



US00D787455S

(12) **United States Design Patent** (10) **Patent No.:** **US D787,455 S**
Pliner et al. (45) **Date of Patent:** **** May 23, 2017**

(54) **LOUDSPEAKER HEAT SINK**
(71) Applicant: **Harman International Industries, Incorporated**, Northridge, CA (US)
(72) Inventors: **Alexander Pliner**, Lake Balboa, CA (US); **Alexander Voishvillo**, Simi Valley, CA (US)
(73) Assignee: **Harman International Industries, Incorporated**, Northridge, CA (US)
(**) Term: **15 Years**

(21) Appl. No.: **29/543,464**

(22) Filed: **Oct. 23, 2015**

(51) **LOC (10) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/179**

(58) **Field of Classification Search**
USPC D13/179, 122, 182; D14/224
CPC H01L 23/34; H01L 31/1024; H01L 33/64; H01L 23/367; H01L 23/3672; H01L 23/46; H01L 23/467; H01L 23/473; G06F 1/20; H05K 7/20972; B23P 2700/10; F28F 2215/00; F28F 2215/08; H04R 1/345; H04R 9/022

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D483,744 S *	12/2003	Vosse	.....	D14/224
D579,419 S *	10/2008	Horng	.....	D13/179
D579,883 S *	11/2008	Hwang	.....	D13/179
D616,390 S *	5/2010	Sato	.....	D13/182
D662,898 S *	7/2012	Petroski	.....	D13/179
D694,874 S *	12/2013	Lin	.....	D13/179
D701,300 S *	3/2014	Tanabe	.....	D23/379
D707,629 S *	6/2014	Cocks	.....	D13/122
D713,821 S *	9/2014	Hyde	.....	D14/221
D720,706 S *	1/2015	Chang	.....	D13/179

9,173,035 B2 *	10/2015	Button	.....	H04R 9/025
D745,955 S *	12/2015	Chen	.....	D13/179
D755,134 S *	5/2016	Andre	.....	D13/179
D762,181 S *	7/2016	Lin	.....	F21V 29/74
				D13/179
2003/0046967 A1 *	3/2003	Pollard, II	.....	B21K 1/305
				72/68
2004/0202535 A1 *	10/2004	Lin	.....	F04D 29/281
				415/84
2006/0051203 A1 *	3/2006	Lee	.....	H01L 23/467
				415/204
2008/0025549 A1 *	1/2008	Avera	.....	H04R 9/022
				381/397
2008/0310119 A1 *	12/2008	Giacoma	.....	H01L 23/367
				361/719
2009/0255658 A1 *	10/2009	Shen	.....	F28F 13/00
				165/185
2013/0259692 A1 *	10/2013	Chen	.....	F04D 29/26
				6/195

(Continued)

Primary Examiner — Jennifer Rivard
Assistant Examiner — April Rivas
(74) *Attorney, Agent, or Firm* — Plumsea Law Group, LLC

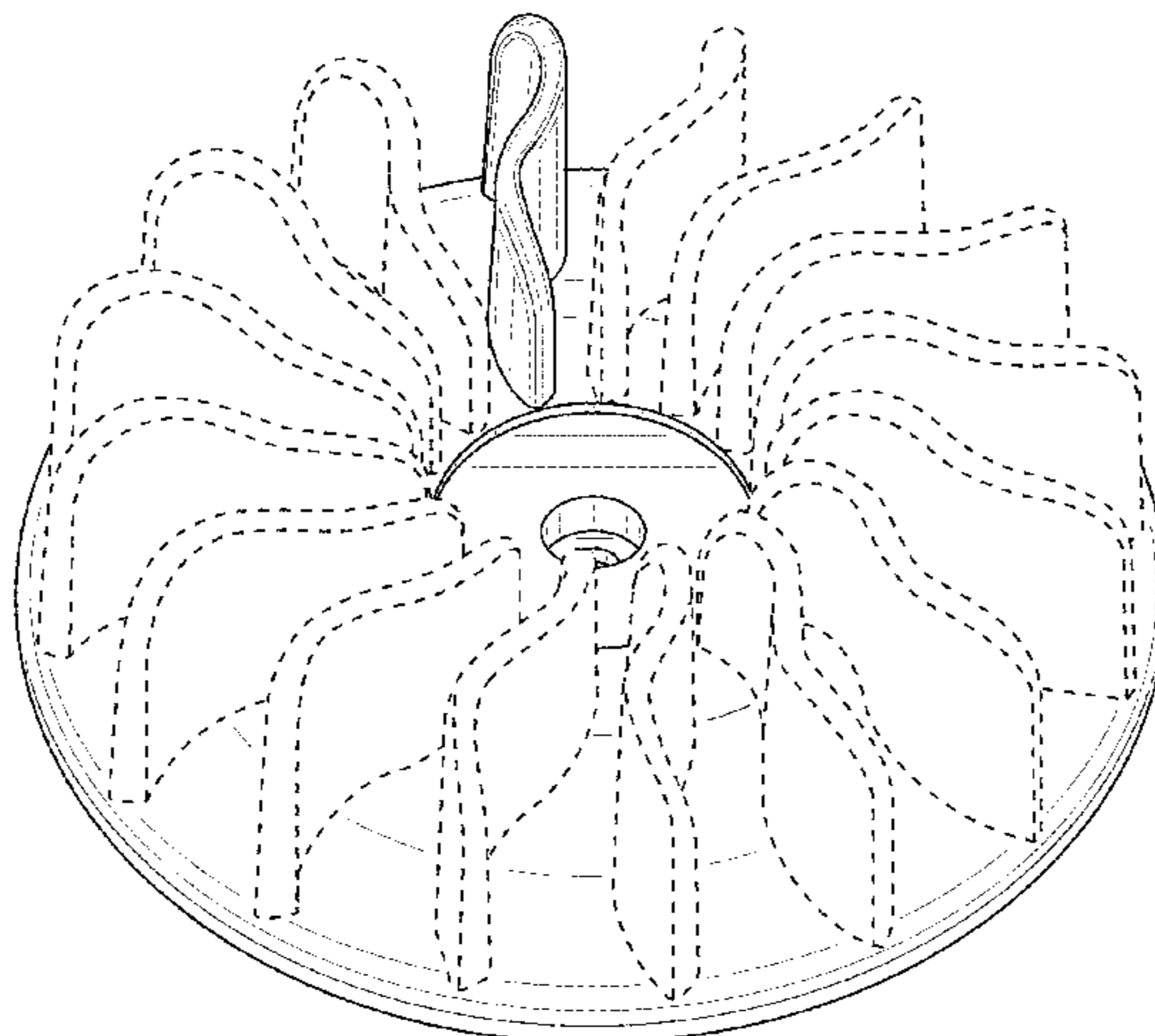
(57) **CLAIM**

The ornamental design for a loudspeaker heat sink, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a loudspeaker heat sink showing our new design;
FIG. 2 is a top plan view thereof;
FIG. 3 is a rear elevation view thereof;
FIG. 4 is a side elevation view, viewed from the left-hand side of FIG. 2; and,
FIG. 5 is a cross-sectional view taken along line 5-5 of FIG. 2.
The broken lines illustrate portions of the loudspeaker heat sink and form no part of the claimed design.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2014/0020871 A1* 1/2014 Huang H01L 23/3672
165/104.34
2015/0342091 A1* 11/2015 Schering H05K 7/20909
165/80.3

* cited by examiner

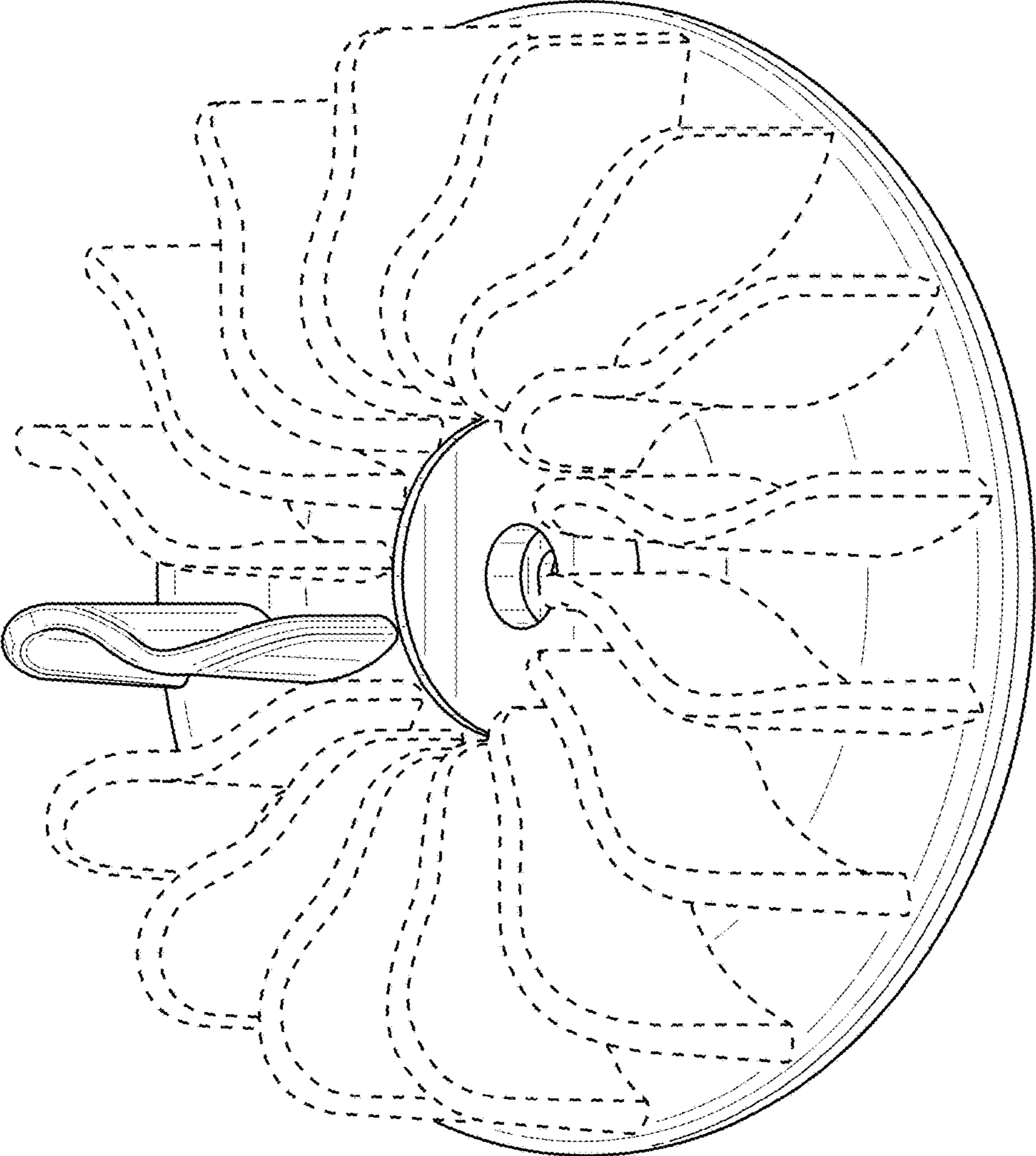


FIG. 1

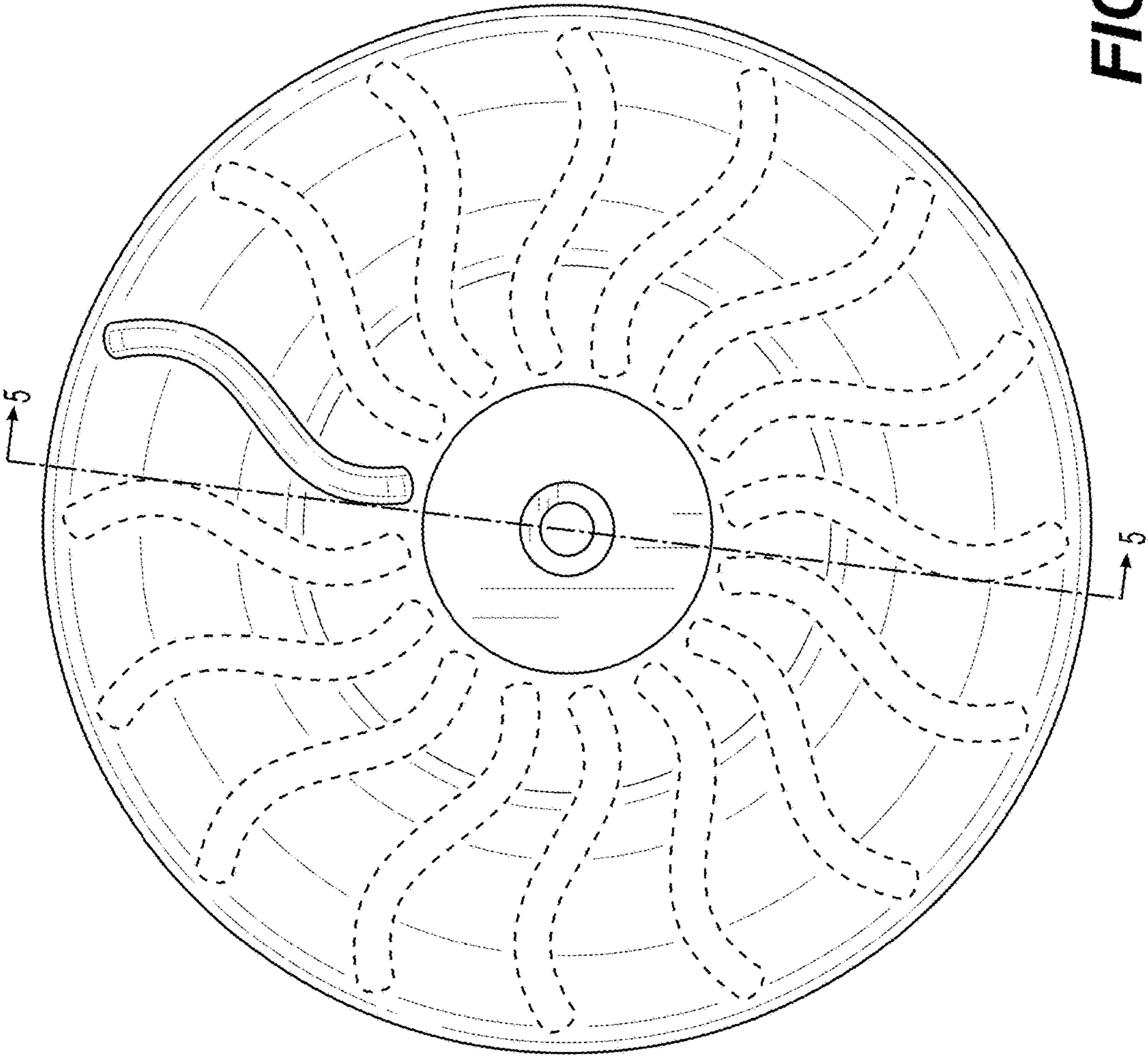


FIG. 2

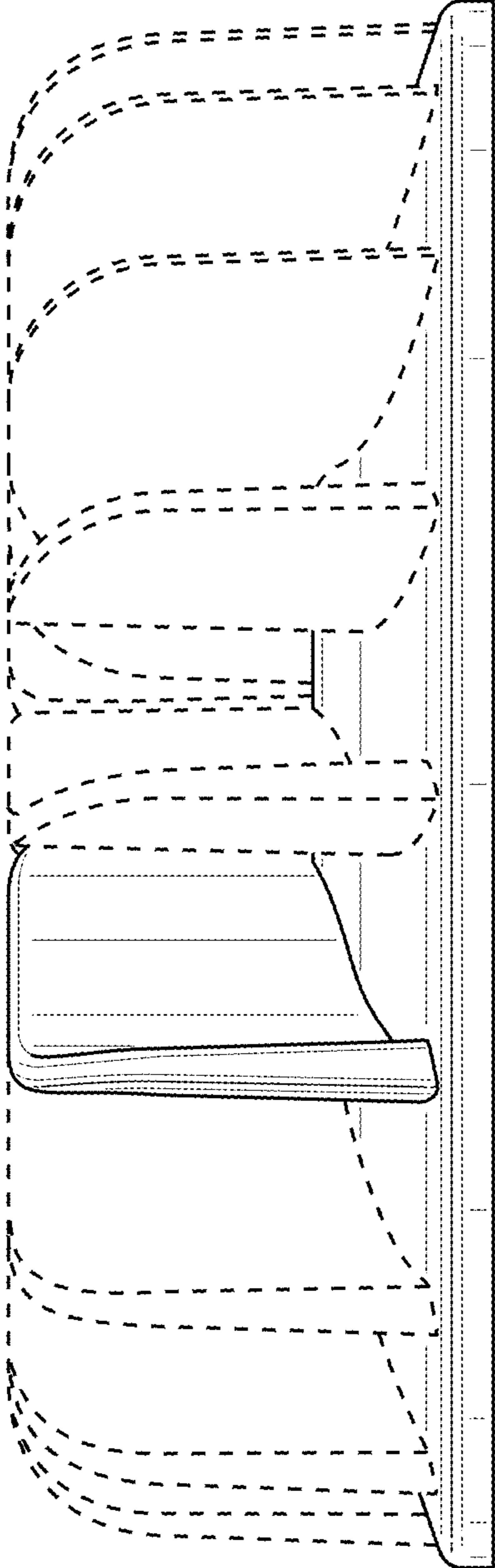


FIG. 3

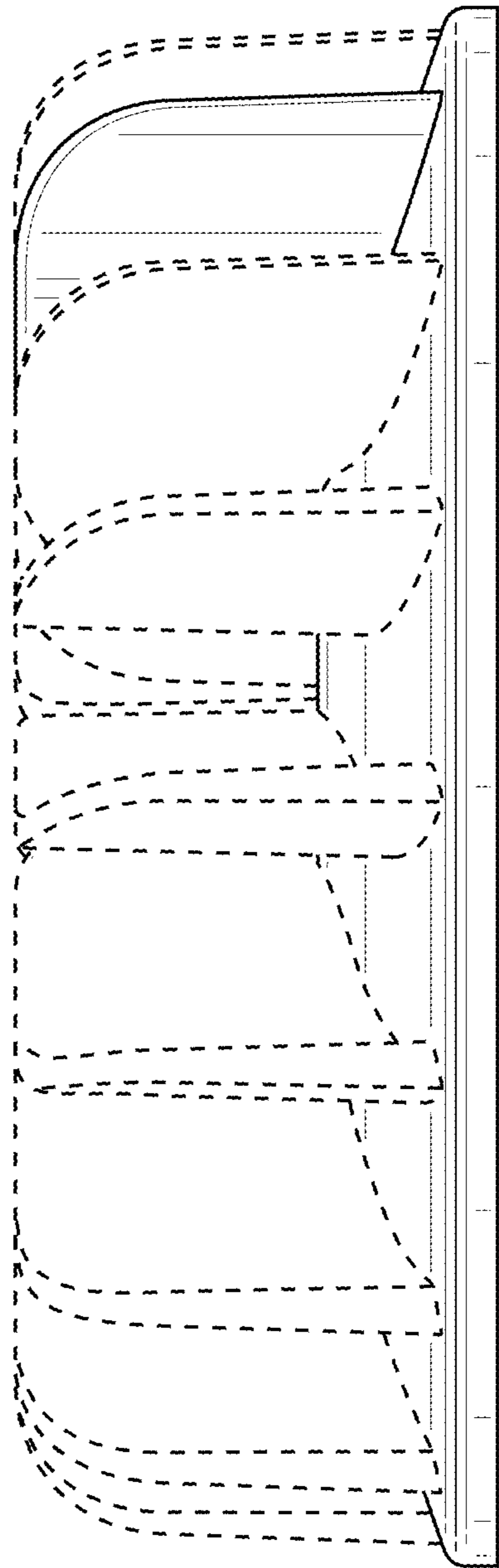


FIG. 4

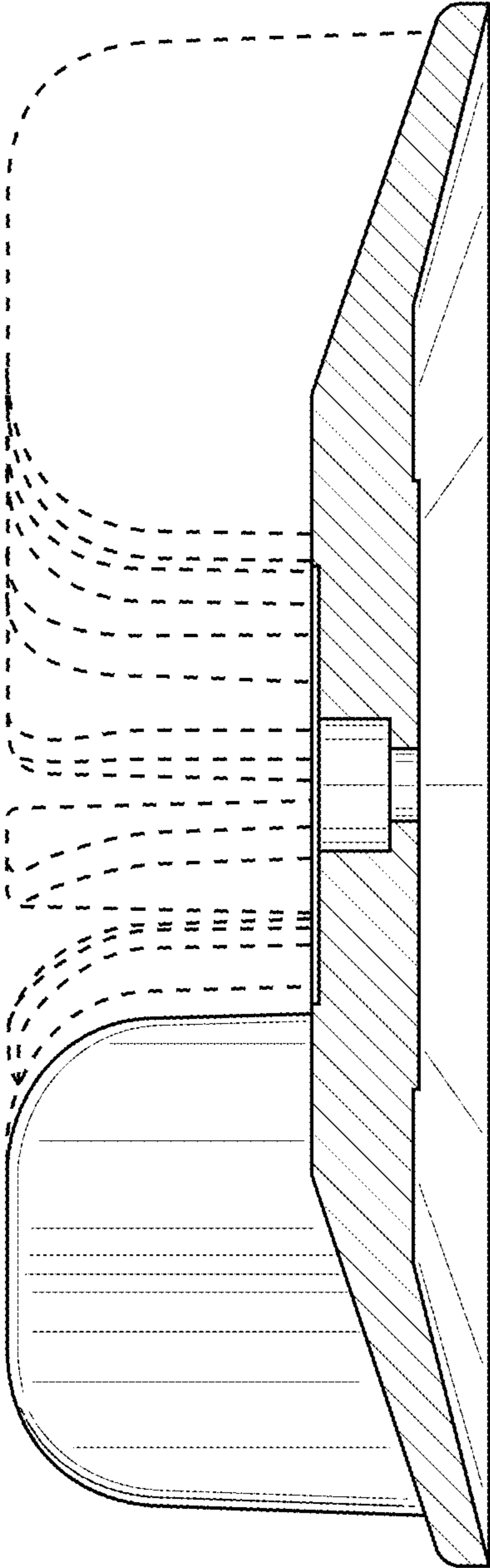


FIG. 5