



US00D612817S

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

(10) **Patent No.:** **US D612,817 S**
(45) **Date of Patent:** **** Mar. 30, 2010**

(54) **LIGHT EMITTING DIODE**

(75) Inventors: **Keisuke Tokuda**, Tokushima (JP);
Daisuke Kishikawa, Anan (JP); **Naoki Nishiuchi**, Tokushima (JP)

(73) Assignee: **Nichia Corporation**, Anan-shi (JP)

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

(21) Appl. No.: **29/304,551**

(22) Filed: **Mar. 4, 2008**

Related U.S. Application Data

(62) Division of application No. 29/273,595, filed on Mar. 9, 2007, now Pat. No. Des. 569,353.

(30) **Foreign Application Priority Data**

Sep. 11, 2006	(JP)	.....	2006-024150
Sep. 11, 2006	(JP)	.....	2006-024184
Sep. 11, 2006	(JP)	.....	2006-024198
Sep. 11, 2006	(JP)	.....	2006-024199
Sep. 11, 2006	(JP)	.....	2006-024200
Sep. 11, 2006	(JP)	.....	2006-024201
Sep. 11, 2006	(JP)	.....	2006-024202
Sep. 11, 2006	(JP)	.....	2006-024203
Sep. 11, 2006	(JP)	.....	2006-024204
Sep. 11, 2006	(JP)	.....	2006-024205
Sep. 11, 2006	(JP)	.....	2006-024206
Sep. 11, 2006	(JP)	.....	2006-024207

(51) **LOC (9) Cl.** **13-03**

(52) **U.S. Cl.** **D13/180**

(58) **Field of Classification Search** D13/180;
D26/2; 257/79, 80, 81, 88, 89, 95, 98, 99,
257/100, E33.058; 313/483, 498, 500; 362/555,
362/800

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,764,862 A * 10/1973 Jankowski 257/98

Primary Examiner—Selina Sikder

(74) *Attorney, Agent, or Firm*—Global IP Counselors, LLP

(57) **CLAIM**

The ornamental design for a light emitting diode, as shown and described.

DESCRIPTION

FIG. 1 is a front top side perspective view of a light emitting diode in accordance with a first embodiment of our new design;

FIG. 2 is a top plan view of the light emitting diode in accordance with the first embodiment of our new design;

FIG. 3 is a vertical cross sectional view of the light emitting diode in accordance with the first embodiment of our new design as seen along section line 3—3 of FIG. 2;

FIG. 4 is a vertical cross sectional view of the light emitting diode in accordance with the first embodiment of our new design as seen along section line 4—4 of FIG. 2;

FIG. 5 is an enlarged view of an encircled portion 5 of FIG. 3 of the light emitting diode in accordance with the first embodiment of our new design;

FIG. 6 is a front top side perspective view of a light emitting diode in accordance with a second embodiment of our new design;

FIG. 7 is a top plan view of the light emitting diode in accordance with the second embodiment of our new design;

FIG. 8 is a vertical cross sectional view of the light emitting diode in accordance with the second embodiment of our new design as seen along section line 8—8 of FIG. 7;

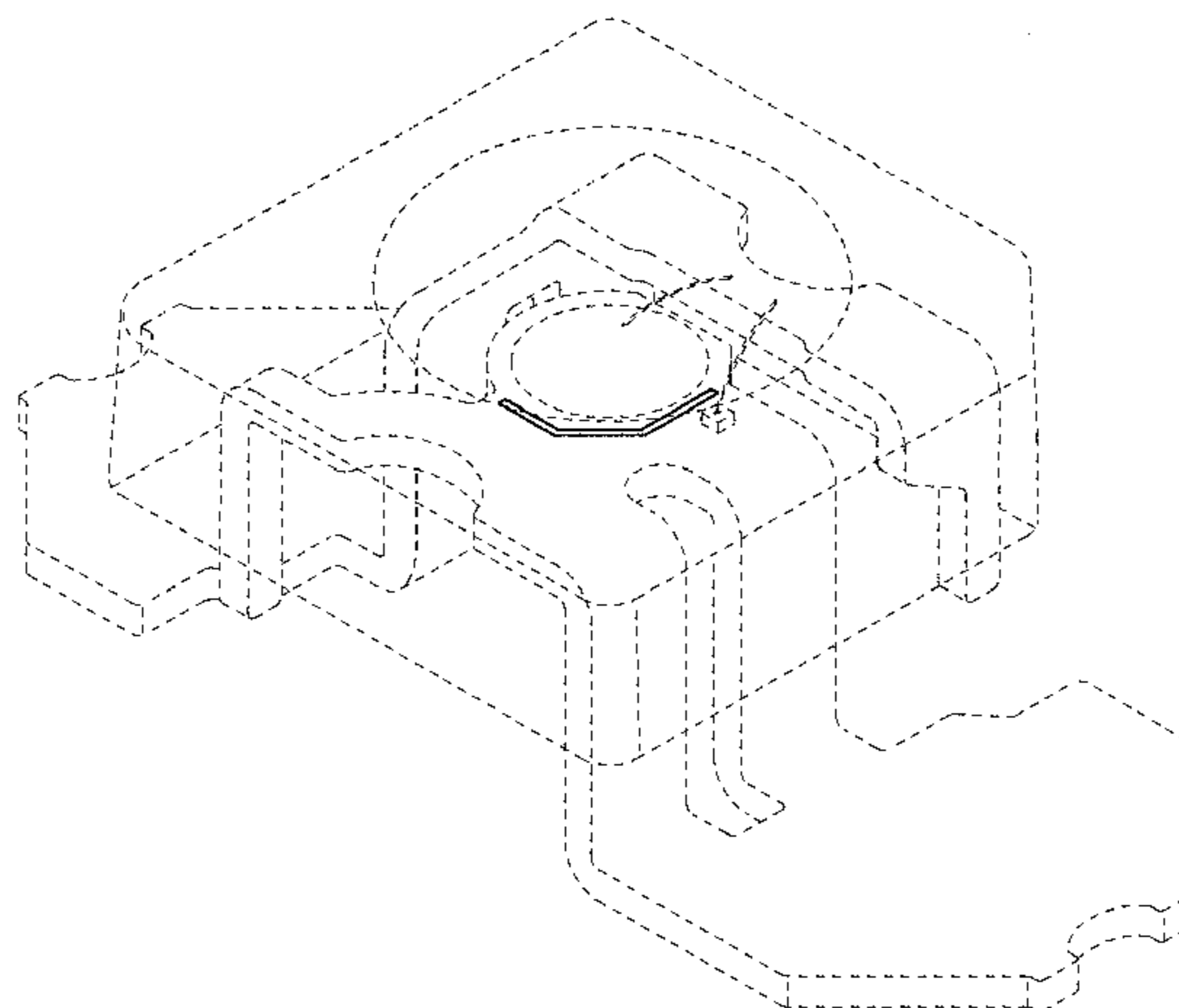
FIG. 9 is a vertical cross sectional view of the light emitting diode in accordance with the second embodiment of our new design as seen along section line 9—9 of FIG. 7; and,

FIG. 10 is an enlarged view of an encircled portion 10 of FIG. 9 of the light emitting diode in accordance with the second embodiment of our new design.

The broken line showing of environment (the remaining structure of the light emitting diode) in the FIGS. 1—10 is for illustrative purposes only and forms no part of the claimed design.

(Continued)

1 Claim, 8 Drawing Sheets



US D612,817 S

Page 2

U.S. PATENT DOCUMENTS

4,255,688	A *	3/1981	Nagasawa	313/499	7,213,945	B2 *	5/2007	Yoneda et al.	362/309
5,585,695	A *	12/1996	Kitai	313/506	2002/0008325	A1 *	1/2002	Tominaga	257/778
RE36,614	E	3/2000	Lumbard et al.		2005/0269589	A1	12/2005	Wu	
6,445,011	B1 *	9/2002	Hirano et al.	257/99	2006/0267036	A1	11/2006	Lee et al.	
6,476,549	B2 *	11/2002	Yu	313/499	2007/0029563	A1	2/2007	Amano et al.	
D477,580	S	7/2003	Kamada		2007/0063321	A1	3/2007	Han et al.	
6,617,786	B1 *	9/2003	Centofante	313/512	2007/0114559	A1	5/2007	Sayers et al.	
D503,690	S	4/2005	Kamada		2007/0126020	A1	6/2007	Lin et al.	
D523,826	S	6/2006	Kamada		2007/0171664	A1	7/2007	Shih et al.	

* cited by examiner

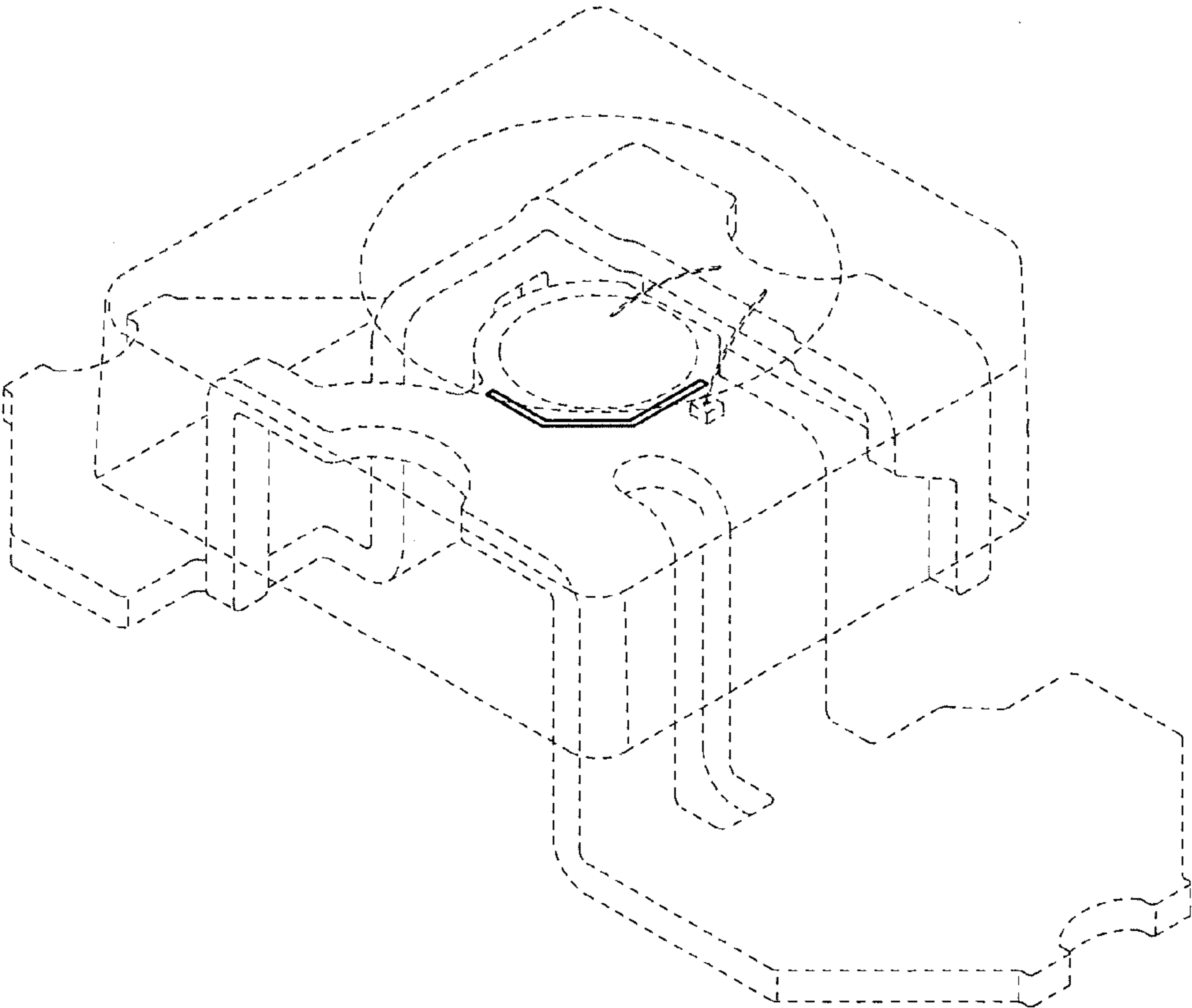


FIG. 1

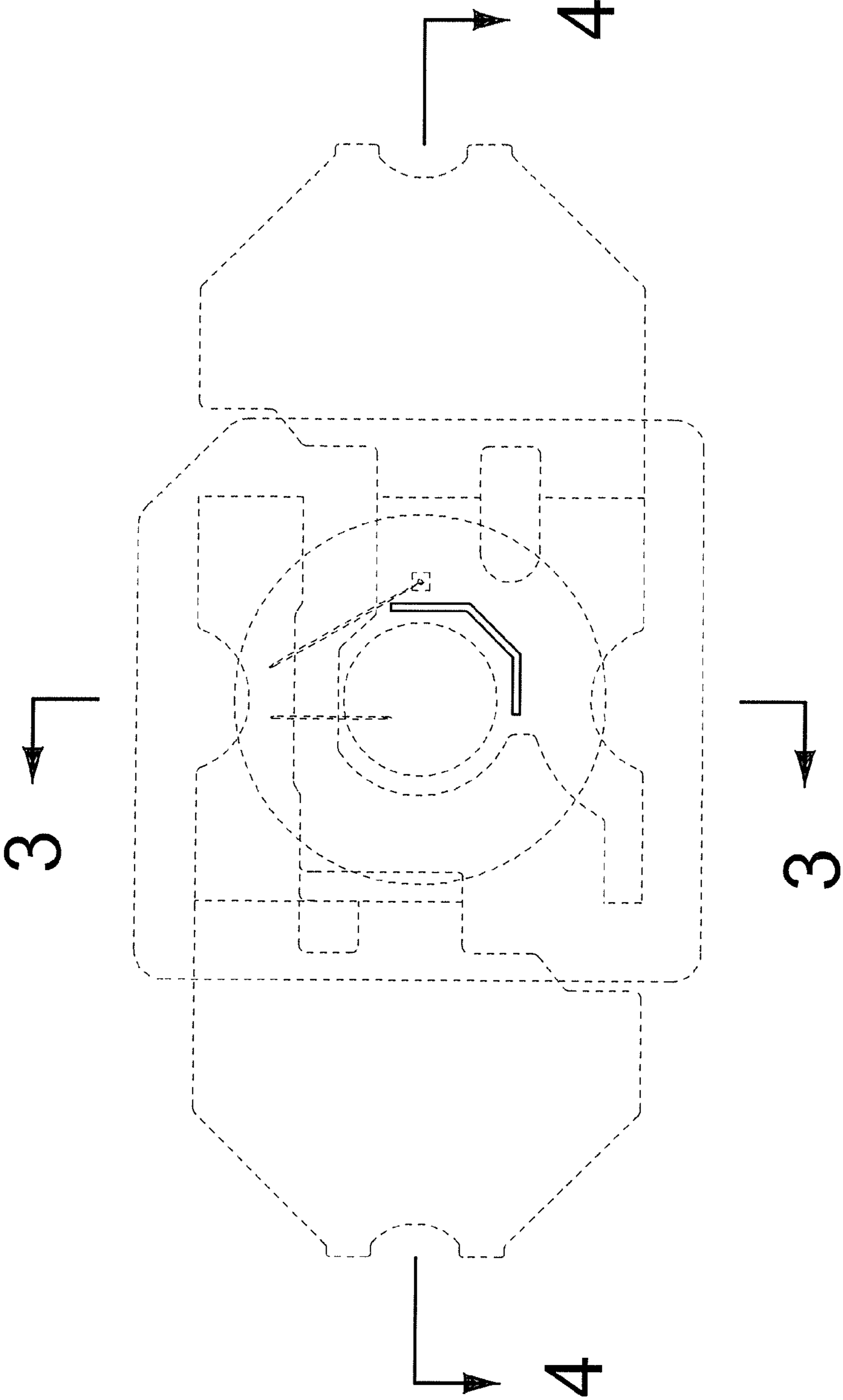


FIG. 2

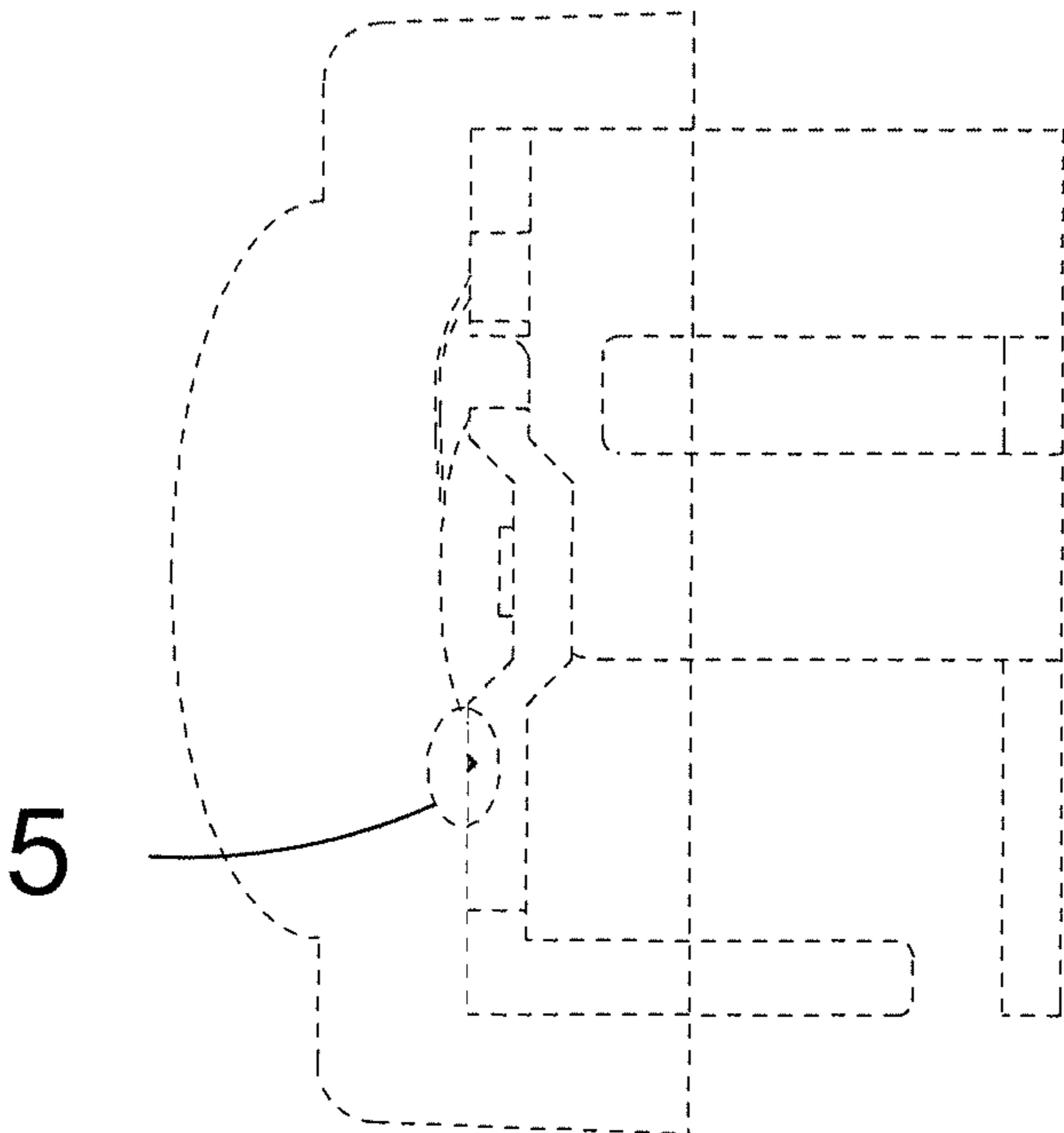


FIG. 3

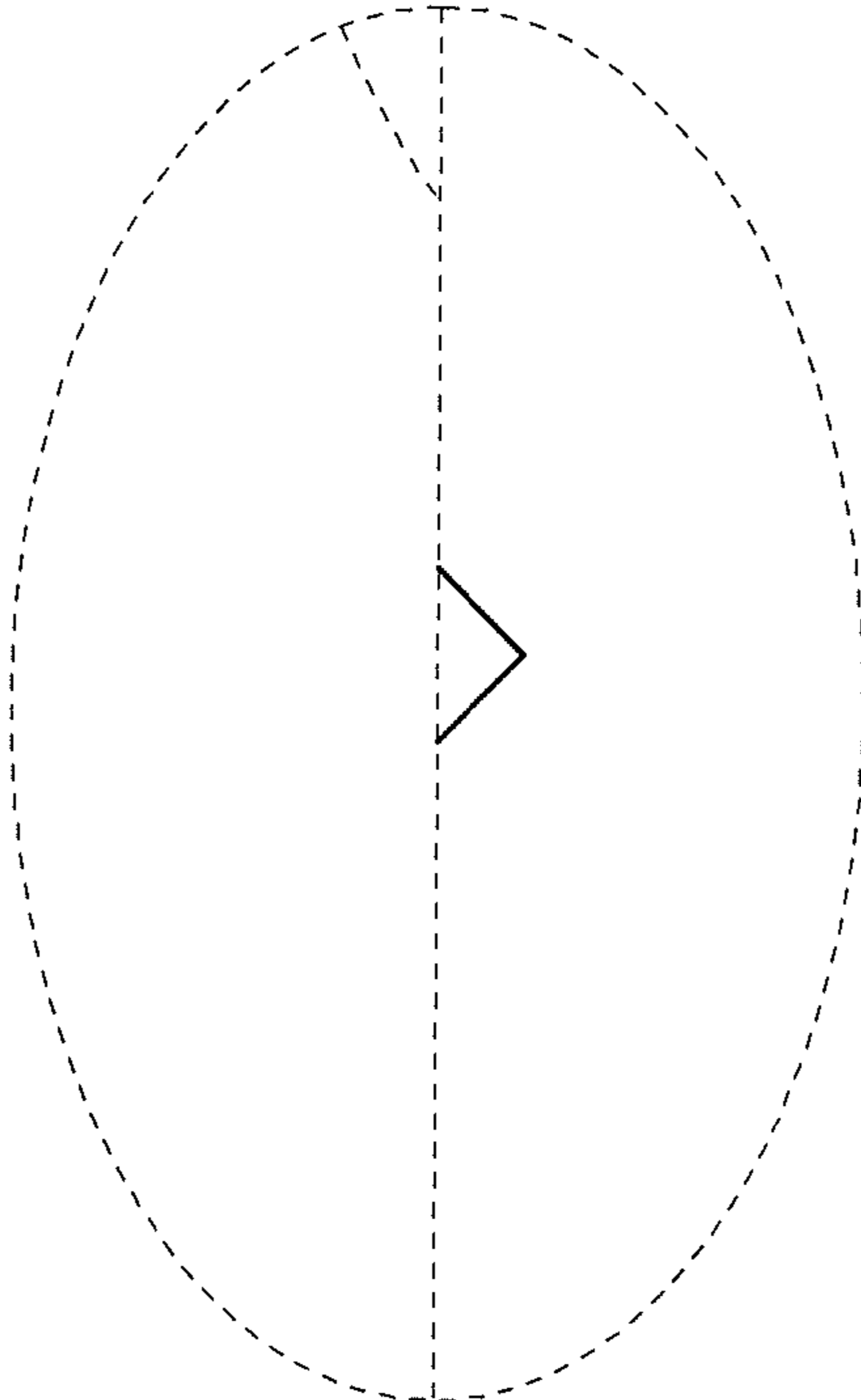


FIG. 5

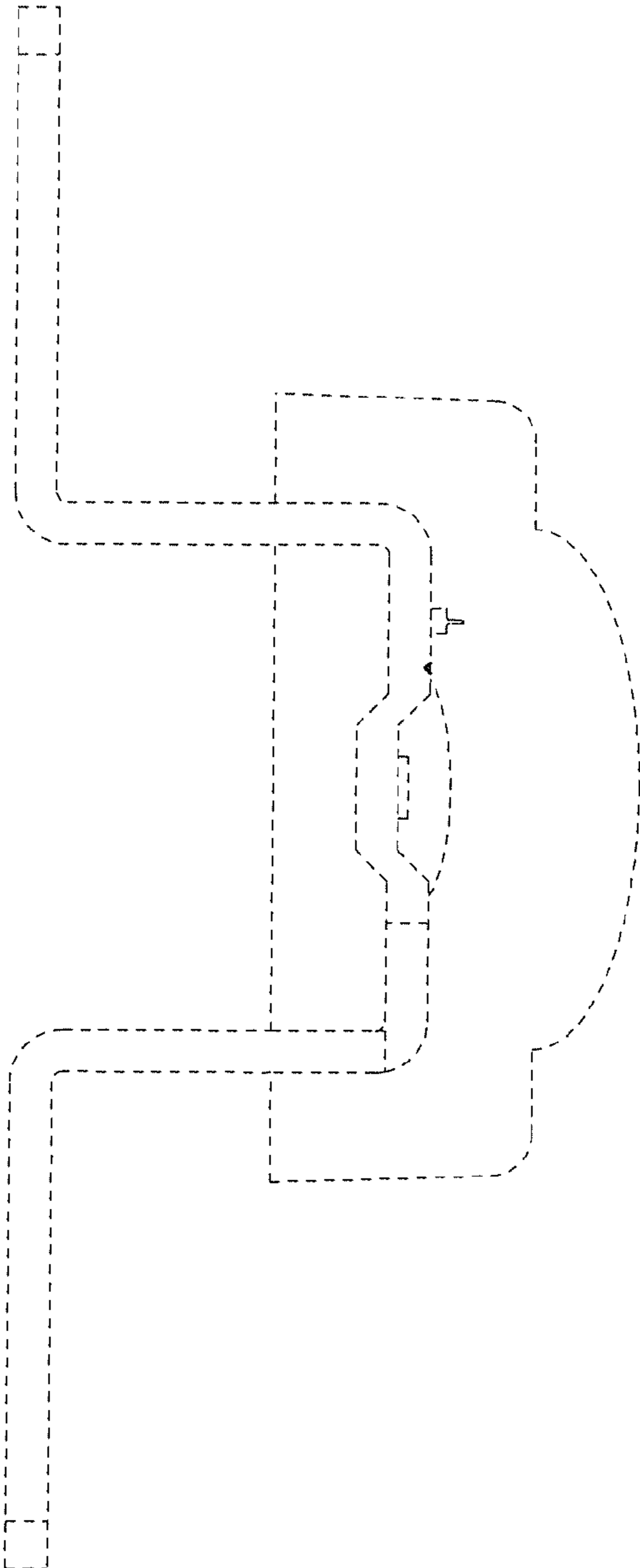


FIG. 4

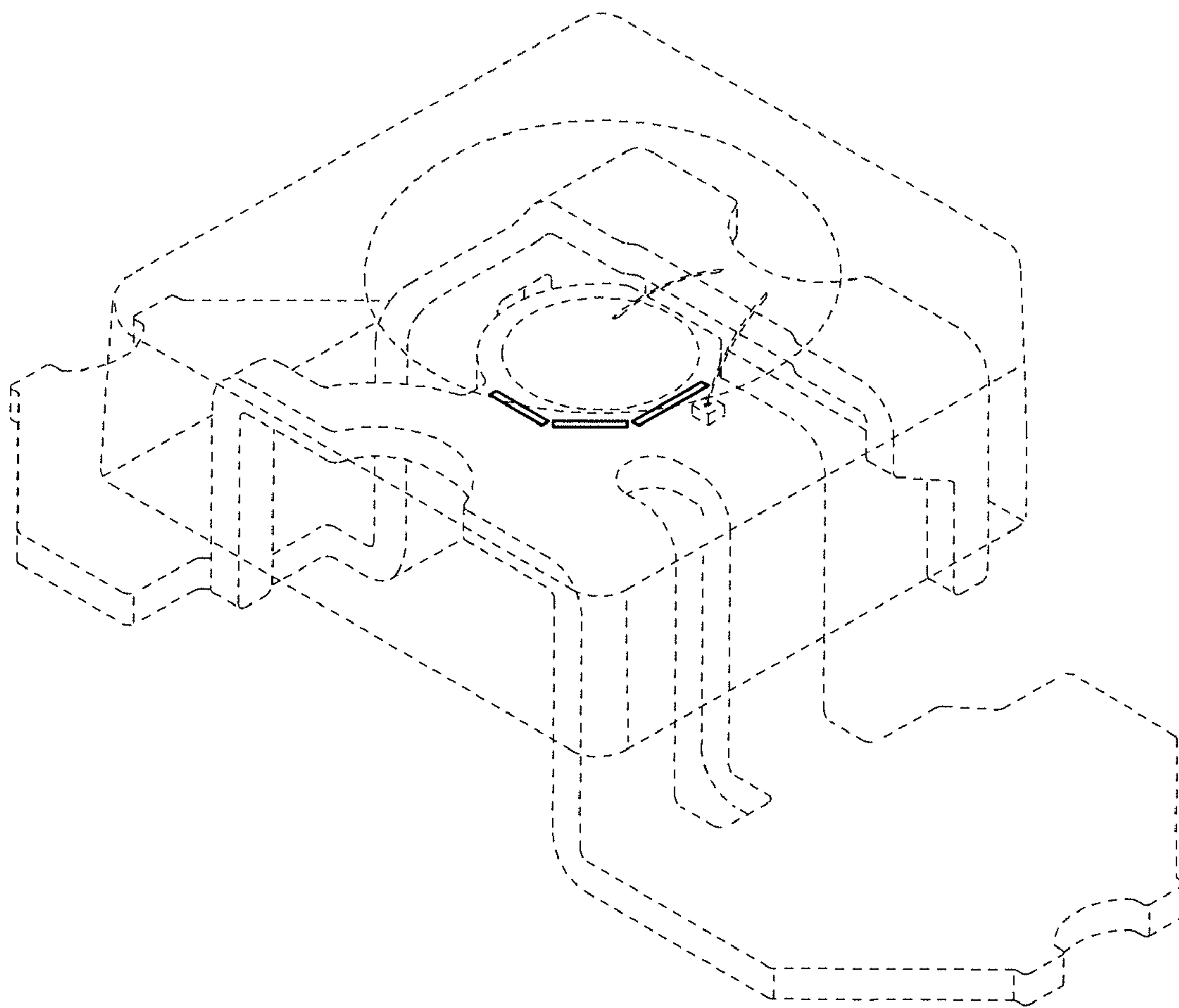


FIG. 6

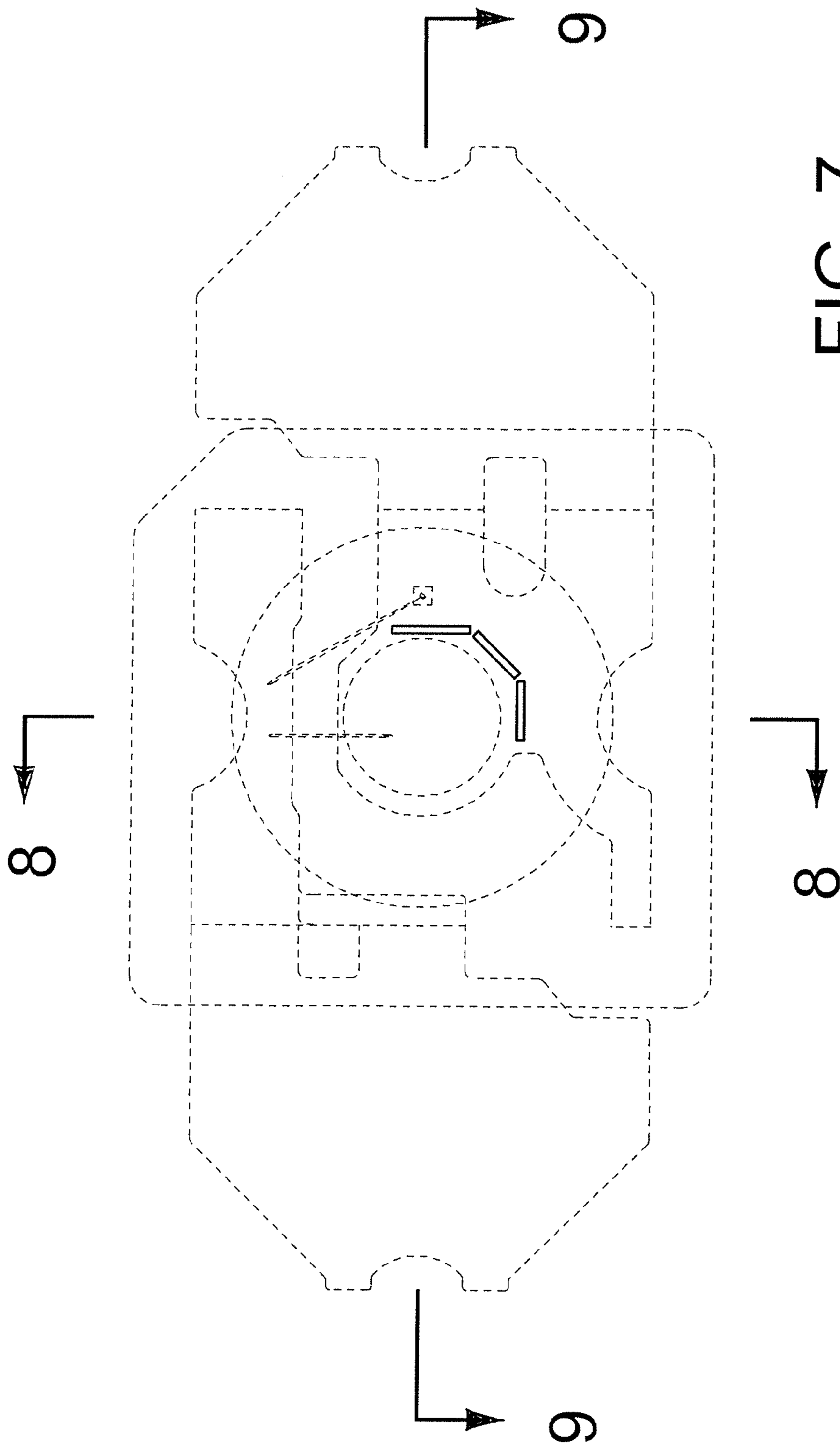


FIG. 7

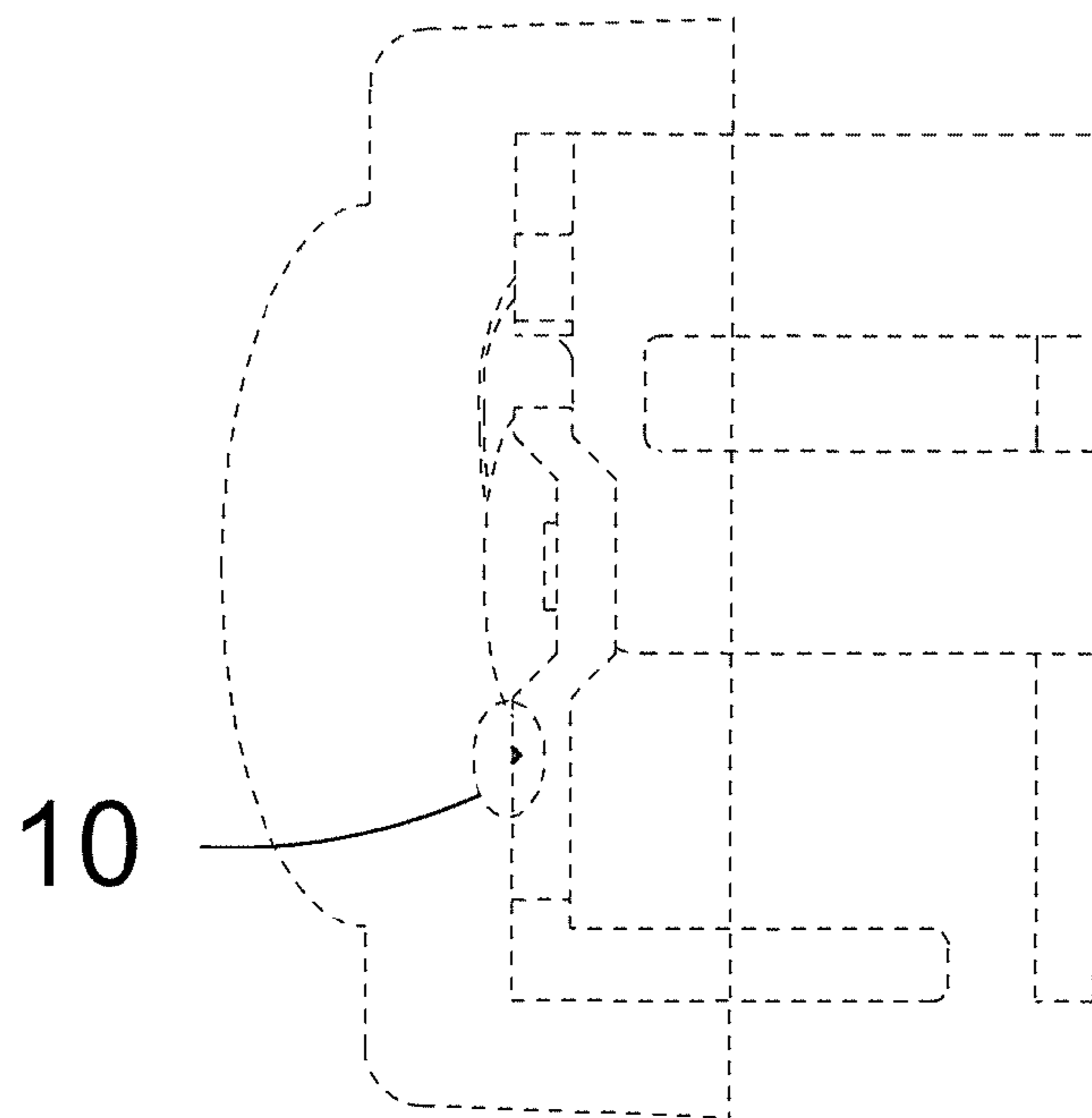


FIG. 8

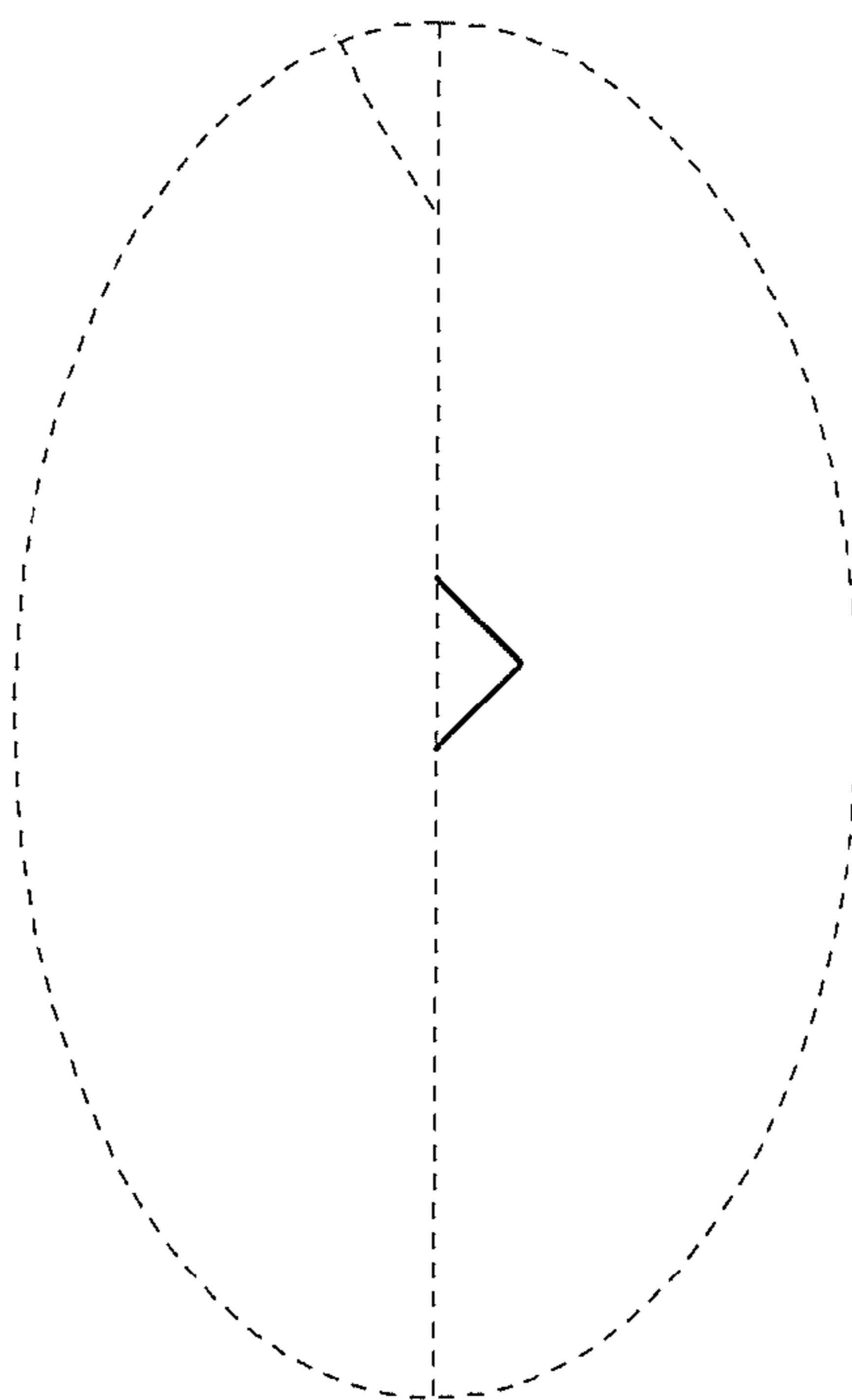


FIG. 10

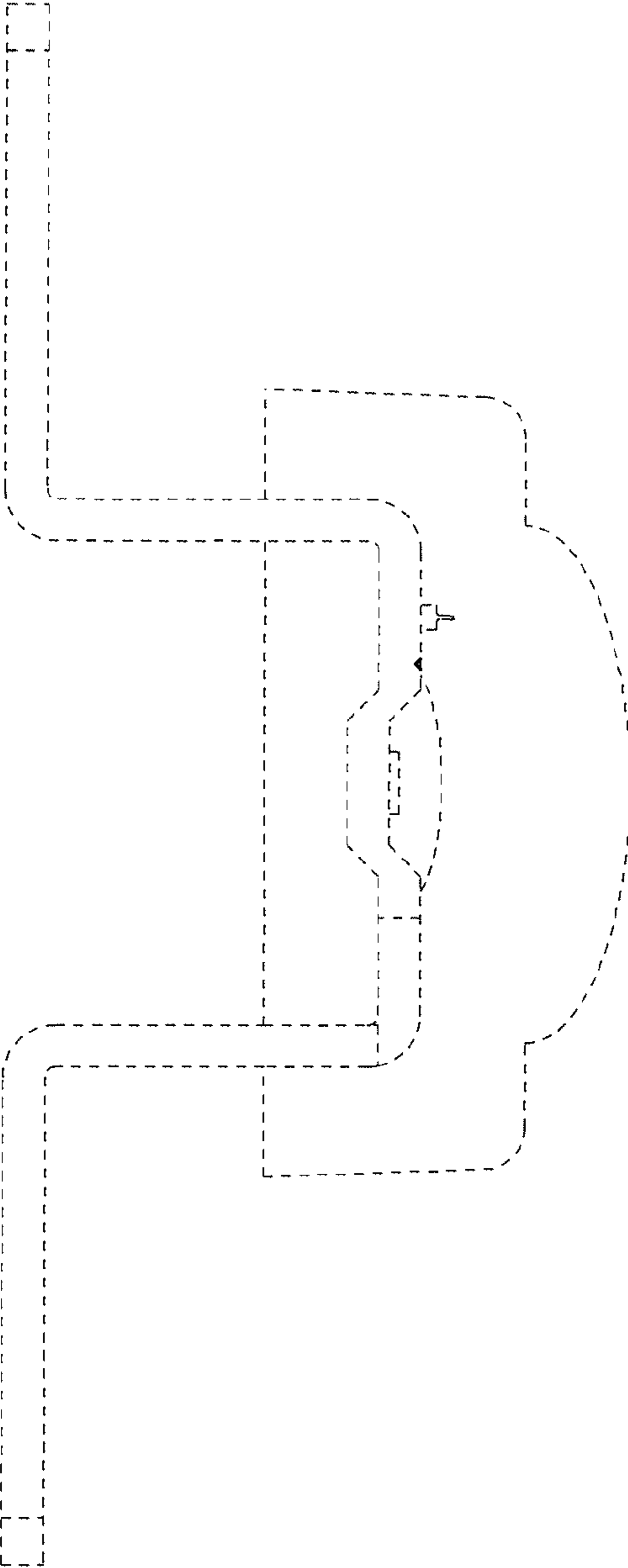


FIG. 9