



US0D1027154S

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

(10) **Patent No.:** **US D1,027,154 S**

(45) **Date of Patent:** **\*\* May 14, 2024**

(54) **FRAME FOR AIR CLEANER FILTER ELEMENT**

(57) **CLAIM**

The ornamental design for a frame for air cleaner filter element, as shown and described.

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**DESCRIPTION**

(72) Inventors: **Longtao Wu**, Suqian (CN); **Kai Chen**, Suqian (CN); **Leilei Chen**, Suqian (CN); **Yafei Wang**, Suqian (CN)

FIG. 1 is a perspective view of a frame for air cleaner filter element in accordance with our design 1;

FIG. 2 is a front side view thereof;

FIG. 3 is a rear side view thereof;

FIG. 4 is a top view thereof;

FIG. 5 is a bottom view thereof;

FIG. 6 is a left side view thereof;

FIG. 7 is a right side view thereof;

FIG. 8 is a perspective exploded view showing that a cover and a base of the frame for air cleaner filter element are separated in design 1;

FIG. 9 is an internal side view of the cover of the frame for air cleaner filter element in design 1;

FIG. 10 is an internal side view of the base of the frame for air cleaner filter element in design 1;

FIG. 11 is an enlarged perspective view of a circle portion 11 of FIG. 1;

FIG. 12 is an enlarged perspective view of a circle portion 12 of FIG. 8;

FIG. 13 is an enlarged perspective view of a circle portion 13 of FIG. 8;

FIG. 14 is a perspective view of a frame for air cleaner filter element in accordance with our design 2;

FIG. 15 is a front side view thereof;

FIG. 16 is a rear side view thereof;

FIG. 17 is a top view thereof;

FIG. 18 is a bottom view thereof;

FIG. 19 is a left side view thereof;

FIG. 20 is a right side view thereof;

FIG. 21 is a perspective exploded view showing that a cover and a base of the frame for air cleaner filter element are separated in design 2;

FIG. 22 is an internal side view of the cover of the frame for air cleaner filter element in design 2;

FIG. 23 is an internal side view of the base of the frame for air cleaner filter element in design 2;

(Continued)

(73) Assignee: **YIMAO ENVIRONMENTAL TECHNOLOGY CO., LTD.**, Suqian (CN)

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

(21) Appl. No.: **29/826,661**

(22) Filed: **Feb. 14, 2022**

(30) **Foreign Application Priority Data**

Dec. 20, 2021 (CN) ..... 202130843259.3

(51) **LOC (14) Cl.** ..... **23-04**

(52) **U.S. Cl.**  
USPC ..... **D23/365**

(58) **Field of Classification Search**  
USPC ..... D23/332-336, 341, 351-366, 370, 385, D23/386, 387, 388, 390, 393, 397, 411,  
(Continued)

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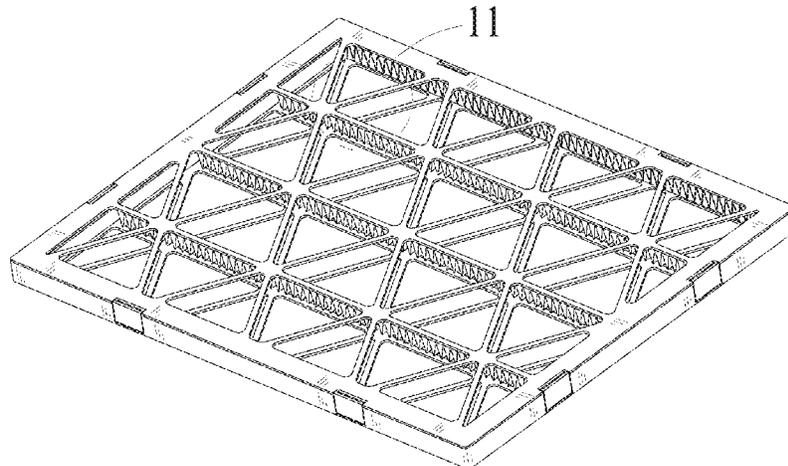


FIG. 24 is an enlarged perspective view of a circle portion 24 of FIG. 14;  
 FIG. 25 is an enlarged perspective view of a circle portion 25 of FIG. 21;  
 FIG. 26 is an enlarged perspective view of a circle portion 26 of FIG. 21;  
 FIG. 27 is a perspective view of a frame for air cleaner filter element in accordance with our design 3;  
 FIG. 28 is a front side view thereof;  
 FIG. 29 is a rear side view thereof;  
 FIG. 30 is a top view thereof;  
 FIG. 31 is a bottom view thereof;  
 FIG. 32 is a left side view thereof;  
 FIG. 33 is a right side view thereof;  
 FIG. 34 is a perspective exploded view showing that a cover and a base of the frame for air cleaner filter element are separated in design 3;  
 FIG. 35 is an internal side view of the cover of the frame for air cleaner filter element in design 3;  
 FIG. 36 is an internal side view of the base of the frame for air cleaner filter element in design 3;  
 FIG. 37 is an enlarged perspective view of a circle portion 37 of FIG. 27;  
 FIG. 38 is an enlarged side view of a circle portion 38 of FIG. 30;  
 FIG. 39 is an enlarged perspective view of a circle portion 39 of FIG. 34; and,  
 FIG. 40 is an enlarged perspective view of a circle portion 40 of FIG. 34.

**1 Claim, 40 Drawing Sheets**

(58) **Field of Classification Search**

USPC ..... D23/412; D14/125, 188, 194, 195, 204,  
 D14/221, 228, 240, 253, 348, 350, 358,  
 D14/496; D21/332; D26/26, 40, 46, 49,  
 D26/97, 110, 123, 124; D11/143, 146,  
 D11/152, 153

CPC ..... A61L 2209/11; A61L 2209/14; A61L  
 2209/133; F24F 13/18; F24F 13/20; F24F  
 13/28; F24F 2221/14; F24F 2221/17;  
 B01D 46/00; B01D 46/001; B01D  
 46/0002; B01D 46/0004; B01D 46/0005;  
 B01D 46/0012; B01D 46/0015; B01D  
 46/0016; B01D 46/02; B01D 46/10;  
 B01D 46/026; B01D 46/18; B01D 46/30;  
 B01D 46/24; B01D 46/2411; B01D  
 46/2418; B01D 46/2422; B01D 46/2425;  
 B01D 46/2429; B01D 46/2451; B01D  
 46/2455; B01D 46/247; B01D 46/2478;  
 B01D 46/2486; B01D 46/2488; B01D  
 46/249; B01D 46/2492; B01D 46/2494;  
 B01D 46/52; B01D 46/521; B01D  
 46/522; B01D 46/523; B01D 46/54;  
 B01D 46/58; B01D 46/645; B01D 35/30;  
 B01D 35/303; B01D 27/00; B01D 27/04;  
 B01D 27/06; B01D 27/08; B01J 35/004

See application file for complete search history.

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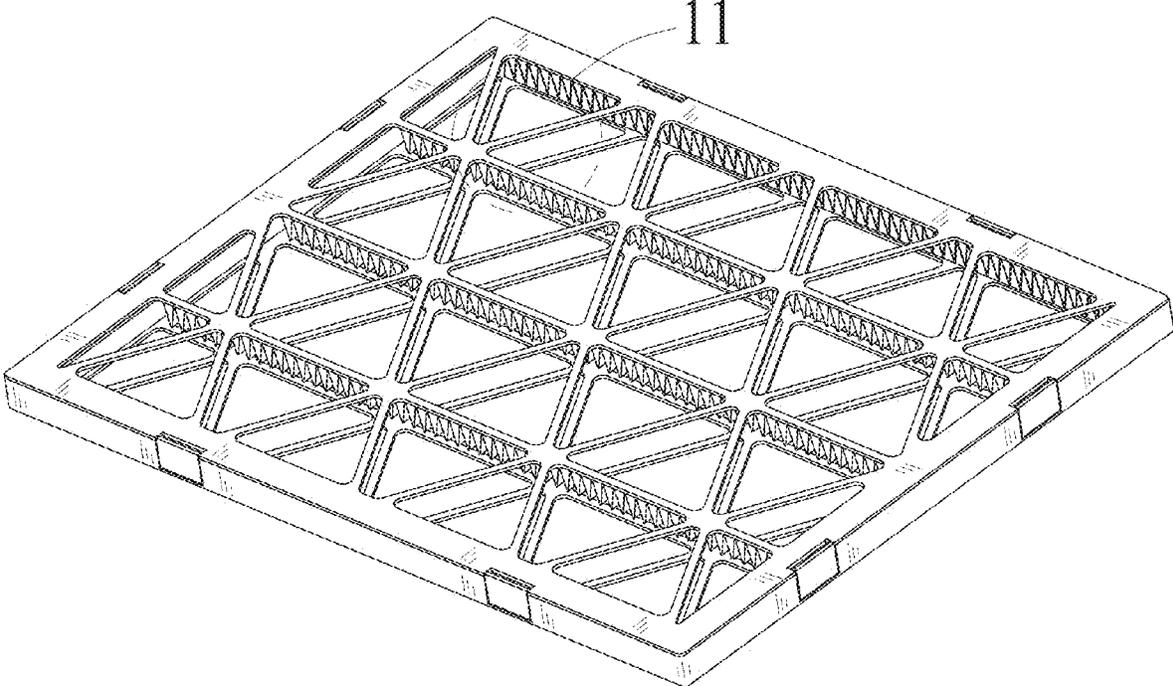


FIG. 1

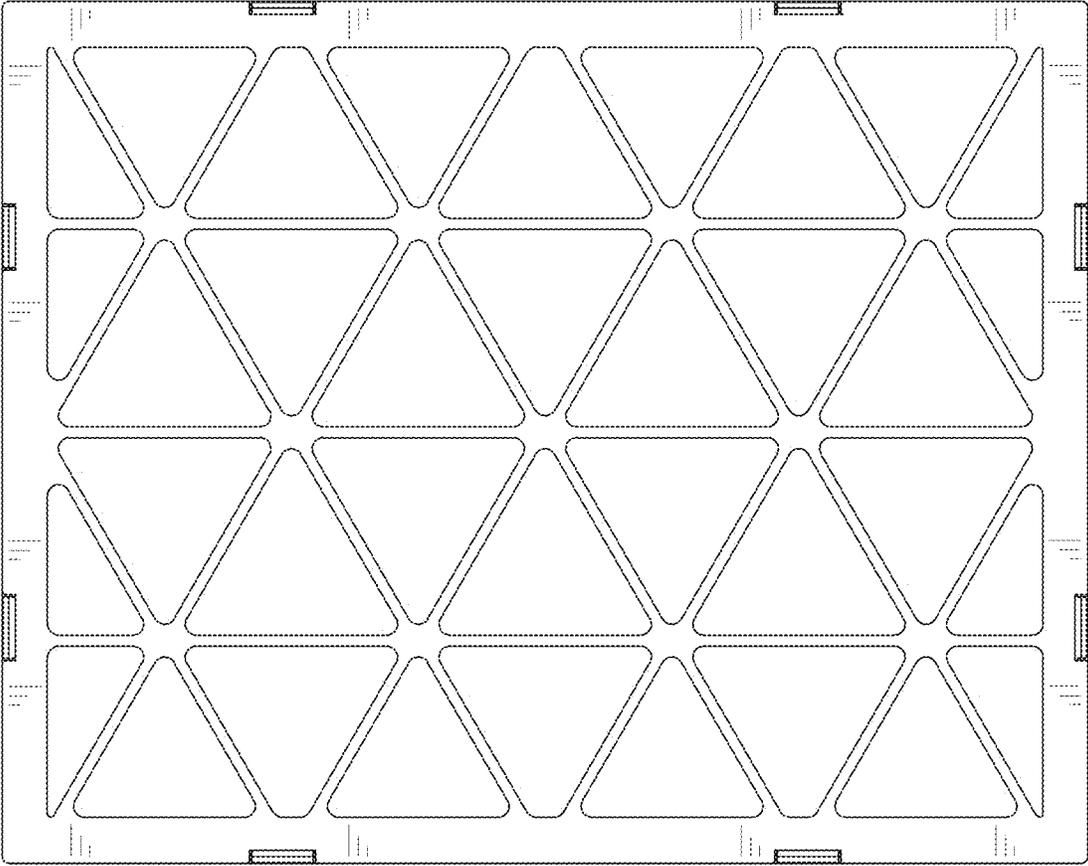


FIG. 2

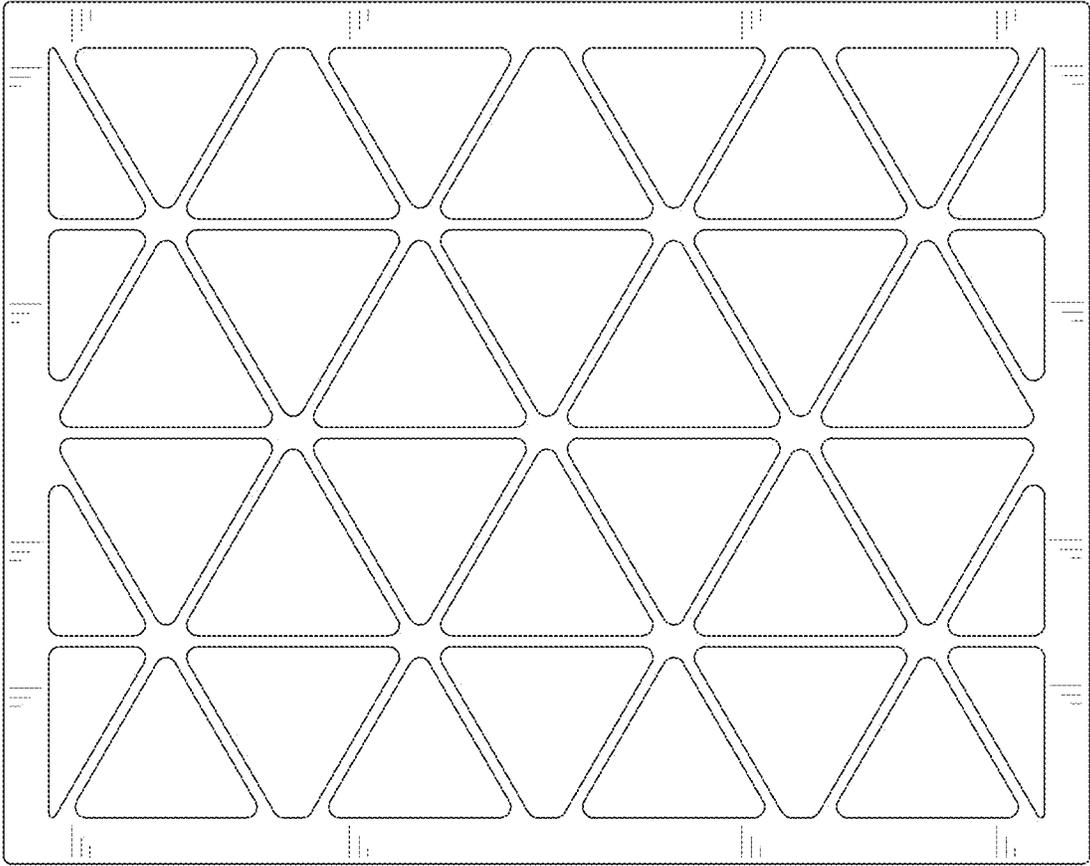


FIG. 3



FIG. 4

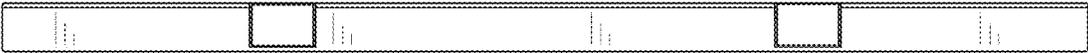


FIG. 5

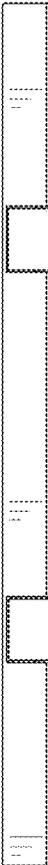


FIG. 6



FIG. 7

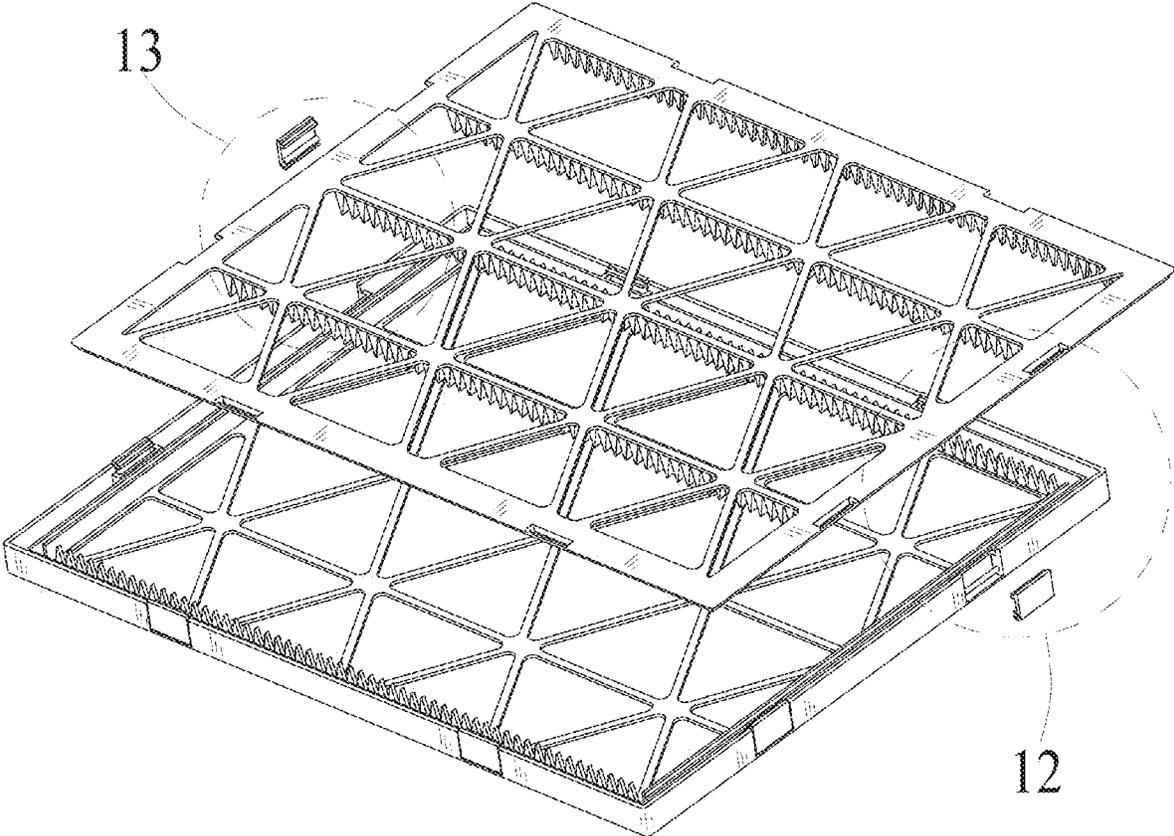


FIG. 8

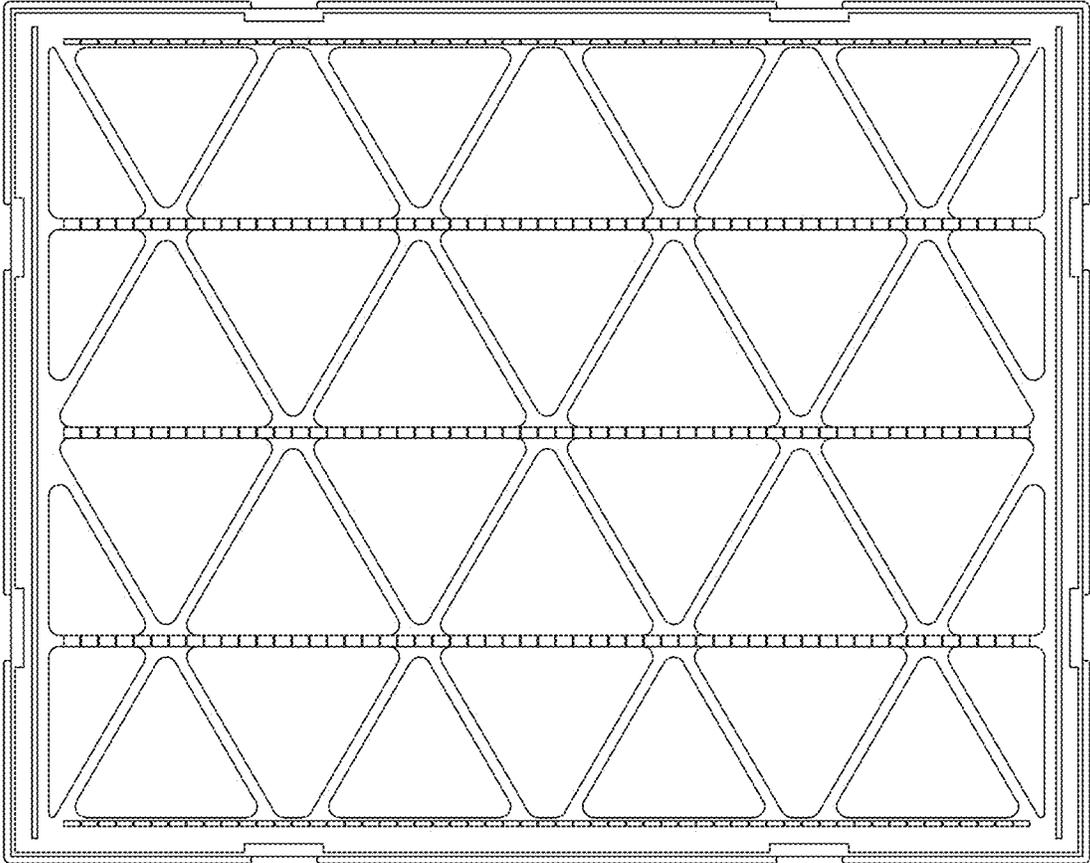


FIG. 9

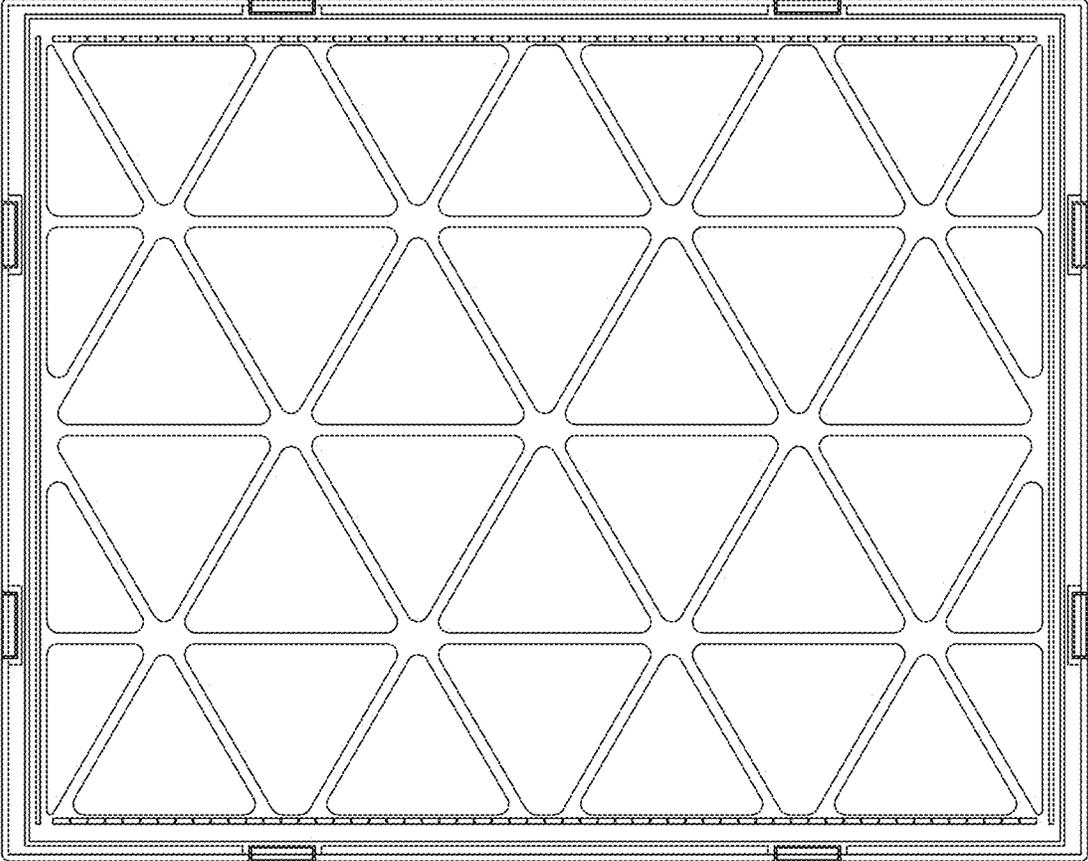


FIG. 10

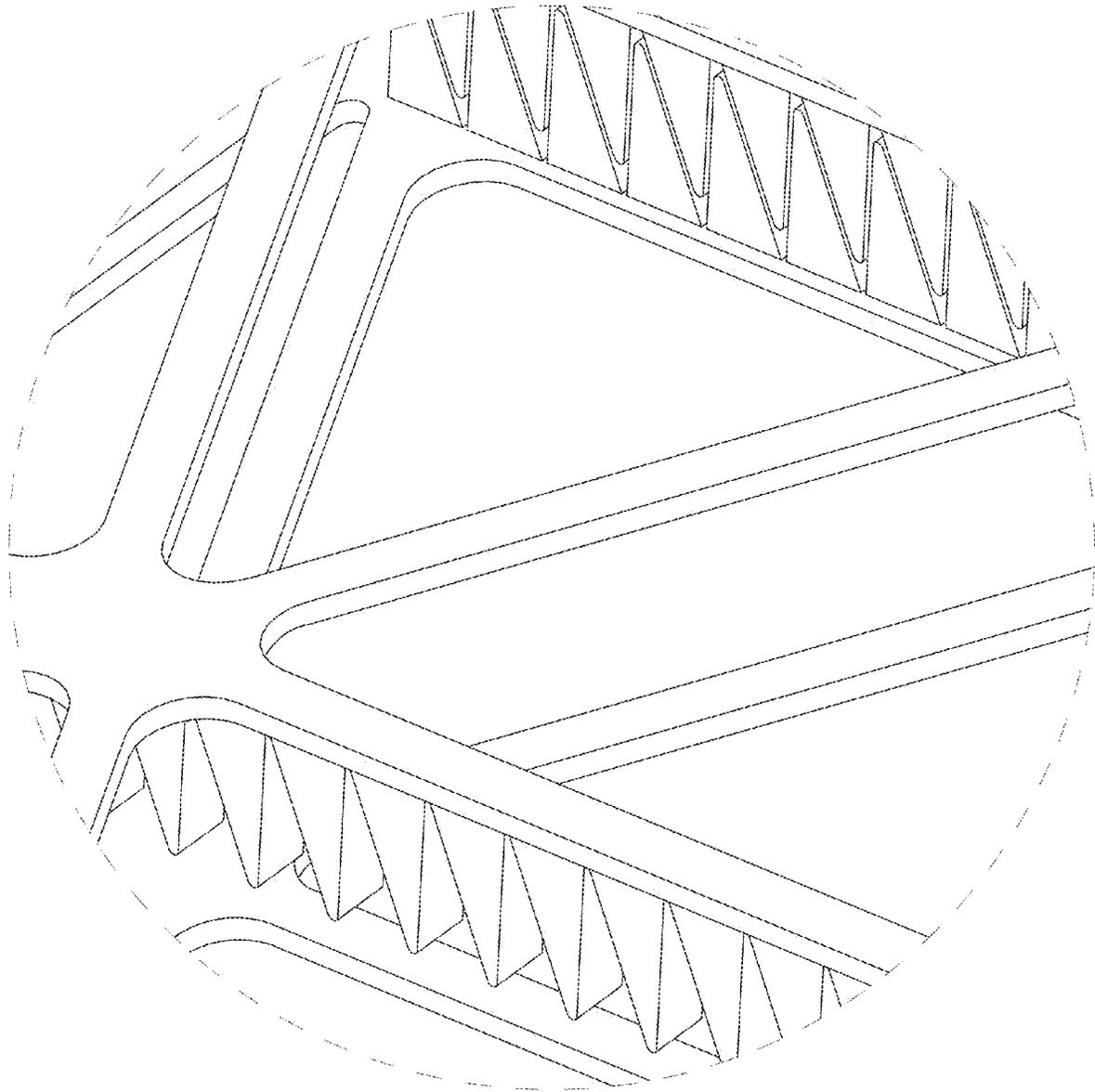


FIG. 11

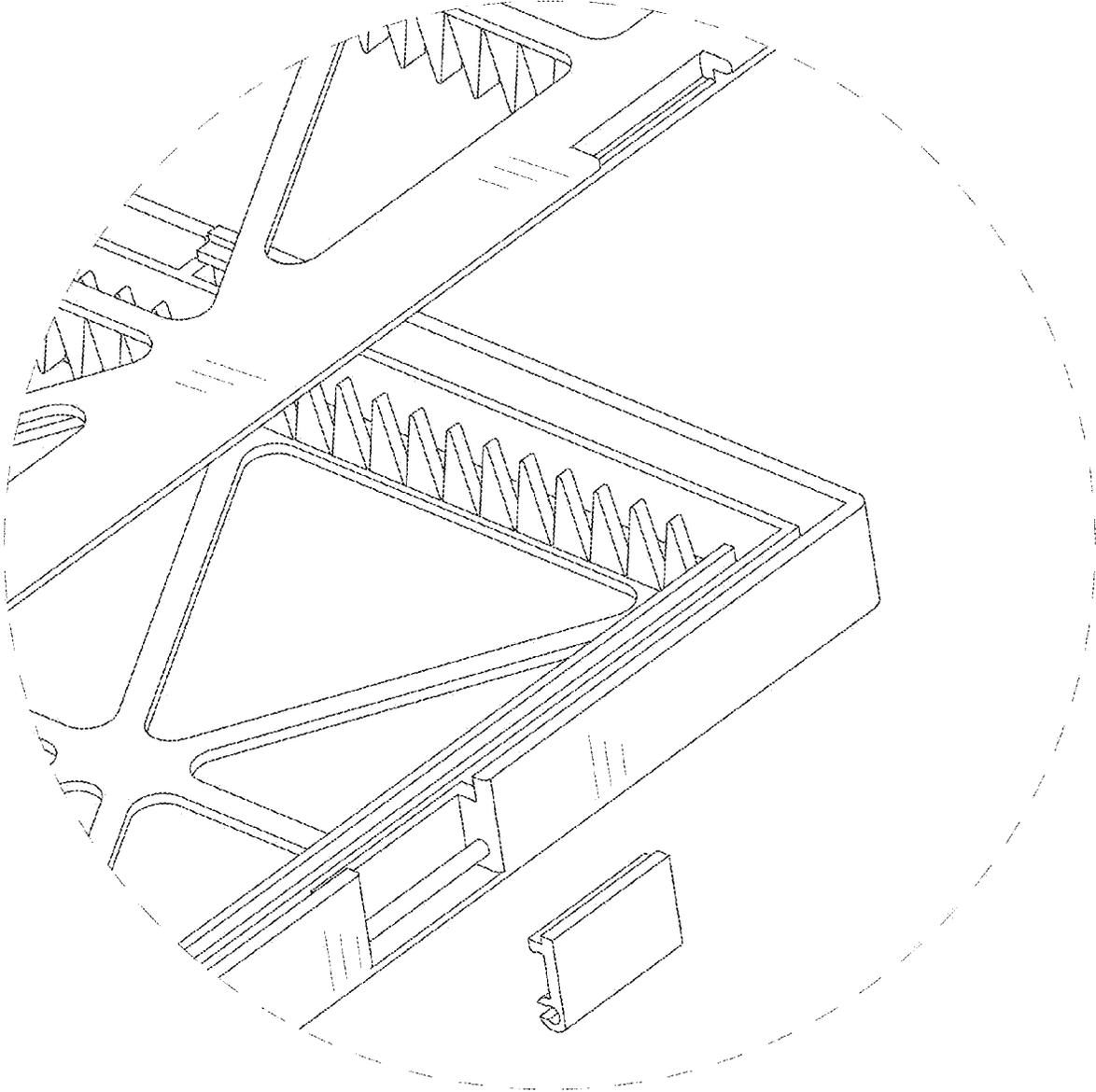


FIG. 12

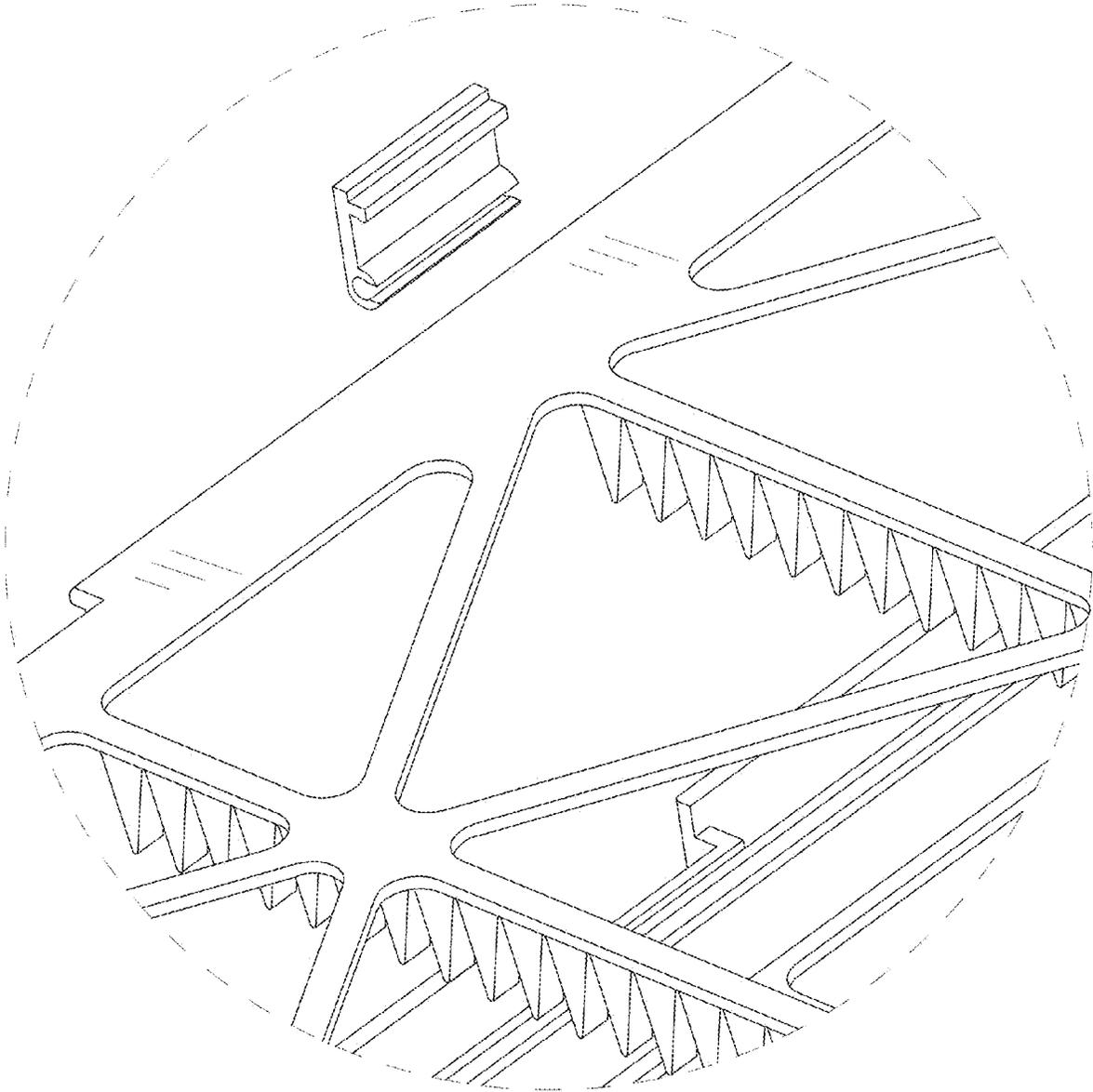


FIG. 13

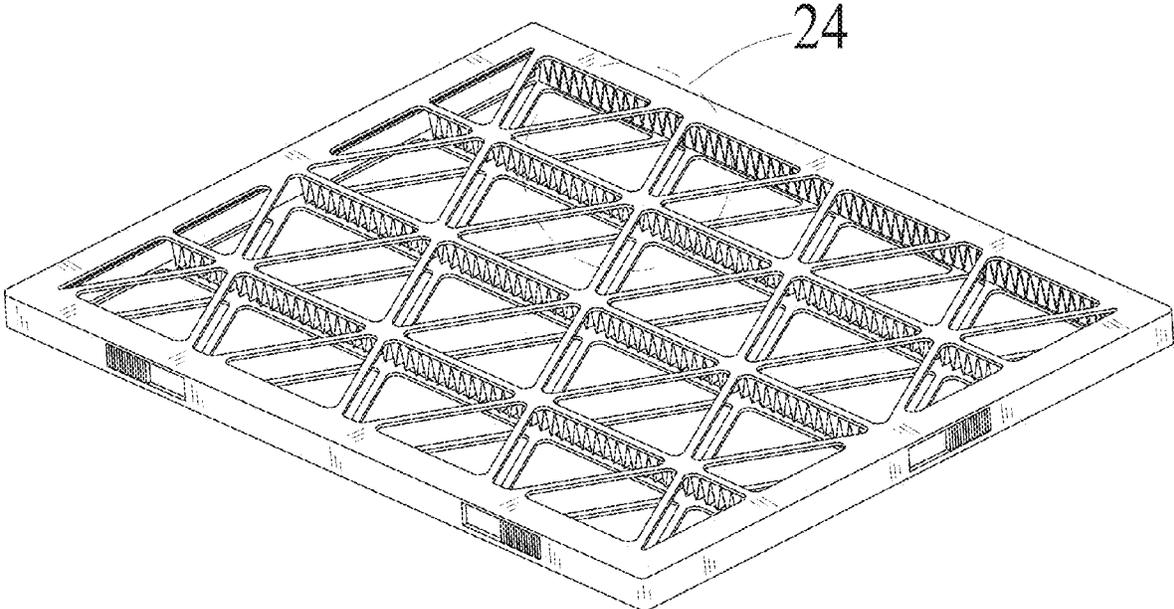


FIG. 14

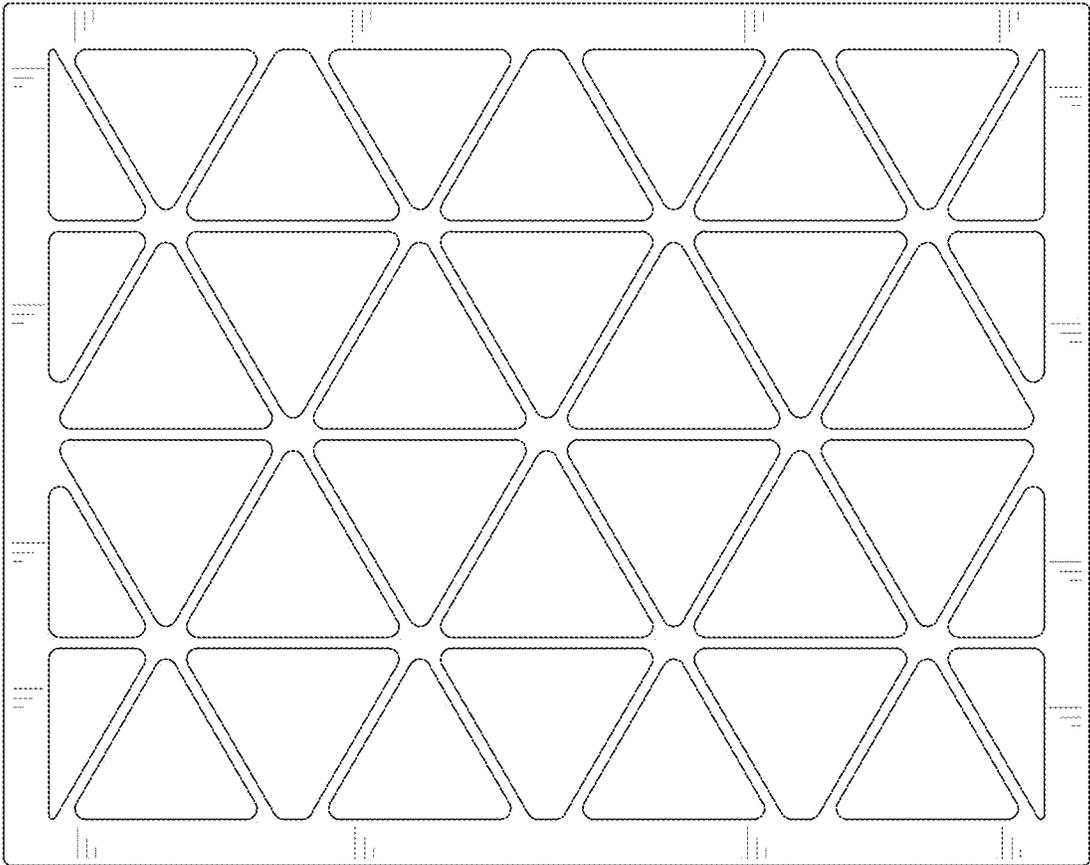


FIG. 15

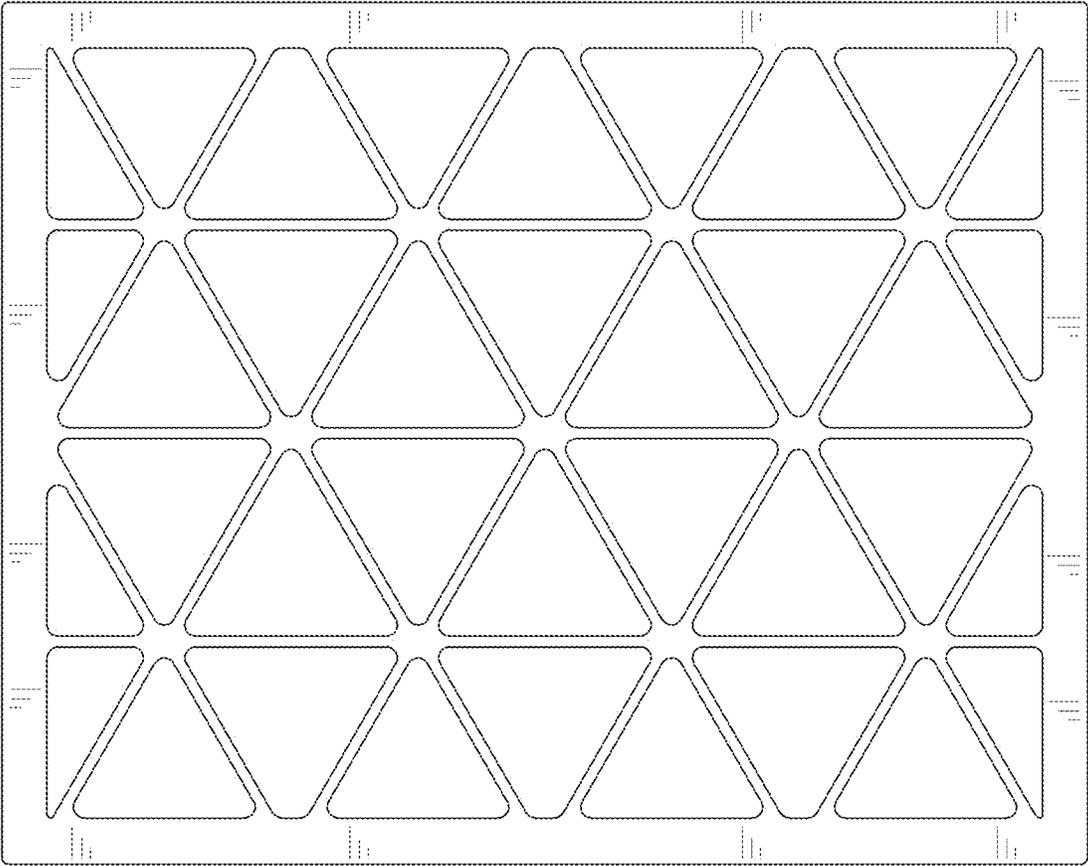


FIG. 16



FIG. 17

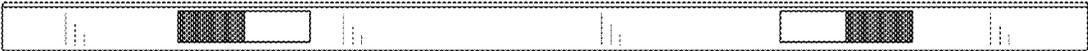


FIG. 18

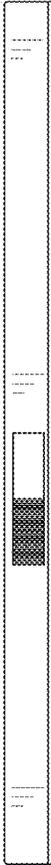


FIG. 19



FIG. 20

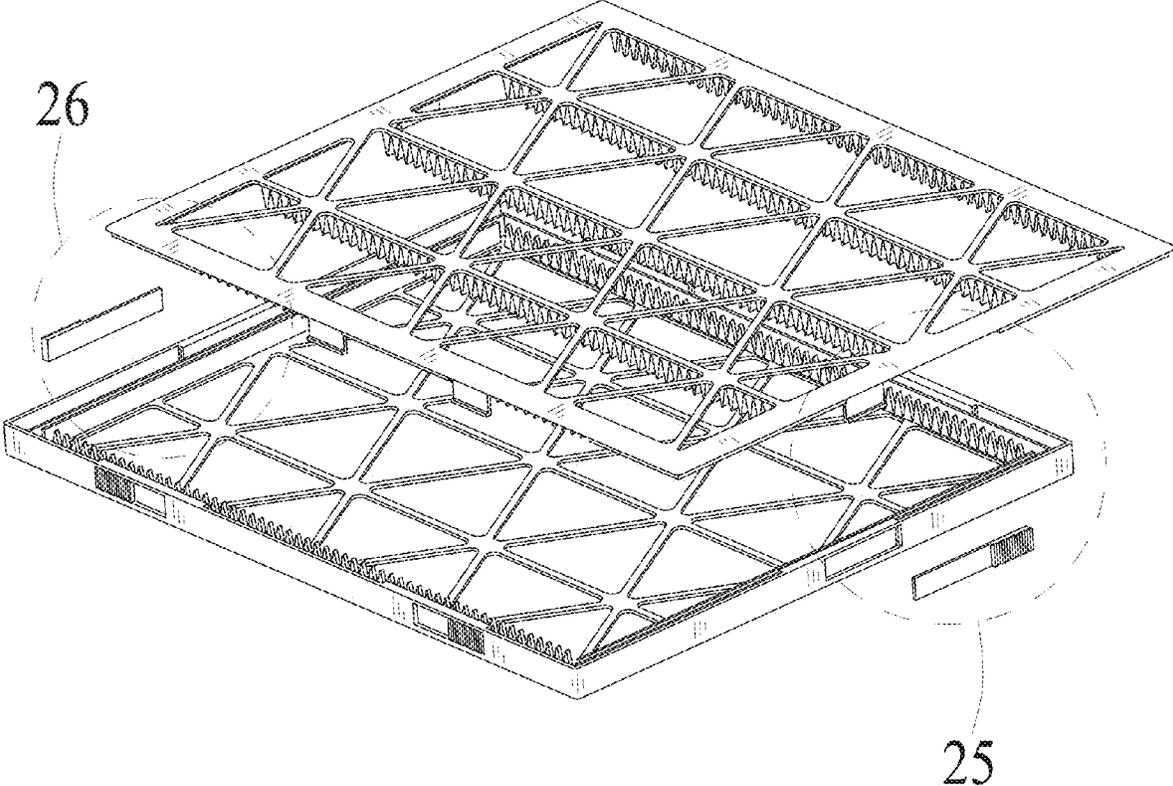


FIG. 21

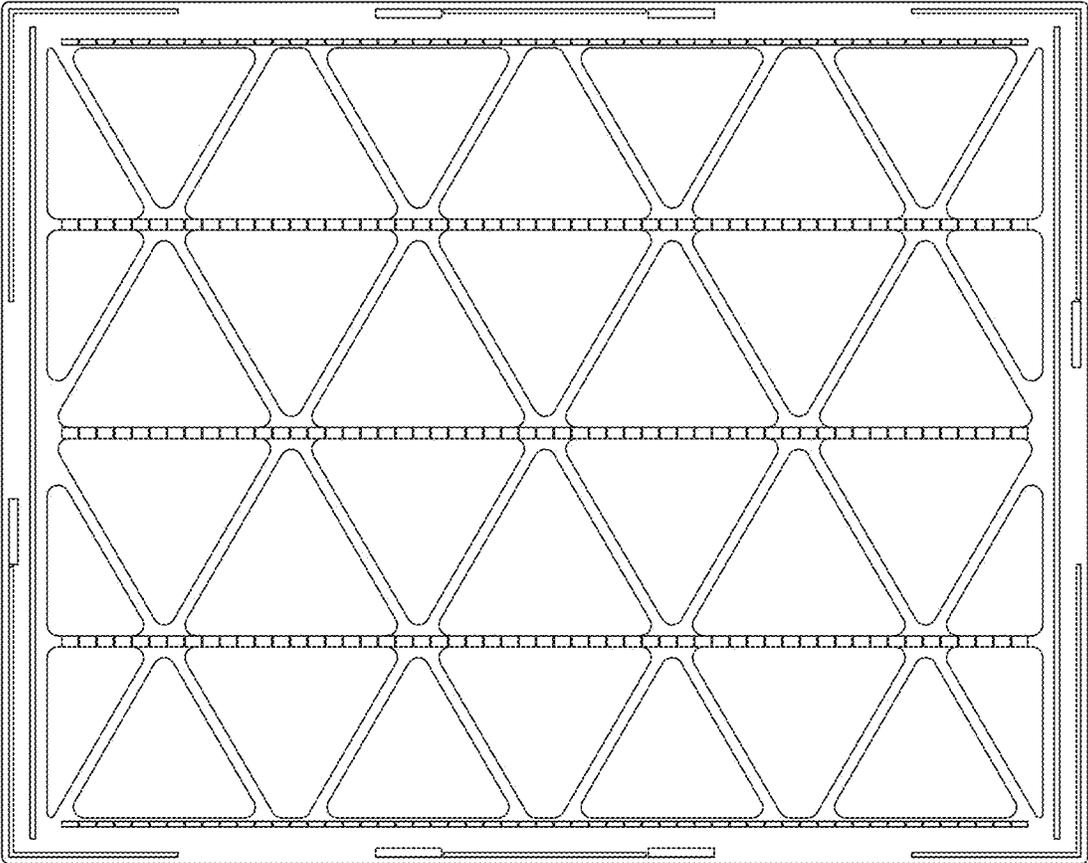


FIG. 22

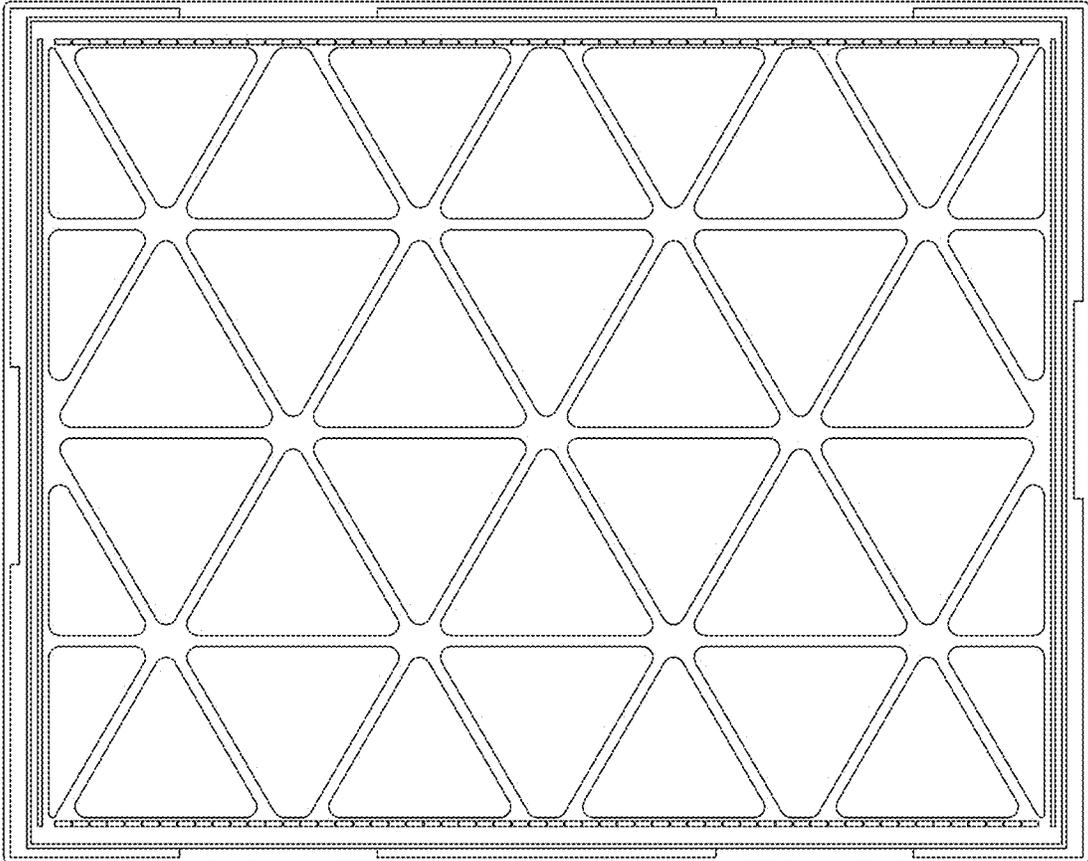


FIG. 23

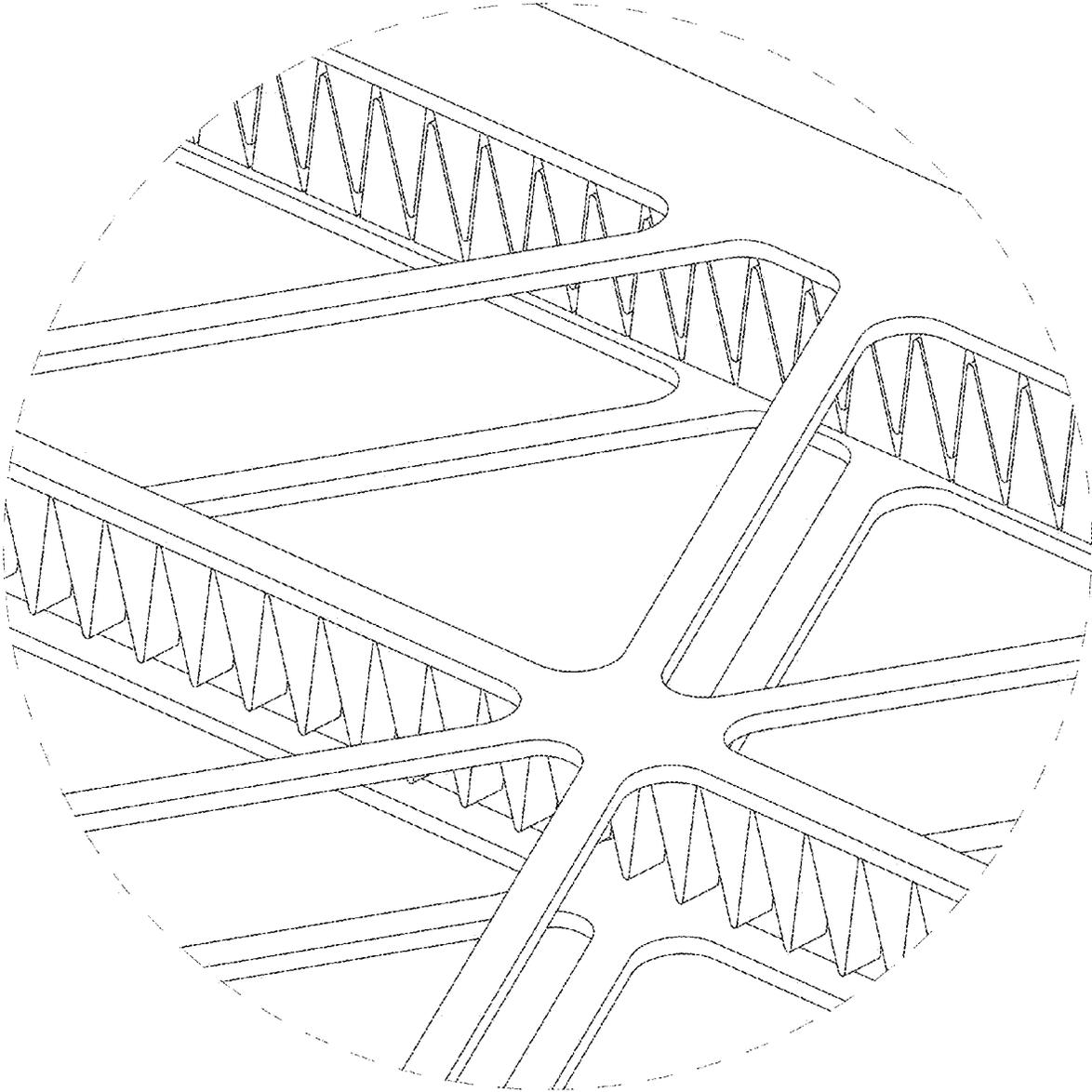


FIG. 24

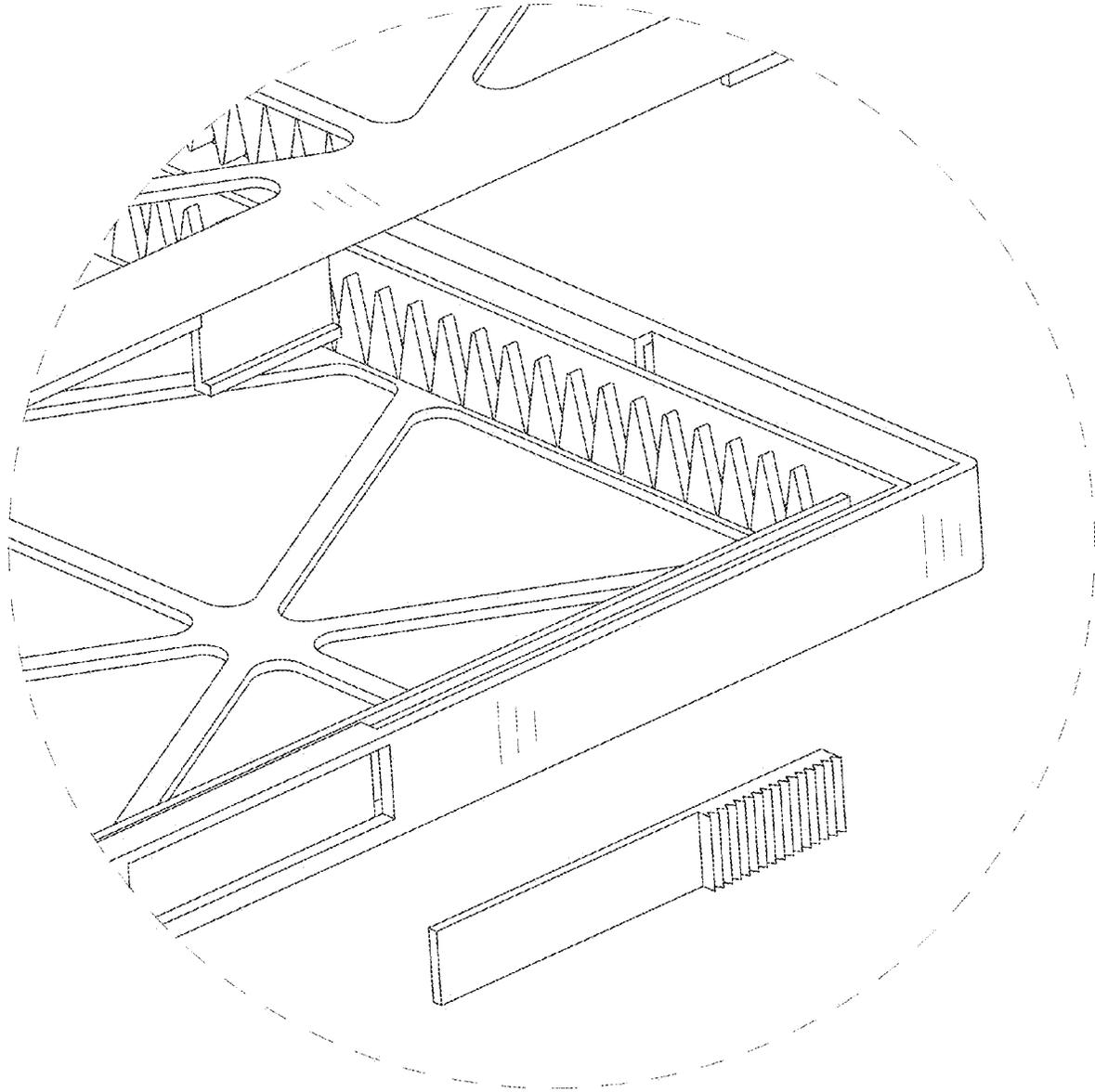


FIG. 25

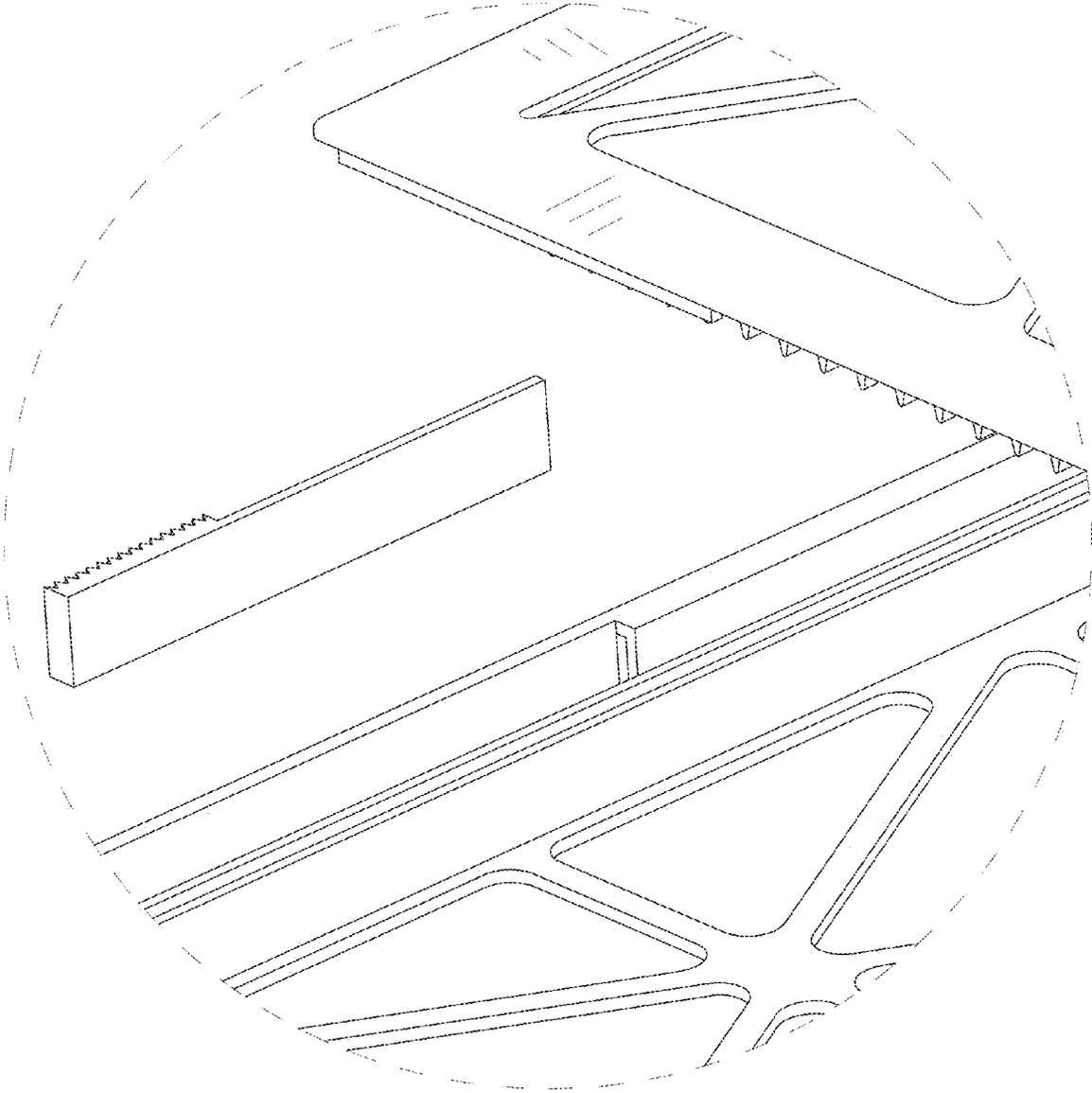


FIG. 26

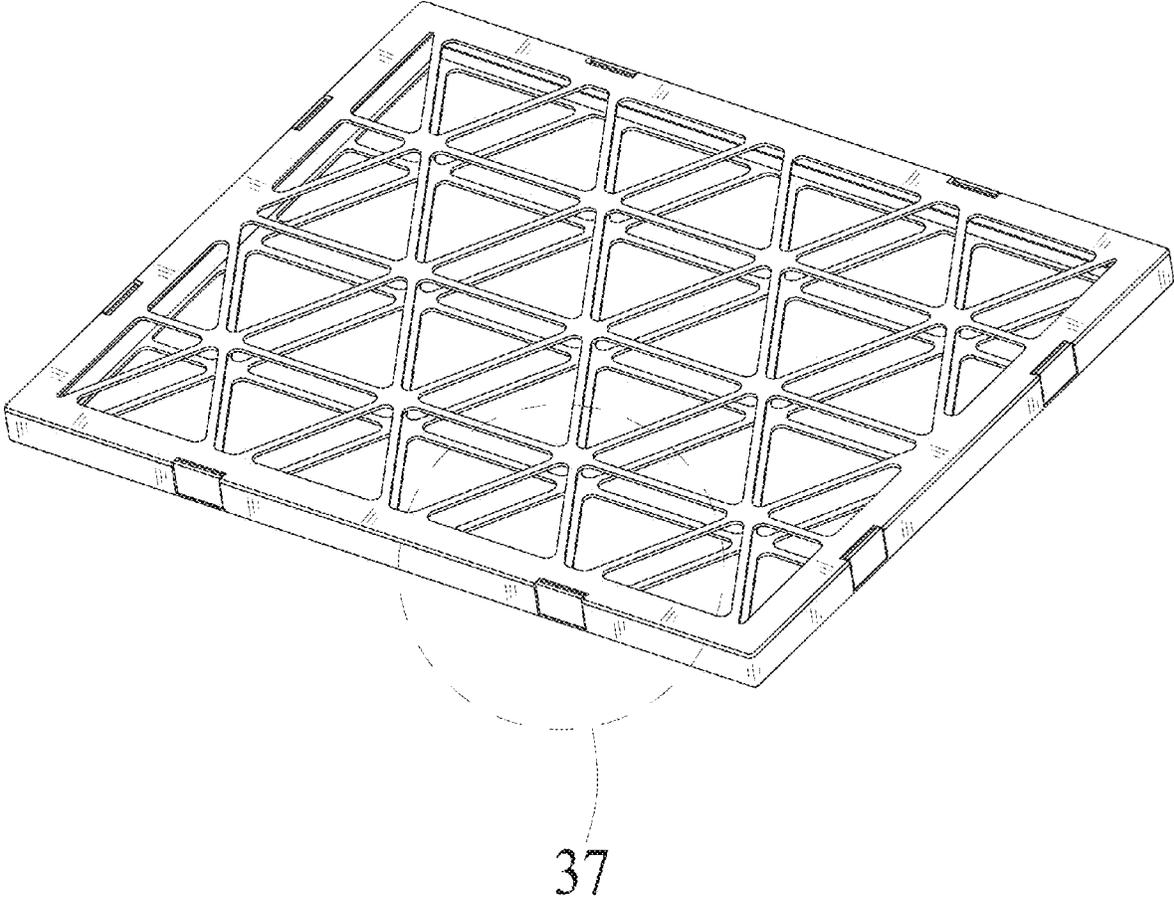


FIG. 27

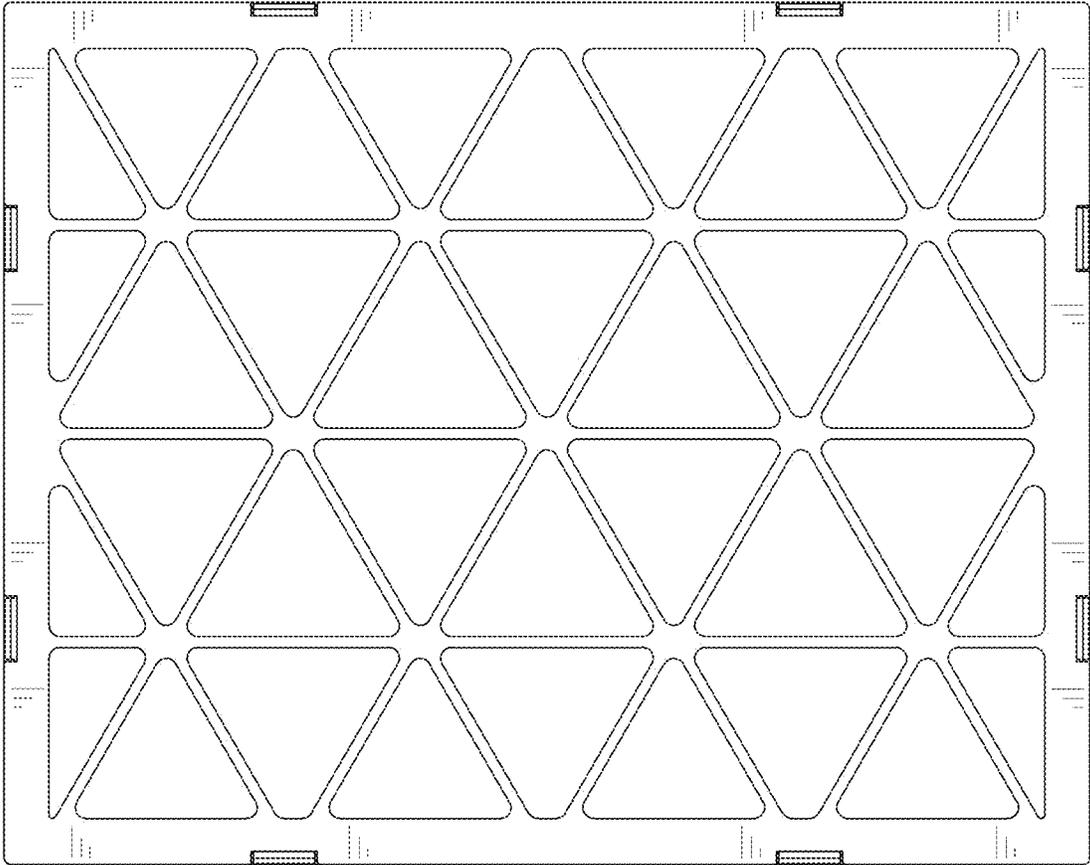


FIG. 28

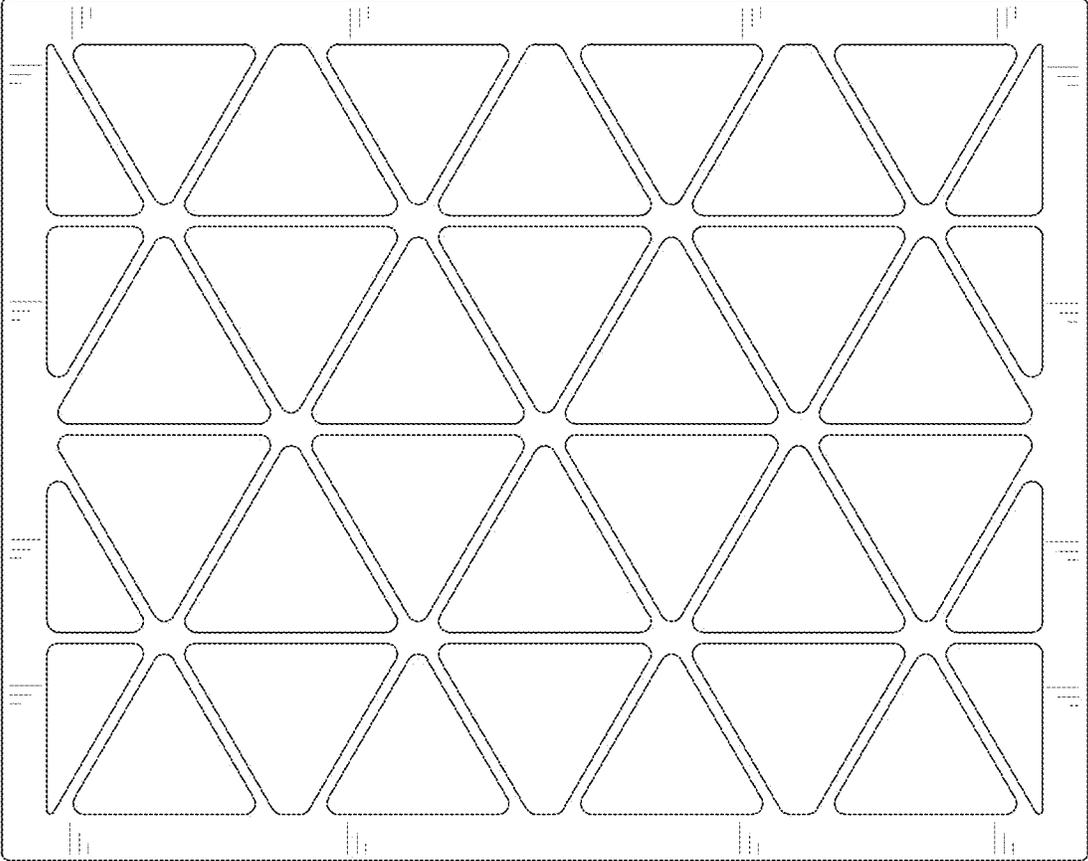


FIG. 29

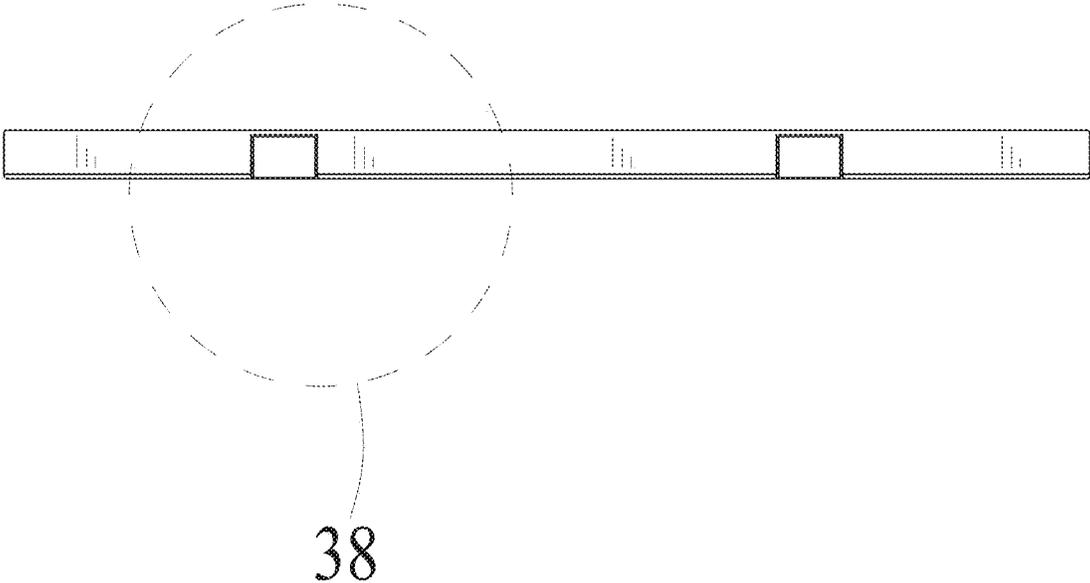


FIG. 30



FIG. 31

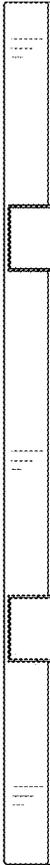


FIG. 32



FIG. 33

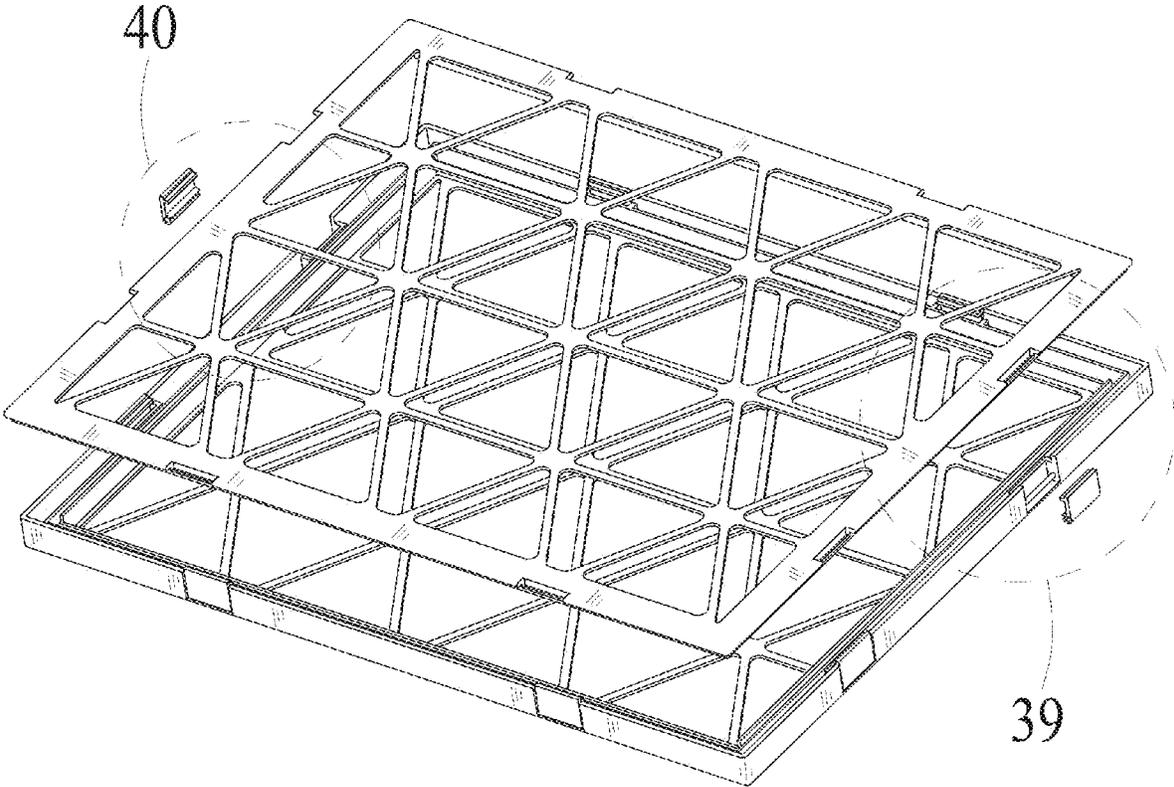


FIG. 34

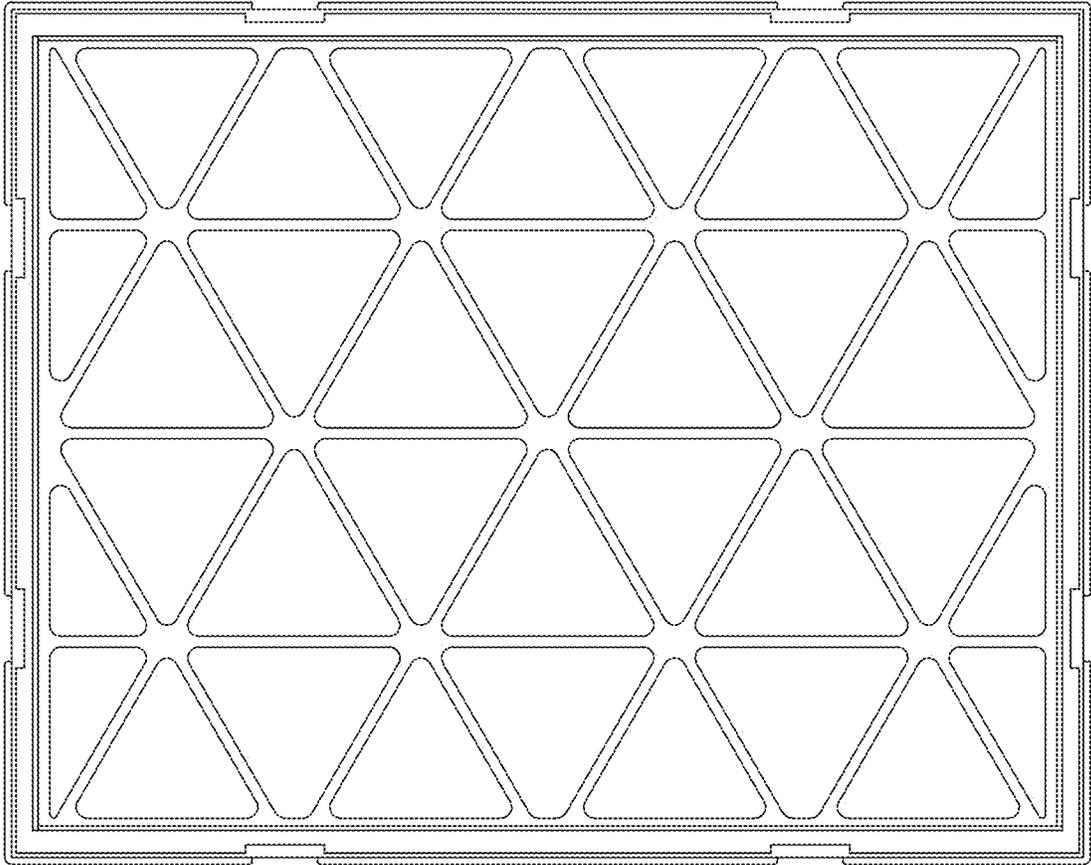


FIG. 35

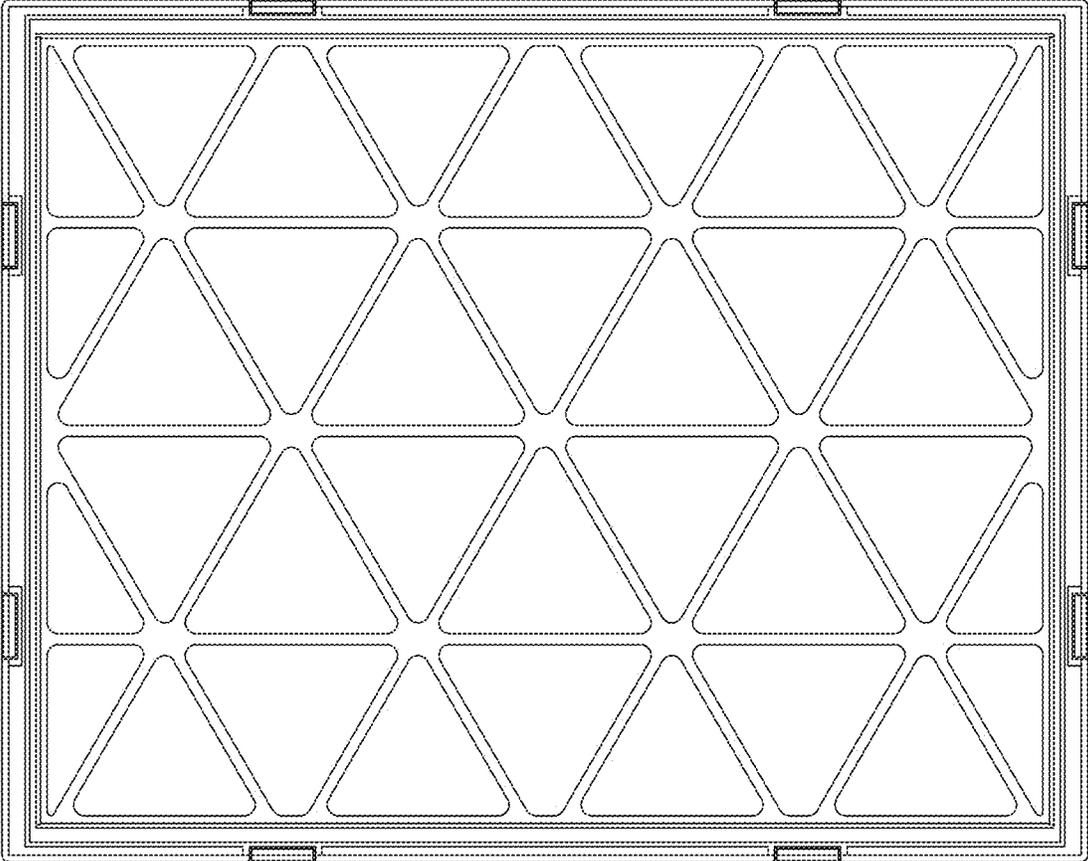


FIG. 36

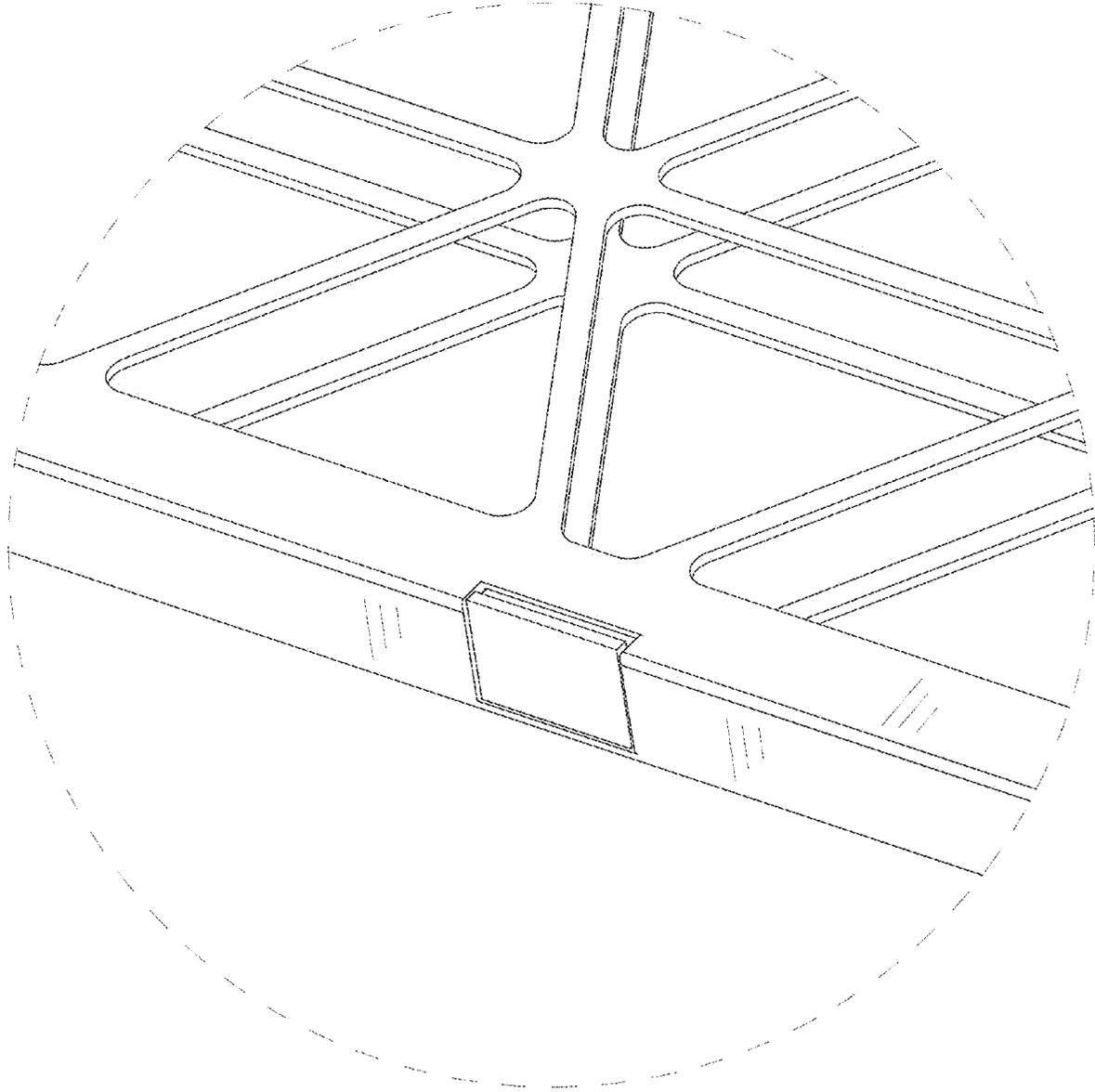


FIG. 37

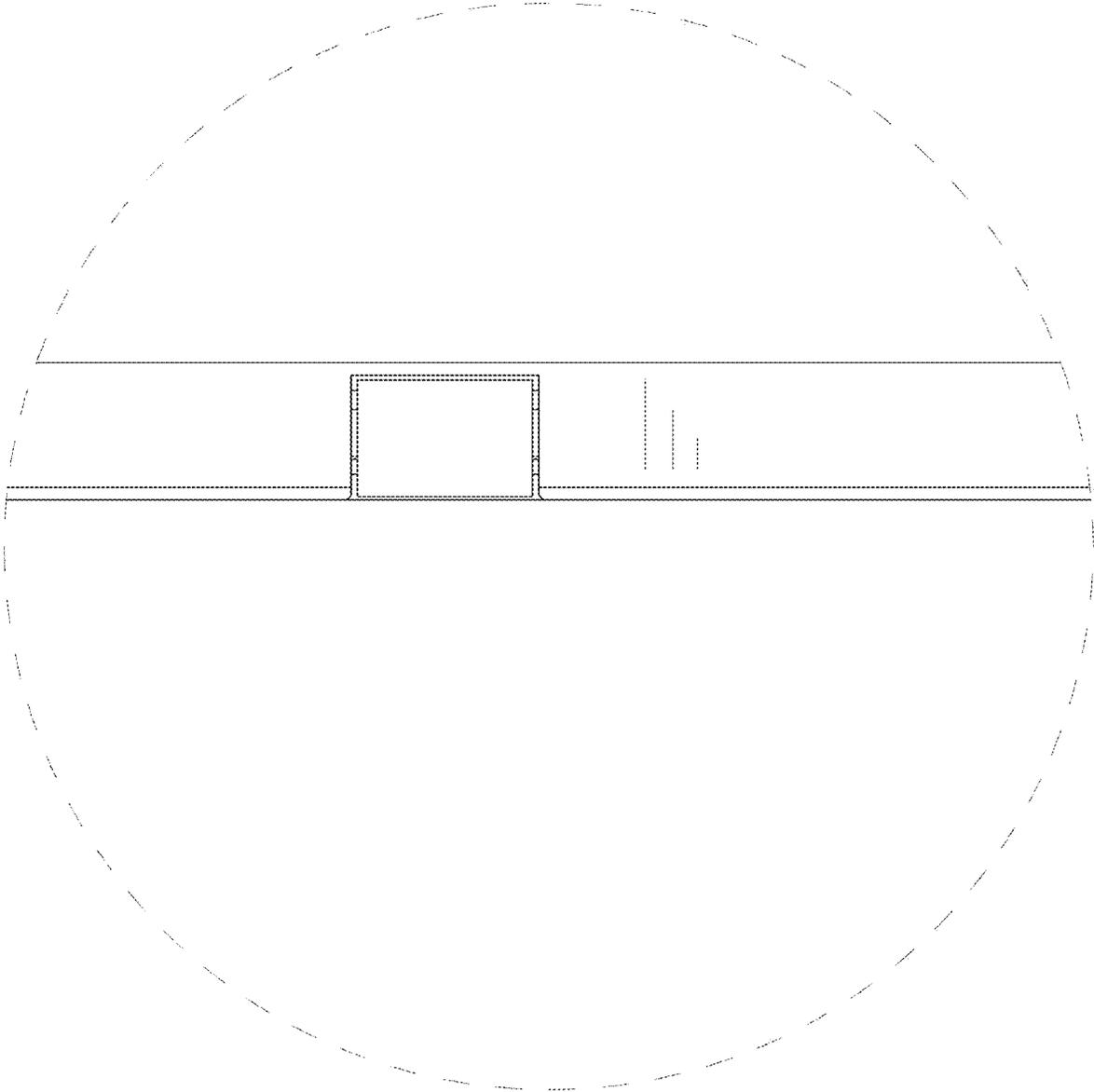


FIG. 38

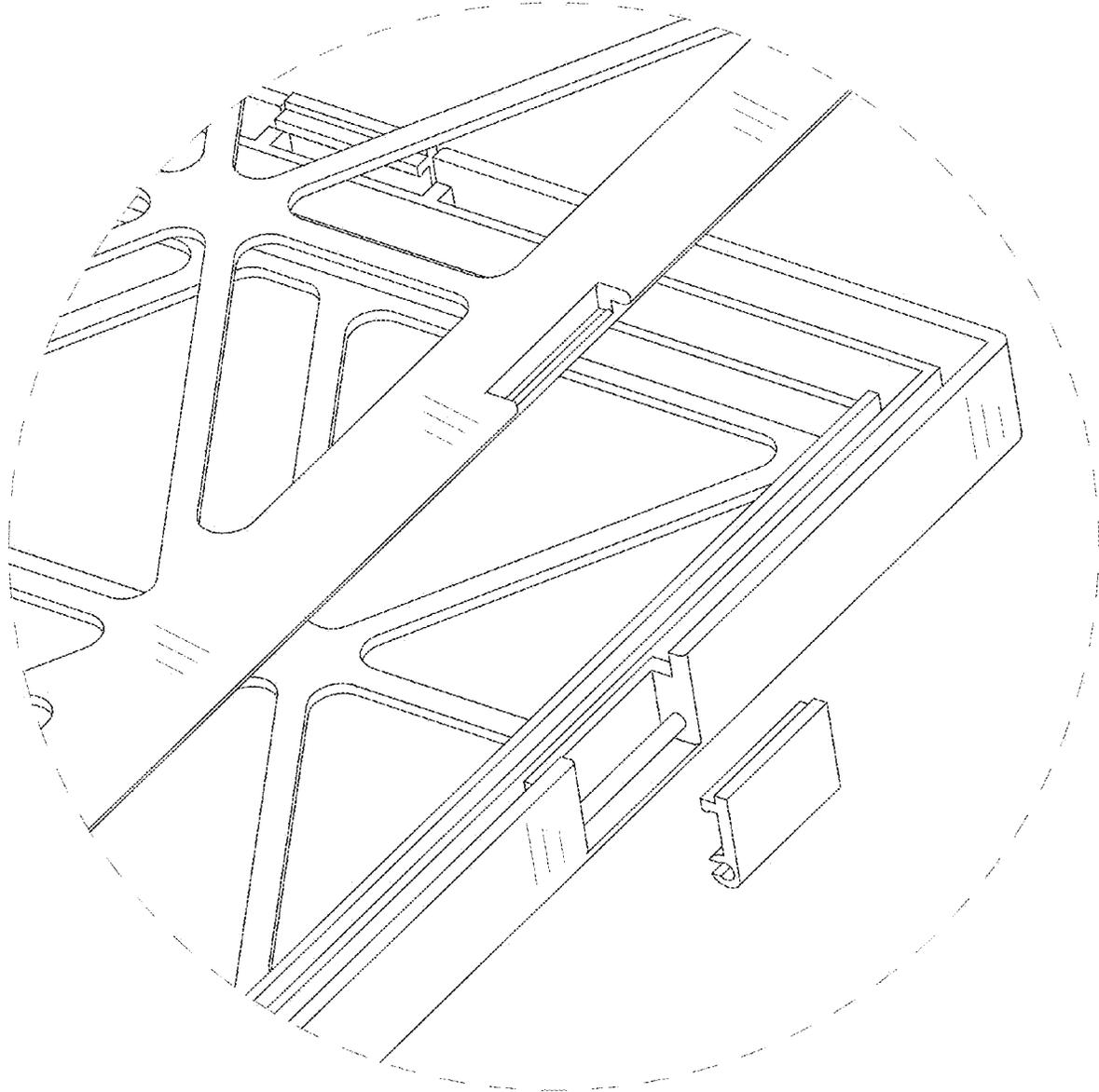


FIG. 39

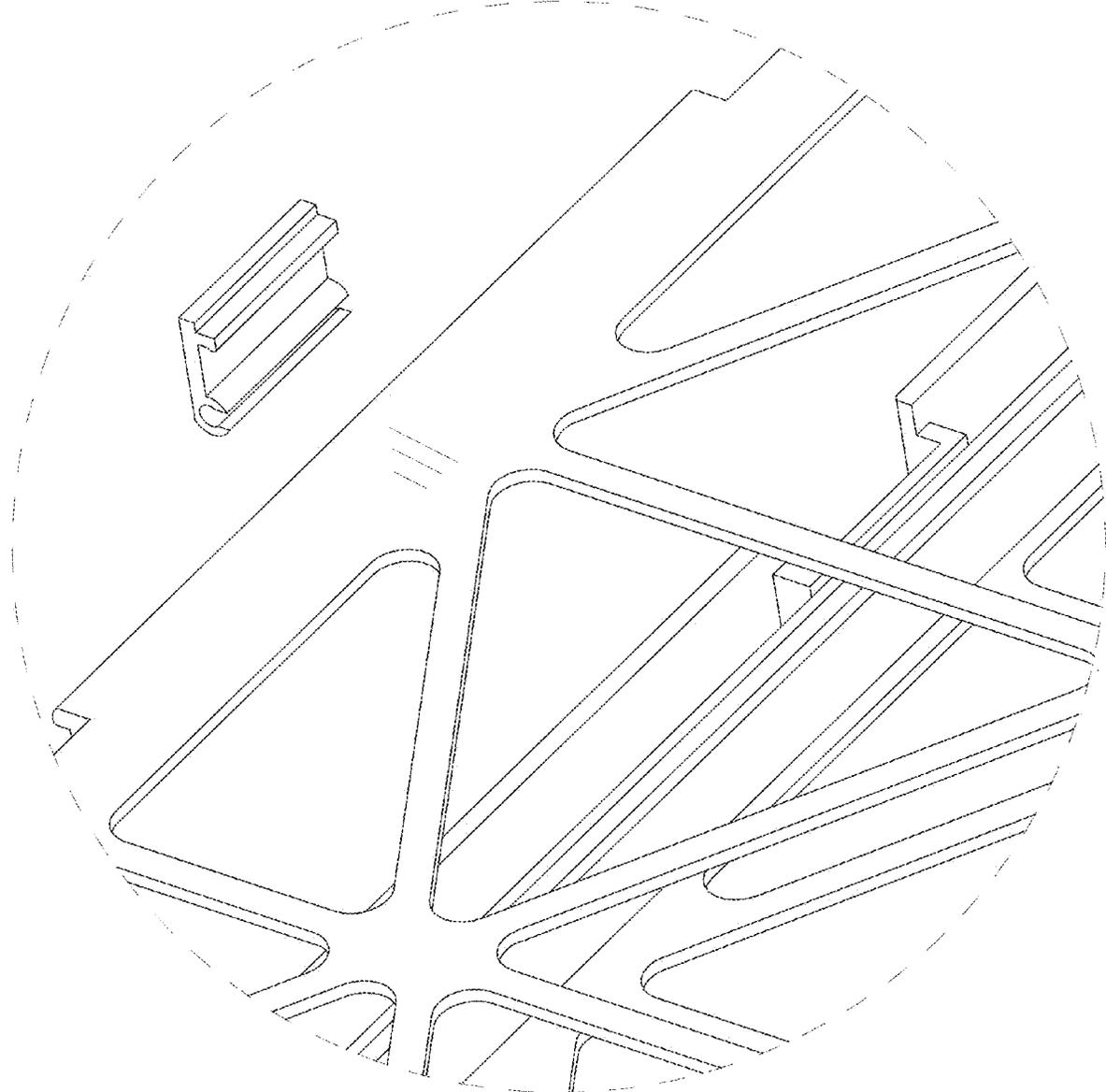


FIG. 40