



US00D879544S

(12) **United States Design Patent** (10) **Patent No.:** **US D879,544 S**
Ileleji et al. (45) **Date of Patent:** **** Mar. 31, 2020**

(54) **MULTIPURPOSE SOLAR DRYING TRAY ASSEMBLY**

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(73) Assignee: **Purdue Research Foundation**, West Lafayette, IN (US)

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

(21) Appl. No.: **29/650,725**

(22) Filed: **Jun. 8, 2018**

(51) **LOC (12) Cl.** **07-02**

(52) **U.S. Cl.**

USPC **D7/359**; D7/354

(58) **Field of Classification Search**

USPC D3/313-314, 323; D7/323, 354-361, D7/409, 543, 545, 549, 550.1, D7/553.1-553.8, 554.1-554.4, 555, 584, D7/586, 688; D9/430-433, 455-456, D9/737, 756-762; D11/155

CPC .. A21B 3/00; A21B 3/003; A21B 3/13; A21B 3/15; A21B 3/134; A21B 5/00; A21B 5/02; A47J 36/022; A47J 36/025; A47J 36/027; A47J 37/00; A47J 37/01; A47J

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D444,950 S * 7/2001 Hwang D3/323
D600,917 S * 9/2009 Meter D3/313

(Continued)

OTHER PUBLICATIONS

Solar Tunnel Dryer "Hohenheim"; <https://www.innotech-ing.de/Innotech/english/Tunneldryer.html> downloaded on Jun. 3, 2018.

(Continued)

Primary Examiner — Ricky Pham

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(57) **CLAIM**

The ornamental design for a multipurpose solar drying tray assembly, as shown and described.

DESCRIPTION

This invention was made with government support under Contract No. AID-OAA-L-14-00003 awarded by the U.S. Agency for International Development. The government has certain rights in the invention.

FIG. 1 is a perspective view of a multipurpose solar drying tray assembly comprising a tray and a cover in accordance with this invention.

FIG. 2 is a right elevational end view of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 3 is a left elevational end view of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 4 is a rear elevational view of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 5 is a front elevational view of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 6 is a top view of the multipurpose solar drying tray assembly of FIG. 1.

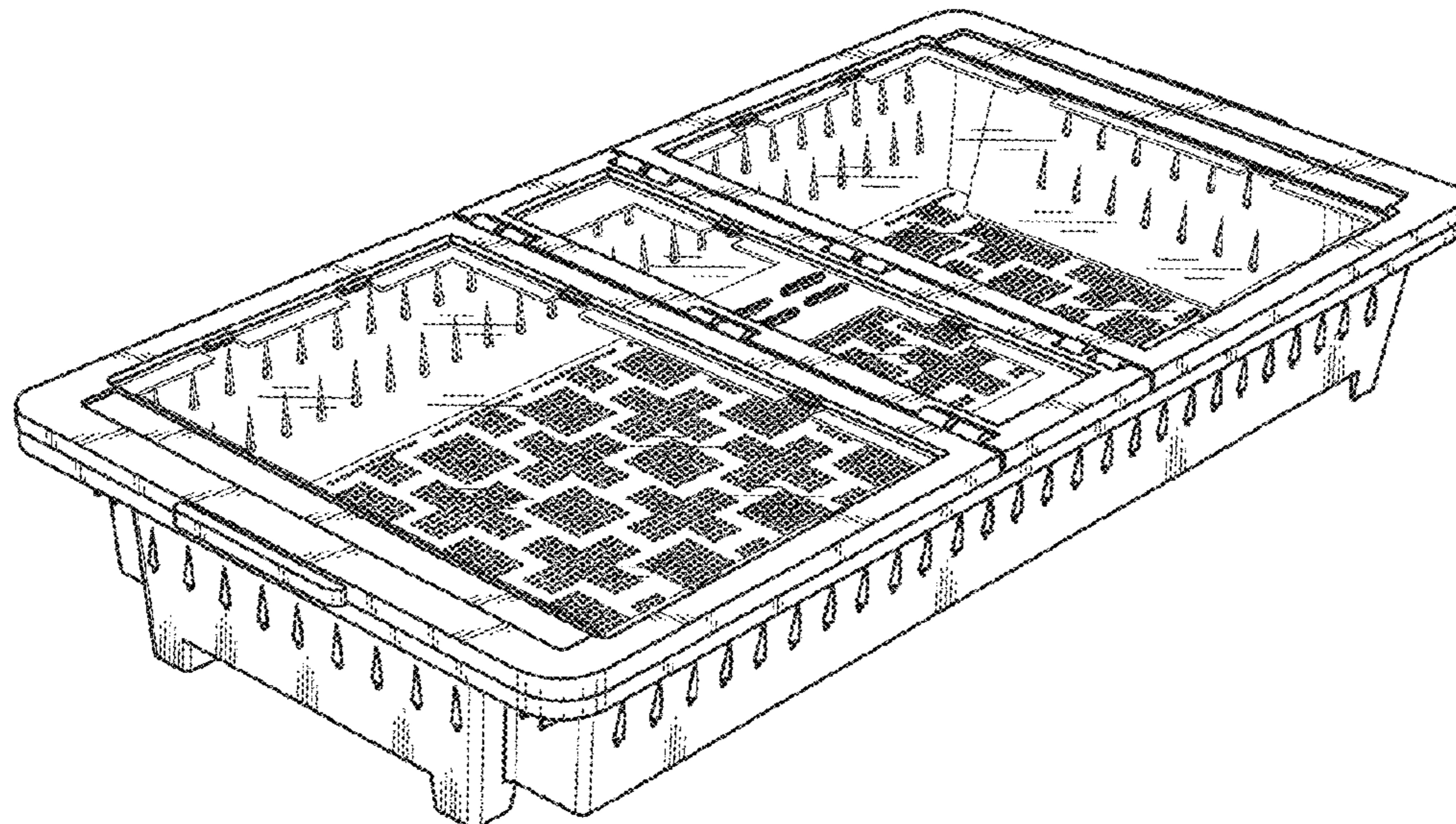
FIG. 7 is a bottom view of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 8 is an isolated perspective view of the cover of the multipurpose solar drying tray assembly of FIG. 1.

FIG. 9 is an exploded perspective view of the cover of the multipurpose solar drying tray assembly of FIG. 1; and,

FIG. 10 is a right elevational end view of the tray of the multipurpose solar drying tray assembly of FIG. 1 nested with an identical tray.

1 Claim, 10 Drawing Sheets



(58) **Field of Classification Search**

CPC 37/04; A47J 43/28; A47J 43/284; B65D
1/22; B65D 1/24; B65D 1/34; B65D
1/36; B65D 21/0215; B65D 81/343;
B65D 85/36

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D628,434 S * 12/2010 Sarnoff D7/354
D727,791 S * 4/2015 Montagano D11/155
D781,148 S * 3/2017 Kemp D3/304
D800,492 S * 10/2017 Sarnoff D7/359
D807,698 S * 1/2018 Nilssen D7/409
D826,622 S * 8/2018 Shah D7/359
D848,152 S * 5/2019 Martinez Layseca D3/314
2016/0007737 A1 * 1/2016 Clark B65D 21/0215
211/126.2
2018/0251260 A1 * 9/2018 Hassell A47J 37/01

OTHER PUBLICATIONS

Chimney Solar Dryer Manual, dated Jan. 17, 2018.
MFG Tray Confectionery Products; “The material matters in material handling”; MFGT-CP—Aug. 2014.
Rebecca R. Milczarek, Roberto Avena-Mascareno, Jerome Alonzo, and Melissa I. Fichot; “Improving the Sun Drying of Apricots (*Prunus armeniaca*) with Photo-Selective Dryer Cabinet Materials”; *Journal of Food Science*; vol. 81, No. 10, 2016.
Bayram Murat Asma; “Malatya: World’s Capital of Apricot Culture”; *Chrgniga Horticulture*; vol. 47, No. 1, 2007.

* cited by examiner

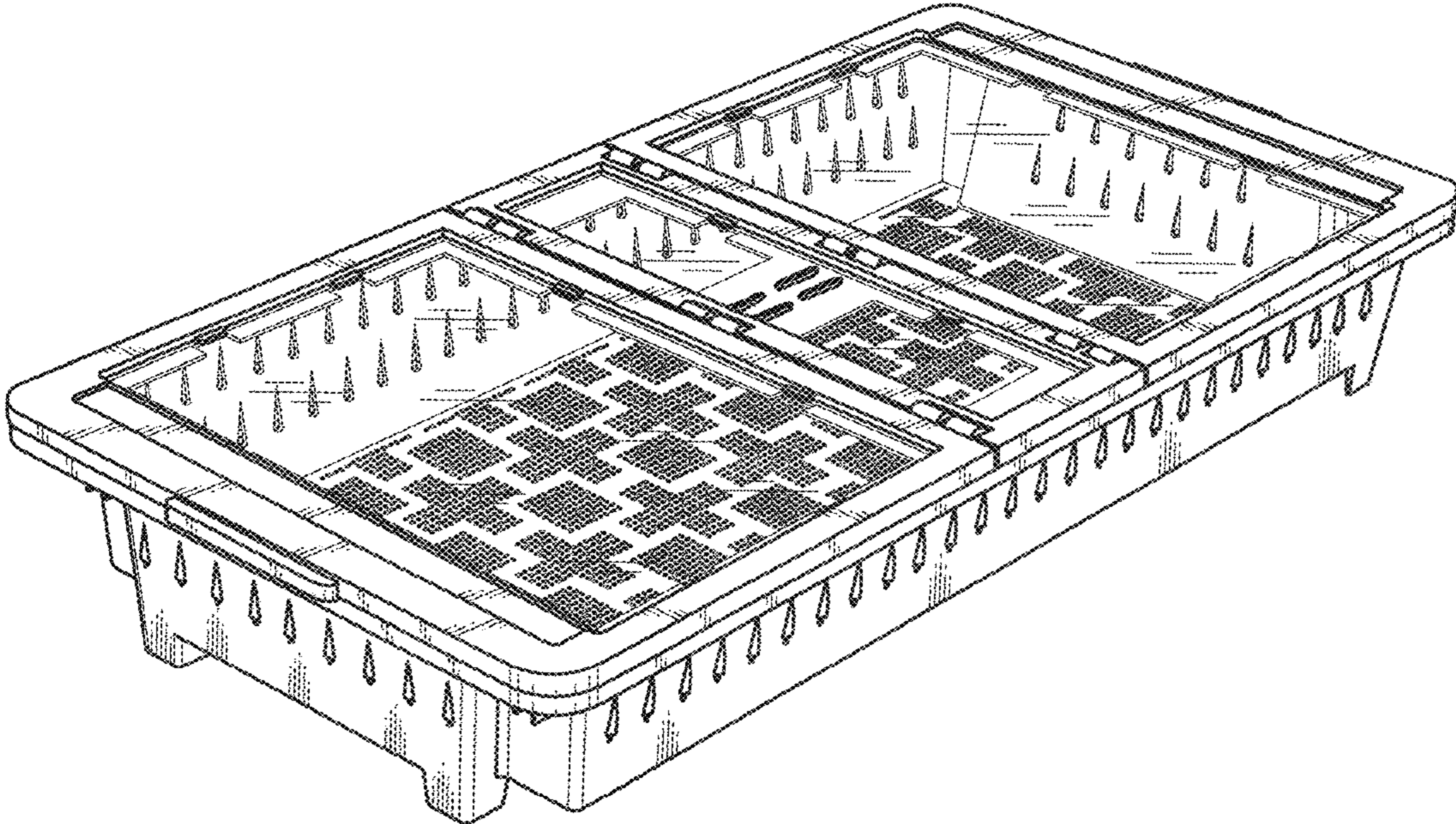


FIG. 1

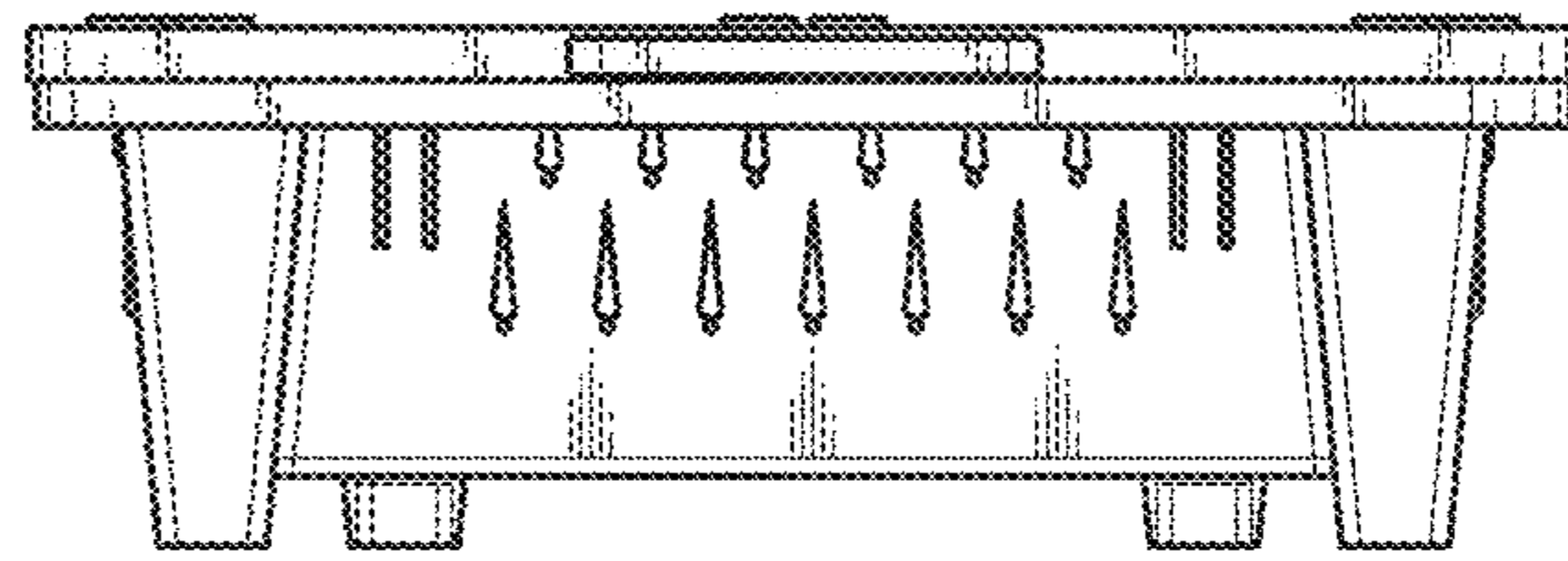


FIG. 2

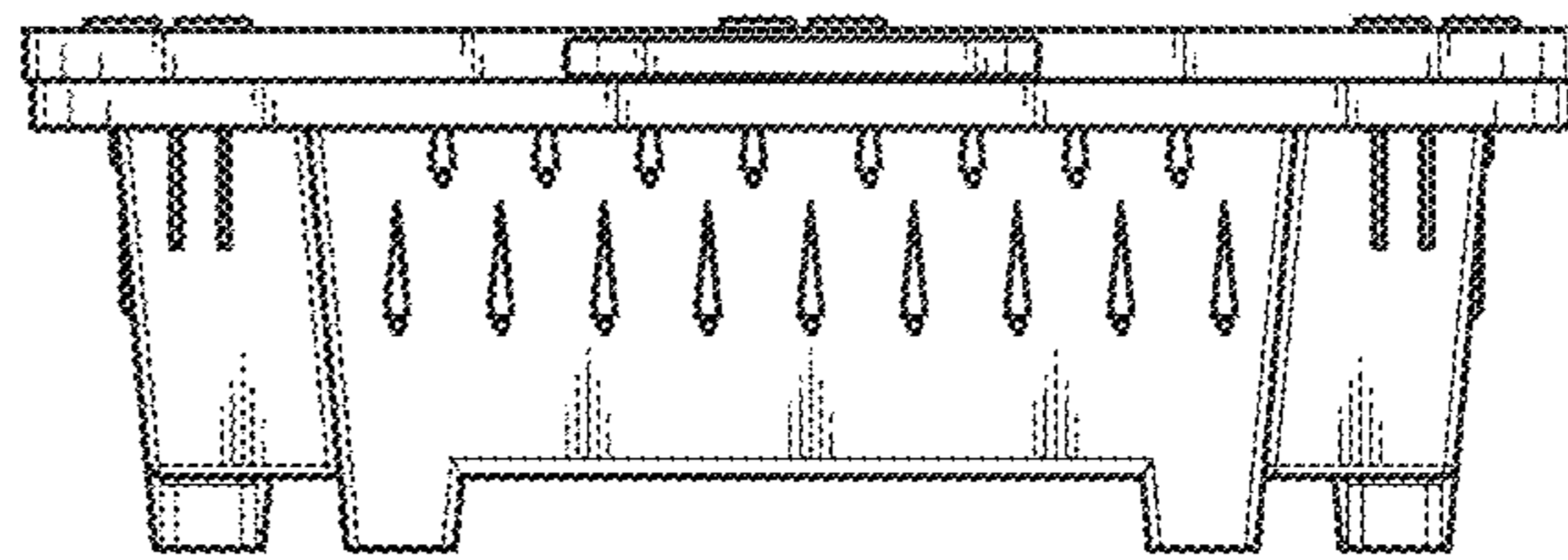


FIG. 3

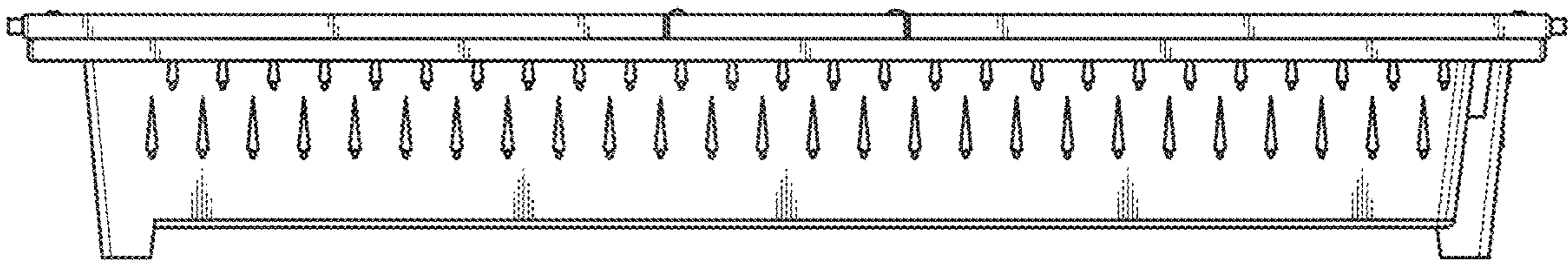


FIG. 4

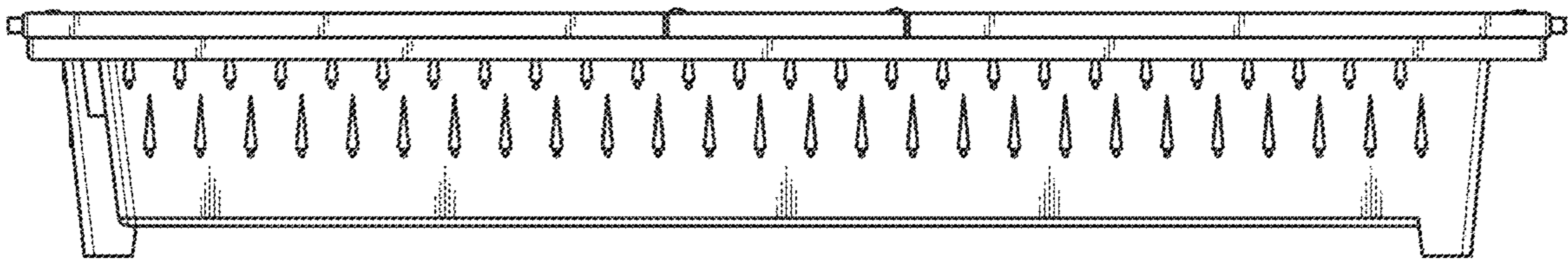


FIG. 5

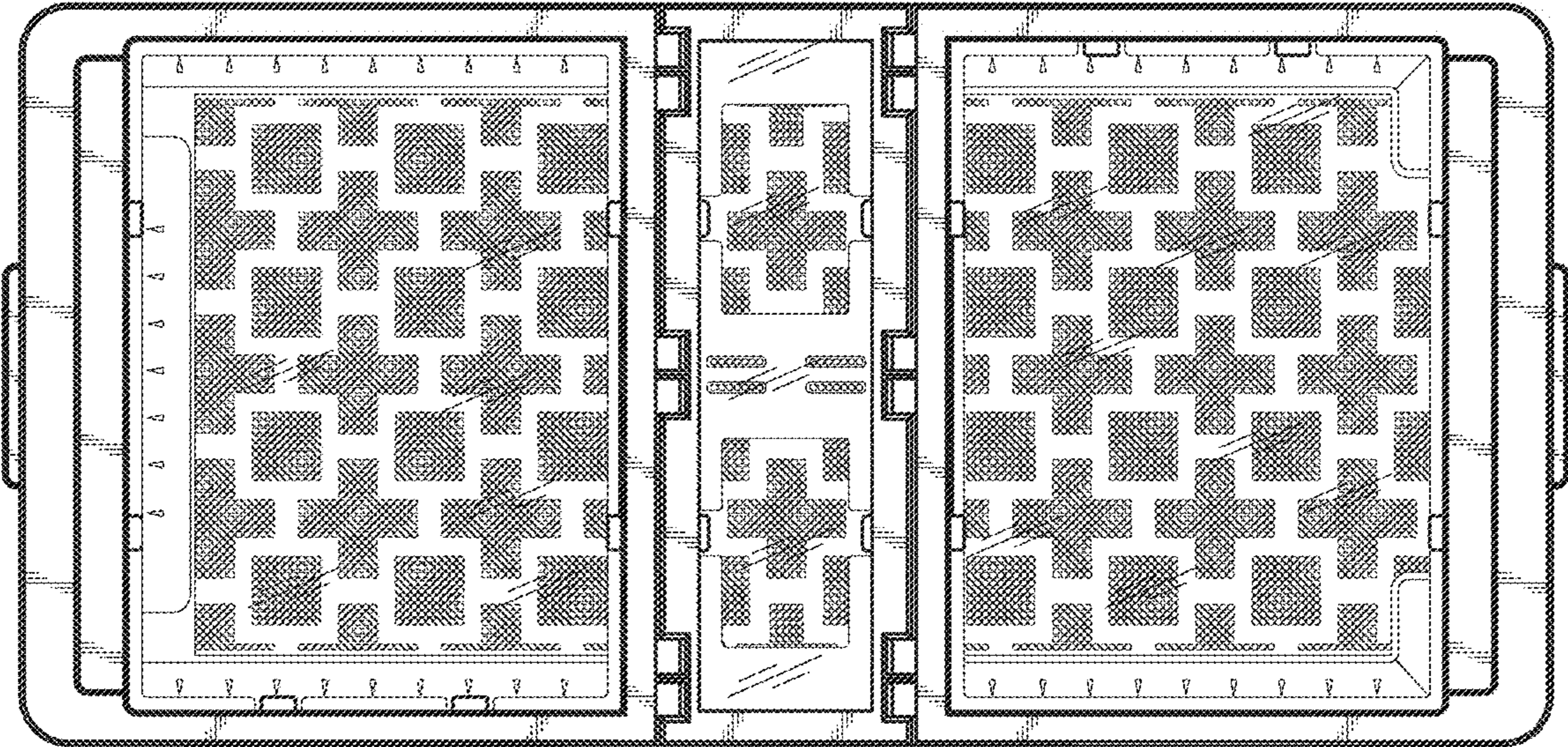


FIG. 6

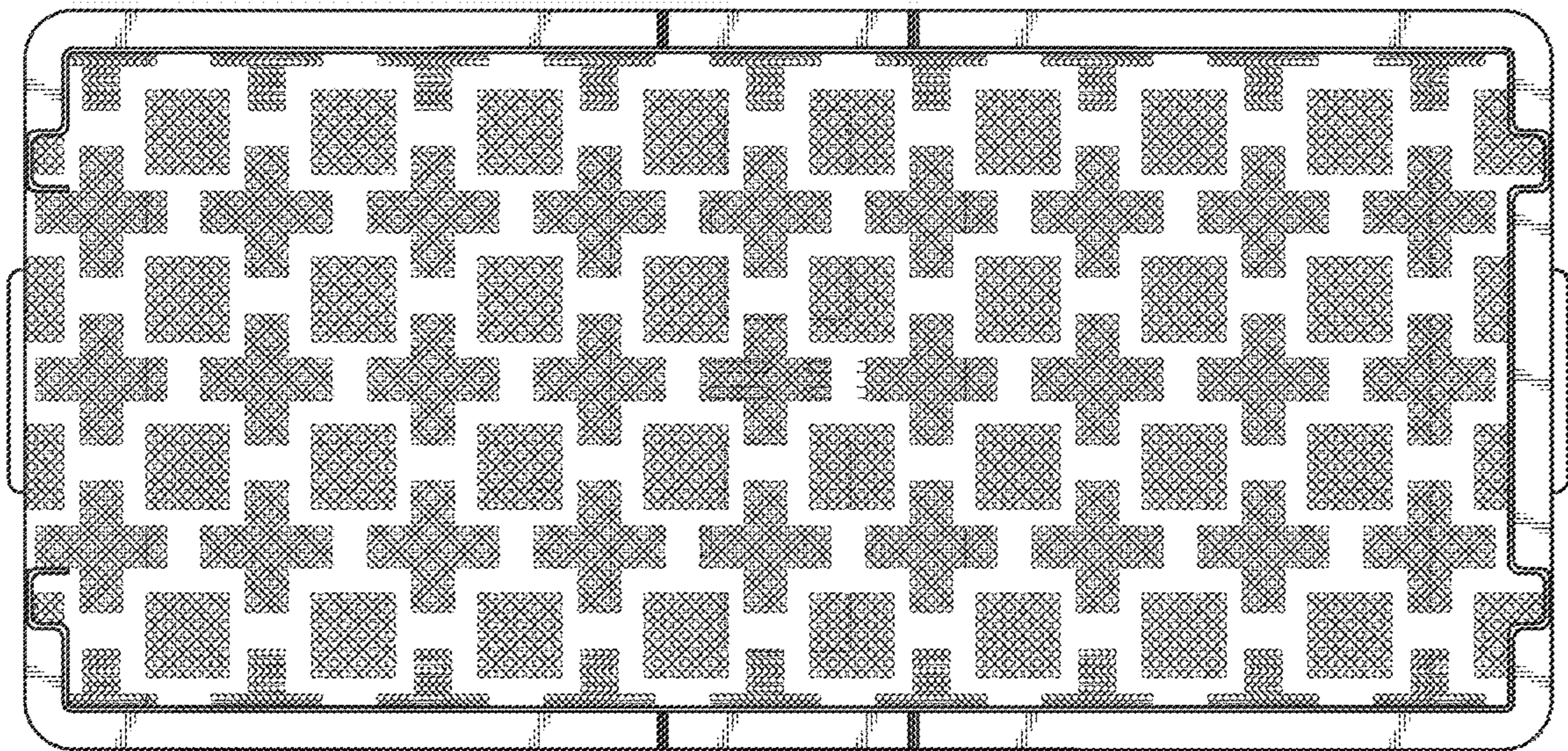


FIG. 7

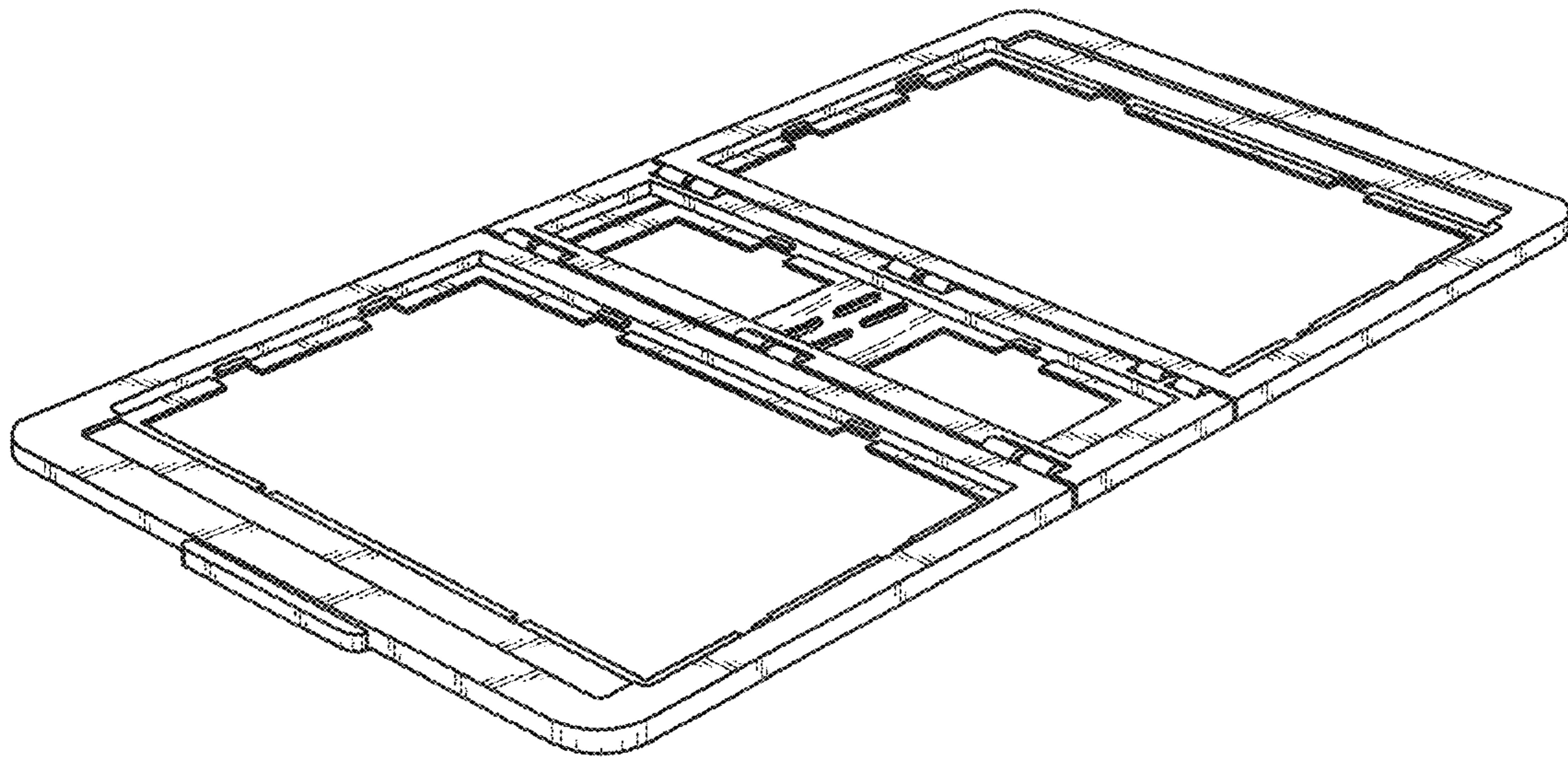


FIG. 8

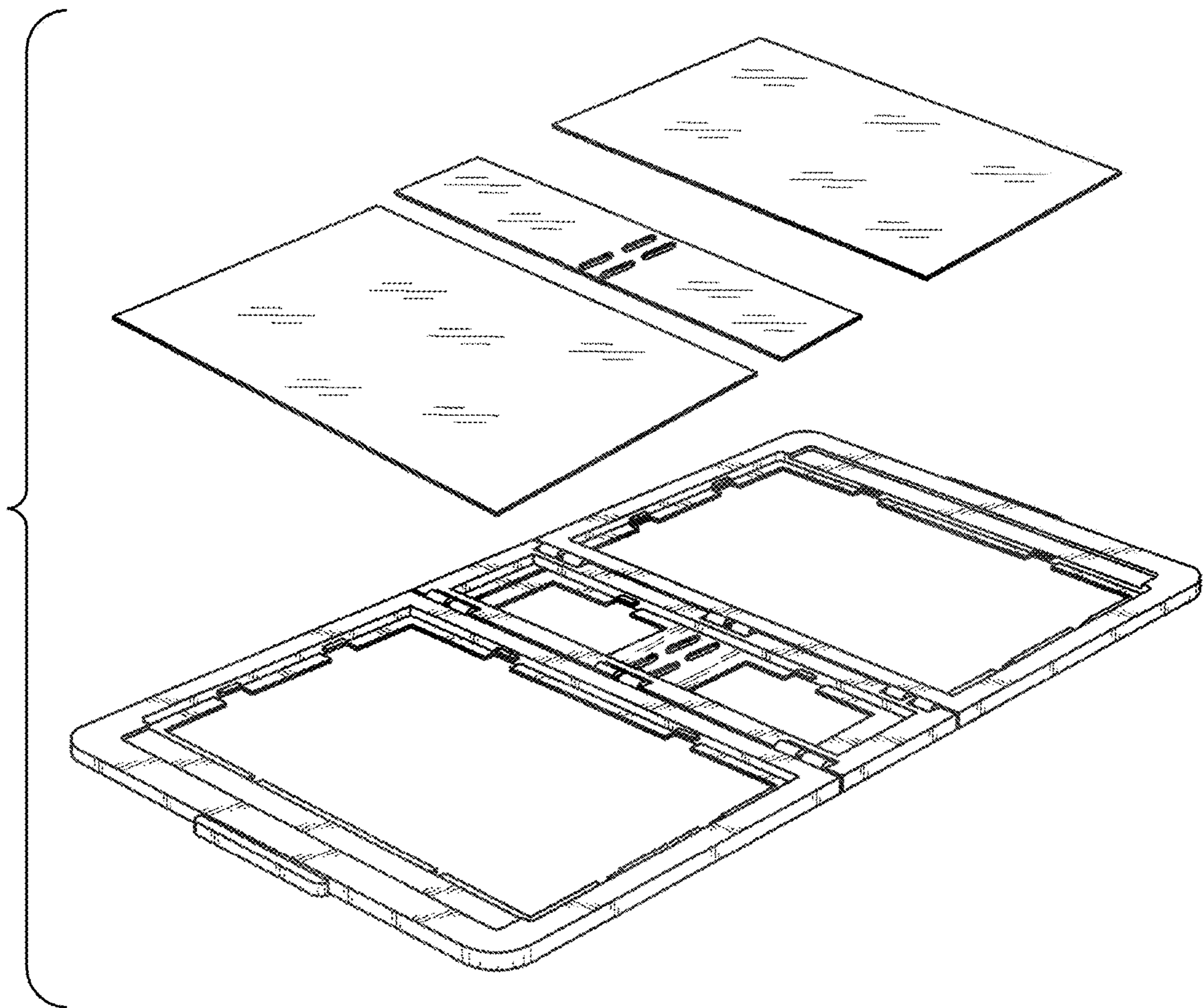


FIG. 9

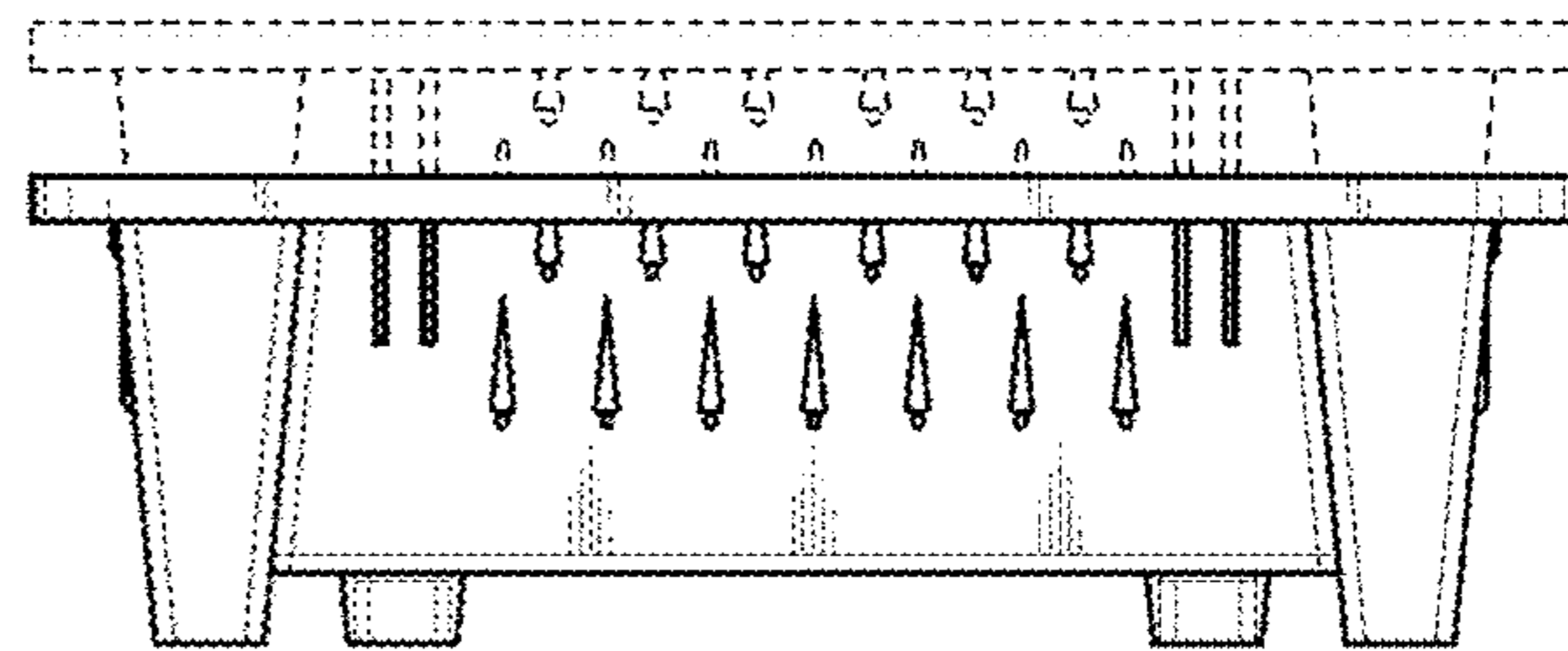


FIG. 10