

US00D997748S

(12)

United States Design Patent

Inoda et al.

(10)

Patent No.:

US D997,748 S

(45)

Date of Patent:

** Sep. 5, 2023

(54) SENSOR FOR INDUSTRIAL ROBOT

(71) Applicant: OMRON Corporation, Kyoto (JP)

(72) Inventors: Takeshi Inoda, Nara (JP); Hitoshi Nakatsuka, Kawanishi (JP); Tomonori Ariyoshi, Kusatsu (JP); Motoharu Okuno, Fukuchiyama (JP)

(73) Assignee: OMRON Corporation, Kyoto (JP)

(**) Term: 15 Years

(21) Appl. No.: 29/726,948

(22) Filed: Mar. 6, 2020

(30) Foreign Application Priority Data

Nov. 21, 2019 (JP) 2019-025861

(51) LOC (14) Cl. 15-99

(52) U.S. Cl.

USPC D15/199

(58) Field of Classification Search

USPC D10/46, 75-80; D13/112, 162.1, 110, D13/147, 159, 174; D15/199

CPC .. B23K 37/0247; B23K 9/327; B23K 9/0956; B23K 37/0264; B23K 9/1274; B23K 9/02; B23K 9/0953; B62D 55/30; B62D 55/075; H02K 5/1732; H02K 5/15; H02K 5/124; H02K 5/203; H02K 9/193; H02K 7/085; H02K 5/1735; F16J 15/002; F16J 15/3296; B25J 13/087; B25J 19/0075; B25J 9/126; G01M 3/04; G01B 11/254; G02B 7/028; F16C 2380/26

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

6,636,255 B1 * 10/2003 Kobayashi G01B 11/254 356/605

D570,232 S * 6/2008 Kaluza D15/199

D593,962 S * 6/2009 Ross D13/162

D617,214 S * 6/2010 Siegler D10/46

D680,570 S * 4/2013 Nishimori D16/203

D688,627 S * 8/2013 Veeh D13/112

D762,582 S * 8/2016 Salomon D13/147

D904,312 S * 12/2020 Yamaji D13/147

D975,034 S * 1/2023 Greiser D13/162.1

2021/0274069 A1 * 9/2021 Bull H05K 1/148

2021/0291289 A1 * 9/2021 Feng B23K 37/0247

(Continued)

FOREIGN PATENT DOCUMENTS

CN 305624396 * 9/2019

CN 306139321 * 3/2020

(Continued)

Primary Examiner — Keli L Hill

(74) Attorney, Agent, or Firm — Capitol City TechLaw

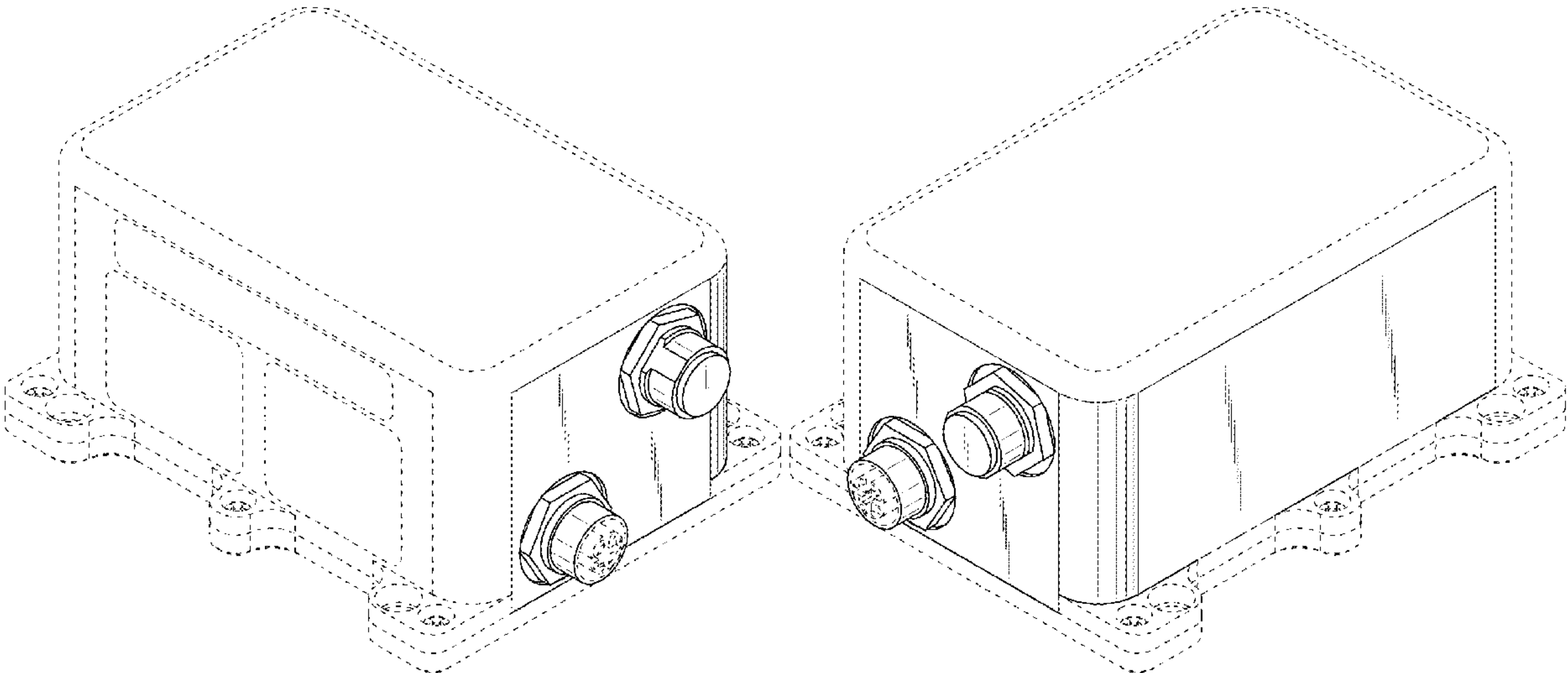
(57) CLAIM

The ornamental design for a sensor for industrial robot, as shown and described.

DESCRIPTION

FIG. 1 is a top, front, and right side perspective view of a sensor for industrial robot showing our new design; FIG. 2 is a top, rear, and right side perspective view thereof; FIG. 3 is a front view thereof; FIG. 4 is a rear view thereof; FIG. 5 is a left side view thereof; FIG. 6 is a right side view thereof; FIG. 7 is a top view thereof; and, FIG. 8 is a bottom view thereof. The dashed broken lines in the figures show portions of the sensor for industrial robot that form no part of the claimed design. The dot-dashed broken lines shown in the figures illustrate the bounds of the claim and form no part thereof.

1 Claim, 5 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

2022/0266649 A1* 8/2022 Kim B60G 17/06
2022/0383720 A1* 12/2022 Pace G08B 25/10

FOREIGN PATENT DOCUMENTS

CN 306084769 * 6/2020
CN 306313797 * 8/2020
CN 306869467 * 5/2021
GB 9002402495-0006 * 2/2014

* cited by examiner

Fig. 1

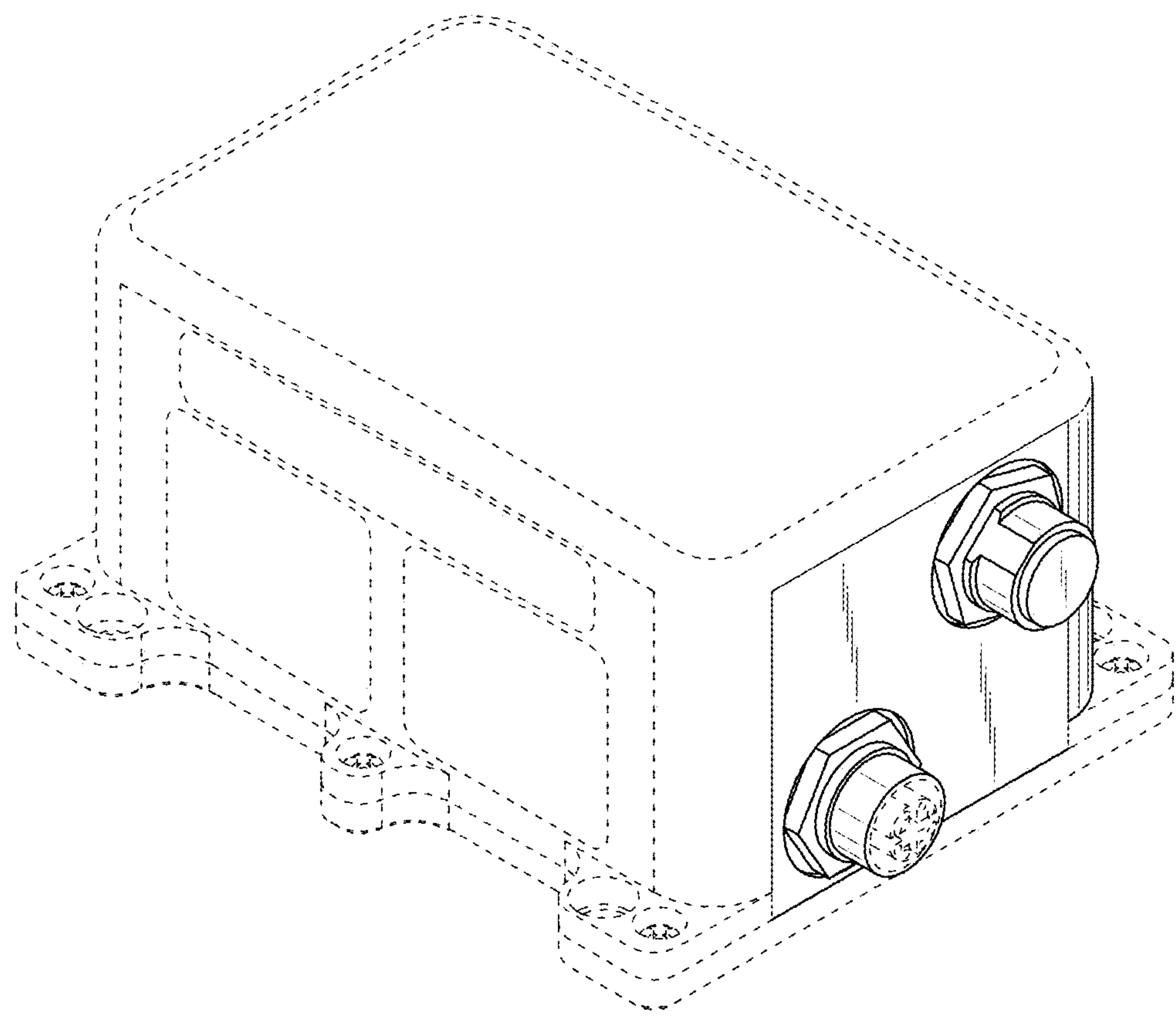


Fig. 2

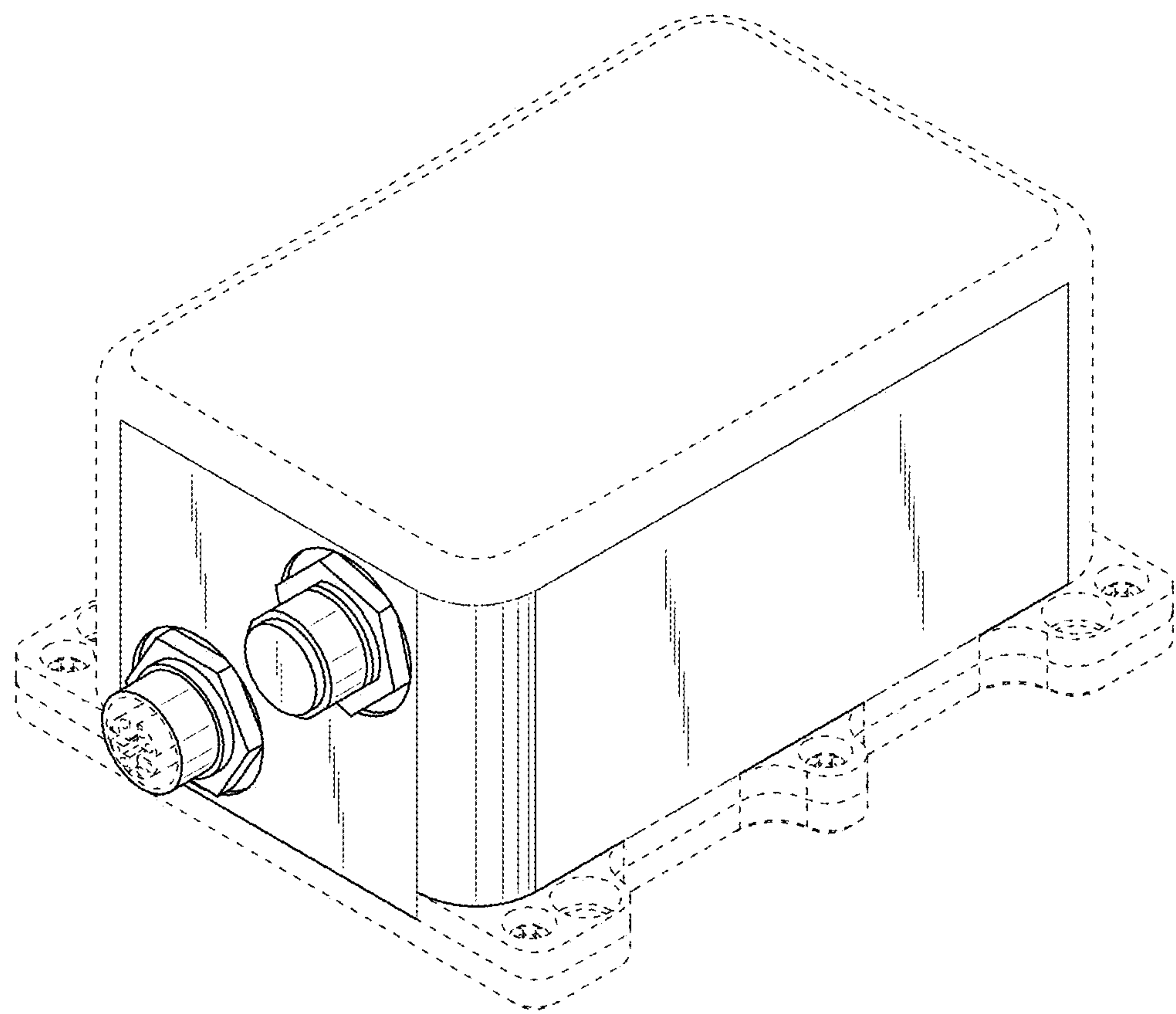


Fig. 3

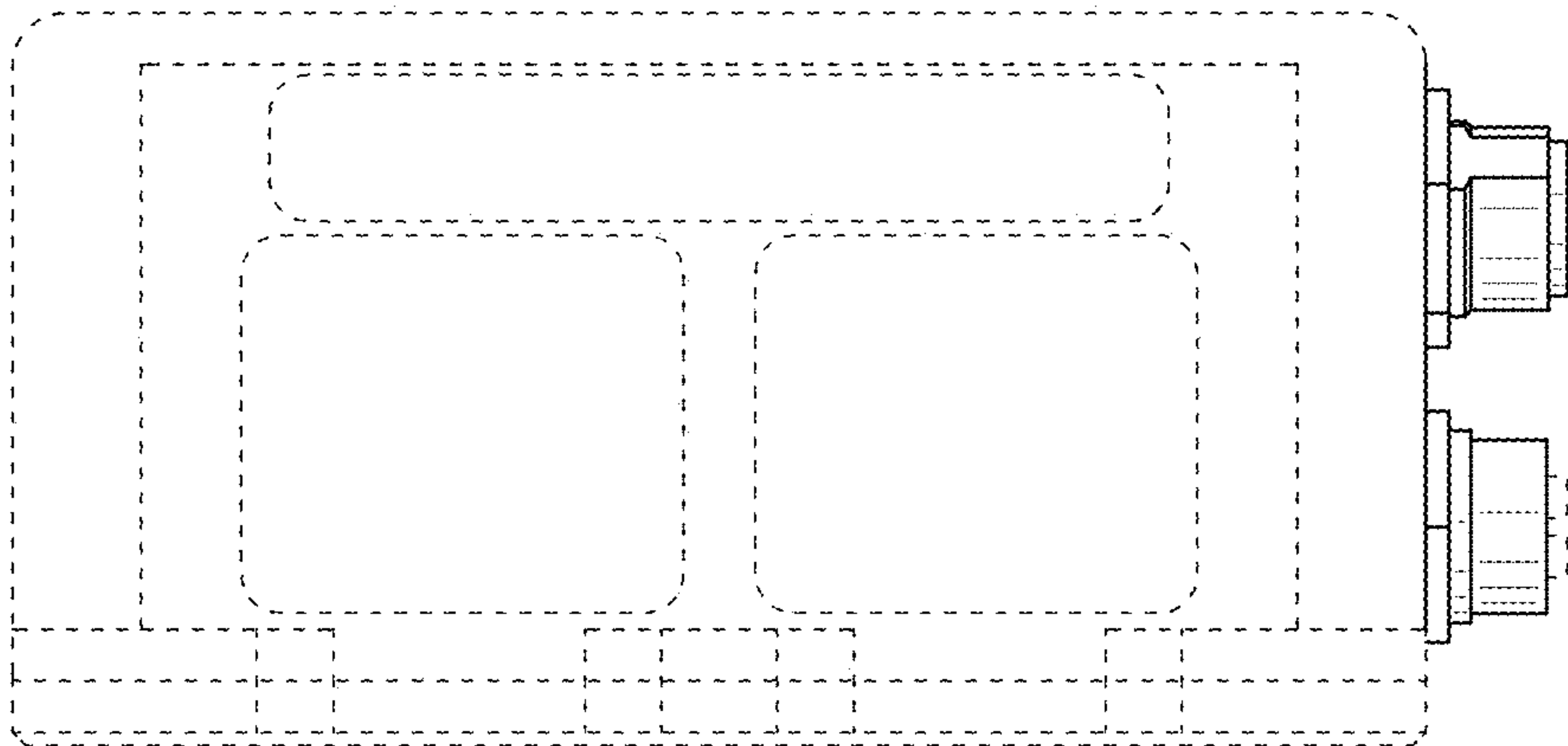


Fig. 4

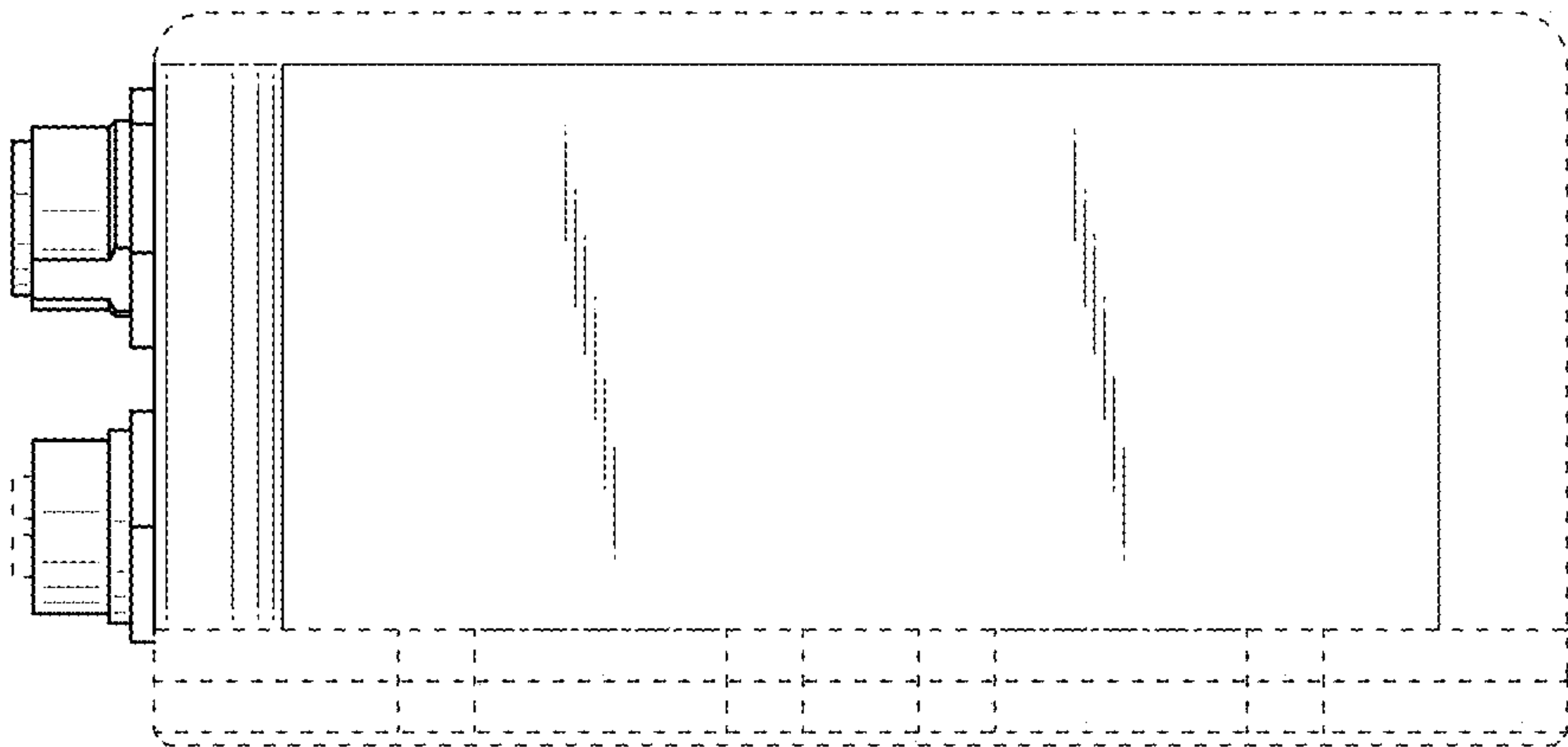


Fig. 5

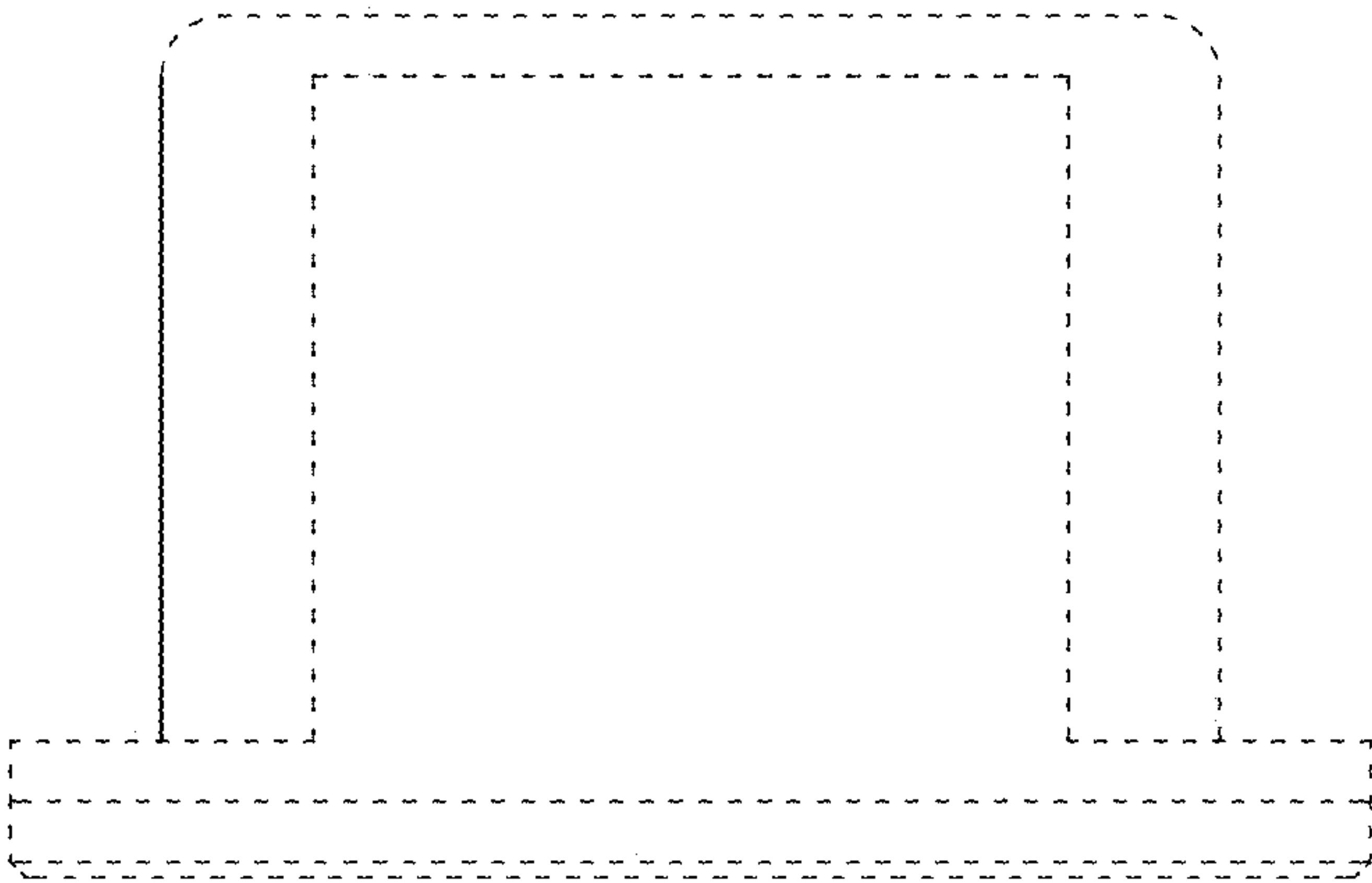


Fig. 6

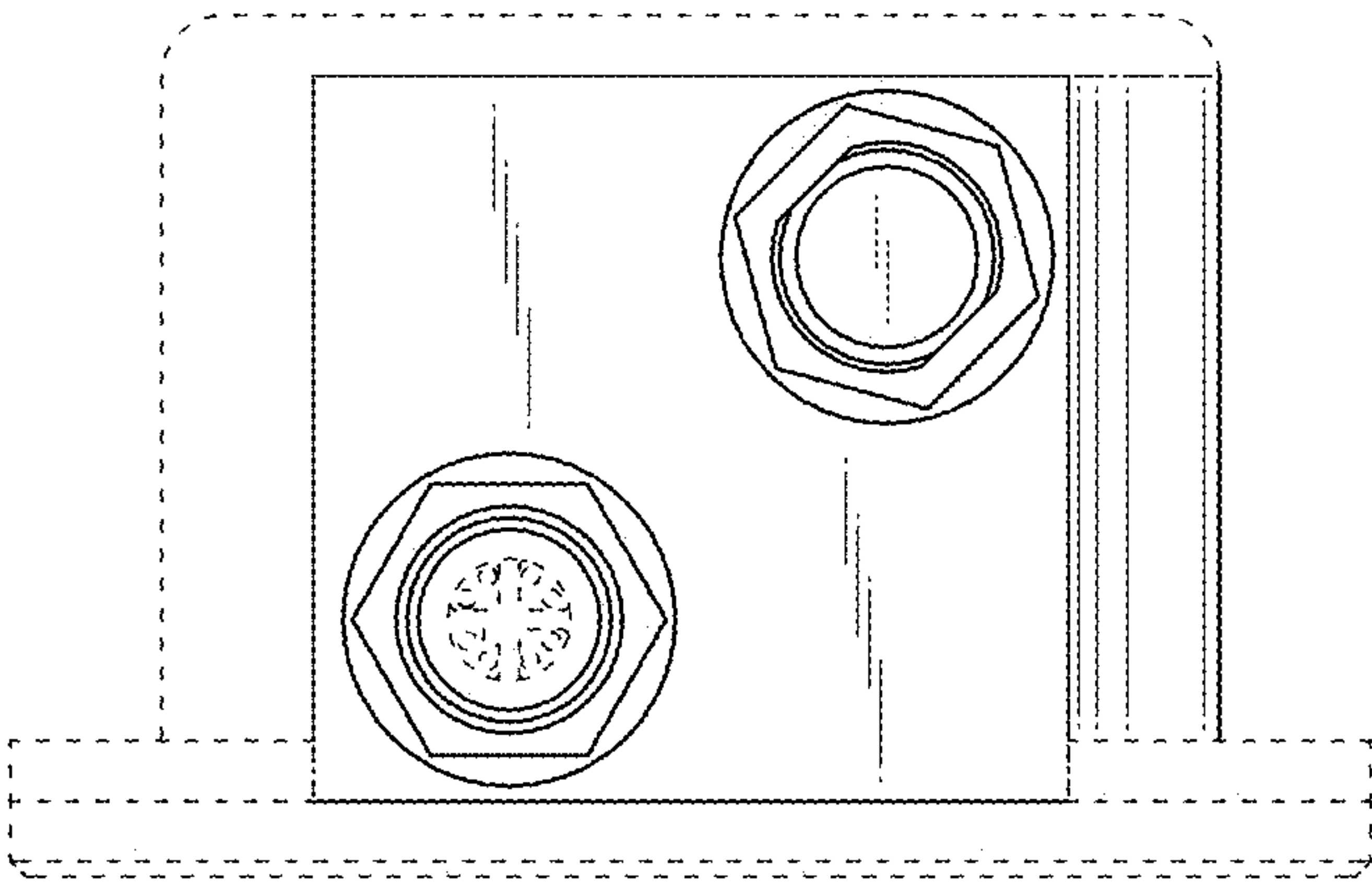


Fig. 7

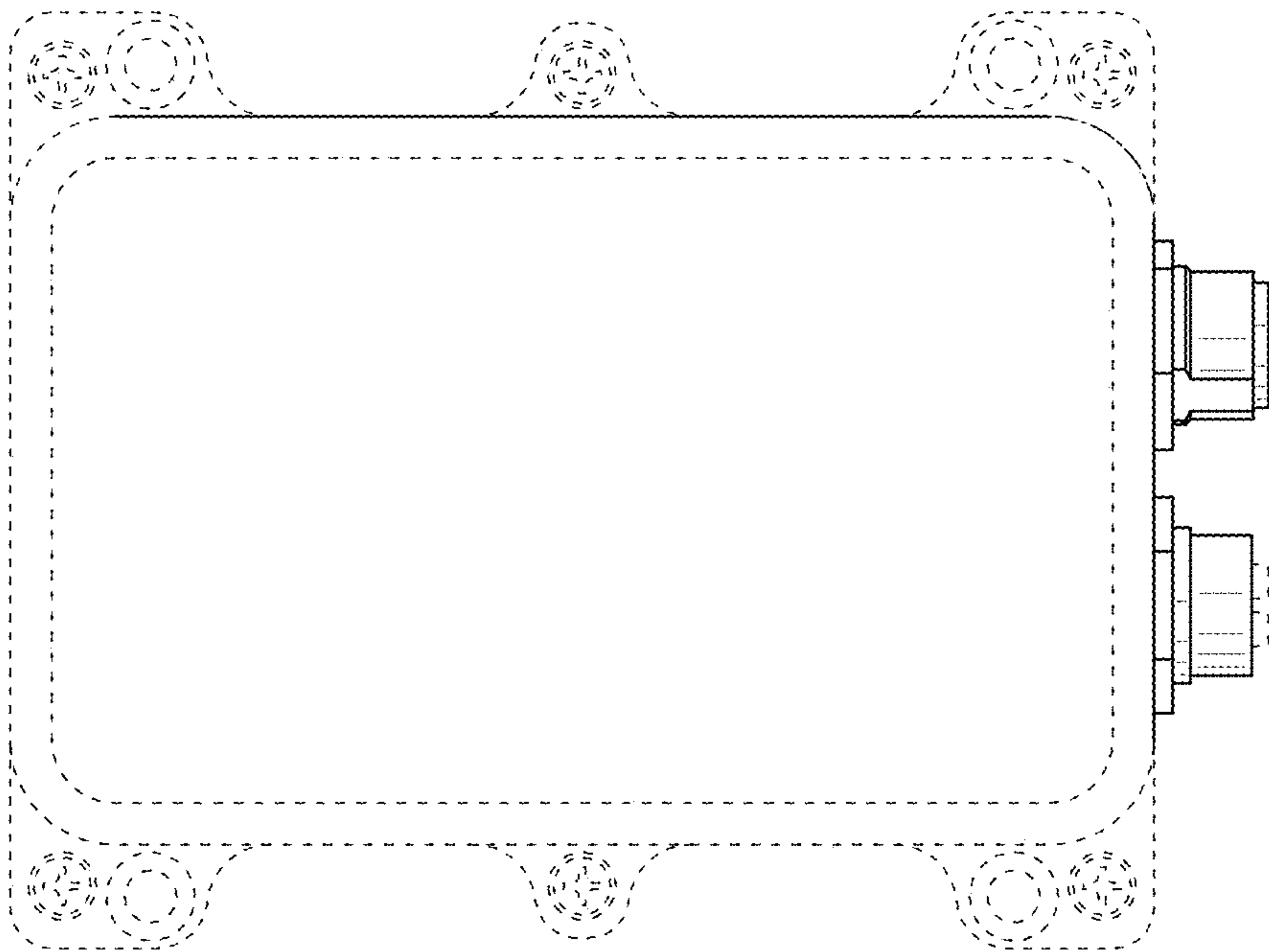


Fig. 8

