

US00D769230S

(12) **United States Design Patent** (10) **Patent No.:** **US D769,230 S**
Jeon et al. (45) **Date of Patent:** **** Oct. 18, 2016**

(54) **OPTICAL REPEATER**

(56) **References Cited**

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

U.S. PATENT DOCUMENTS

4,107,518 A * 8/1978 McMahon H04B 10/29
398/62
4,257,124 A * 3/1981 Porter H04B 10/29
385/15
4,406,513 A * 9/1983 Raphael H04B 10/29
385/16
D310,998 S * 10/1990 Lee D14/434
D338,674 S * 8/1993 Fogarty, Sr. D14/218
5,778,132 A * 7/1998 Csipkes H01S 3/06704
359/341.1
5,793,510 A * 8/1998 Samejima H04L 7/0008
398/154
6,317,239 B1 * 11/2001 Burbidge G02B 6/29317
359/348
D463,414 S * 9/2002 Gao D13/182
D476,977 S * 7/2003 Gao D13/182
D484,105 S * 12/2003 Takagi D13/182
6,810,215 B1 * 10/2004 Oikawa H04B 10/27
398/175
D506,450 S * 6/2005 Takeuchi D13/182
D512,052 S * 11/2005 Wallace D14/240
D514,531 S * 2/2006 Takagi D13/182
D518,797 S * 4/2006 Takagi D13/182
D519,512 S * 4/2006 Nishio D13/147
D520,012 S * 5/2006 Nishio D13/147
D529,892 S * 10/2006 Weidinger D14/140.1
D530,316 S * 10/2006 Hsu D14/240

(21) Appl. No.: **29/531,702**

(22) Filed: **Jun. 29, 2015**

(30) **Foreign Application Priority Data**

Jan. 22, 2015 (KR) 30-2015-0003418

(51) **LOC (10) Cl.** **14-03**

(52) **U.S. Cl.**
USPC **D14/240**; D13/182; D13/199

(58) **Field of Classification Search**
USPC D14/137, 240, 242, 357, 258, 144, 370,
D14/432, 125, 155, 299, 439, 140, 188,
D14/243; D13/101, 123, 152, 199, 182,
D13/184, 110
CPC H04B 10/18; H04B 10/29; H04B 10/00;
H04B 10/22; H04B 10/291; H04B 10/2912;
H04B 10/2914; H04B 10/2916; H04B
10/2918; H04B 10/2937; H04B 10/297;
H04B 10/2971; H04B 10/2972; H04B
10/299; H04J 14/02; G02B 6/4448; G02B
6/4471; G02B 5/4452; G02B 6/3897; G02B
6/3887; G02B 6/3636; H01S 5/50; H01S
5/5009; H01S 5/5018; H01S 5/509; H01S
3/067; H01S 3/06704; H01S 3/06754

See application file for complete search history.

(Continued)

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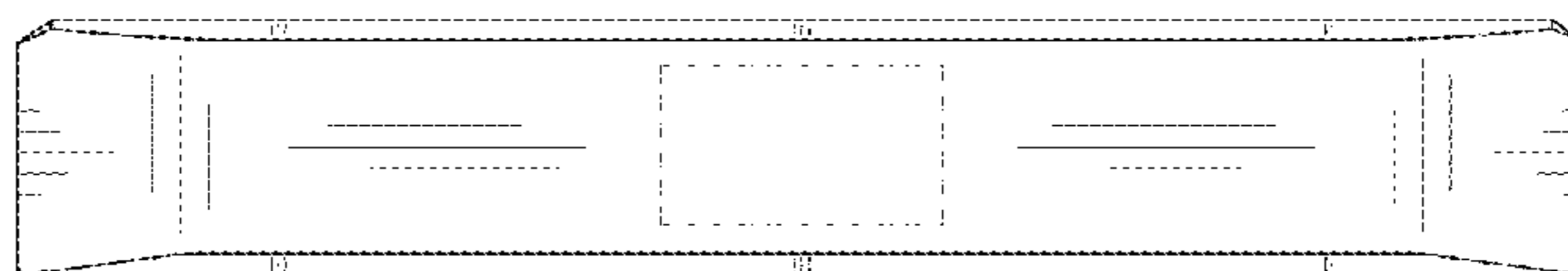
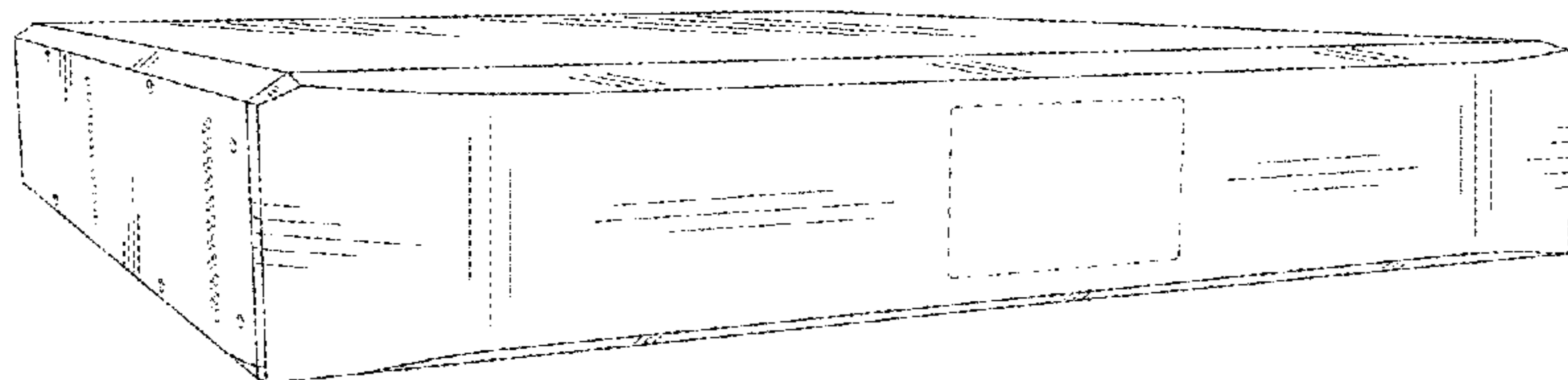
(57) **CLAIM**

The ornamental design for an optical repeater, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of an optical repeater showing our new design;
FIG. 2 is the front view thereof;
FIG. 3 is the rear view thereof;
FIG. 4 is the left-side view thereof;
FIG. 5 is the right-side view thereof;
FIG. 6 is the top plan view thereof; and,
FIG. 7 is the bottom plan view thereof.
The broken lines in the drawing show unclaimed environment only and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



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(56)

References Cited

U.S. PATENT DOCUMENTS

7,911,686 B2 *	3/2011	Nakagawa	G02B 6/125 359/237
D659,694 S *	5/2012	Sumita	D14/356
8,380,071 B2 *	2/2013	Webb	H04B 10/806 398/105
D721,706 S *	1/2015	Rooyakkers	D13/110
D721,707 S *	1/2015	Rooyakkers	D13/110
9,184,848 B2 *	11/2015	Willoughby	G02B 6/4448
D753,072 S *	4/2016	Dai	D13/182

* cited by examiner

FIG. 1

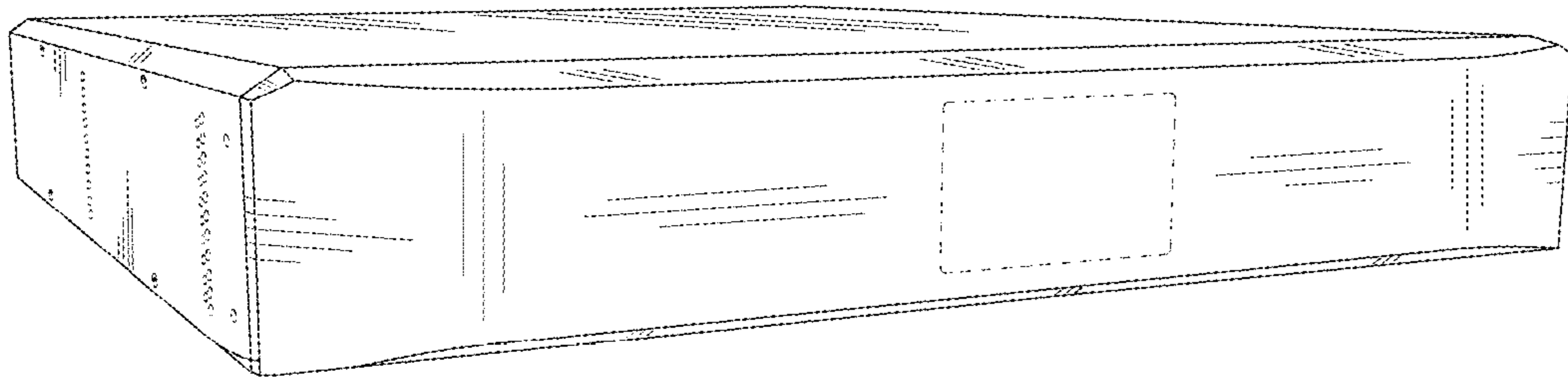


FIG.2

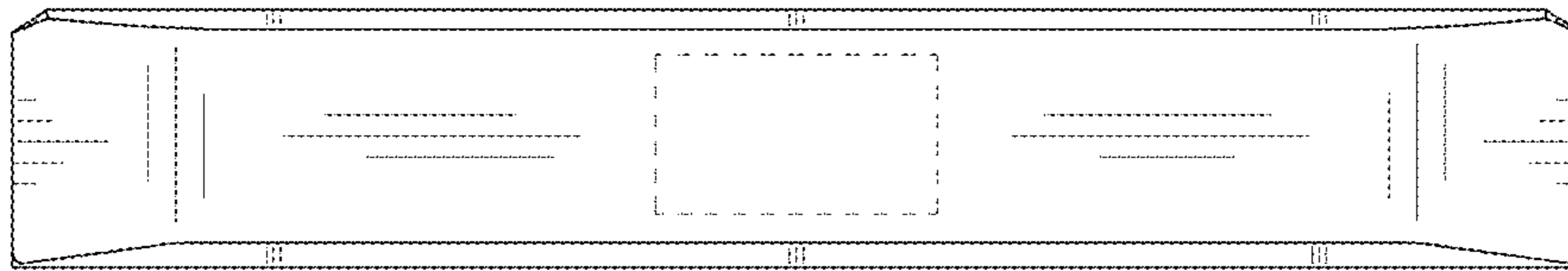


FIG.3

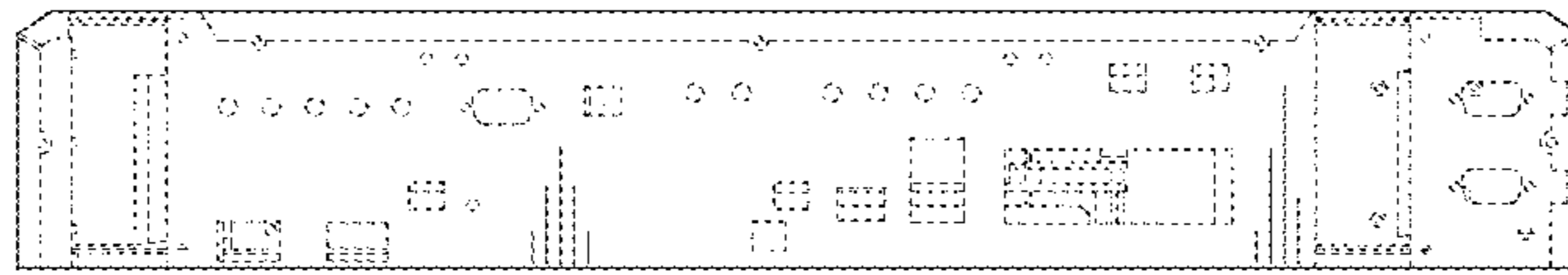


FIG.4

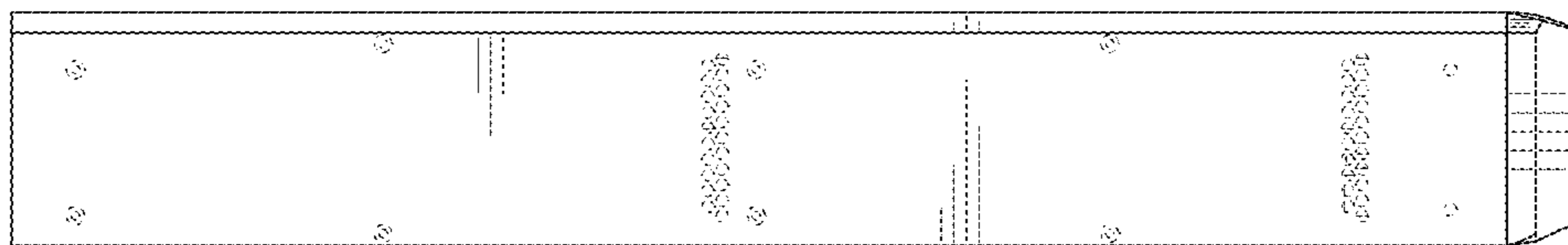


FIG. 5

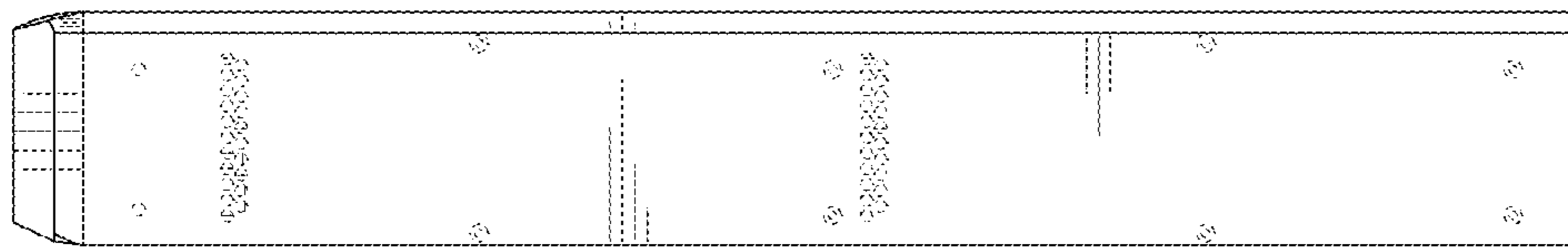


FIG.6

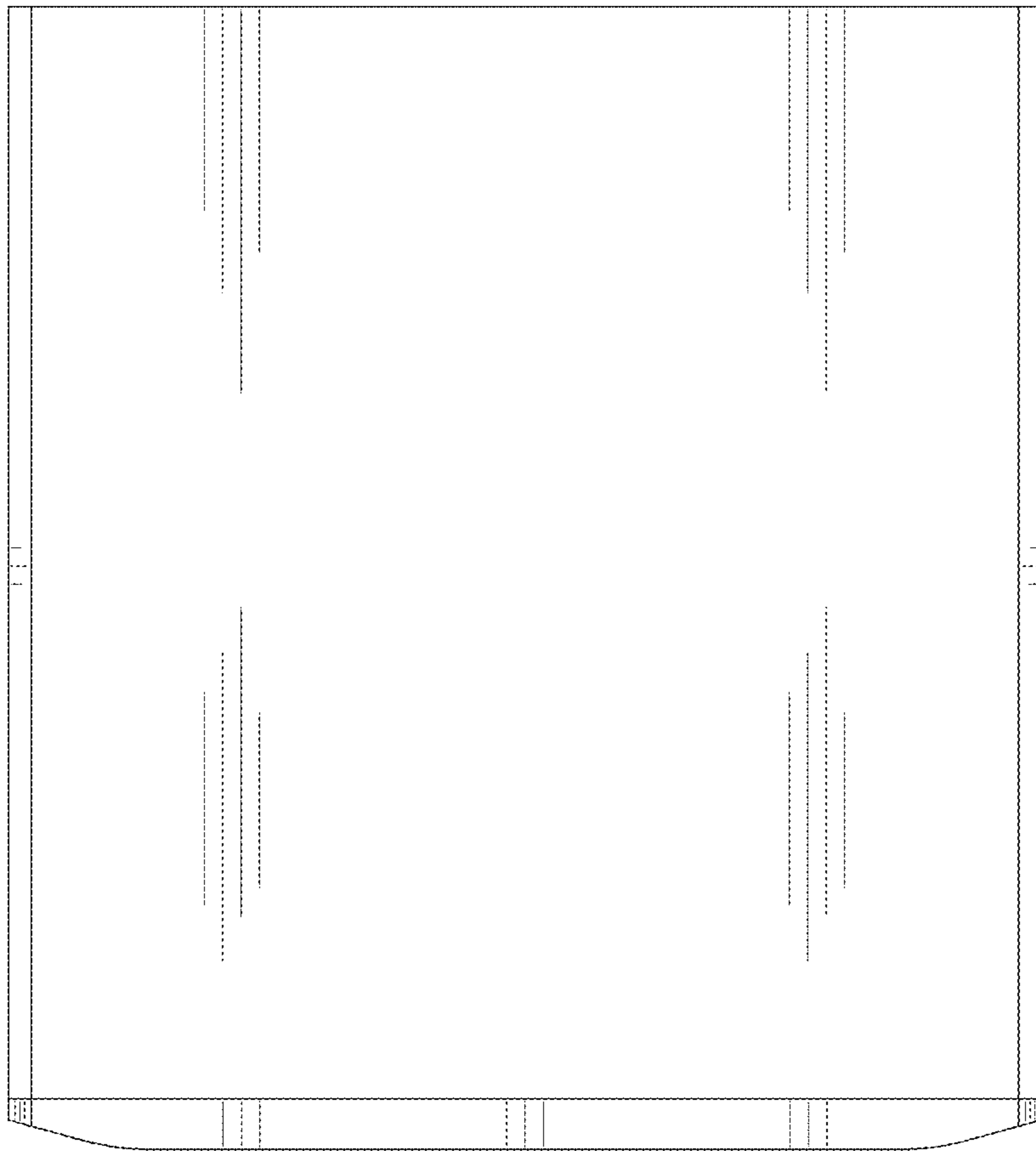


FIG.7

