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

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(54) **LED LIGHT ENGINE WITH OPTICS**

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

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(51) **LOC (9) Cl.** ..... **26-06**

(52) **U.S. Cl.** ..... **D26/28**

(58) **Field of Classification Search** ..... D26/28-36;  
362/459-468, 475-478, 485-487, 61-83,  
362/330-335

See application file for complete search history.

2009/0097262 A1 4/2009 Zhang et al.  
2009/0126905 A1 5/2009 Dinh  
2009/0168416 A1 7/2009 Zhang et al.

**FOREIGN PATENT DOCUMENTS**

WO 2009081382 A1 7/2009

**OTHER PUBLICATIONS**

CAFP Electronical Technology Co., Ltd, LED streetlight heat sink,  
<http://winszhang.en.ecplaza.net/2.asp>, Retrieved Sep. 22, 2009, 3  
pages.

International Search Report and Written Opinion dated Sep. 17,  
2010, regarding PCT/US2010/040866, 13 pages.

\* cited by examiner

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(57) **CLAIM**

The ornamental design for a LED light engine with optics, as  
shown and described.

(56) **References Cited**

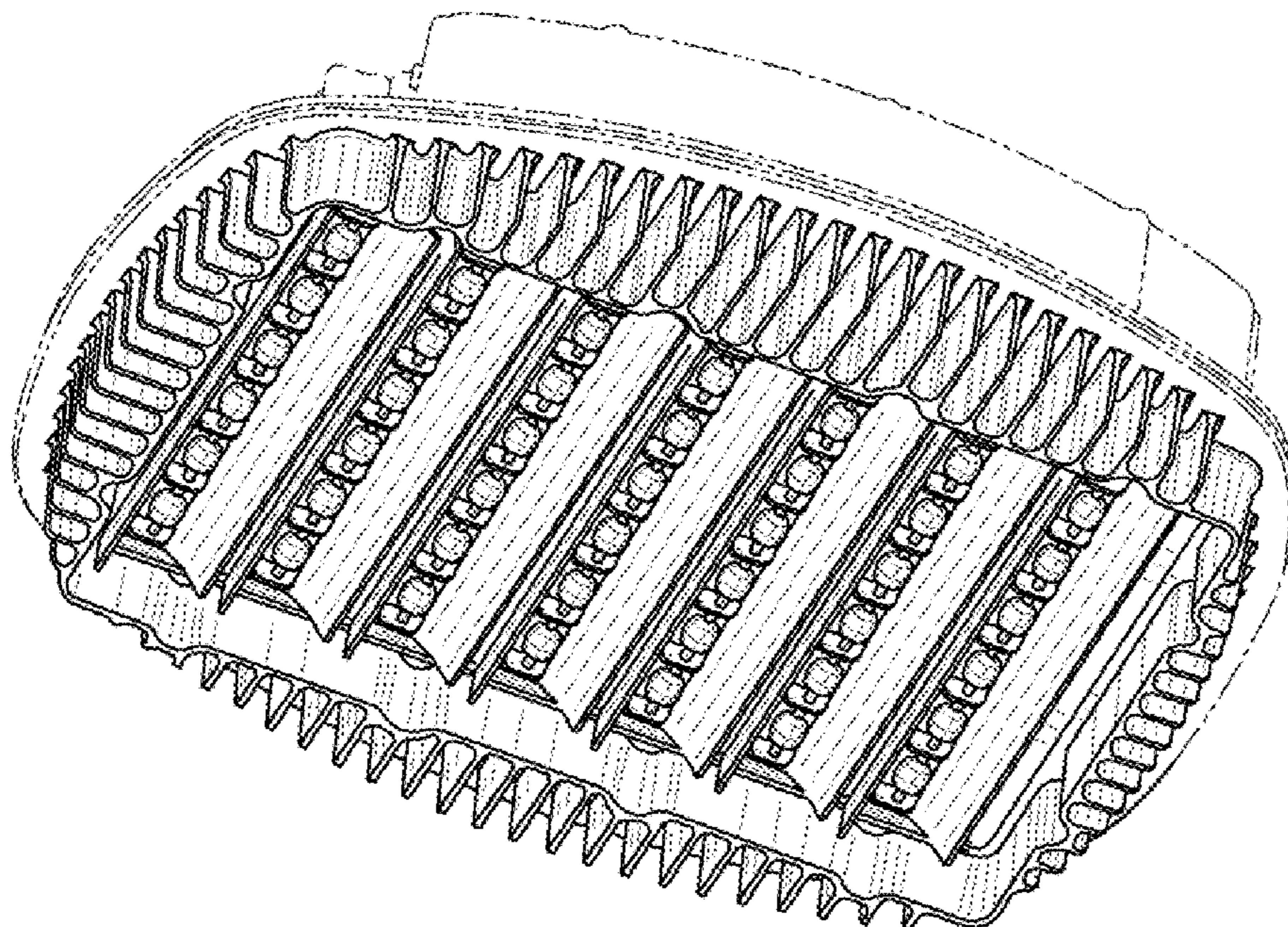
**U.S. PATENT DOCUMENTS**

D315,216 S *	3/1991	Kelley et al.	.....	D26/28
D324,111 S *	2/1992	Arbisi	.....	D26/28
D334,821 S *	4/1993	Morgan	.....	D26/28
5,892,621 A	4/1999	McGregor et al.		
6,045,240 A	4/2000	Hochstein		
6,942,361 B1	9/2005	Kishimura et al.		
7,347,706 B1	3/2008	Wu et al.		
2006/0092639 A1	5/2006	Livesay et al.		
2007/0076413 A1	4/2007	Mingozzi		
2007/0076415 A1	4/2007	Chou et al.		
2007/0201225 A1	8/2007	Holder et al.		
2008/0080196 A1	4/2008	Ruud et al.		
2009/0021933 A1	1/2009	Mayer et al.		

**DESCRIPTION**

FIG. 1 is a bottom perspective view of the LED light engine  
with optics showing our new design;  
FIG. 2 is a front view of the LED light engine with optics;  
FIG. 3 is a rear view of the LED light engine with optics;  
FIG. 4 is a left side view of the LED light engine with optics;  
FIG. 5 is a right side view of the LED light engine with optics;  
FIG. 6 is a top view of the LED light engine with optics; and,  
FIG. 7 is a bottom view of the LED light engine with optics.  
The broken lines shown are for illustrative purposes only and  
form no part of the claimed design.

**1 Claim, 4 Drawing Sheets**





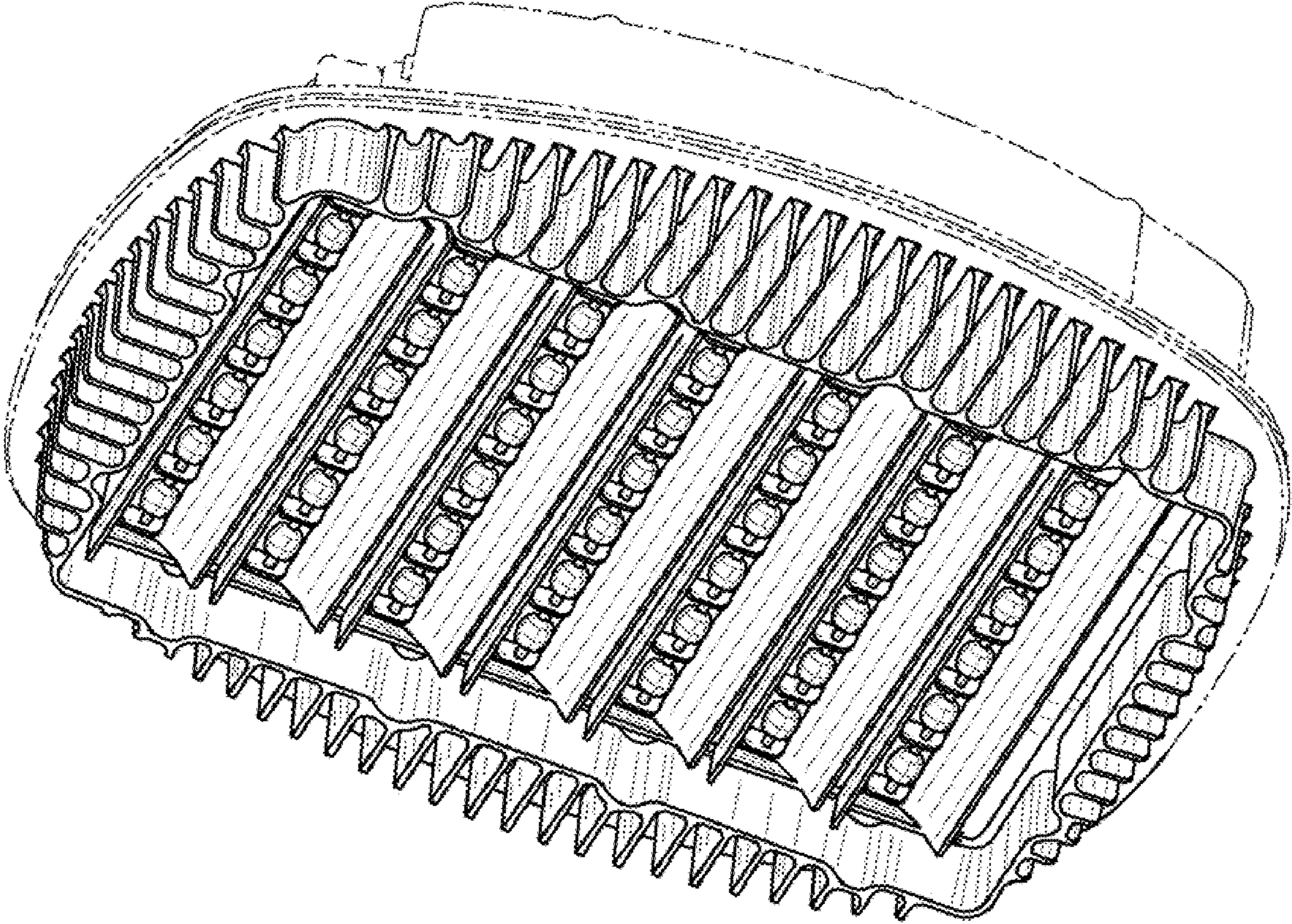


FIG. 1

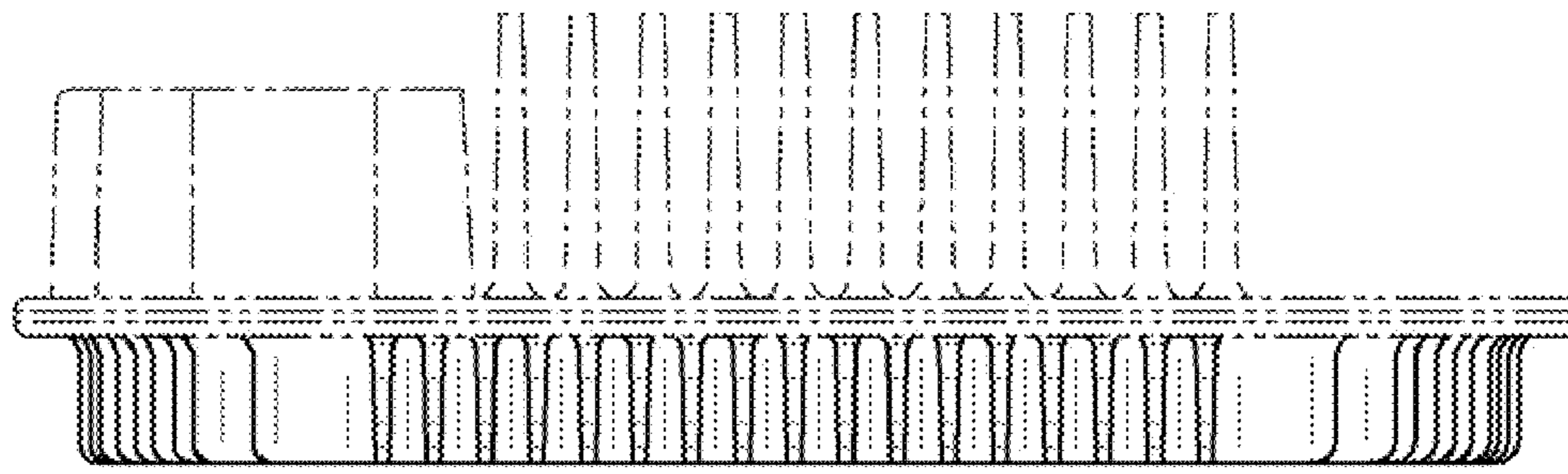


FIG. 2

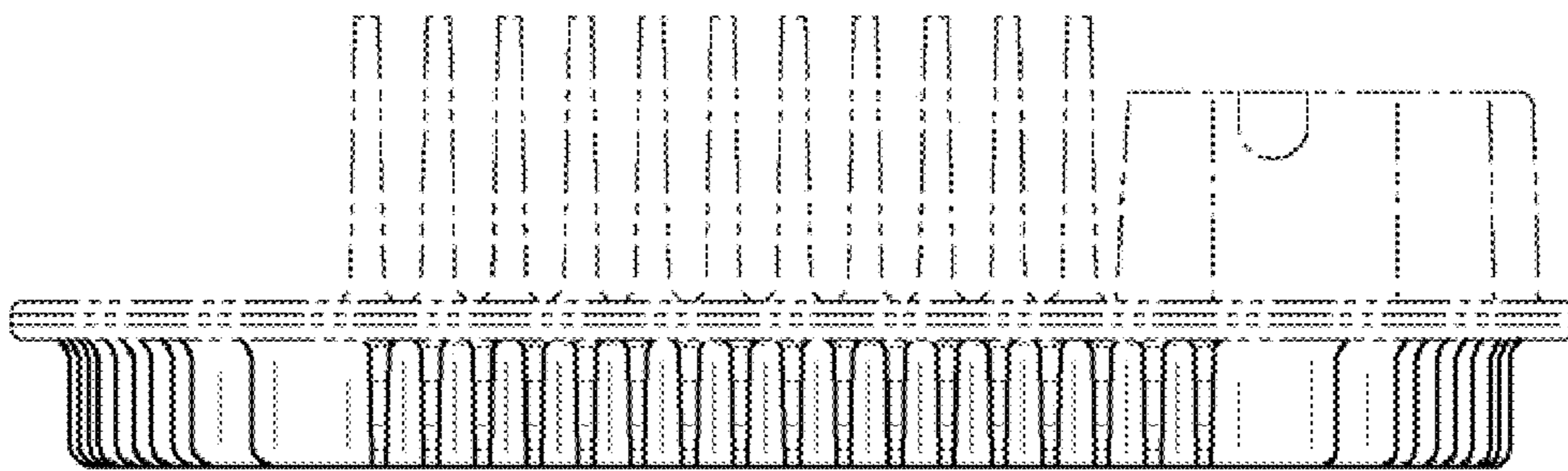


FIG. 3

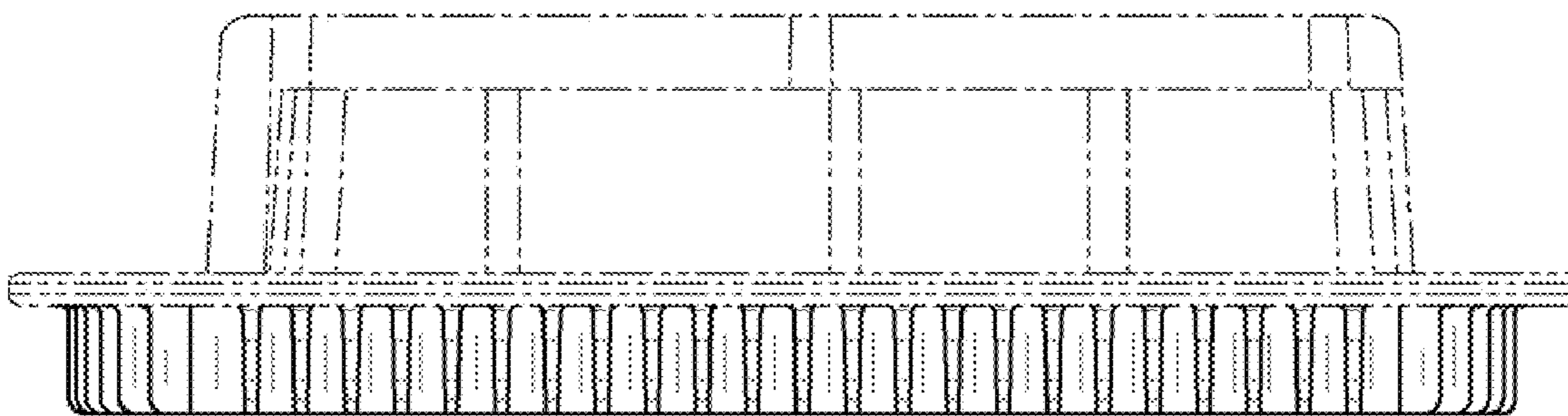


FIG. 4

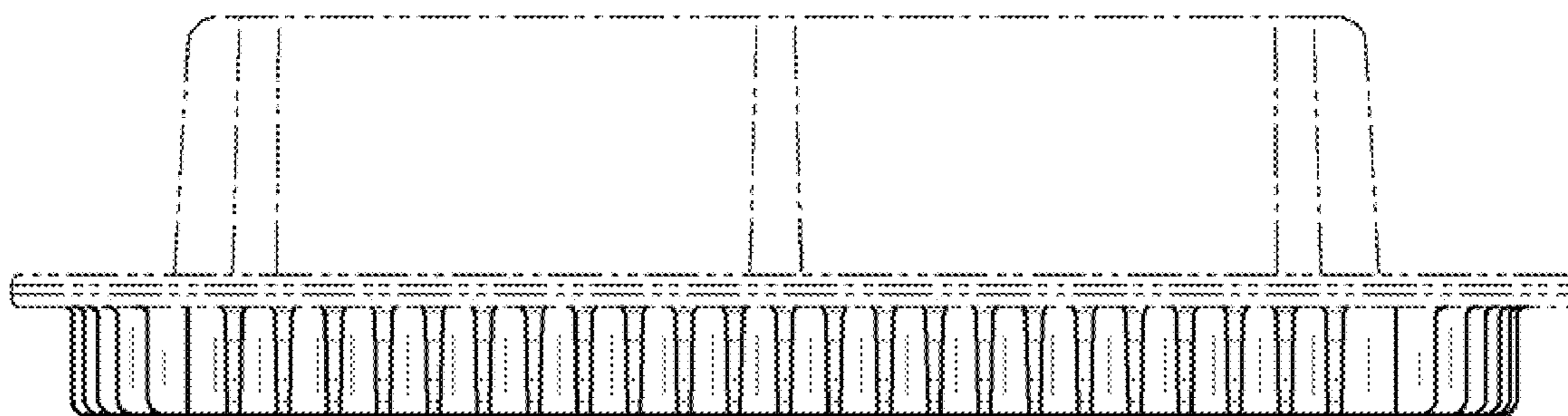


FIG. 5



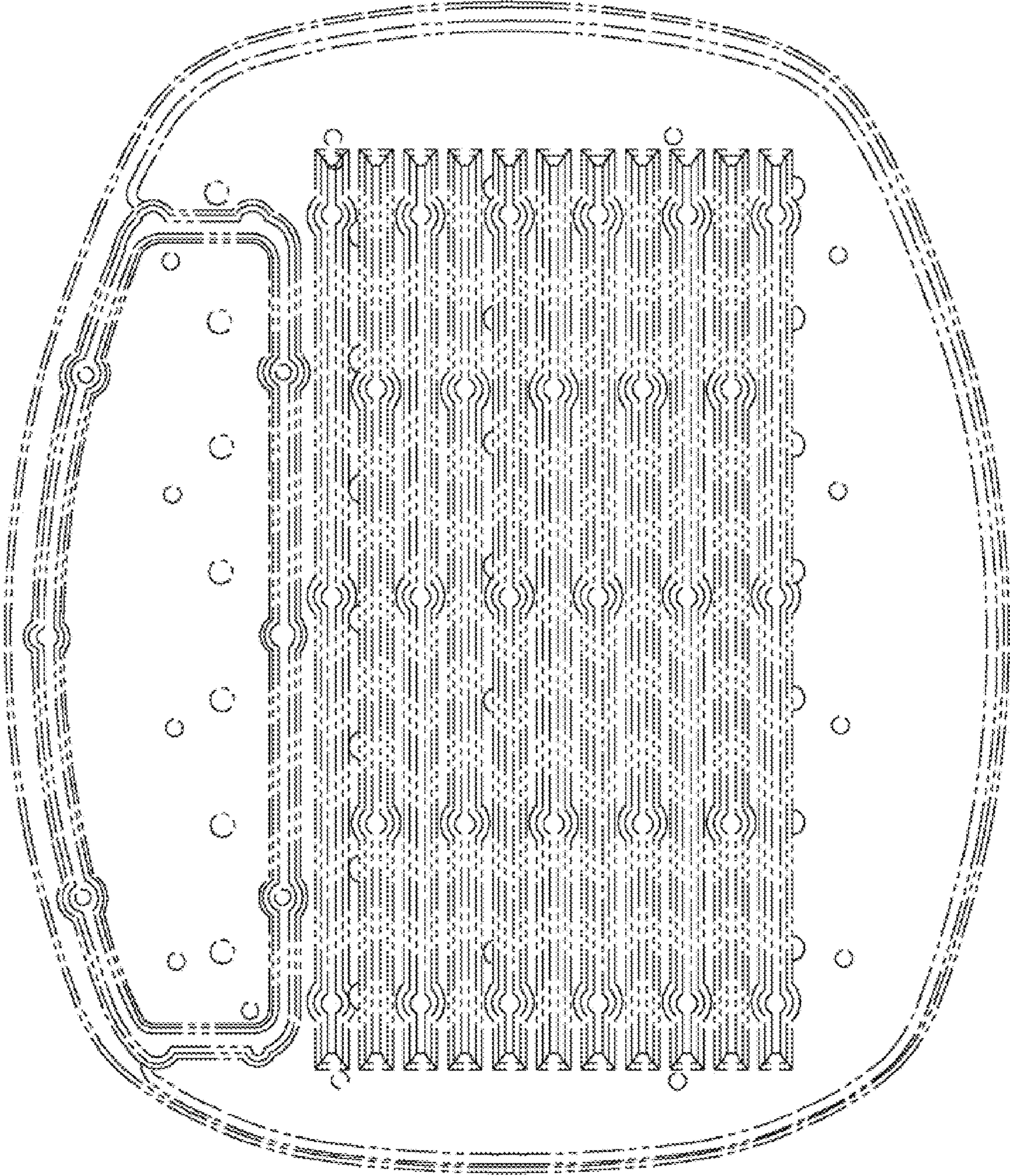


FIG. 6



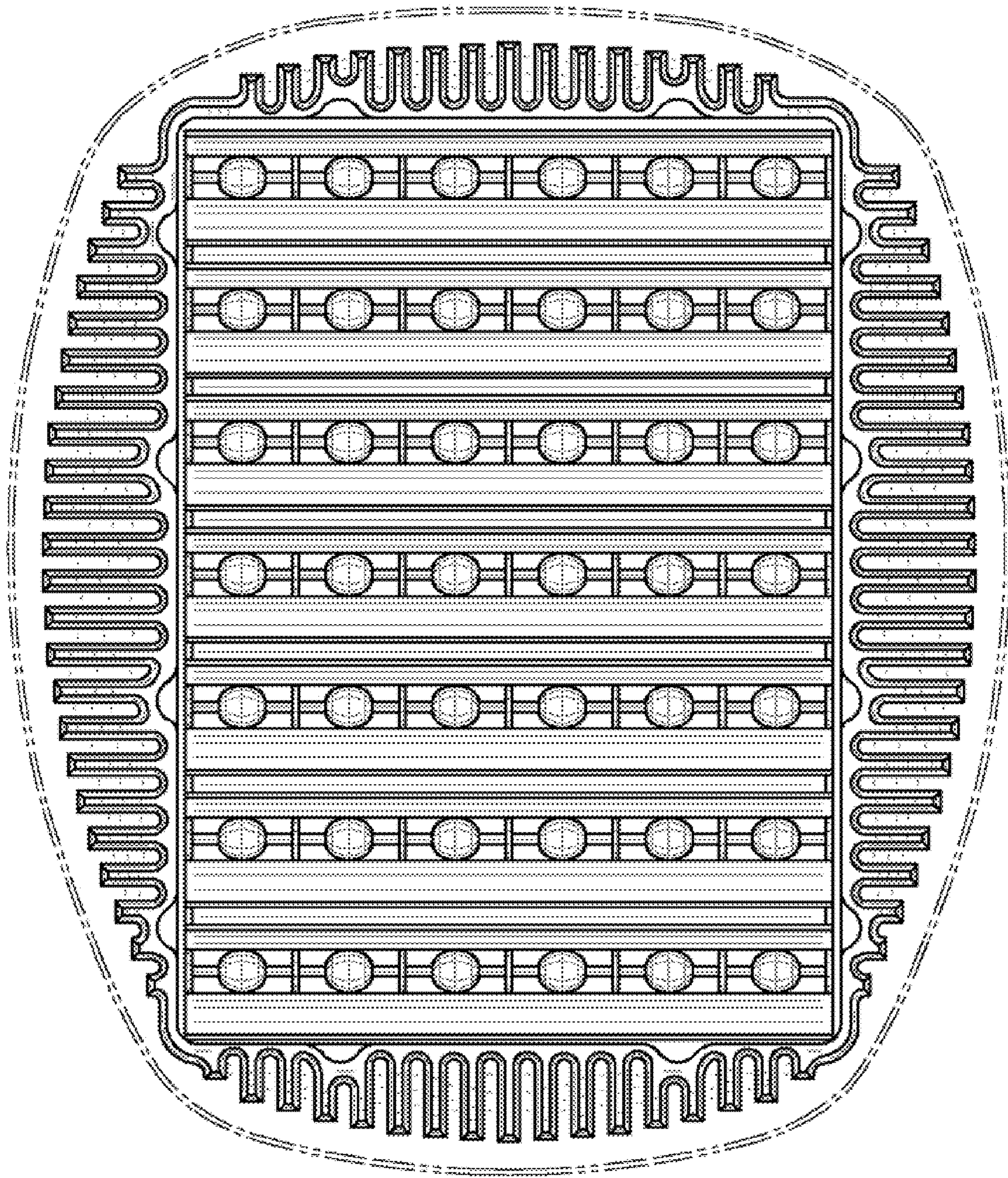


FIG. 7