



US00D788038S

(12) **United States Design Patent** (10) **Patent No.:** **US D788,038 S**
Tateno et al. (45) **Date of Patent:** **** May 30, 2017**

(54) **HEAT INSULATING UNIT FOR SUBSTRATE PROCESSING APPARATUS**

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

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(30) **Foreign Application Priority Data**

Aug. 21, 2015 (JP) 2015-018406

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

(52) **U.S. Cl.**
USPC **D13/129**; D13/184

(58) **Field of Classification Search**
USPC D13/118, 129, 182, 179, 133, 154, 184;
D15/5, 127, 128, 140; 76/107.1
CPC C23C 16/44; C23C 16/4557; H01L 21/00;
H01L 21/02; H01L 21/28008; H01L
21/70; H01L 23/544
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D440,138 S * 4/2001 Campbell D8/71
D599,386 S * 9/2009 Moellering D15/140

D613,245 S * 4/2010 Honna D13/118
D654,211 S * 2/2012 Melzner D26/118
D670,247 S * 11/2012 Savill, Jr. D13/130
D703,238 S * 4/2014 Ueno D15/5
D709,323 S * 7/2014 Brown D7/213
9,082,694 B2 * 7/2015 Saido C23C 16/4557
9,134,052 B2 * 9/2015 Kuo F25B 21/00
D758,317 S * 6/2016 Plassiard D13/154
D766,833 S * 9/2016 Plassiard D13/154

* cited by examiner

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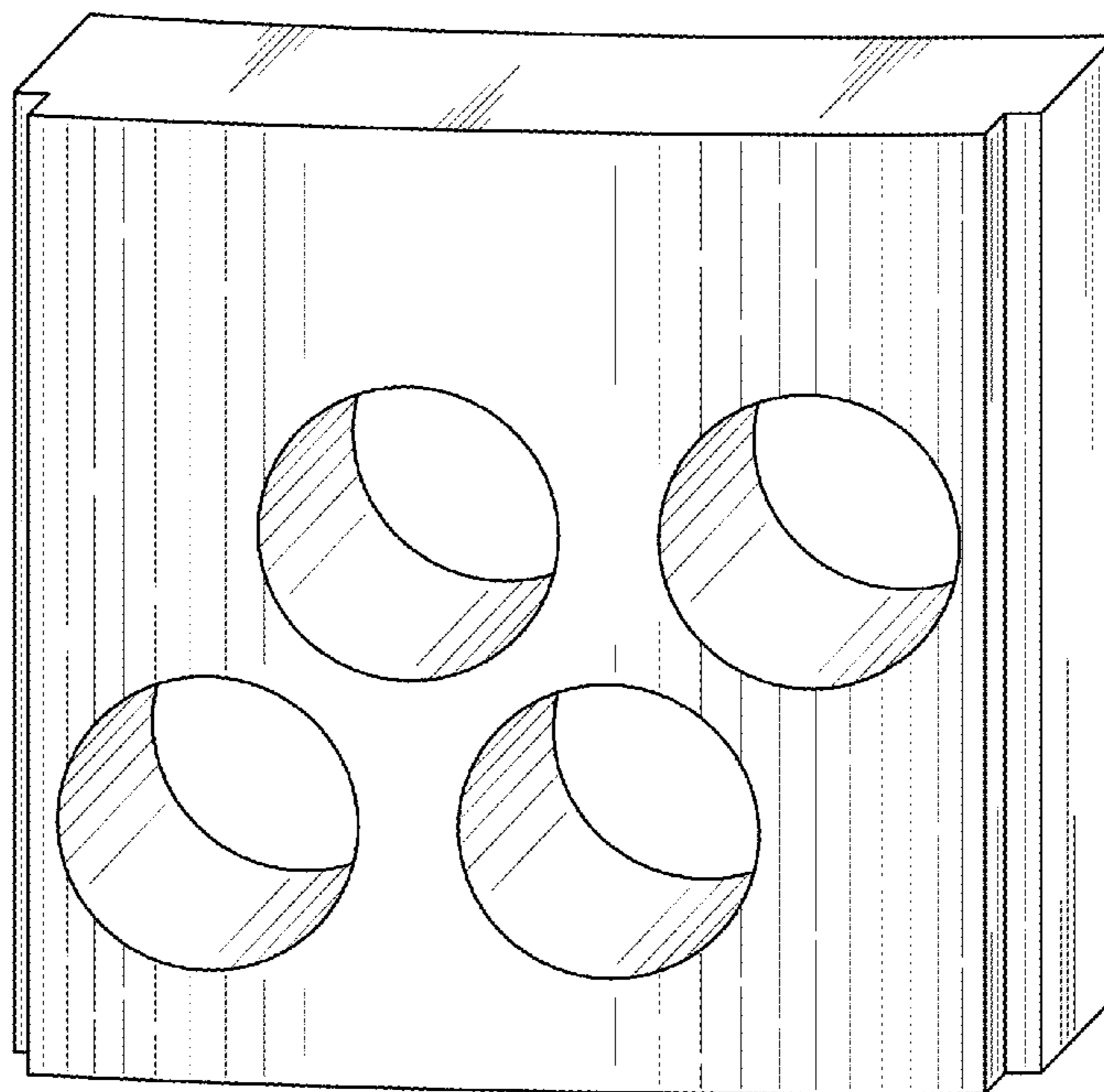
(57) **CLAIM**

We claim the ornamental design for a heat insulating unit for substrate processing apparatus, as shown (and described).

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of a heat insulating unit for substrate processing apparatus showing my new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a left side elevational view thereof;
FIG. 5 is a right side elevational view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view.

1 Claim, 4 Drawing Sheets



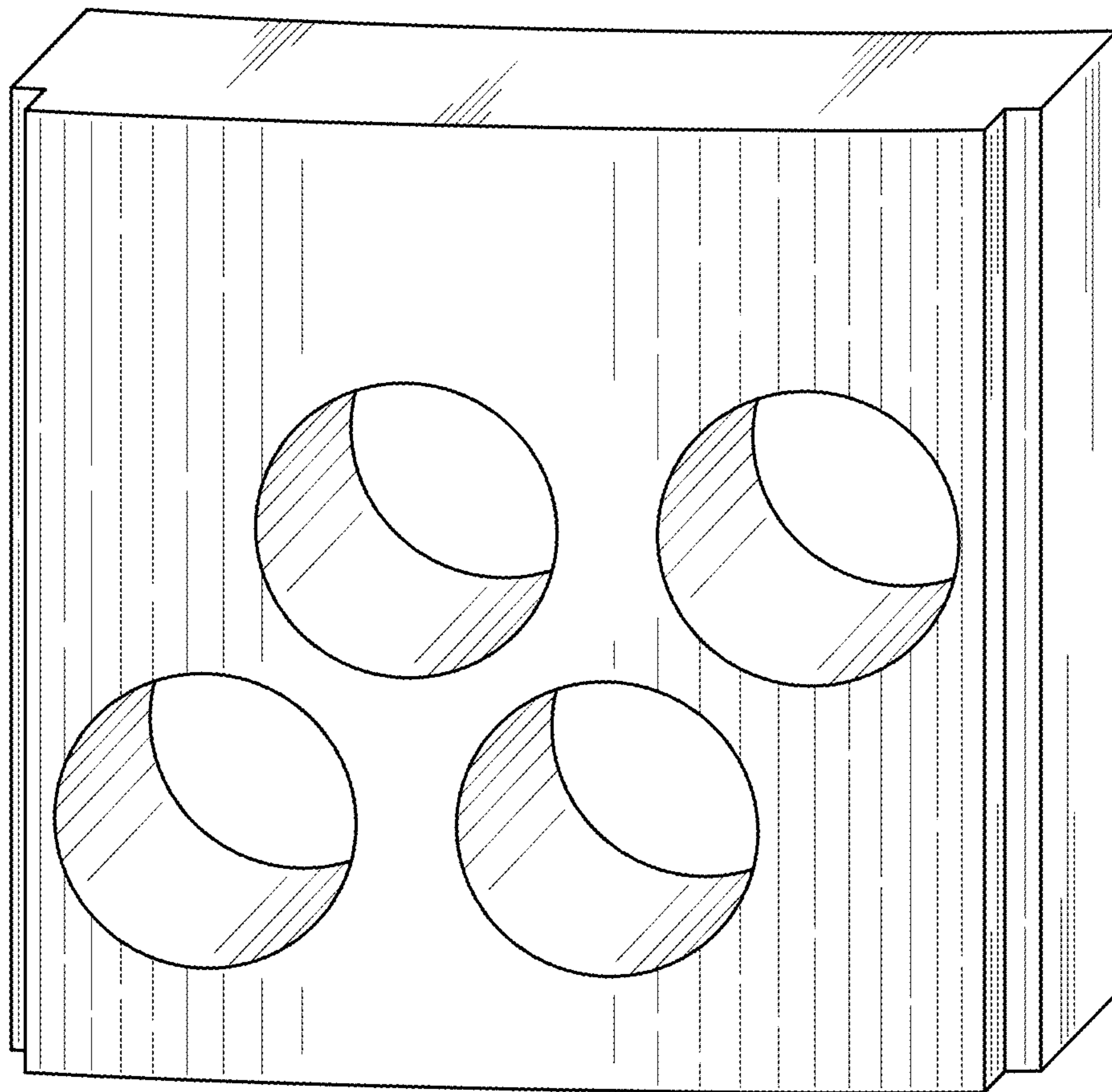


FIG. 1

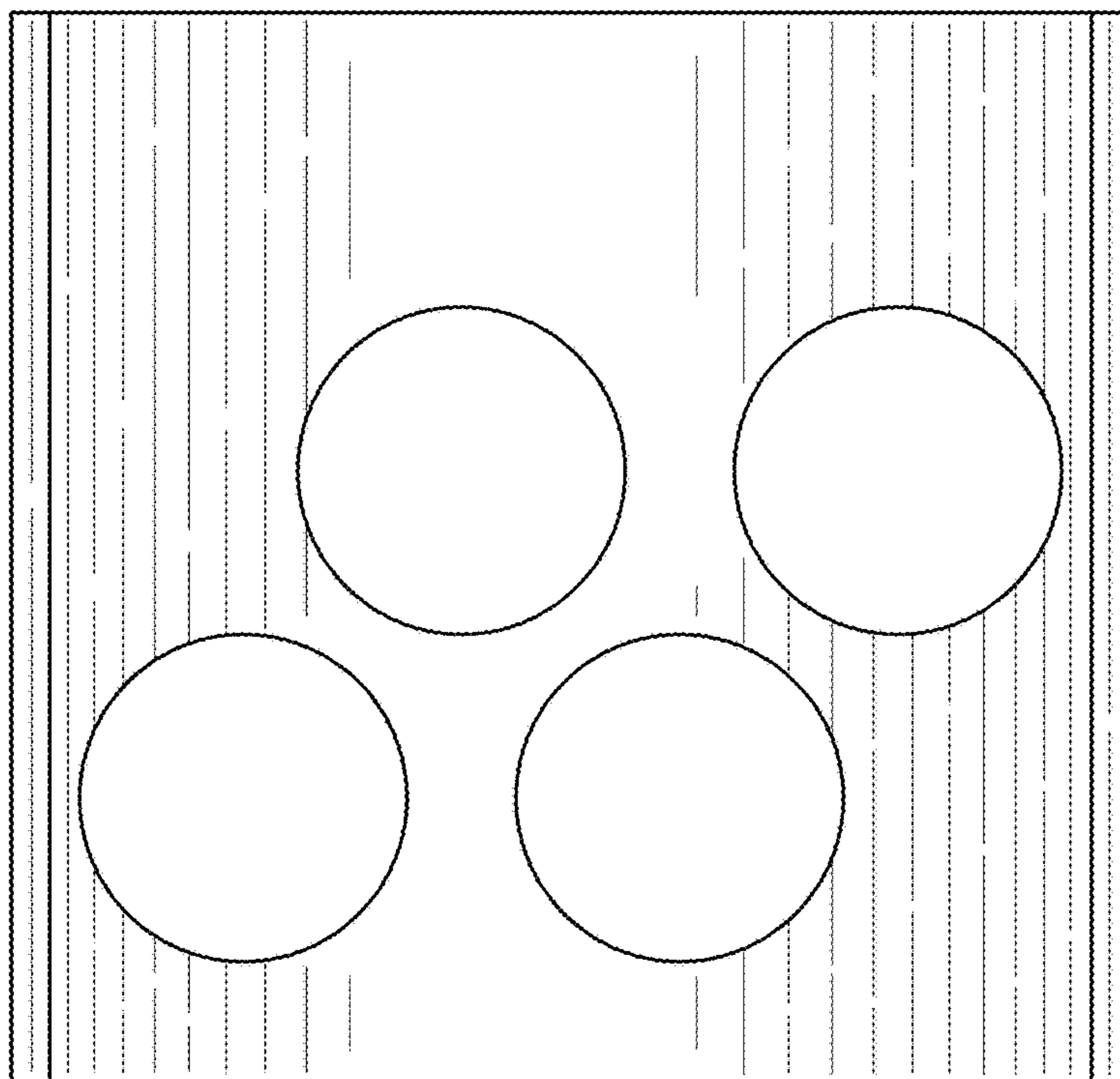


FIG. 2

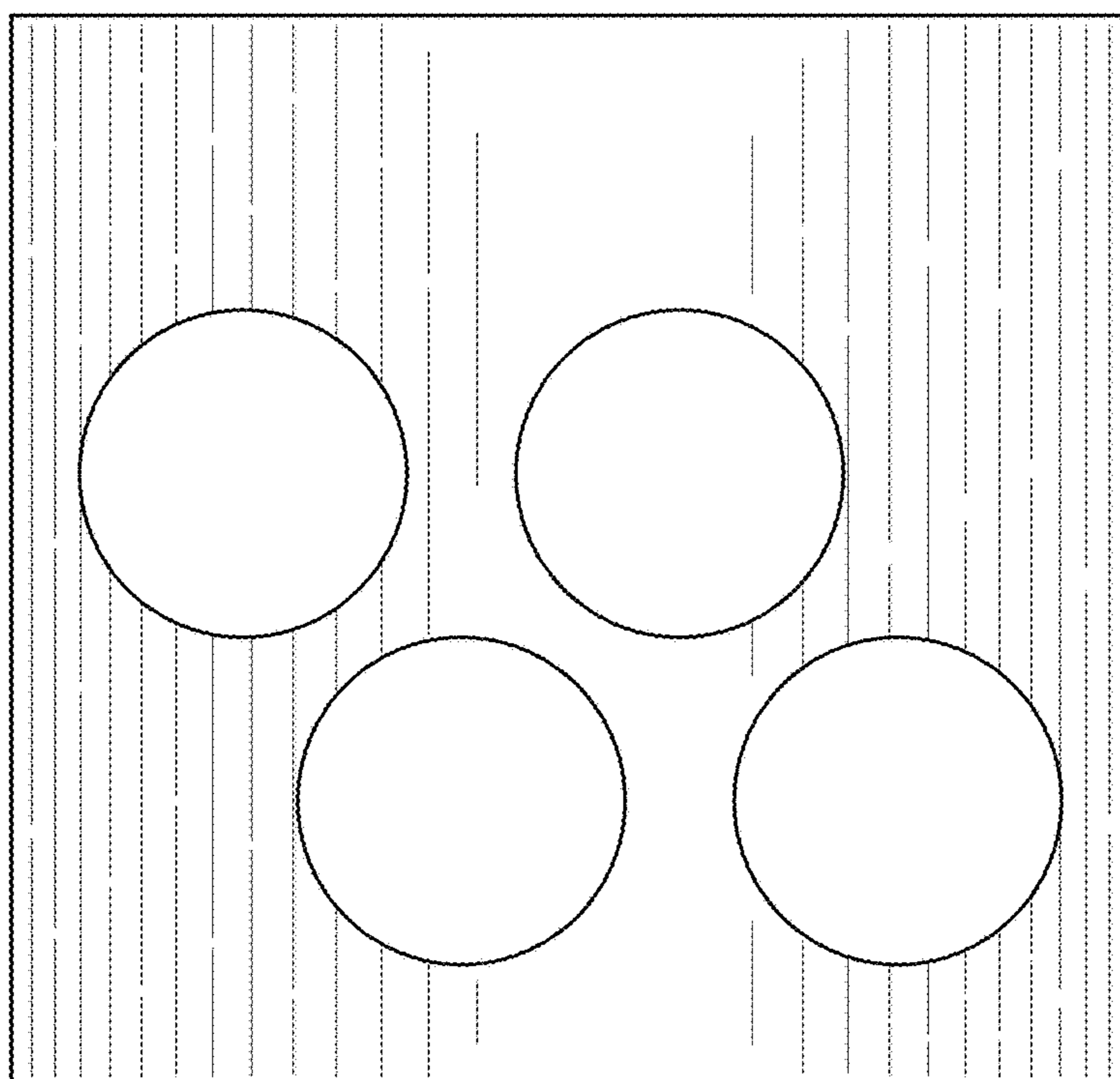


FIG. 3

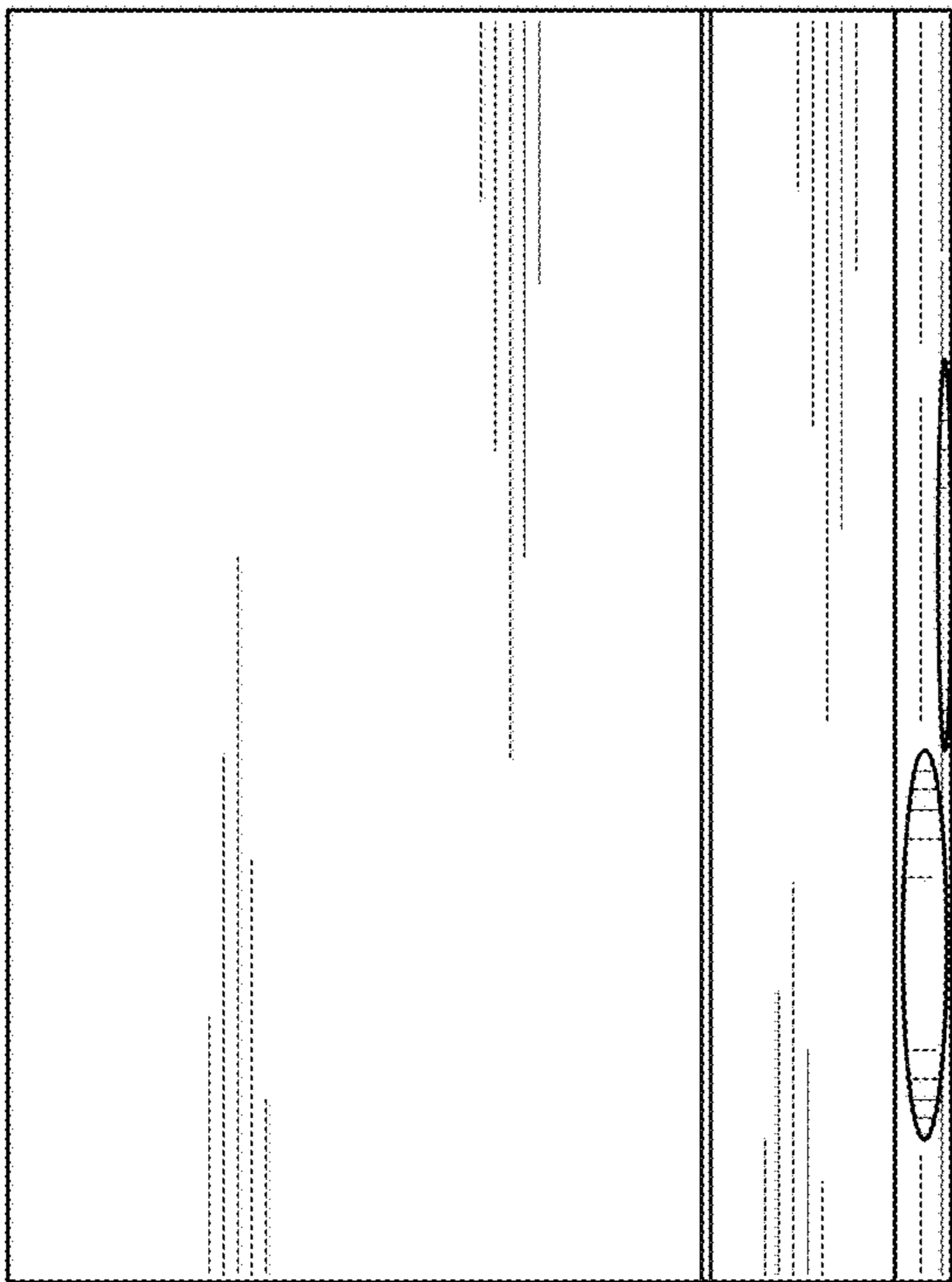


FIG. 4

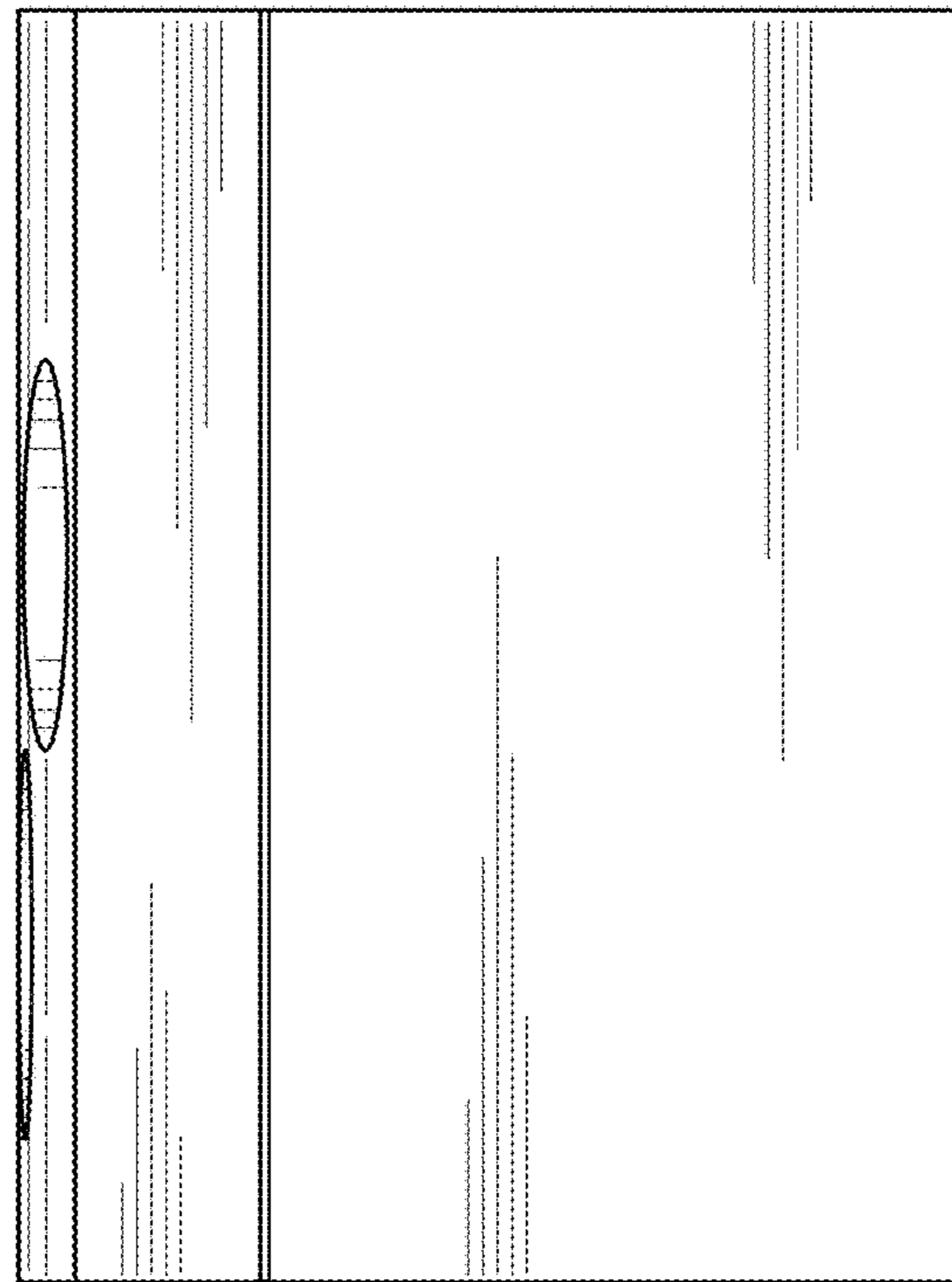


FIG. 5

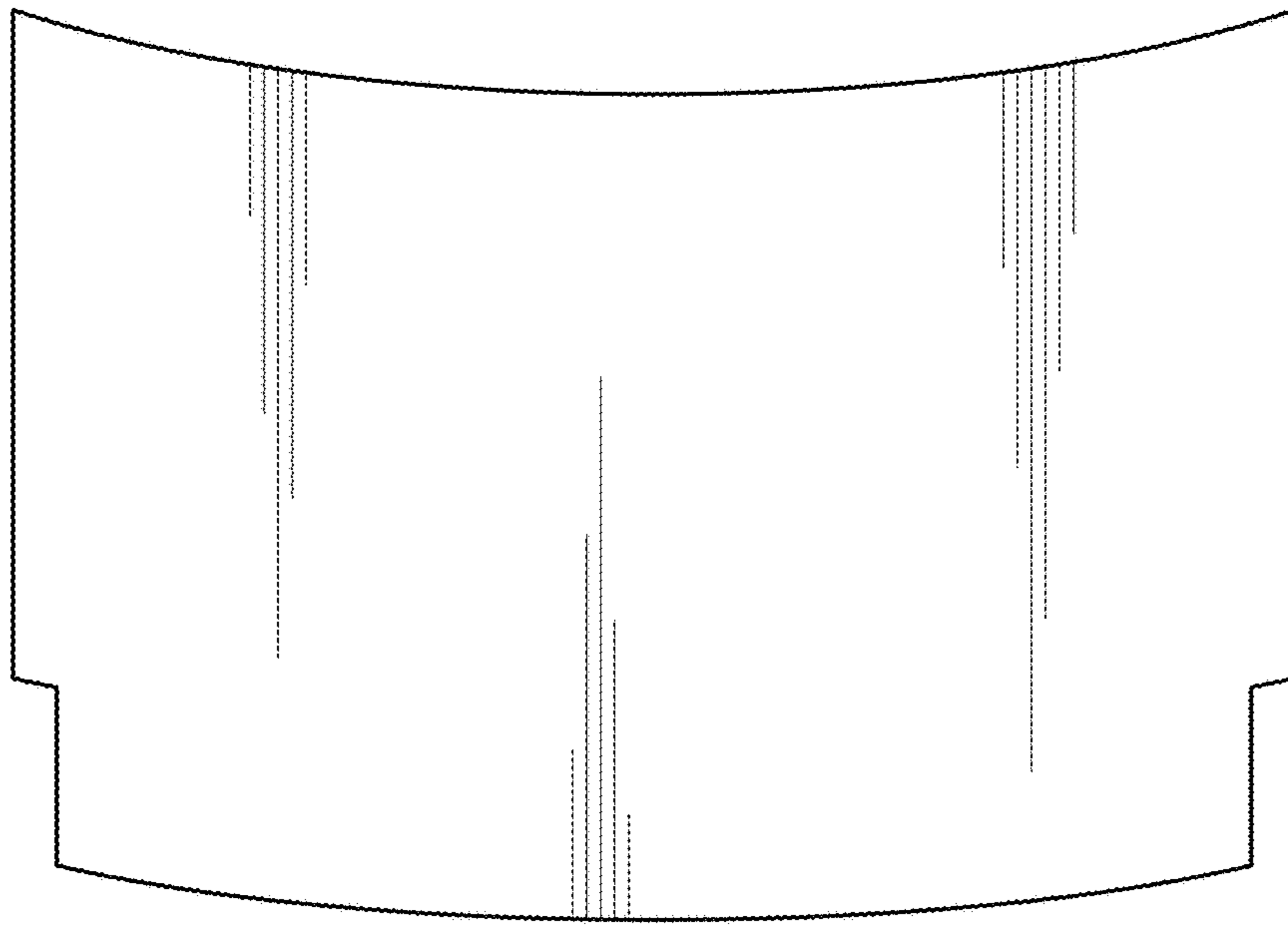


FIG. 6

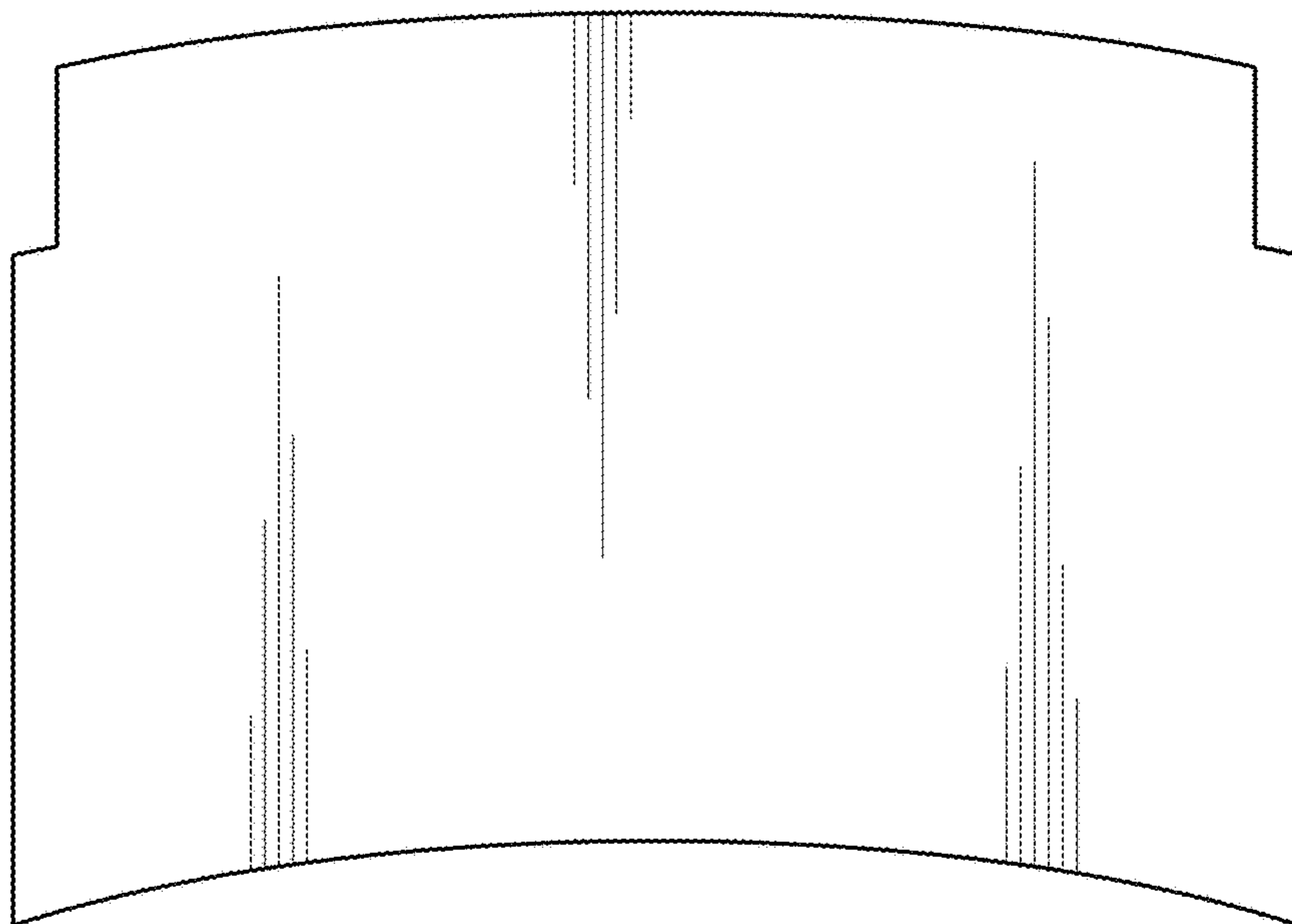


FIG. 7