



US00D908102S

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

(10) **Patent No.:** **US D908,102 S**  
(45) **Date of Patent:** **\*\* Jan. 19, 2021**

(54) **TRANSPORTABLE SEMICONDUCTOR  
WAFER RACK**

(71) Applicant: **Veeco Instruments Inc.**, Plainview, NY  
(US)

(72) Inventors: **Michael W. Pacier**, Leominster, MA  
(US); **Michael J. Sershen**, Cambridge,  
MA (US); **Adam F. Bertuch**, South  
Hamilton, MA (US); **Laurent  
Lecordier**, Arlington, MA (US)

(73) Assignee: **Veeco Instruments Inc.**, Plainview, NY  
(US)

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

(21) Appl. No.: **29/680,872**

(22) Filed: **Feb. 20, 2019**

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

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

(58) **Field of Classification Search**

USPC ..... D13/182; D15/144, 144.1, 199;  
118/715, 500, 728, 729; 211/41.18;  
432/253, 258; 156/345.51, 345.52,  
156/345.53, 345.55; 414/217, 220.01,  
414/935-941  
CPC ..... C23C 16/458; C23C 16/4581; C23C  
16/4582; C23C 16/4583; C23C 16/4584;  
C23C 16/4587; C23C 16/4588; C30B  
3/14; H01L 21/673; H01L 21/67303;  
H01L 21/67306; H01L 21/67309; H01L  
21/67313; H01L 21/67316; H01L  
21/67323; H01L 21/67326; H01L 21/6733  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D361,752 S \* 8/1995 Yamaga ..... D13/182  
D366,868 S \* 2/1996 Ohsawa ..... D13/182

D378,675 S \* 4/1997 Iwai ..... D13/182  
D378,823 S \* 4/1997 Watanabe ..... D13/182  
D380,454 S \* 7/1997 Iwai ..... D13/182  
5,752,609 A \* 5/1998 Kato ..... H01L 21/67309  
211/41.18  
D404,015 S \* 1/1999 Honma ..... D13/182  
D404,371 S \* 1/1999 Shimazu ..... D13/182  
D409,158 S \* 5/1999 Shimazu ..... 206/832  
D411,176 S \* 6/1999 Shimazu ..... D13/182

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 110246791 A 9/2019

*Primary Examiner* — Elizabeth J Oswecki

(74) *Attorney, Agent, or Firm* — Downs Rachlin Martin  
PLLC

(57) **CLAIM**

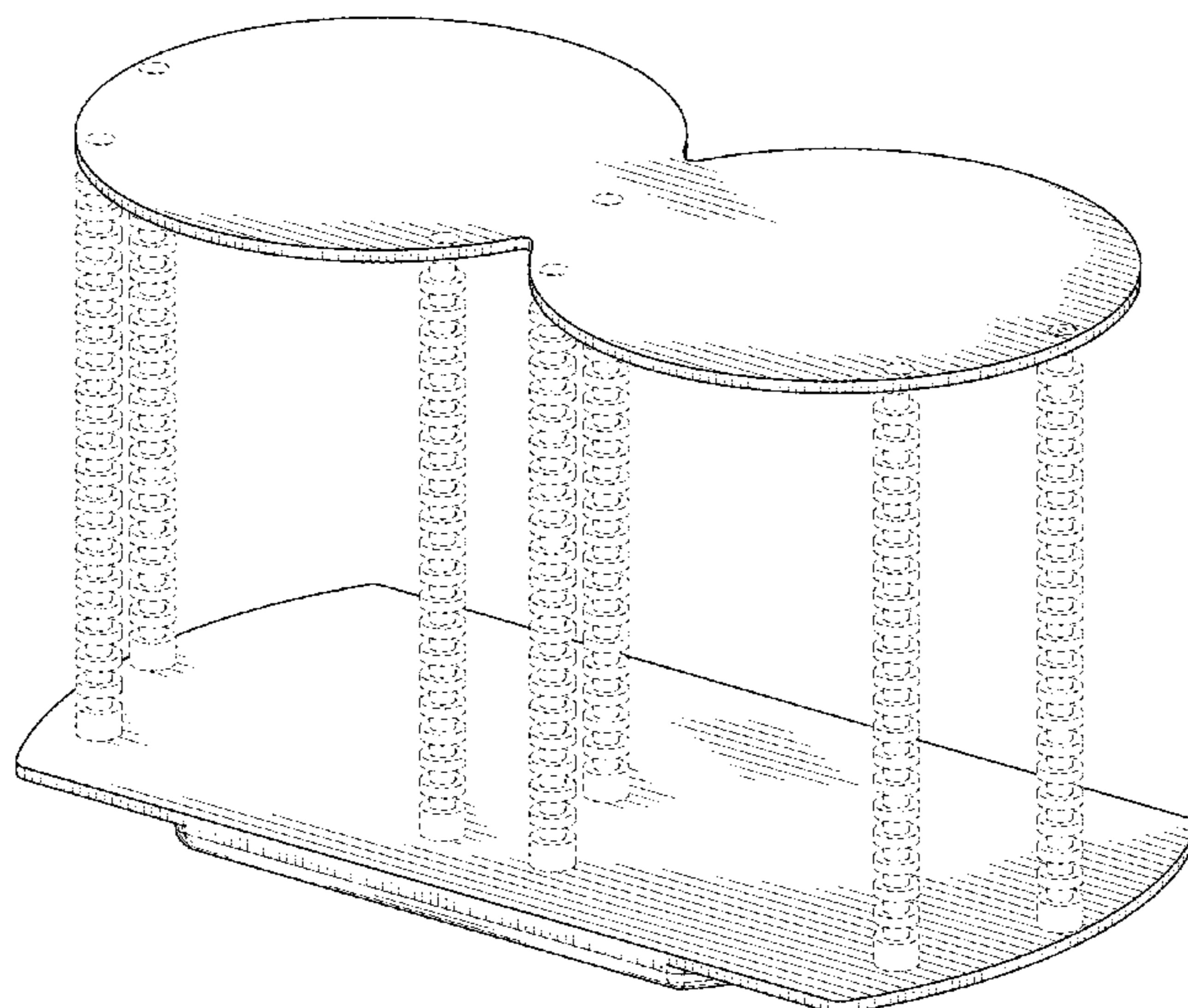
The ornamental design for a transportable semiconductor wafer rack, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a transportable semiconductor wafer rack showing our new design;  
FIG. 2 is a front view thereof;  
FIG. 3 is a rear view thereof;  
FIG. 4 is a first side view thereof;  
FIG. 5 is a second side view thereof;  
FIG. 6 is a top view thereof;  
FIG. 7 is a bottom view thereof;  
FIG. 8 is a cross-section view taken along line 8-8 of FIG. 7; and,  
FIG. 9 is another cross-section view taken along line 9-9 of FIG. 7.

The broken lines in the Figures are for the purpose of illustrating unclaimed portions of the transportable semiconductor wafer rack and form no part of the claimed design. The shade lines in the Figures show contour and not surface ornamentation.

**1 Claim, 9 Drawing Sheets**



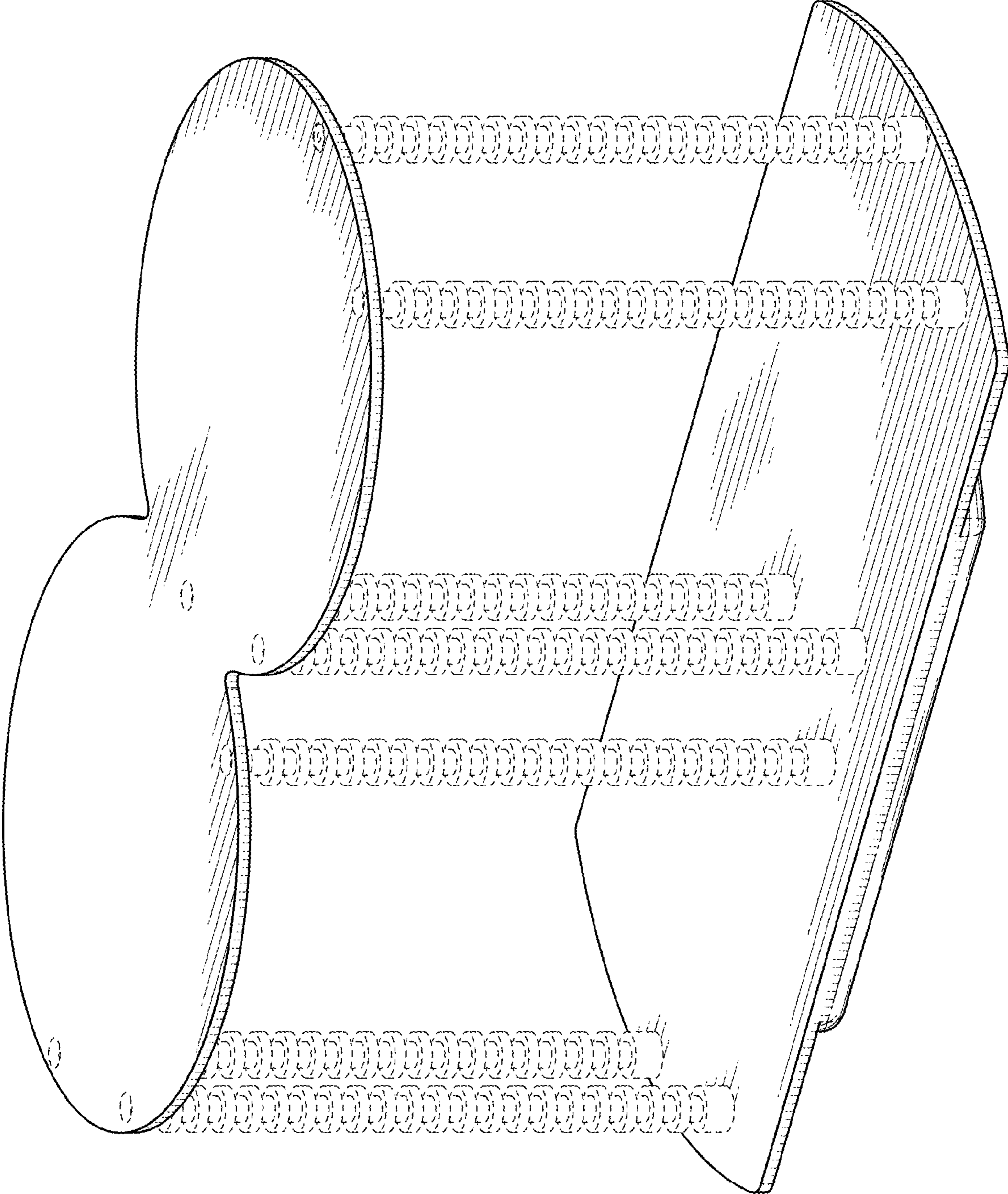
(56)

References Cited

U.S. PATENT DOCUMENTS

6,062,853	A *	5/2000	Shimazu	.....	H01L 21/6875	432/258
6,065,615	A *	5/2000	Uchiyama	.....	H01L 21/67306	211/41.18
6,099,302	A *	8/2000	Hong	.....	C30B 31/14	211/41.18
6,099,645	A *	8/2000	Easley	.....	H01L 21/67309	118/500
6,287,112	B1 *	9/2001	Van Voorst Vader	.....	C30B 31/14	118/728
6,341,935	B1 *	1/2002	Tseng	.....	H01L 21/67303	118/500
D570,308	S *	6/2008	Sato	.....	D13/182	
D570,309	S *	6/2008	Sato	.....	D13/182	
D580,894	S *	11/2008	Sato	.....	D13/182	
7,484,958	B2 *	2/2009	Kobayashi	.....	H01L 21/67309	211/41.18
D600,221	S *	9/2009	Sato	.....	D13/182	
D600,222	S *	9/2009	Sato	.....	D13/182	
D616,396	S *	5/2010	Sato	.....	D13/182	
7,857,140	B2 *	12/2010	Shinjo	.....	H01L 21/6732	206/445
D655,255	S *	3/2012	Takebayashi	.....	D13/182	
D655,682	S *	3/2012	Takebayashi	.....	D13/182	
D734,730	S *	7/2015	Yoshida	.....	D13/182	
D737,785	S *	9/2015	Yoshida	.....	D13/182	
D738,329	S *	9/2015	Yoshida	.....	D13/182	
D747,279	S *	1/2016	Yoshida	.....	D13/182	
D839,219	S *	1/2019	Yoshida	.....	D13/182	
10,224,185	B2	3/2019	Noh et al.			
D846,514	S *	4/2019	Yoshida	.....	D13/182	
2002/0092815	A1 *	7/2002	Kim	.....	H01L 21/67303	211/41.18
2002/0113027	A1 *	8/2002	Minami	.....	H01L 21/67309	211/41.18
2002/0130061	A1 *	9/2002	Hengst	.....	C23C 16/325	206/710
2002/0187023	A1 *	12/2002	Araki	.....	H01L 21/67309	414/160
2003/0024888	A1 *	2/2003	Payne	.....	H01L 21/67303	211/41.18
2005/0145584	A1 *	7/2005	Buckley	.....	H01L 21/67306	211/41.18
2018/0019144	A1	1/2018	Ogitsu			
2019/0279891	A1	9/2019	Domsa et al.			

\* cited by examiner



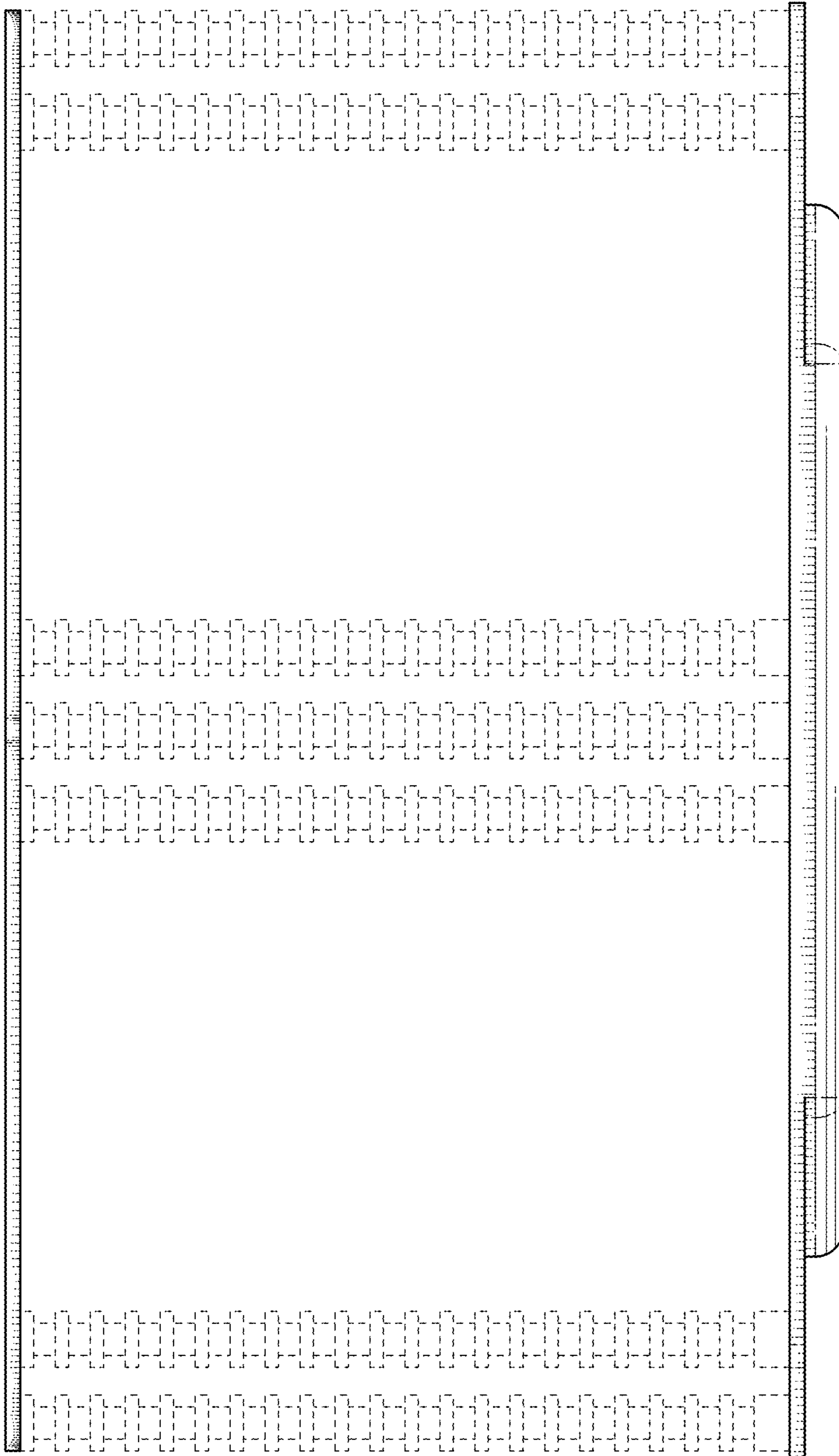


FIG. 2

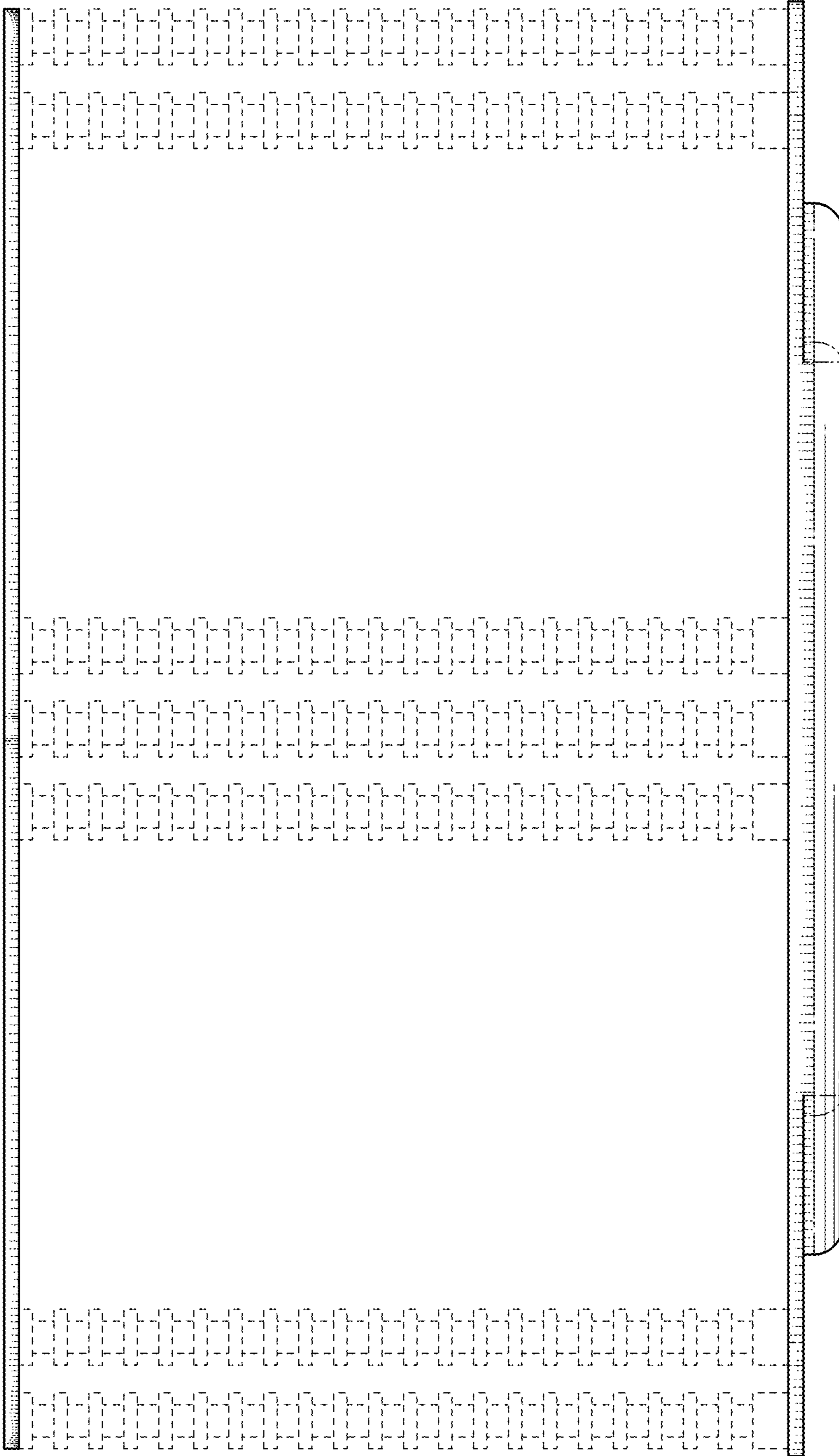


FIG. 3

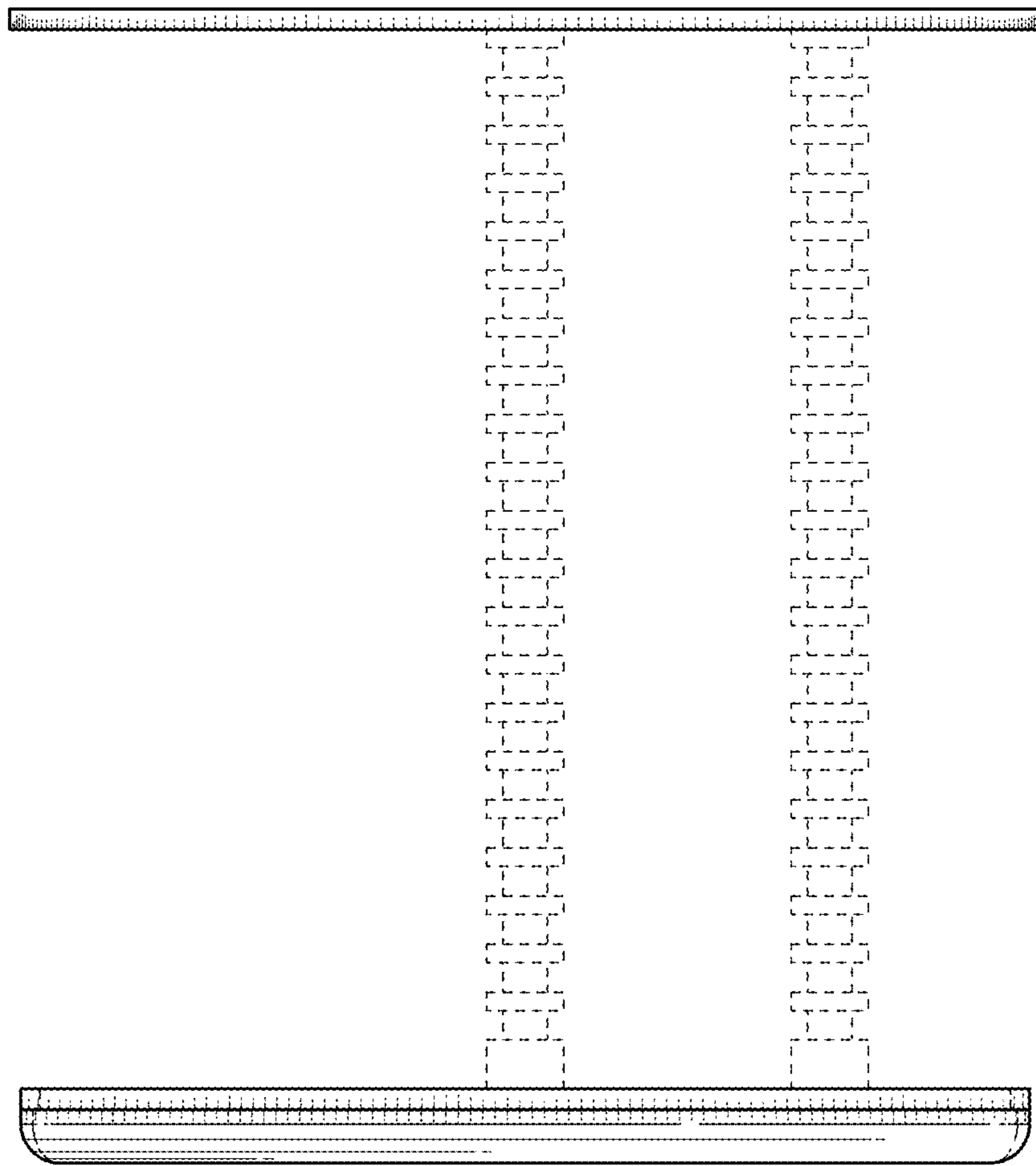


FIG. 4

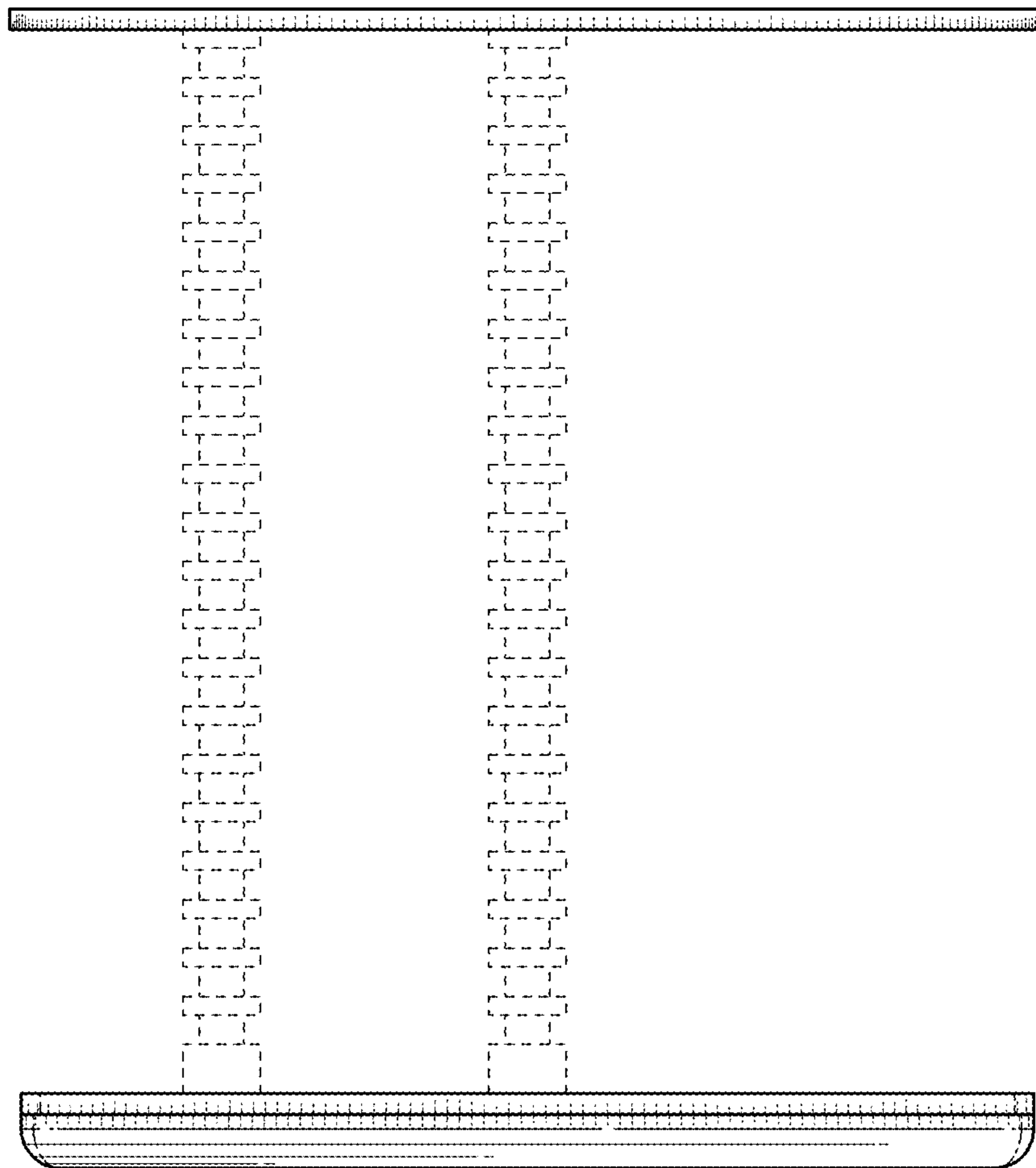


FIG. 5

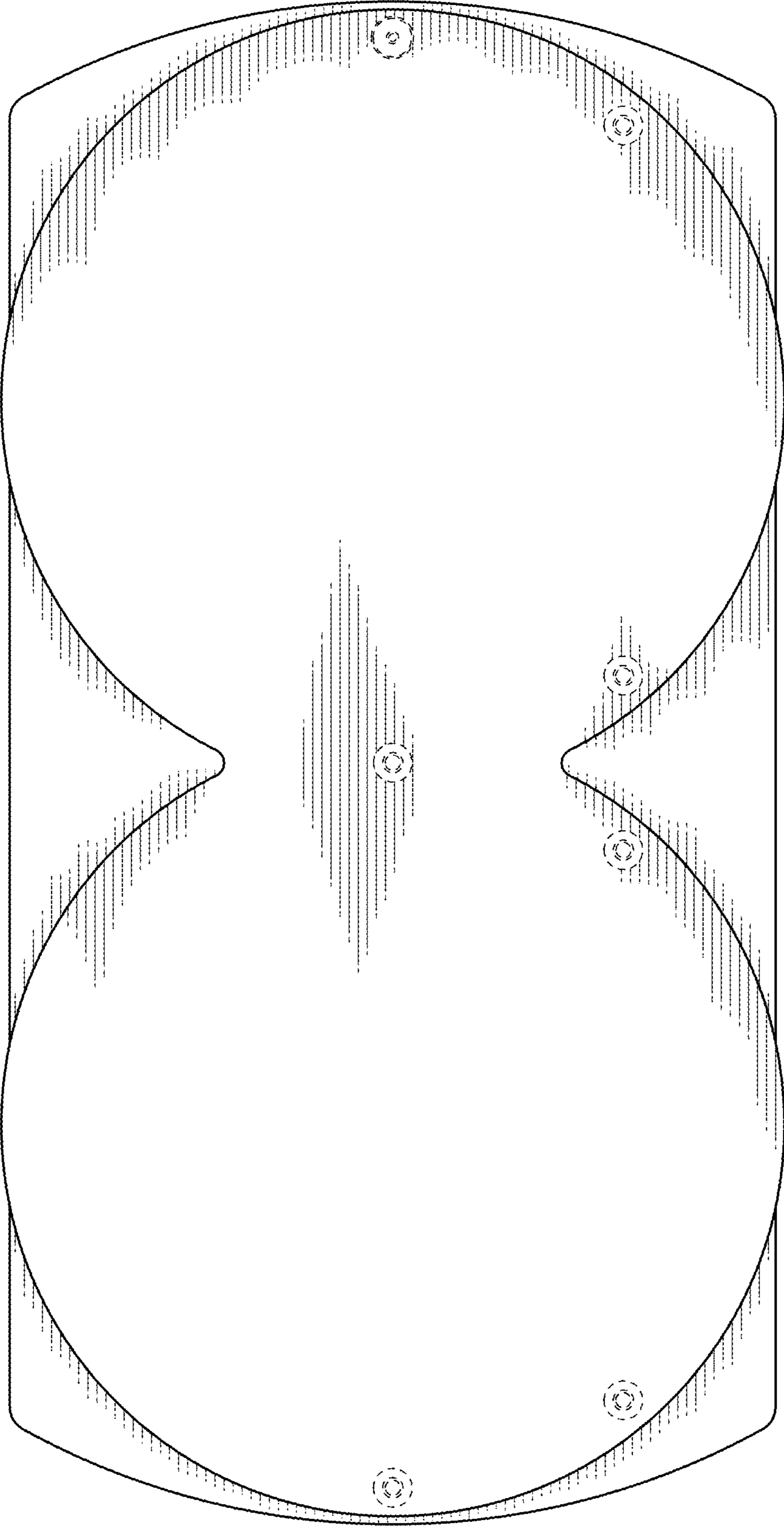


FIG. 6



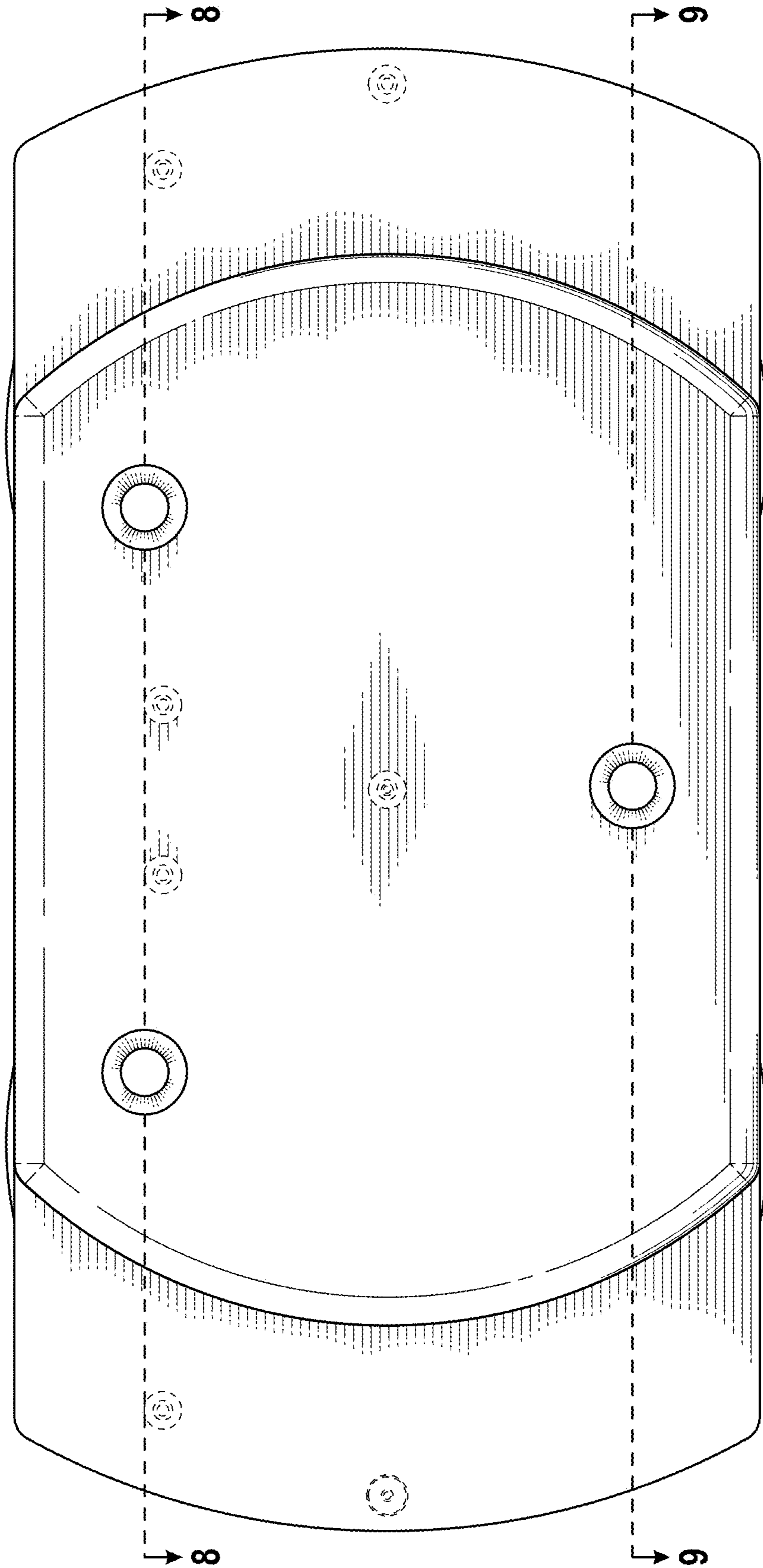


FIG. 7

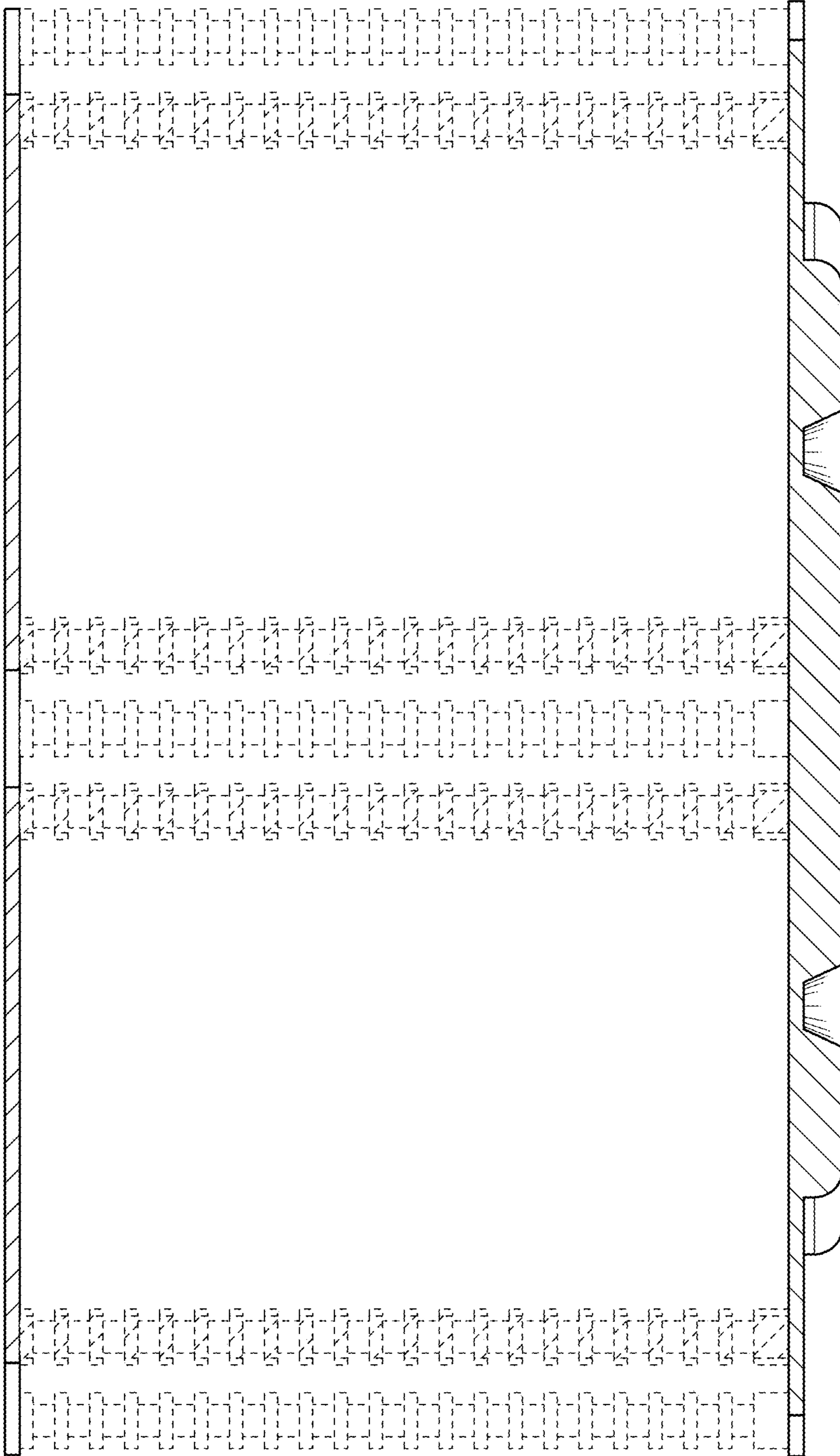


FIG. 8

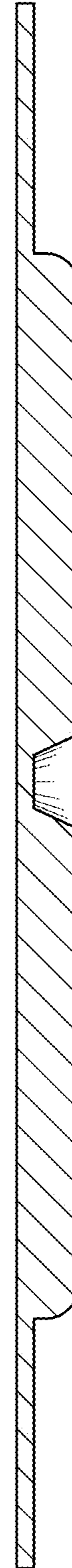


FIG. 9