



US00D853977S

(12) **United States Design Patent** (10) **Patent No.:** **US D853,977 S**
Kim et al. (45) **Date of Patent:** **** Jul. 16, 2019**

(54) **HEAT SINK PLATE**
(71) Applicant: **THE GOODSYSTEM CO., LTD.**,
Ansan-si, Gyeonggi-do (KR)
(72) Inventors: **Il-ho Kim**, Yongin-si (KR);
Meoung-whan Cho, Yongin-si (KR);
Young-suk Kim, Suwon-si (KR)
(73) Assignee: **THE GOODSYSTEM CO., LTD.**,
Ansan-si, Gyeonggi-do (KR)
(**) Term: **15 Years**
(21) Appl. No.: **29/618,583**
(22) Filed: **Sep. 22, 2017**
(30) **Foreign Application Priority Data**

Apr. 25, 2017 (KR) 30-2017-0019170
(51) **LOC (11) Cl.** **13-03**
(52) **U.S. Cl.**
USPC **D13/179**
(58) **Field of Classification Search**
USPC D13/179, 182; D15/199; D26/138, 141,
D26/152, 142, 63; D14/435, 436, 447
CPC ... H01L 23/473; H01L 23/4735; H01L 23/46;
H01L 23/467; H01L 23/4006; H01L
23/427; H01L 23/3672; H01L 21/4871;
H01L 21/4882; H01L 23/3735; F28D
15/00; F28D 15/02; F28D 15/0275; F28D
3/02; G06F 1/20; G06F 2200/201; F28F
1/025; F28F 1/325
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS
D601,515 S * 10/2009 Meyer, IV D13/179
2009/0229864 A1* 9/2009 Kuromitsu H01L 23/3735
174/252

2010/0193941 A1* 8/2010 Mori H01L 23/3735
257/712
2013/0277034 A1* 10/2013 Iwata B23K 1/20
165/185
2013/0328200 A1* 12/2013 Bae H01L 23/481
257/762
2015/0284296 A1* 10/2015 Osanai C04B 37/02
428/141
2016/0014878 A1* 1/2016 Kilhenny H01L 23/142
257/99
2017/0205149 A1* 7/2017 Herring B22F 3/1055
2017/0309499 A1* 10/2017 Oi H01L 21/4882
2018/0218920 A1* 8/2018 Kuwabara H01L 23/373
2018/0301391 A1* 10/2018 Oohiraki H01L 23/36
2018/0315679 A1* 11/2018 Dilsch C04B 37/021
2019/0037692 A1* 1/2019 Mizuno H01L 23/3735

* cited by examiner
Primary Examiner — Jennifer Rivard
Assistant Examiner — April Rivas
(74) *Attorney, Agent, or Firm* — Revolution IP, PLLC

(57) **CLAIM**
The ornamental design for a heat sink plate, as shown and described.

DESCRIPTION
FIG. 1 is a perspective view of heat sink plate showing my new design;
FIG. 2 is a front view thereof;
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 cross-sectional view taken along line 8-8 shown in FIG. 4; and,
FIG. 9 is an enlarged view, taken from the section labeled "9", as shown in FIG. 8.

1 Claim, 5 Drawing Sheets

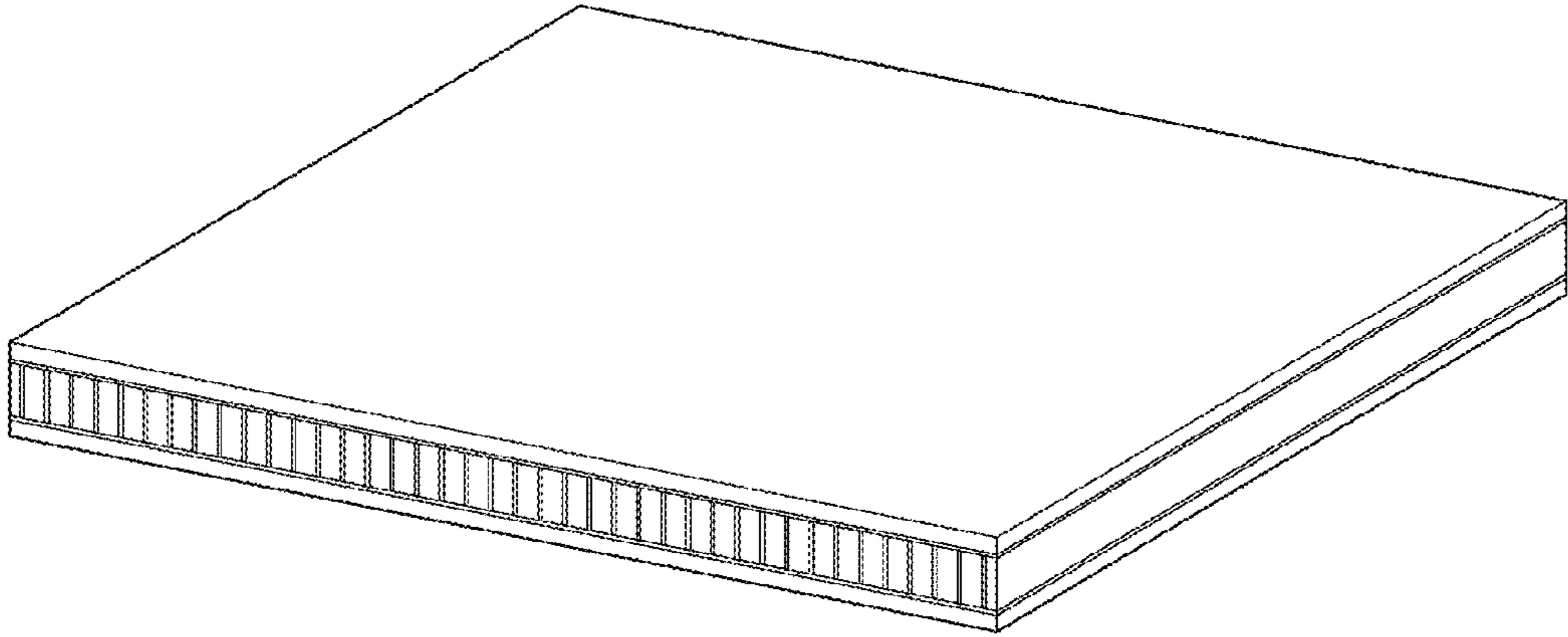


FIG. 1

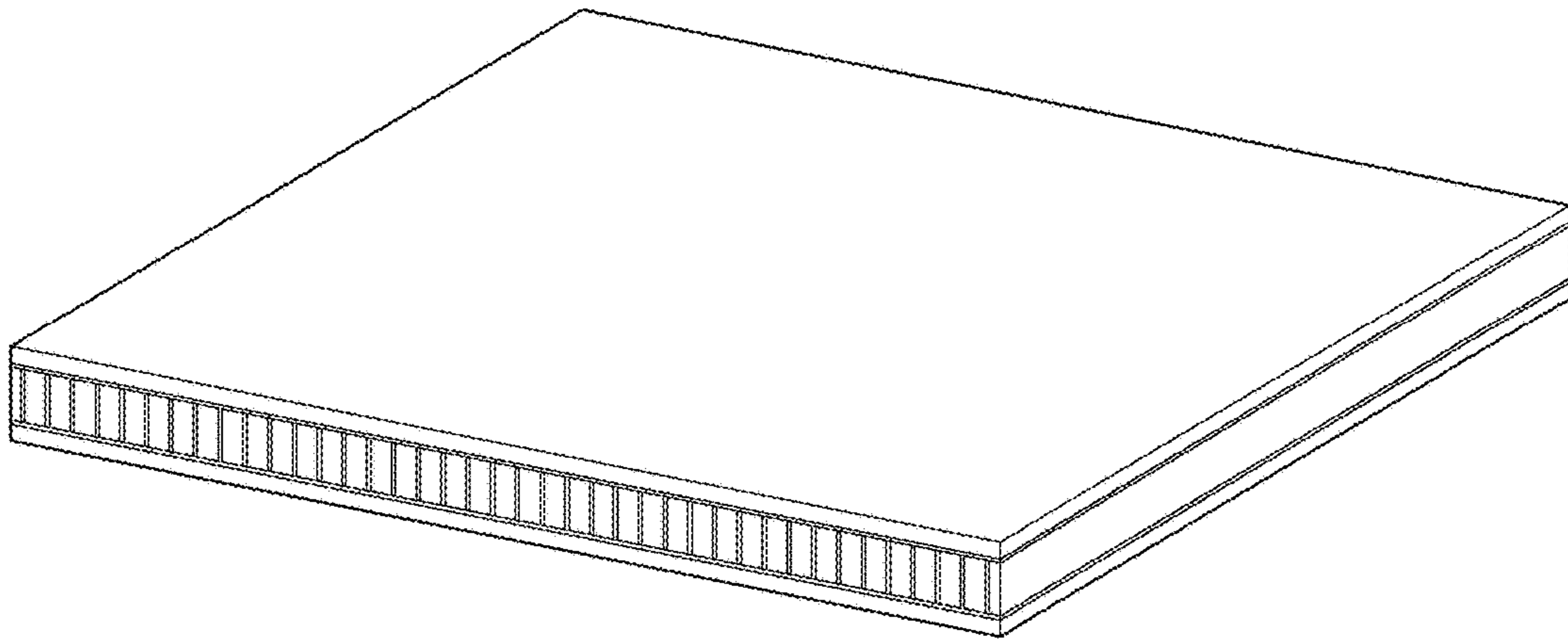


FIG. 2

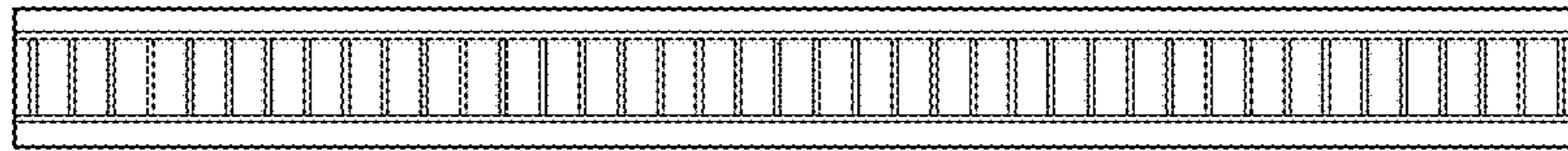


FIG. 3

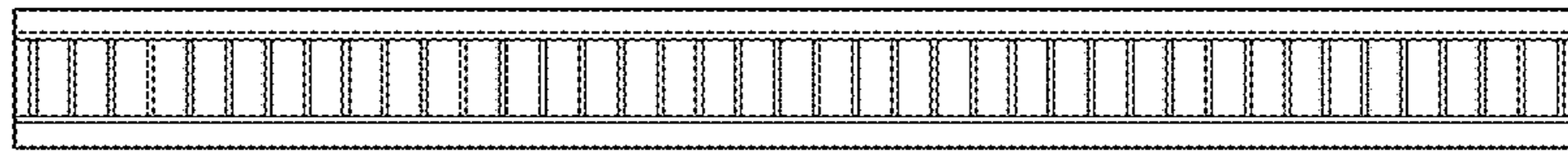


FIG. 4

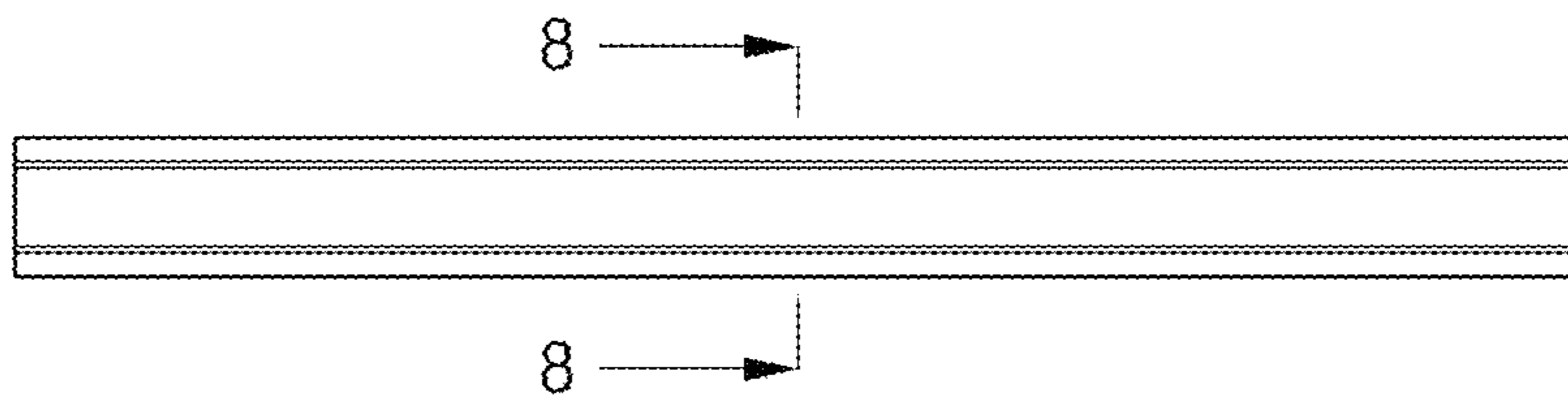


FIG. 5

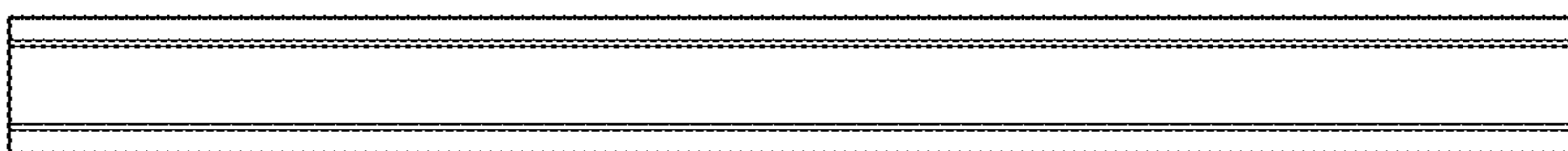


FIG. 6

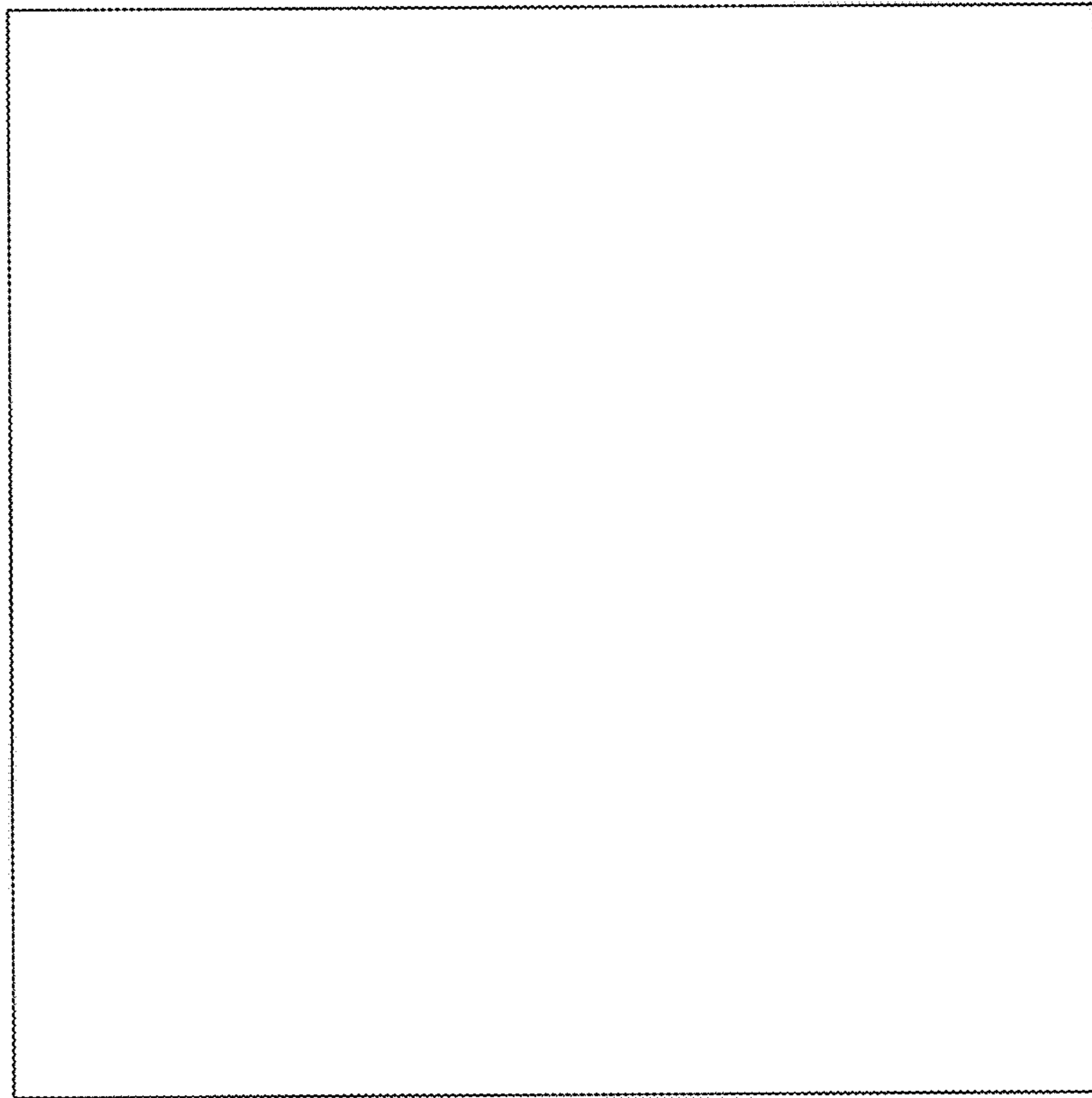


FIG. 7

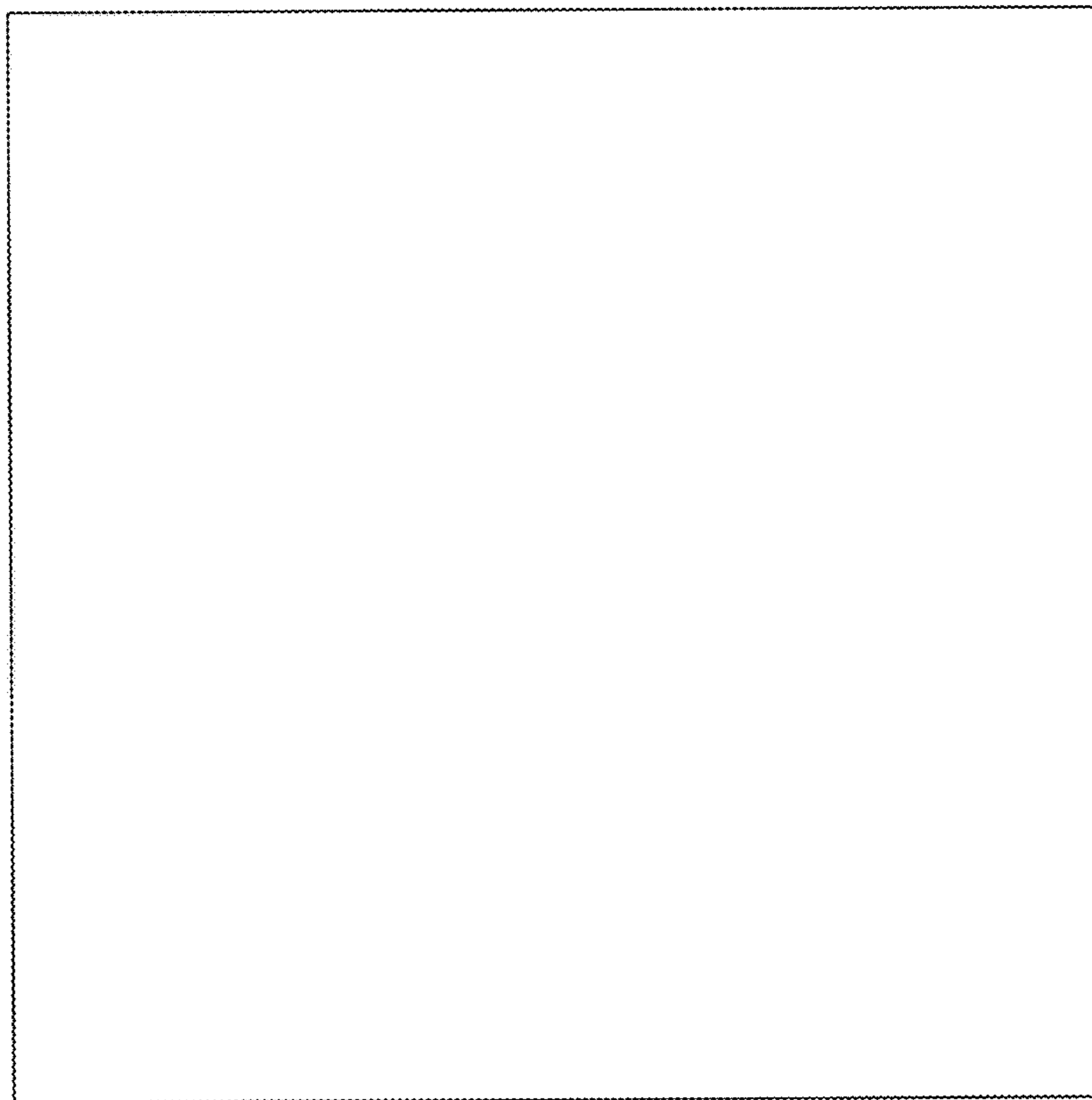


FIG. 8

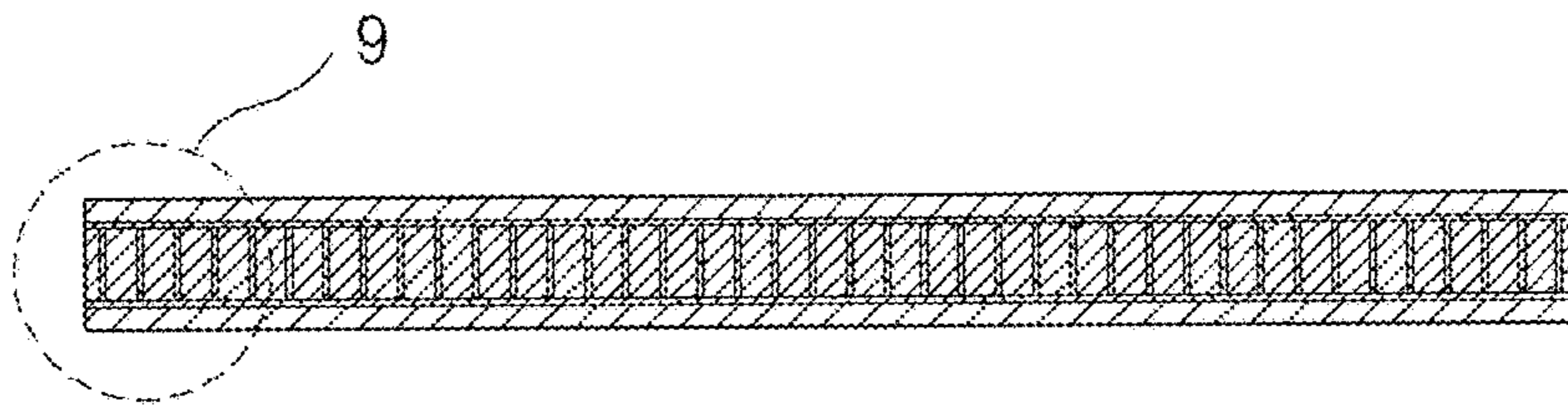


FIG. 9

