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Morita et al.

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(54) **SEPARATOR OF SUBSTRATE PROCESSING APPARATUS**

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

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(30) **Foreign Application Priority Data**

Mar. 15, 2021 (JP) .... 2021-005259 D

(51) **LOC (14) Cl.** **13-03**
(52) **U.S. Cl.**
USPC **D13/182**
(58) **Field of Classification Search**
USPC D13/154, 173, 178, 182, 199; D24/127, D24/129
CPC H01L 21/67303; H01L 21/67306; H01L 21/67309; H01L 21/67126; H01L 21/67757; H01L 21/67748; H01L 21/683; H01L 21/68728; H01L 21/6875
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,231,038	B1 *	5/2001	Keyser	H01L 21/68721 269/287
7,484,958	B2 *	2/2009	Kobayashi	H01L 21/67309 211/41.18
D616,392	S *	5/2010	Sato	D13/182
8,028,978	B2 *	10/2011	Nelson	H01L 21/67778 118/728
10,840,118	B2 *	11/2020	Yoo	H01L 21/67346
2009/0197424	A1 *	8/2009	Sakai	C23C 16/45546 438/758
2017/0073813	A1 *	3/2017	Hyon	C23C 16/45504
2018/0211840	A1 *	7/2018	Yamaguchi	H01L 21/67109
2019/0287828	A1	9/2019	Yoshii et al.	
2019/0330740	A1 *	10/2019	Klaver	H01L 21/67017
2020/0013646	A1 *	1/2020	Sasaki	H01L 21/67248
2020/0152490	A1 *	5/2020	Yanagisawa	H01L 21/205
2021/0407865	A1 *	12/2021	Shinozaki	F27D 5/0037

* cited by examiner

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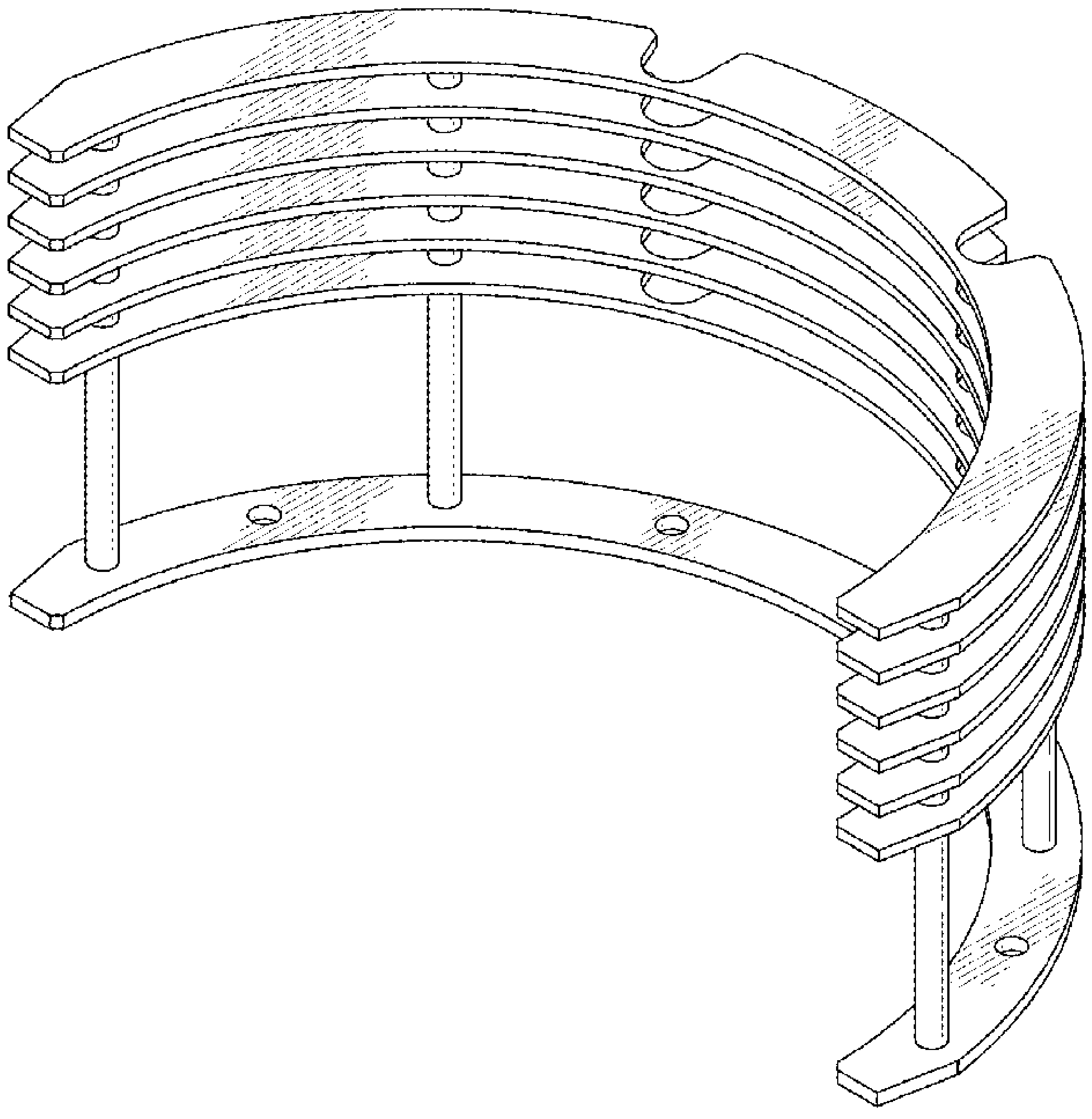
(57) **CLAIM**

The ornamental design for a separator of substrate processing apparatus, as shown and described.

DESCRIPTION

FIG. **1** is a front, top and right side perspective view of a separator of substrate processing apparatus showing our new design;
FIG. **2** is a front elevational view thereof;
FIG. **3** is a rear elevational view thereof;
FIG. **4** is a right side elevational view thereof;
FIG. **5** is a left side elevational view thereof;
FIG. **6** is a top plan view thereof;
FIG. **7** is a bottom plan view thereof; and,
FIG. **8** is a cross sectional view taken along line **8-8** in FIG. **2**.

1 Claim, 5 Drawing Sheets



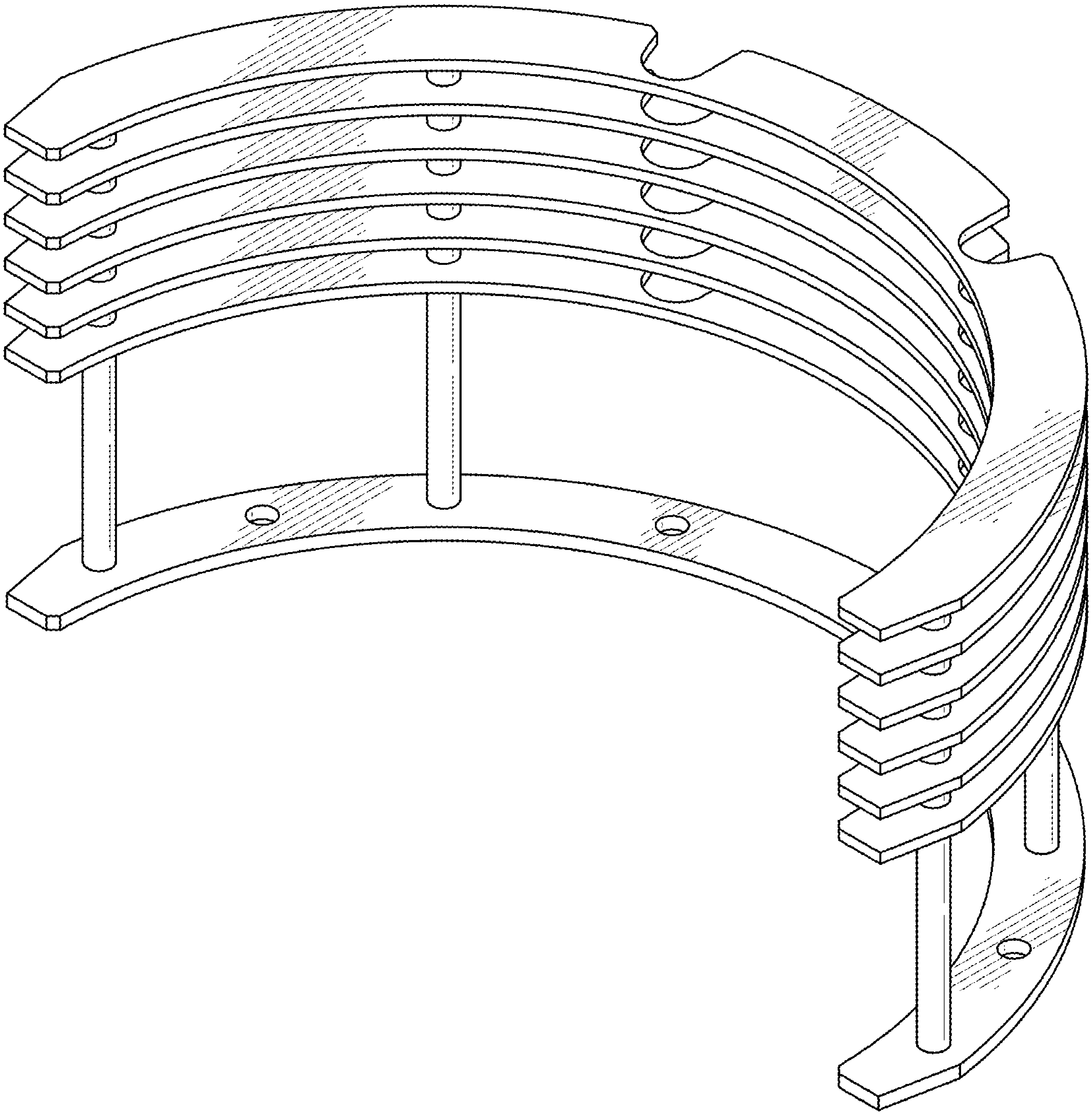


FIG. 1

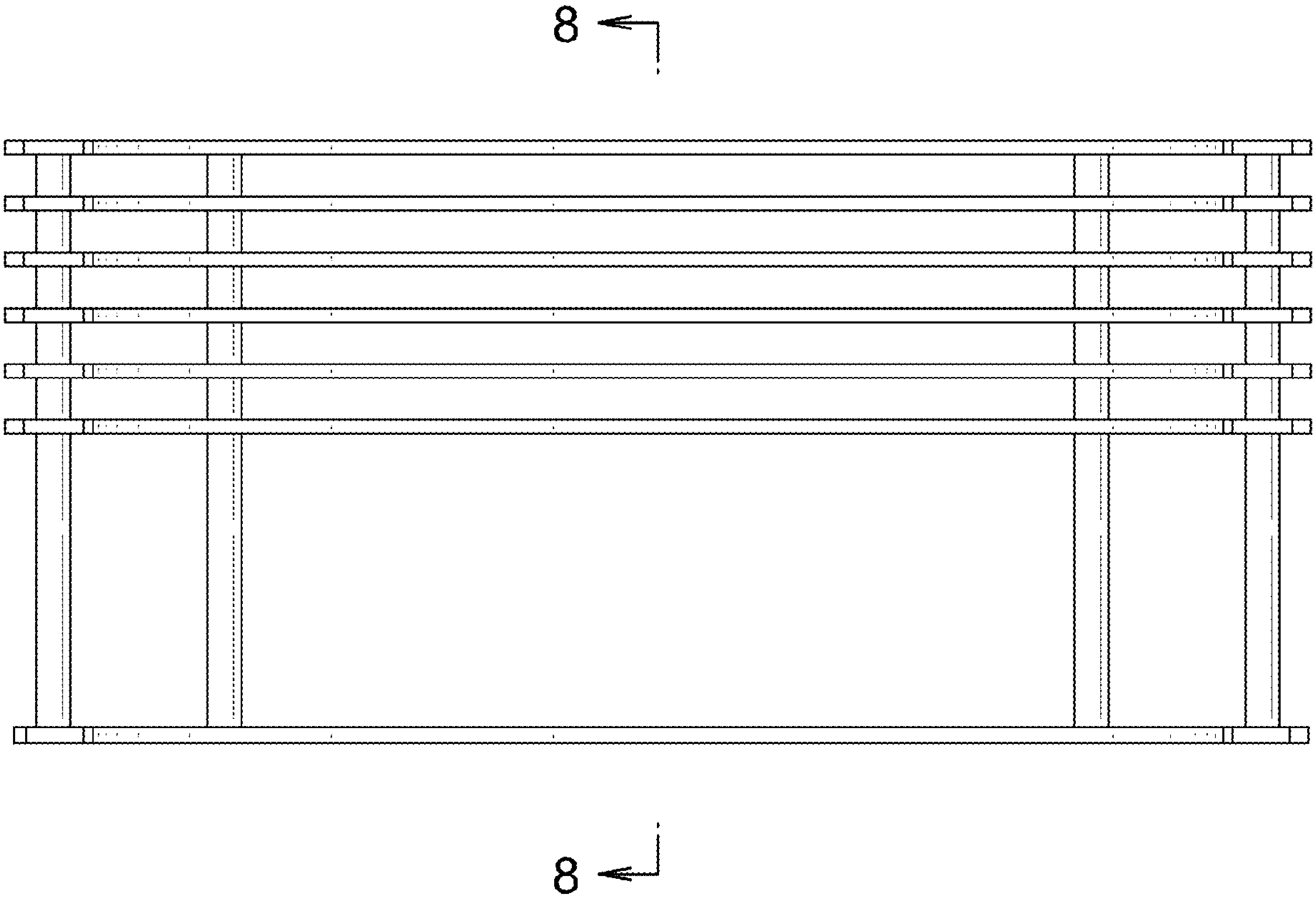


FIG. 2

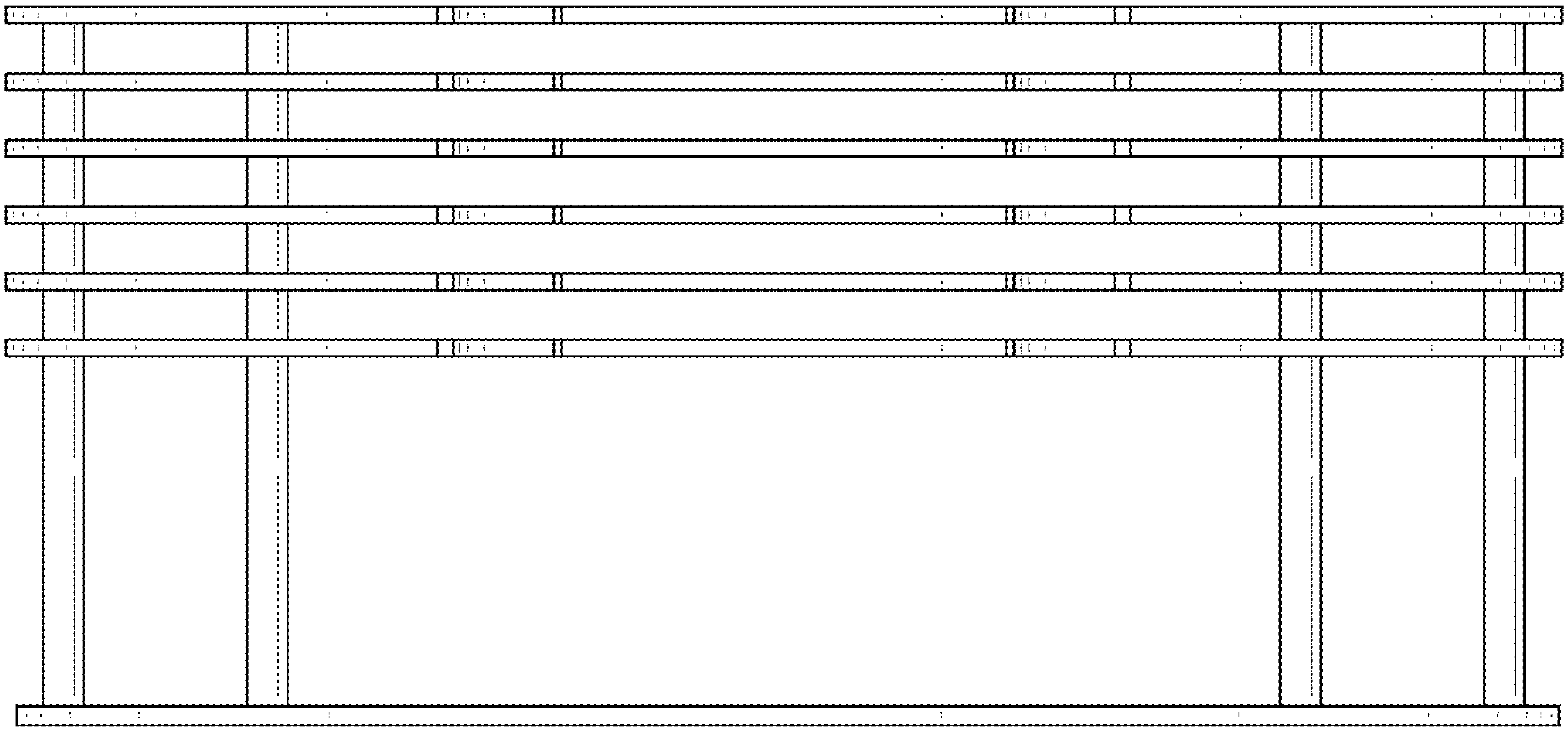


FIG. 3

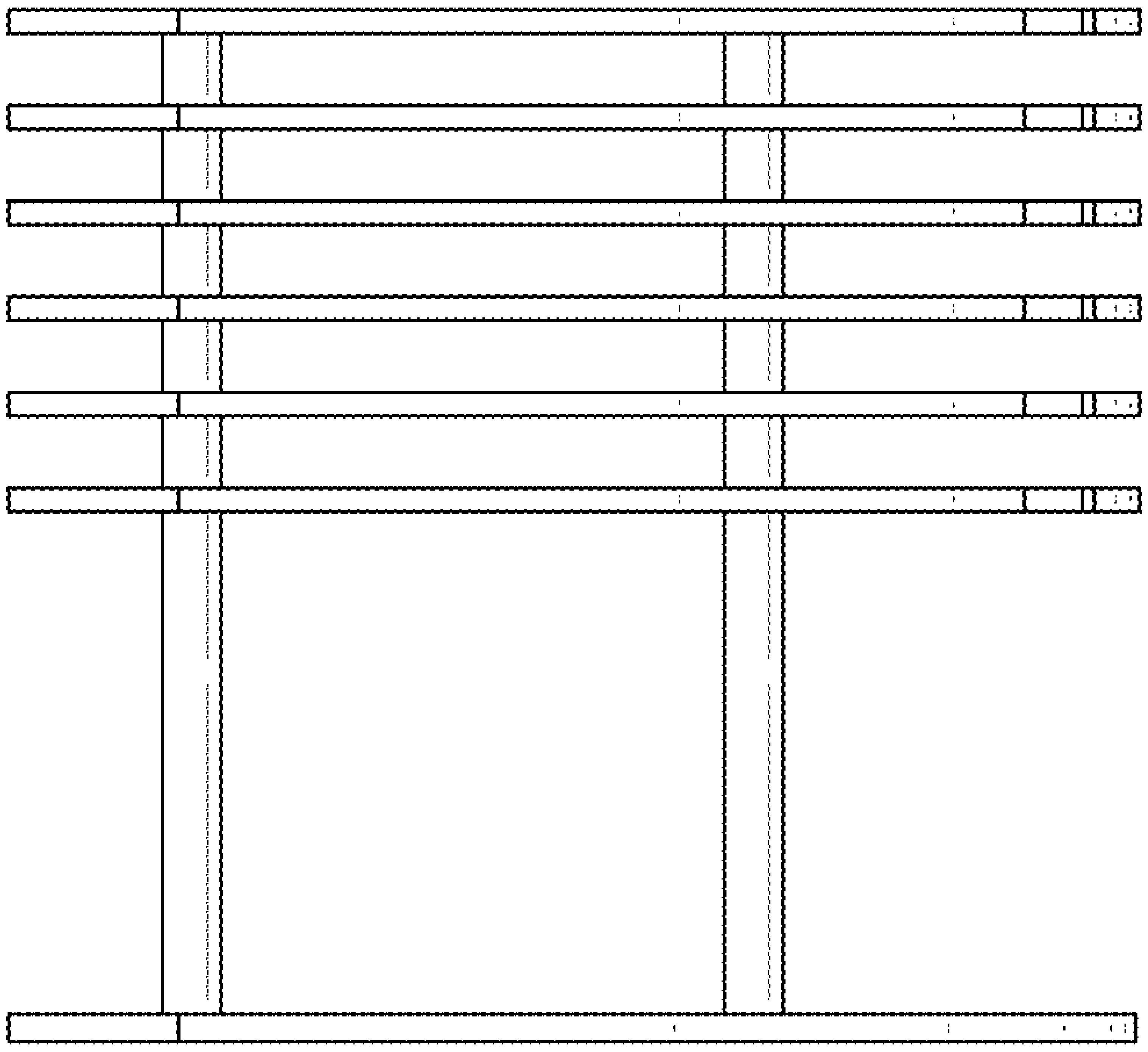


FIG. 4

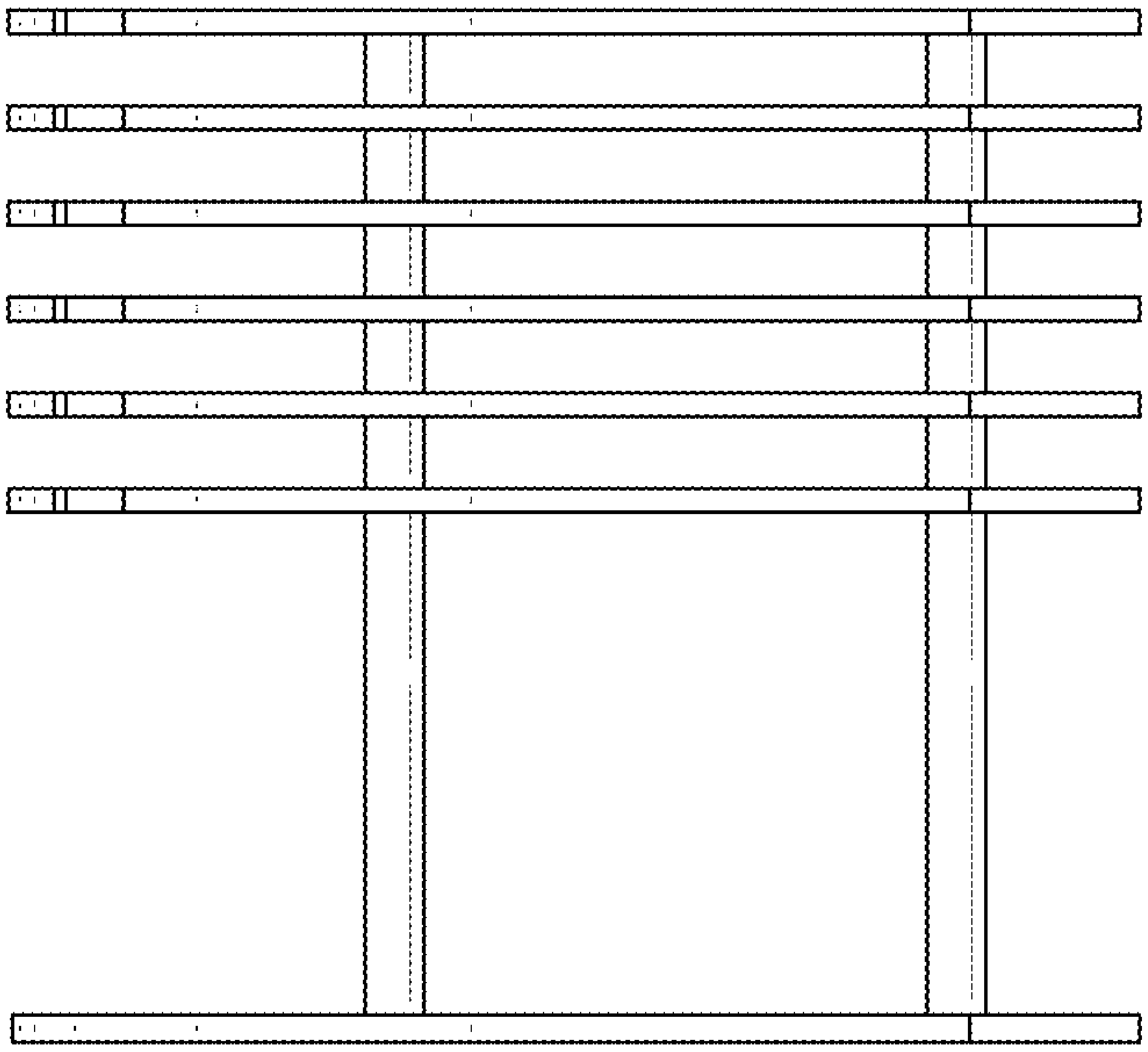


FIG. 5

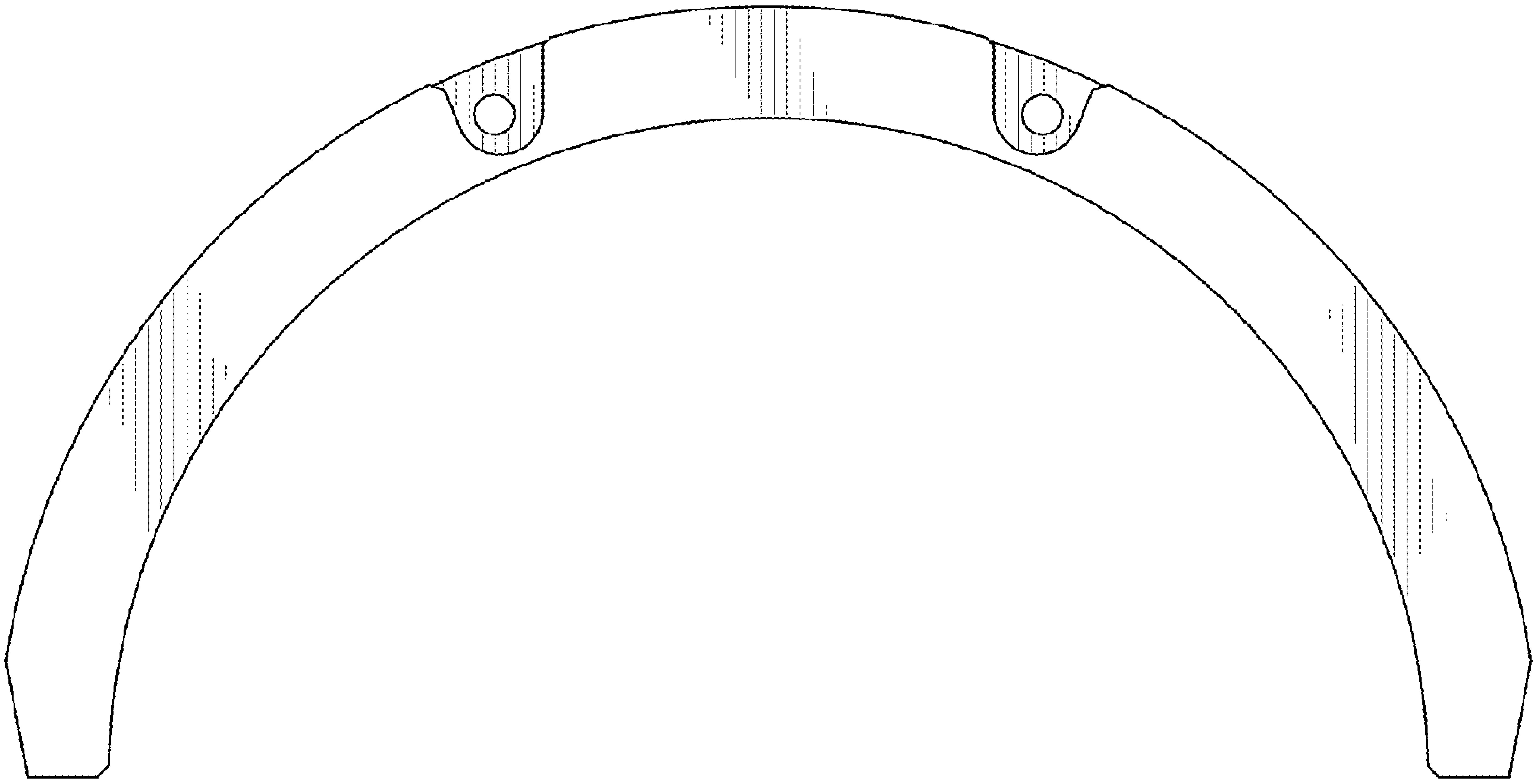


FIG. 6

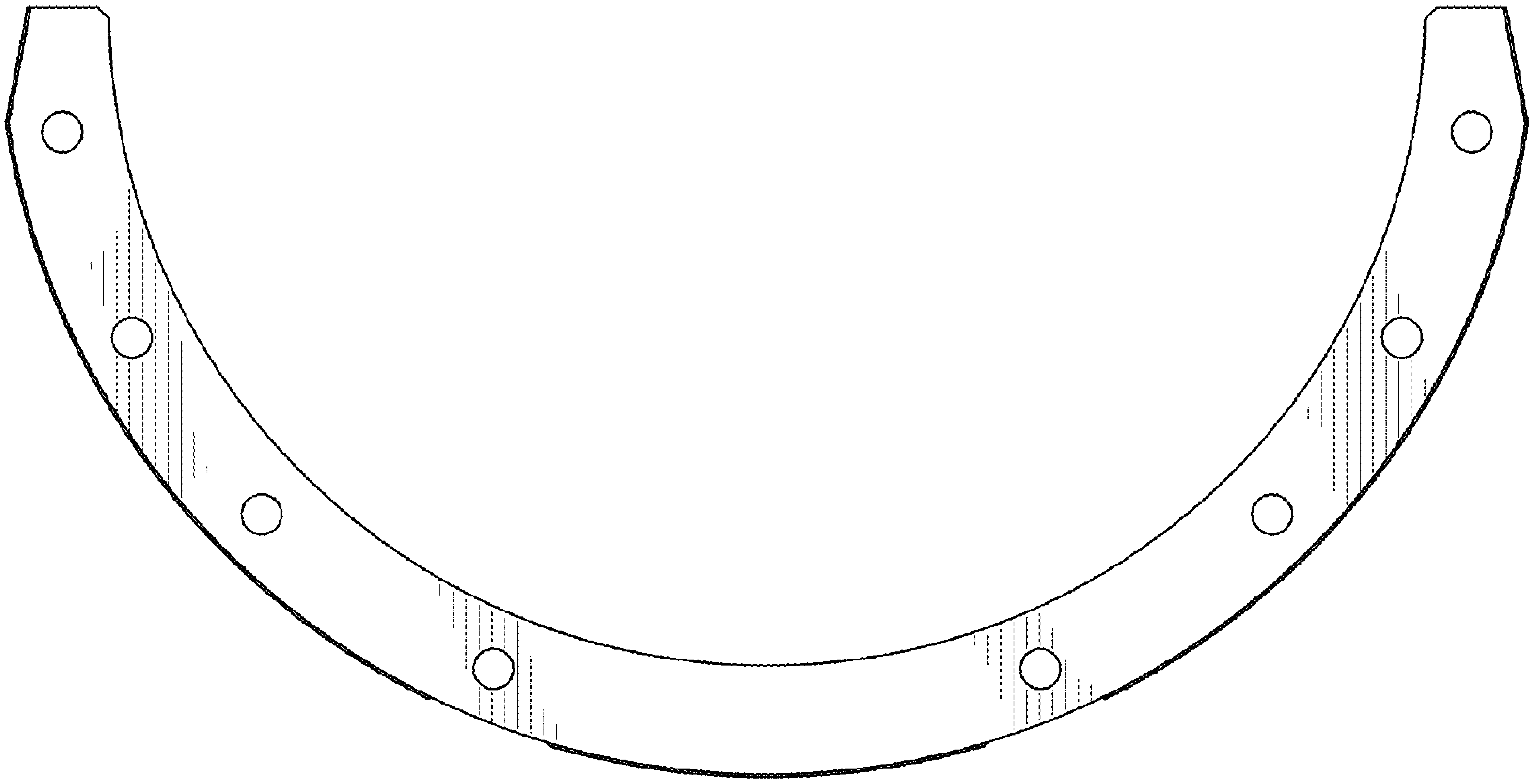


FIG. 7

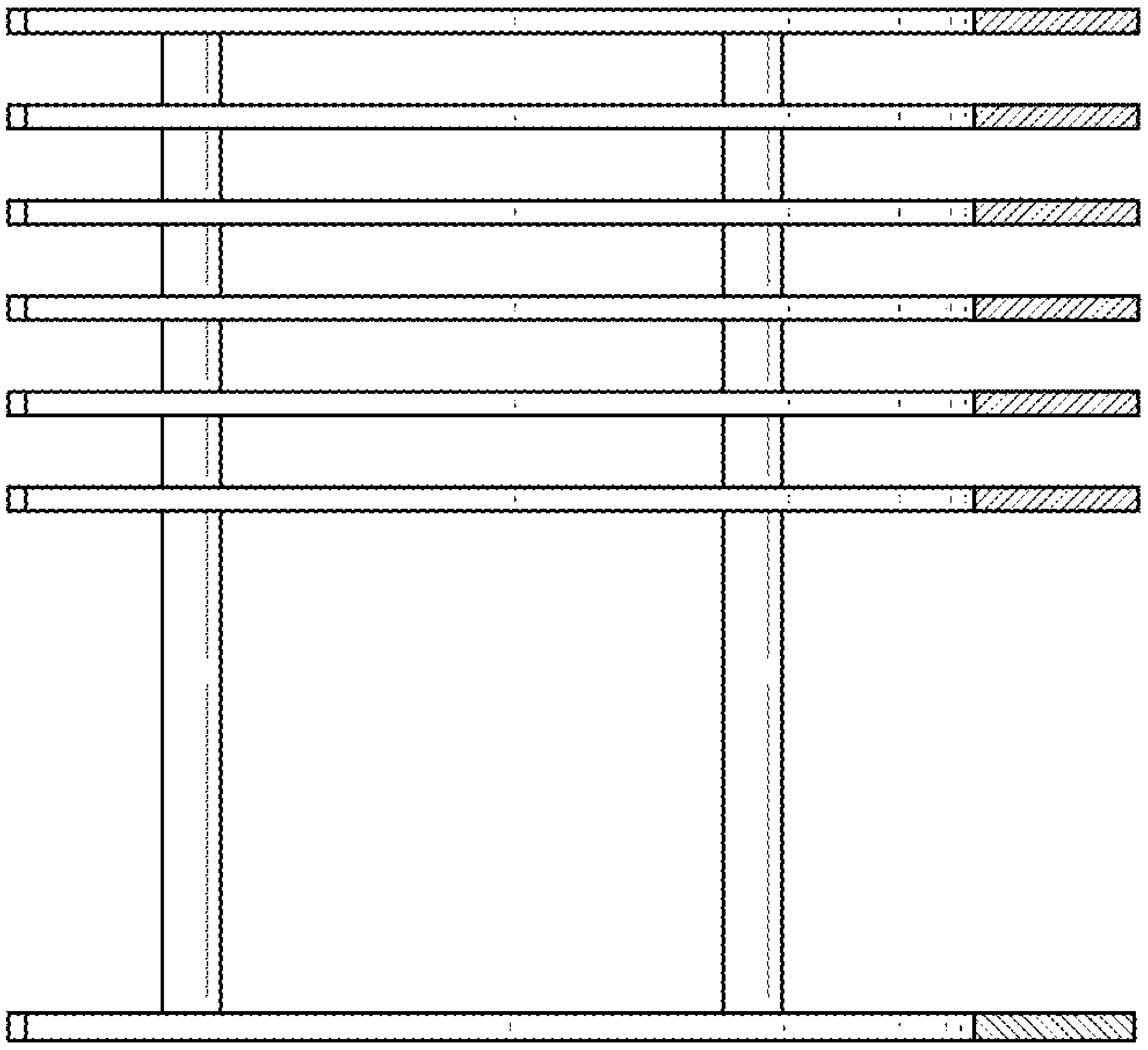


FIG. 8