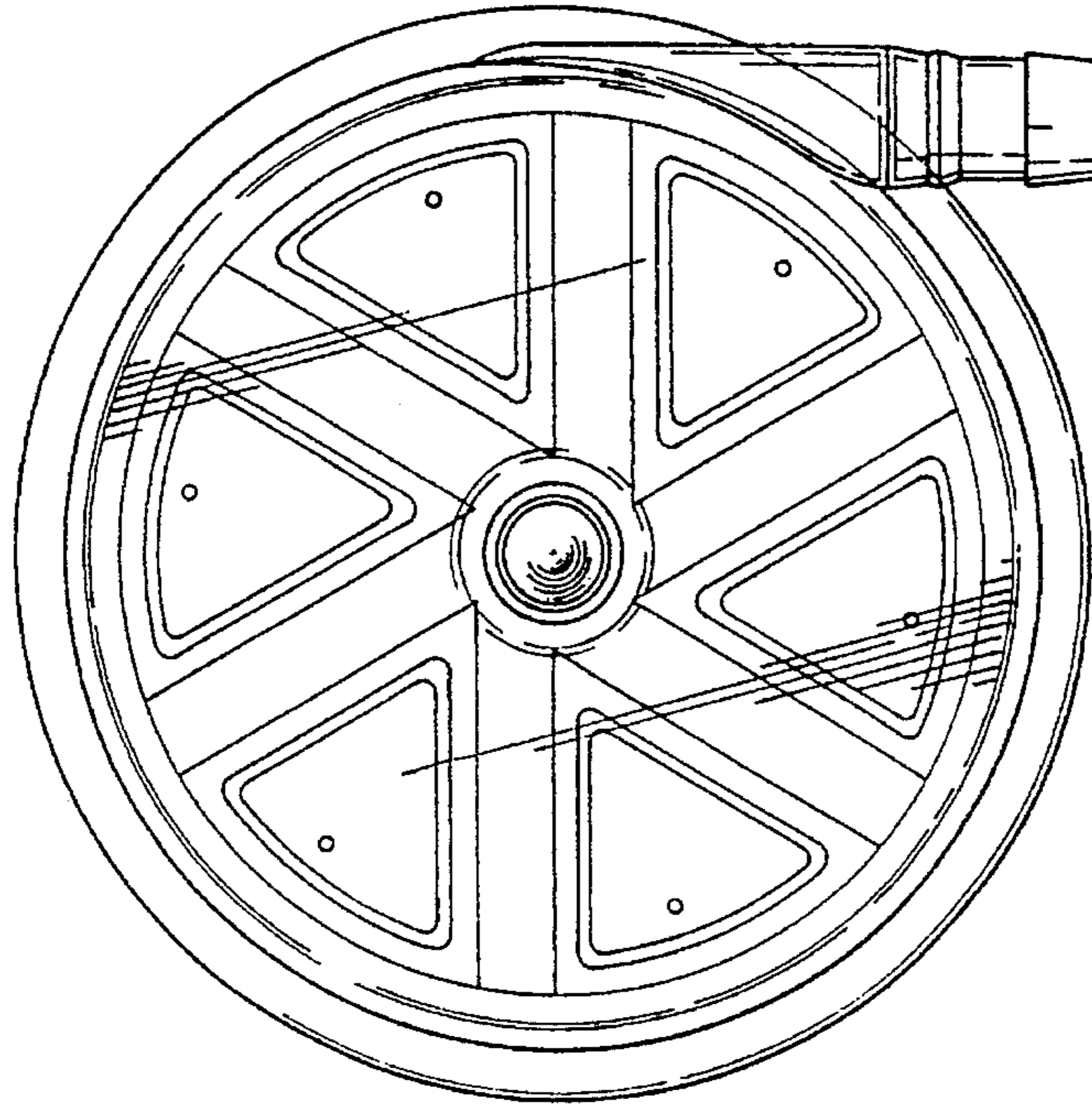


FIG. 7

