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(12) **United States Design Patent**
Naganuma et al.

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(54) **ELECTRICAL CONNECTOR**

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(73) Assignee: **Hirose Electric Co., Ltd.**, Tokyo (JP)

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

(21) Appl. No.: **29/616,754**

(22) Filed: **Sep. 8, 2017**

(30) **Foreign Application Priority Data**

Mar. 13, 2017 (JP) 2017-005032

(51) **LOC (11) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/147**

(58) **Field of Classification Search**

USPC D13/101, 103, 110, 112, 117, 118, 120,
D13/123, 129-133, 145-147, 149, 151,
D13/153-155, 173, 183, 199
CPC H01R 12/00; H01R 12/70; H01R 12/707;
H01R 12/72; H01R 13/62; H01R 13/66;
H01R 13/627; H01R 13/639; H01R
13/648; H01R 13/658; H01R 24/00;
H01R 24/06; H01R 25/00

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D443,859 S * 6/2001 Hogan D13/133
D554,065 S * 10/2007 Ho D13/147
D568,821 S * 5/2008 Ashida D13/133
D615,040 S * 5/2010 Slippy D13/133
D636,730 S * 4/2011 Sasaki D13/147
D638,361 S * 5/2011 Sasaki D13/147
D649,118 S * 11/2011 Kawakami D13/147
D704,140 S * 5/2014 Little D13/147

D704,664 S * 5/2014 Kawakami D13/147
D708,579 S * 7/2014 Masumoto D13/147
2009/0023336 A1 * 1/2009 Kondo H01R 13/6474
439/607.01
2018/0083390 A1 * 3/2018 Sutter H01R 13/6471

FOREIGN PATENT DOCUMENTS

JP 2017152308 A * 8/2017 H01R 13/639

* cited by examiner

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LLP

(57) **CLAIM**

The ornamental design for an electrical connector, as shown
and described.

DESCRIPTION

FIG. 1 is a perspective view of the front, top and right side
of the electrical connector according to the first embodi-
ment, showing our new design;

FIG. 2 is a perspective view of the front, bottom and right
side thereof;

FIG. 3 is a perspective view of the rear, top and left side
thereof;

FIG. 4 is a perspective view of the rear, bottom and left side
thereof;

FIG. 5 is a front view thereof;

FIG. 6 is a rear view thereof;

FIG. 7 is a left side view thereof;

FIG. 8 is a right side view thereof;

FIG. 9 is a top plan view thereof;

FIG. 10 is a bottom view thereof; and,

FIG. 11 is an enlarged cross sectional view taken along a line
11-11 in FIG. 5 at a part 11 in FIG. 7.

The broken lines in the drawings illustrate portions of the
electrical connector that form no part of the claimed design.

1 Claim, 9 Drawing Sheets

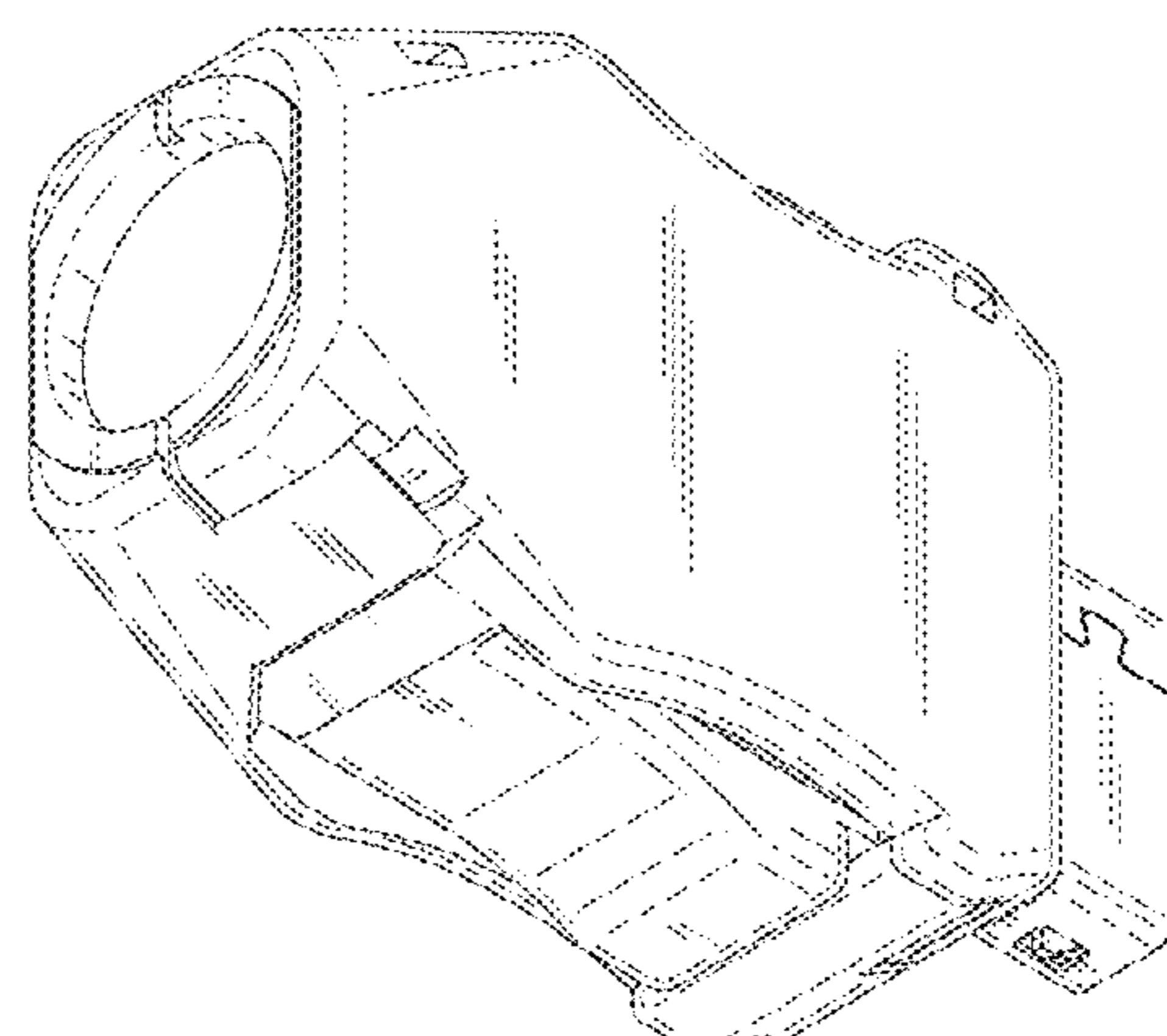
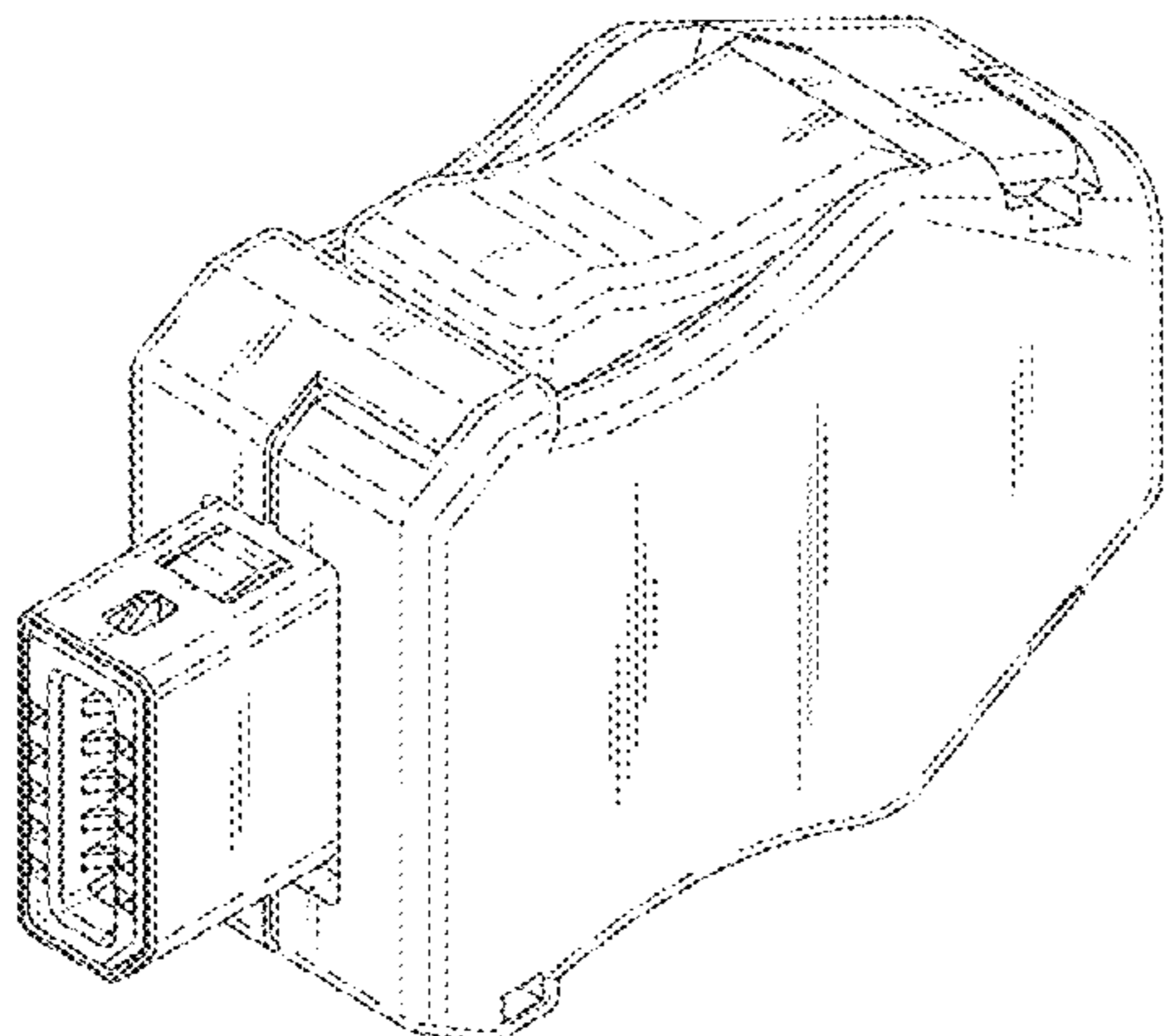


Fig. 1

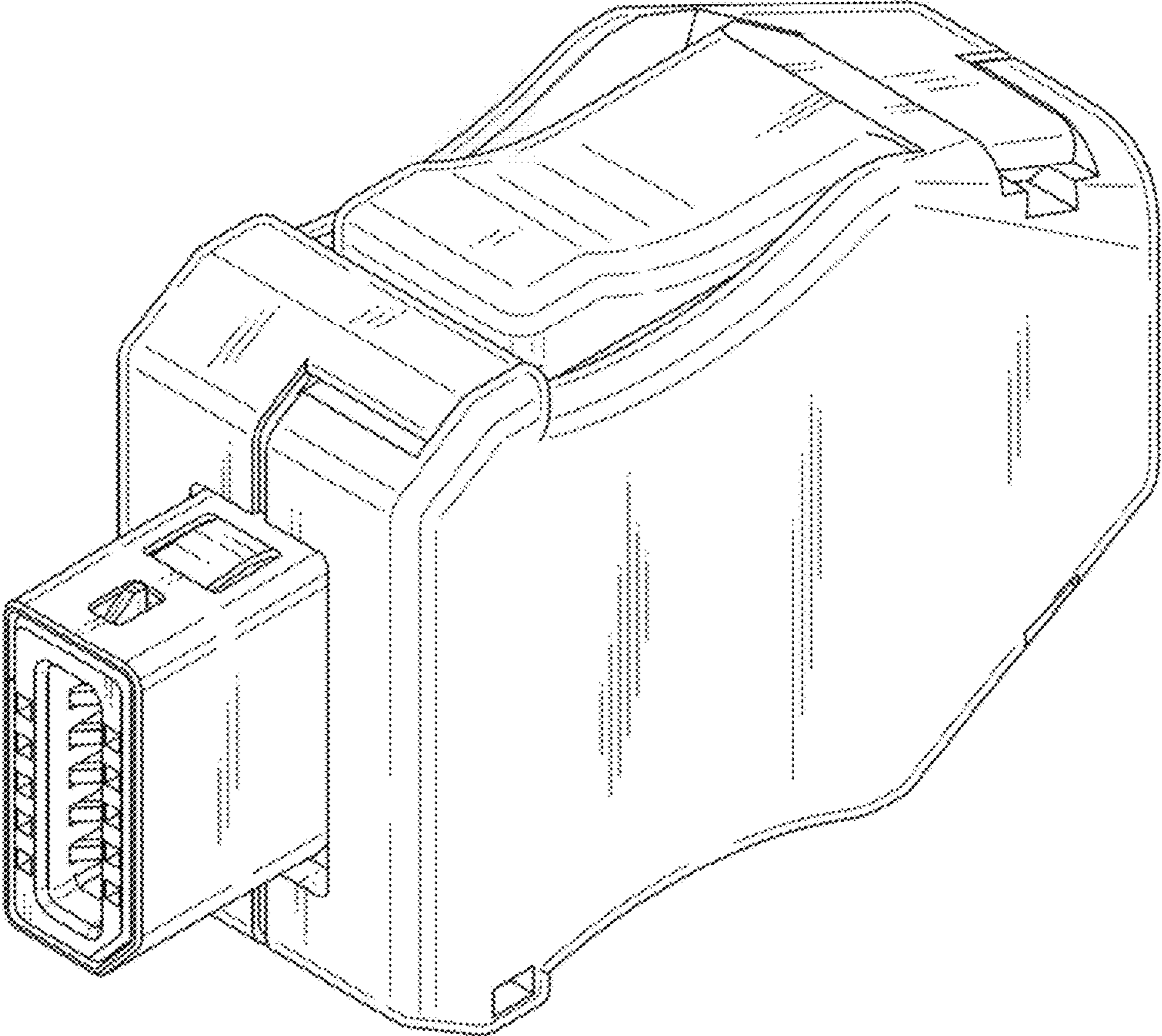


Fig. 2

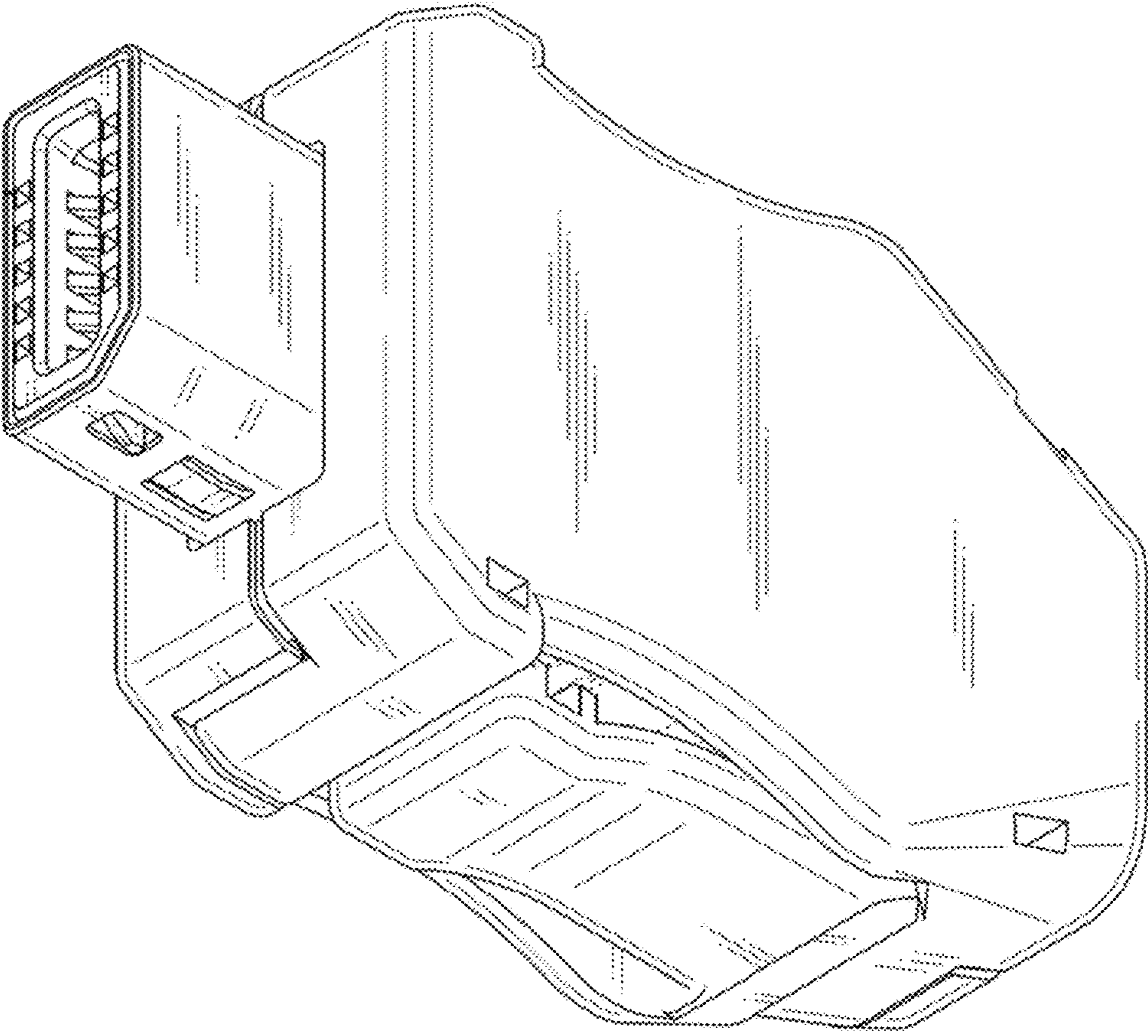


Fig. 3

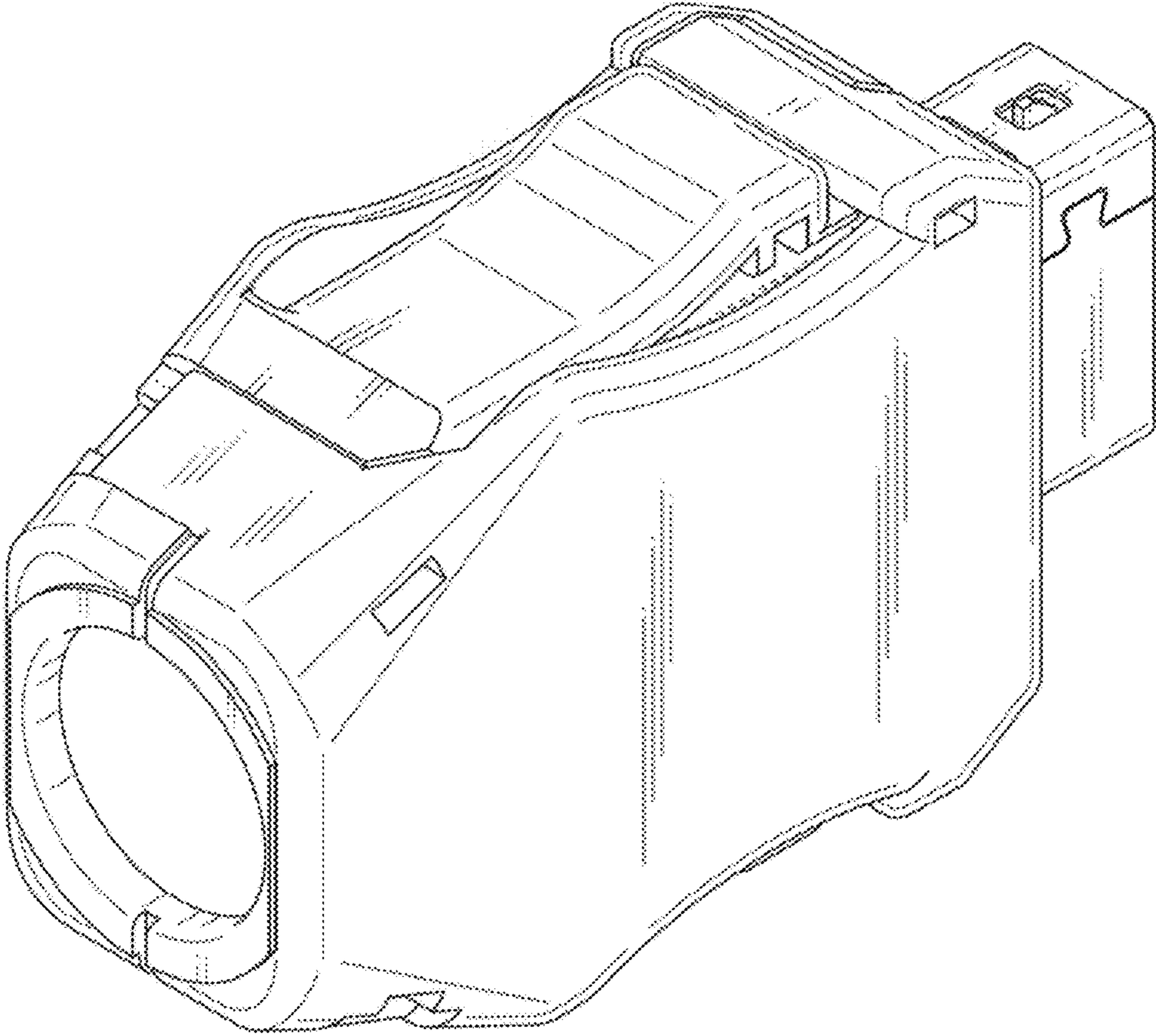


Fig. 4

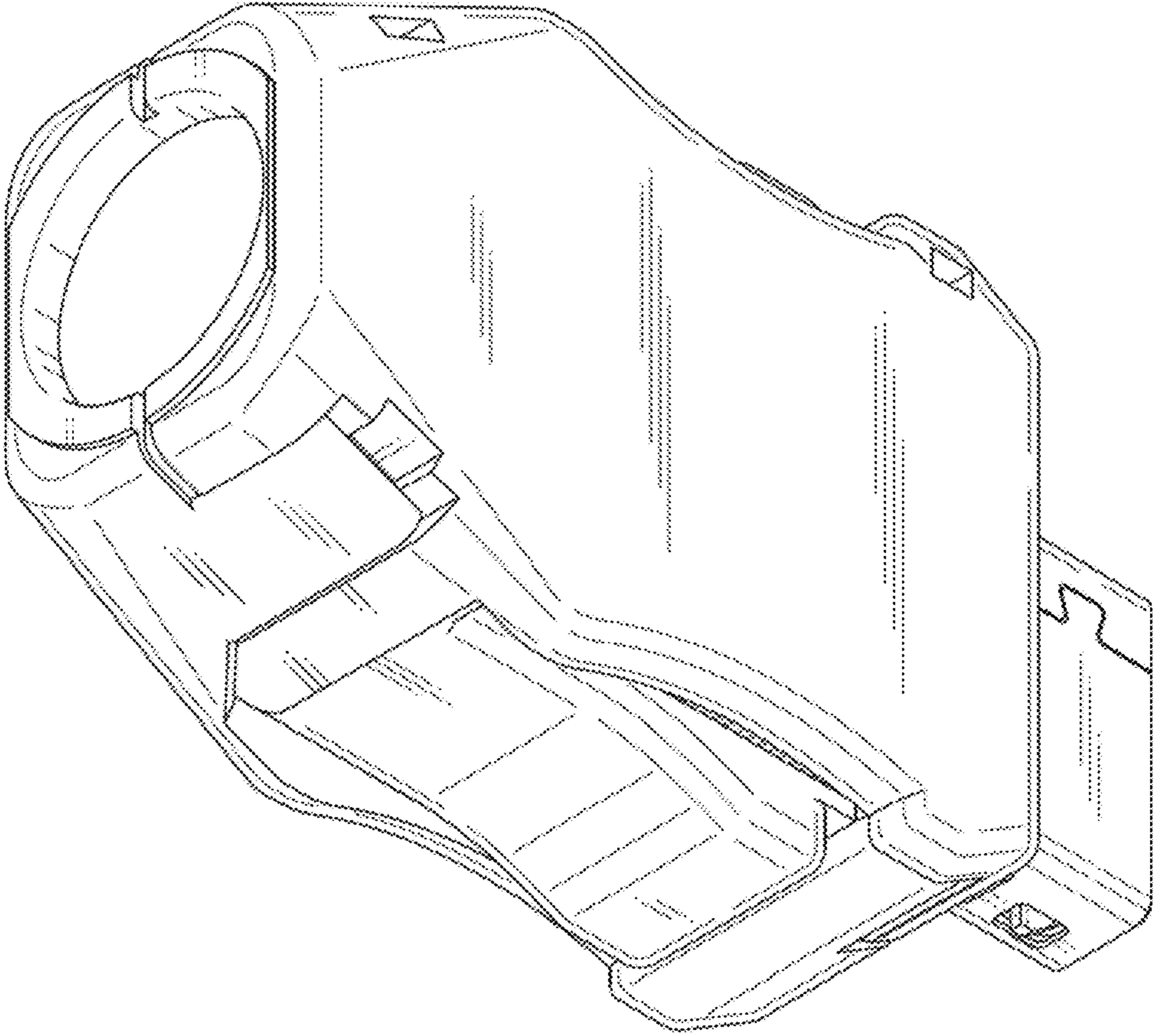


Fig. 5

Fig. 6

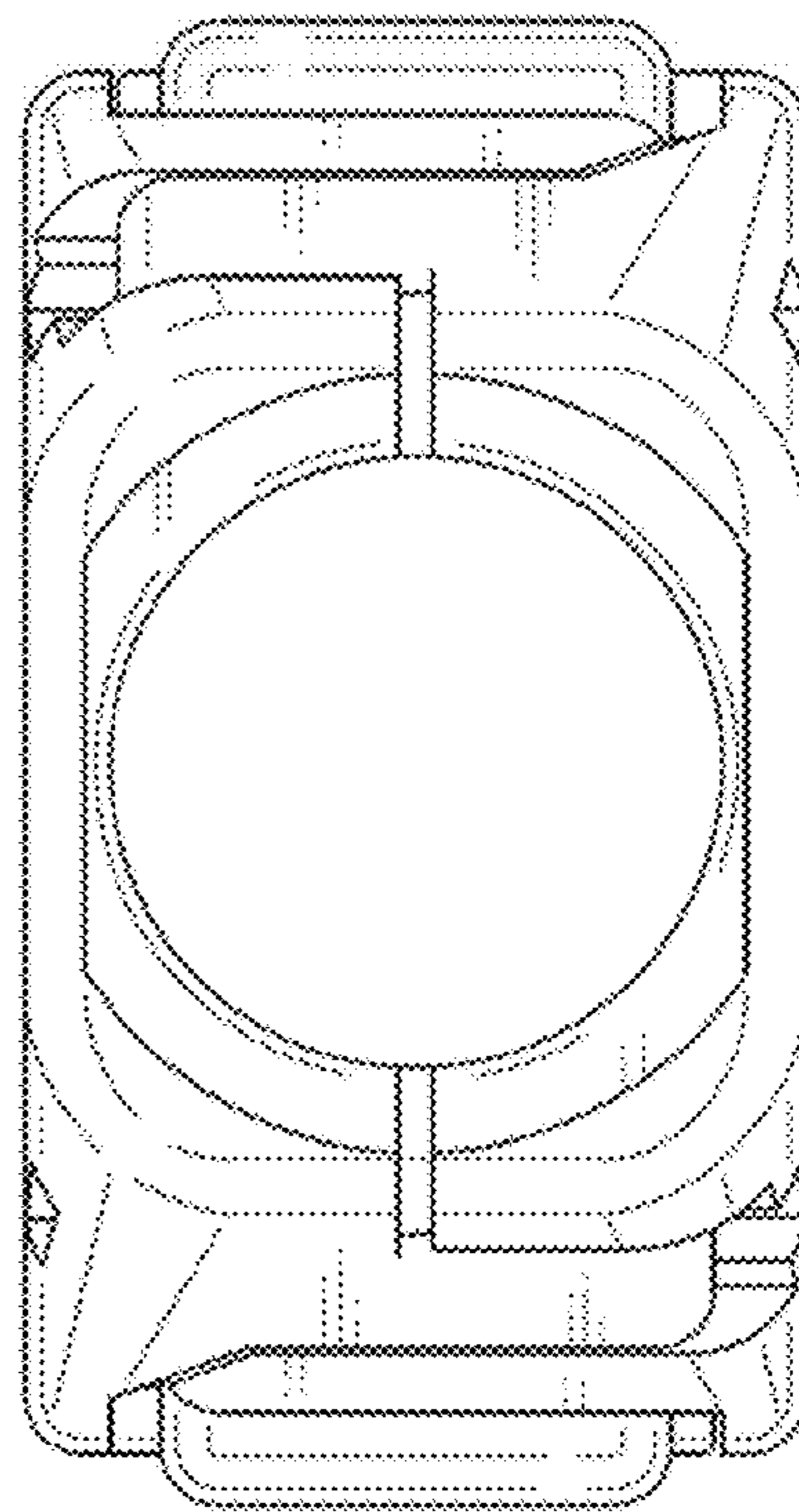
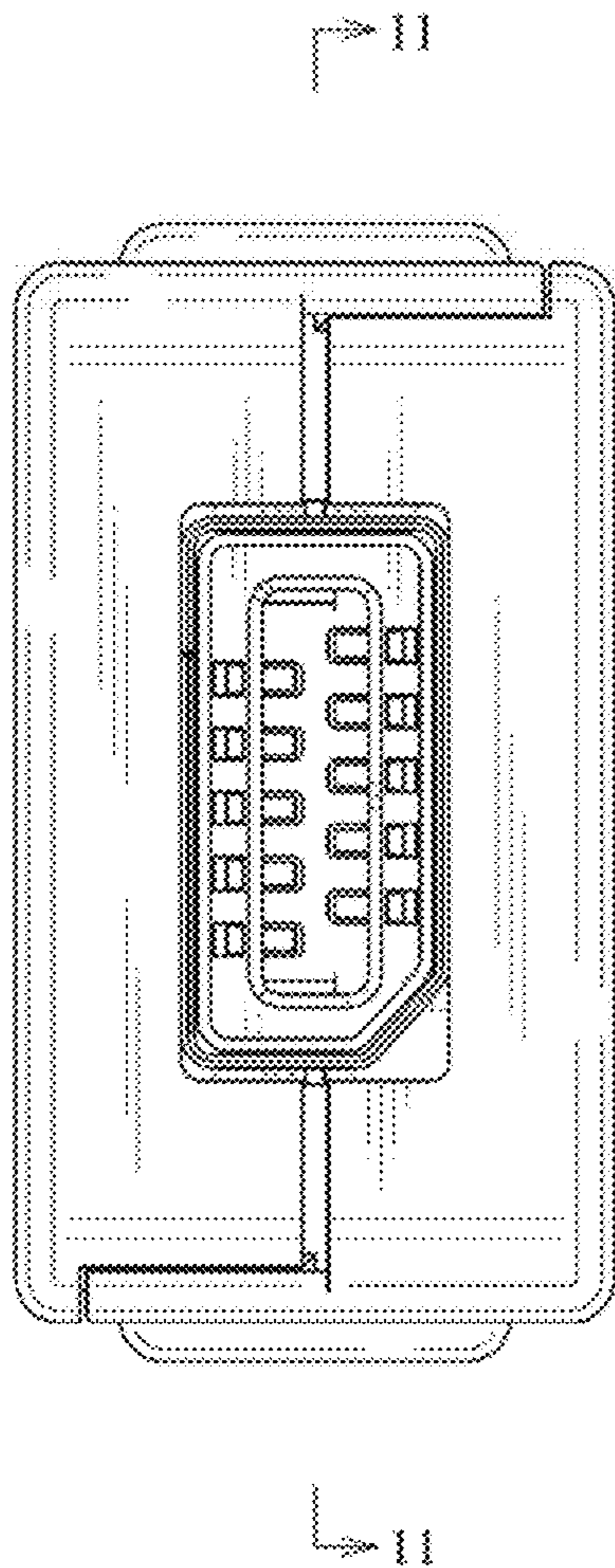


Fig. 7

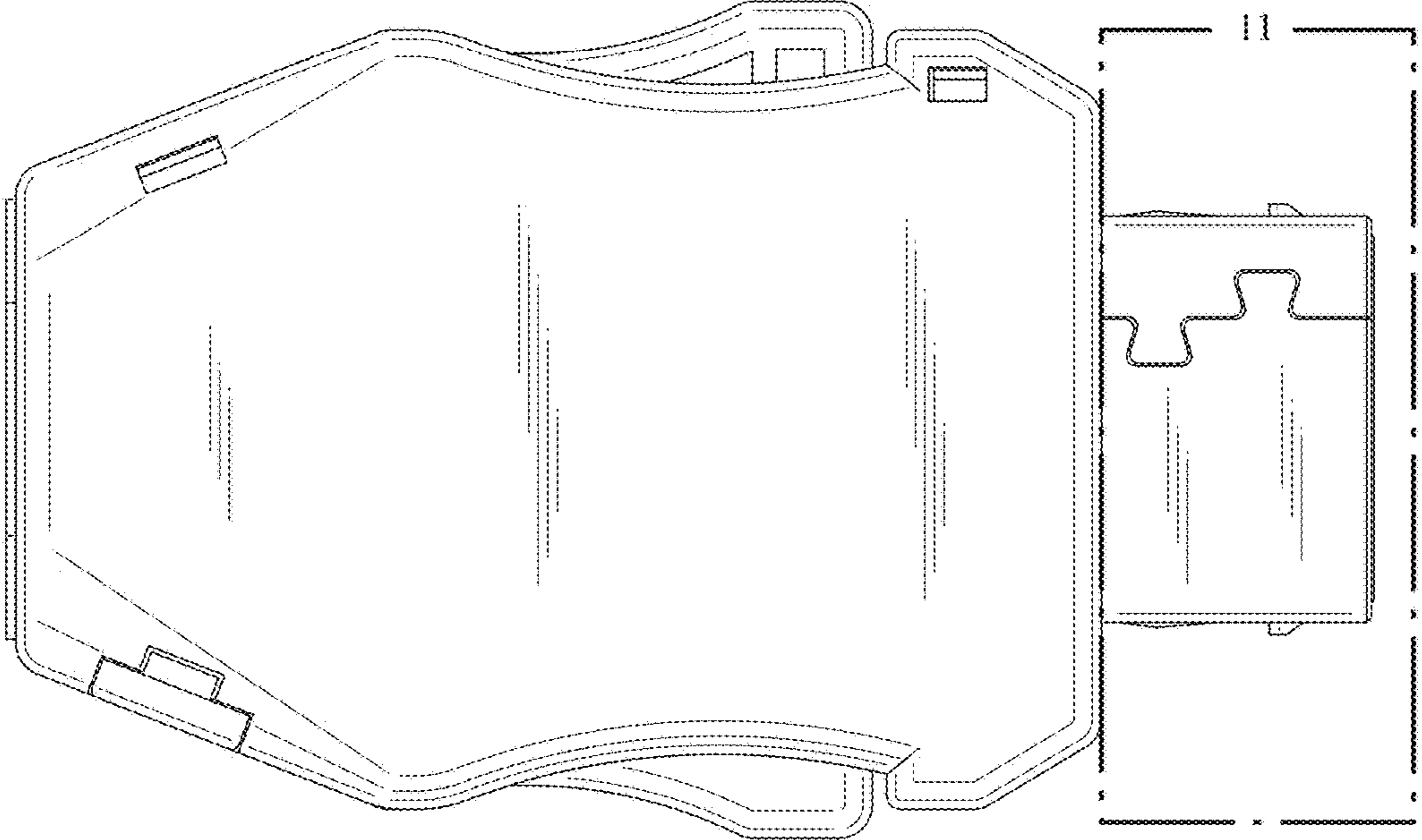


Fig. 8

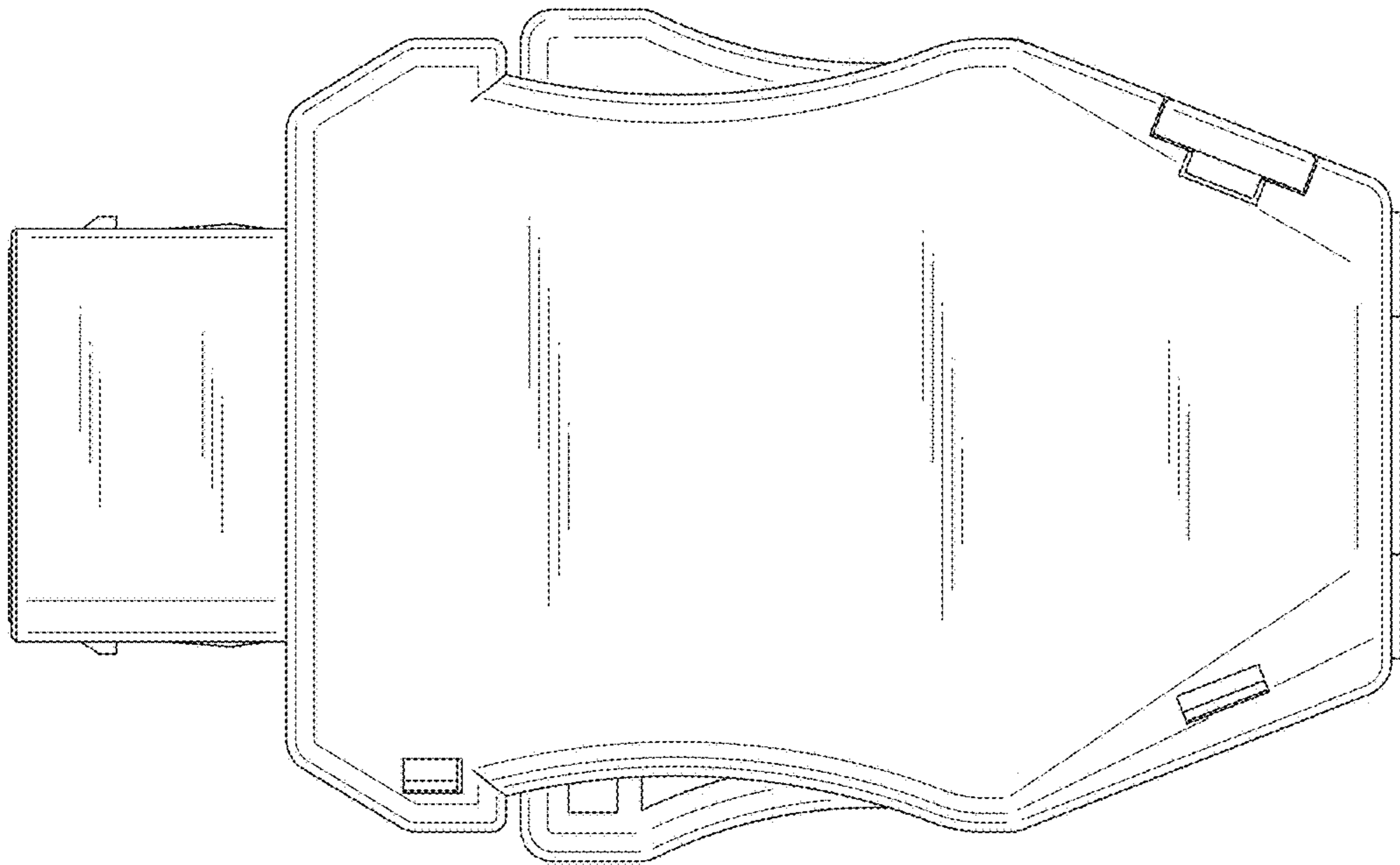


Fig. 9

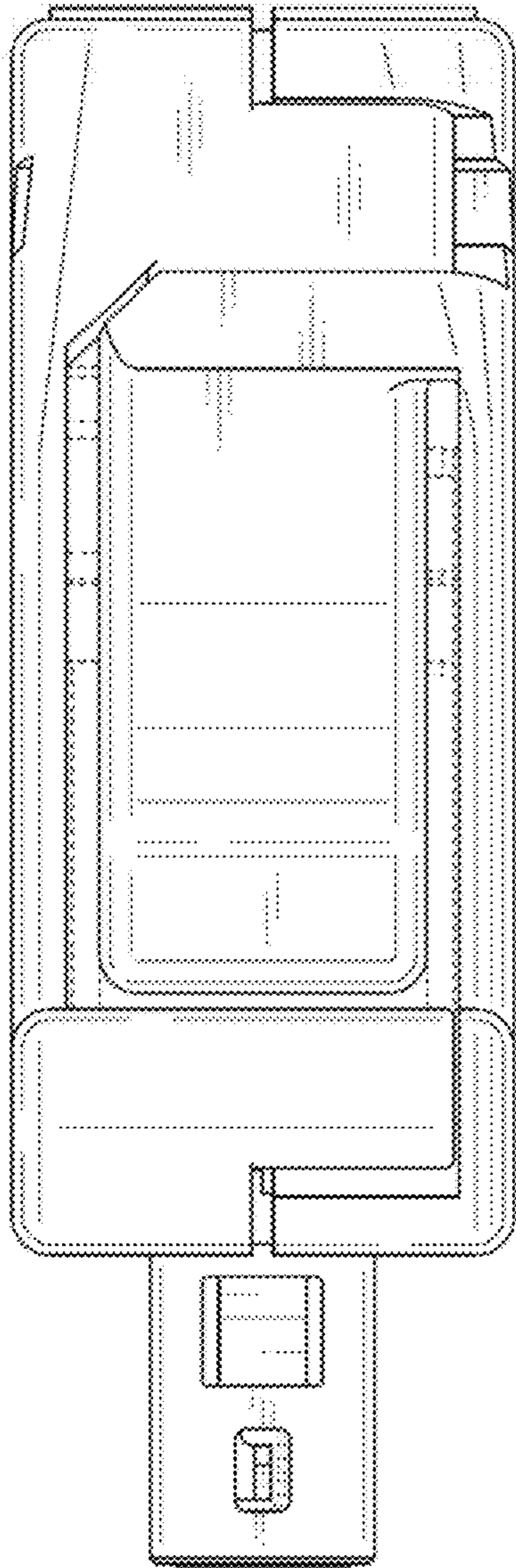


Fig. 10

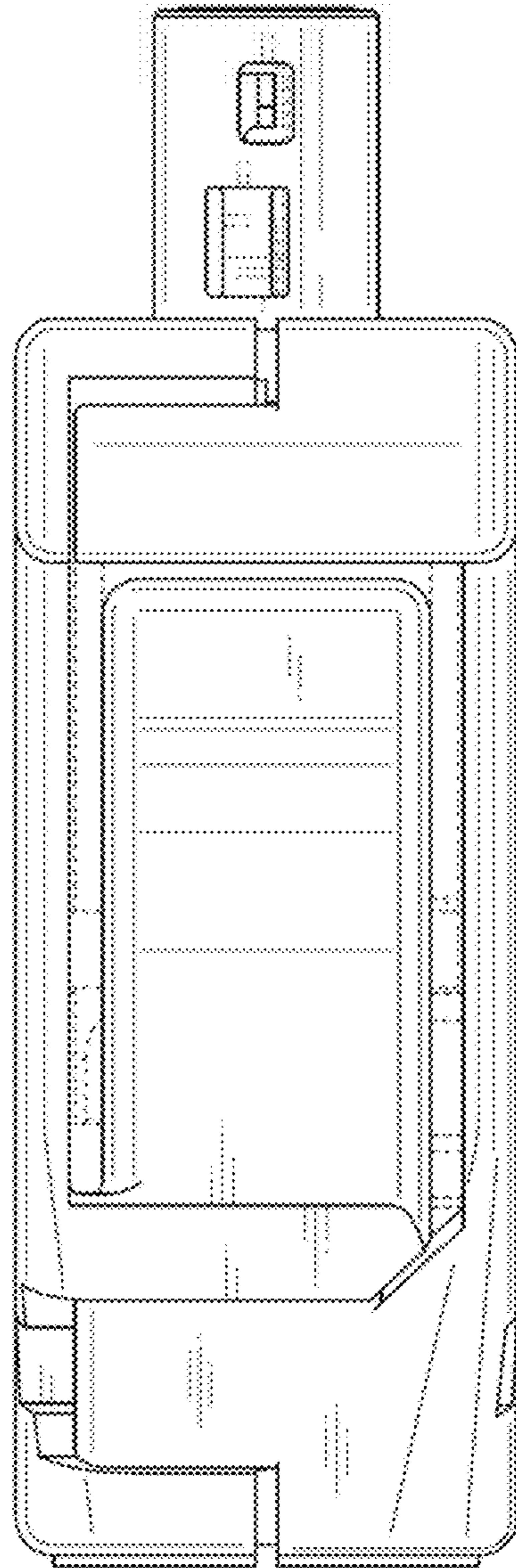


Fig. 11

