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

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(45) **Date of Patent:** **** May 31, 2016**

(54) **MICRO FLOW CHANNEL CHIP FOR FLOW CYTOMETER**

424/473; 435/91.2, 701, 705, 6.19, 435/6.11-6.14, 4, 5, 300.1, 289.1, 288.7, 435/287.2; 436/174, 63, 526, 524, 514, 436/501, 43, 180; 604/892.1

(71) Applicant: **Sony Corporation**, Tokyo (JP)

CPC B01L 3/5027-3/50279; B01L 2200/027; B01L 2300/0829; B01L 2300/0861-2300/0883; B01J 19/0093; F04B 19/006; B01F 3/0446; B01F 13/0062; B05B 7/0475; B05B 7/061; B05B 7/065; B05B 7/066; B05B 7/0884

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See application file for complete search history.

(73) Assignee: **Sony Corporation**, Tokyo (JP)

(56) **References Cited**

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

U.S. PATENT DOCUMENTS

(21) Appl. No.: **29/484,307**

8,158,082	B2 *	4/2012	Imran	422/505
D673,286	S	12/2012	Shinoda	
D673,287	S	12/2012	Akiyama et al.	
D725,524	S *	3/2015	Takach et al.	D10/103
2005/0183496	A1	8/2005	Baek	
2006/0147343	A1	7/2006	Teramoto	
2008/0072895	A1	3/2008	Ganan-Calvo	
2009/0202608	A1 *	8/2009	Alessi et al.	424/424
2011/0235030	A1	9/2011	Champseix et al.	
2012/0276543	A1	11/2012	Quake et al.	
2013/0090287	A1	4/2013	Alessi et al.	

(22) Filed: **Mar. 7, 2014**

Related U.S. Application Data

(63) Continuation of application No. 29/421,304, filed on Jun. 29, 2012, now Pat. No. Des. 704,580.

(30) **Foreign Application Priority Data**

Mar. 8, 2012	(JP)	D2012-005307
Mar. 8, 2012	(JP)	D2012-005308
Mar. 8, 2012	(JP)	D2012-005309
Mar. 8, 2012	(JP)	D2012-005310

* cited by examiner

Primary Examiner — Antoine D Davis

(74) *Attorney, Agent, or Firm* — Michael Best & Friedrich LLP

(51) **LOC (10) Cl.** **10-04**

(57) **CLAIM**

(52) **U.S. Cl.**
USPC **D10/81**; D10/94; D10/103

The ornamental design for a micro flow channel chip for flow cytometer, as shown and described.

(58) **Field of Classification Search**
USPC D10/81, 94, 103; D24/216, 224, 225, D24/226; 73/866.5, 54.09, 53.01, 514.29, 73/514.01, 196, 204.15, 28.05; 137/487, 137/1, 561 R, 896, 833; 204/451, 601, 643, 204/600, 547, 515, 454; 209/155, 131, 209/127.1, 132; 210/321.84; 324/71.1; 356/445, 337, 243.2; 417/413.3, 413.2, 417/322, 244; 422/82.06, 64, 69, 504, 505, 422/503, 413, 400, 130, 502, 68.1;

DESCRIPTION

FIG. 1 is a front elevational view of a first embodiment of a micro flow channel chip for flow cytometer showing our new design, a rear elevational view thereof being a mirror image; FIG. 2 is a right side elevational view thereof, a left side elevational view being a mirror image; and FIG. 3 is a top plan view thereof, a bottom plan view being a mirror image;

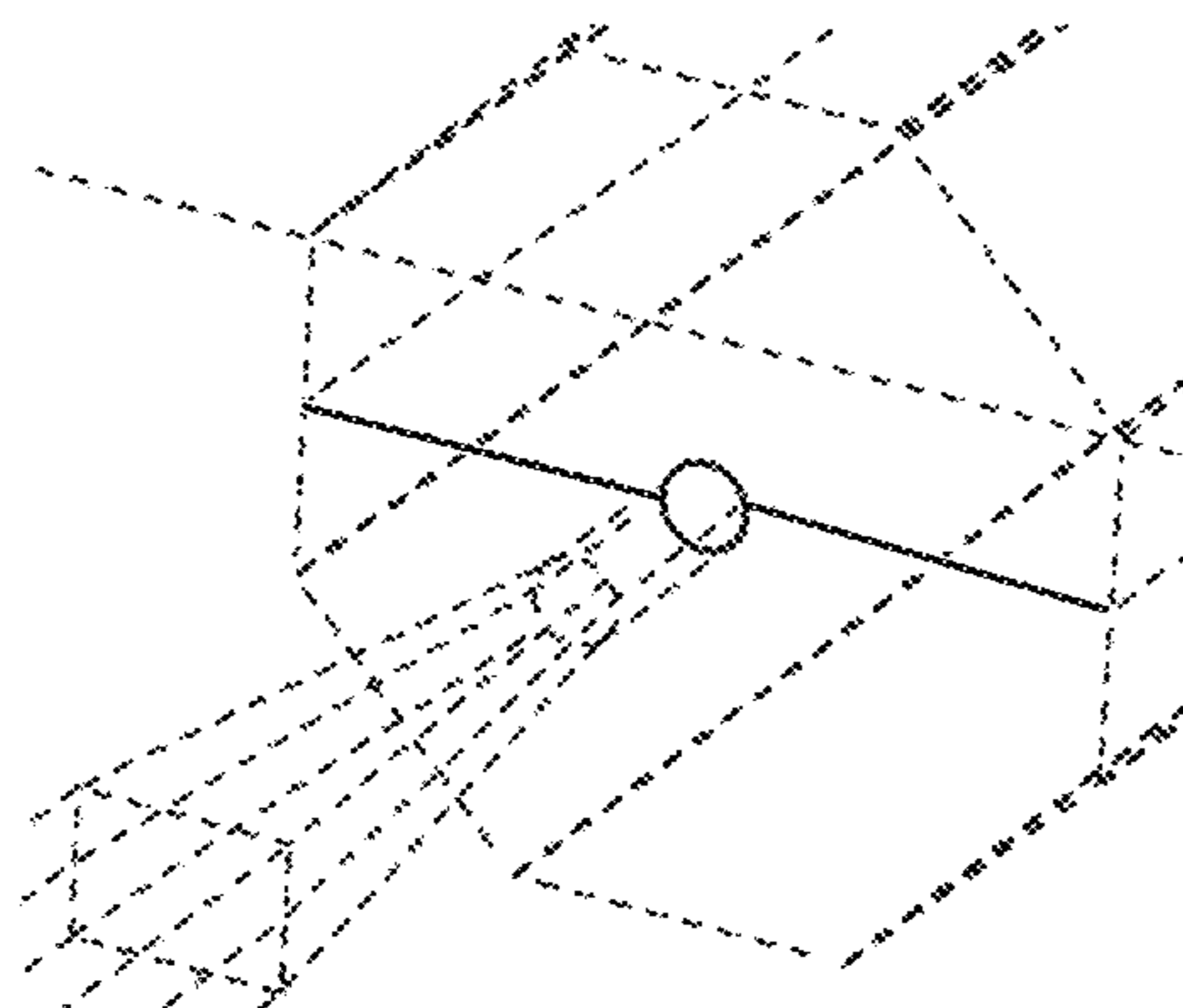


FIG. 4 is an enlarged perspective view thereof;
FIG. 5 is an enlarged top plan view thereof;
FIG. 6 is an enlarged front elevational view thereof; and
FIG. 7 is an enlarged right side elevational view thereof;
FIG. 8 is a front elevational view of a second embodiment of a micro flow channel chip for flow cytometer showing our new design, a rear elevational view thereof being a mirror image;
FIG. 9 is a right side elevational view thereof, a left side elevational view being a mirror image; and
FIG. 10 is a top plan view thereof, a bottom plan view being a mirror image;
FIG. 11 is an enlarged perspective view thereof;
FIG. 12 is an enlarged top plan view thereof;
FIG. 13 is an enlarged front elevational view thereof; and
FIG. 14 is an enlarged right side elevational view thereof.
FIG. 15 is a front elevational view of a third embodiment of a micro flow channel chip for flow cytometer showing our new design, a rear elevational view thereof being a mirror image;

FIG. 16 is a right side elevational view thereof, a left side elevational view being a mirror image; and
FIG. 17 is a top plan view thereof, a bottom plan view being a mirror image;
FIG. 18 is an enlarged perspective view thereof;
FIG. 19 is an enlarged top plan view thereof;
FIG. 20 is an enlarged front elevational view thereof; and
FIG. 21 is an enlarged right side elevational view thereof.
FIG. 22 is a partially enlarged perspective view of FIG. 4 showing the claimed portion.
FIG. 23 is a partially enlarged perspective view of FIG. 11 showing the claimed portion; and,
FIG. 24 is a partially enlarged perspective view of FIG. 18 showing the claimed portion.
Portions in broken lines are for illustrative purposes only and form no part of the claimed design.

1 Claim, 24 Drawing Sheets

FIG. 1

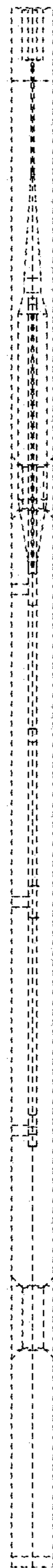


FIG.2

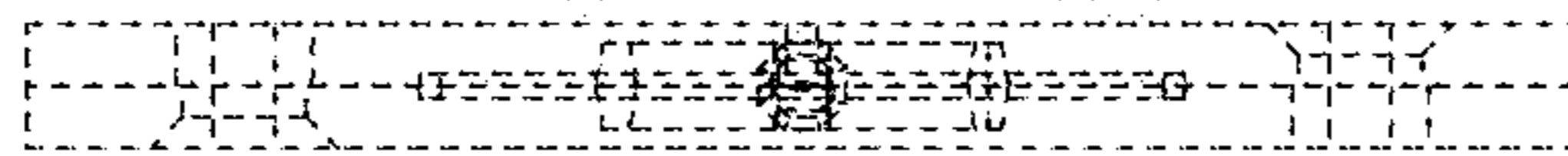


FIG.3

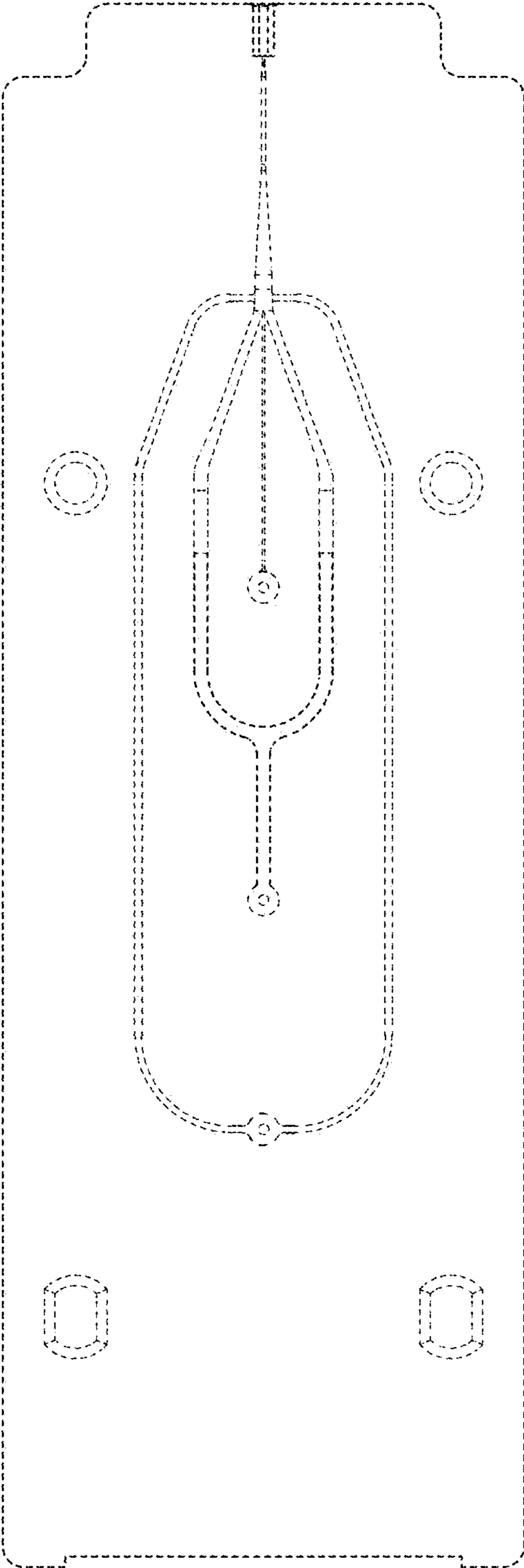
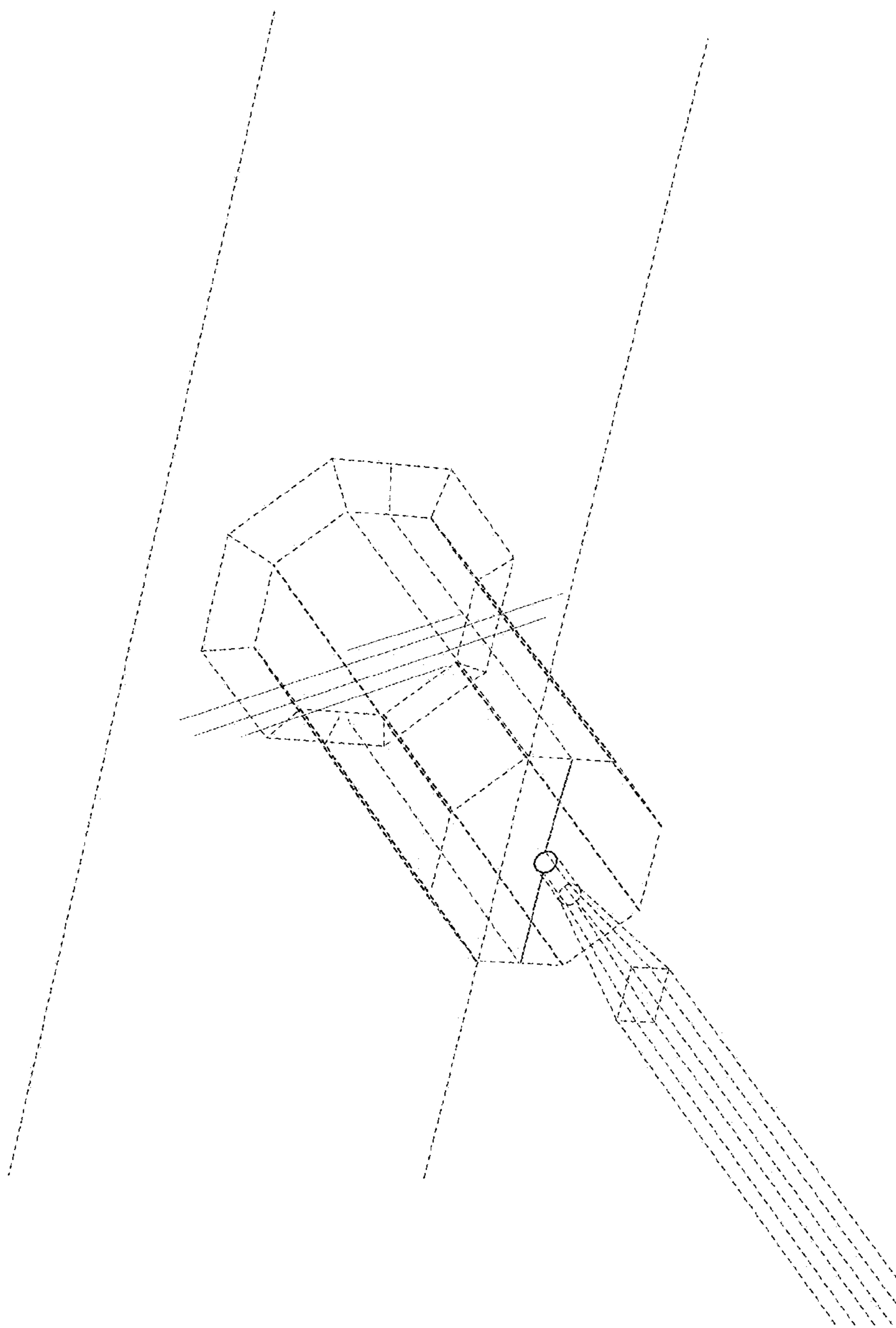


FIG.4



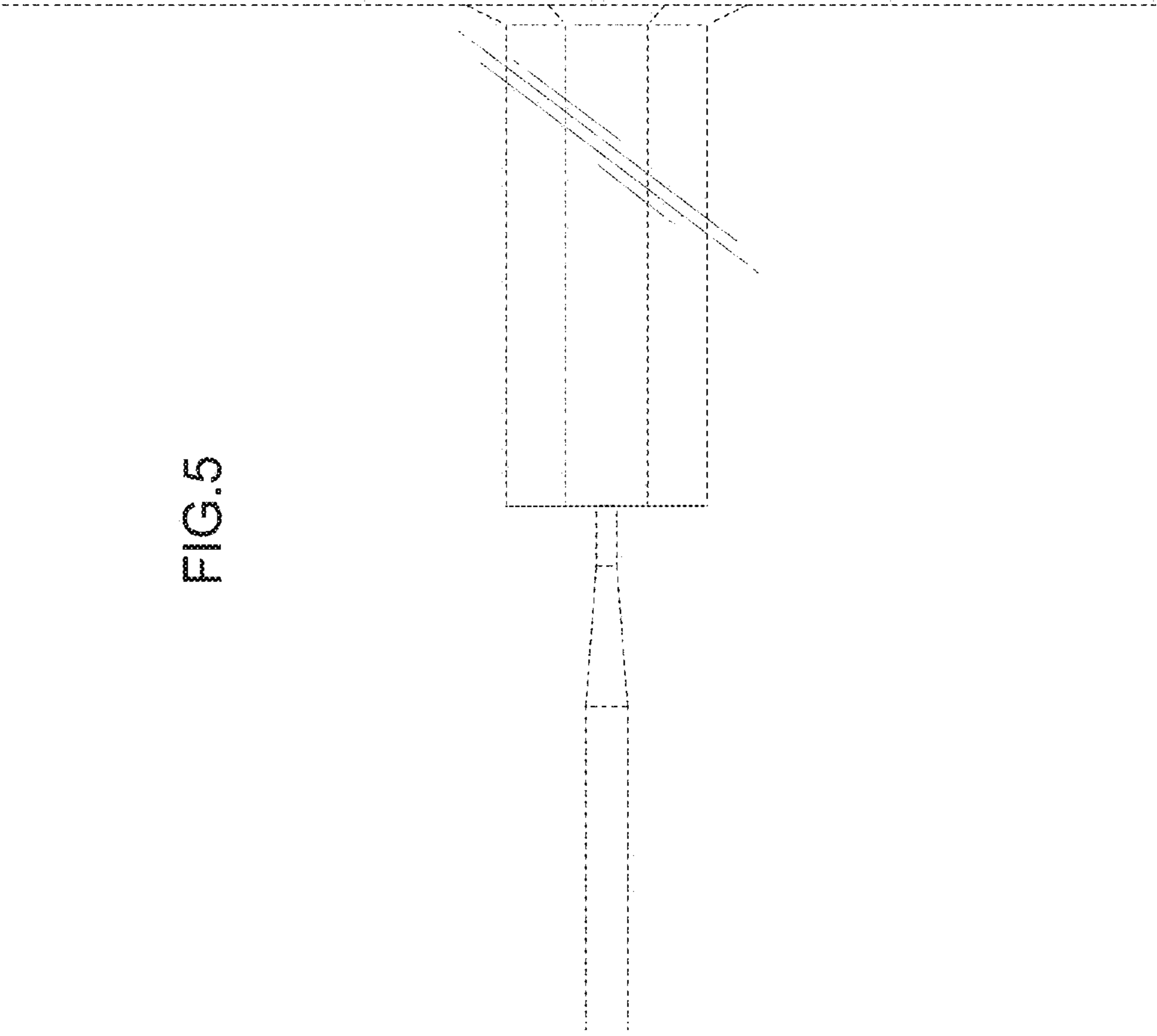


FIG. 5

FIG.6

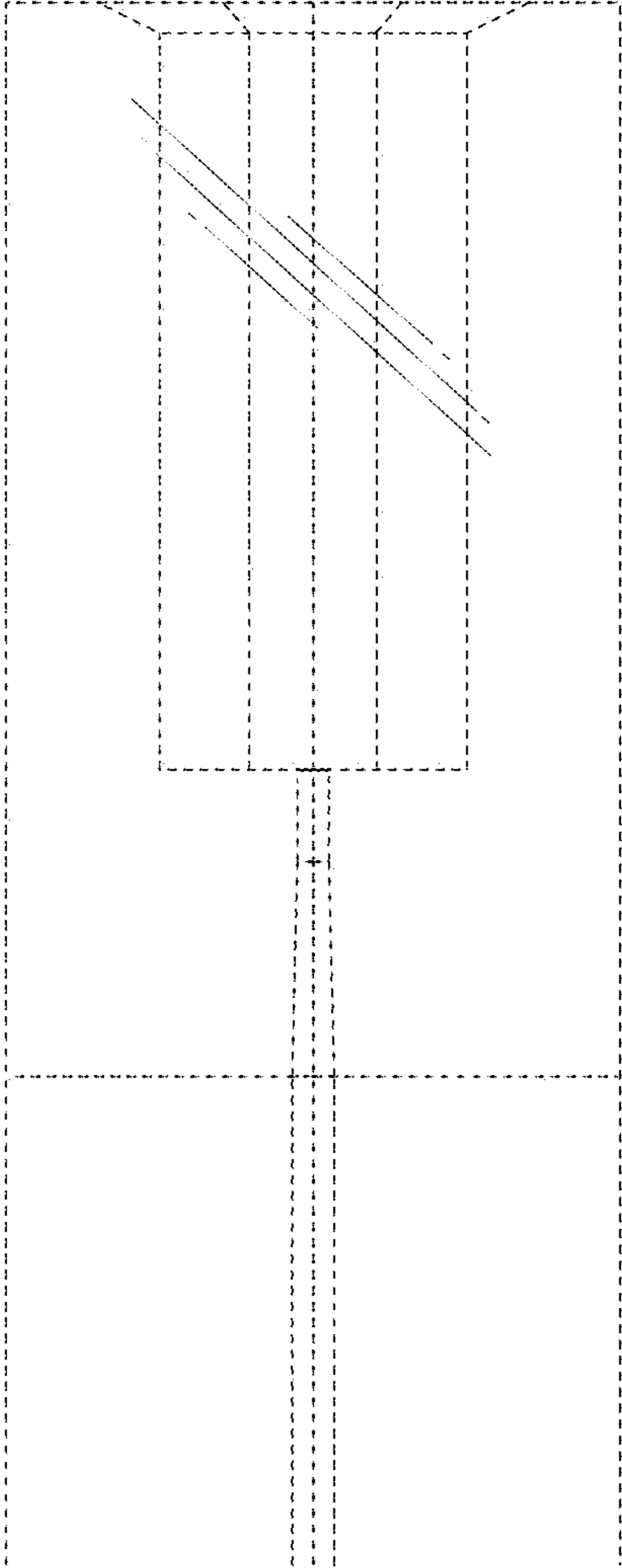


FIG.7

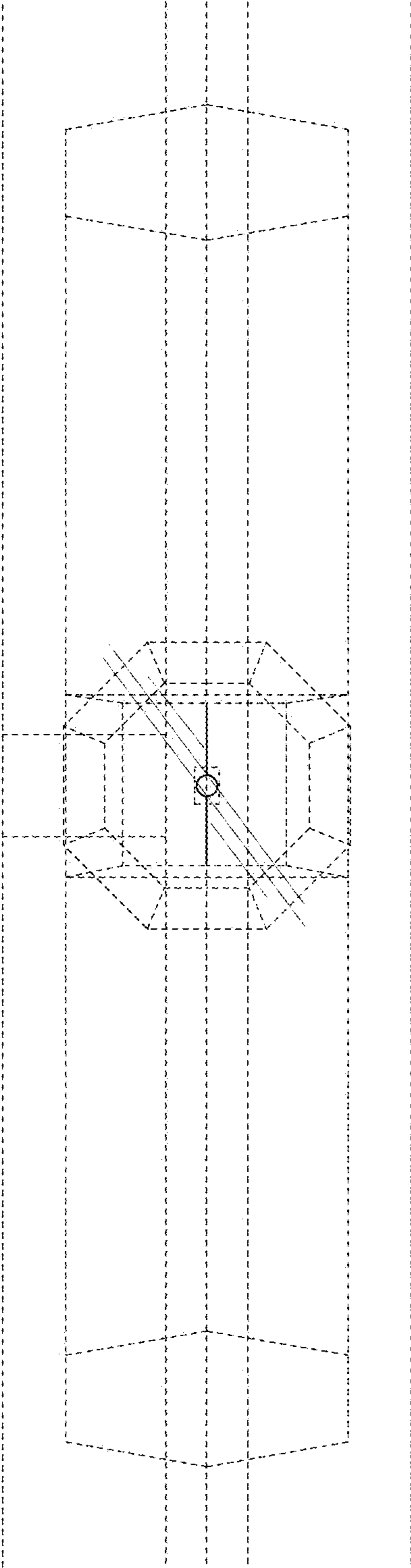


FIG. 8

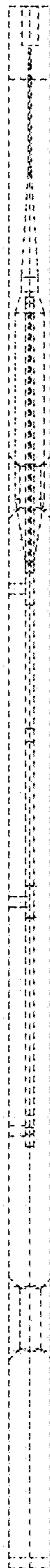


FIG. 9

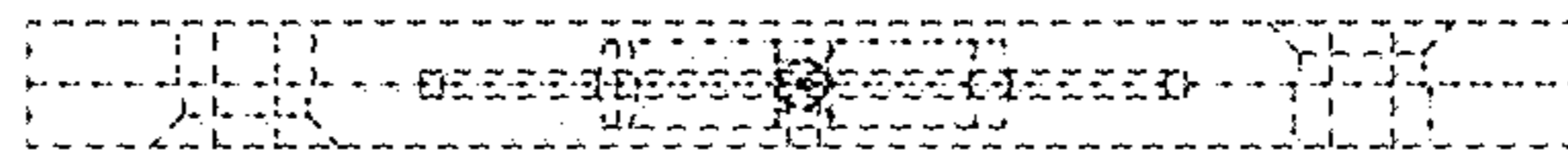


FIG.10

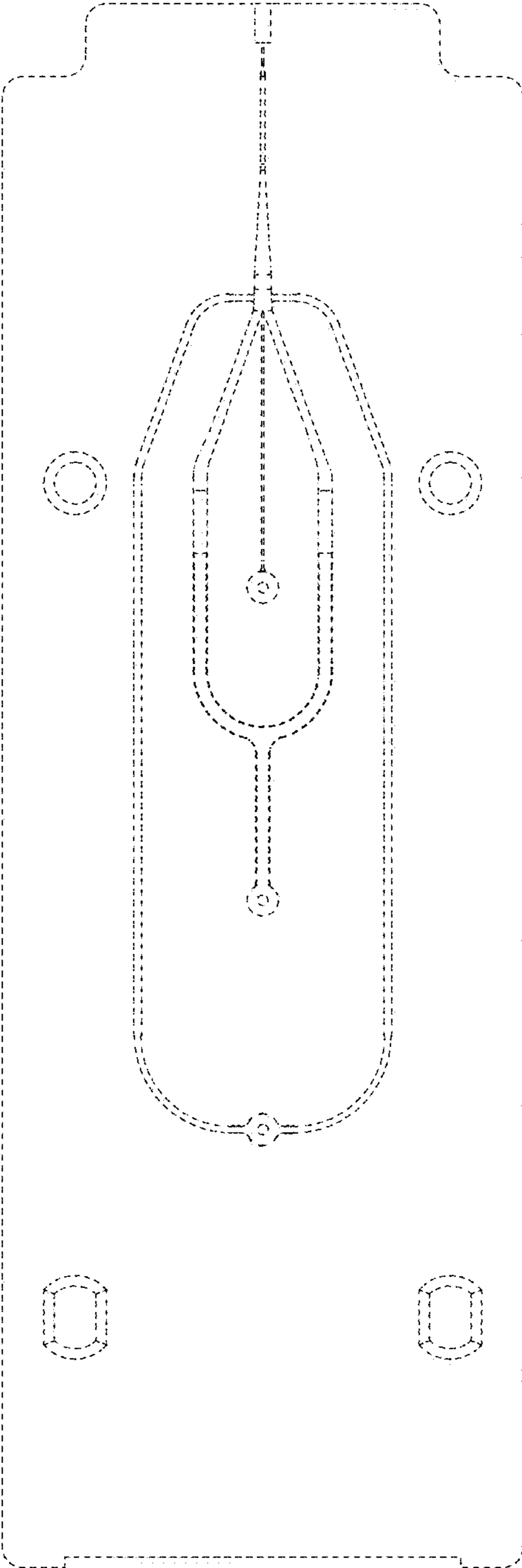
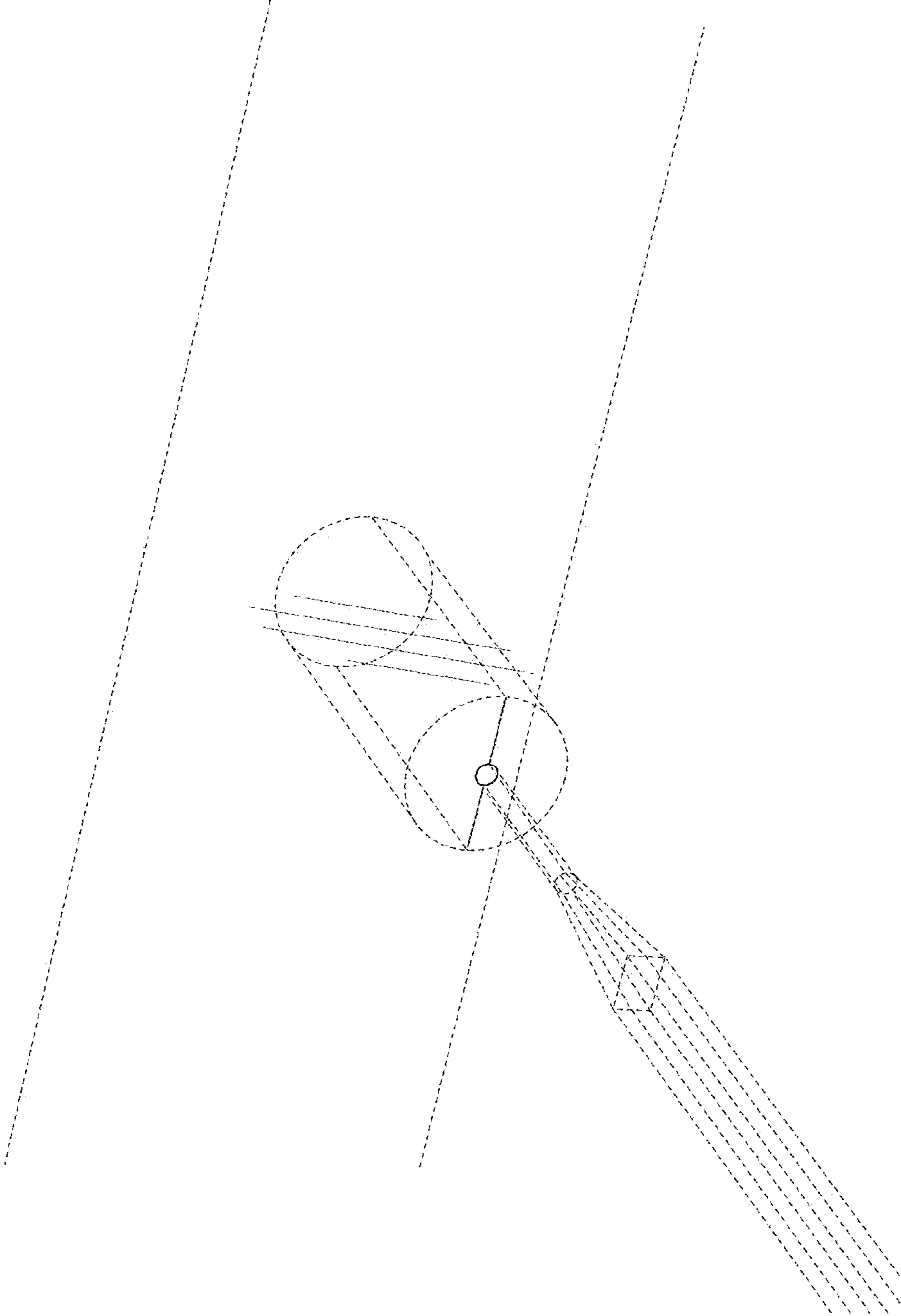


FIG.11



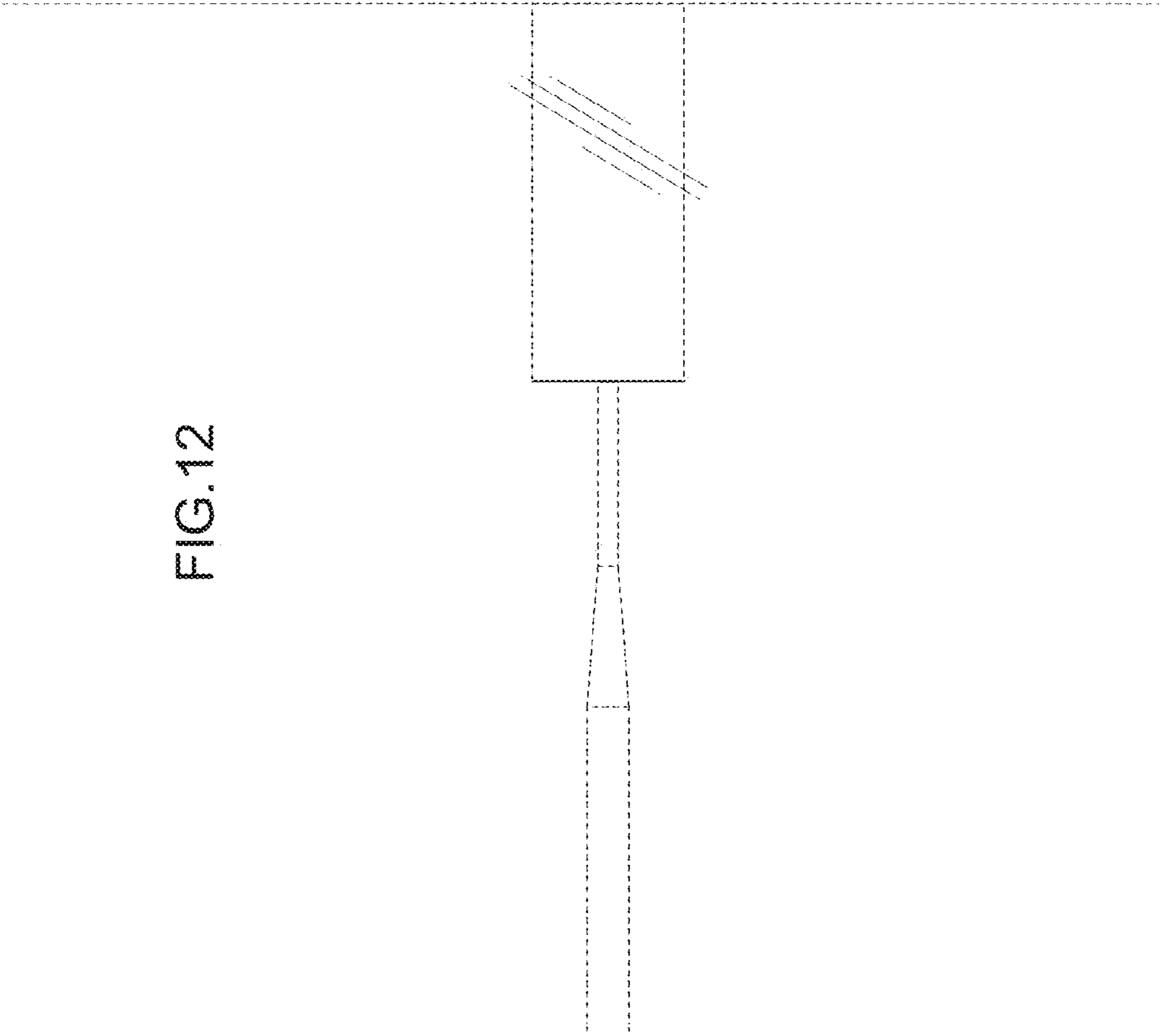


FIG.12

FIG.13

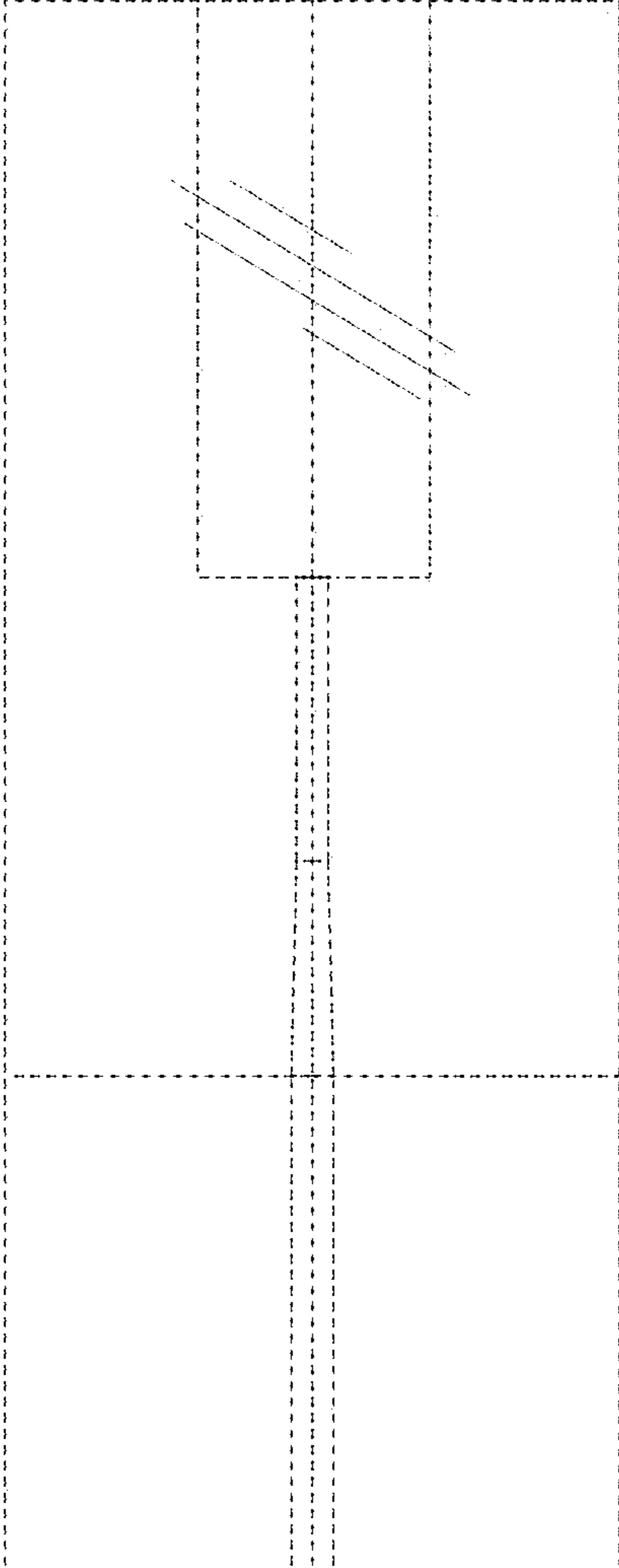


FIG.14

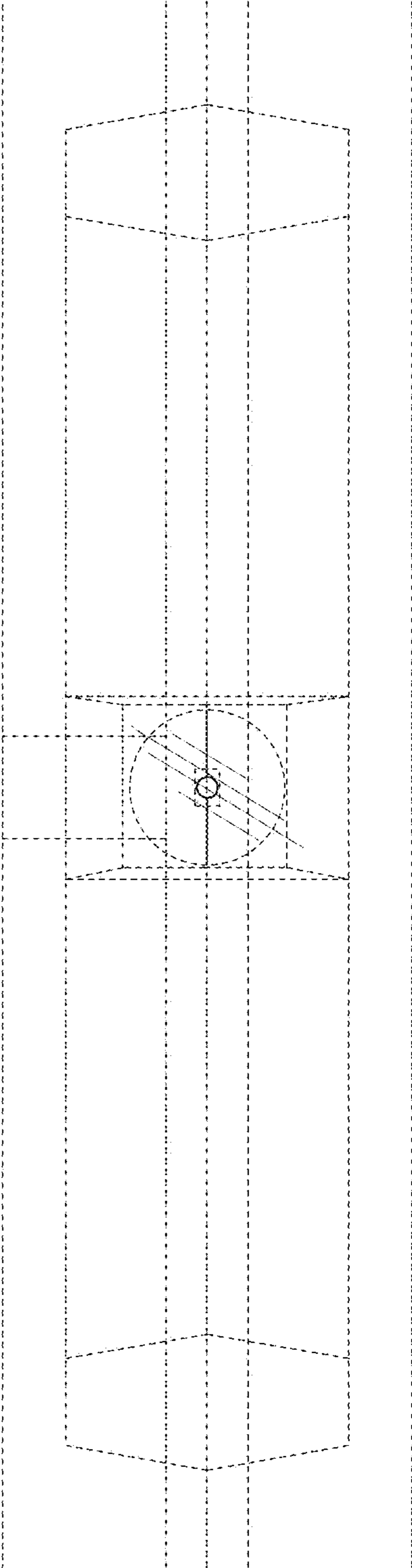


FIG.15

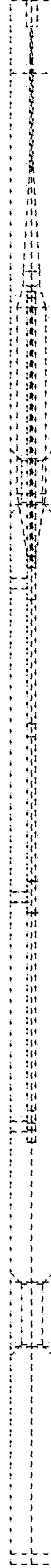


FIG.16

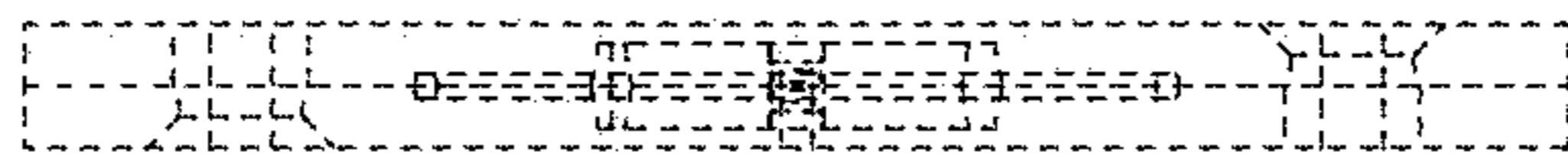


FIG.17

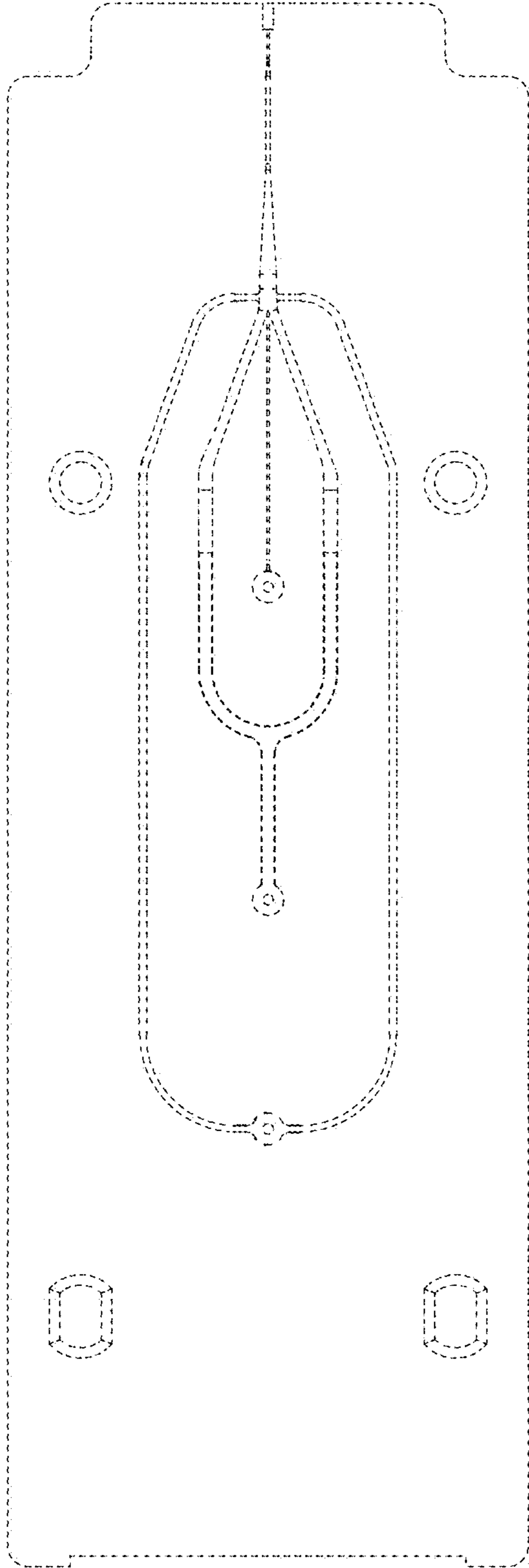


FIG.18

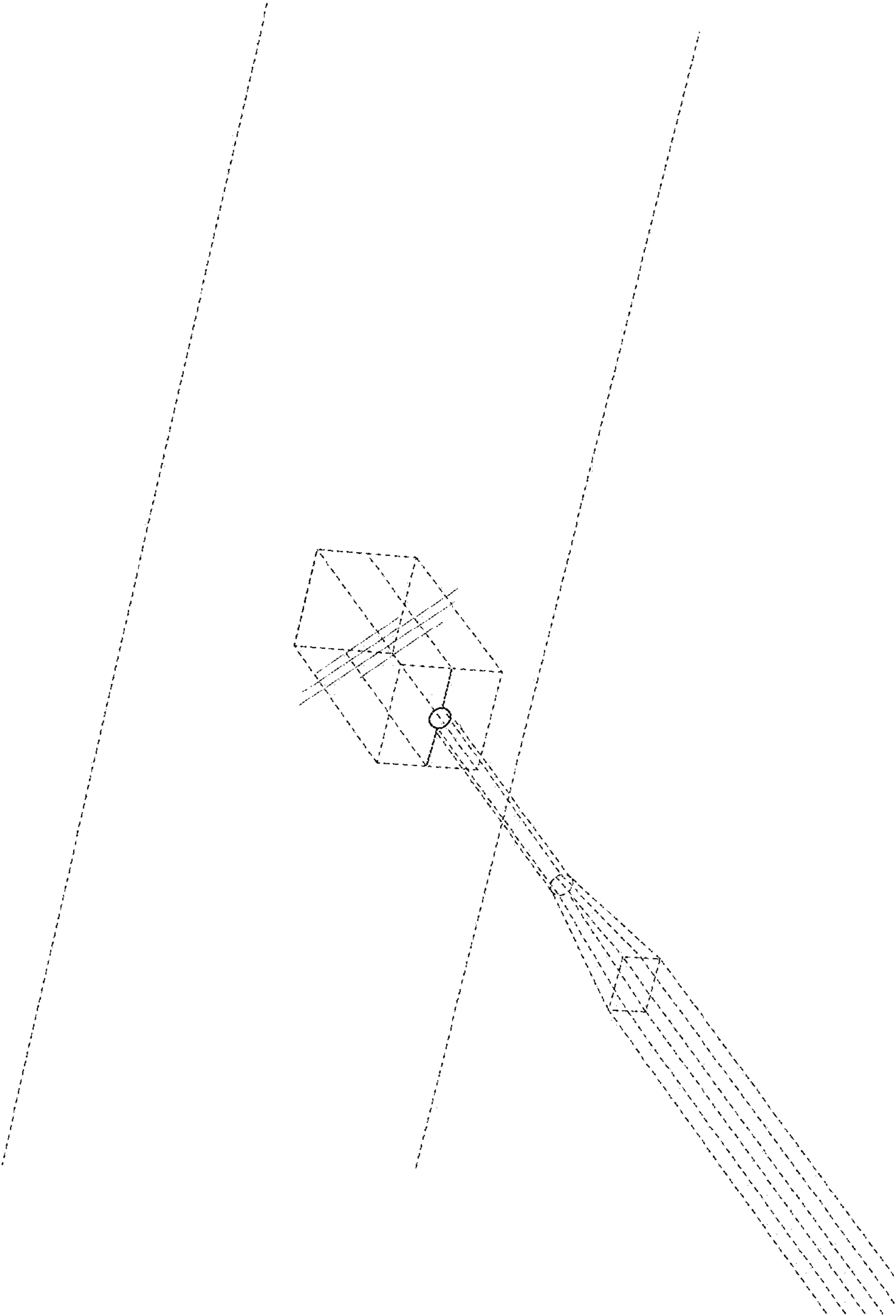


FIG. 19

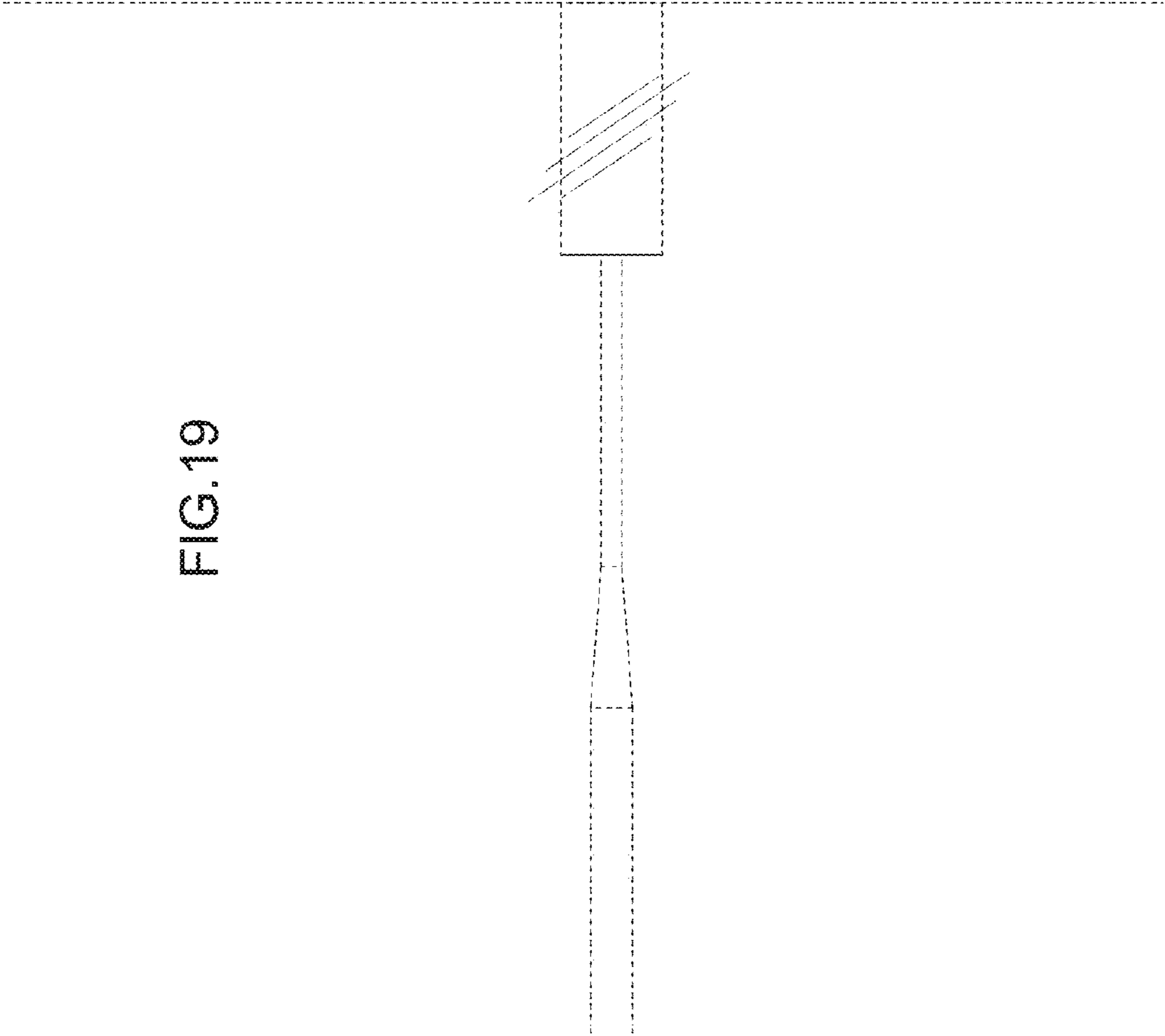


FIG.20

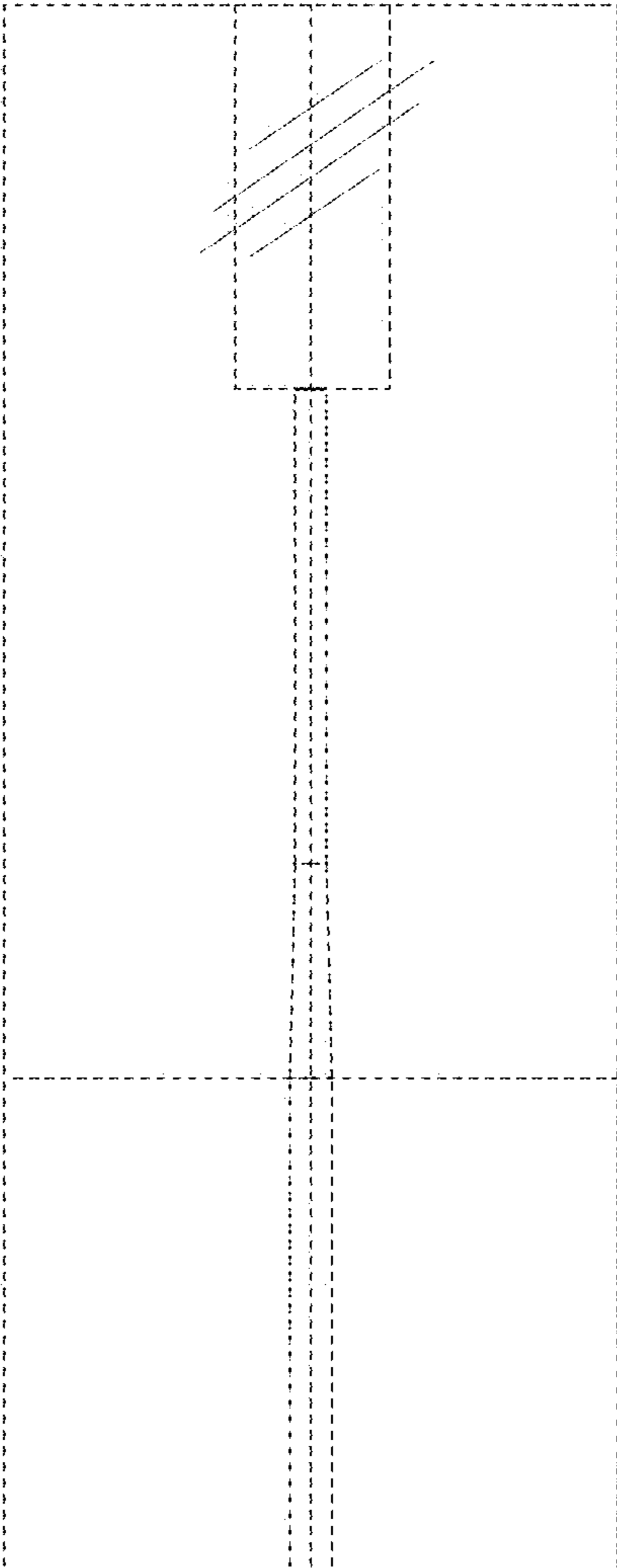


FIG. 21

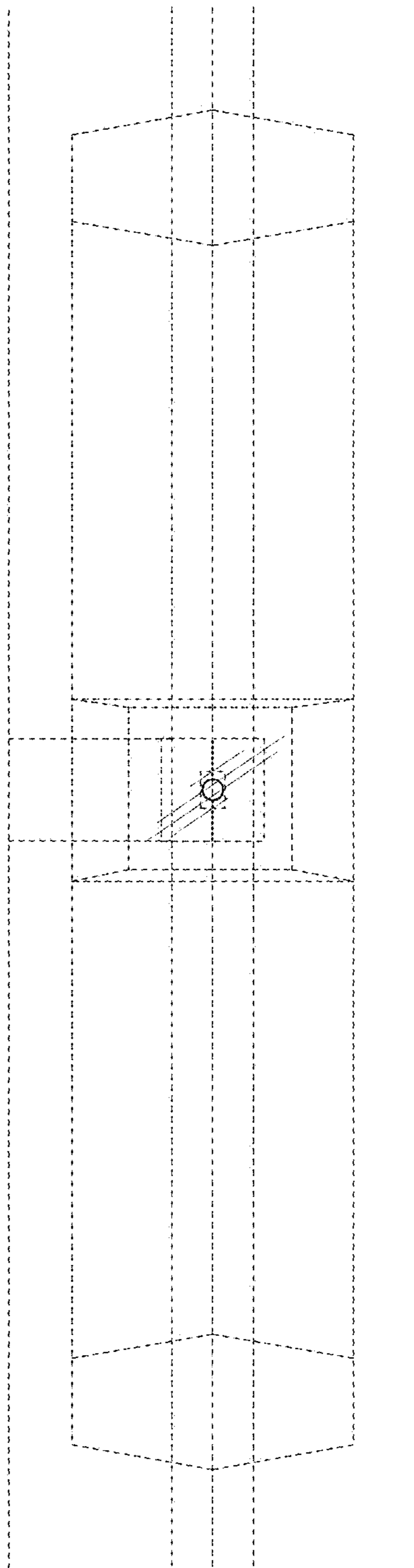


FIG.22

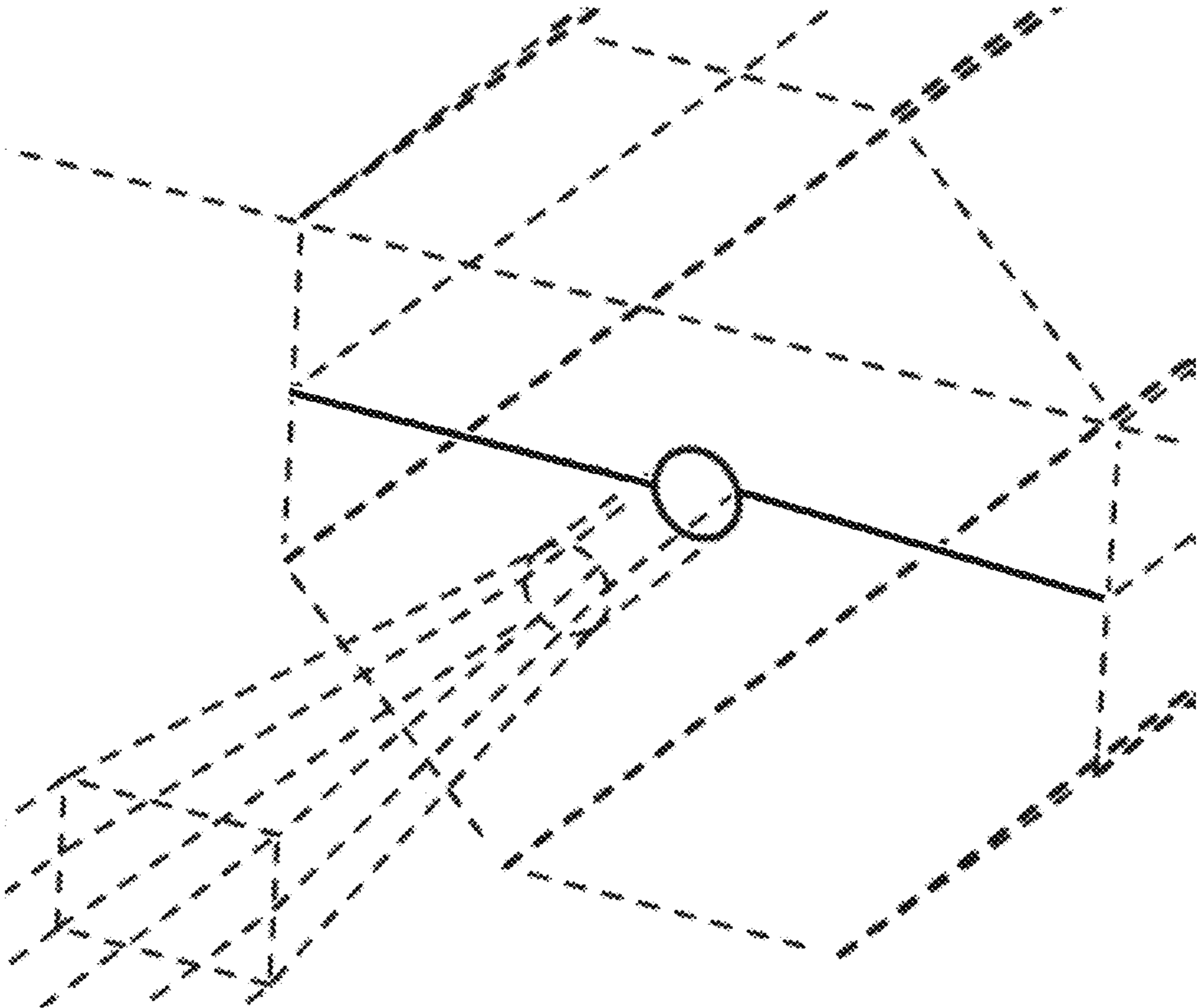


FIG.23

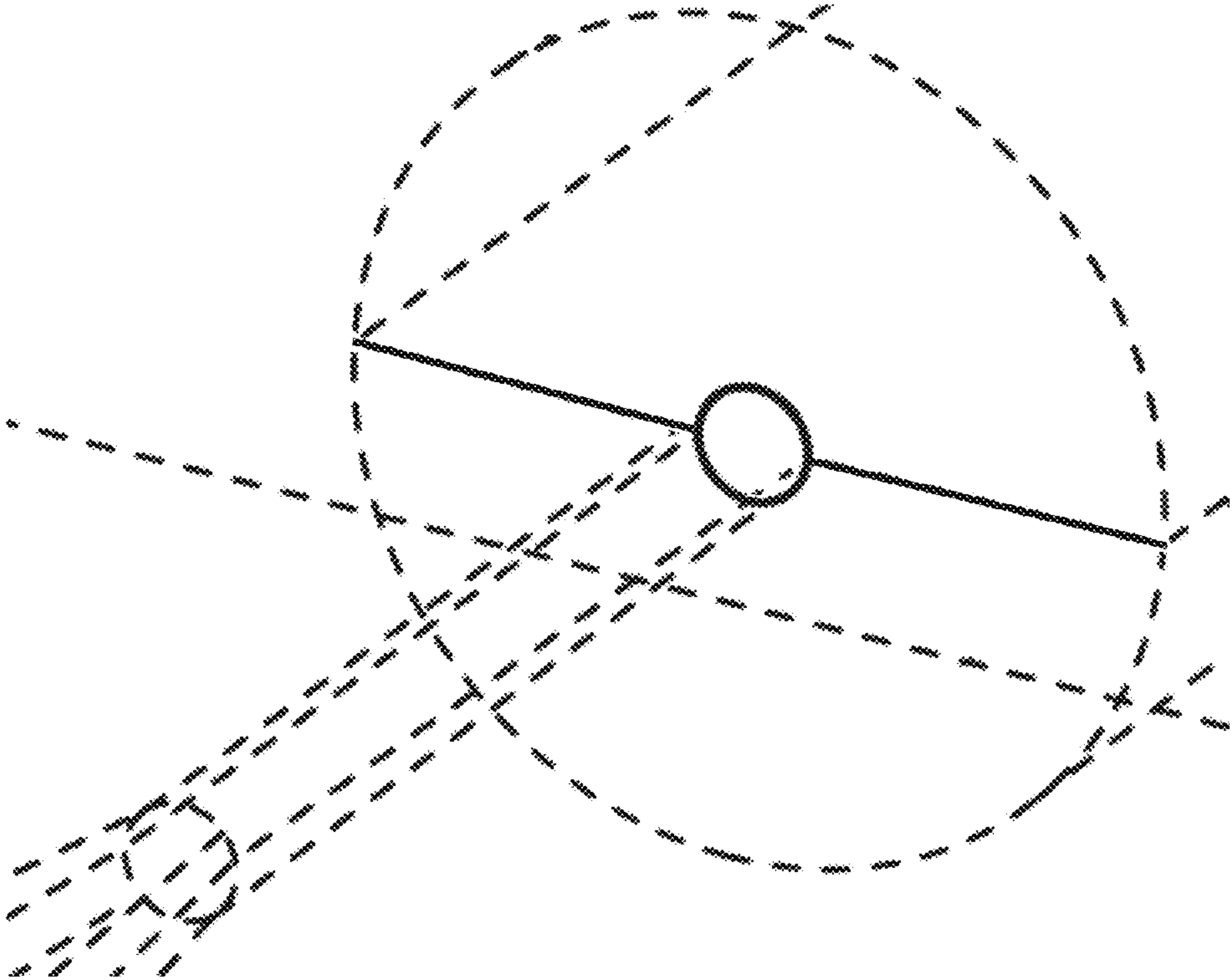


FIG.24

