



US00D894130S

(12) **United States Design Patent** (10) **Patent No.:** **US D894,130 S**  
**Byrne et al.** (45) **Date of Patent:** **\*\* Aug. 25, 2020**

(54) **ELECTRICAL POWER CONVERTER HOUSING**

D318,268 S \* 7/1991 Oikawa ..... D13/156  
5,773,760 A \* 6/1998 Stark ..... H02G 3/088  
174/66

(71) Applicants: **Norman R. Byrne**, Ada, MI (US);  
**Timothy J. Warwick**, Sparta, MI (US);  
**Joseph D. Ward**, Grand Rapids, MI (US)

6,220,880 B1 4/2001 Lee et al.  
7,182,633 B2 2/2007 Byrne  
(Continued)

**FOREIGN PATENT DOCUMENTS**

(72) Inventors: **Norman R. Byrne**, Ada, MI (US);  
**Timothy J. Warwick**, Sparta, MI (US);  
**Joseph D. Ward**, Grand Rapids, MI (US)

CN 201213213 Y 3/2009  
CN 202058958 11/2011  
CN 101662093 2/2012

*Primary Examiner* — Jennifer Rivard  
*Assistant Examiner* — Alison M Ofstun

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

(74) *Attorney, Agent, or Firm* — Gardner, Linn, Burkhardt & Ondersma LLP

(21) Appl. No.: **29/708,083**

(22) Filed: **Oct. 3, 2019**

**Related U.S. Application Data**

(62) Division of application No. 29/596,755, filed on Mar. 10, 2017, now Pat. No. Des. 862,389.

(51) **LOC (12) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/139.1**

(58) **Field of Classification Search**  
USPC ..... D13/137.1–137.4, 138.1, 138.2,  
D13/139.1–139.3, 156, 145, 147, 184,  
D13/103, 133  
CPC .. H02G 15/18; H02G 15/1826; H01R 13/516;  
H01R 13/518; H01R 13/52; H01R 13/46;  
H01R 13/50; H01R 13/506; H01R  
13/5213; H01R 25/006; H02J 7/025;  
H02J 7/0042; H02J 7/0044; H02J 7/0045;  
H02J 7/0003; H01H 21/00; H01H 21/04;  
H01H 23/00; H01H 71/02  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D210,377 S 3/1968 Lopez-Fabrega et al.  
D315,332 S \* 3/1991 Kumagai ..... D13/156

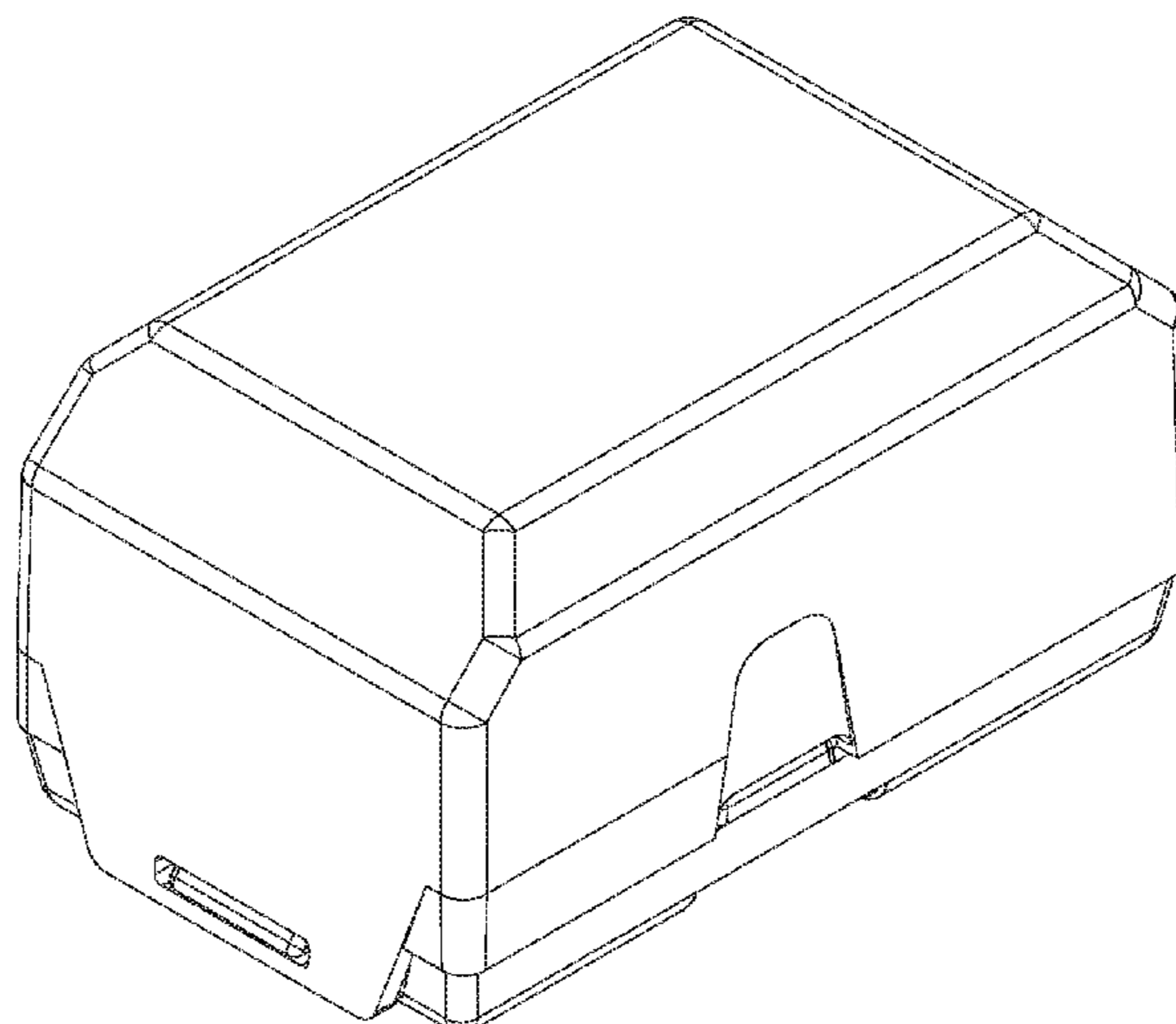
(57) **CLAIM**

The ornamental design for an electrical power converter housing, as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of an electrical power converter housing showing our new design, viewed from the front and right side;  
FIG. 2 is another top perspective view thereof, viewed from the front and left side;  
FIG. 3 is a bottom perspective view thereof, viewed from the front and right side;  
FIG. 4 is another bottom perspective view thereof, viewed from the front and left side;  
FIG. 5 is a top plan view thereof;  
FIG. 6 is a bottom plan view thereof;  
FIG. 7 is a front elevation thereof;  
FIG. 8 is a rear elevation thereof;  
FIG. 9 is a right side elevation thereof; and,  
FIG. 10 is a left side elevation thereof.  
In the drawings, the broken lines represent portions of the article which form no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

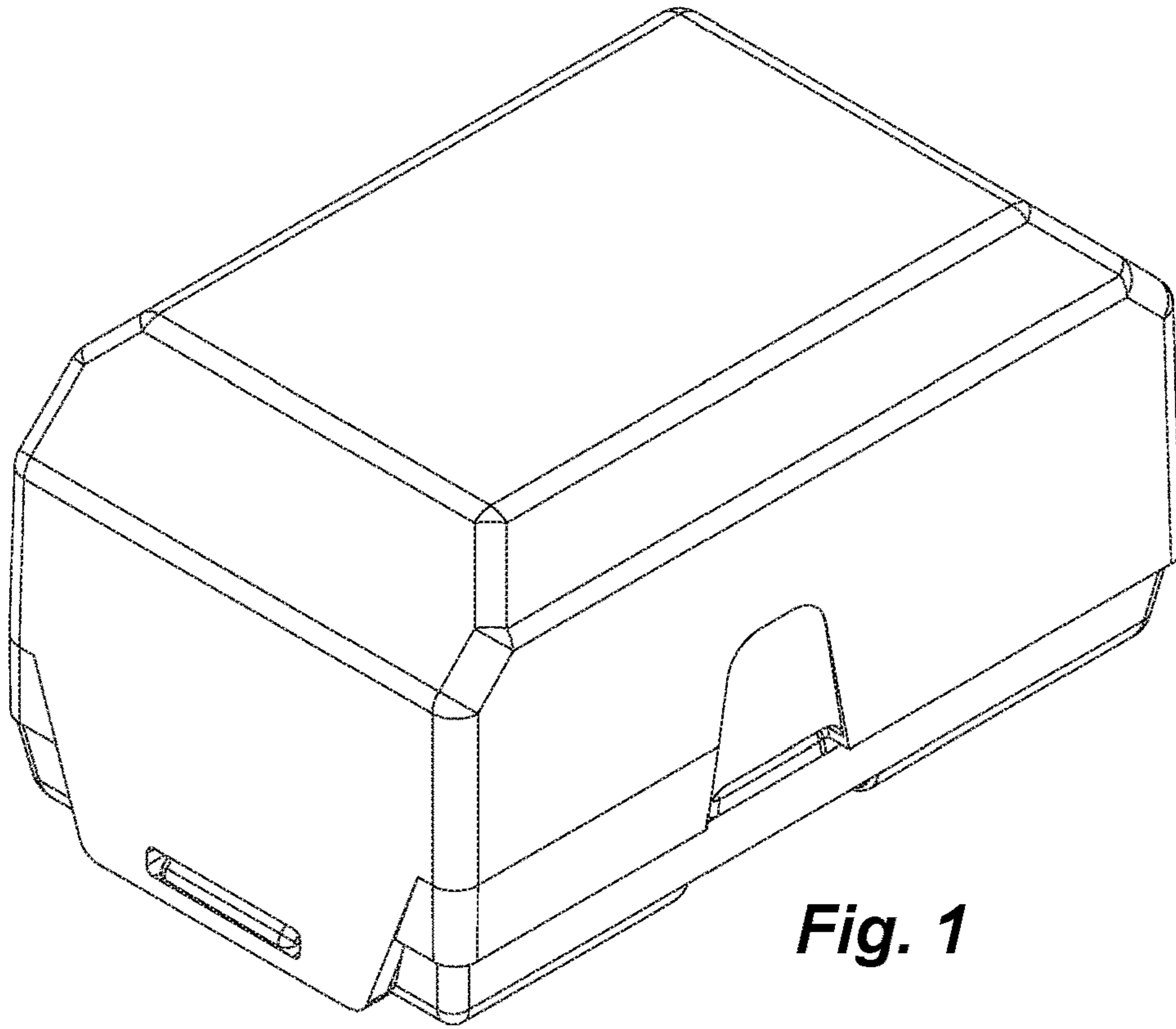
References Cited

U.S. PATENT DOCUMENTS

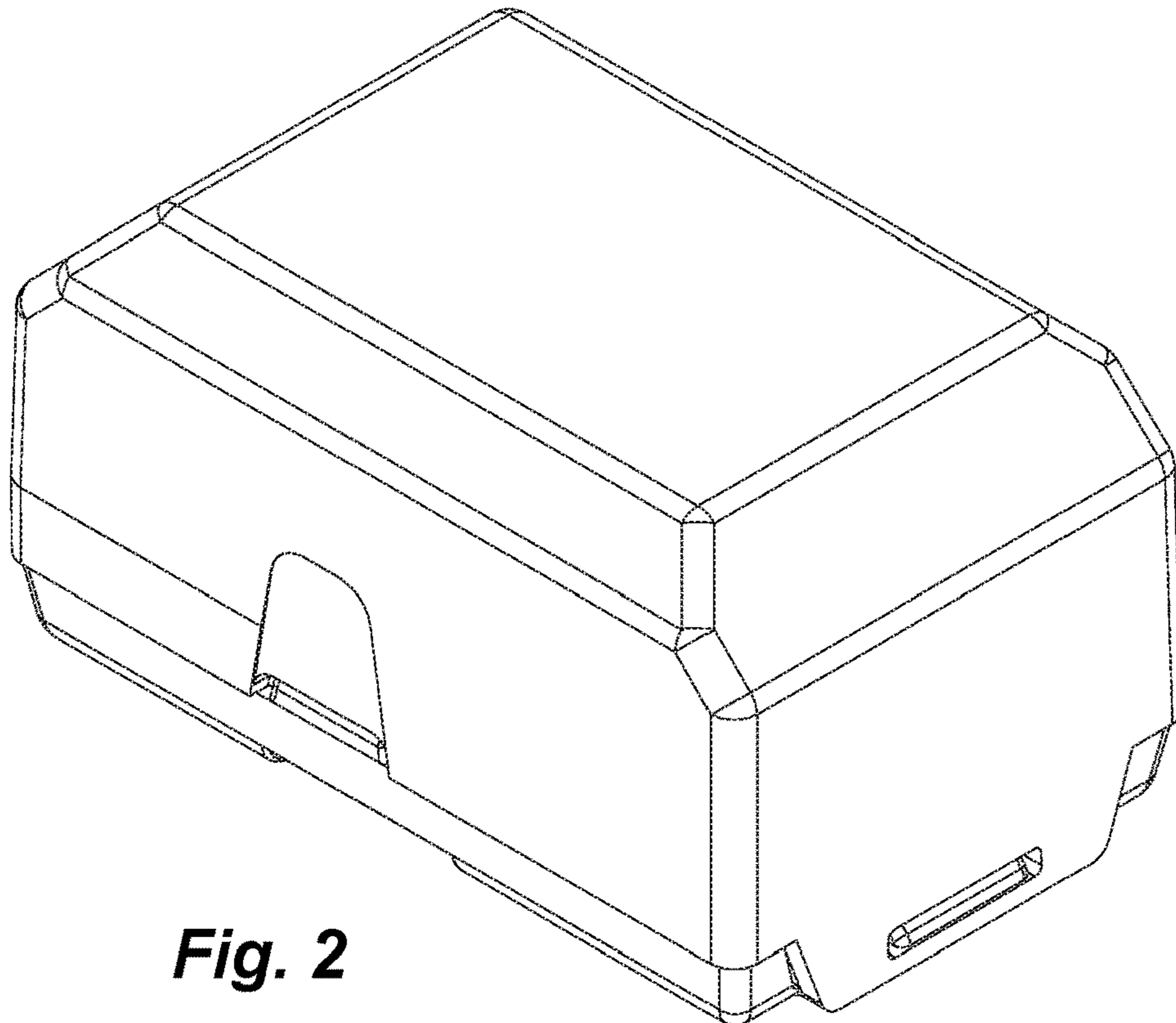
D573,952 S 7/2008 Schwartz  
 7,556,511 B1 7/2009 Hsu et al.  
 7,559,795 B2 7/2009 Byrne  
 7,677,512 B1 3/2010 Ford et al.  
 D642,529 S 8/2011 Su et al.  
 D667,794 S 9/2012 Junko et al.  
 8,278,790 B2\* 10/2012 Rueggen ..... H02K 11/33  
 310/68 D  
 D678,212 S \* 3/2013 Peckham ..... D13/156  
 8,491,343 B2 7/2013 Wang et al.  
 D690,274 S \* 9/2013 Greaney ..... D13/156  
 8,758,031 B2 6/2014 Cheng et al.  
 8,794,997 B2 8/2014 Tin  
 9,247,657 B2 1/2016 Row et al.  
 9,312,673 B2 4/2016 Byrne et al.  
 9,509,083 B2 11/2016 Yang  
 9,553,407 B2 1/2017 McDowall

D783,542 S \* 4/2017 Marsden ..... H01R 13/447  
 D13/156  
 9,698,550 B2\* 7/2017 Byrne ..... H01R 31/02  
 9,837,753 B1 12/2017 Chen  
 9,853,405 B2 12/2017 Suri  
 D807,827 S 1/2018 Lu  
 9,991,633 B2 6/2018 Robinet  
 10,175,996 B2 1/2019 Byrne et al.  
 2011/0104945 A1 5/2011 Gao et al.  
 2012/0048590 A1\* 3/2012 Drane ..... H02G 3/081  
 174/67  
 2012/0067610 A1\* 3/2012 Stonebraker ..... H02G 3/081  
 174/50  
 2013/0109213 A1 5/2013 Chang  
 2013/0200841 A1 8/2013 Farkas et al.  
 2013/0244475 A1 9/2013 Sayadi et al.  
 2017/0237198 A1\* 8/2017 Sathyanarayana .....  
 H01R 13/5202  
 439/105  
 2019/0319391 A1\* 10/2019 Thomas ..... H01R 13/5213

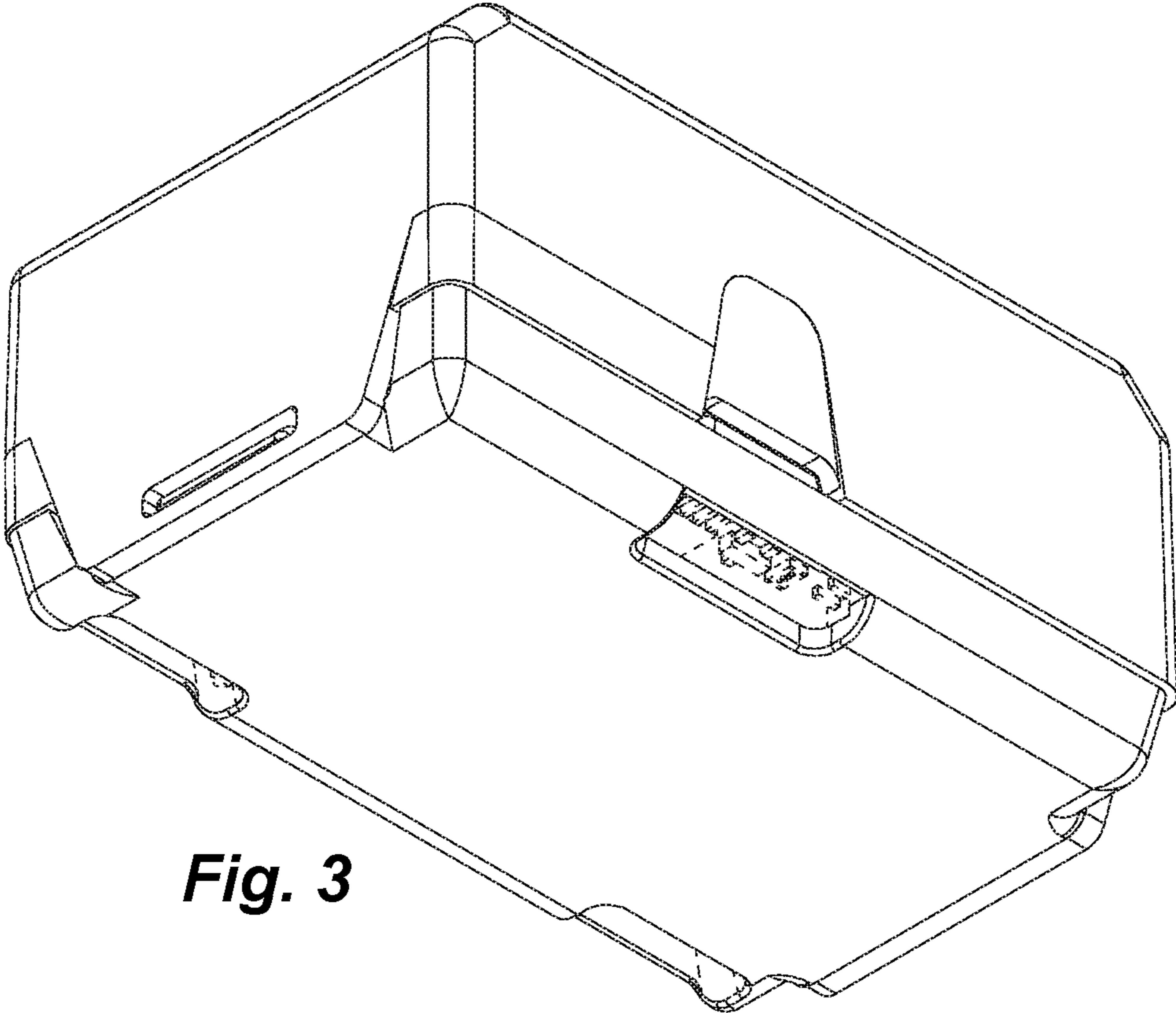
\* cited by examiner



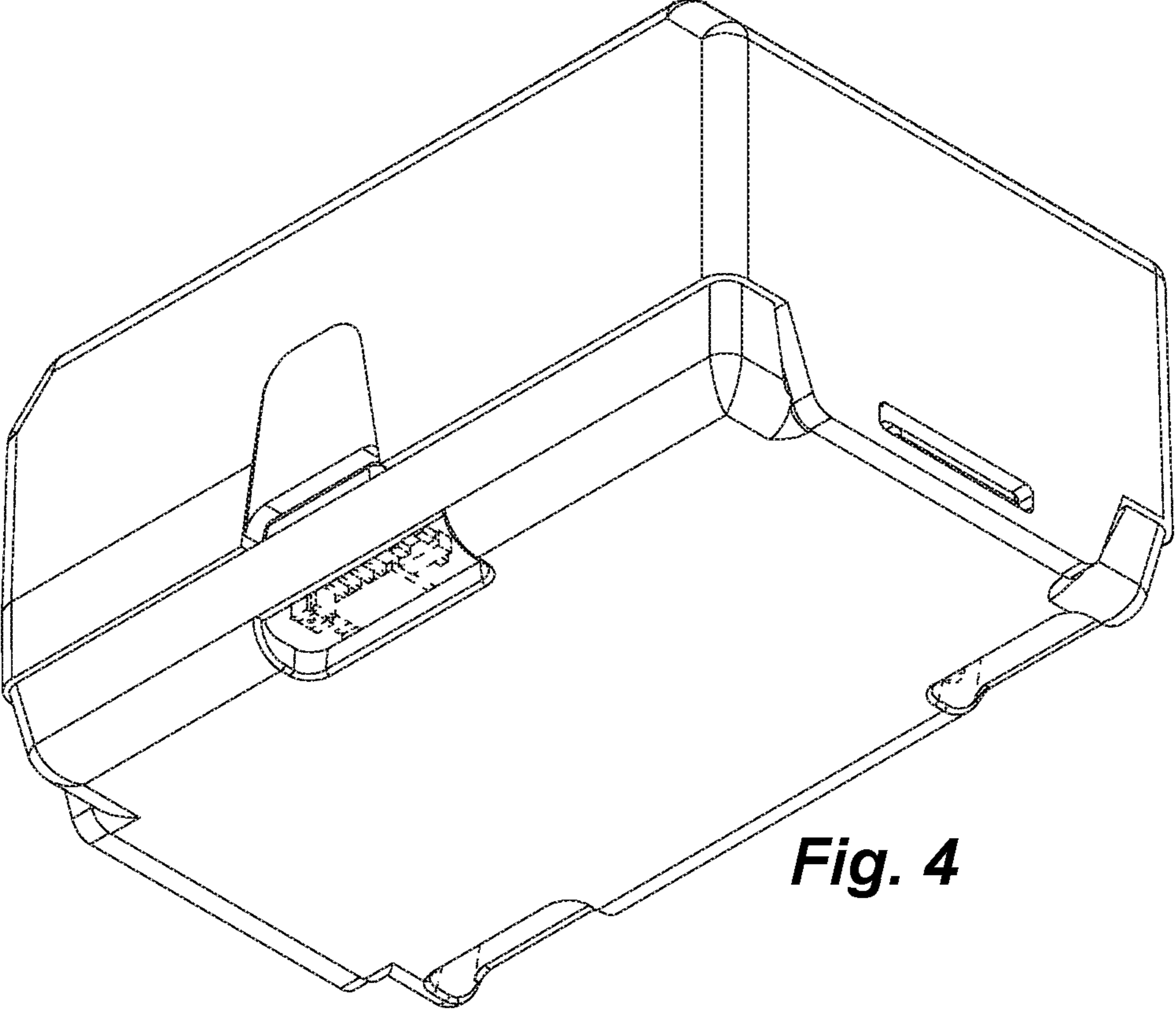
**Fig. 1**



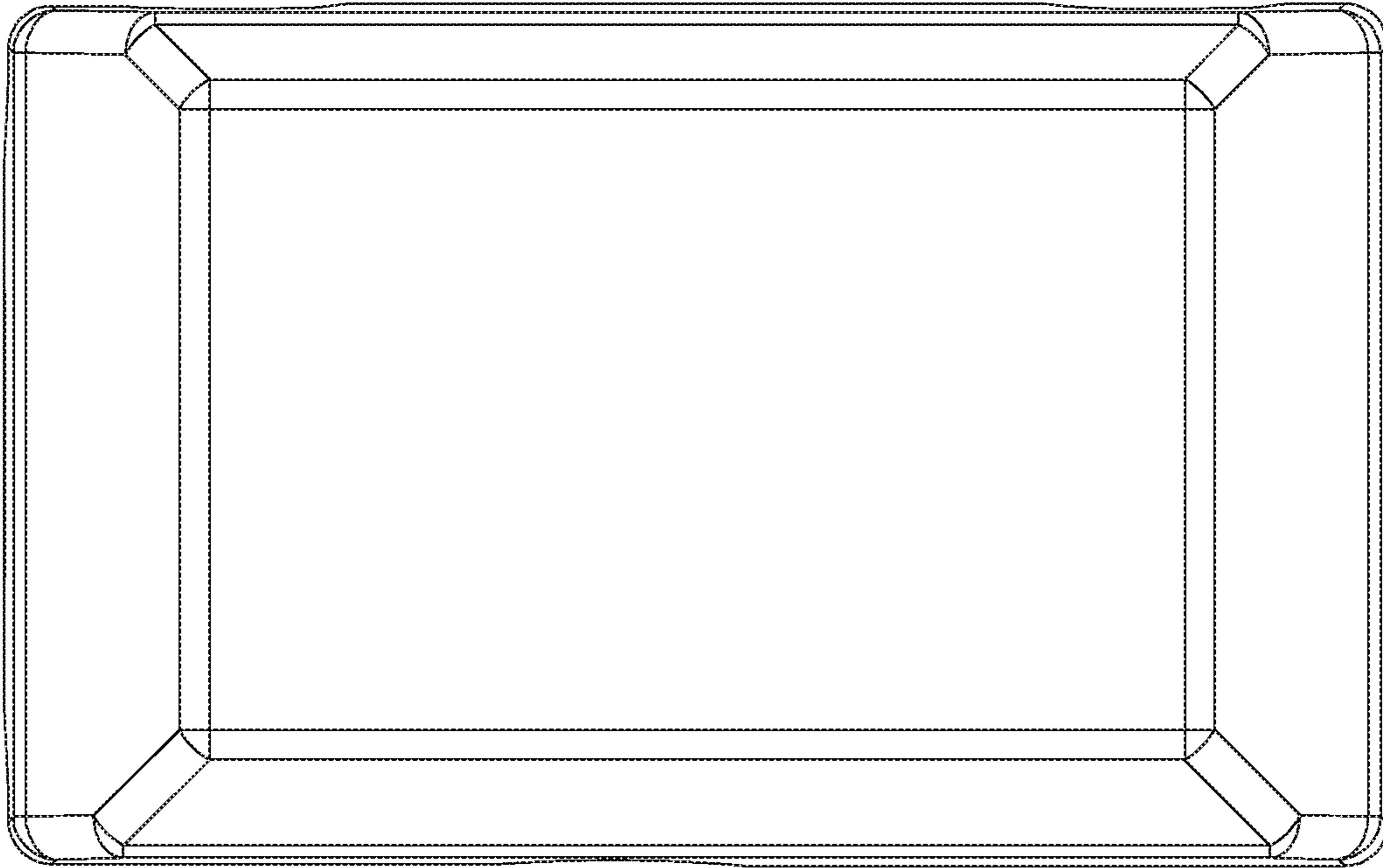
**Fig. 2**



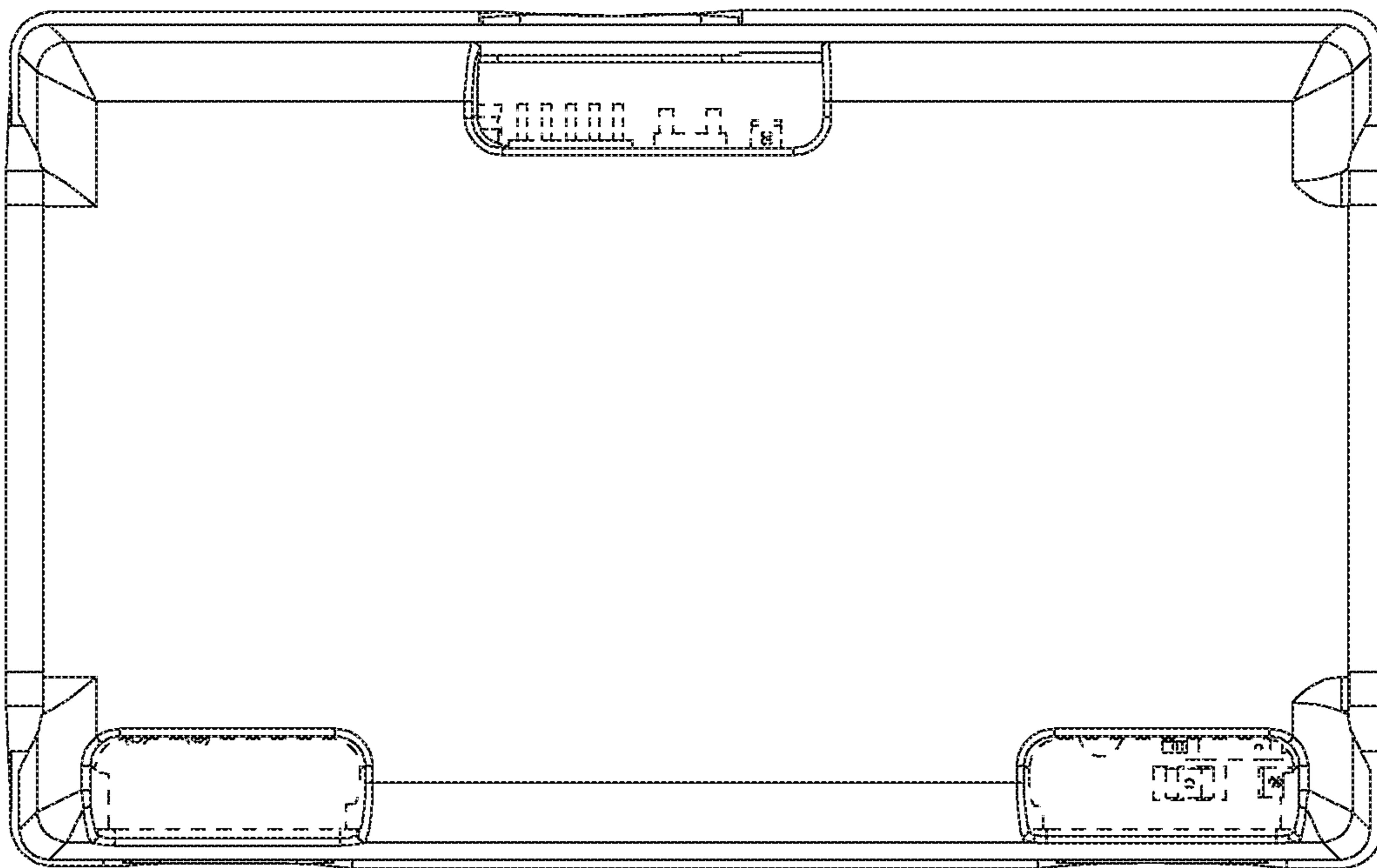
**Fig. 3**



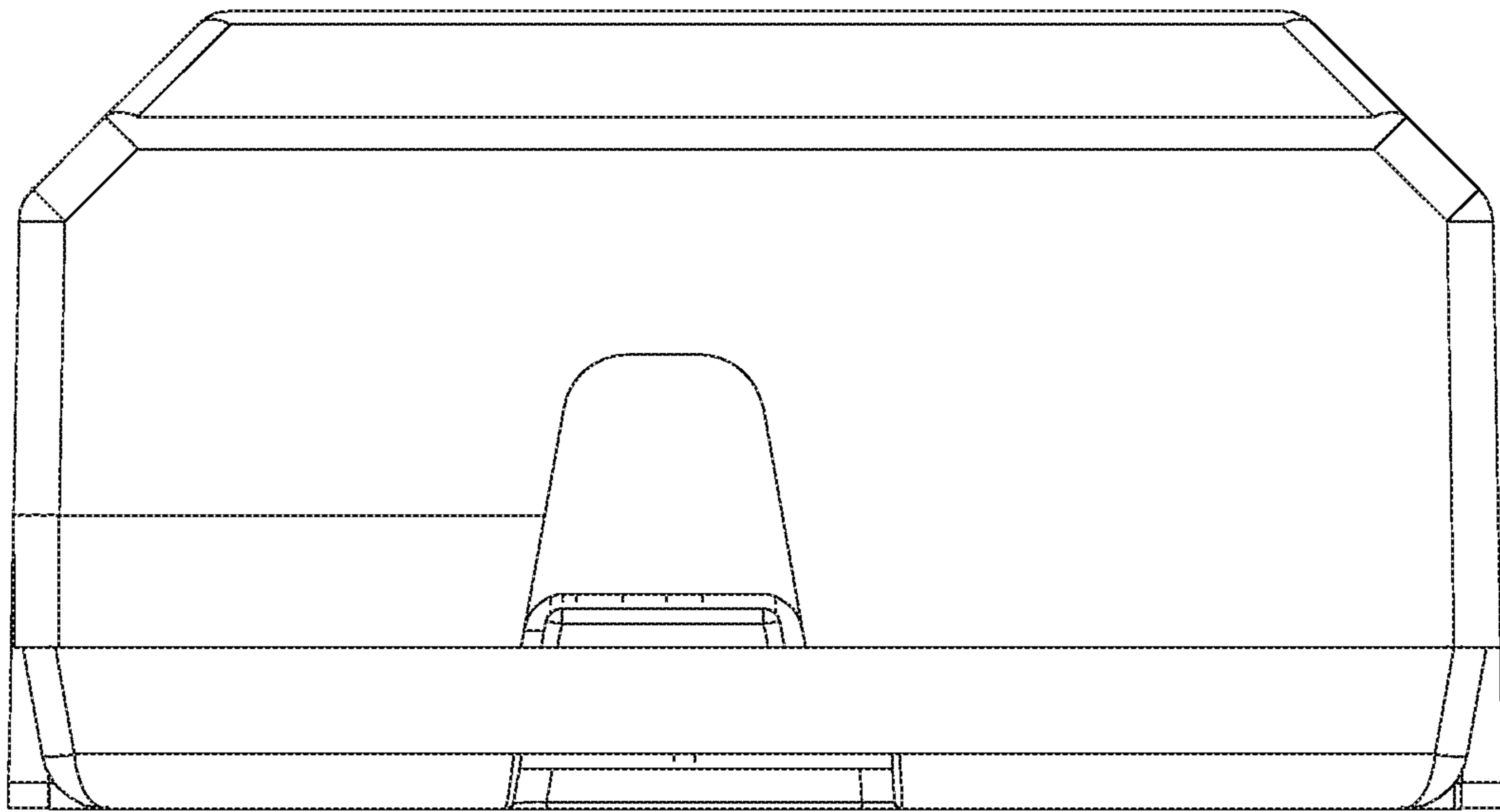
**Fig. 4**



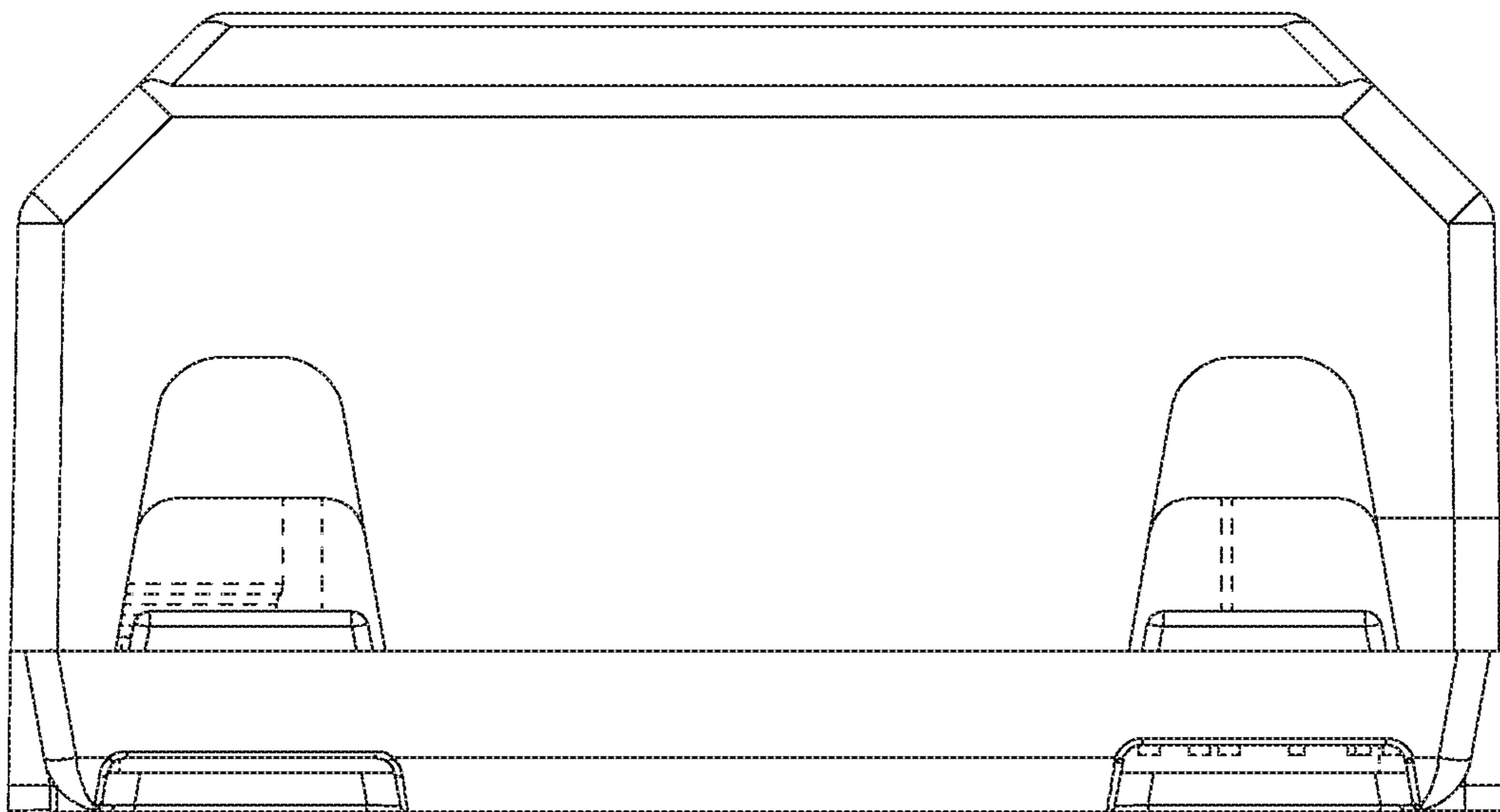
**Fig. 5**



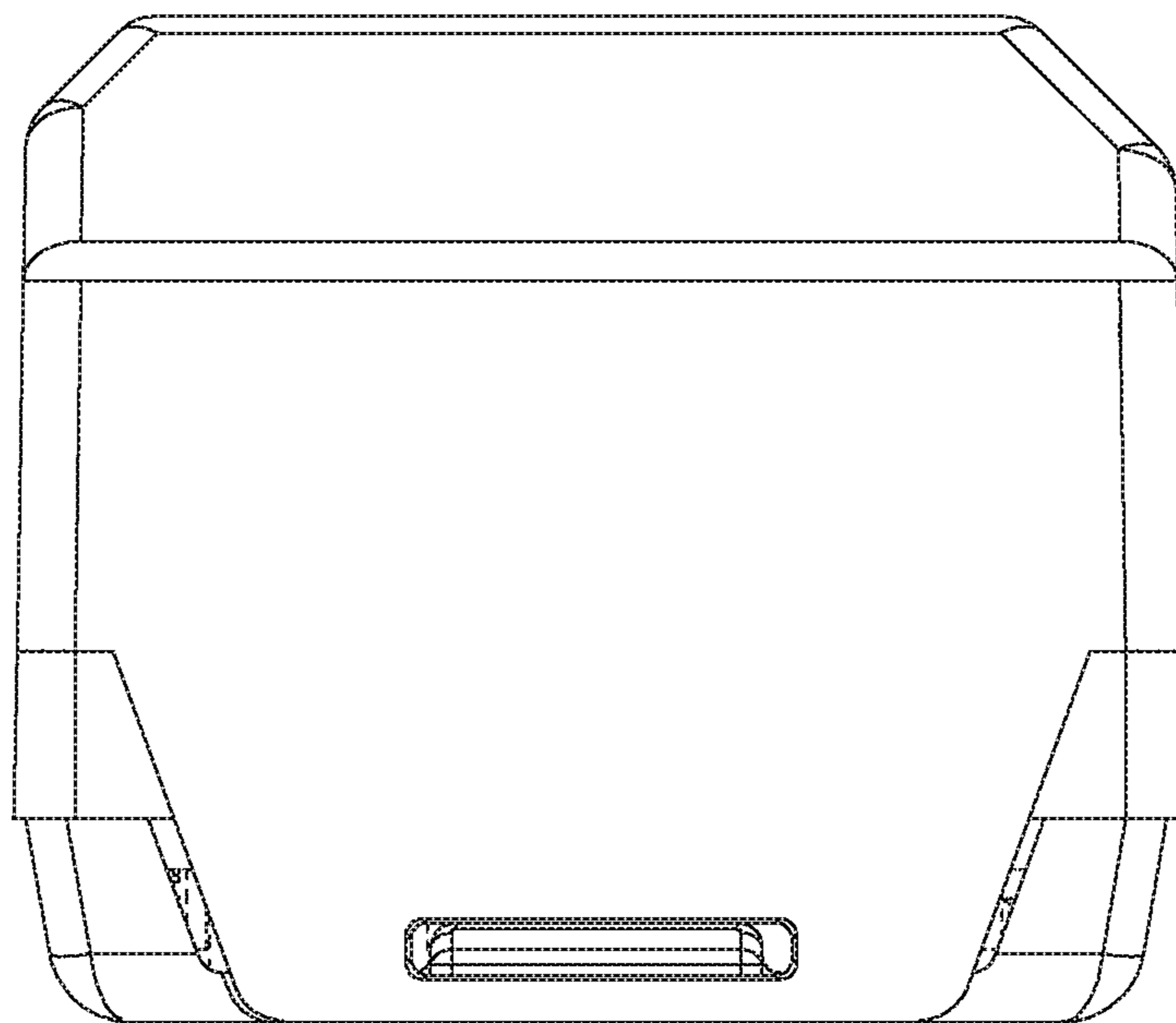
**Fig. 6**



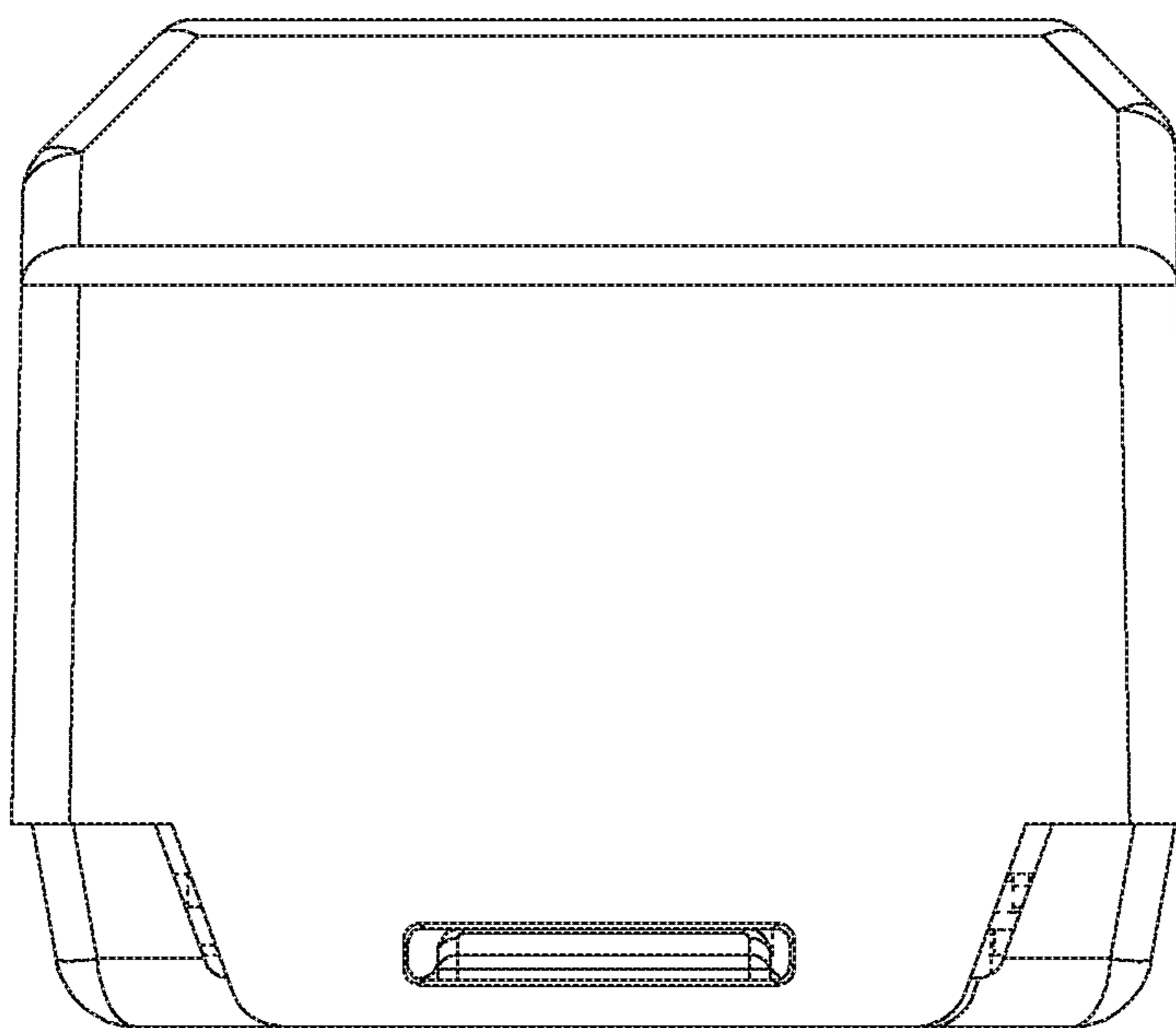
**Fig. 7**



**Fig. 8**



**Fig. 9**



**Fig. 10**