



US00D859484S

(12) **United States Design Patent**
Kondo(10) **Patent No.:** **US D859,484 S**
(45) **Date of Patent:** **** Sep. 10, 2019**(54) **HEATER BLOCK**(71) Applicant: **ASM IP HOLDING B.V.**, Almere (NL)(72) Inventor: **Hiroshi Kondo**, Sagamihara (JP)(73) Assignee: **ASM IP Holding B.V.**, Almere (NL)(**) Term: **15 Years**(21) Appl. No.: **29/607,328**(22) Filed: **Jun. 12, 2017**(51) LOC (12) Cl. **15-99**

(52) U.S. Cl.

USPC **D15/199; D15/144**(58) **Field of Classification Search**USPC D15/144, 199; D23/209, 210, 233,
D23/259–262, 263–266, 268–269

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,306,664 A * 4/1994 Sakura H01L 24/11
228/180.22

5,531,835 A 7/1996 Fodor et al.

(Continued)

OTHER PUBLICATIONS

Chinese Office Action issued on May 3, 2018 in corresponding Chinese Design Patent Application No. 201730619939.0 and English translation thereof (2 pages).

Primary Examiner — Patricia A Palasik(74) *Attorney, Agent, or Firm* — Pillsbury Winthrop Shaw Pittman LLP(57) **CLAIM**

The ornamental design for a heater block, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of an embodiment of the design of a heater block;

FIG. 2 is a front view of the embodiment of the design of the heater block of FIG. 1;

FIG. 3 is a rear view of the embodiment of the design of the heater block of FIG. 1;

FIG. 4 is a top view of the embodiment of the design of the heater block of FIG. 1;

FIG. 5 is a bottom view of the embodiment of the design of the heater block of FIG. 1;

FIG. 6 is a right side view of the embodiment of the design of the heater block of FIG. 1;

FIG. 7 is a cross-sectional view of the embodiment of the design of the heater block of FIG. 1, taken along line 7-7 of FIG. 2;

FIG. 8 is a front perspective view of an embodiment of the design of a heater block;

FIG. 9 is a front view of the embodiment of the design of the heater block of FIG. 8;

FIG. 10 is a rear view of the embodiment of the design of the heater block of FIG. 8;

FIG. 11 is a top view of the embodiment of the design of the heater block of FIG. 8;

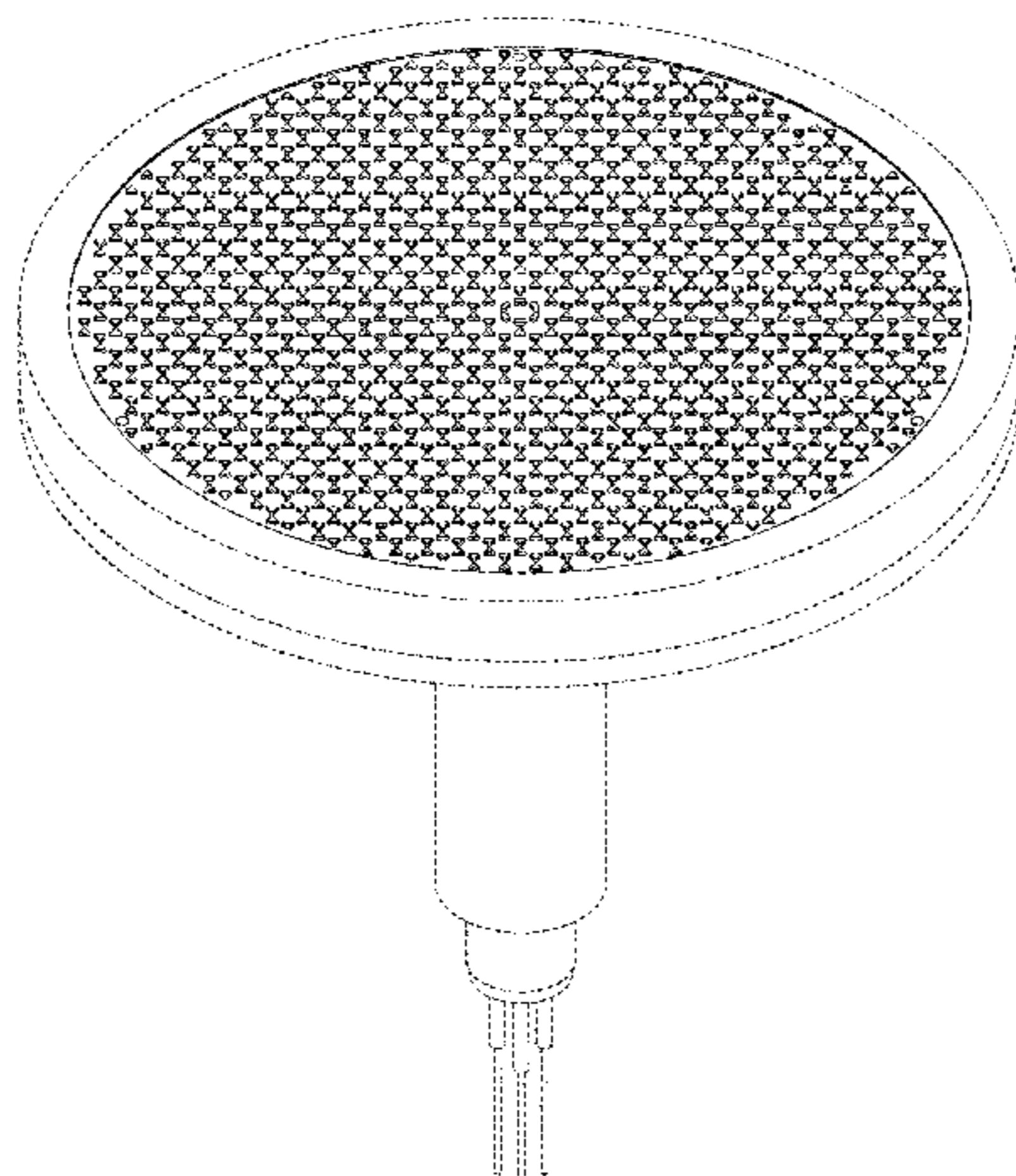
FIG. 12 is a bottom view of the embodiment of the design of the heater block of FIG. 8;

FIG. 13 is a right side view of the embodiment of the design of the heater block of FIG. 8; and,

FIG. 14 is a cross-sectional view of the embodiment of the design of the heater block of FIG. 8, taken along line 14-14 of FIG. 9.

Any components or portions in the accompanying drawings shown in one or more broken lines form no part of the claimed design or a specified embodiment thereof. Applicant is in possession of any components or portions shown in one or more broken lines and so reserves the right, without introducing any new matter, to convert any component or portion in one or more broken lines into one or more solid lines (and add any appropriate surface treatment) in order to make it part of the claimed design or a specified embodiment thereof. Further, Applicant is in possession of any combination of components or portions shown in one or more solid lines as not forming part of the claimed design and so reserves the right, without introducing any new matter, to convert any component or portion in one or more solid lines

(Continued)



into one or more broken lines in order to make it not form part of the claimed design or a specified embodiment thereof.

1 Claim, 14 Drawing Sheets

(58) Field of Classification Search

CPC ... C23C 16/46; C23C 16/505; C23C 16/4404; C23C 16/4407; C23C 16/4583; C23C 16/45565; E03C 1/26; E03C 1/28; E03C 1/262; E03C 1/298; H05B 3/68; H01L 21/6831; H01L 21/68735

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,810,933 A 9/1998 Mountsier et al.
6,394,797 B1 * 5/2002 Sugaya H01L 21/67103
118/724

6,634,882 B2 *	10/2003	Goodman	C23C 16/4581 211/41.18
6,709,267 B1 *	3/2004	Hawkins	C23C 16/4585 118/500
D529,057 S *	9/2006	Willson	D15/144
D643,055 S *	8/2011	Takahashi	D15/199
7,993,462 B2 *	8/2011	Takahashi	C23C 16/52 118/715
D724,196 S *	3/2015	Turner	D23/415
D725,168 S *	3/2015	Yamagishi	D15/199
D726,884 S *	4/2015	Yamagishi	D23/259
9,607,822 B2	3/2017	Buckalew et al.	
D799,646 S *	10/2017	Aida	D23/259
D807,921 S *	1/2018	Grzesiak	D15/5
D830,981 S *	10/2018	Jeong	D13/182
10,087,525 B2 *	10/2018	Schmotzer	H01L 21/68785
2002/0162630 A1	11/2002	Satoh et al.	
2005/0274708 A1 *	12/2005	Chan	H01L 21/67103 219/392
2006/0011298 A1 *	1/2006	Lim	C23C 16/45514 156/345.34

* cited by examiner

FIG.1

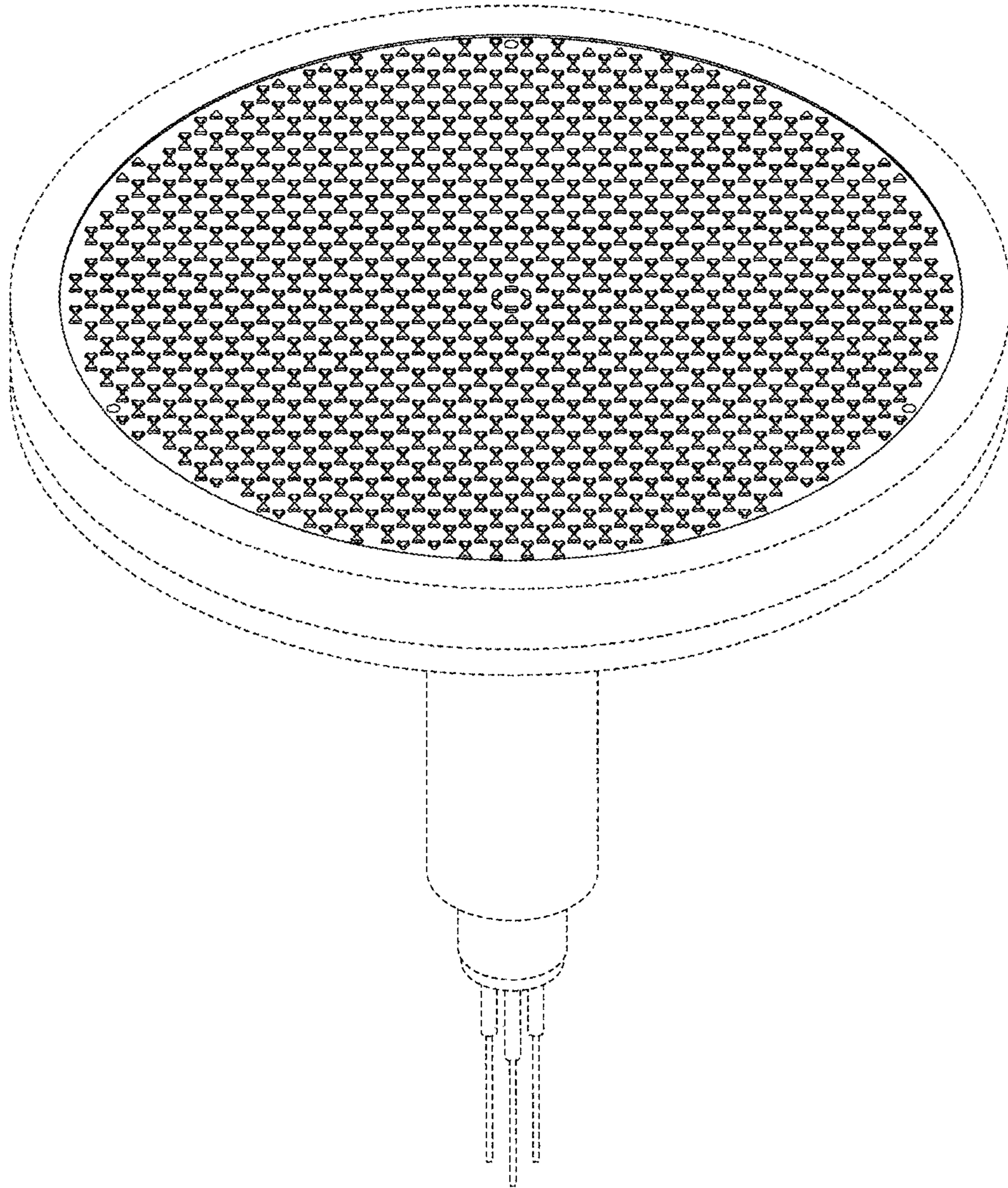


FIG.2

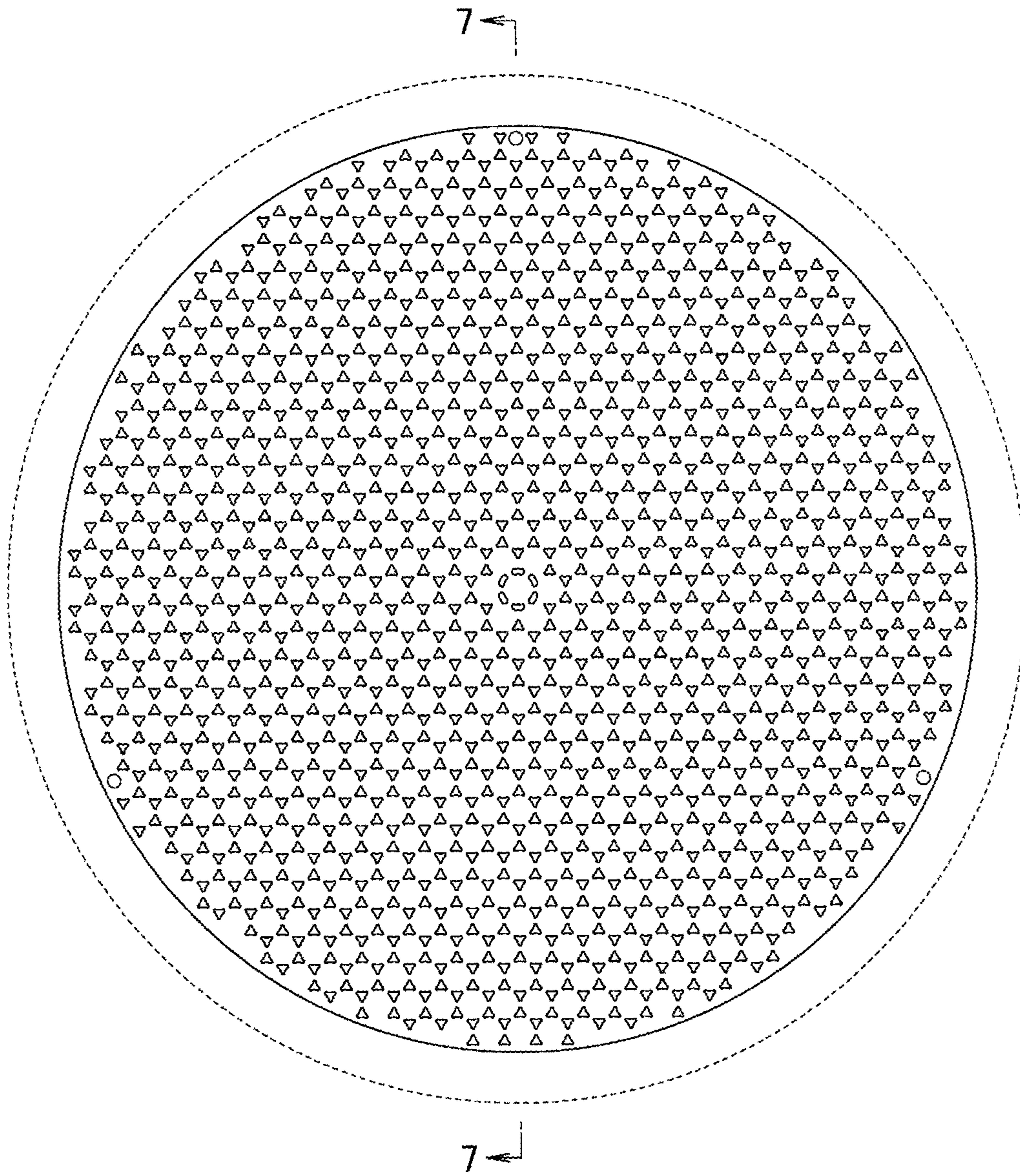


FIG.3

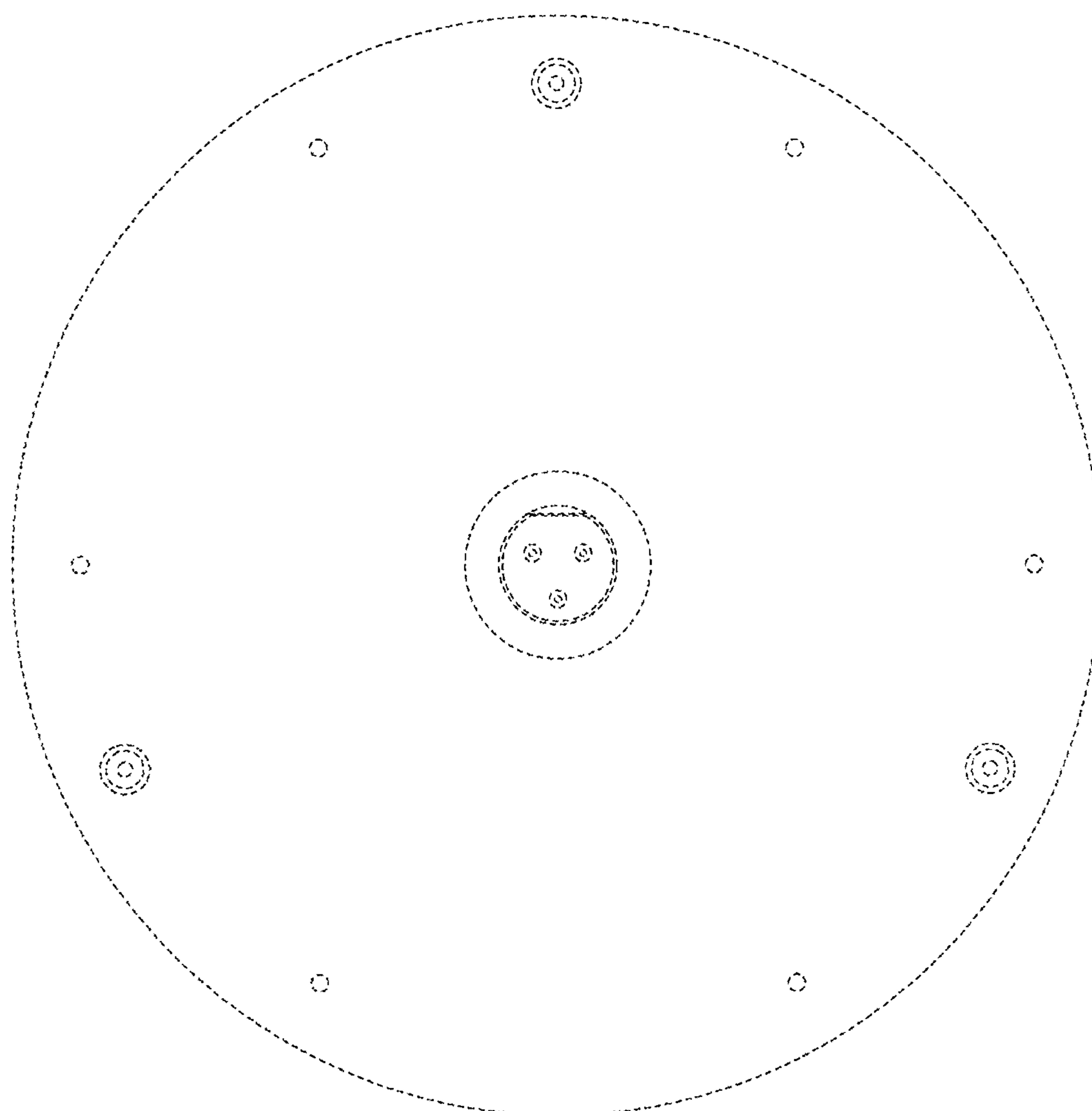


FIG.4

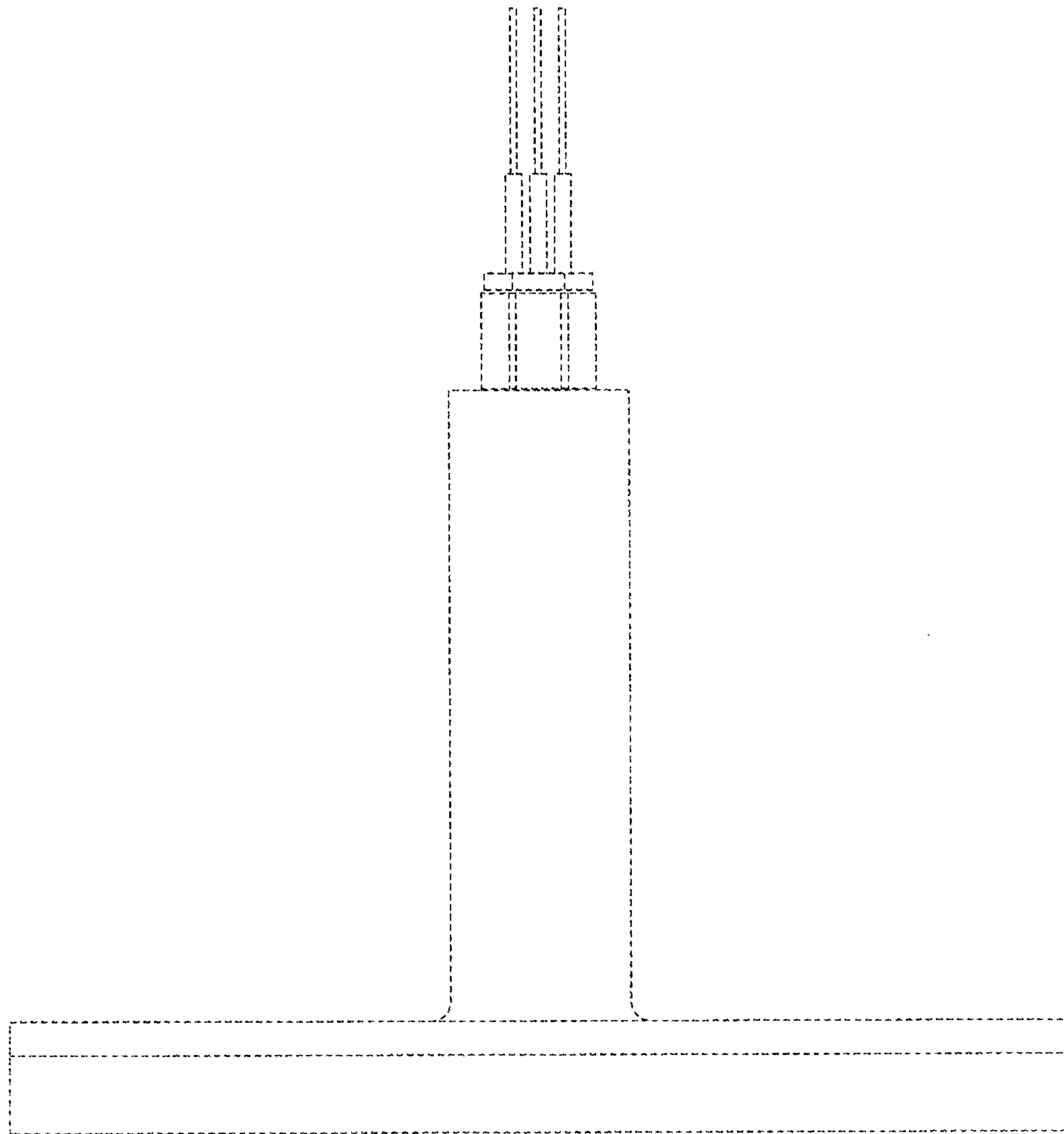


FIG.5

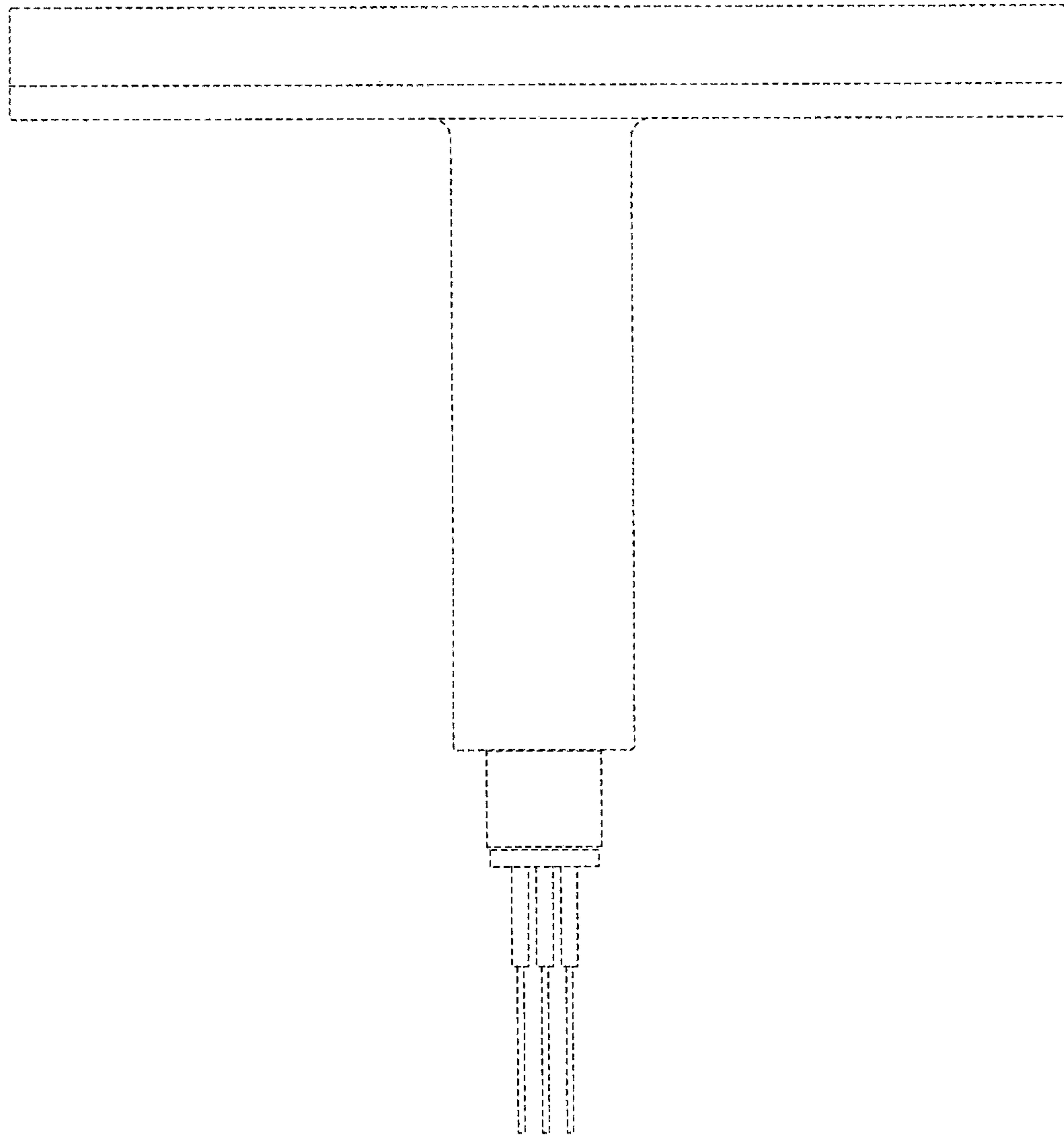


FIG.6

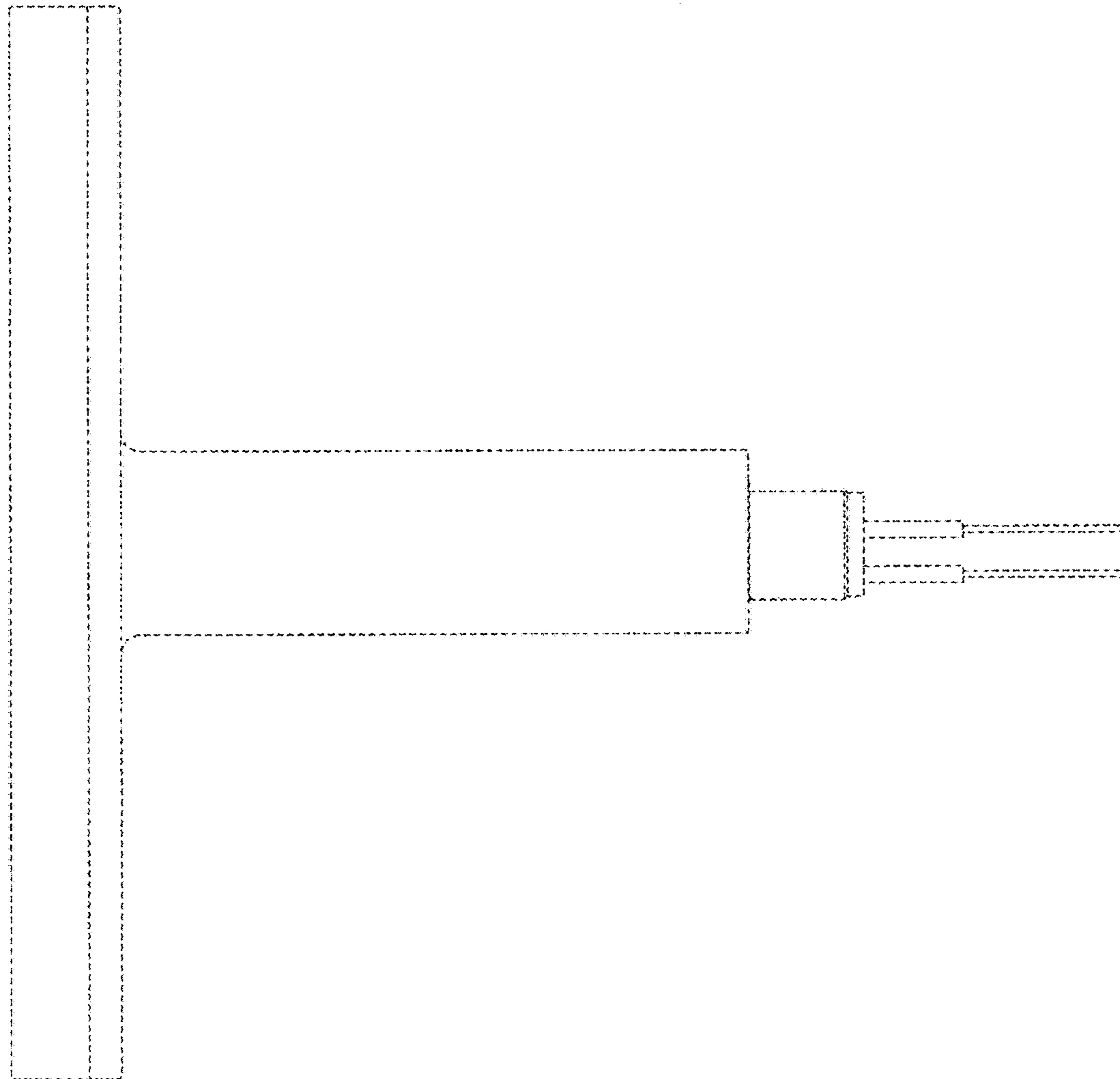


FIG.7

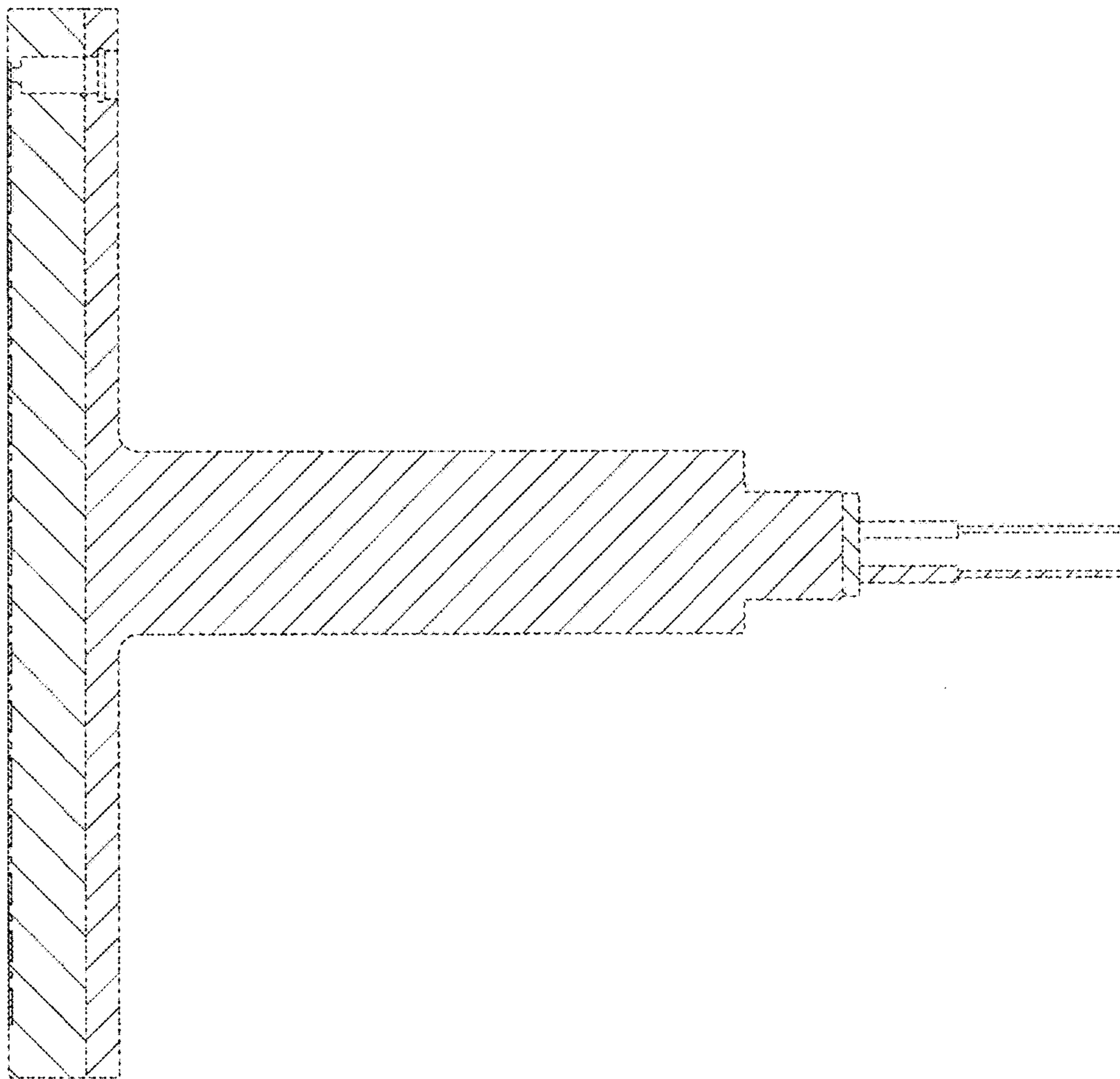


FIG.8

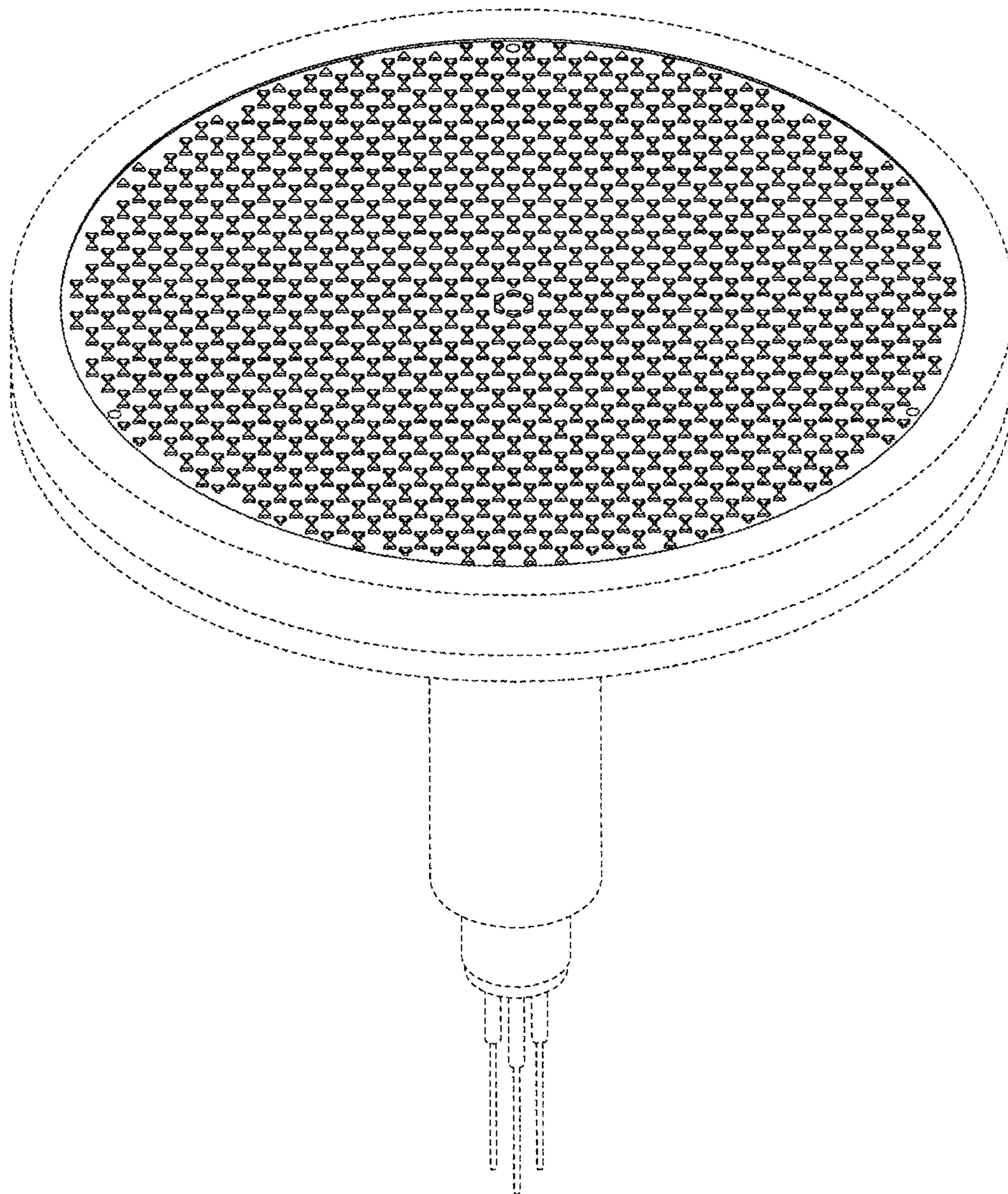


FIG.9

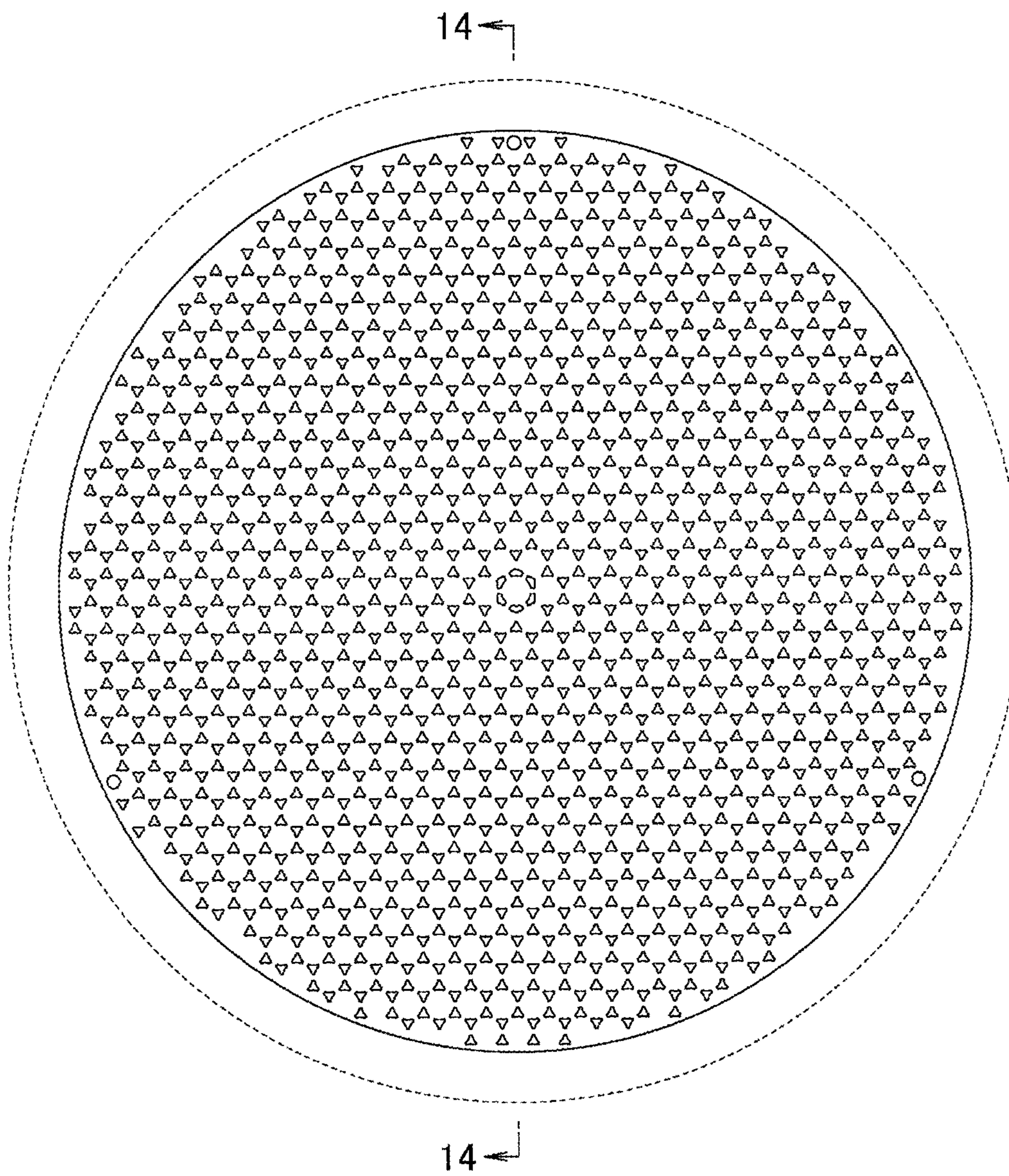


FIG.10

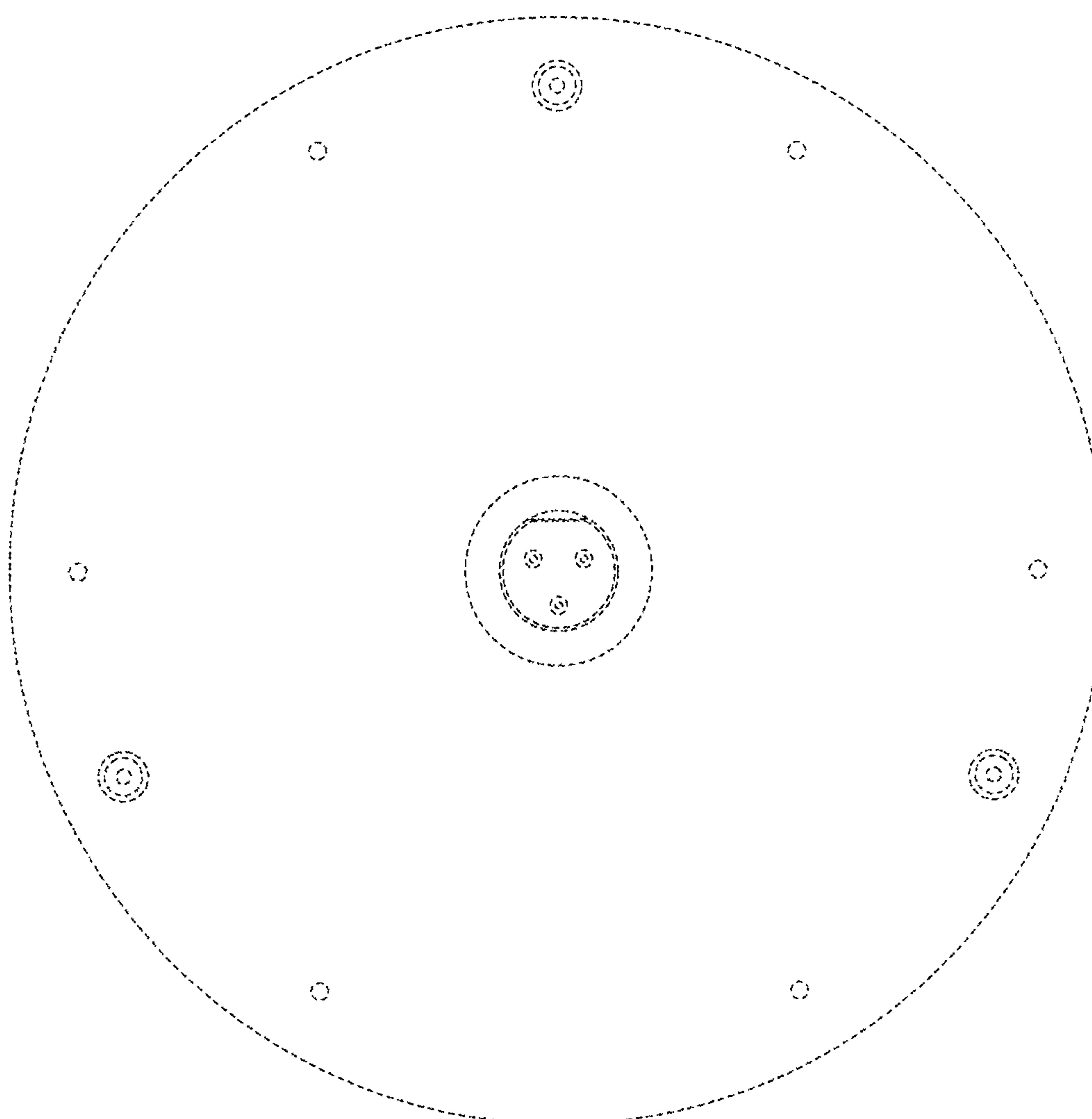


FIG.11

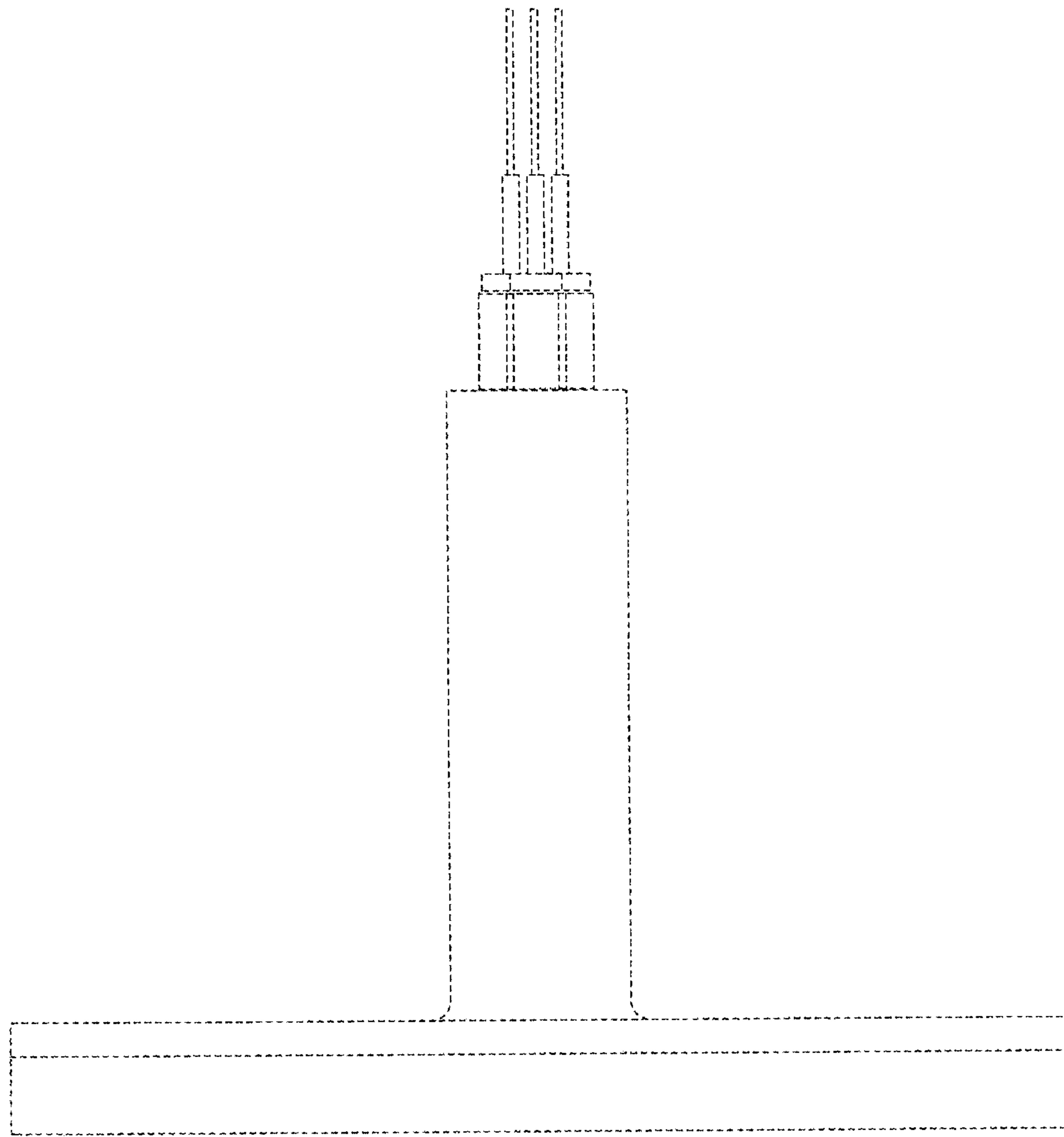


FIG.12

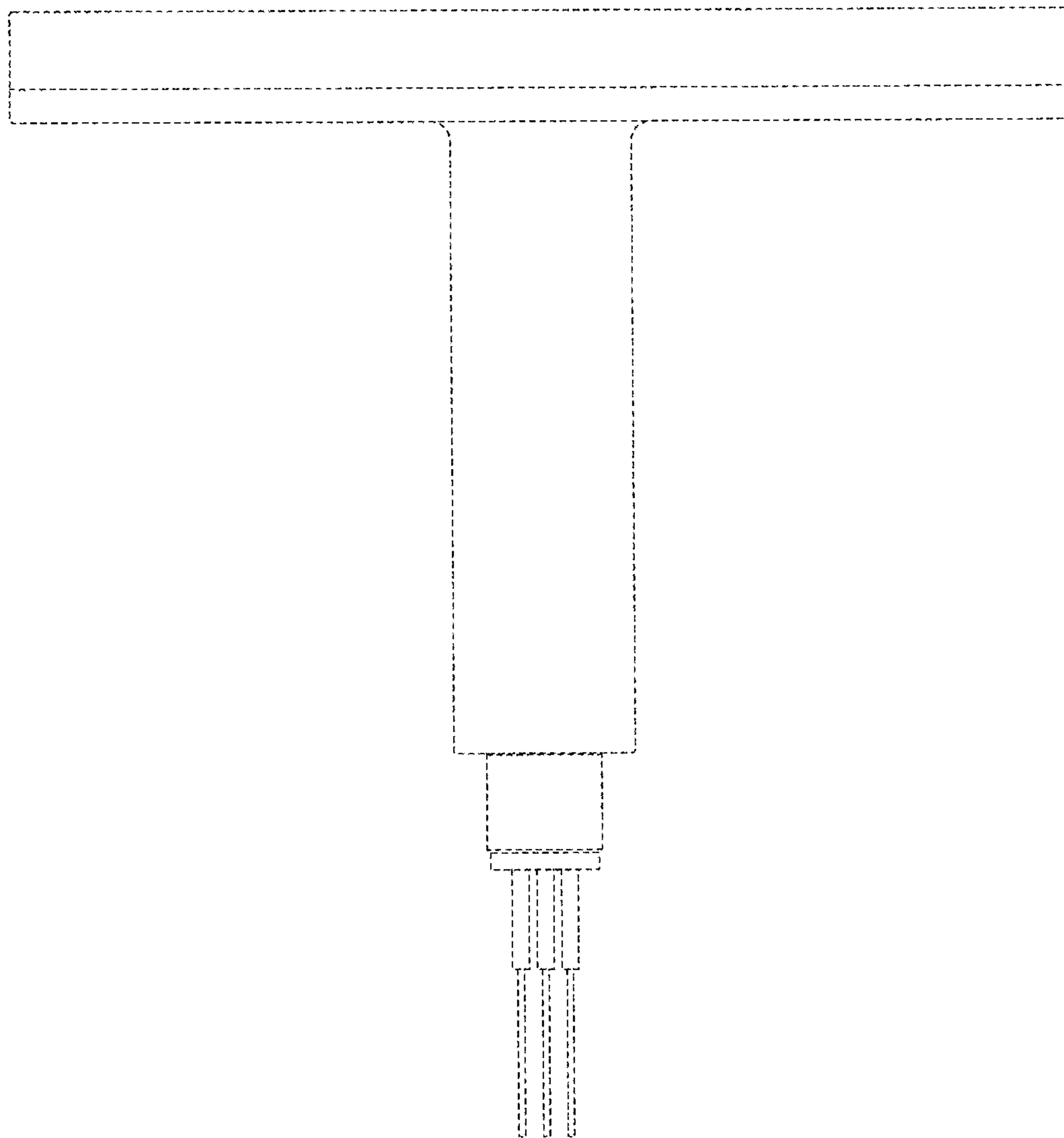


FIG.13

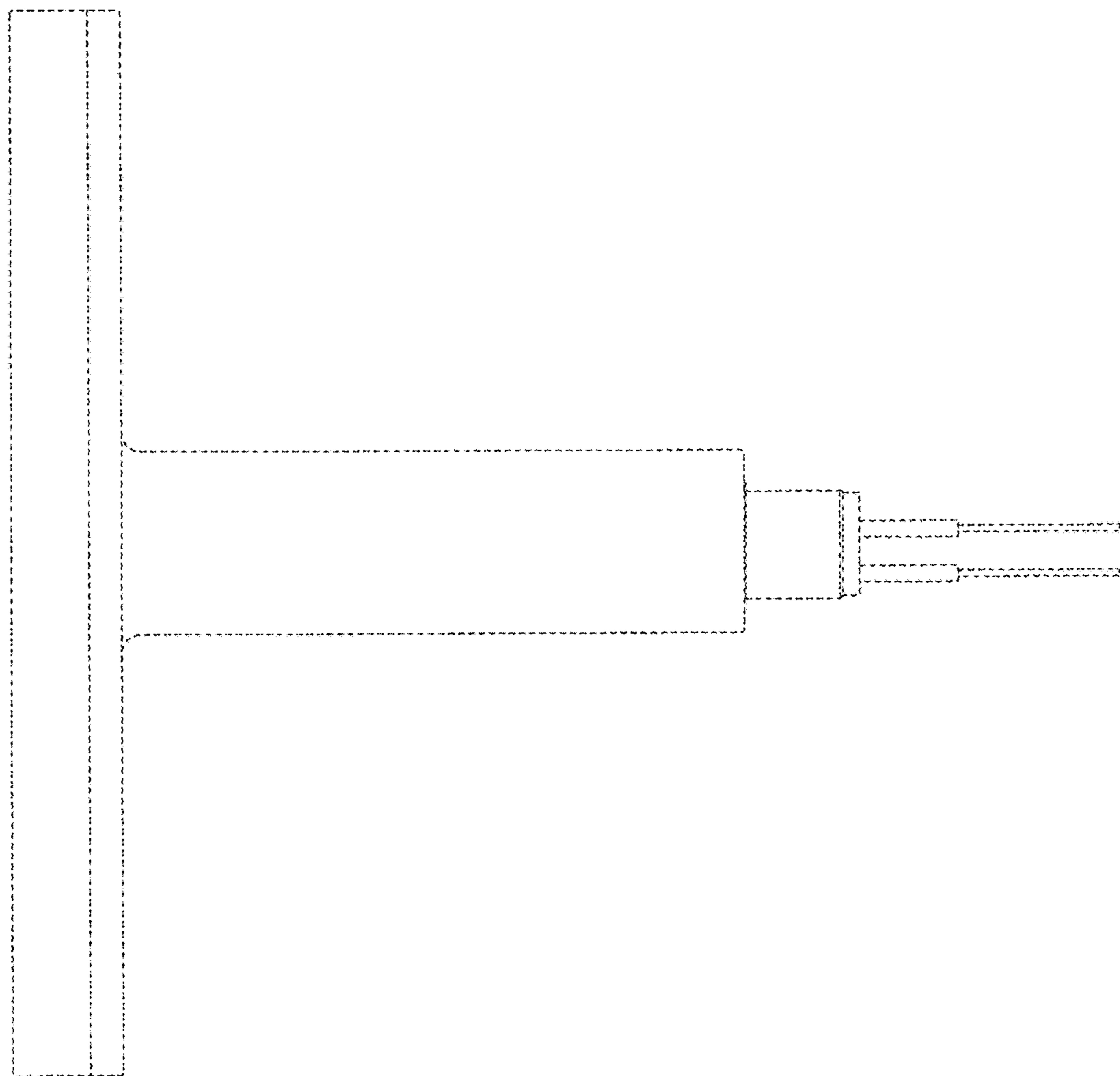


FIG.14

