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Becker et al.

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(54) **LOWER CONE OF A HYDROCYCLONE CLEANER**

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

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(51) **LOC (10) Cl.** **15-05**

(52) **U.S. Cl.**
USPC **D32/25**

(58) **Field of Classification Search**
USPC D32/1, 25, 30, 31
CPC ... D06F 33/02; D06F 39/02; D06F 2204/065;
D06F 25/00; D06F 35/006
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,313,413	A *	4/1967	Delcellier	.....	209/731
3,331,512	A *	7/1967	Vore	.....	210/487
3,529,725	A *	9/1970	Fifer	.....	210/220
3,687,286	A *	8/1972	Weiss	.....	209/135
4,572,783	A *	2/1986	Watson	.....	210/109

D294,363	S *	2/1988	Donhauser	.....	D15/147
D303,672	S *	9/1989	Stienen	.....	D15/147
5,221,476	A *	6/1993	Papetti et al.	.....	210/512.2
6,231,761	B1 *	5/2001	Mohlin et al.	.....	210/232
6,582,489	B2 *	6/2003	Conrad	.....	55/337
D517,727	S *	3/2006	Schuyler et al.	.....	D26/154
D612,878	S *	3/2010	Meter	.....	D15/147
7,771,499	B2 *	8/2010	Oh et al.	.....	55/343
7,794,515	B2 *	9/2010	Oh et al.	.....	55/343
8,002,865	B2 *	8/2011	Lane et al.	.....	55/426
2003/0201213	A1 *	10/2003	Bolles et al.	209/725
2004/0200028	A1 *	10/2004	Oh et al.	15/347

* cited by examiner

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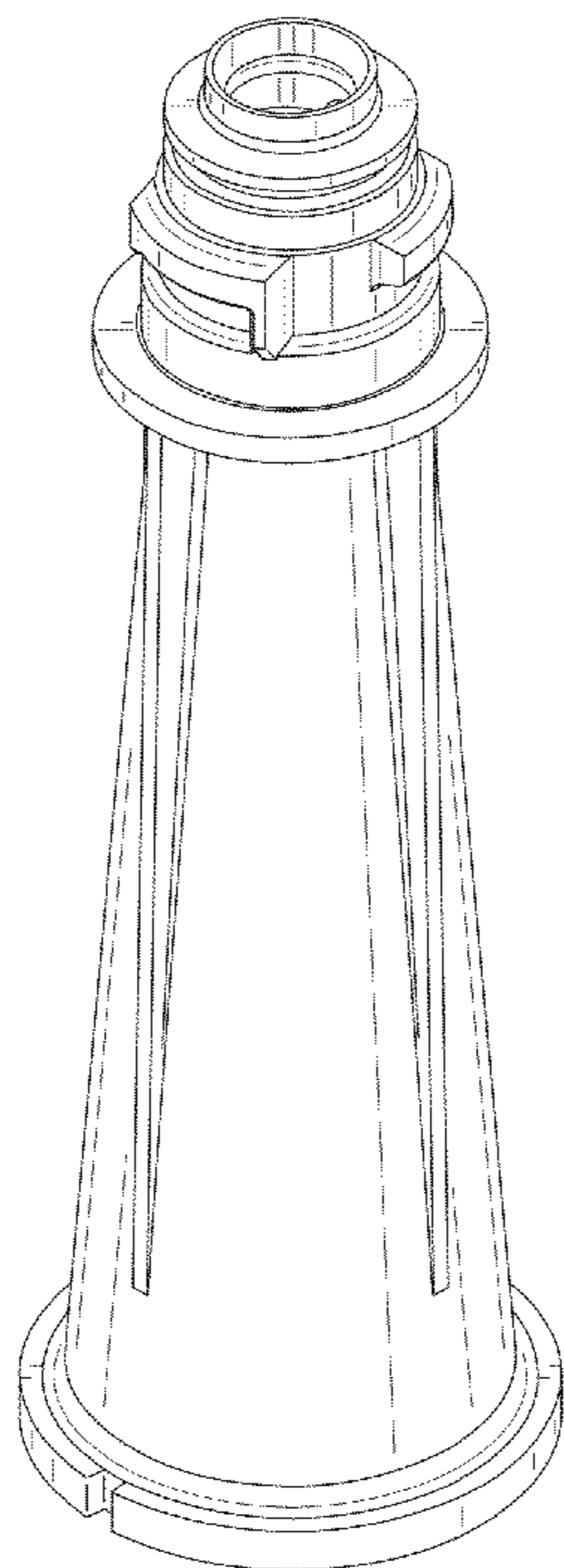
(57) **CLAIM**

The ornamental design for a lower cone of a hydrocyclone cleaner, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a lower cone of a hydrocyclone cleaner showing our new design; FIG. 2 is a left side elevation view thereof; FIG. 3 is a front elevation view thereof; and, FIG. 4 is a right side elevation view thereof; FIG. 5 is a rear elevation view thereof. FIG. 6 is a top elevation view thereof; and, FIG. 7 is a bottom elevation view thereof. The broken line showing of the interior of the lower cone in FIG. 7 is for the purpose of illustrating features inside the cone and forms no part of the claimed design.

1 Claim, 4 Drawing Sheets



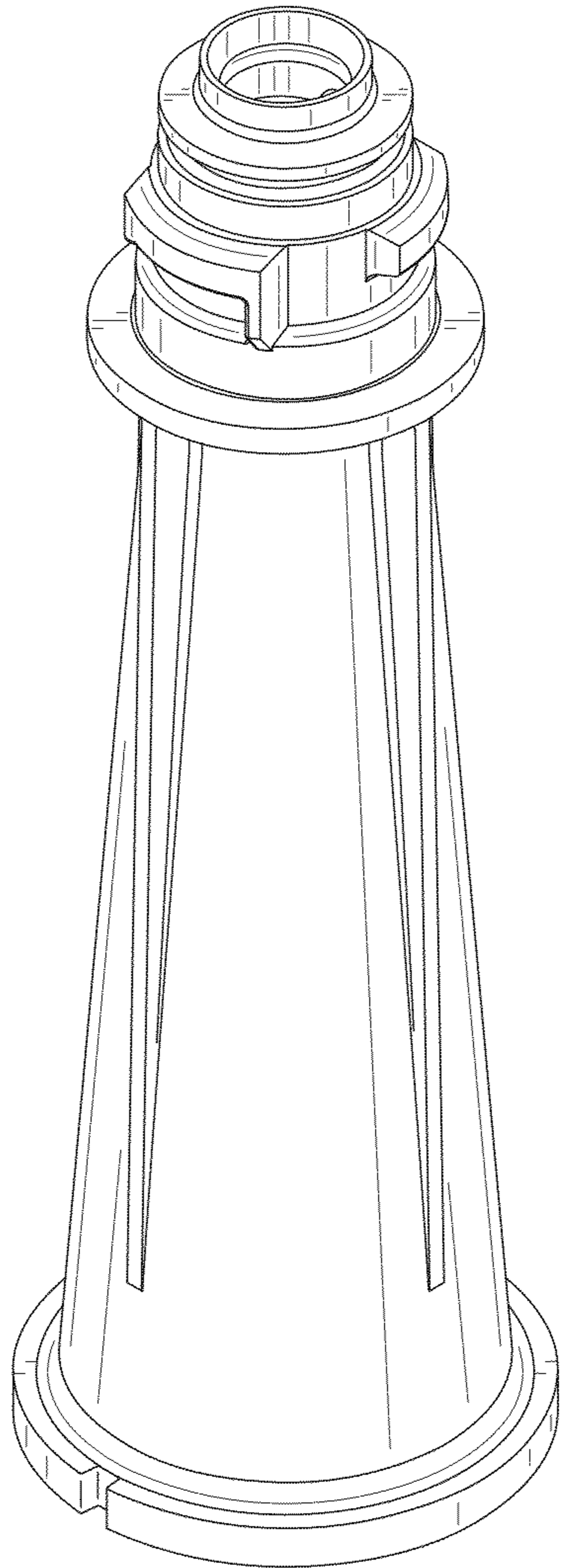


FIG. 1

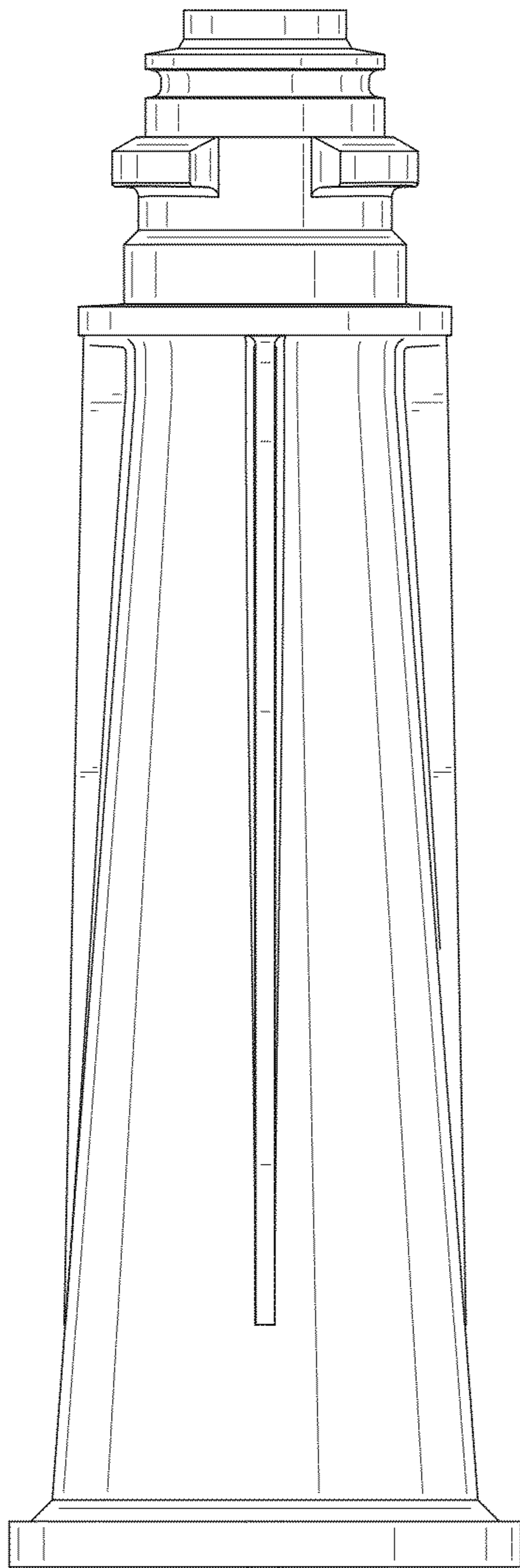


FIG. 2

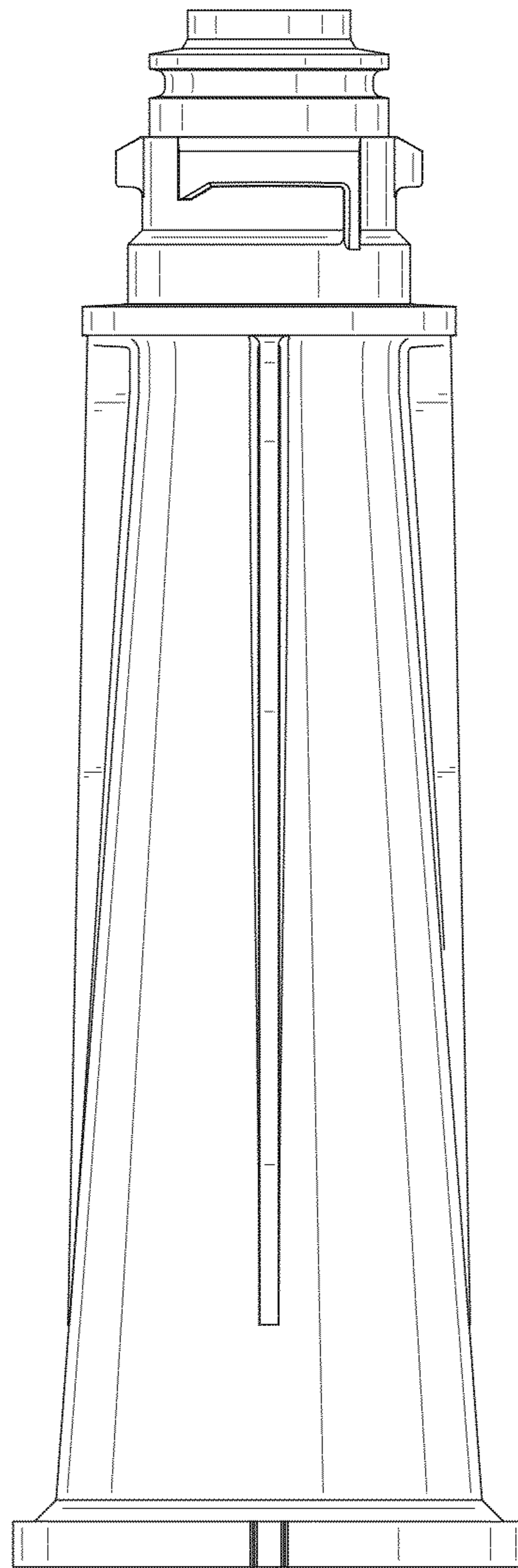


FIG. 3

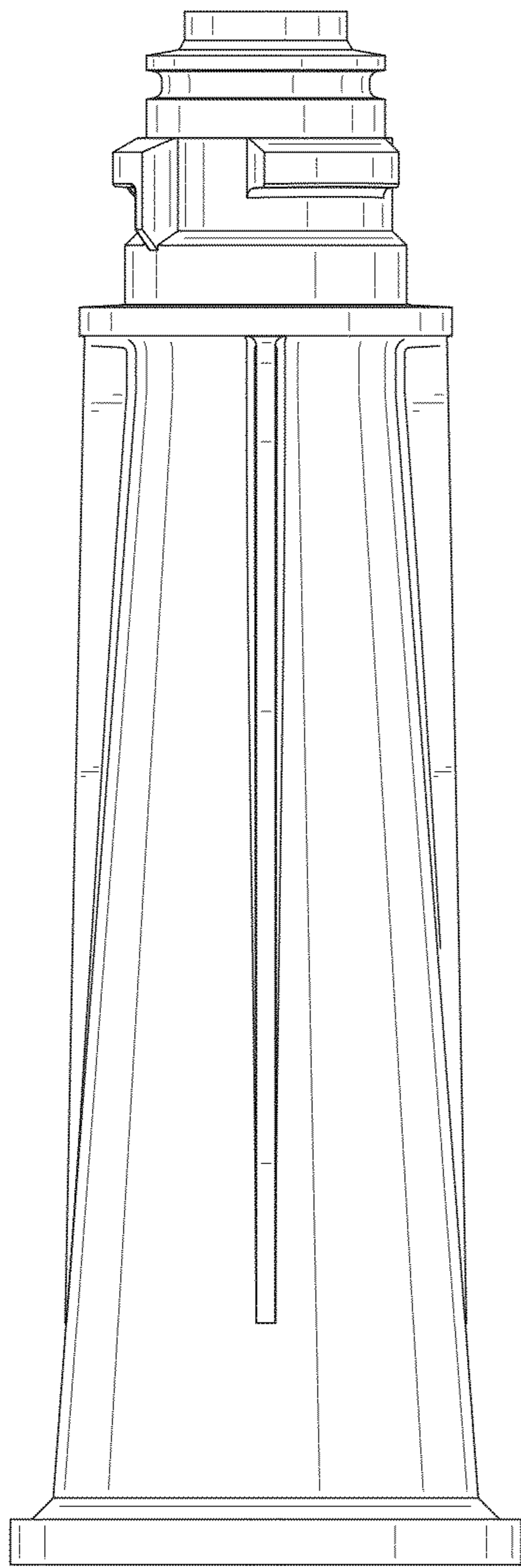


FIG. 4

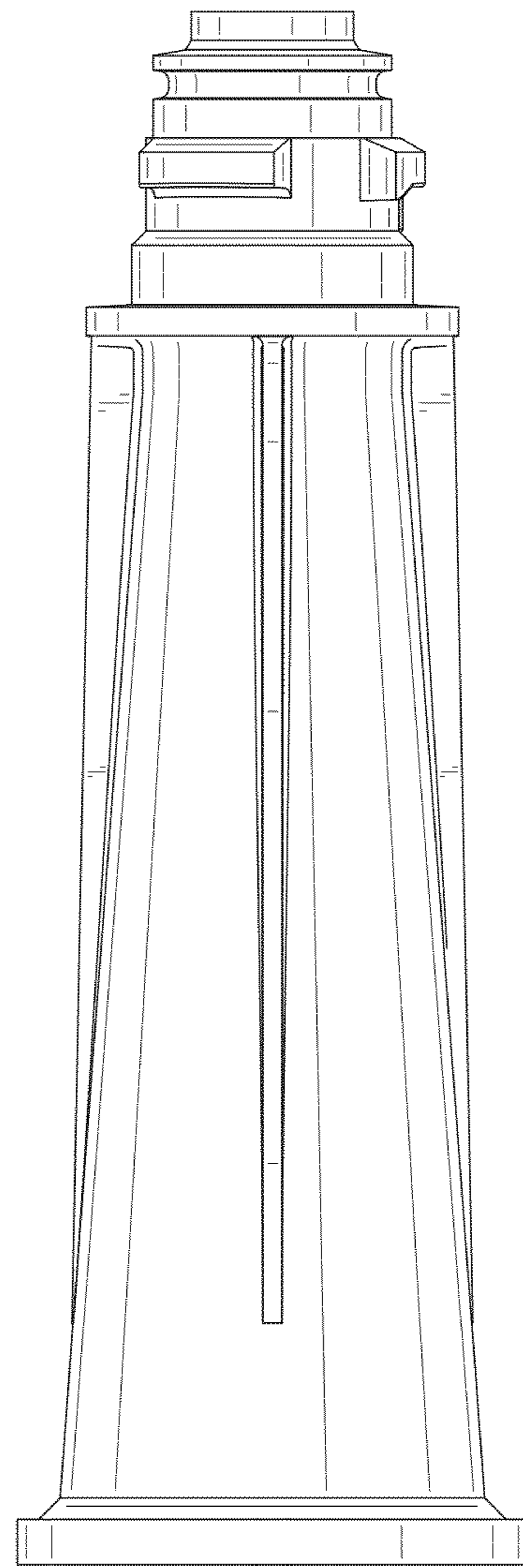


FIG. 5

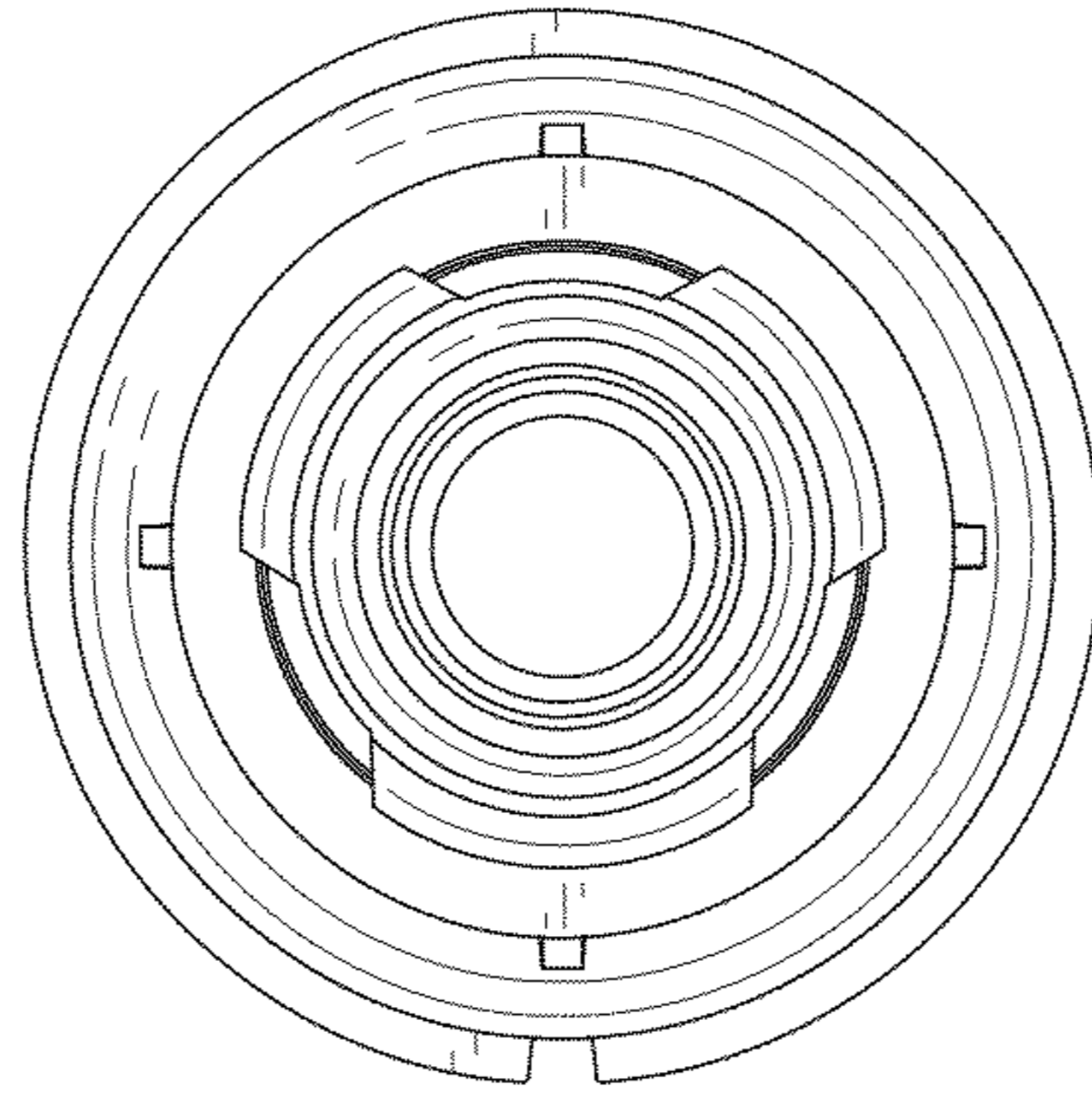


FIG. 6

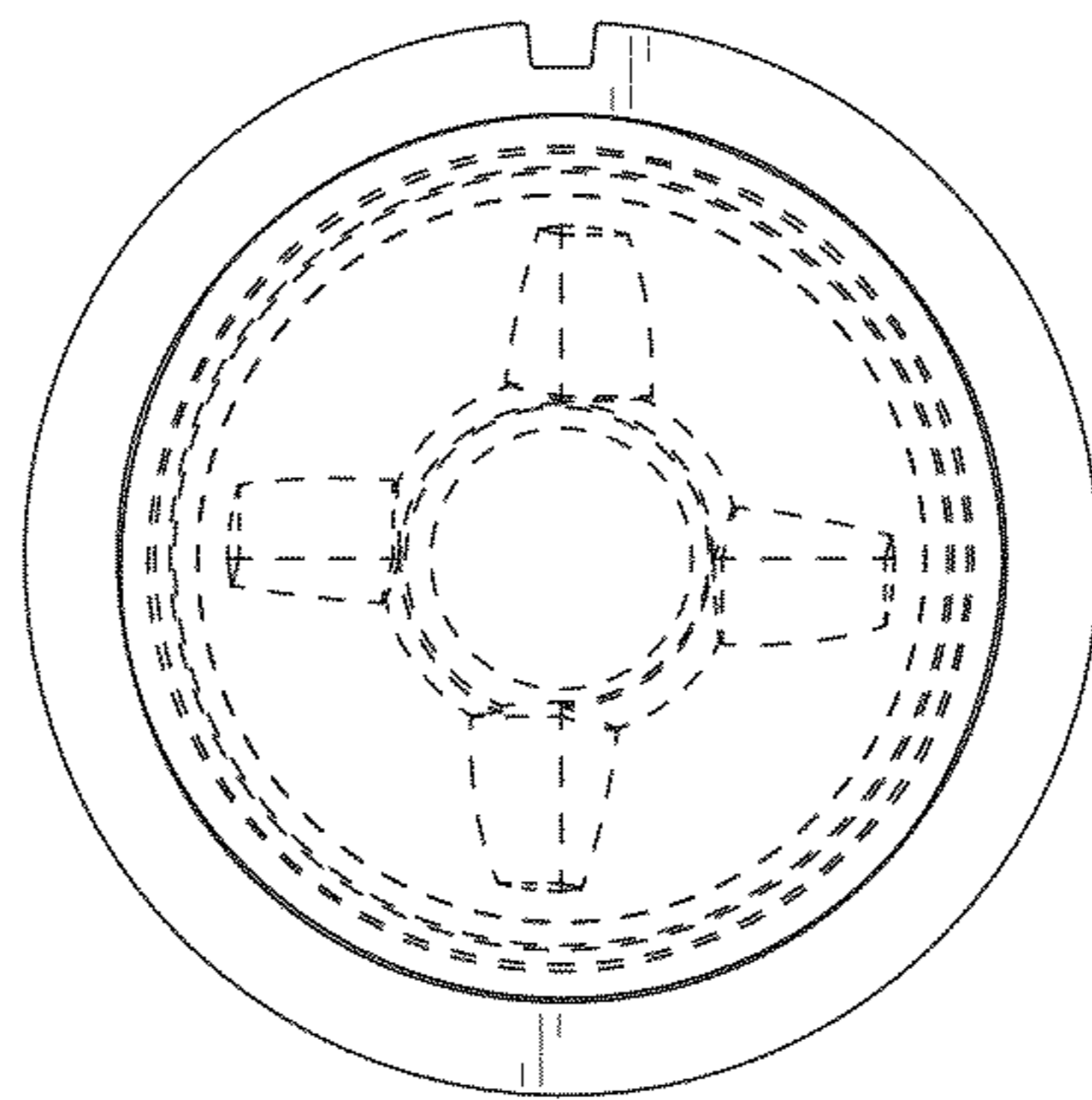


FIG. 7