



US00D786202S

(12) **United States Design Patent** (10) **Patent No.:** **US D786,202 S**  
**Hodrinsky** (45) **Date of Patent:** \*\* **May 9, 2017**

(54) **HEAT SINK FOR A LIGHT-EMITTING DIODE**

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(73) Assignee: **Liteideas, LLC**, Mansfield Center, CT (US)

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

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(51) LOC (10) Cl. .... **13-03**

(52) U.S. Cl.

USPC ..... **D13/179**

(58) **Field of Classification Search**

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CPC .... H01L 23/34; H01L 31/1024; H01L 33/64;  
H01L 23/367; H01L 23/46; H01L 23/467;  
H01L 23/473; G06F 1/20; H05K  
7/20972; B23P 2700/10; F28F 2215/00;  
F28F 2215/08

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D441,725 S *	5/2001	Chou	.....	D13/179
D442,566 S *	5/2001	Chou	.....	D13/179
D450,306 S *	11/2001	Lin	.....	D13/179
D464,939 S *	10/2002	Chuang	.....	D13/179
D476,958 S *	7/2003	Tsai	.....	D13/179
D477,580 S *	7/2003	Kamada	.....	D13/182
D500,745 S *	1/2005	Duan	.....	D13/179
D593,512 S *	6/2009	Lin	.....	D13/179

(Continued)

OTHER PUBLICATIONS

Aliexpress, "Led grow light kit, DIY COB full spectrum grow light, 50w led +50 driver+heat sink+lens + fan for hydroponics/greenhouse", Accessed Dec. 9, 2016. First sale dated Jun. 23, 2016. ([https://www.aliexpress.com/store/product/Led-grow-light-kit-DIY-full-spectrum-grow-light-50w-led-50-driver-heat-sink-lens/121917\\_1567310446.html](https://www.aliexpress.com/store/product/Led-grow-light-kit-DIY-full-spectrum-grow-light-50w-led-50-driver-heat-sink-lens/121917_1567310446.html)).\*

(Continued)

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(57) **CLAIM**

What is claimed is the ornamental design for a heat sink for a light-emitting diode, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of the heat sink according to the present invention;

FIG. 2 is a top view of the heat sink according to the present invention;

FIG. 3 is a side view of the heat sink according to the present invention;

FIG. 4 is a front view of the heat sink according to the present invention;

FIG. 5 is a back view of the heat sink according to the present invention;

FIG. 6 is a perspective view with a region shown in dot-dash for an enlarged detail view of the heat sink according to the present invention;

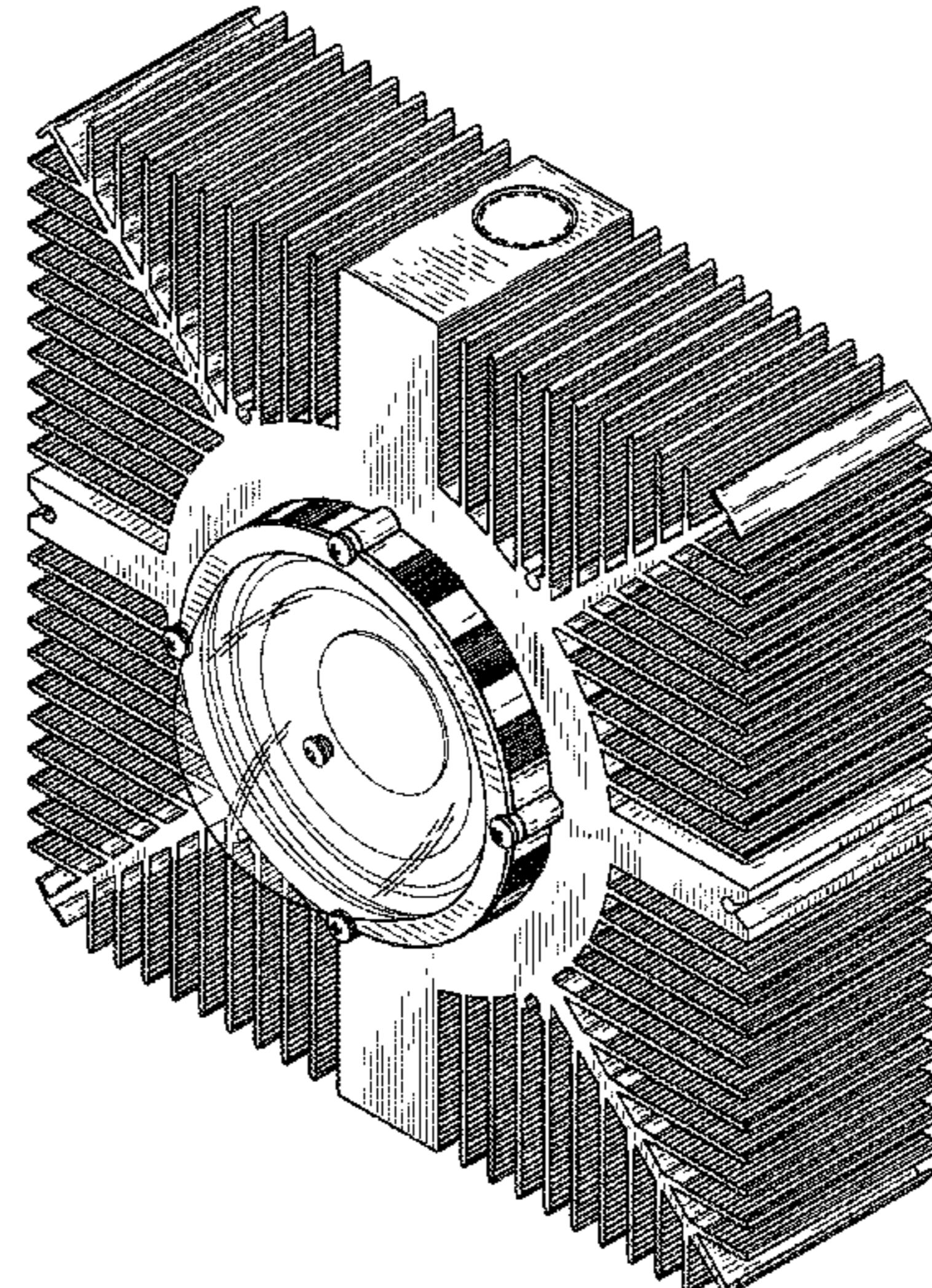
FIG. 7 is an enlarged region as indicated in FIG. 6;

FIG. 8 is a front view with a region shown in dot-dash for an enlarged detail view of the heat sink according to the present invention; and,

FIG. 9 is an enlarged region as indicated in FIG. 8.

The broken lines illustrate portions of the heat sink for a light-emitting diode and form no part of the claimed design.

**1 Claim, 8 Drawing Sheets**



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**References Cited**

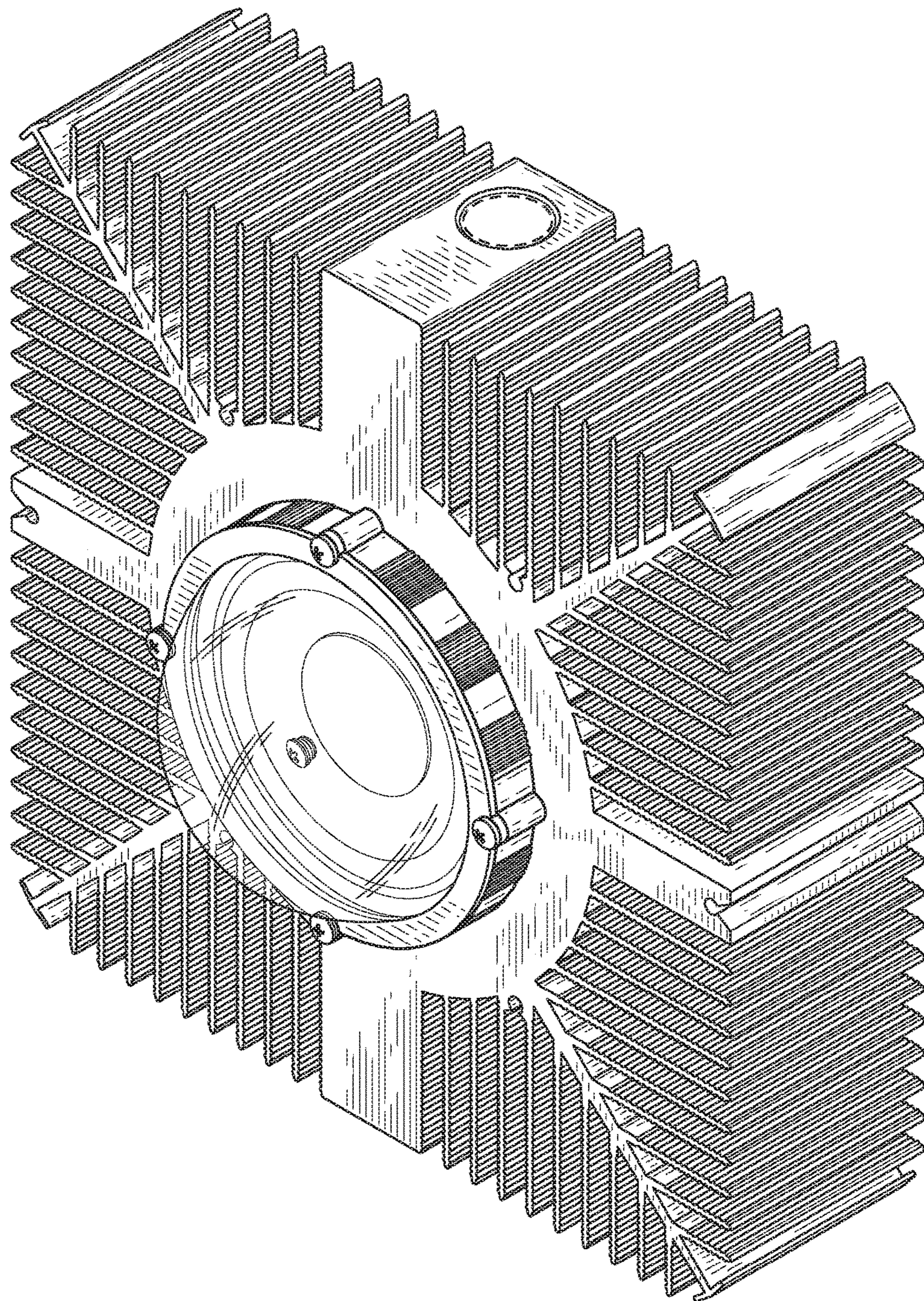
**U.S. PATENT DOCUMENTS**

D603,810	S *	11/2009	Yang .....	D13/179
D604,255	S *	11/2009	King .....	D13/179
D640,645	S *	6/2011	Andrews .....	D13/182
D643,380	S *	8/2011	Tan .....	D13/179
D663,268	S *	7/2012	Andrieux .....	D13/122
D681,573	S *	5/2013	Andrews .....	D13/182
D706,973	S *	6/2014	Shih .....	D26/113
2005/0088823	A1*	4/2005	Kabadi .....	C04B 38/0067 361/704
2008/0175003	A1*	7/2008	Tsou .....	F21S 48/328 362/294
2009/0067133	A1*	3/2009	Li .....	H01L 23/34 361/709
2014/0345844	A1*	11/2014	Chou .....	H01L 23/367 165/185

**OTHER PUBLICATIONS**

Power electronics, "Square Cold Forged Heat Sink for 60 W LED applications ", Accessed Dec. 9, 2016, Dated Nov. 18, 2014. (<http://powerelectronics.com/thermal-management/square-cold-forged-heat-sink-60-w-led-applications>).\*

\* cited by examiner



**FIG. 1**

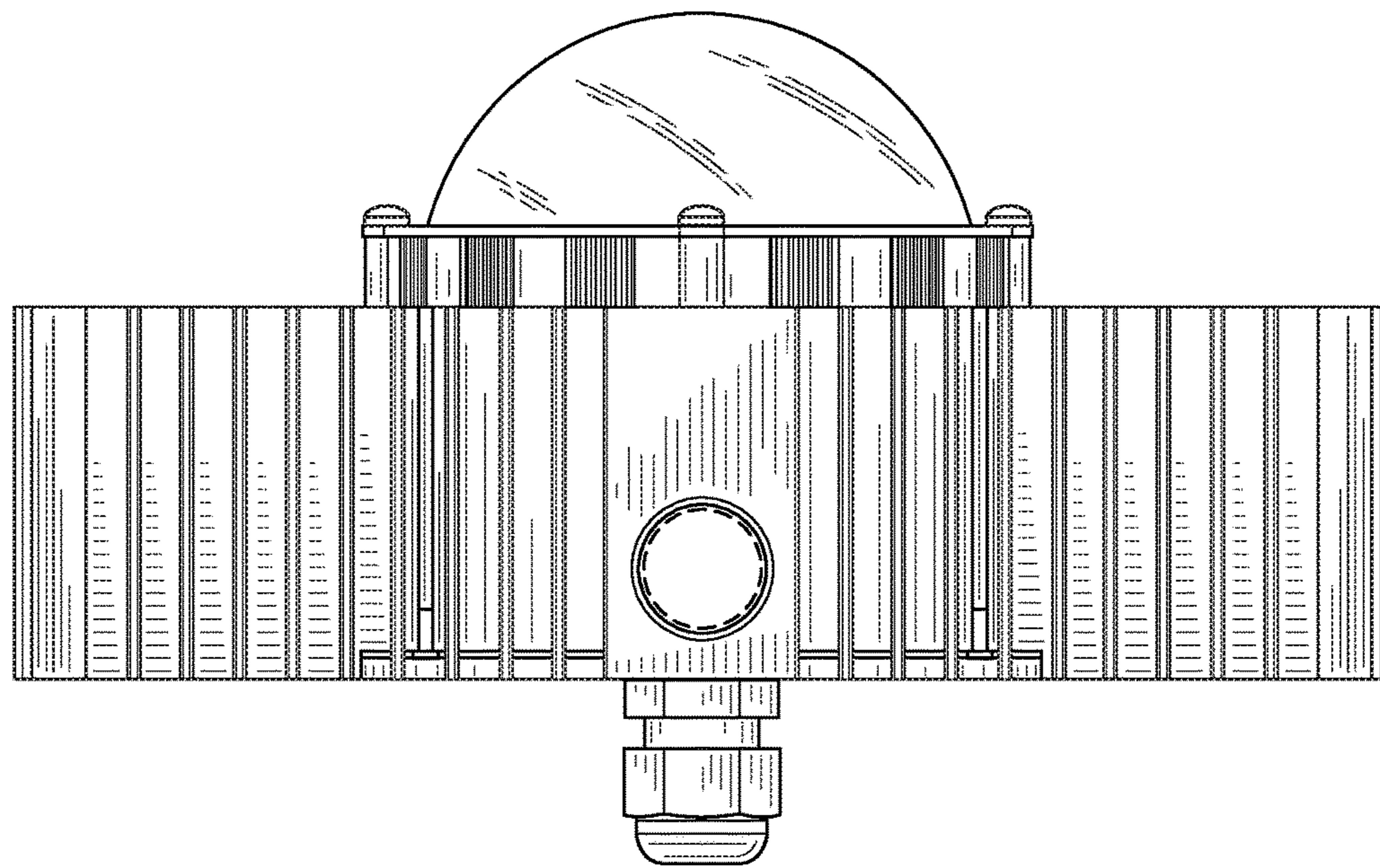


FIG. 2

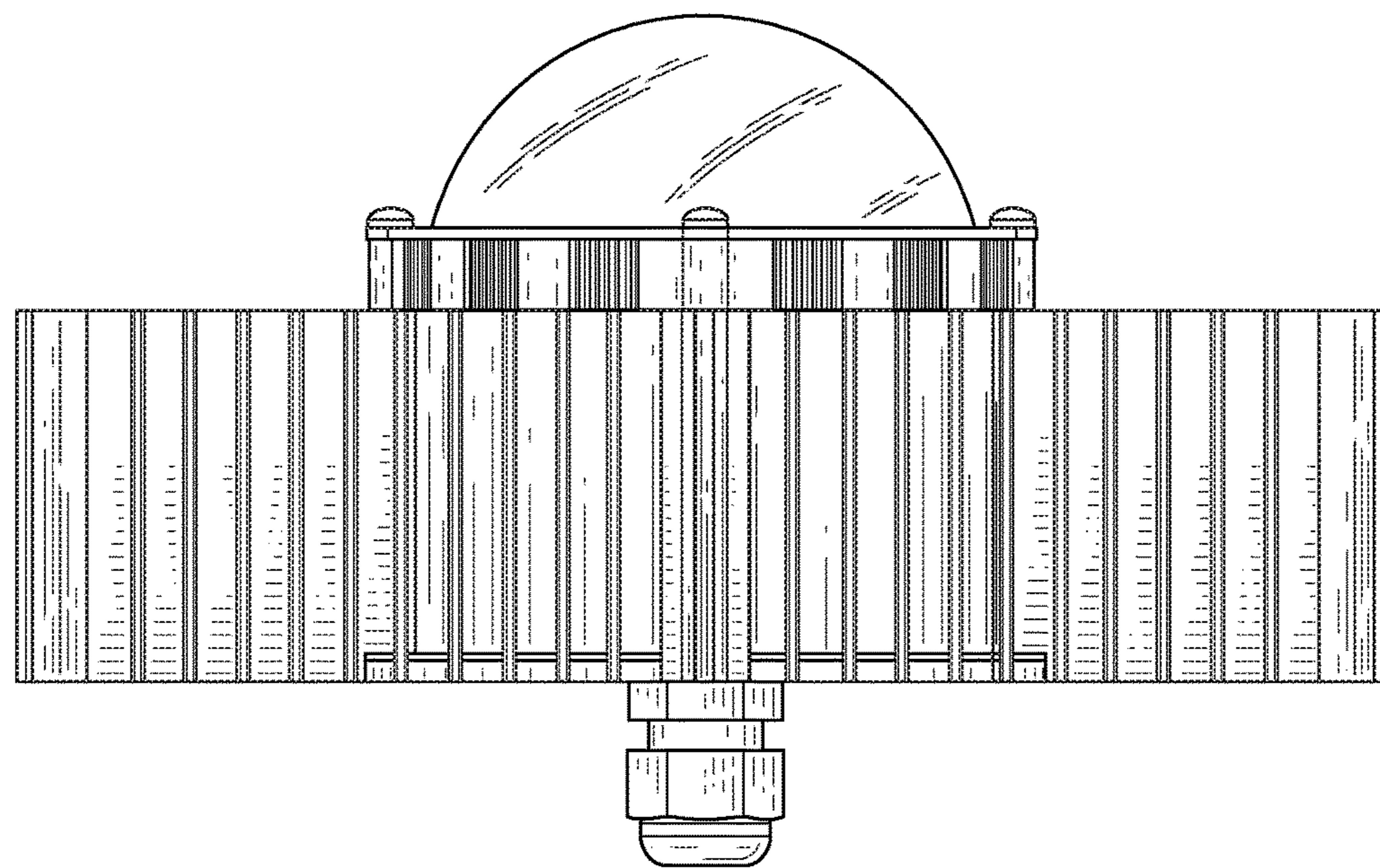


FIG. 3

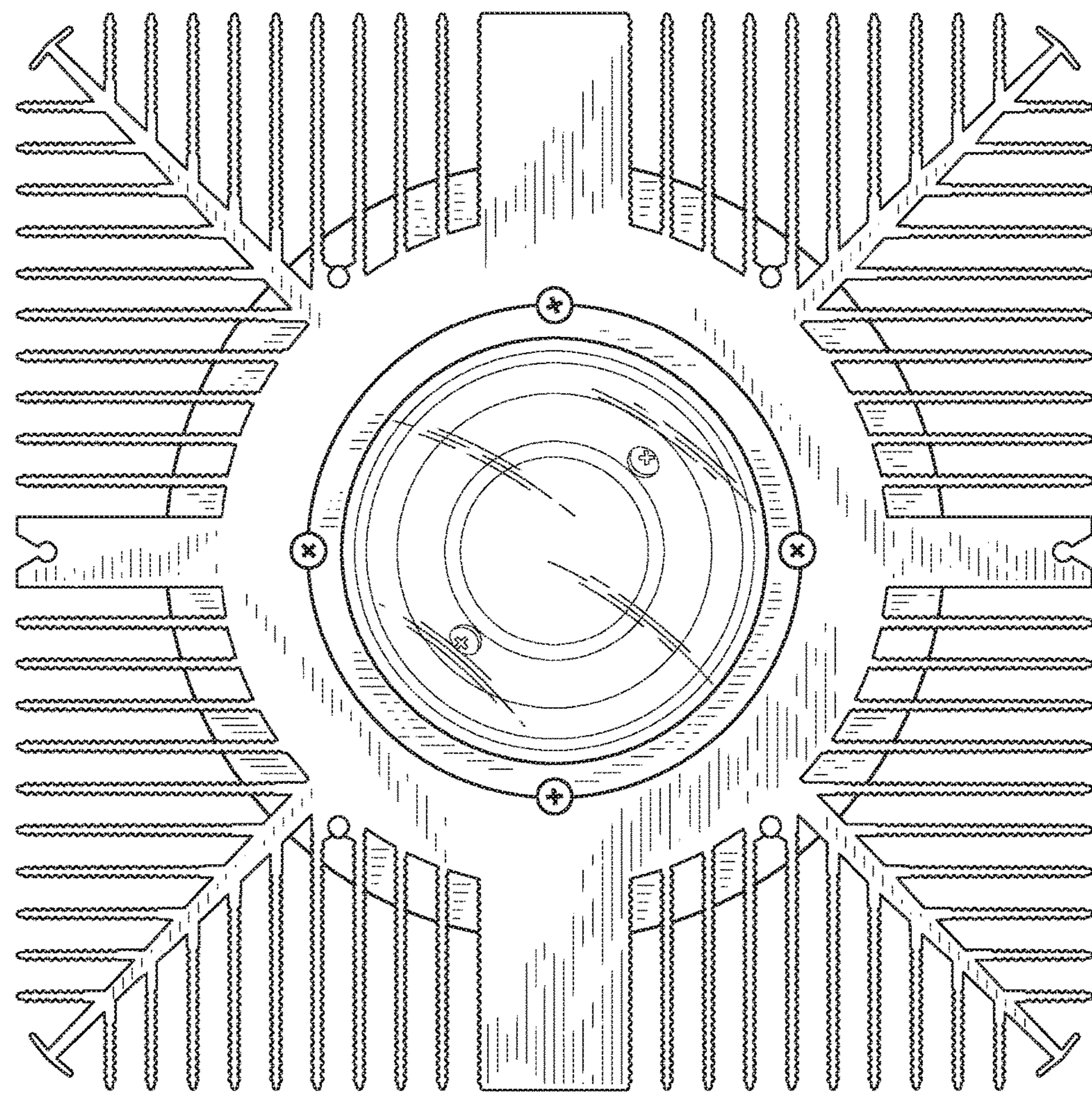


FIG. 4

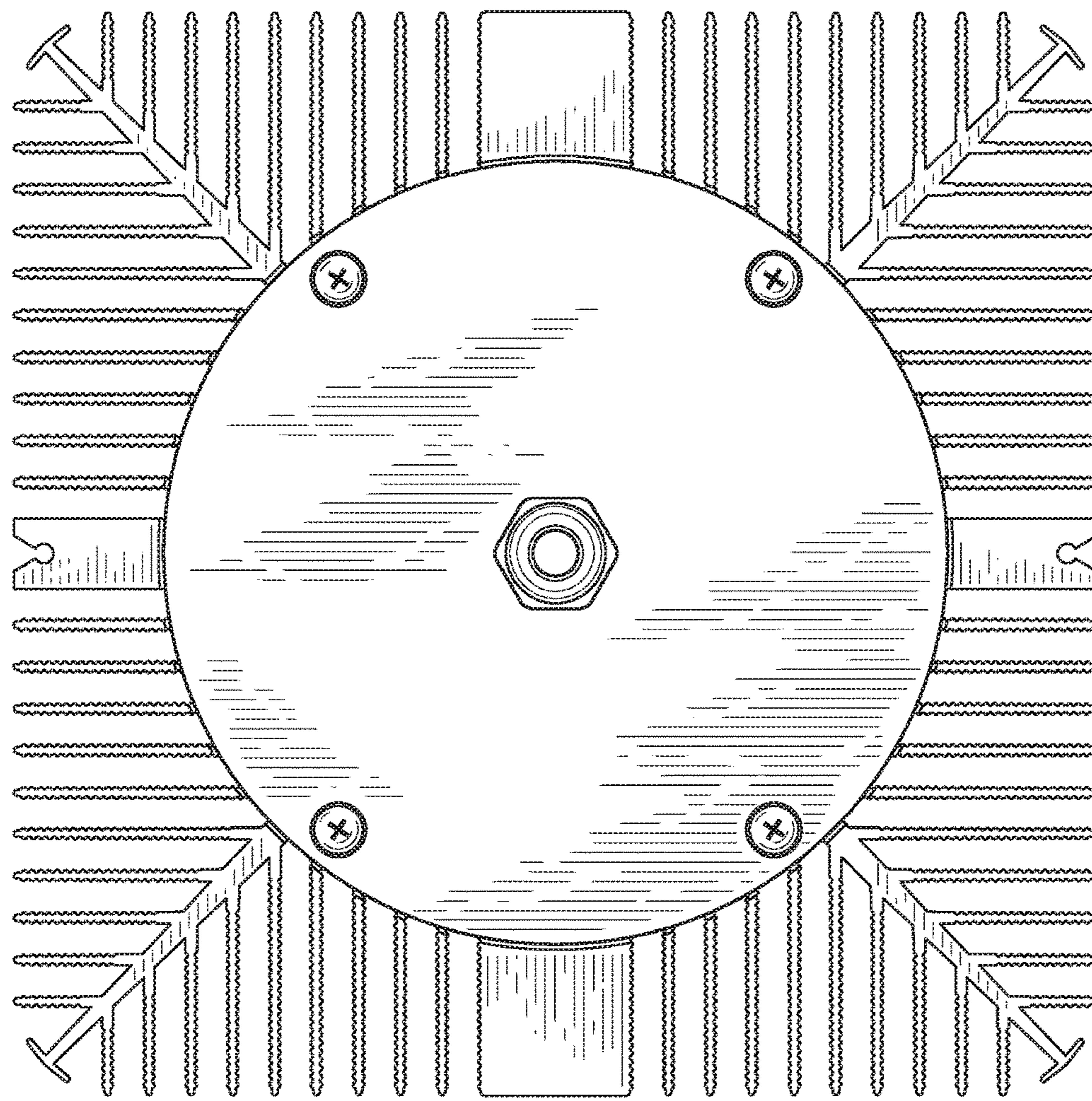
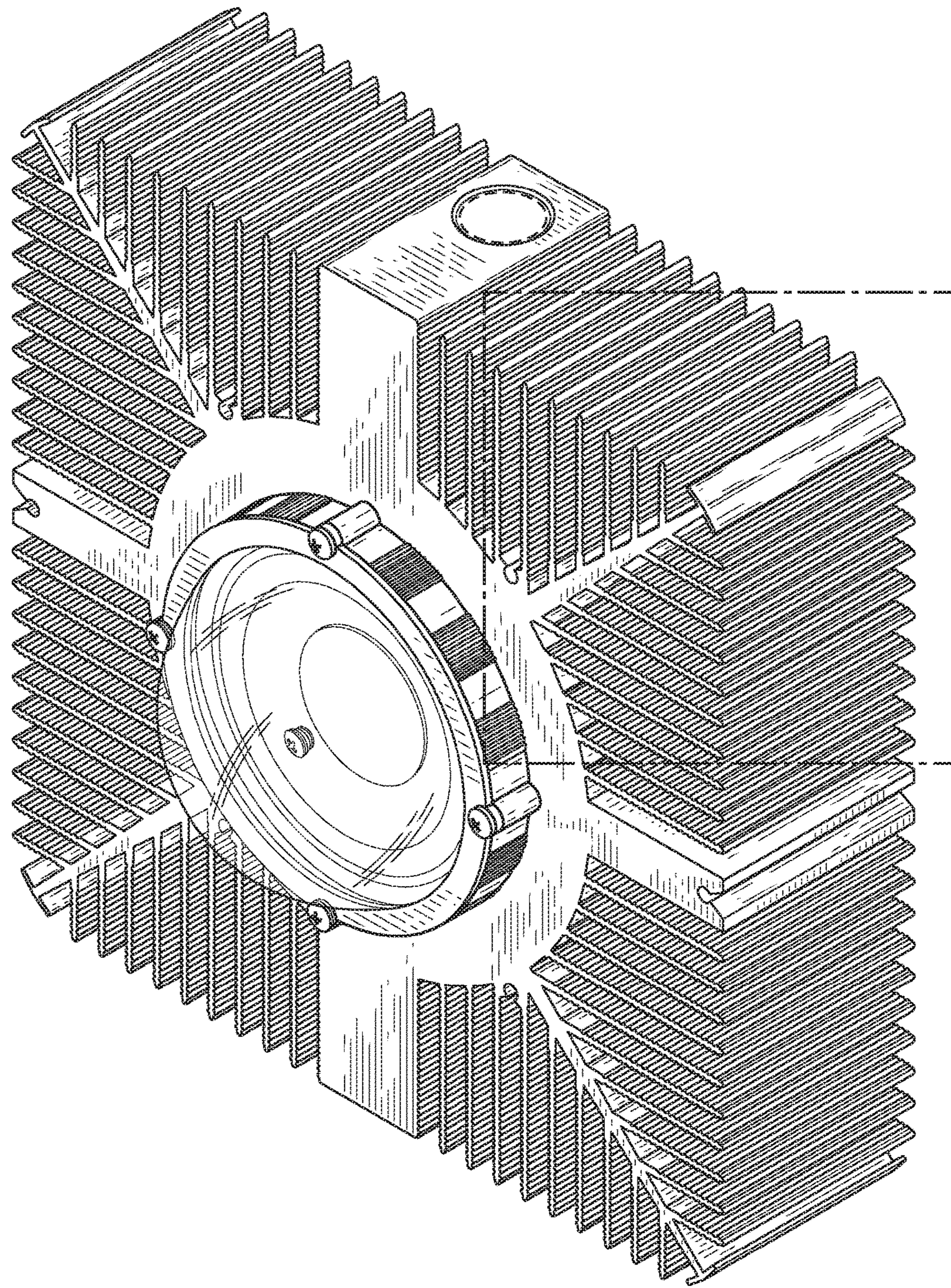
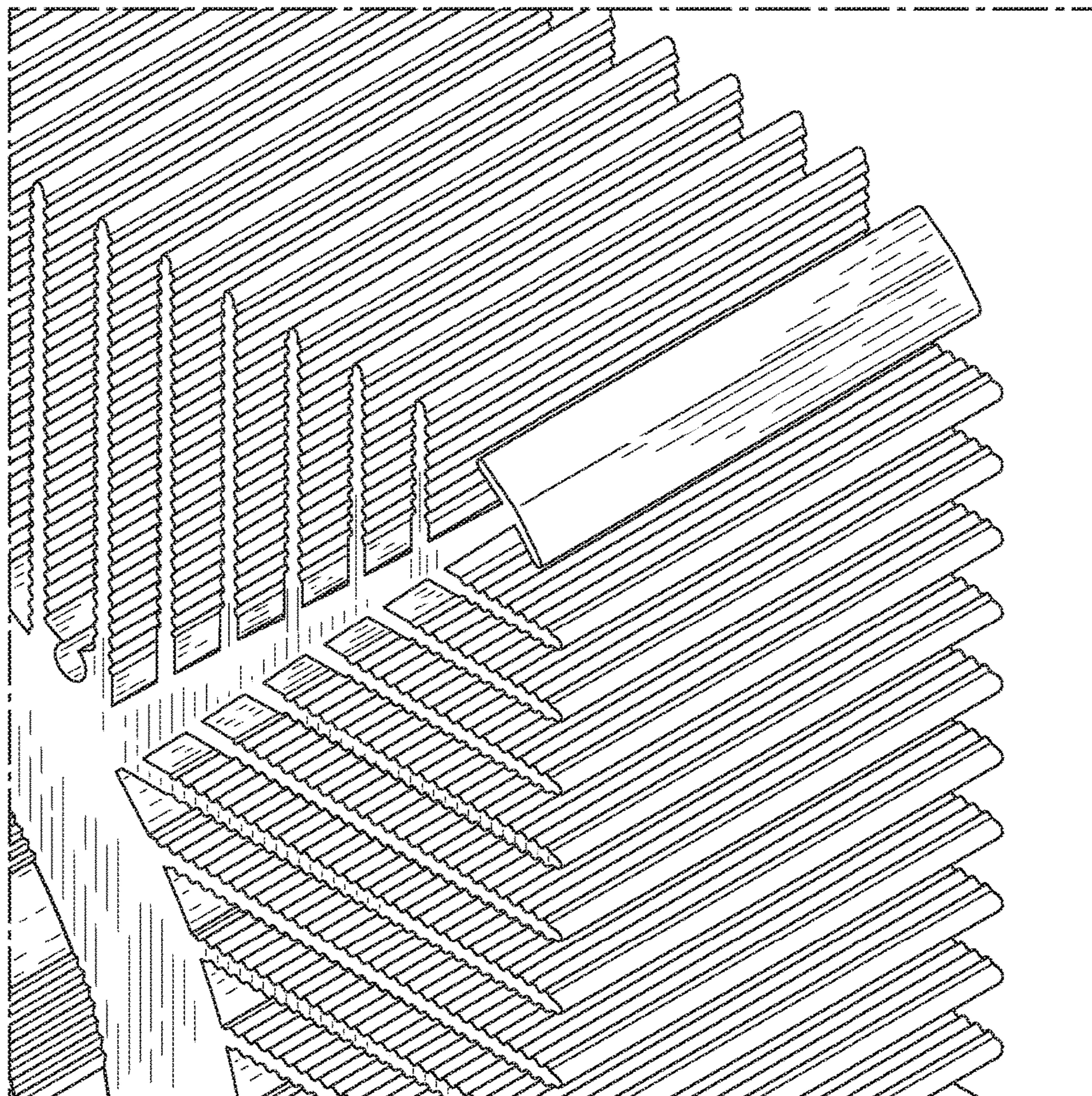


FIG. 5



**FIG. 6**



**FIG. 7**

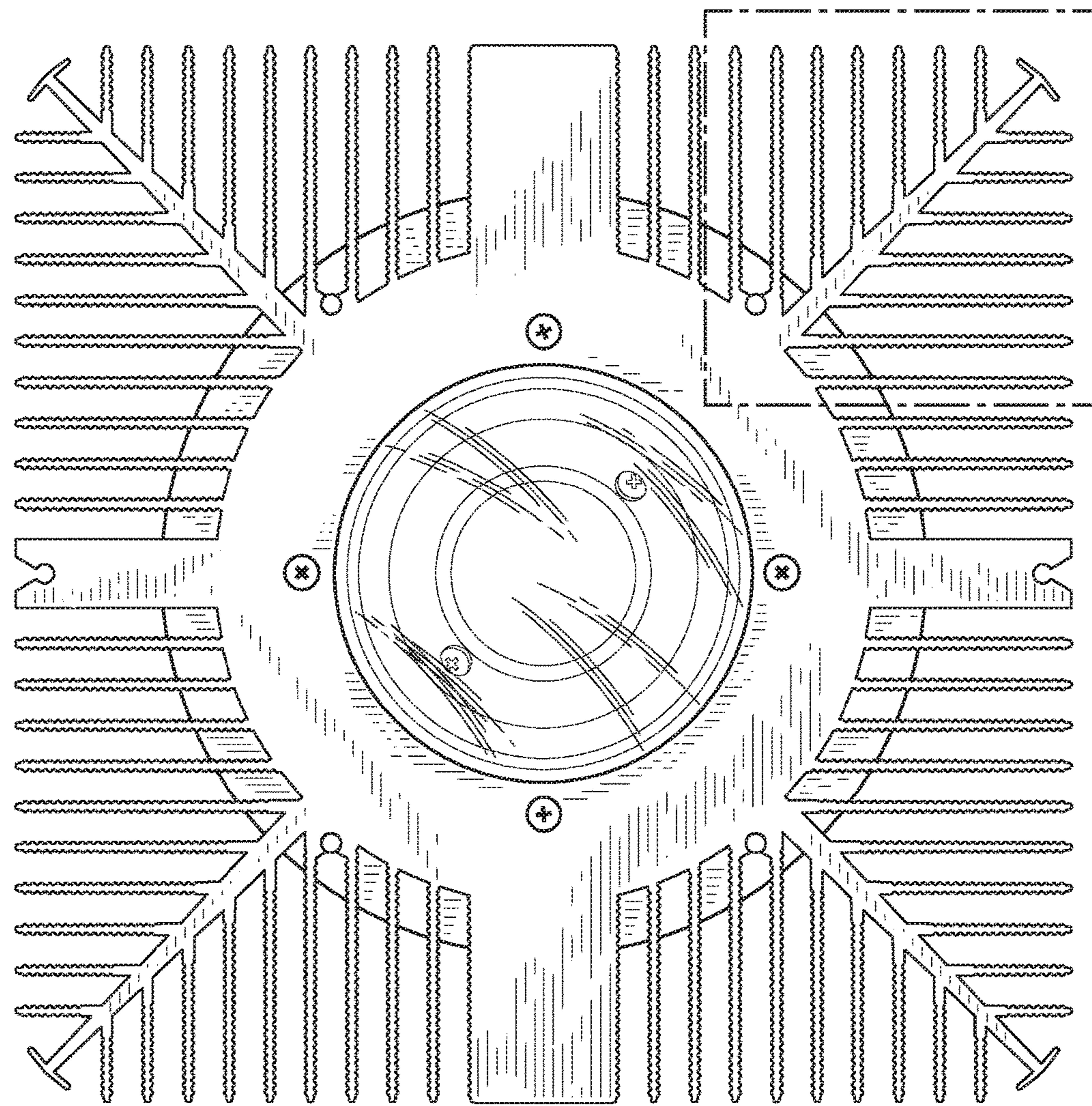
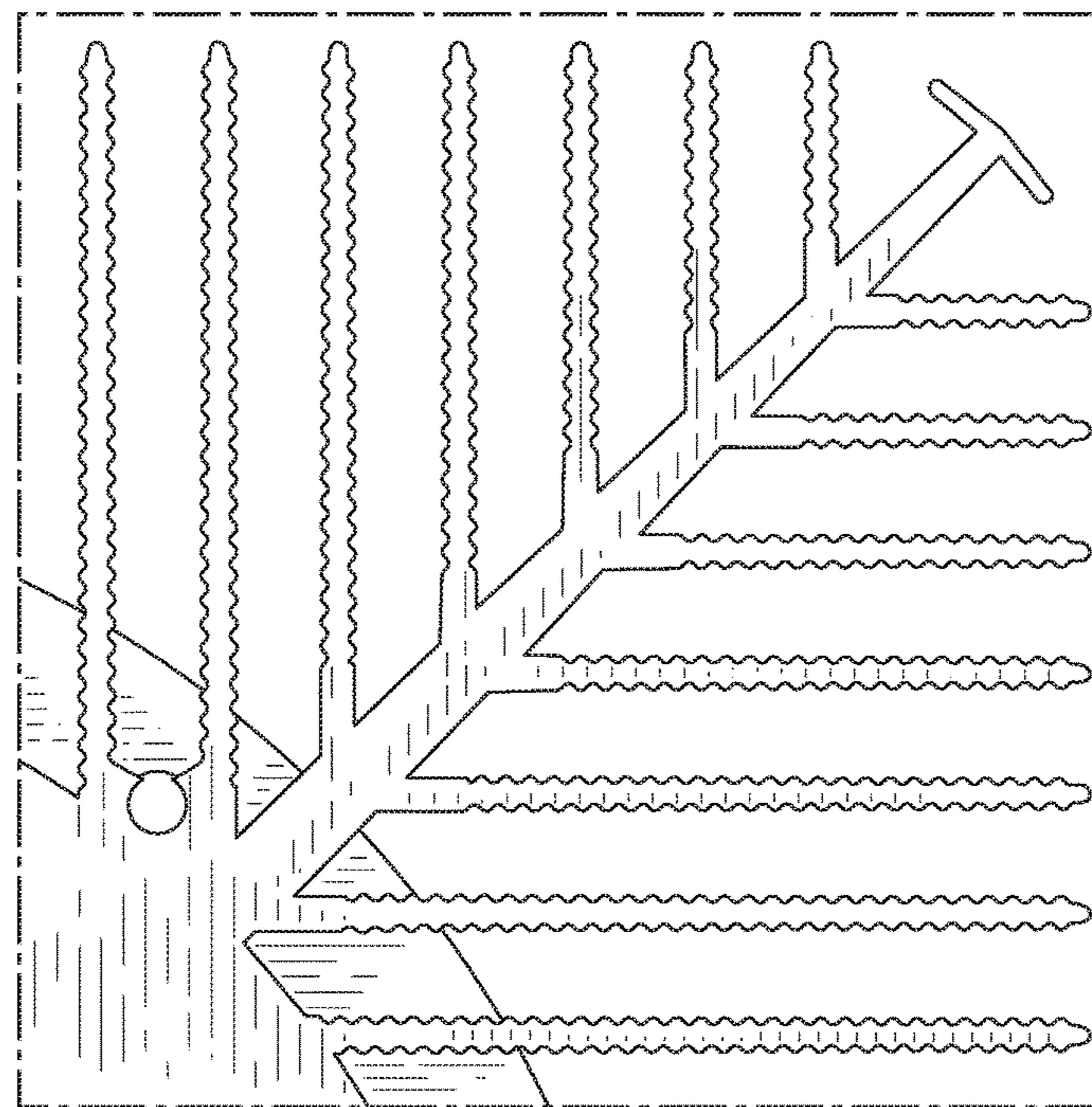


FIG. 8



**FIG. 9**