



US00D978378S

(12) **United States Design Patent** (10) **Patent No.:** **US D978,378 S**  
**Sugie** (45) **Date of Patent:** **\*\* Feb. 14, 2023**

(54) **AUTOMATIC SPRAYING DEVICE**

www.labx.com/item/shimadzu-s-new-implayer-aero-automatic-sprayer/13383730.\*

(71) Applicant: **Shimadzu Corporation**, Kyoto (JP)

\* cited by examiner

(72) Inventor: **Tomoya Sugie**, Kyoto (JP)

*Primary Examiner* — Anhdao Doan

(73) Assignee: **SHIMADZU CORPORATION**, Kyoto (JP)

(74) *Attorney, Agent, or Firm* — JCIPRNET

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

(57) **CLAIM**

(21) Appl. No.: **29/731,875**

The ornamental design for an automatic spraying device, as shown and described.

(22) Filed: **Apr. 20, 2020**

**DESCRIPTION**

(30) **Foreign Application Priority Data**

Oct. 24, 2019 (JP) ..... 2019-023629

The patent or application file contains a least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

(51) **LOC (14) Cl.** ..... **24-01**

FIG. 1 is a perspective view of a automatic spraying device showing a first embodiment of my new design;

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

USPC ..... **D24/232**

FIG. 2 is a front view thereof;

(58) **Field of Classification Search**

USPC ..... D24/107, 186, 216, 232, 233, 234

CPC ..... G01N 2035/00306; G01N 2035/00326;

G01N 2035/00336; G01N 2030/027;

G01N 30/02; G01N 30/04; G01N 30/06;

G01N 35/025

FIG. 3 is a rear view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a top view thereof;

FIG. 7 is a bottom view thereof;

FIG. 8 is a perspective view of a automatic spraying device showing a second embodiment of my new design;

FIG. 9 is a front view thereof;

FIG. 10 is a rear view thereof;

FIG. 11 is a left side view thereof;

FIG. 12 is a right side view thereof;

FIG. 13 is a top view thereof; and,

FIG. 14 is a bottom view thereof.

The pink background in FIGS. 8-14 forms no part of the claimed design.

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D724,214 S \* 3/2015 Ihara ..... D24/216

D810,314 S \* 2/2018 Hoelbl ..... D24/232

D810,315 S \* 2/2018 Hoelbl ..... D24/232

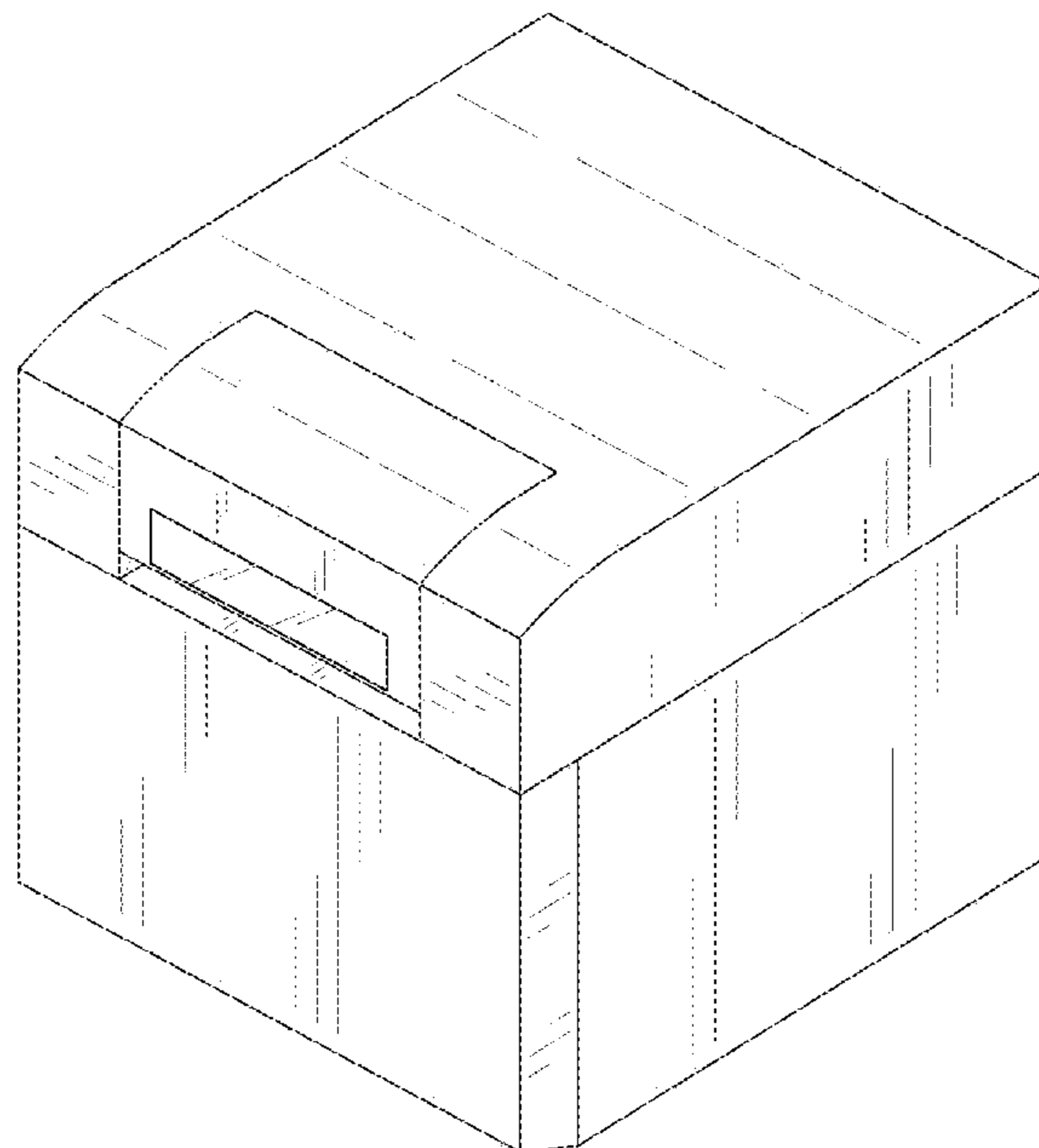
D937,433 S \* 11/2021 Sugie ..... D24/216

11,302,523 B1 \* 4/2022 Creissen ..... G01N 30/6052

**OTHER PUBLICATIONS**

LabX. Shimadzus New iMLayer AERO Automatic Sprayer. Unknown publication date. Retrived from internet on Aug. 1, 2022 at: <https://www.labx.com/item/shimadzu-s-new-implayer-aero-automatic-sprayer/13383730>

**1 Claim, 8 Drawing Sheets**  
**(4 of 8 Drawing Sheet(s) Filed in Color)**



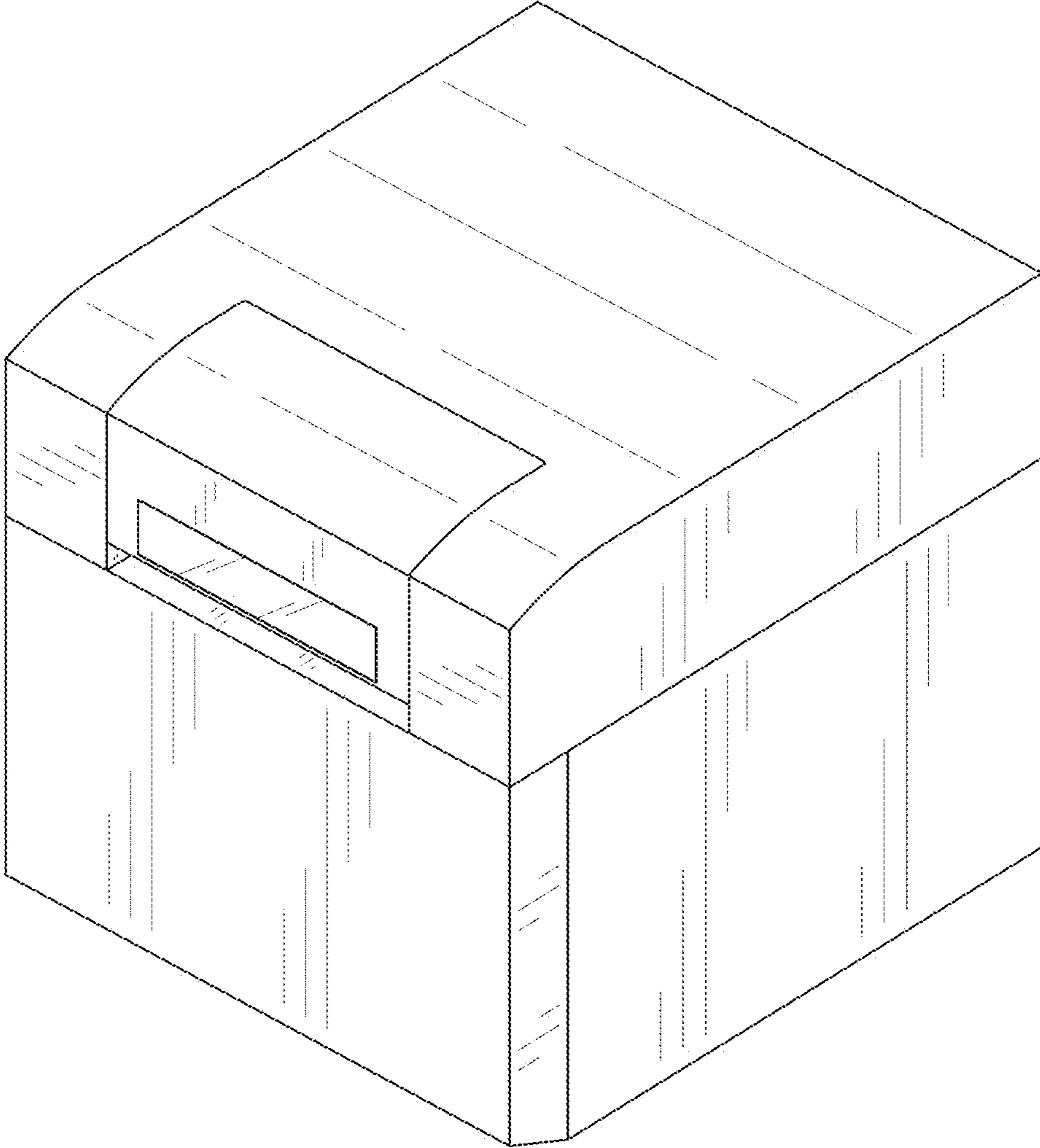


FIG. 1

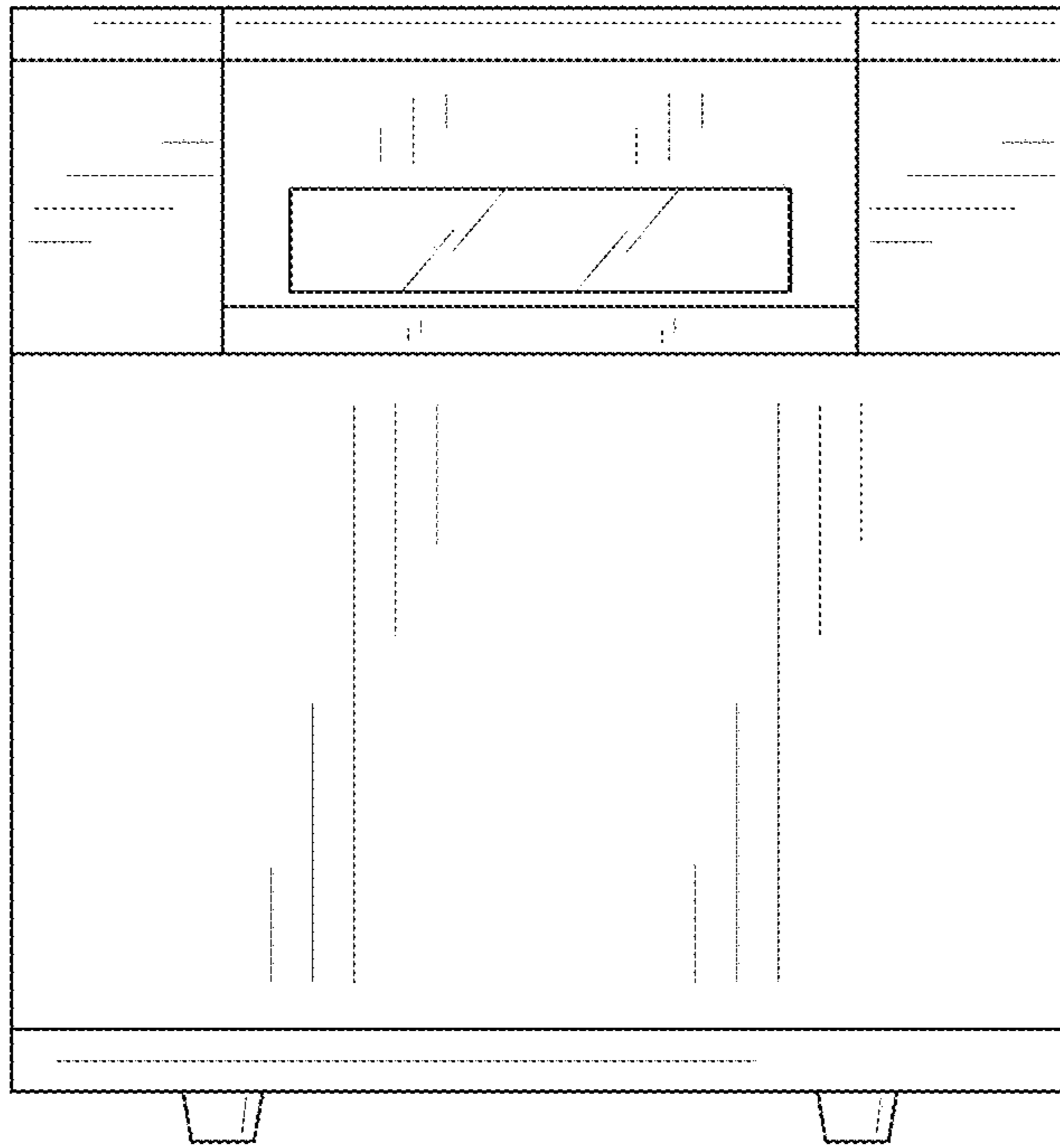


FIG. 2

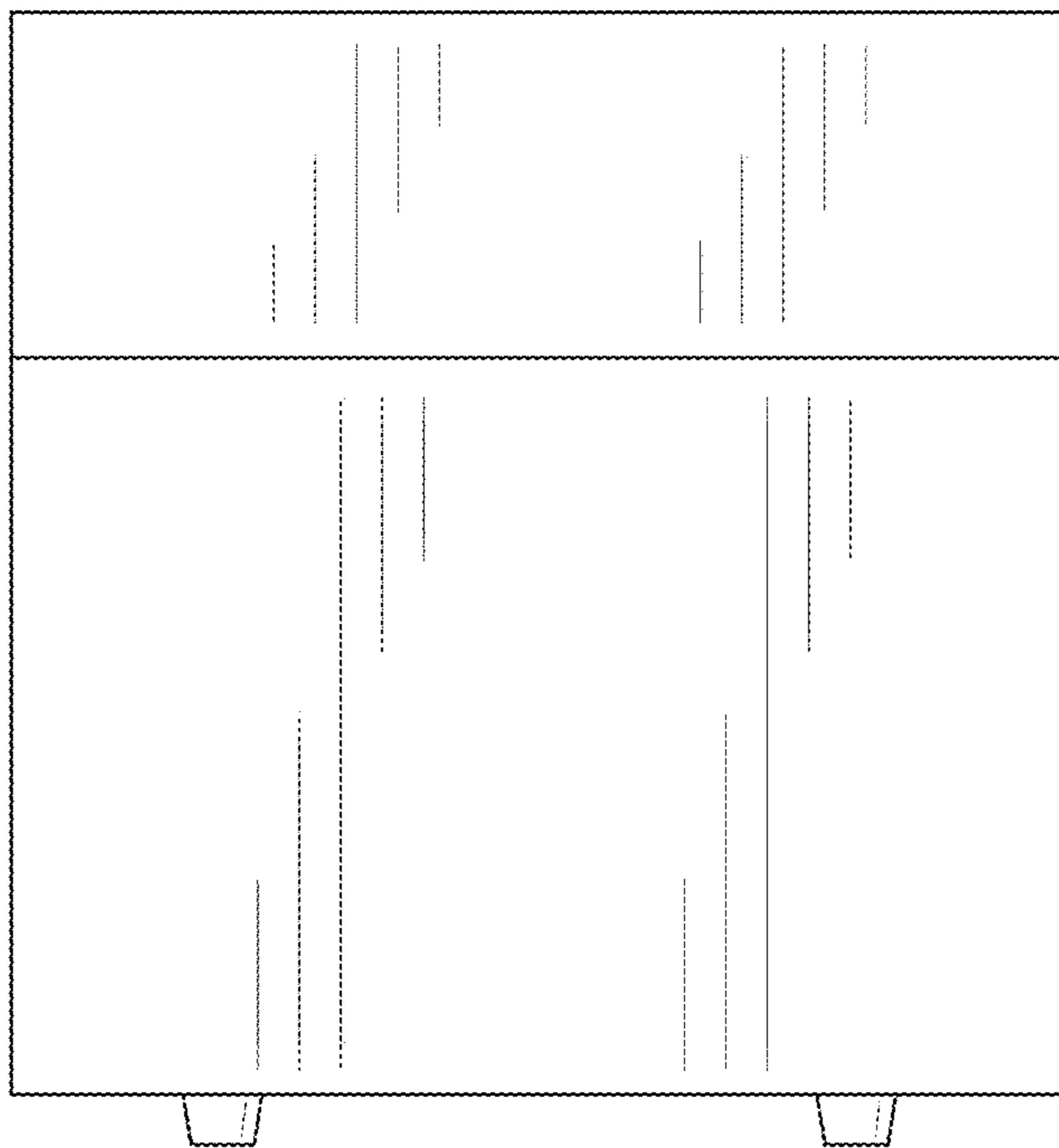


FIG. 3

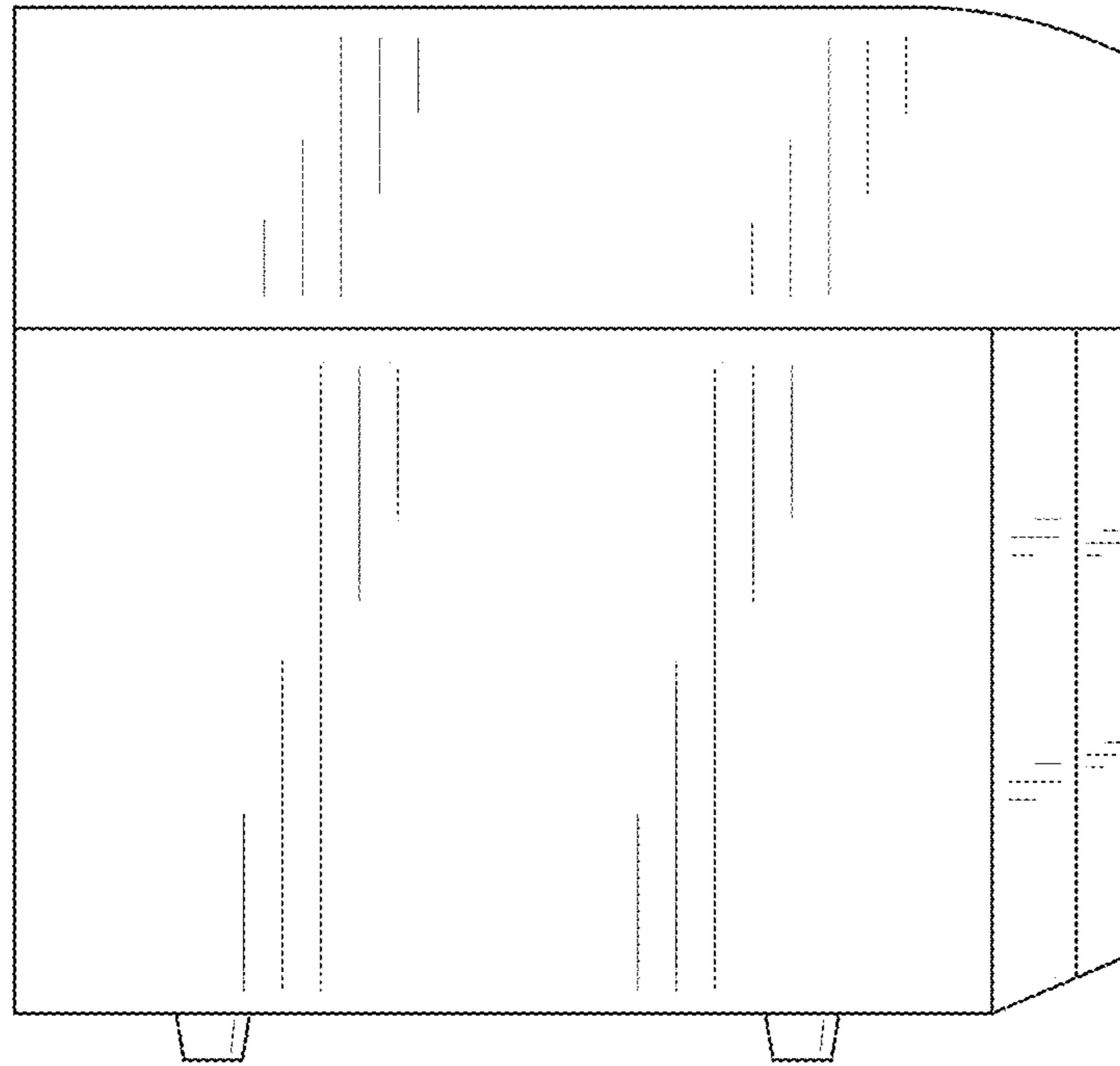


FIG. 4

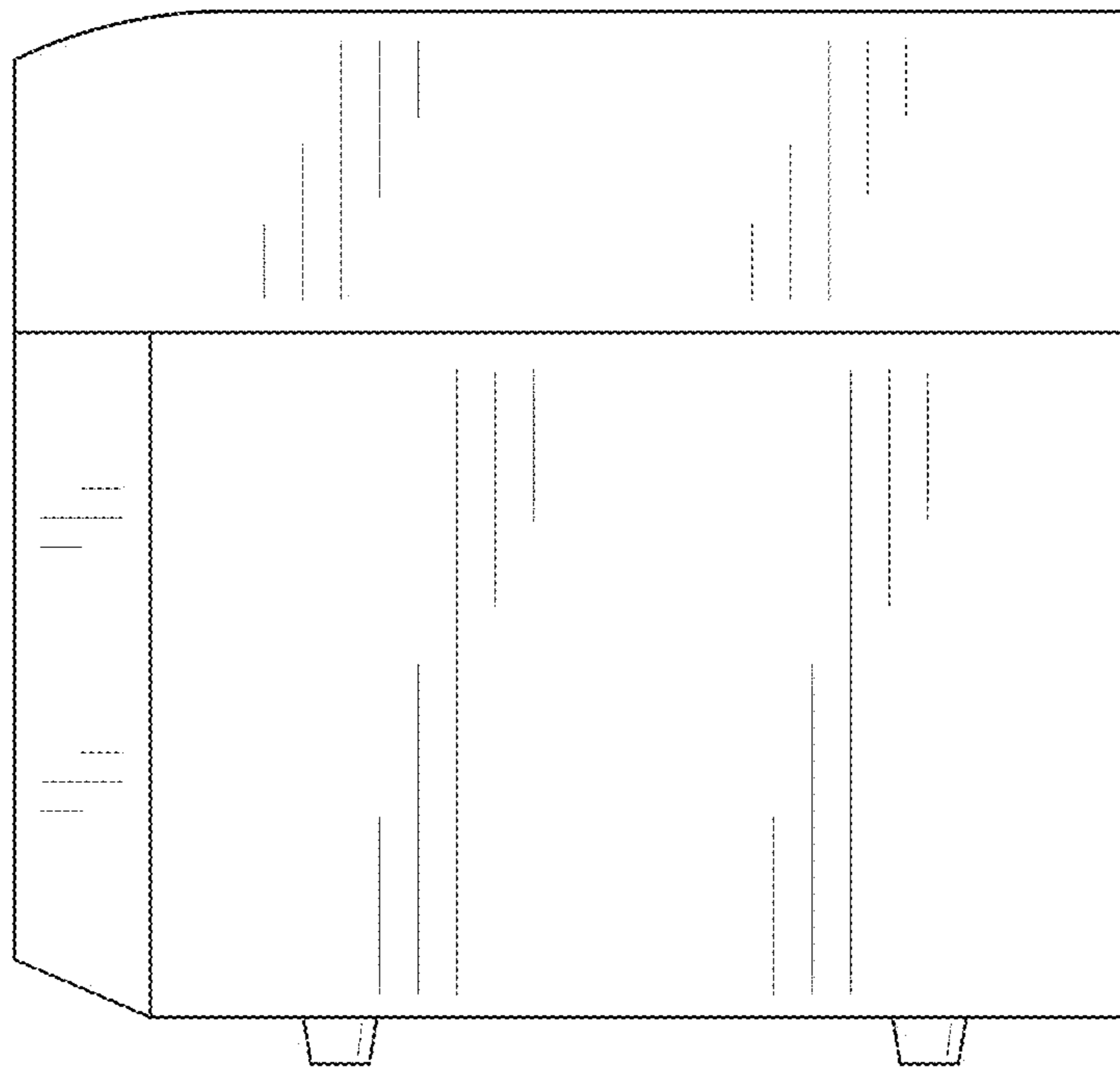


FIG. 5

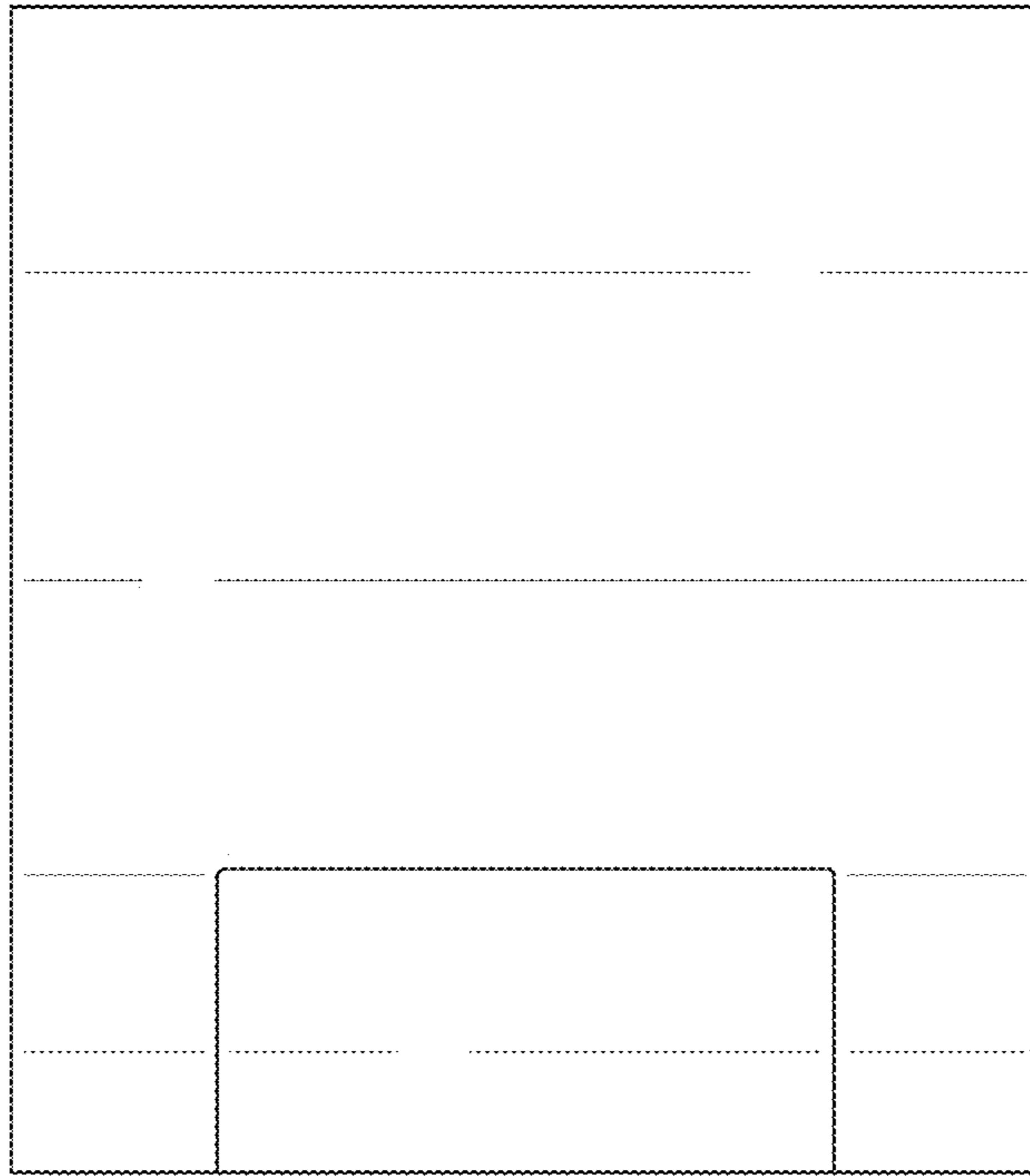


FIG. 6

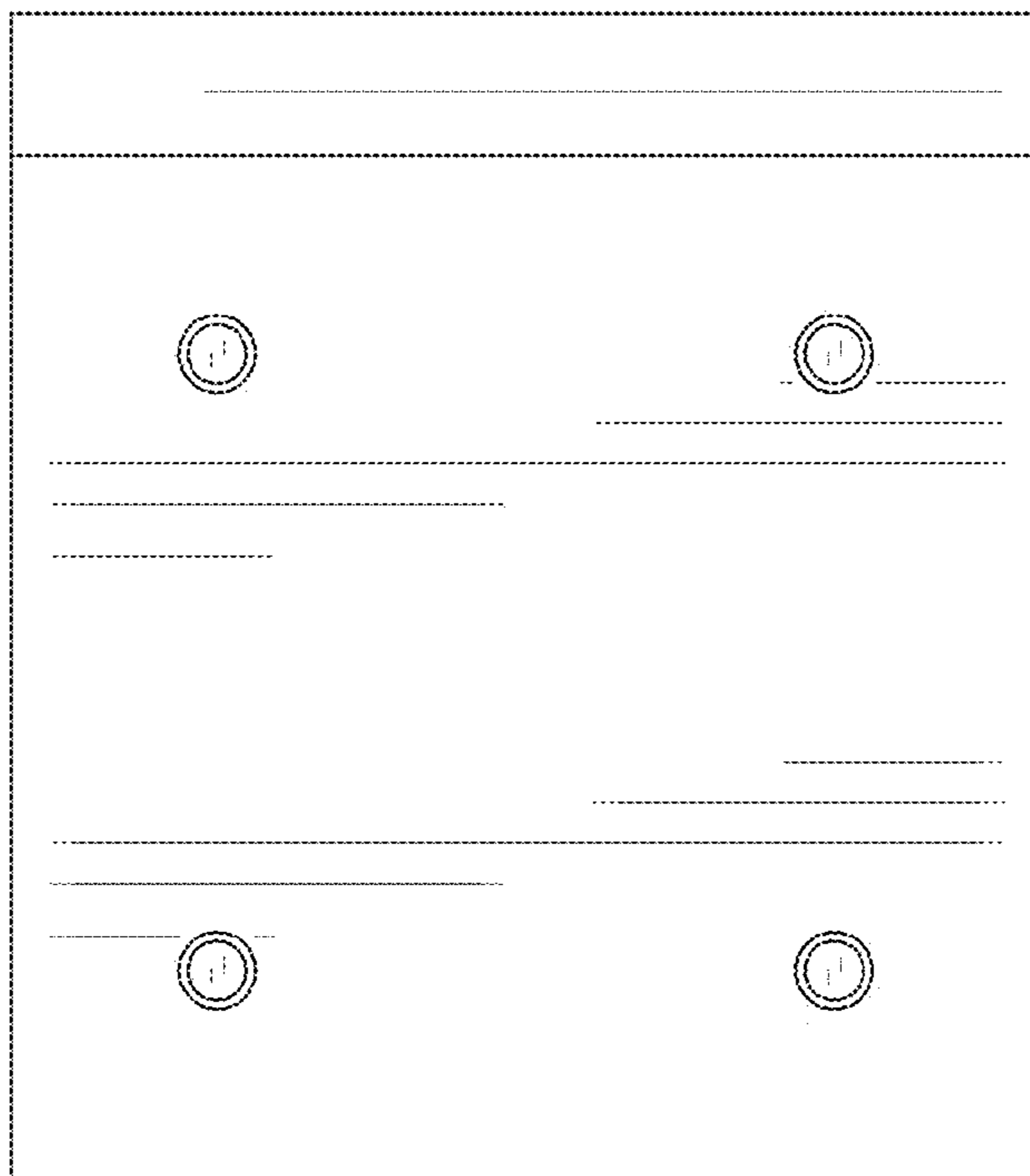


FIG. 7

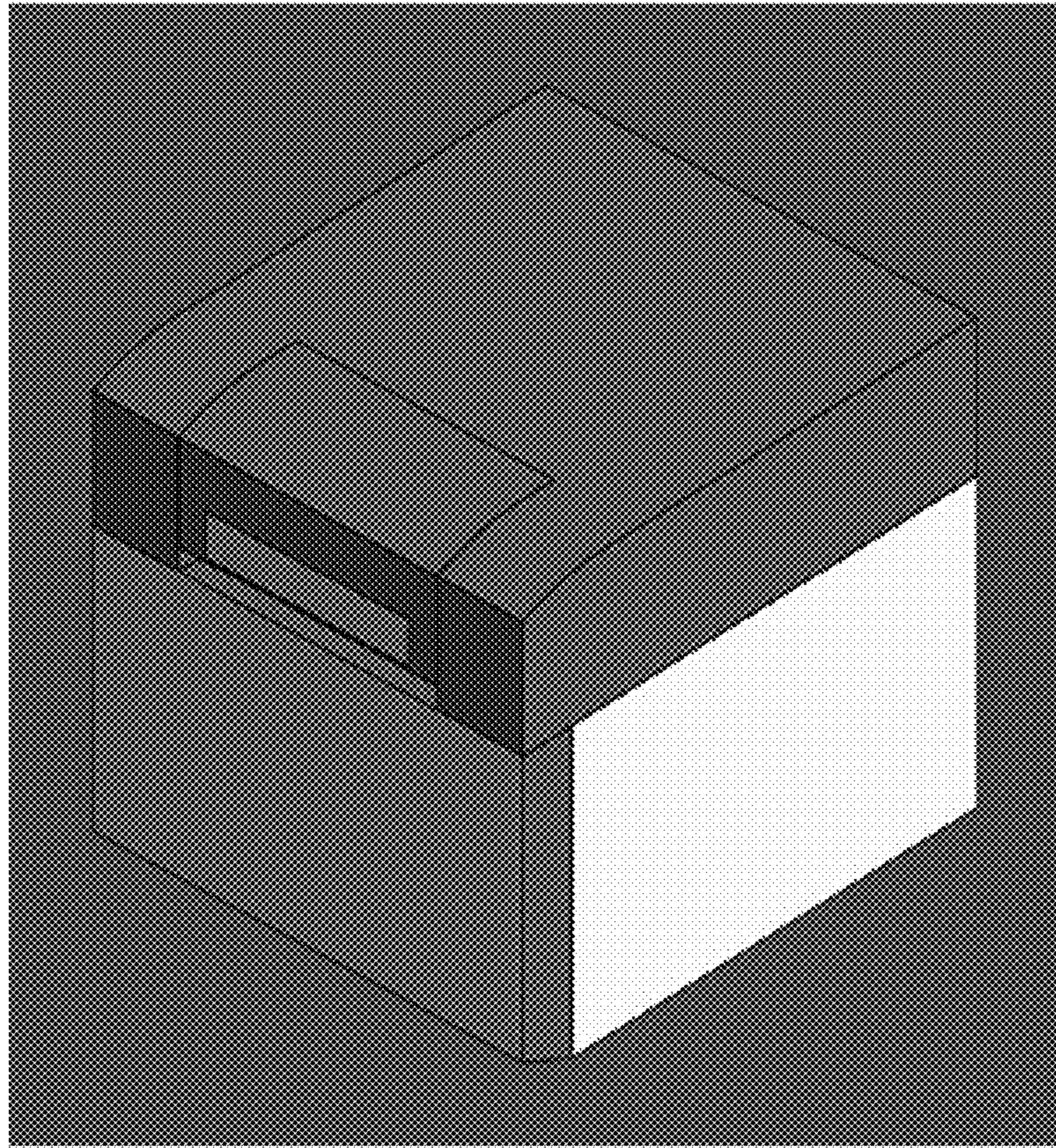


FIG. 8

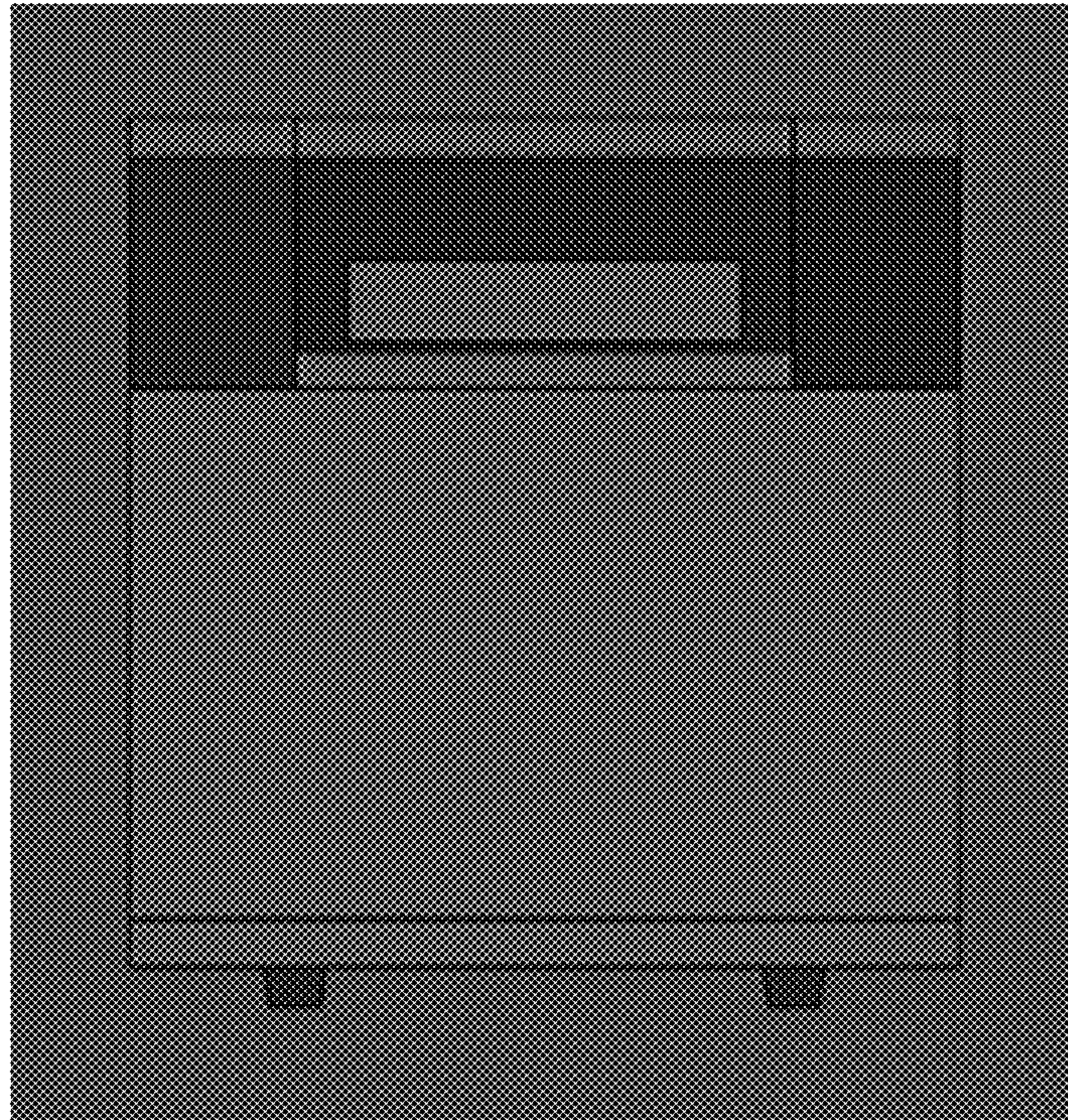


FIG. 9

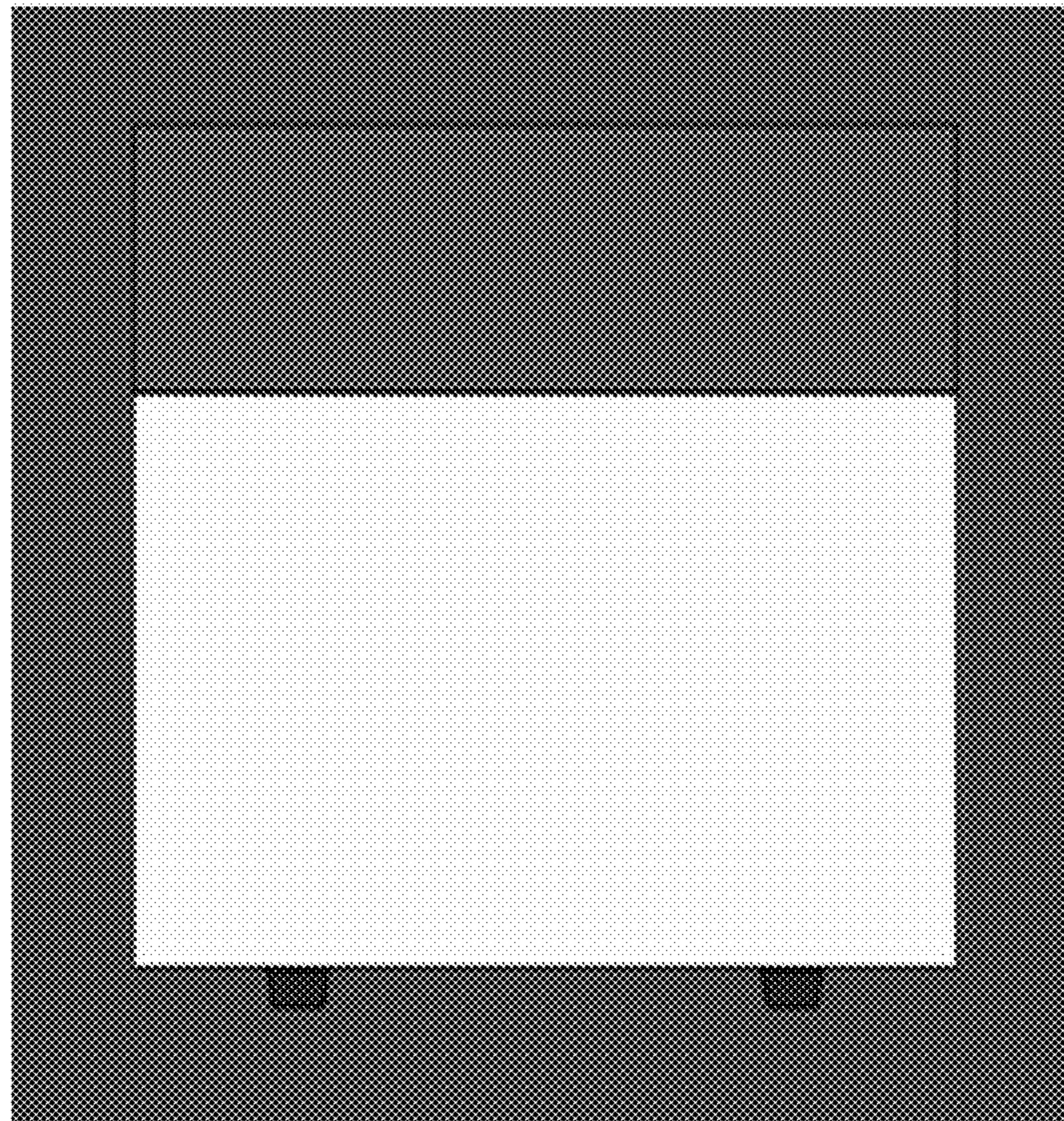


FIG. 10

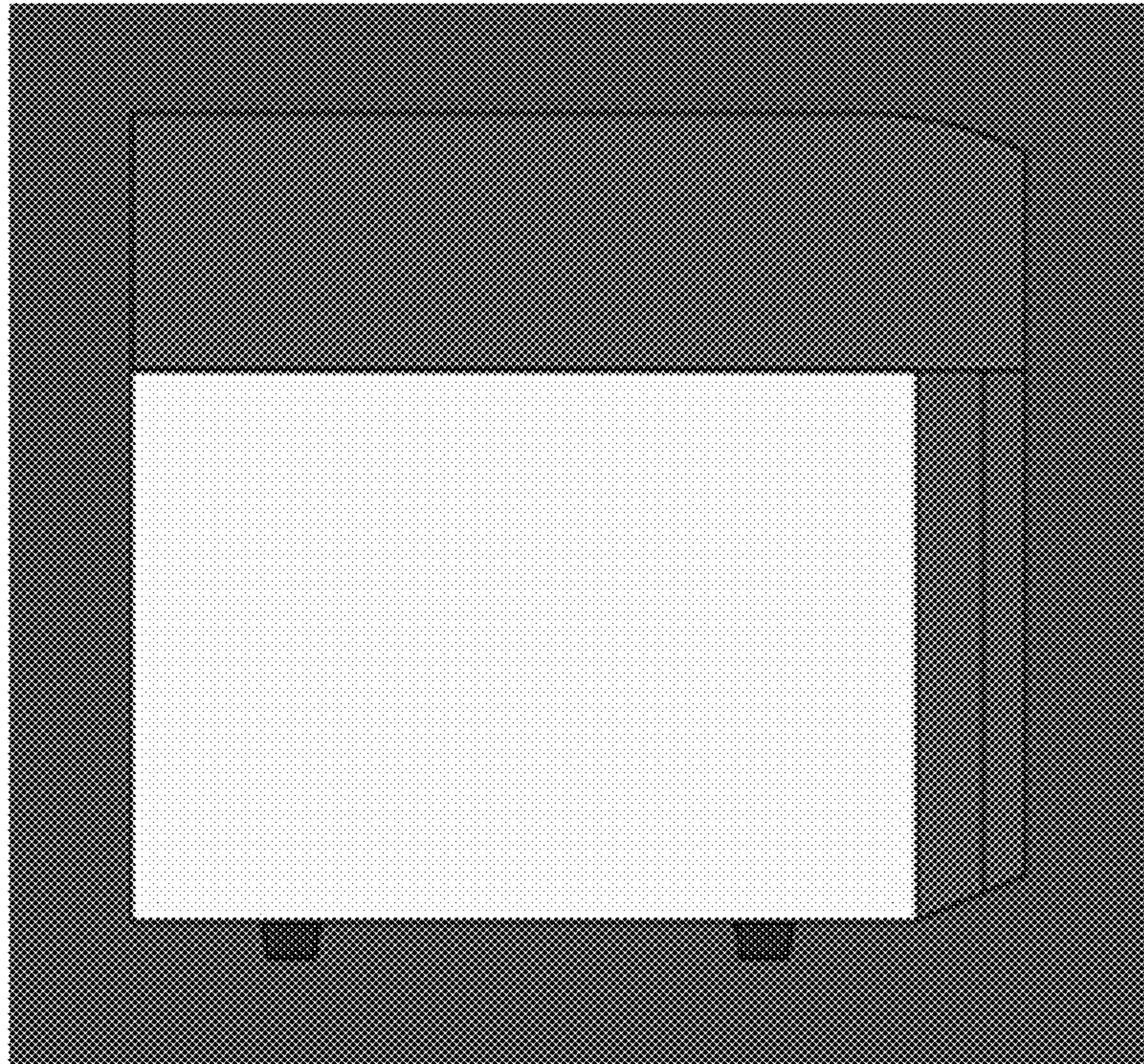


FIG. 11

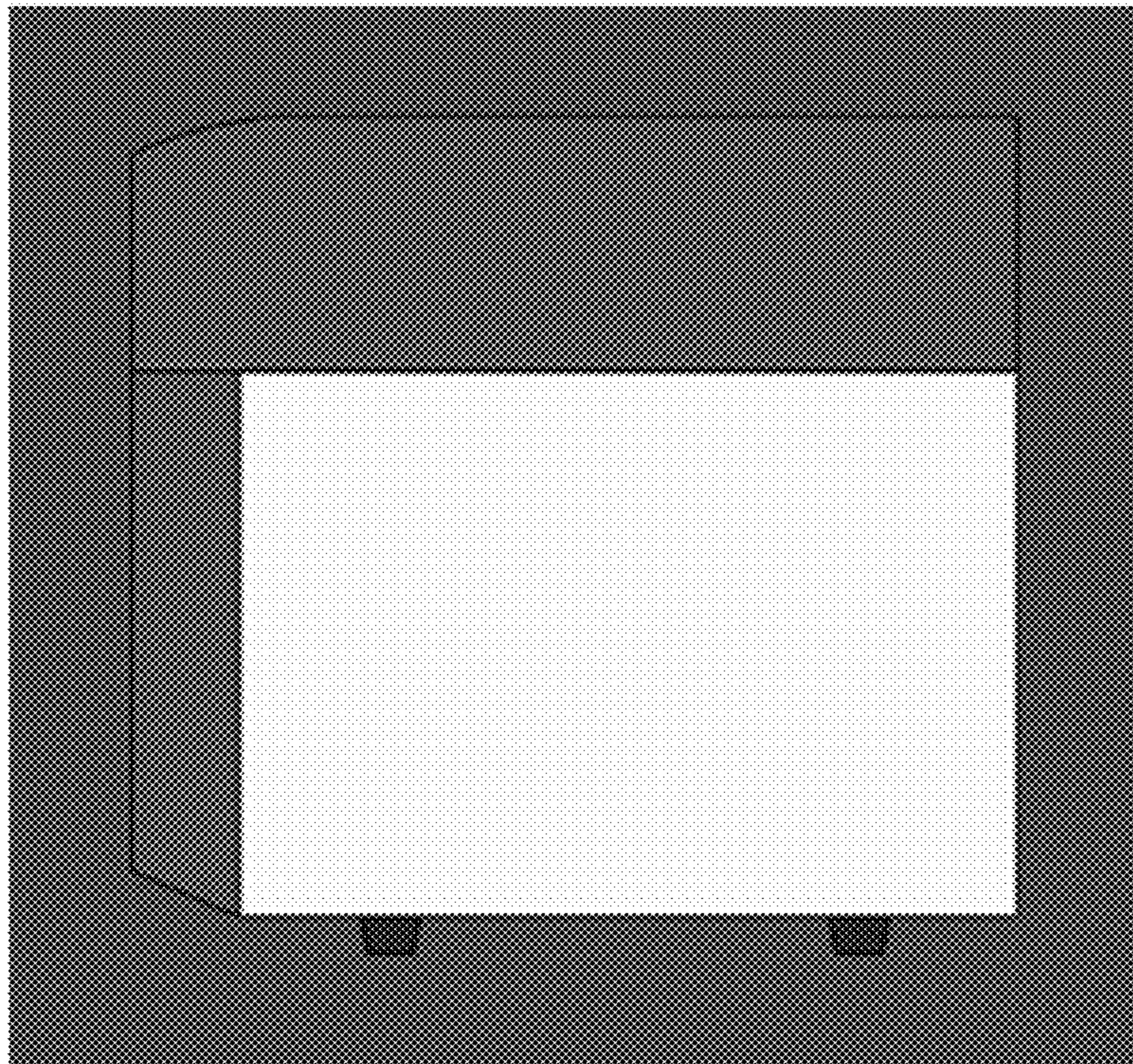


FIG. 12



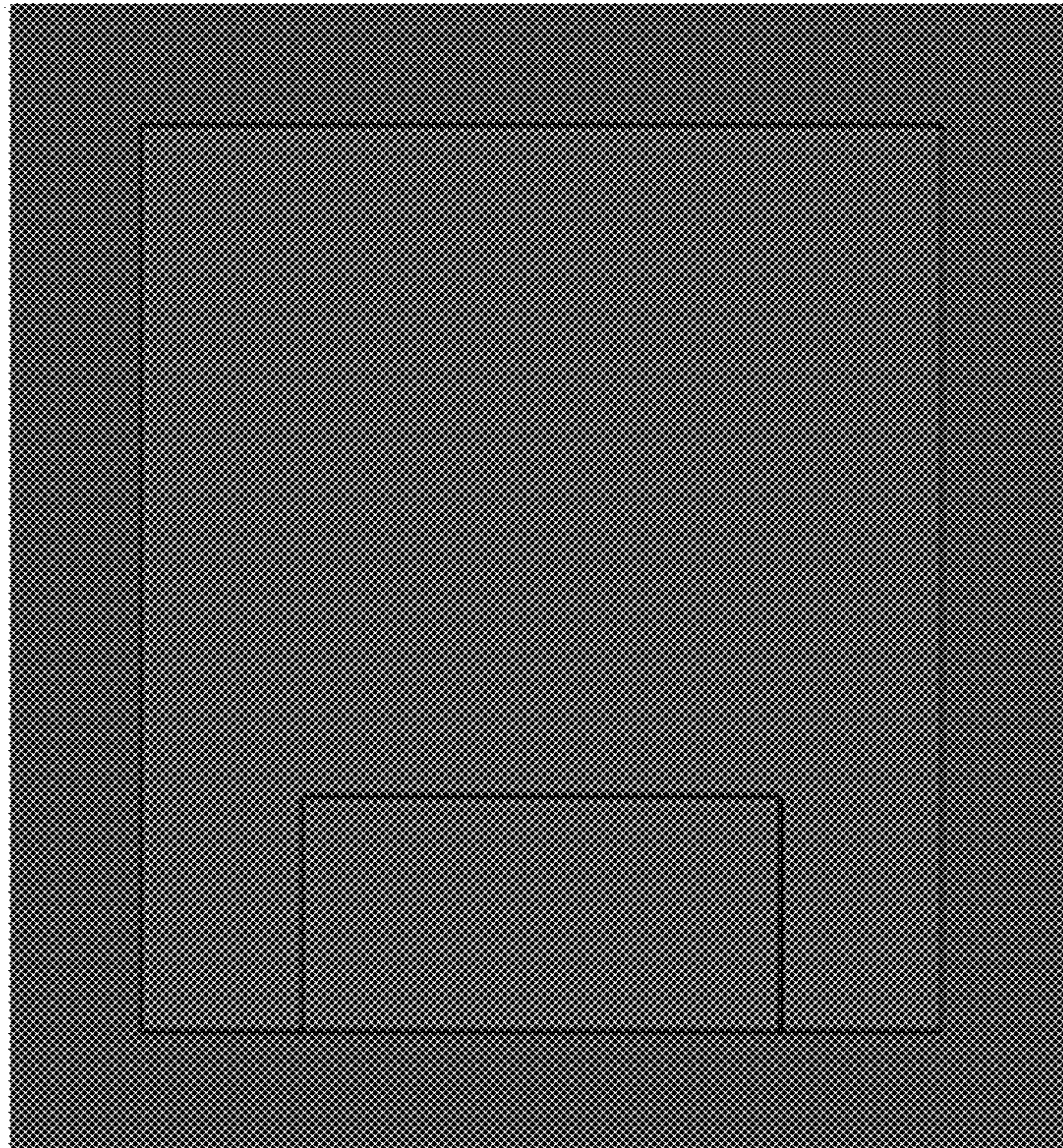


FIG. 13

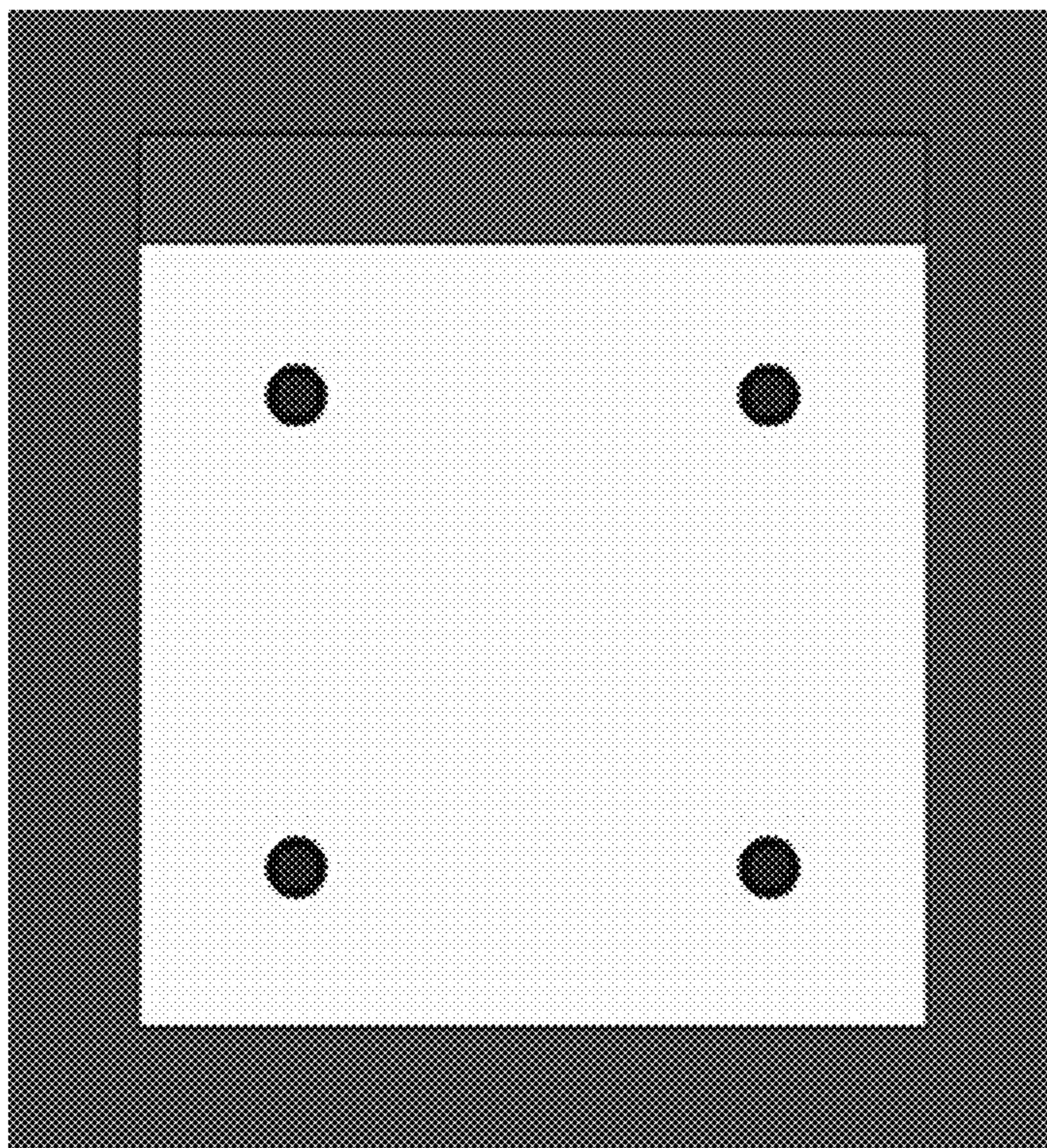


FIG. 14