



US00D946752S

(12) **United States Design Patent**
Frampton et al.

(10) **Patent No.:** **US D946,752 S**

(45) **Date of Patent:** **** Mar. 22, 2022**

(54) **VIAL CAGE**

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

(21) Appl. No.: **29/733,947**

(22) Filed: **May 7, 2020**

(51) **LOC (13) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/128**; D24/227; D24/231

(58) **Field of Classification Search**
USPC D24/227, 128, 108, 127, 129, 130, D24/216-217, 231-232; D3/203.1-203.8; D8/349

CPC A61M 5/14244; A61M 5/14284; A61M 5/14276; A61J 1/2089; A61J 1/2055
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D595,421 S *	6/2009	Suzuki	.....	D24/227
D595,862 S *	7/2009	Suzuki	.....	D24/227
D595,863 S *	7/2009	Suzuki	.....	D24/227
D630,732 S *	1/2011	Lev	.....	D24/129
D643,209 S *	8/2011	Rein	.....	D3/203.1
D674,088 S *	1/2013	Lev	.....	D24/129
D734,868 S *	7/2015	Gilboa	.....	D24/231
D737,960 S *	9/2015	Philipak	.....	D24/127
D796,035 S *	8/2017	Turturro	.....	D24/129
D845,472 S *	4/2019	Evans	.....	D24/128
D867,586 S *	11/2019	Kemps	.....	D24/129
D879,956 S *	3/2020	Klenner	.....	D24/129
D887,577 S *	6/2020	Shor	.....	D24/227
D894,423 S *	8/2020	Bantug	.....	D24/227

D896,372 S *	9/2020	Julian	.....	D24/129
10,772,797 B2 *	9/2020	Denenburg	.....	A61J 1/201
D899,589 S *	10/2020	Lillsley	.....	D24/129
D914,876 S *	3/2021	Yabe	.....	D24/130
D926,977 S *	8/2021	Kubon	.....	D24/129
2011/0264037 A1 *	10/2011	Foshee	.....	A61J 1/2096 604/88

(Continued)

FOREIGN PATENT DOCUMENTS

WO D212026-001 * 5/2021

OTHER PUBLICATIONS

OnGuard®Vial Adaptor for 28 mm Vials, B Braun USA, [Post Date Jan. 6, 2019], [Site seen Oct. 21, 2021], Seen at URL: <https://www.bbrawnausa.com/en/products/b1/onguard-vial-adaptorfor28mmvials.html> (Year: 2019).*

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(57) **CLAIM**

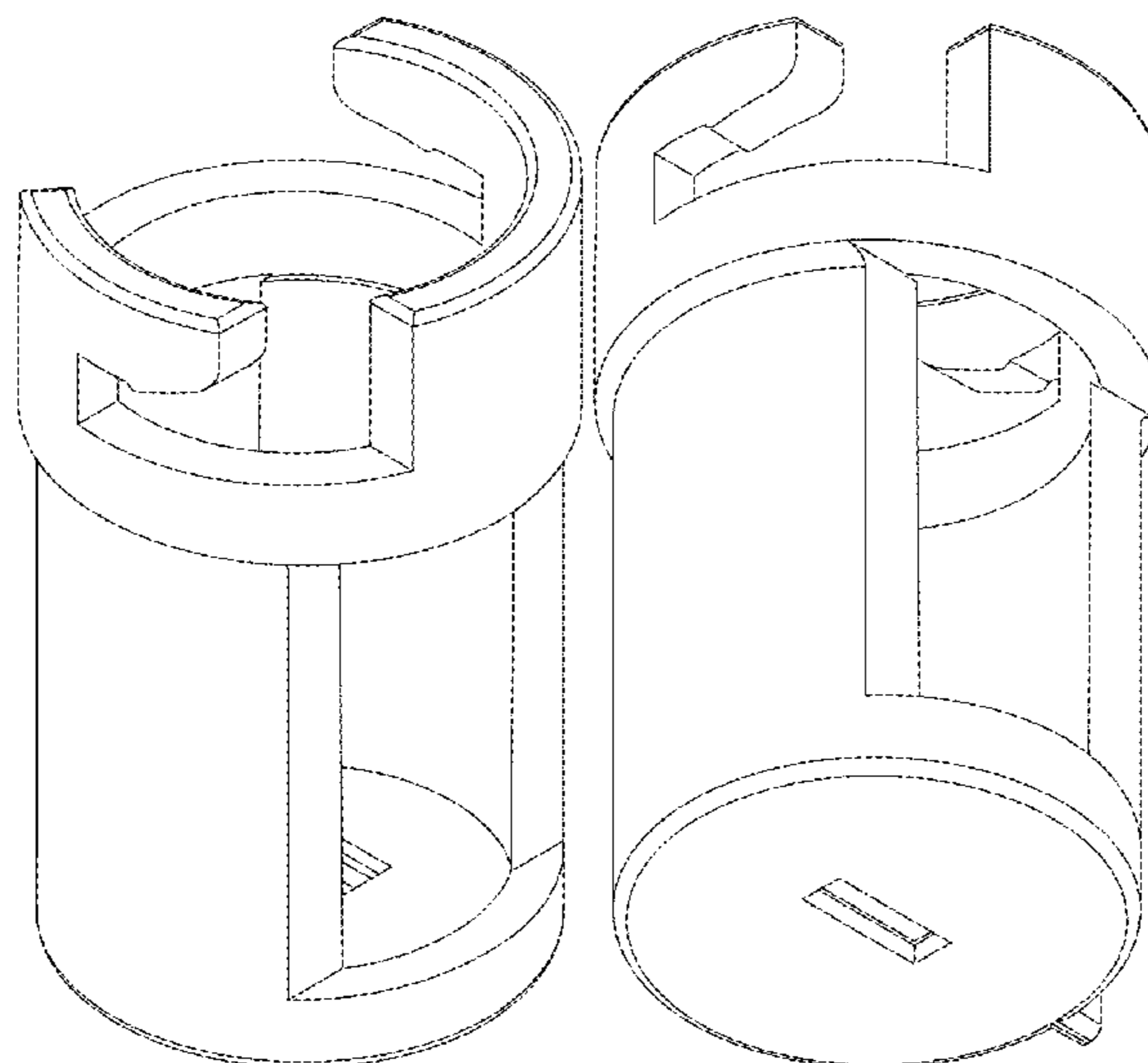
The ornamental design for a vial cage, as shown and described.

DESCRIPTION

FIG. 1 is a top, front perspective view of a vial cage; FIG. 2 is a bottom, front perspective view thereof; FIG. 3 is a top, right perspective view thereof; FIG. 4 is a bottom, right perspective view thereof; FIG. 5 is a rear view thereof; FIG. 6 is a front, right view thereof; FIG. 7 is a top plan view thereof; FIG. 8 is a bottom plan view thereof; and, FIG. 9 is a bottom, rear perspective view thereof connected with a connector.

The broken lines in the drawing depict environmental structure and form no part of the claimed design.

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2014/0020793 A1* 1/2014 Denenburg A61J 1/2089
141/329
2017/0007501 A1* 1/2017 Schuldt-Lieb A61J 1/2089

* cited by examiner

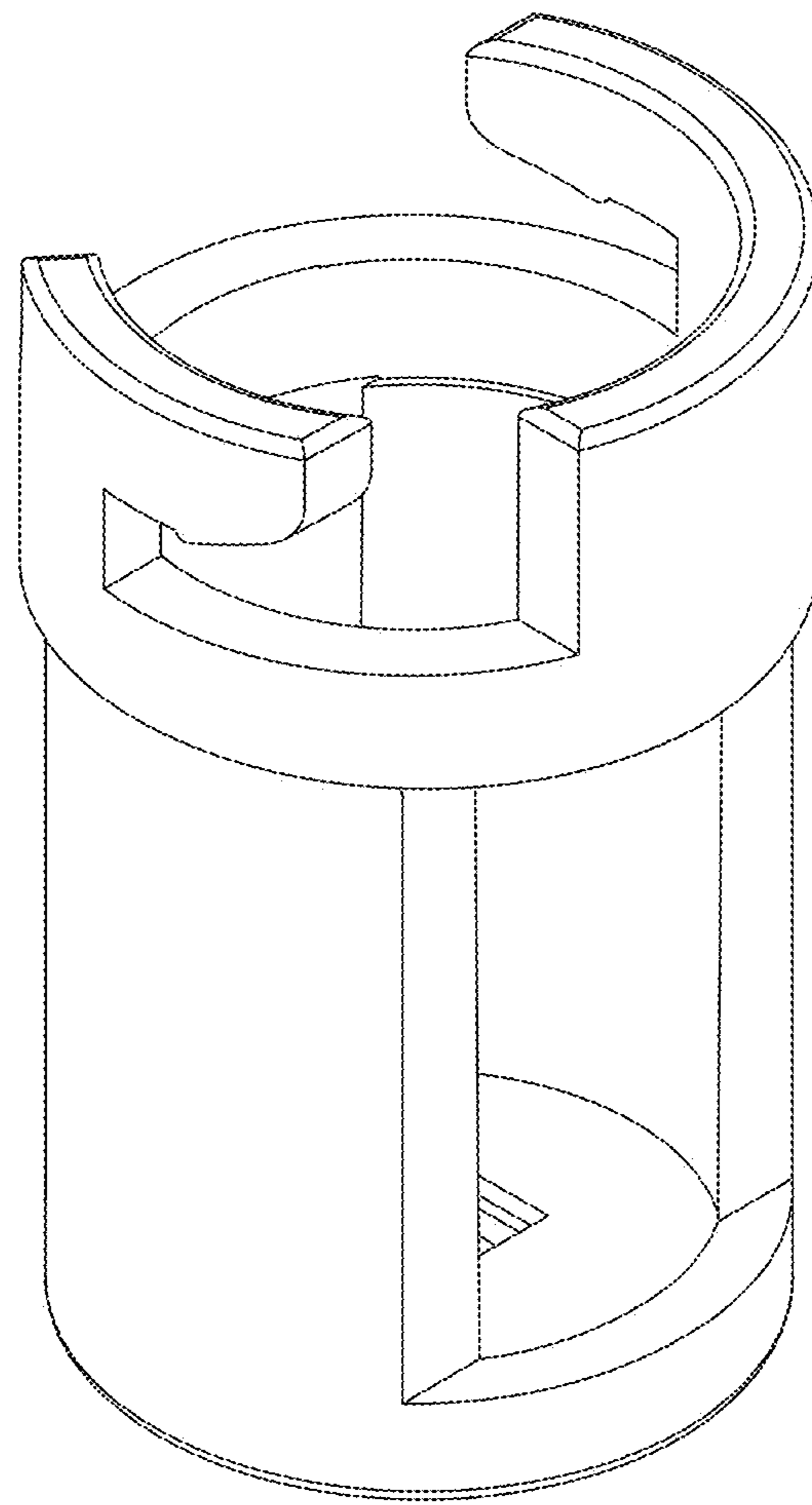


FIG. 1

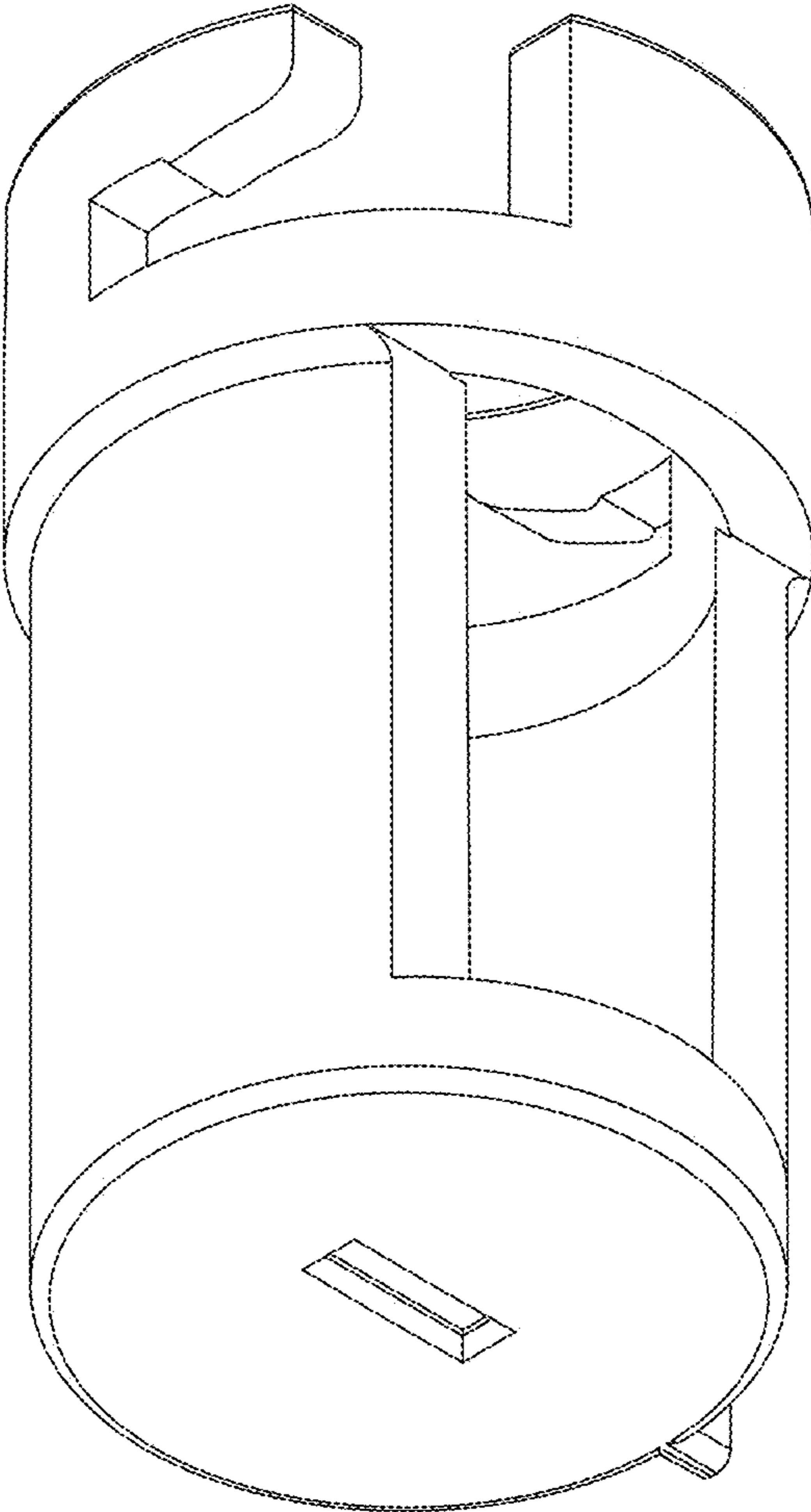


FIG. 2

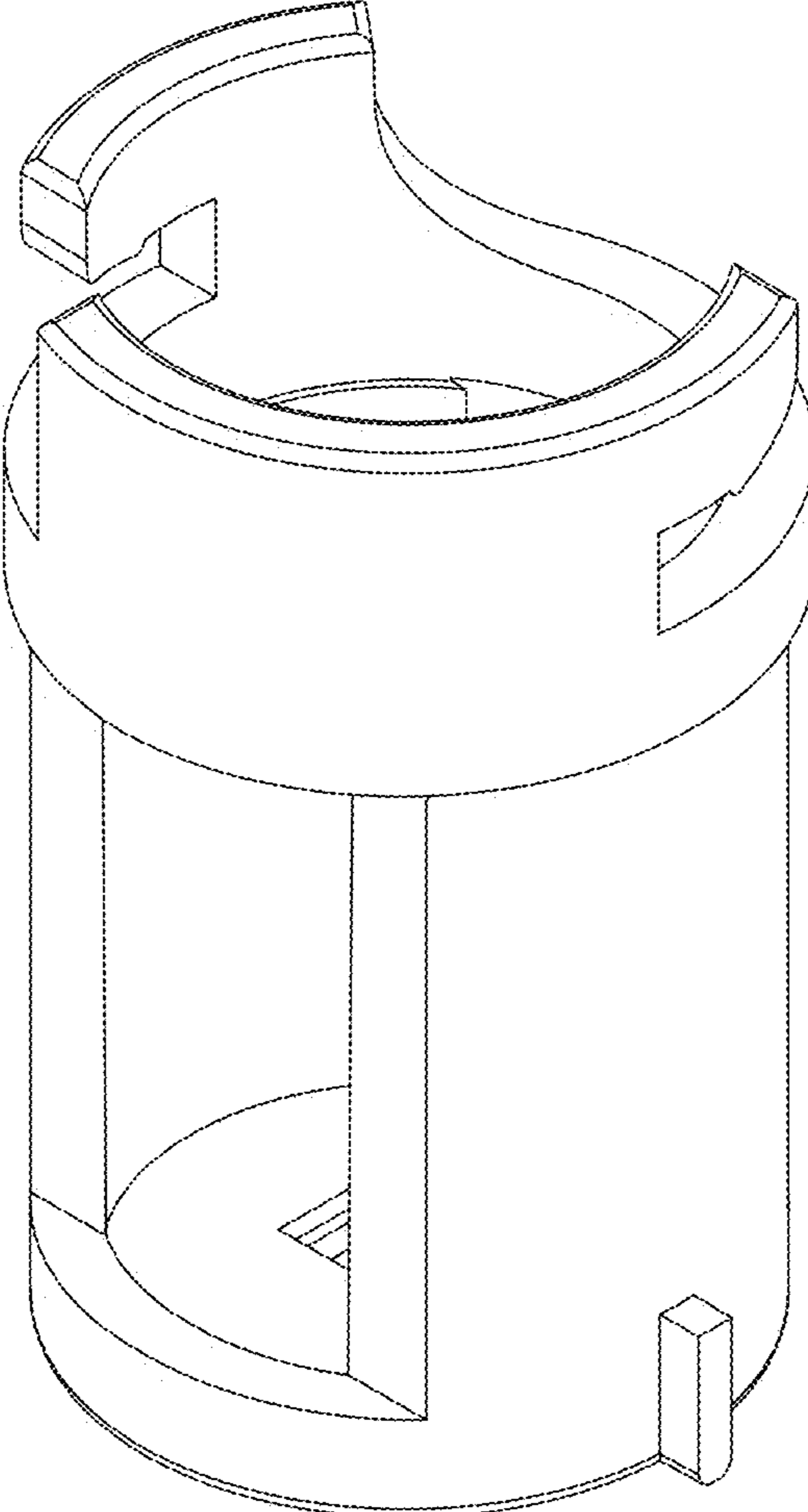


FIG. 3

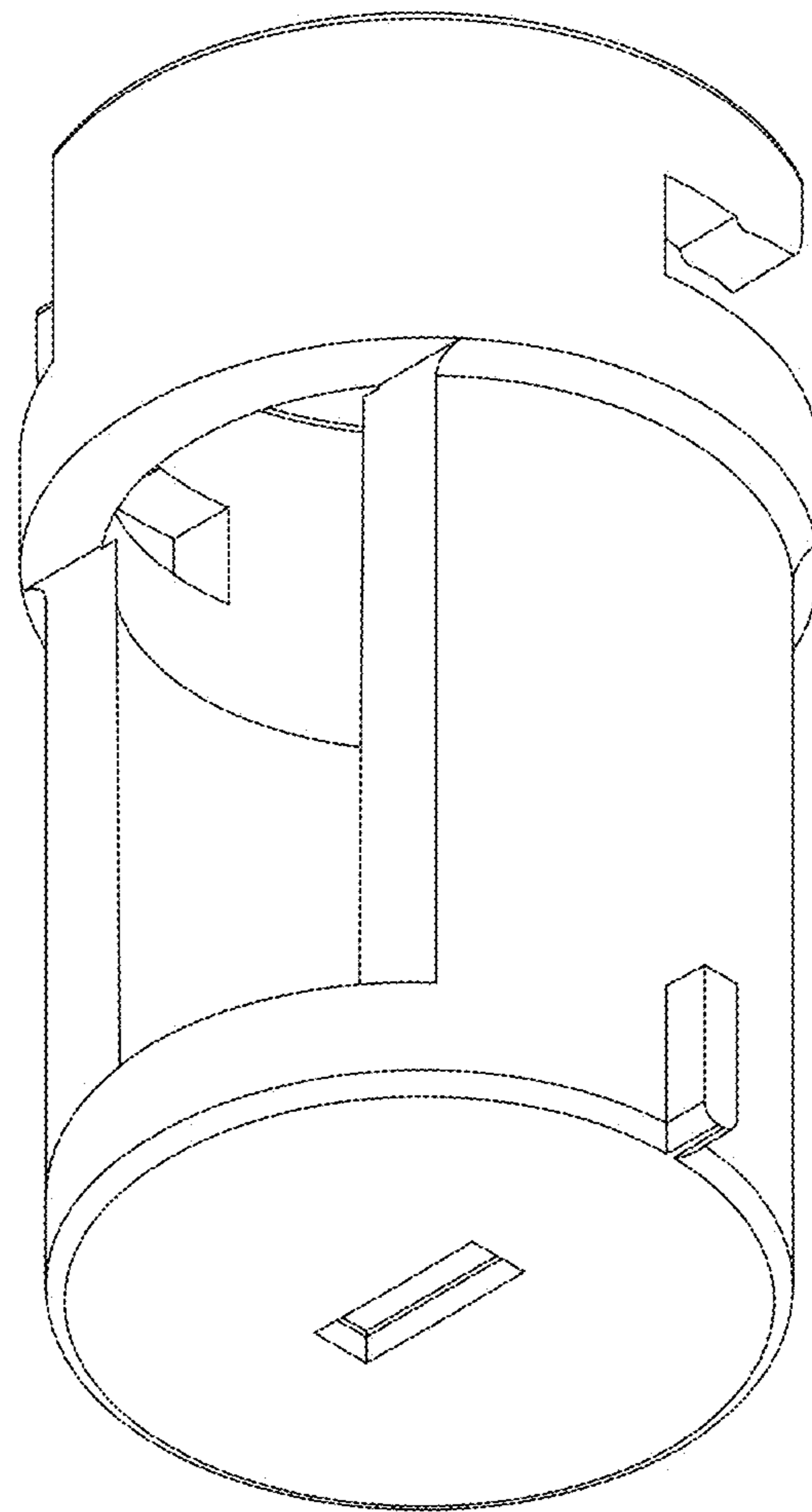


FIG. 4

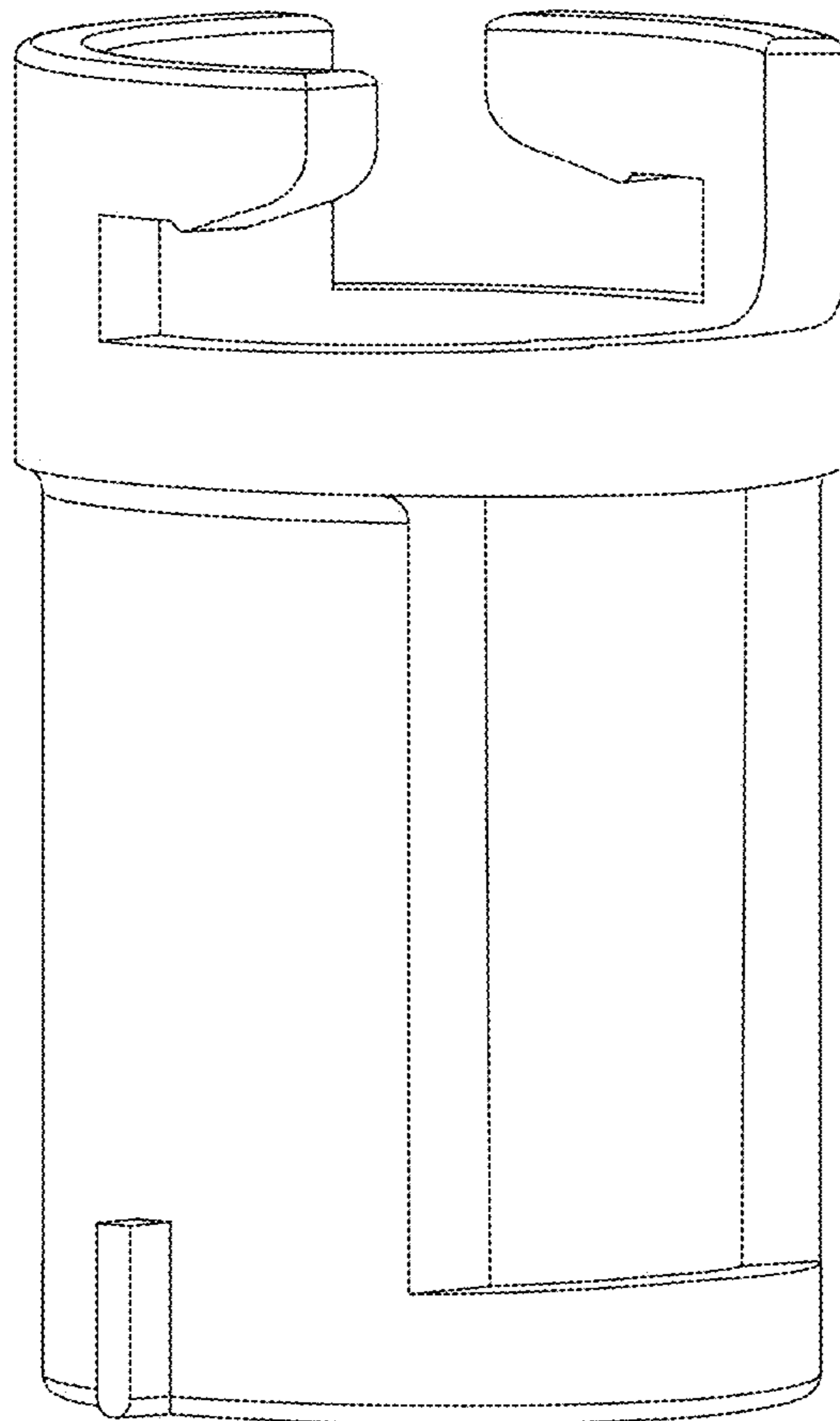


FIG. 5

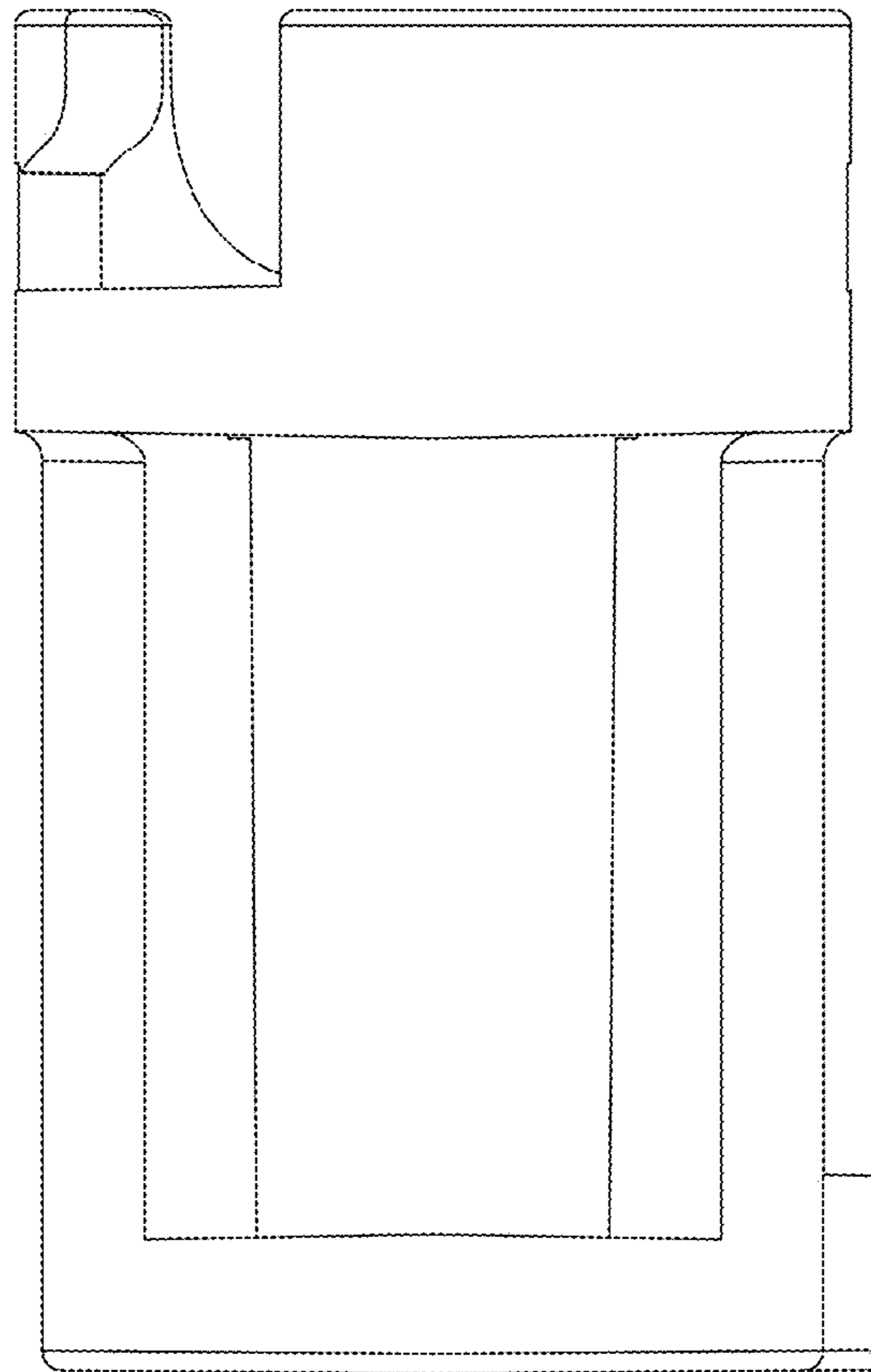


FIG. 6

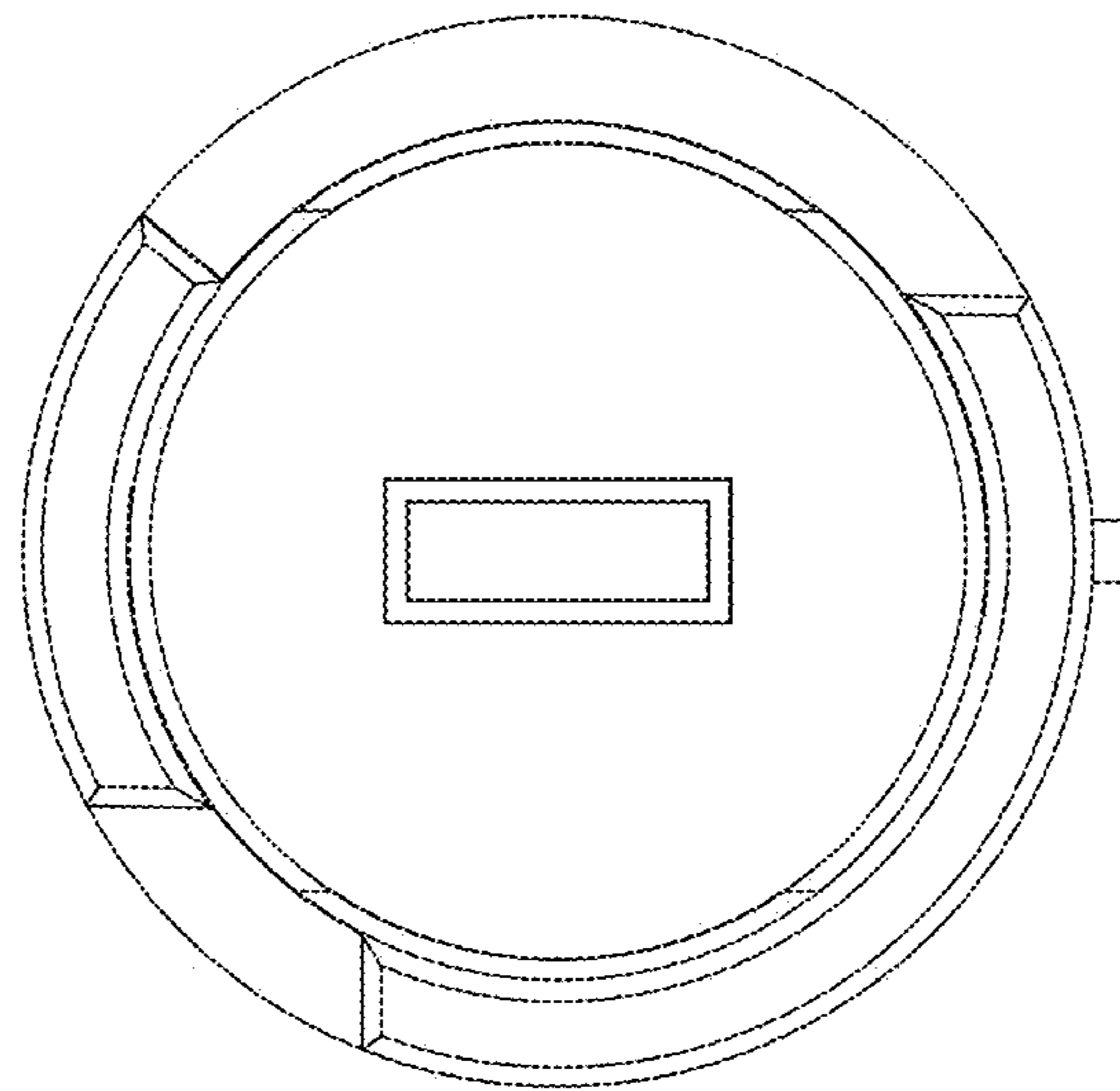


FIG. 7

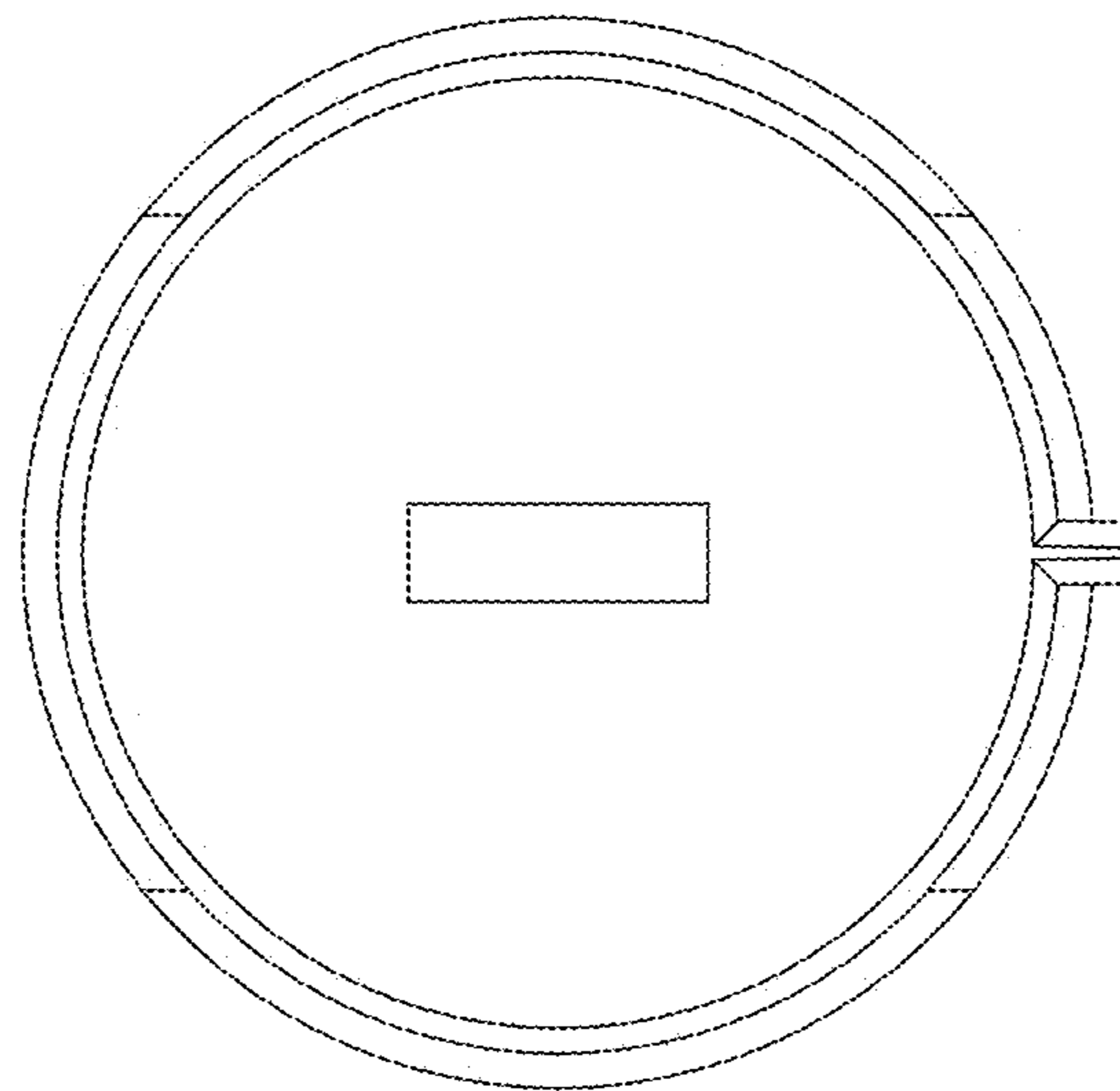


FIG. 8

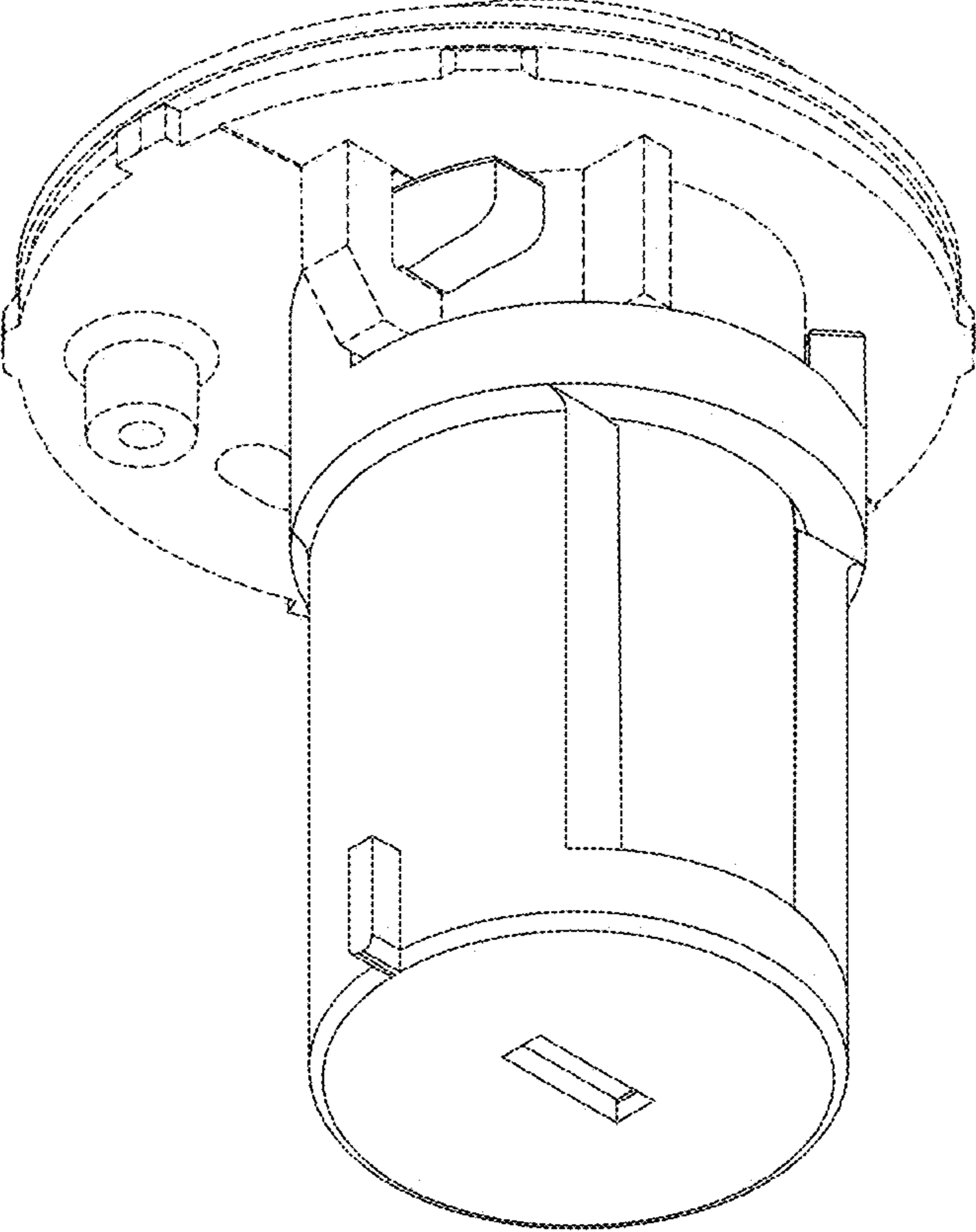


FIG. 9