



US00D930786S

(12) **United States Design Patent**
Huang

(10) **Patent No.:** **US D930,786 S**

(45) **Date of Patent:** **** Sep. 14, 2021**

(54) **SPA MINERAL CARTRIDGE STICK FOR HOT TUB**

(71) Applicant: **Shilin Huang**, Chenzhou (CN)

(72) Inventor: **Shilin Huang**, Chenzhou (CN)

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

(21) Appl. No.: **29/770,159**

(22) Filed: **Feb. 10, 2021**

(51) **LOC (13) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/207**

(58) **Field of Classification Search**
USPC D23/200, 206–207, 209–210, 365
CPC B01D 35/30; B01D 29/25; B01D 29/112;
B01D 29/111; B01D 35/34; C02F 1/003
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D251,571 S *	4/1979	Liebert	.....	D23/207
D320,062 S *	9/1991	Meissner	.....	D23/209
H1157 H *	4/1993	Yanou	.....	D23/209
D609,775 S *	2/2010	Zukor	.....	D23/209
D731,024 S *	6/2015	Elliott	.....	D23/207
D750,736 S *	3/2016	Enomoto	.....	D23/207
D765,220 S *	8/2016	Boudreau	.....	D23/209
D815,714 S *	4/2018	Bell	.....	D23/209
D846,069 S	4/2019	Zou		

(Continued)

FOREIGN PATENT DOCUMENTS

JP D2010-5535 * 2/2011

OTHER PUBLICATIONS

Polytrans Stick found on Apr. 30, 2021 at <https://www.amazon.com/dp/B07PF6JFWM/> (Year: 2019).*

Primary Examiner — Karen S Acker
Assistant Examiner — Jonathan E Fiencke

(57) **CLAIM**

The ornamental design for a spa mineral cartridge stick for hot tub, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a first component of a spa mineral cartridge stick for hot tub, shown separately for ease of illustration;

FIG. 2 is another perspective view thereof;

FIG. 3 is a front elevational view thereof;

FIG. 4 is a rear elevational view thereof;

FIG. 5 is a left side elevational view thereof;

FIG. 6 is a right side elevational view thereof;

FIG. 7 is a top plan view thereof;

FIG. 8 is a bottom plan view thereof;

FIG. 9 is a perspective view of a second component of the spa mineral cartridge stick for hot tub, shown separately for ease of illustration;

FIG. 10 is another perspective view thereof;

FIG. 11 is a front elevational view thereof;

FIG. 12 is a rear elevational view thereof;

FIG. 13 is a left side elevational view thereof;

FIG. 14 is a right side elevational view thereof;

FIG. 15 is a top plan view thereof;

FIG. 16 is a bottom plan view thereof;

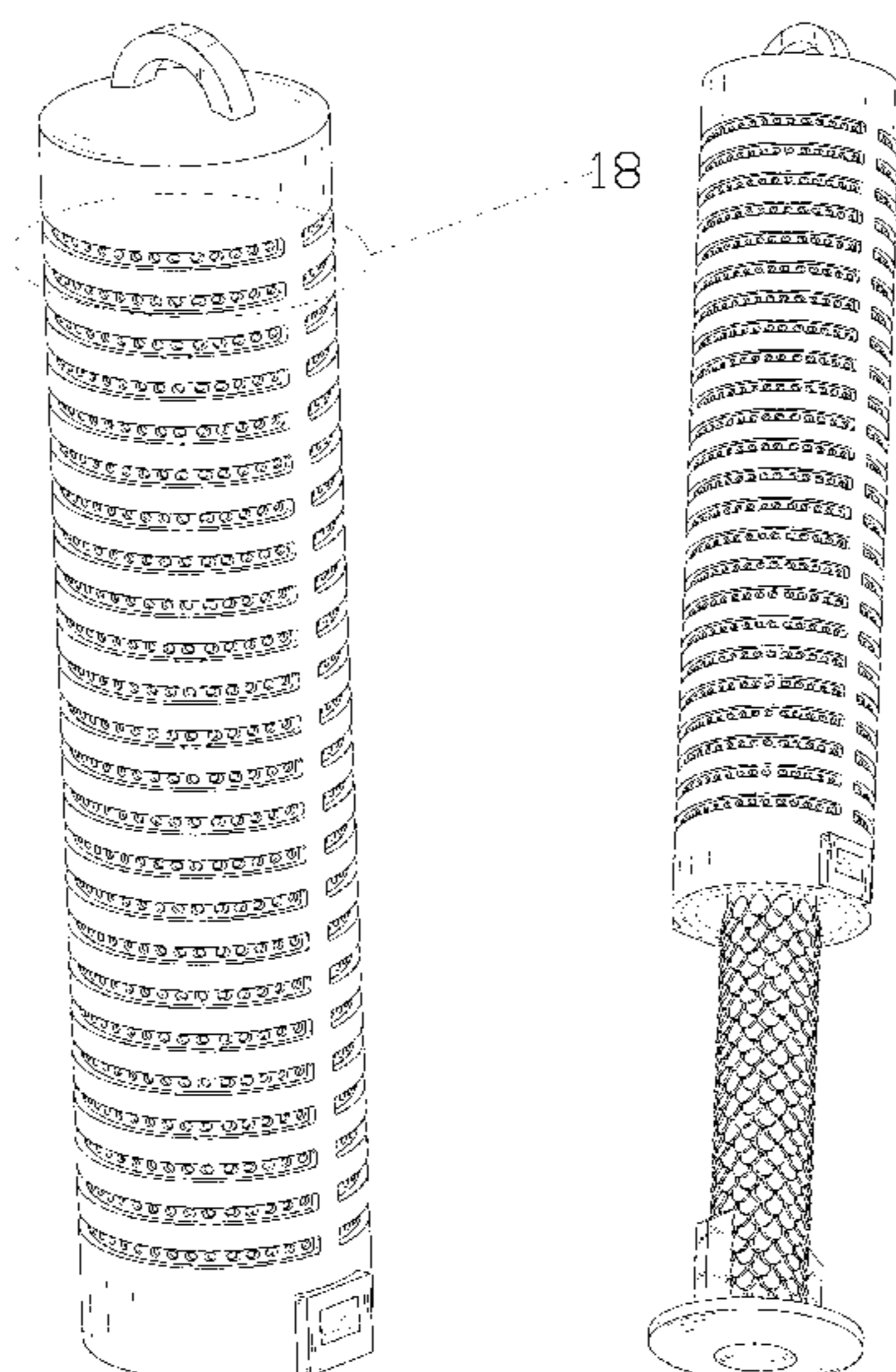
FIG. 17 is a perspective view of the spa mineral cartridge for hot tub with the first and second components assembled;

FIG. 18 is an enlarged view of the detail area 18 circumscribed in FIG. 1; and,

FIG. 19 is an enlarged view of the detail area 19 circumscribed in FIG. 9.

The evenly spaced broken lines and all areas within depict portions of the spa mineral cartridge stick for hot tub that form no part of the claimed design. The dot dash dot broken lines in FIGS. 1, 9 and 18-19 depict the boundary lines of the enlarged views and form no part of the claim.

1 Claim, 19 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D879,242	S	*	3/2020	Trunner	.....	D23/209
D880,656	S	*	4/2020	Coelho	.....	D23/209
D894,329	S		8/2020	Qiang		
D904,560	S	*	12/2020	Coelho	.....	D23/209
2013/0270168	A1	*	10/2013	Fall	.....	B01D 29/96
						210/232
2016/0376162	A1	*	12/2016	Dani	.....	C02F 1/002
						210/266

* cited by examiner

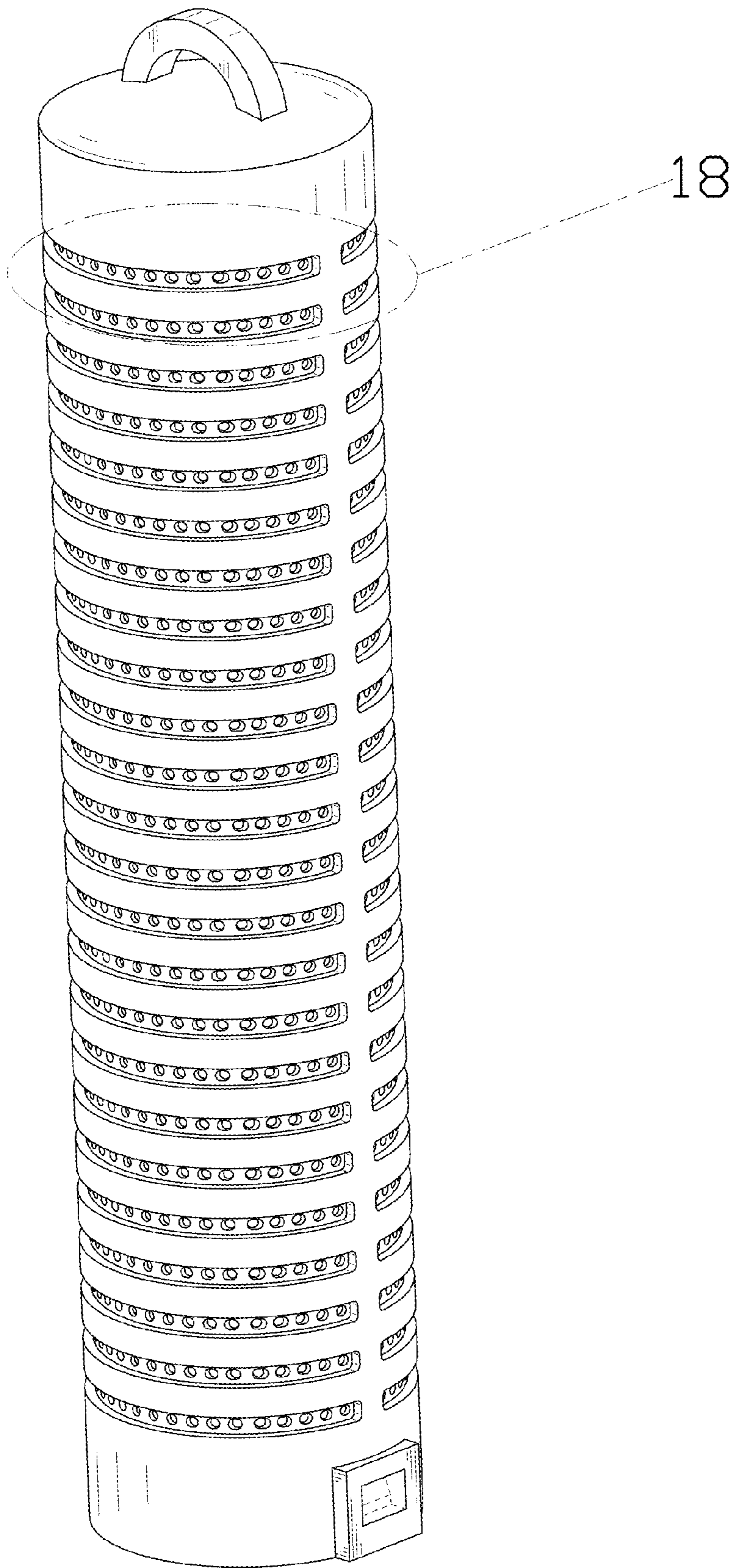


FIG. 1

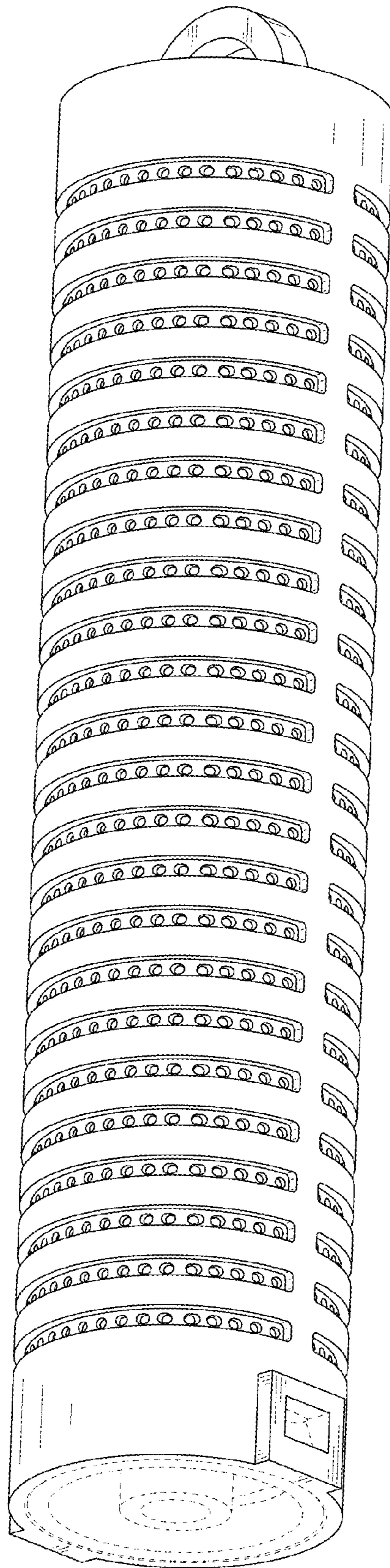


FIG. 2

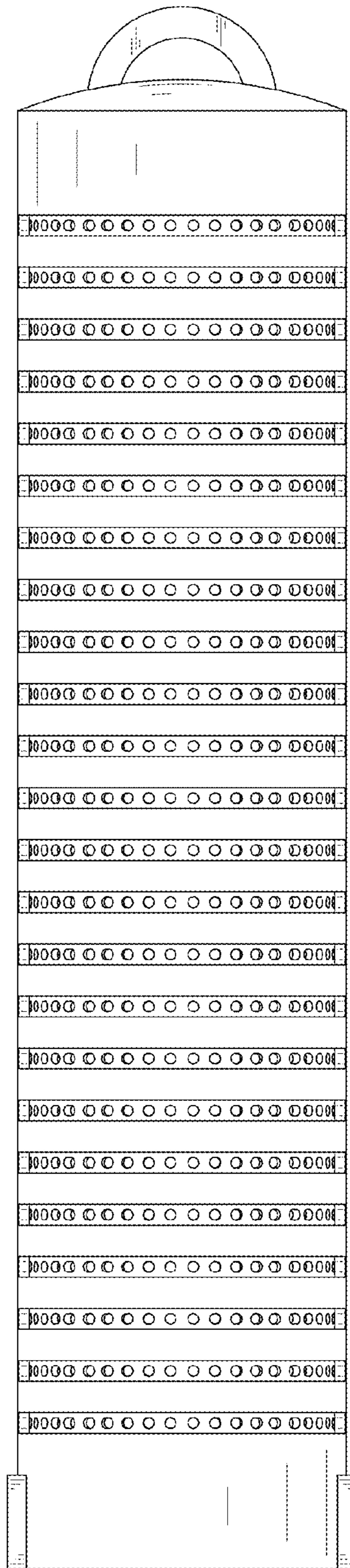


FIG. 3

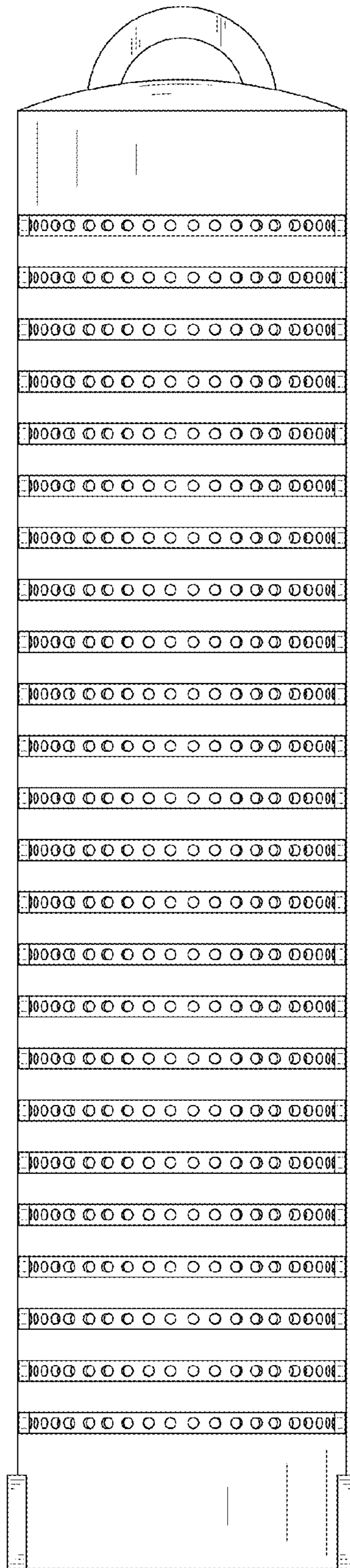


FIG. 4

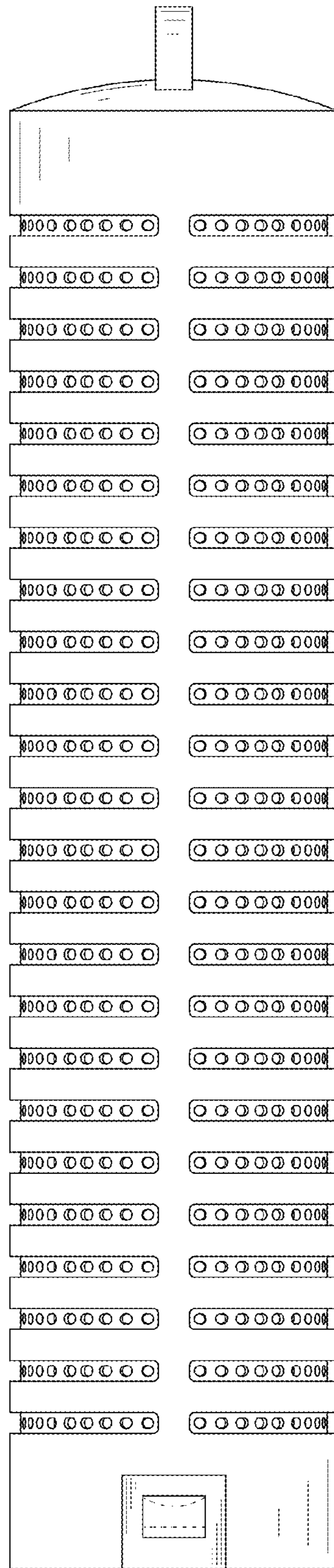


FIG. 5

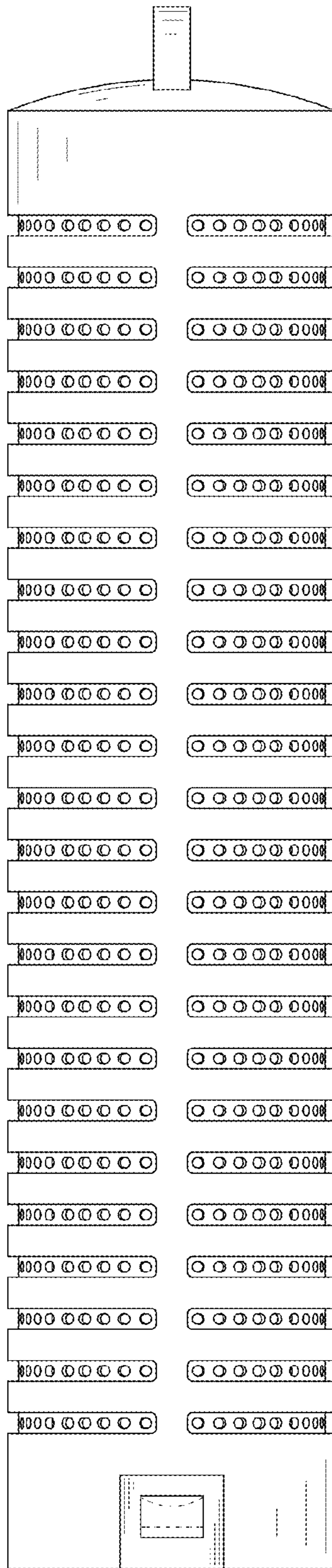


FIG. 6

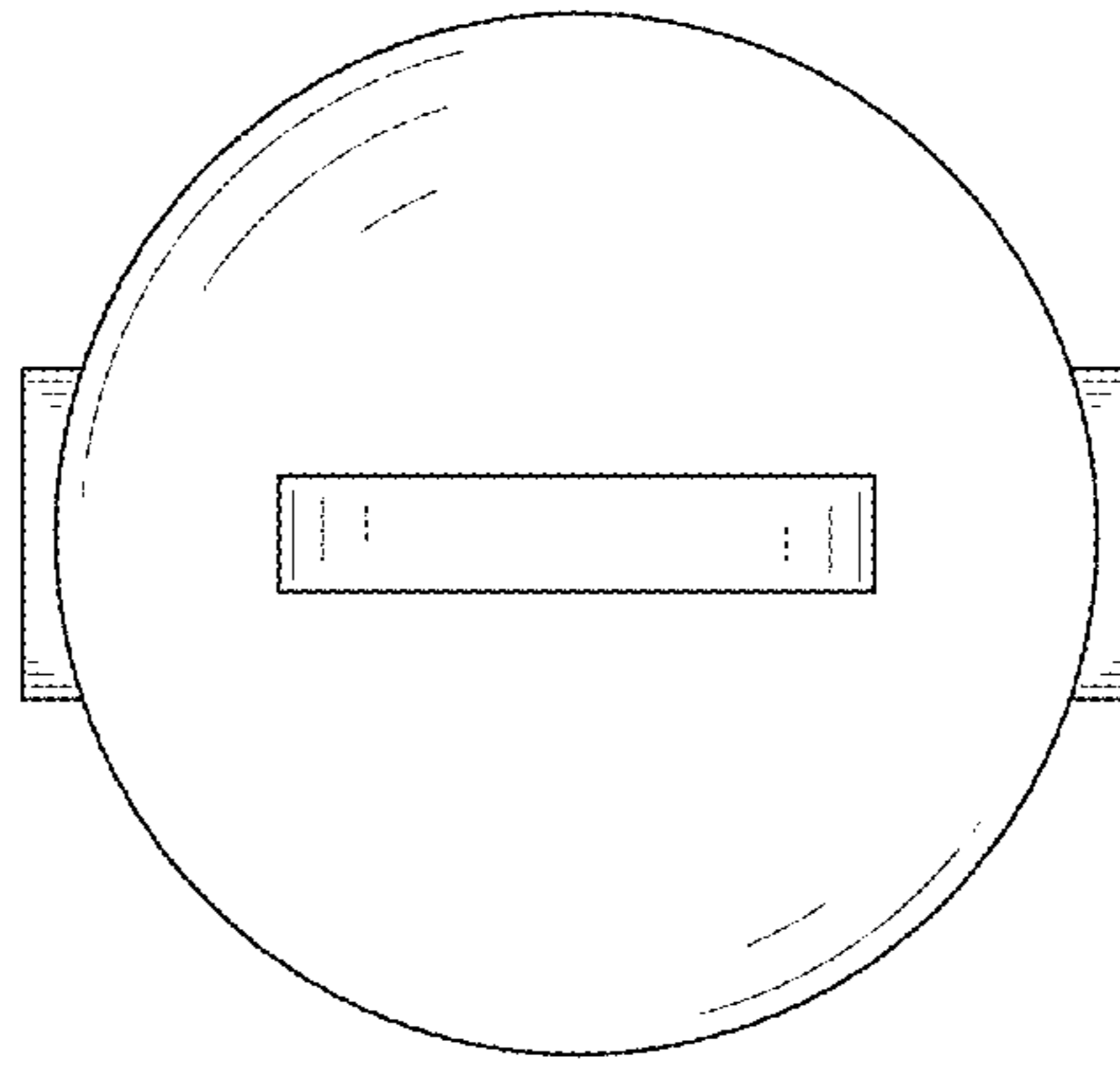


FIG. 7

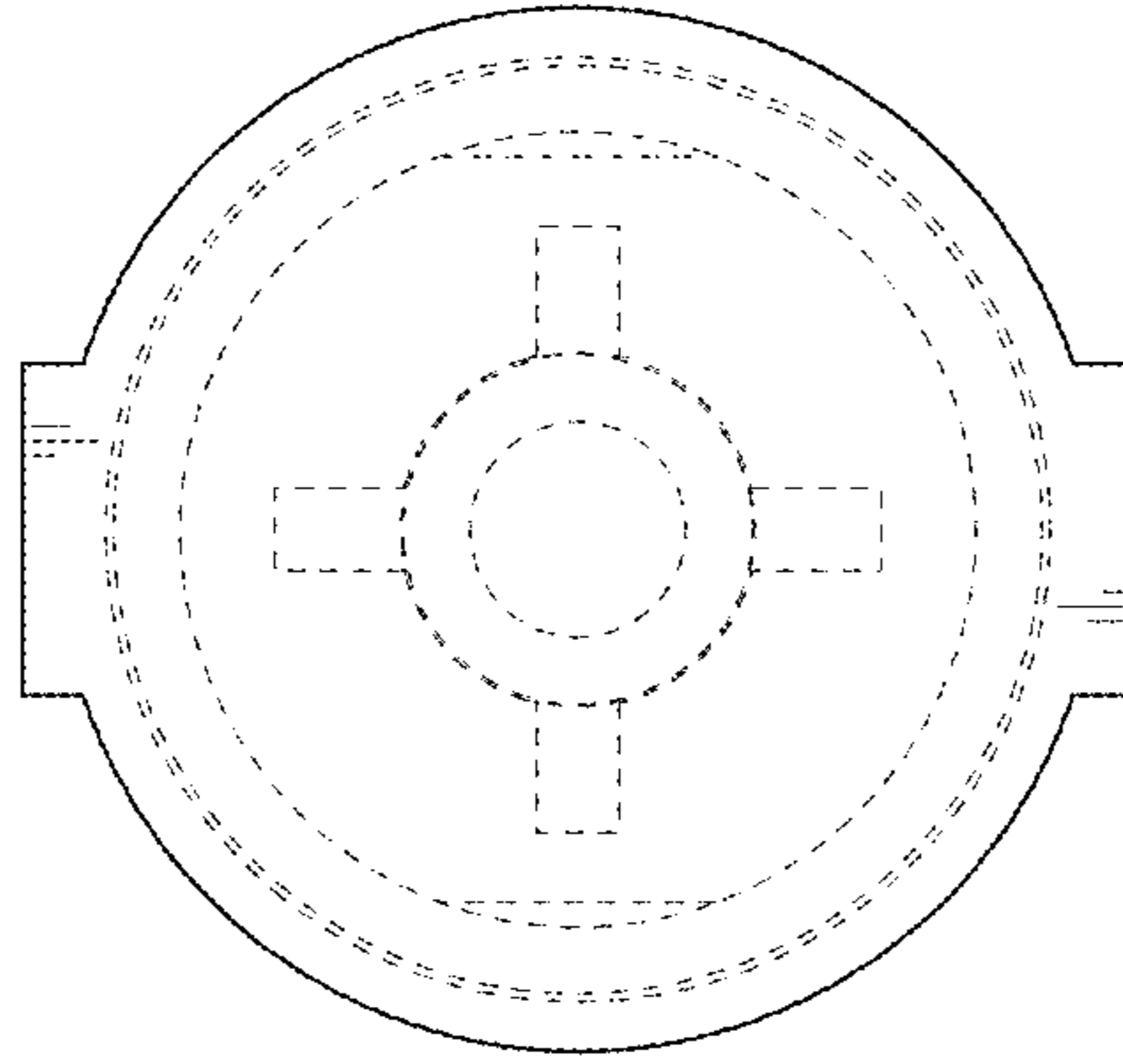


FIG. 8

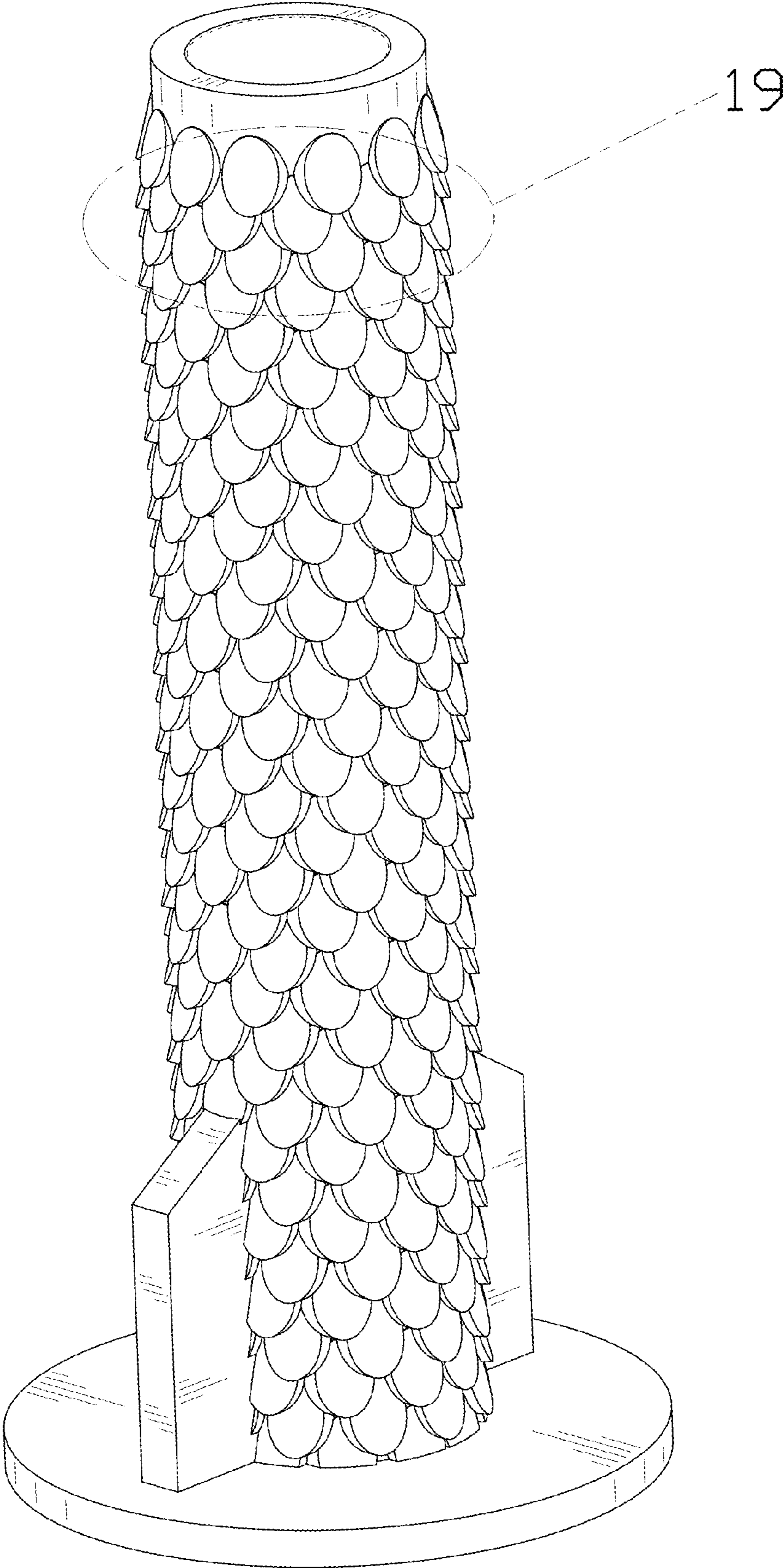


FIG. 9

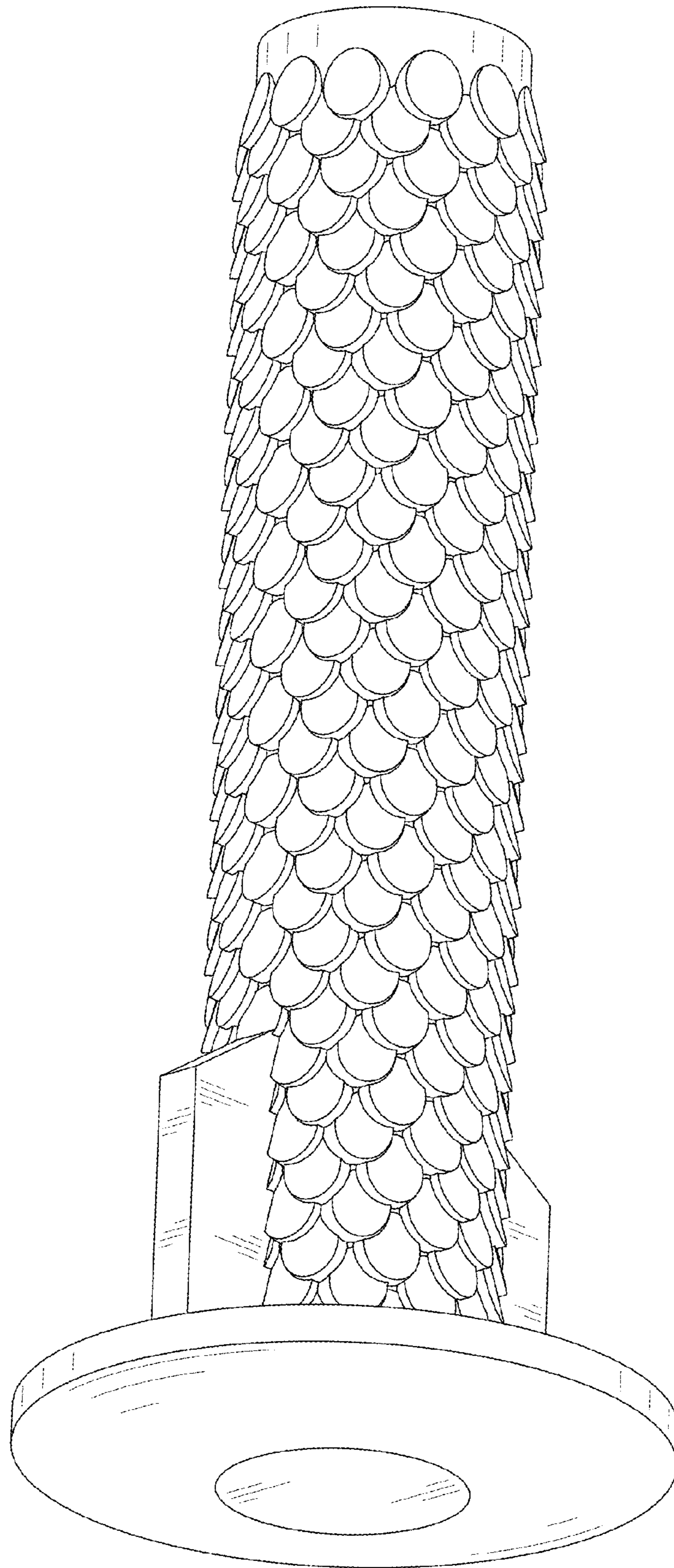


FIG. 10

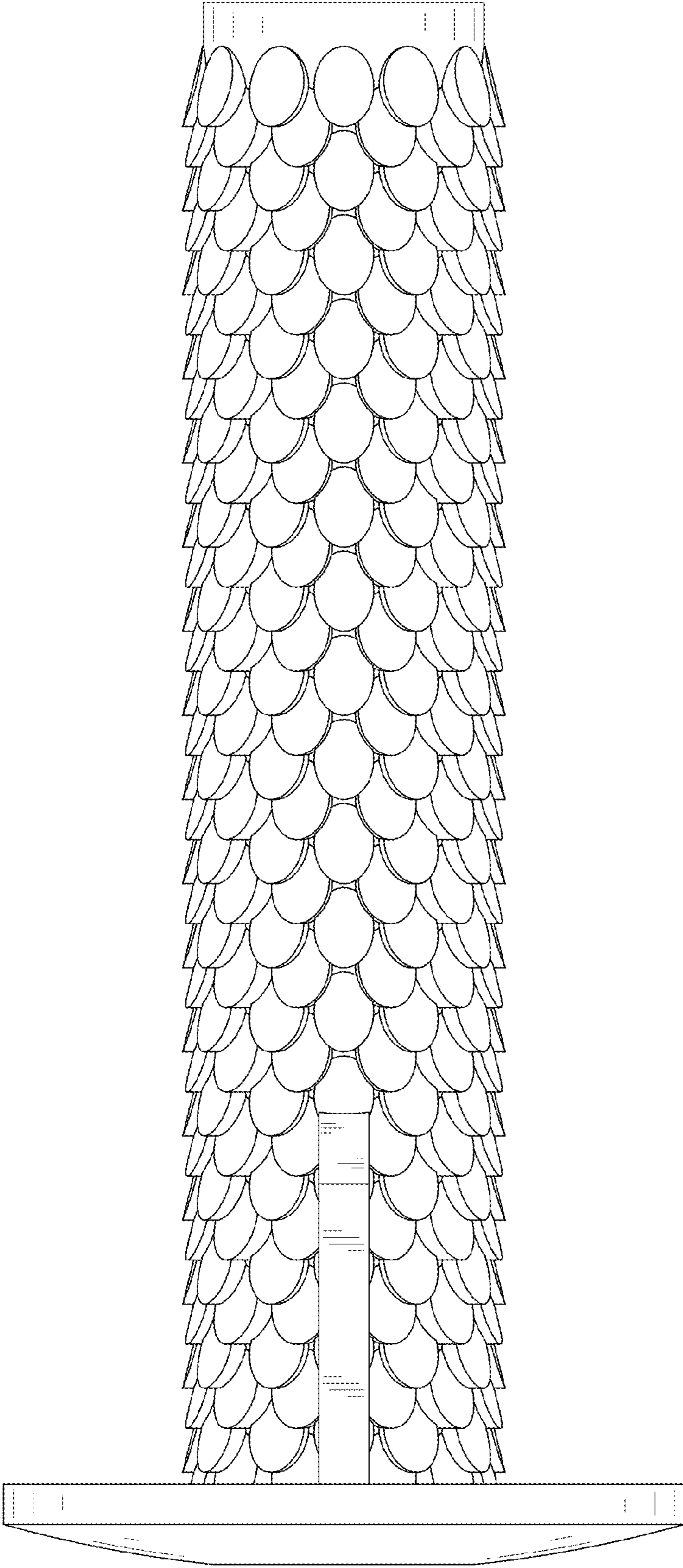


FIG. 11

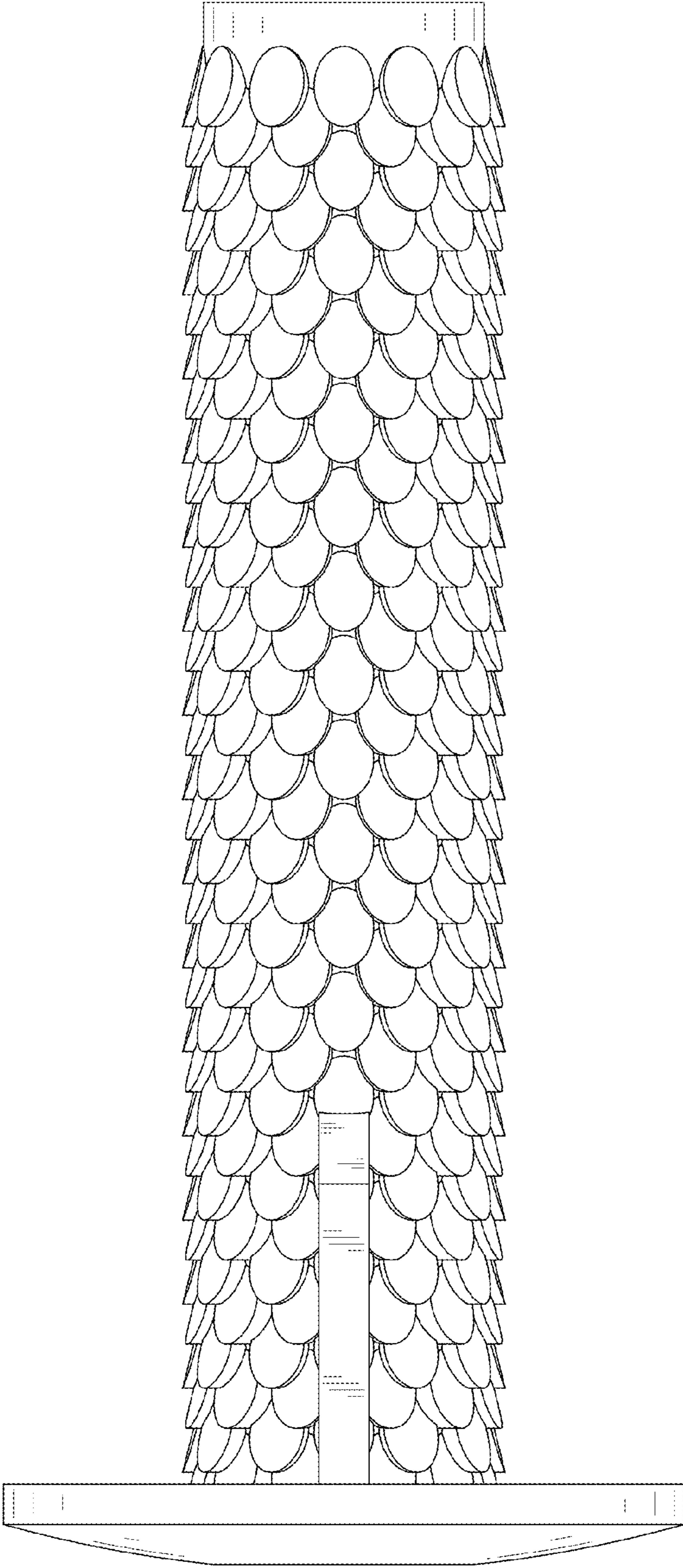


FIG. 12

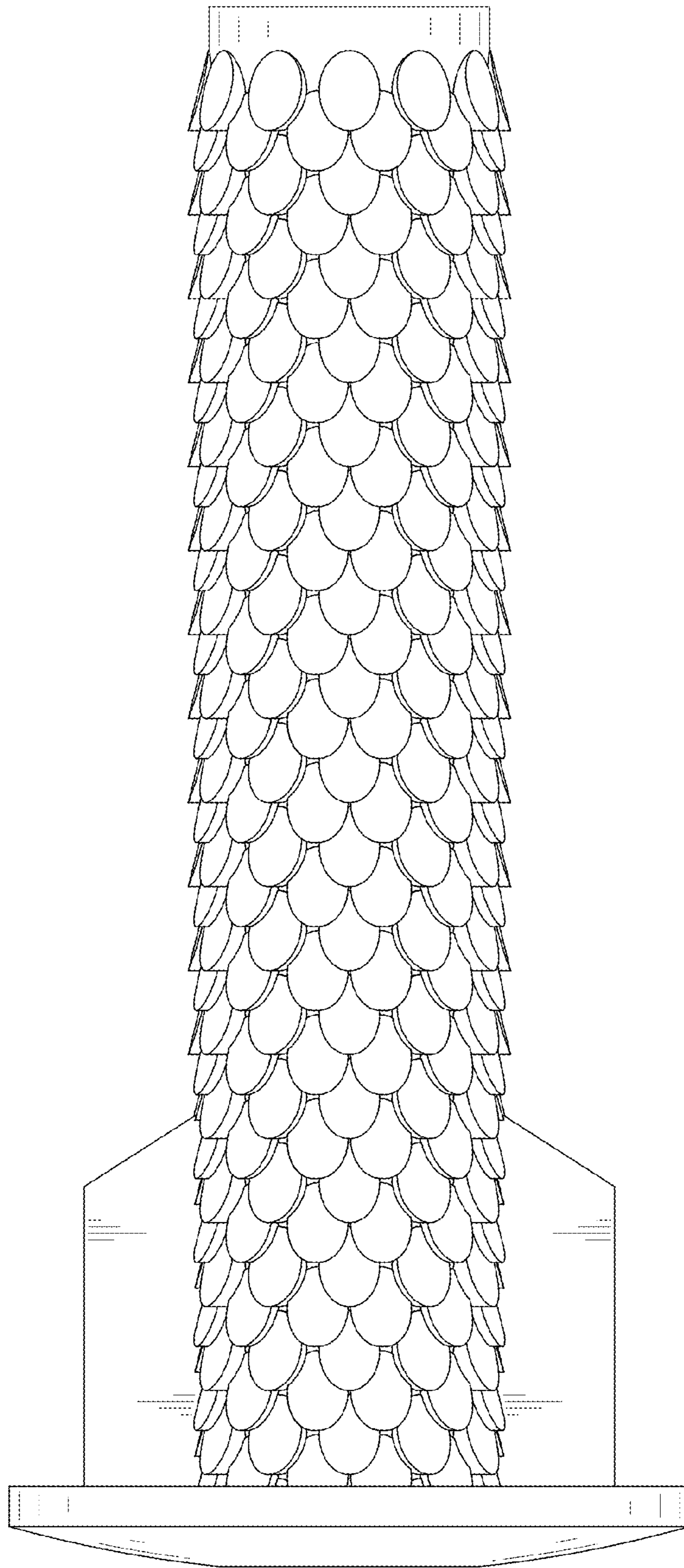


FIG. 13

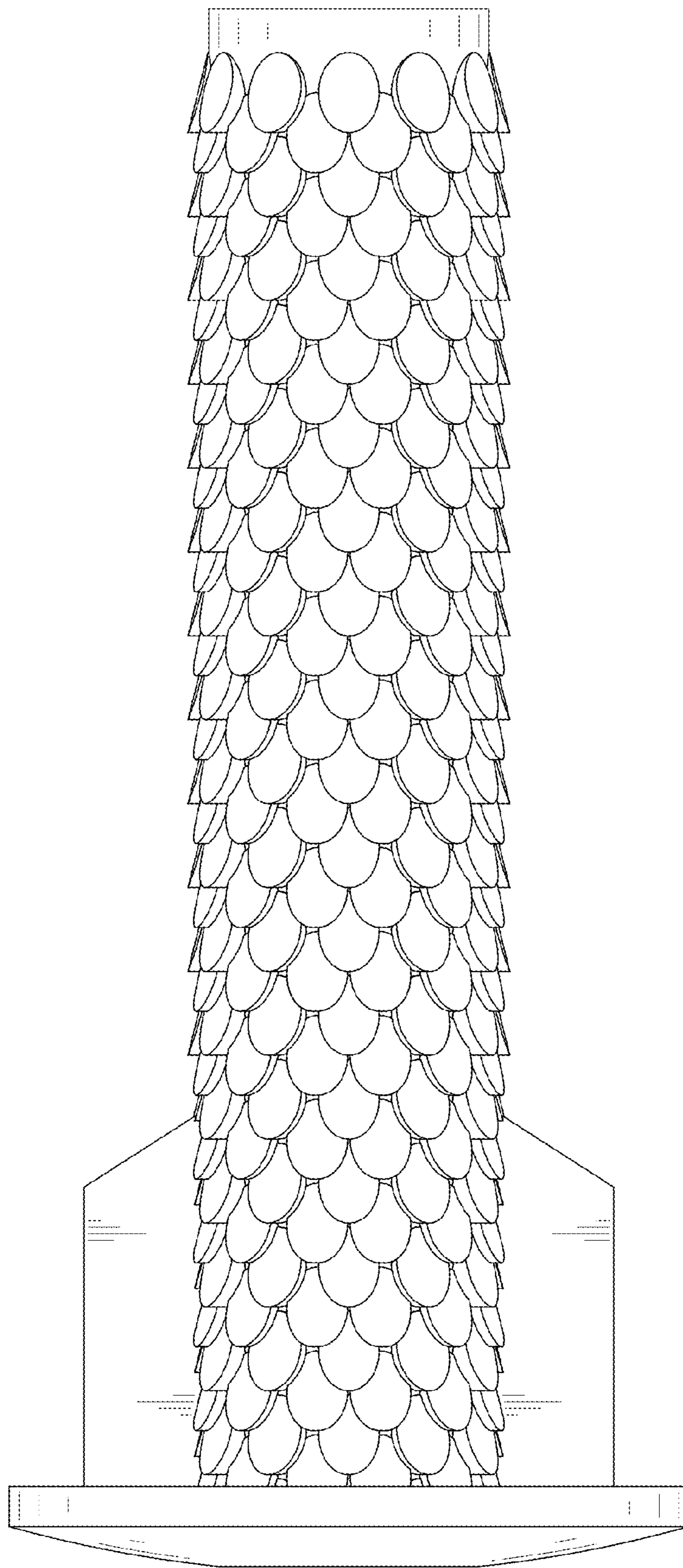


FIG. 14

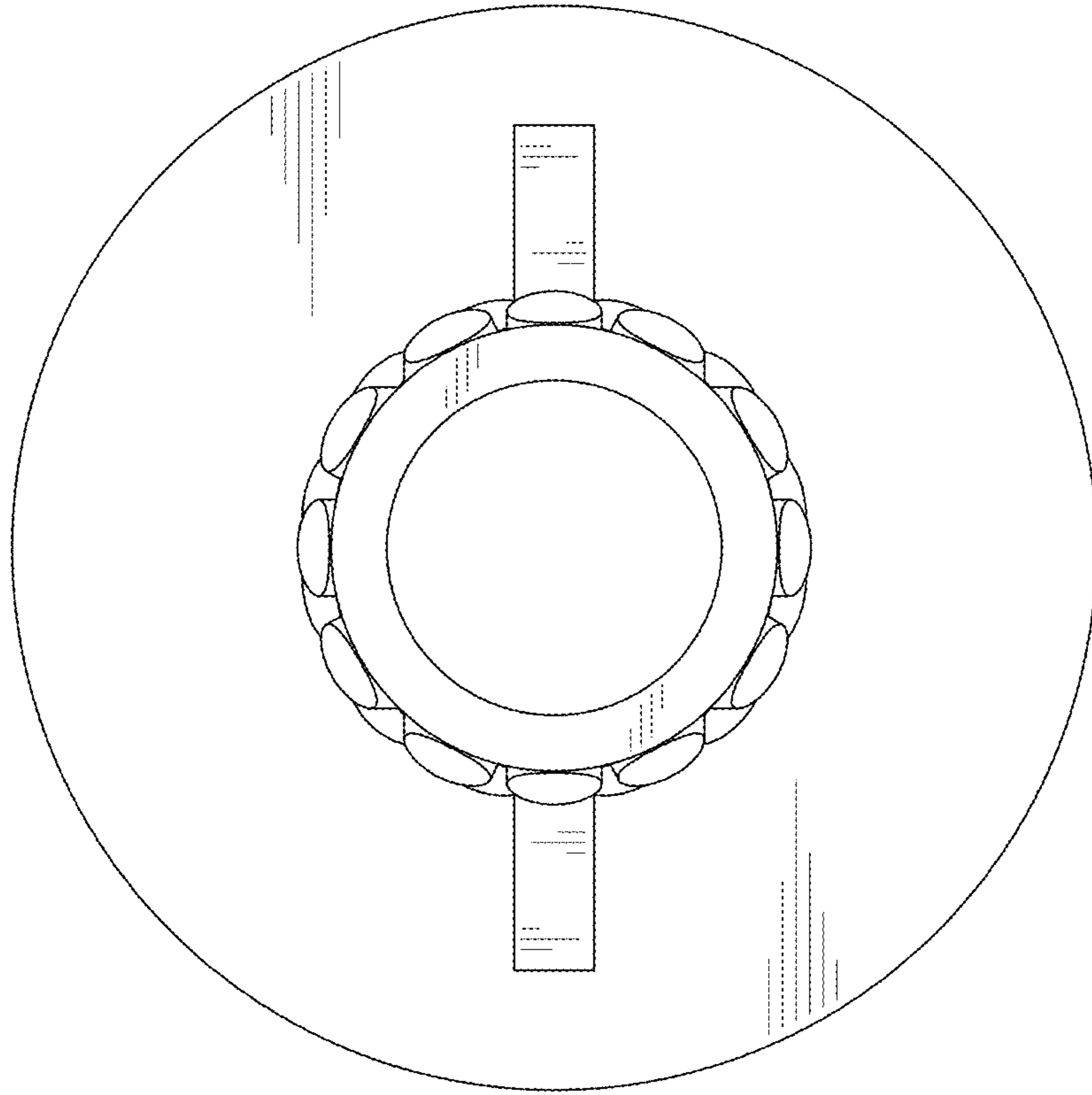


FIG. 15

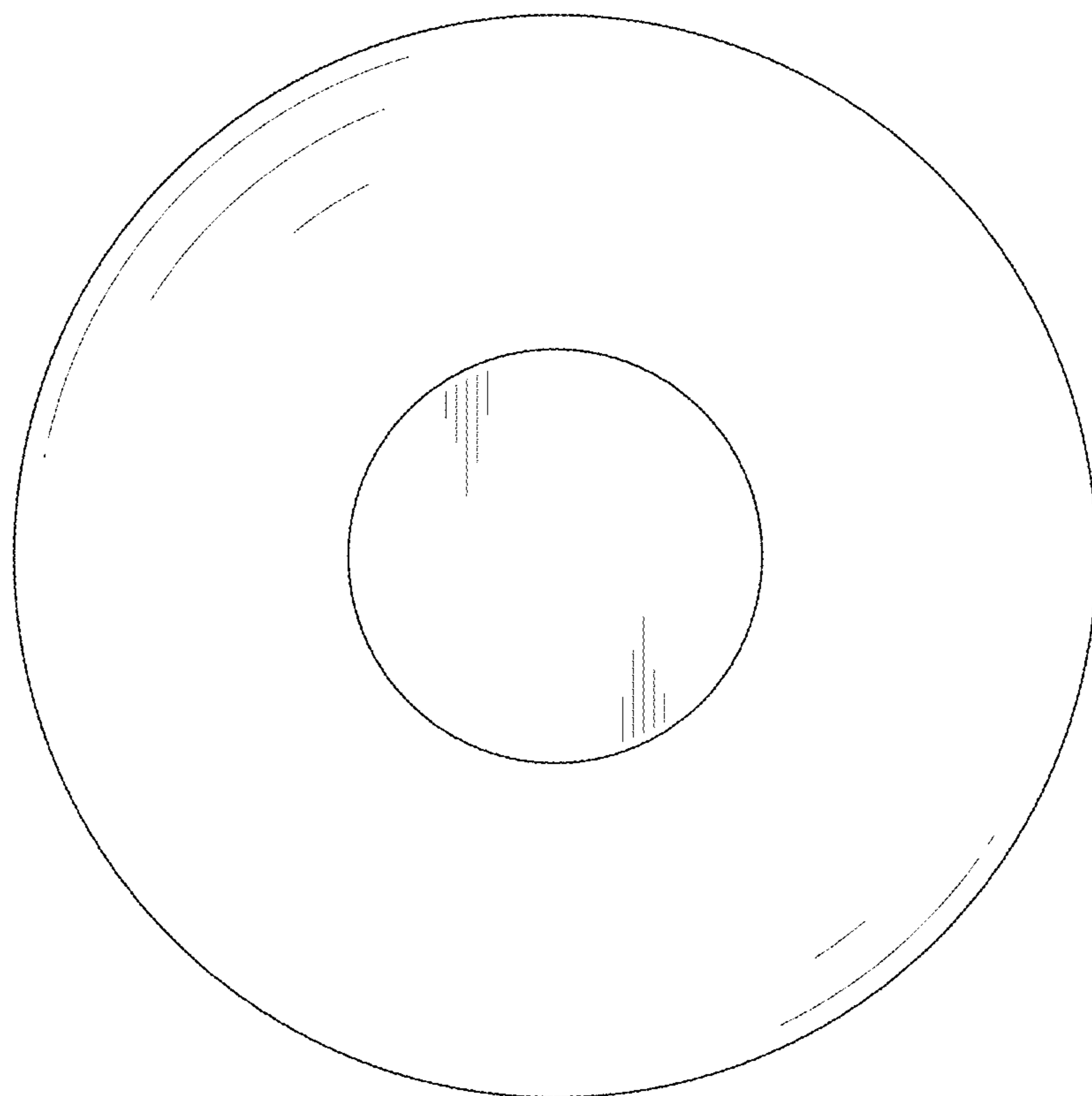


FIG. 16

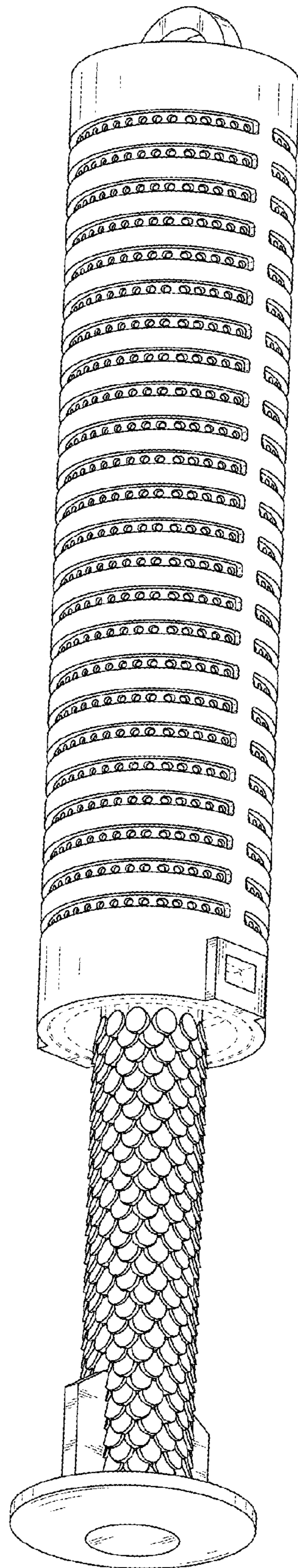


FIG. 17

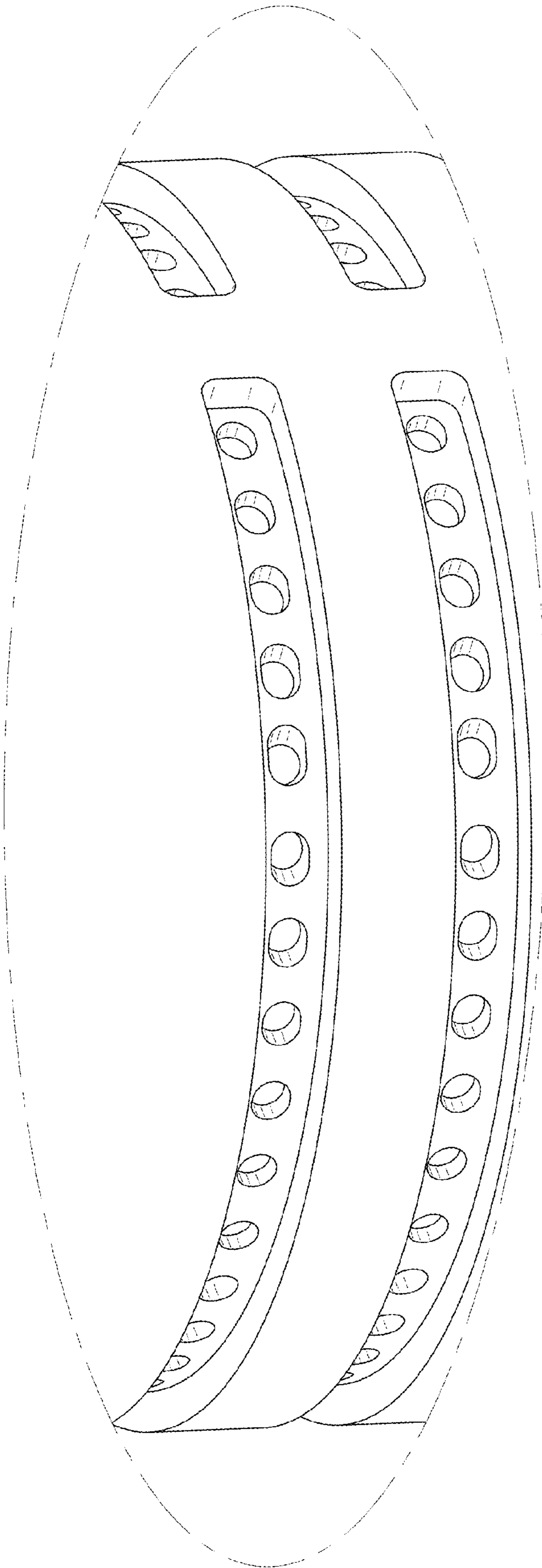


FIG. 18



FIG. 19