



US00D800080S

(12) **United States Design Patent** (10) **Patent No.:** **US D800,080 S**
Nagata (45) **Date of Patent:** **** Oct. 17, 2017**

(54) **REACTOR TUBE FOR SEMICONDUCTOR PRODUCTION DEVICES**

(71) Applicant: **Tokyo Electron Limited**, Tokyo (JP)

(72) Inventor: **Tomoyuki Nagata**, Iwate (JP)

(73) Assignee: **Tokyo Electron Limited**, Tokyo (JP)

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

(21) Appl. No.: **29/578,225**

(22) Filed: **Sep. 20, 2016**

(30) **Foreign Application Priority Data**

Mar. 30, 2016 (JP) 2016-006969

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

(52) **U.S. Cl.**
USPC **D13/182**

(58) **Field of Classification Search**

USPC D13/158-177, 179, 180, 182, 199, 122,
D13/144; D10/104.1, 108, 61, 62;
D11/143, 144, 152; D14/216, 240, 356,
D14/509, 210; D17/22; D23/323, 328,
D23/333, 335, 336, 337, 341, 352, 357,
D23/370, 385, 386, 399, 400, 499, 331,
D23/406; D12/303, 315; 118/50, 722,
118/715, 724, 733; 205/118, 123;
D9/500, 452, 454; D15/122, 199, 138;
D8/16, 19, 323, 399, 45; D16/135, 219,
D16/302; D7/367, 404, 503, 523, 584,
D7/586, 624.1, 630, 340, 677; D26/24,
D26/36, 110; D19/40; D25/100;
D6/332

CPC C25D 17/001; C25D 17/08; C25D 17/10;
C25D 7/10; C25D 7/12; H01L 21/283;
H01L 21/285; H01H 9/02; H01H 9/0214;
H01H 13/04; H01H 21/08; H01S
5/02204; C01B 13/0281; Y10S 148/06

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,995,204 A * 3/1935 Ford B43L 7/0275
33/476
D114,756 S * 5/1939 Fuller D10/62
D137,905 S * 5/1944 Kardux 33/565
2,532,329 A * 12/1950 Premo 33/474
D192,383 S * 3/1962 Rogers D10/64
D340,874 S * 11/1993 Nicholson D10/62

(Continued)

Primary Examiner — Jeffrey D Asch

Assistant Examiner — Tracey J Bell

(74) *Attorney, Agent, or Firm* — Ipusa, PLLC

(57) **CLAIM**

The ornamental design for a reactor tube for semiconductor production devices, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a reactor tube for semiconductor production devices, showing our new design;

FIG. 2 is an enlarged cross-sectional view, along line 2-2 in FIG. 1;

FIG. 3 is a top plan view thereof;

FIG. 4 is a bottom plan view thereof;

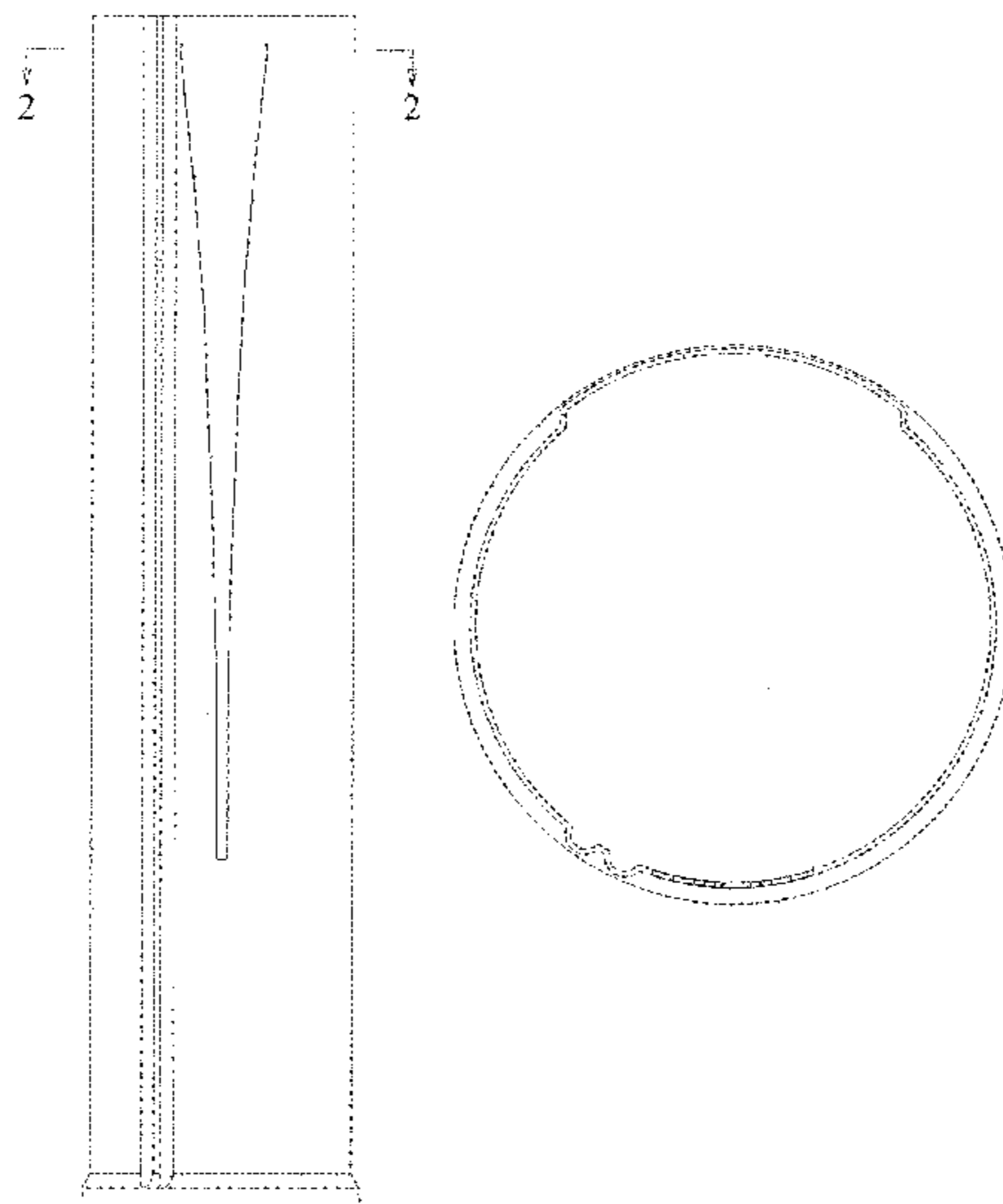
FIG. 5 is a right side view thereof;

FIG. 6 is a left side view thereof; and,

FIG. 7 is a cross-sectional view, along line 7-7 in FIG. 6, shown with additional environment related to use being shown in broken lines.

The broken lines shown in the drawings represent portions of the reactor tube for semiconductor production devices that form no part of the claimed design. The rear view of the reactor tube for semiconductor production devices has been omitted because it does not illustrate the claimed design.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D367,926	S	*	3/1996	Lin	.....	D23/406
D434,440	S	*	11/2000	Lawton	.....	D10/64
D569,996	S	*	5/2008	Zhu	.....	D25/100
D621,526	S	*	8/2010	Falligant	.....	A01G 9/12
						D25/100
D668,975	S	*	10/2012	Phillips	.....	D10/64
D719,114	S	*	12/2014	Yamazaki	.....	D13/182
2007/0098605	A1	*	5/2007	Johns	.....	B01J 8/003
						422/219

* cited by examiner

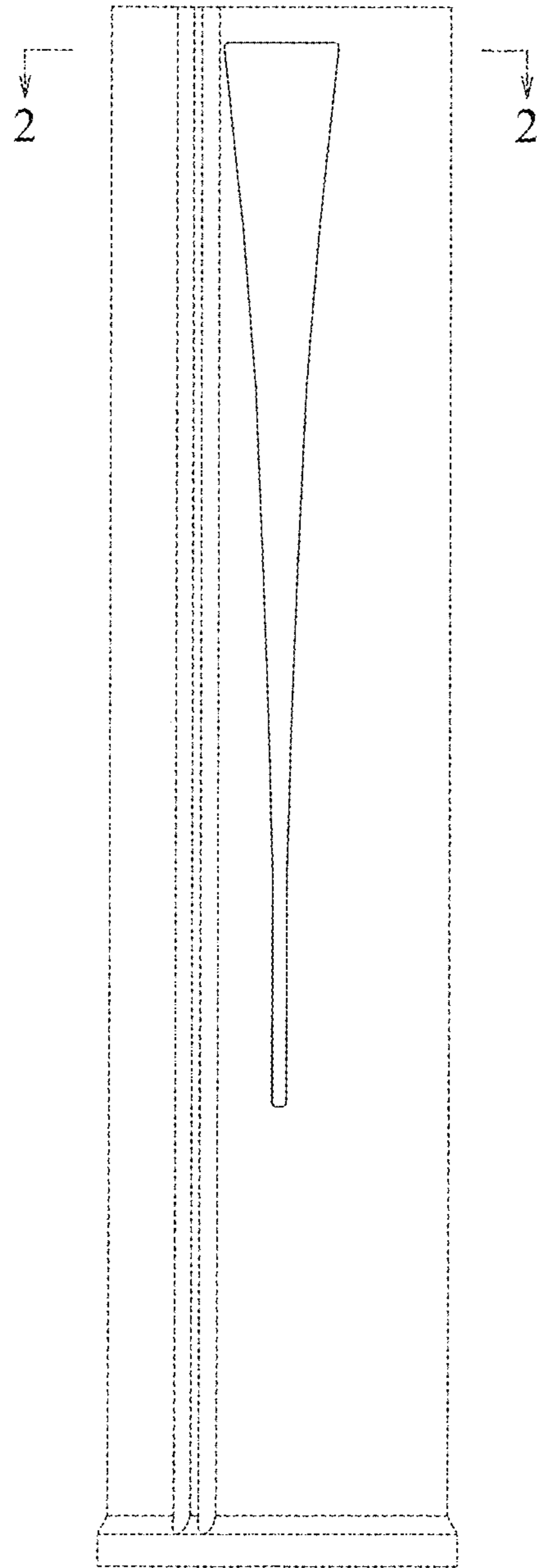


Fig. 1

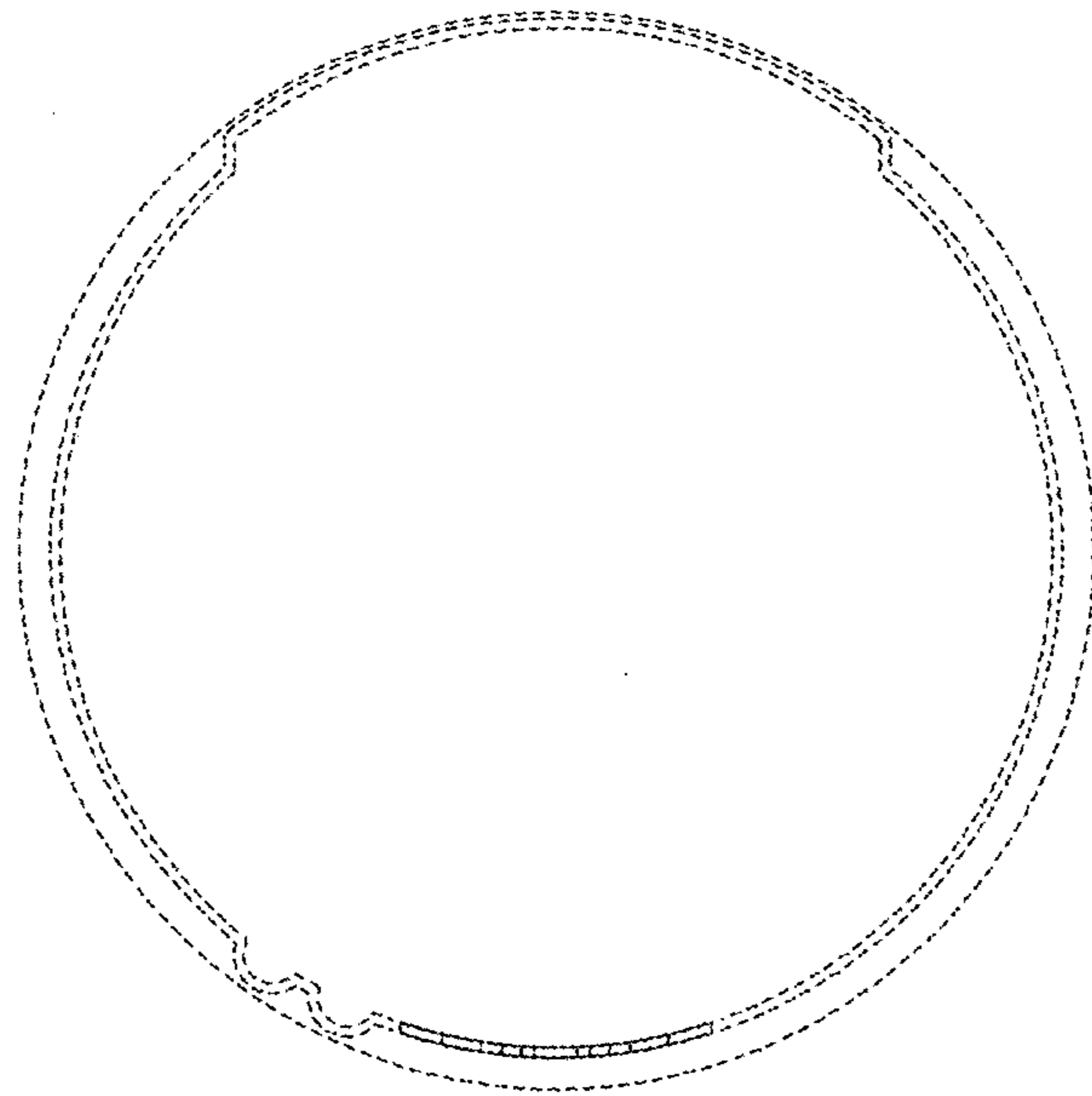


Fig.2

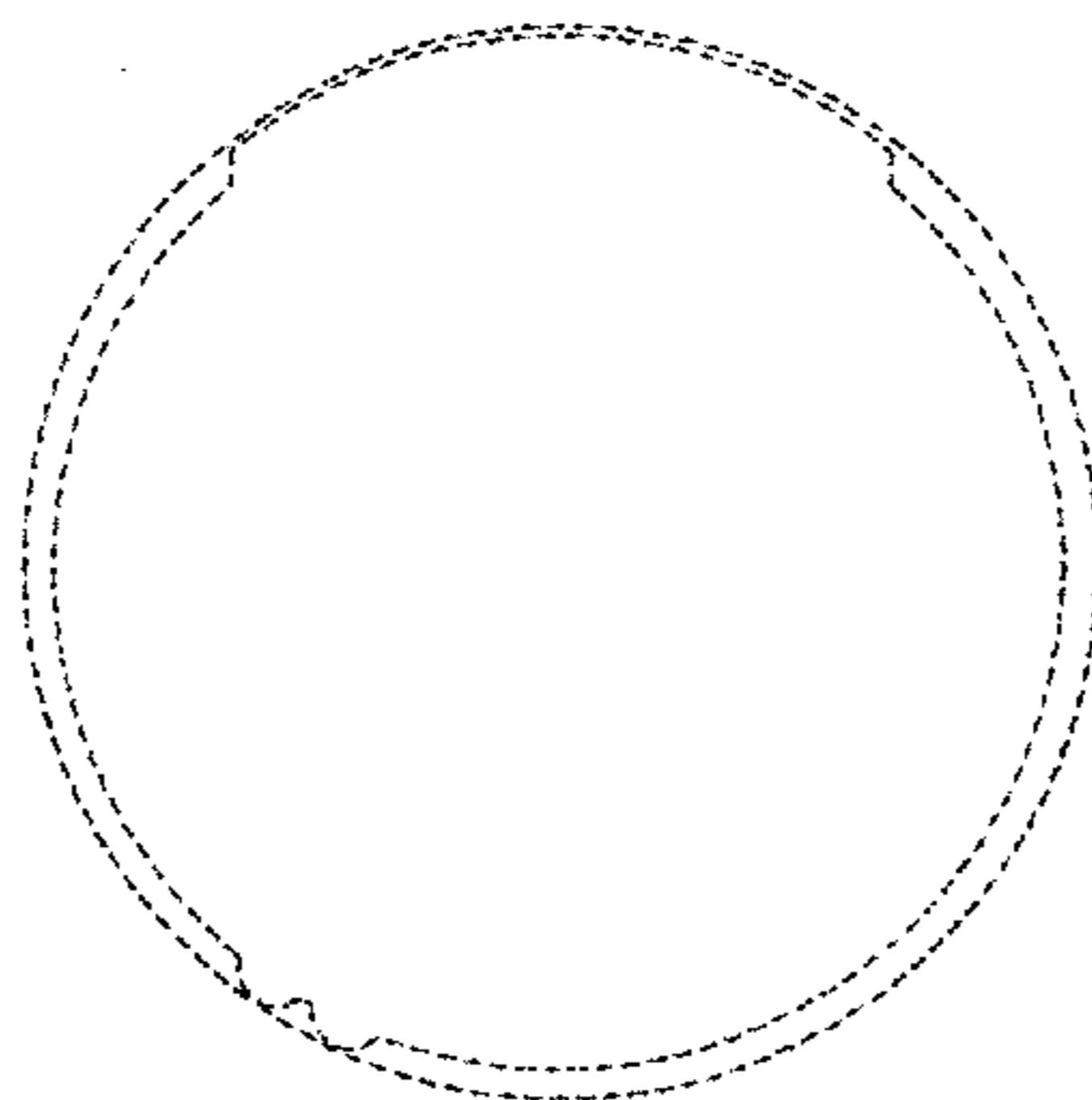


Fig.3

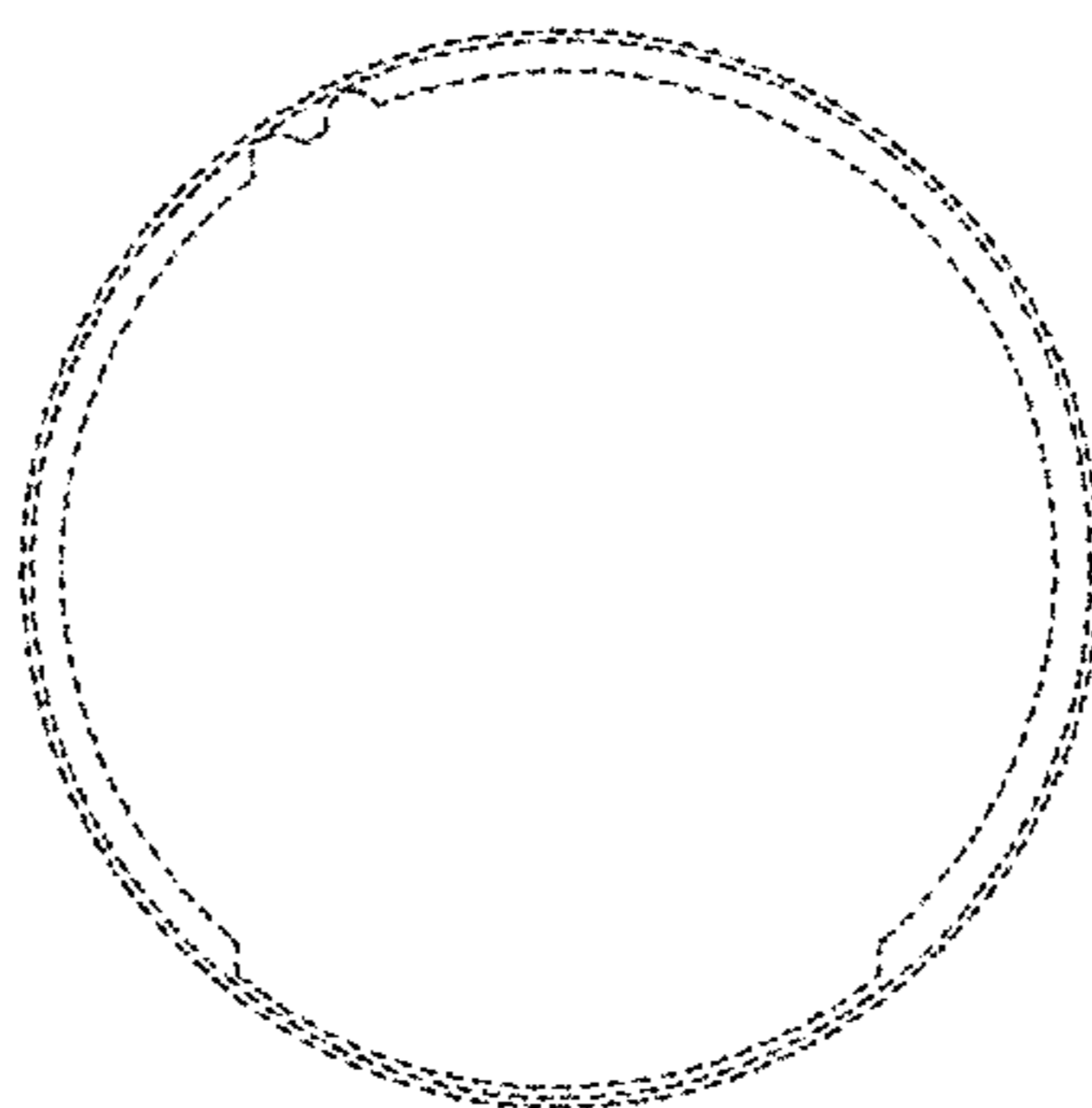


Fig.4

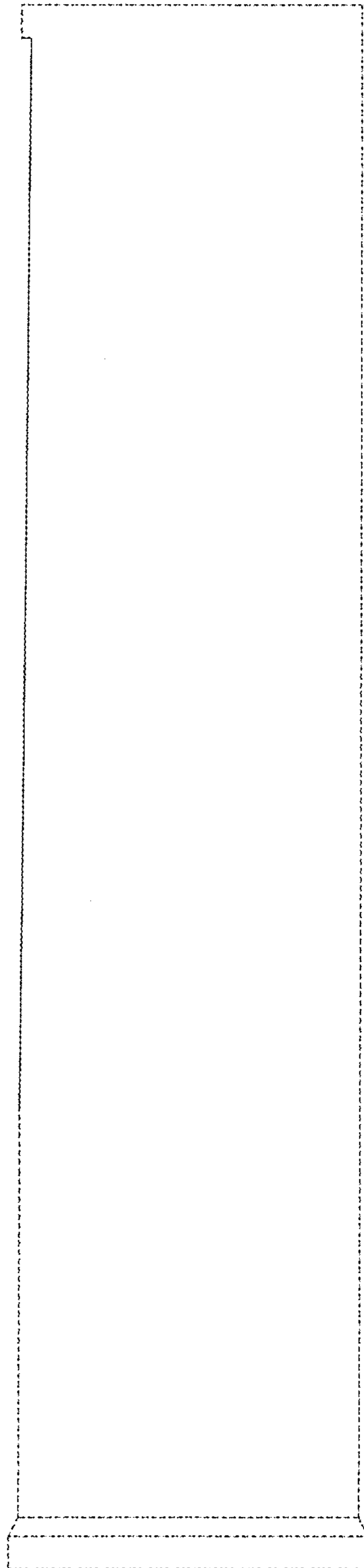


Fig.5

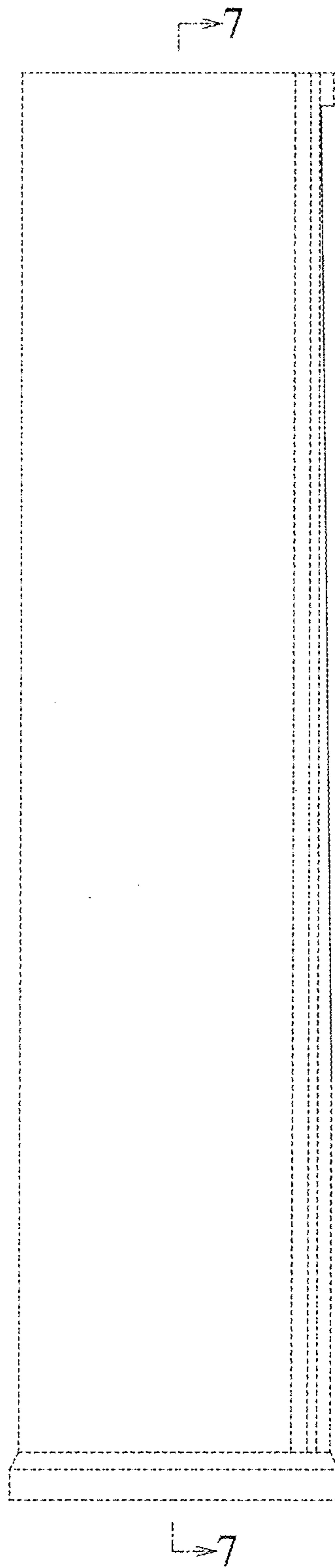


Fig.6

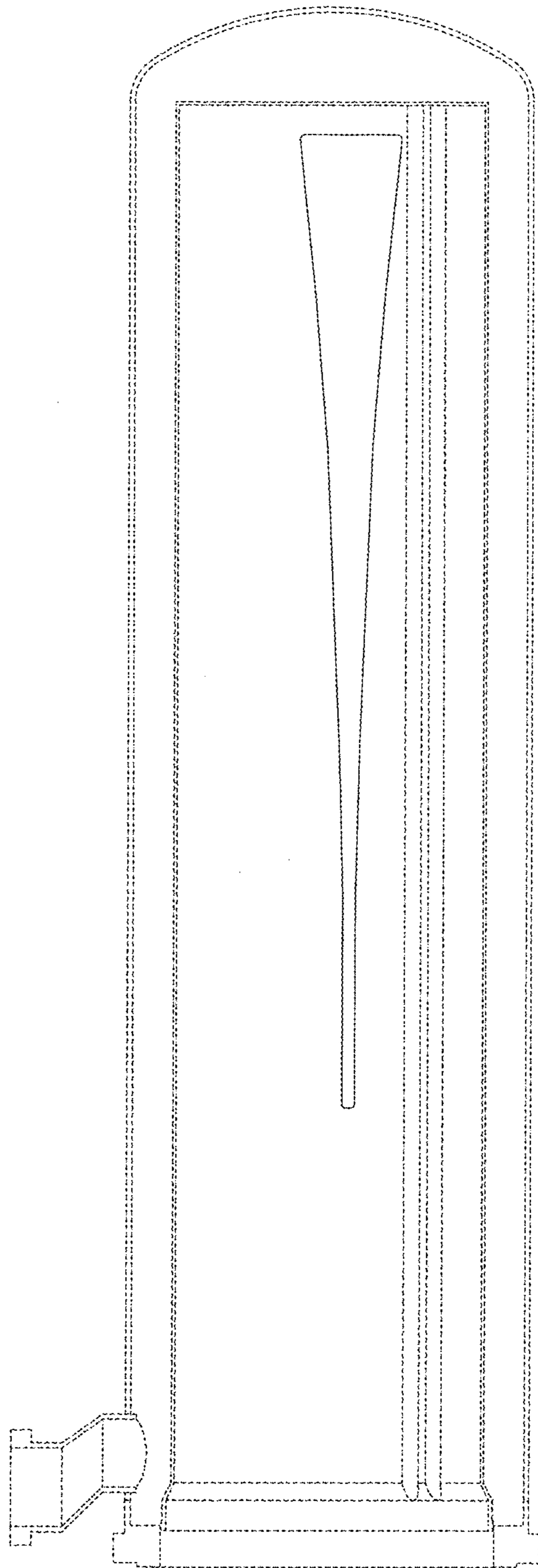


Fig. 7