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(12) **United States Design Patent** (10) **Patent No.:** **US D975,158 S**  
**Sono et al.** (45) **Date of Patent:** **\*\* Jan. 10, 2023**

(54) **LENS FOR INFRARED SENSOR**  
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 (72) Inventors: **Takahiro Sono, Shiga (JP); Ryo Taniguchi, Shiga (JP); Sukoya Tawaratsumida, Mie (JP)**  
 (73) Assignee: **PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD., Osaka (JP)**

(56) **References Cited**

U.S. PATENT DOCUMENTS

D493,479 S *	7/2004	Yoshikawa .....	D16/202
D633,120 S *	2/2011	Ham .....	D16/203
D732,098 S *	6/2015	Choi .....	D16/202
D788,354 S *	5/2017	Yoshioka .....	D26/118
D800,955 S *	10/2017	Hakala .....	D26/118
D811,648 S *	2/2018	Farnsworth .....	D26/122
D929,644 S *	8/2021	Aravena .....	D26/118
2012/0250323 A1 *	10/2012	Velu .....	F21V 29/004 362/249.02

(Continued)

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

FOREIGN PATENT DOCUMENTS

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OTHER PUBLICATIONS

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(51) **LOC (14) Cl.** ..... **16-06**

(52) **U.S. Cl.**  
USPC ..... **D16/134**

(58) **Field of Classification Search**  
USPC ..... D10/70, 109.1, 109.2; D16/134, 130, D16/131, 132, 135, 136, 202-208, 245, D16/219; D24/120, 113, 118, 119, 121, D24/122, 124, 125, 128

CPC ... G01C 3/00; G01C 3/02; G01C 3/04; G01C 3/06; G01C 3/08; G01C 3/085; G01C 3/10; G01C 3/12; G01C 3/16; G01C 3/18; G01C 3/20; G01C 3/22; G01C 3/24; G01C 3/26; G01C 3/28; G01C 3/30; G01C 3/32; B60Q 1/04; B60Q 1/26; F21S 8/026; F21S 8/04; F21V 29/004; F21V 21/02; F21V 21/04; F21V 29/2212; F21Y 2101/02; G02B 27/026; G02B 23/16; G02B 2003/0093; G02B 3/04; H04J 11/00; H04J 13/00; E06B 9/24; G03B 17/02; C03B 2215/46

See application file for complete search history.

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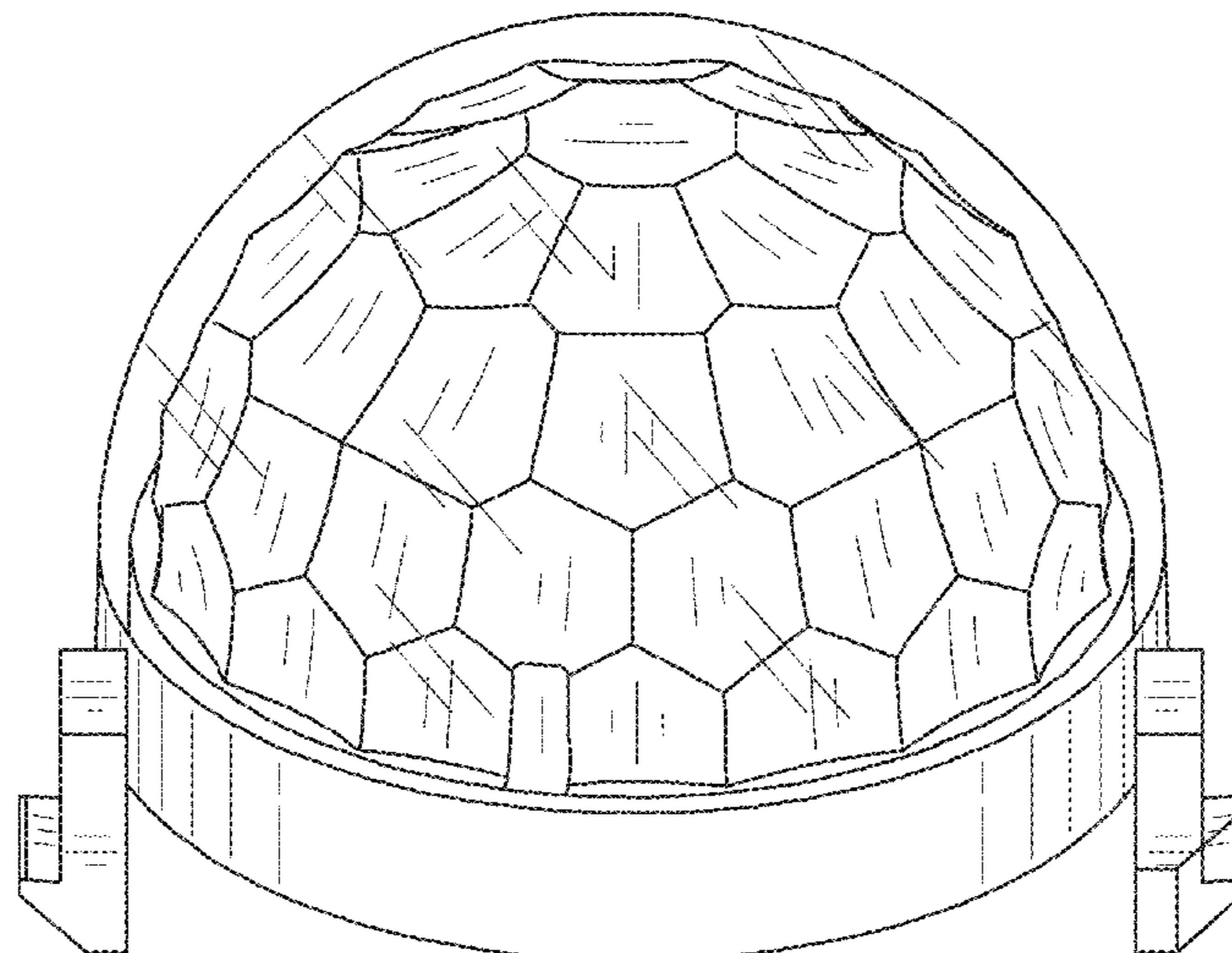
(57) **CLAIM**

We claim the ornamental design for a lens for infrared sensor, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a lens for infrared sensor of the present invention;  
FIG. 2 is a top view thereof;  
FIG. 3 is a bottom view thereof;  
FIG. 4 is a front view thereof;  
FIG. 5 is a rear view thereof;  
FIG. 6 is a left side view thereof;  
FIG. 7 is a right side view thereof; and,  
FIG. 8 is a cross-sectional view thereof taken along lines 8-8 of FIG. 5.

**1 Claim, 8 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

2013/0340234 A1\* 12/2013 Iwasaka ..... B23P 21/004  
29/428  
2014/0071535 A1\* 3/2014 Geraci ..... G02B 23/18  
359/601  
2019/0293274 A1\* 9/2019 Franzosi ..... F21V 23/0485  
2020/0056761 A1\* 2/2020 Yan ..... F21V 7/0008  
2021/0325574 A1\* 10/2021 Arima ..... G02B 3/0043

\* cited by examiner

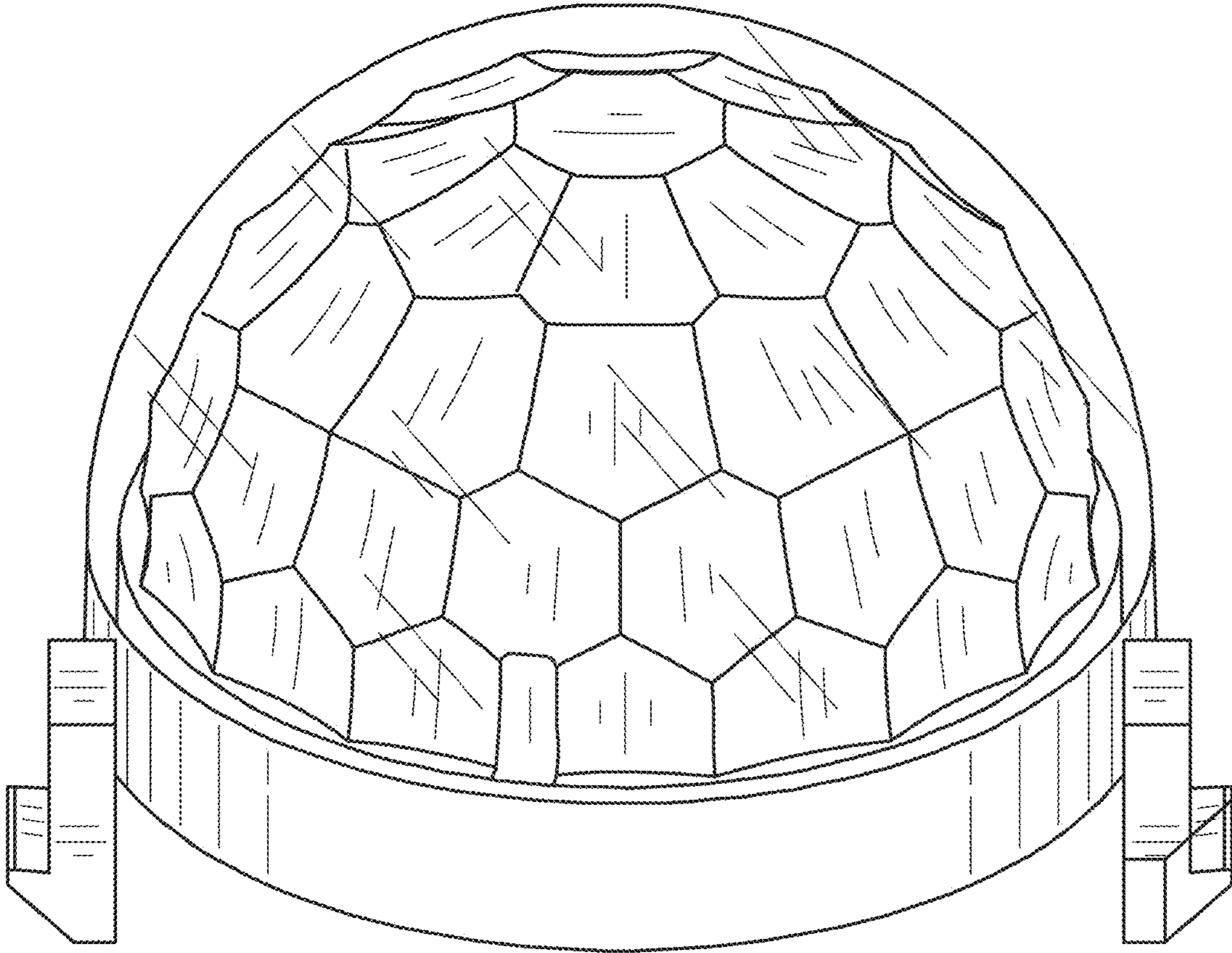


FIG. 1

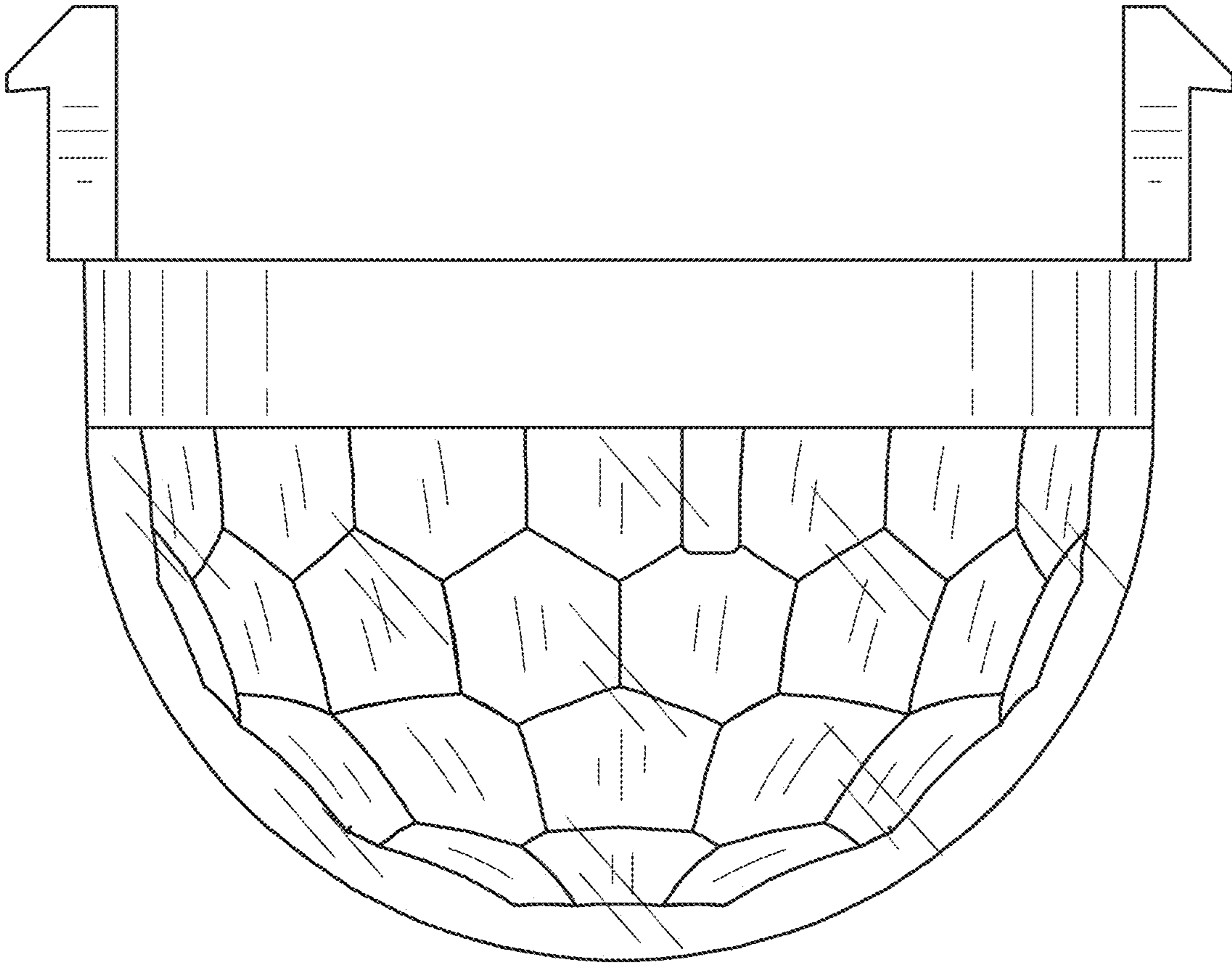


FIG. 2

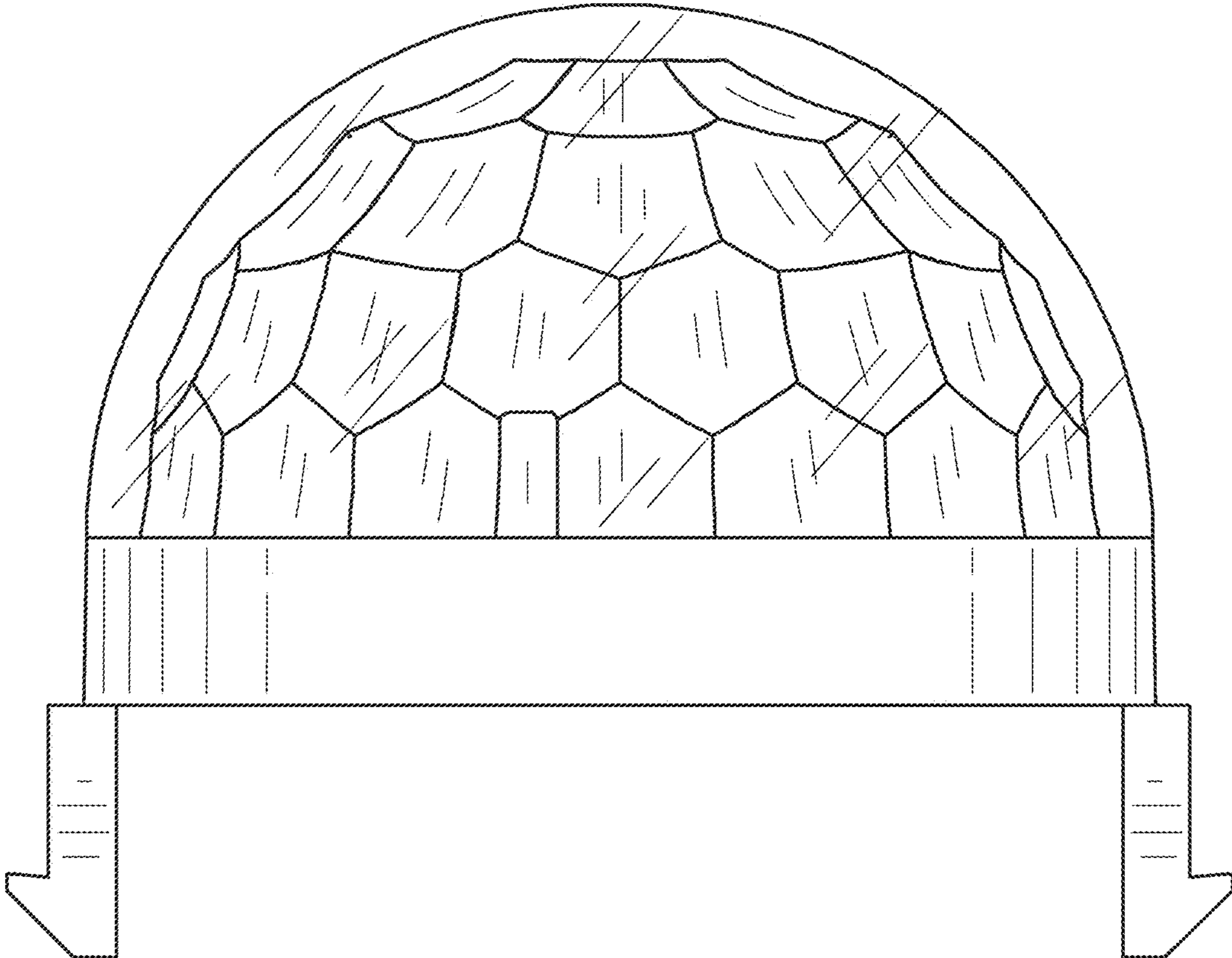


FIG. 3

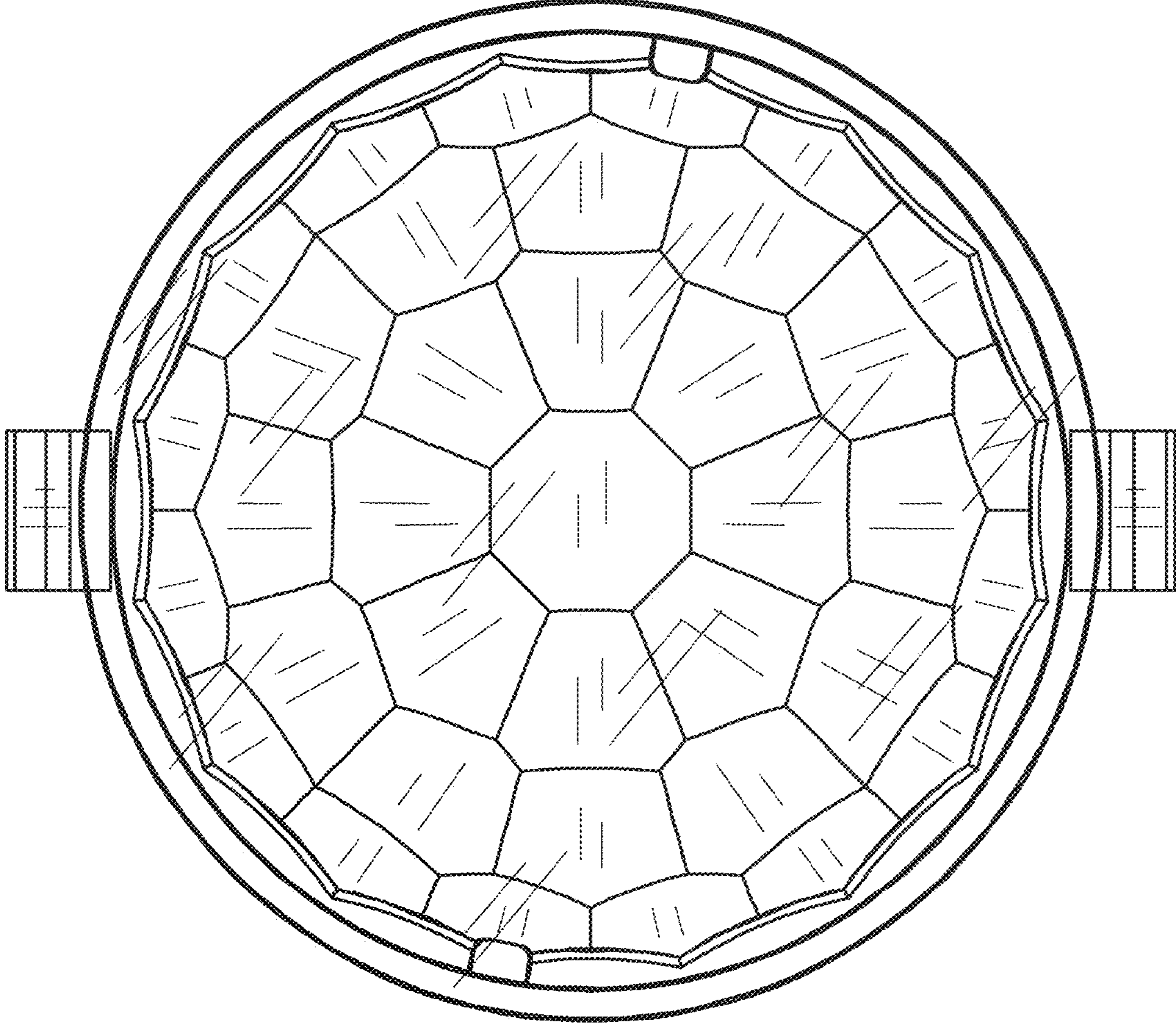


FIG. 4

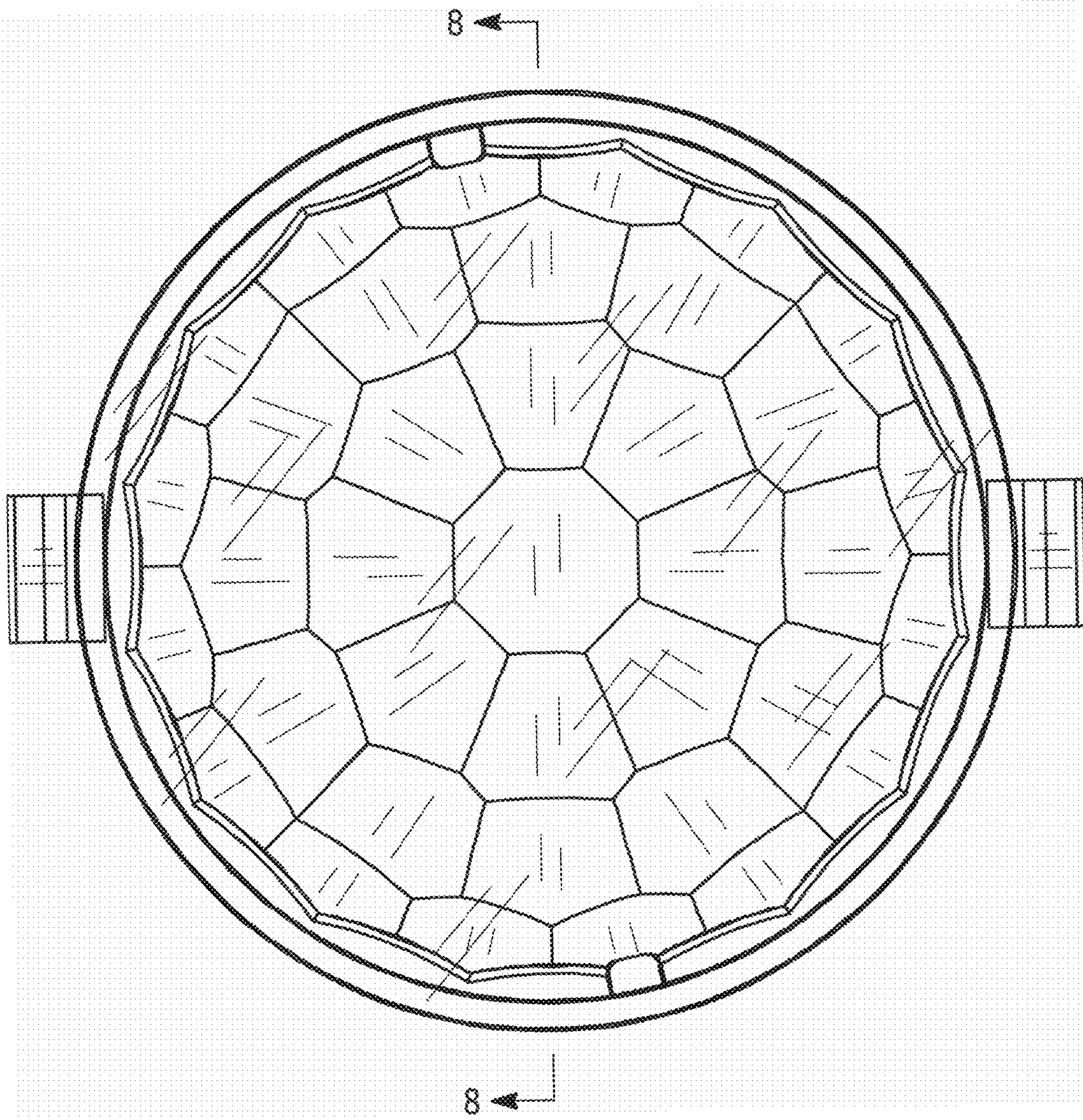


FIG. 5

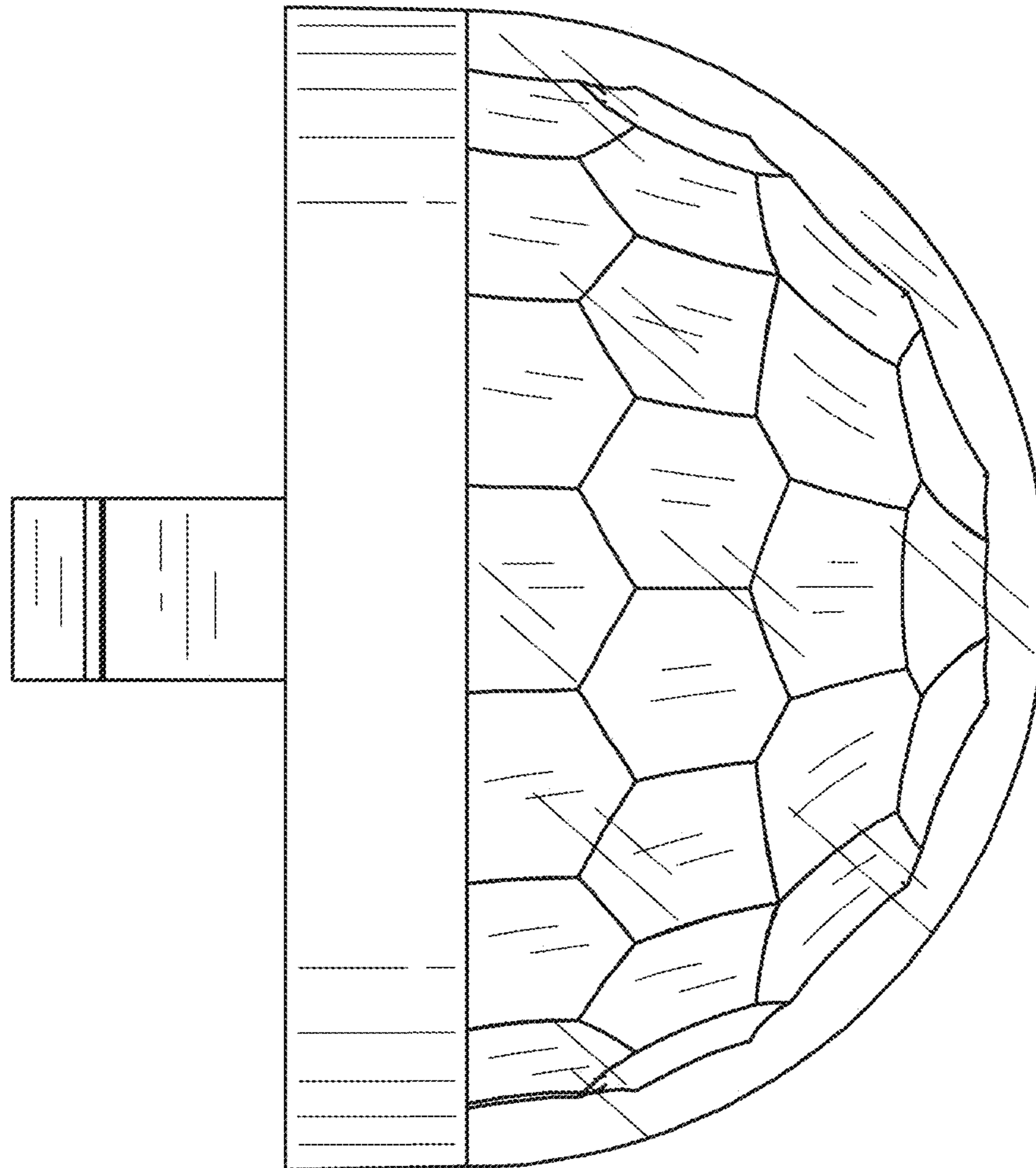


FIG. 6



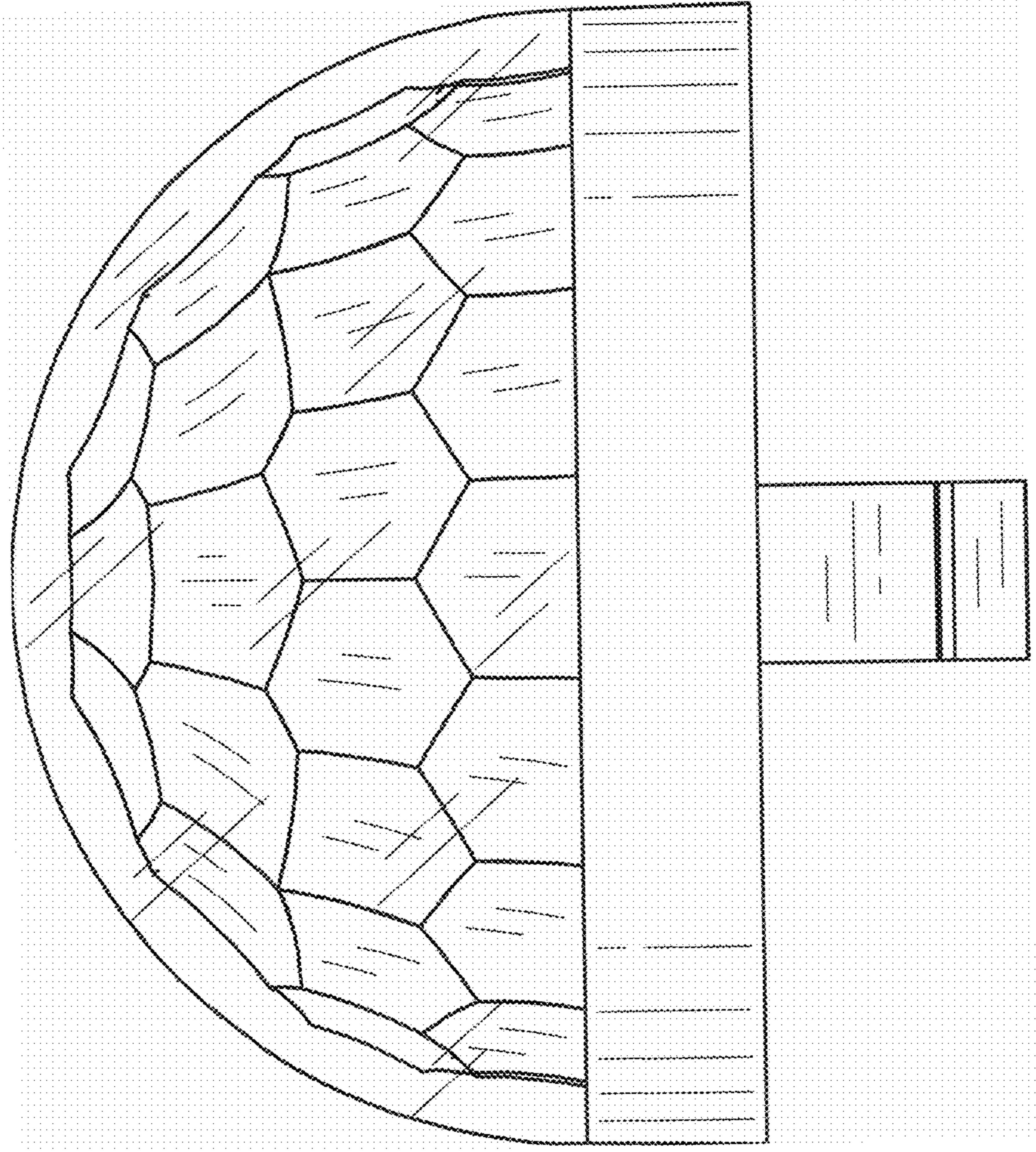


FIG. 7

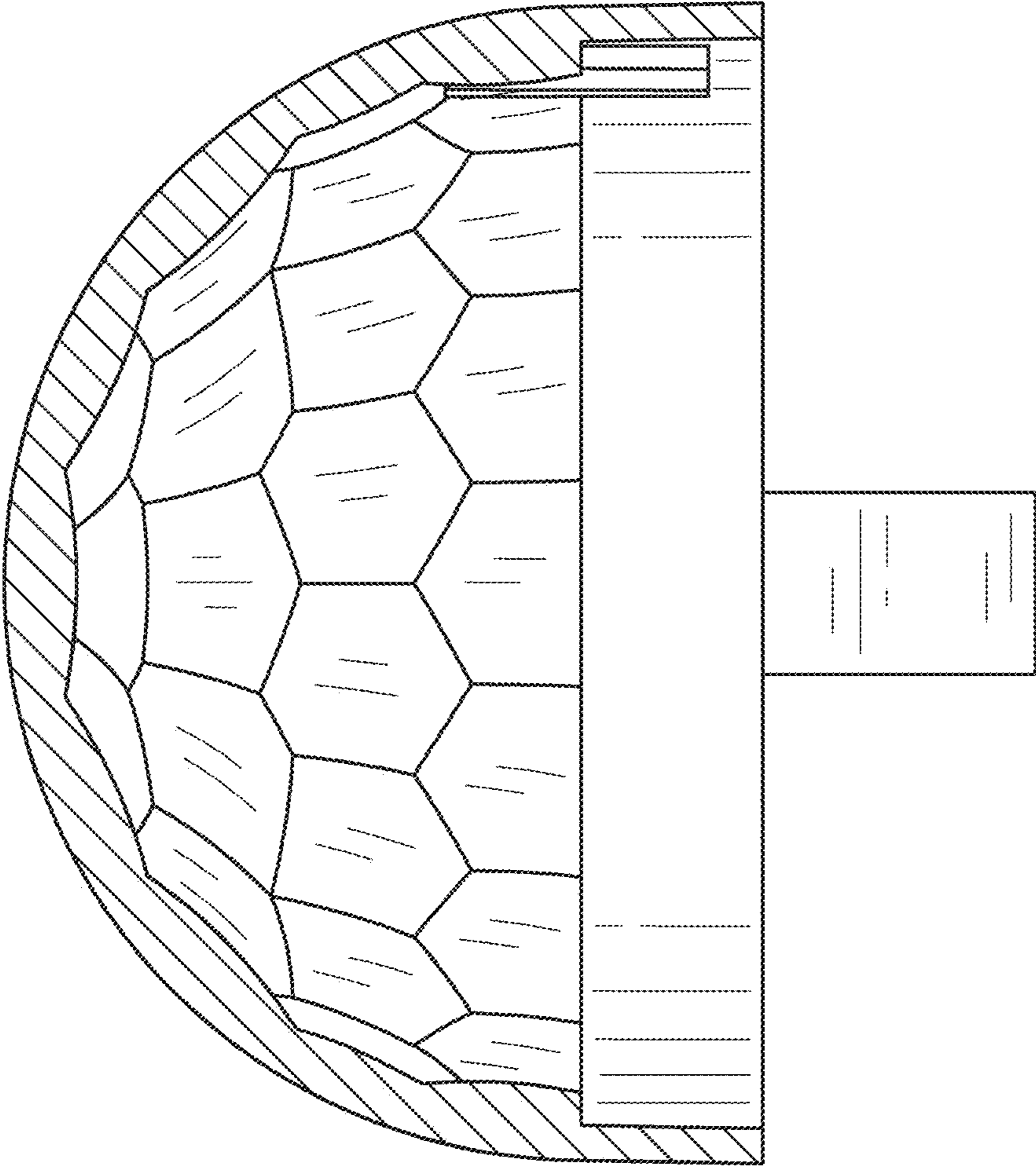


FIG. 8