



US00D984382S

(12) **United States Design Patent** (10) **Patent No.:** **US D984,382 S**  
**Li** (45) **Date of Patent:** **\*\* Apr. 25, 2023**

(54) **ELECTRICAL CONNECTOR**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **IDEAL Industries, Inc.**, Sycamore, IL (US)

EP 0521199 A1 1/1993  
WO 20130003471 A1 1/2013

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OTHER PUBLICATIONS

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ISA/US, International Search Report and Written Opinion issued for International Application No. US2016015391, dated Mar. 29, 2016, 9 pages.

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

(Continued)

(21) Appl. No.: **29/766,110**

*Primary Examiner* — Jennifer O King

(22) Filed: **Jan. 13, 2021**

(74) *Attorney, Agent, or Firm* — Greenberg Traurig, LLP; Keith R. Jarosik

**Related U.S. Application Data**

(57) **CLAIM**

(63) Continuation of application No. 29/690,556, filed on May 9, 2019, now Pat. No. Des. 913,236, and a continuation of application No. 29/690,559, filed on May 9, 2019, now Pat. No. Des. 913,939.

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

(51) **LOC (14) Cl.** ..... **13-03**

**DESCRIPTION**

(52) **U.S. Cl.**  
USPC ..... **D13/120; D13/133**

(58) **Field of Classification Search**  
USPC ..... D13/147, 154, 120, 133, 148, 149, 182  
CPC ..... H01R 11/12; H01R 2107/00; H01R 4/28  
See application file for complete search history.

FIG. 1 is a bottom, front perspective view of a first embodiment of an electrical connector showing my new design; FIG. 2 is top, front perspective view thereof; FIG. 3 is a front side elevational view thereof; FIG. 4 is a rear side elevational view thereof; FIG. 5 is a left side elevational view thereof; FIG. 6 is a right side elevational view thereof; FIG. 7 is a bottom plan view thereof; FIG. 8 is a top plan view thereof; FIG. 9 is a bottom, front perspective view of a second embodiment of an electrical connector showing my new design; FIG. 10 is top, front perspective view thereof; FIG. 11 is a front side elevational view thereof; FIG. 12 is a rear side elevational view thereof; FIG. 13 is a left side elevational view thereof; FIG. 14 is a right side elevational view thereof; FIG. 15 is a bottom plan view thereof; and, FIG. 16 is a top plan view thereof.

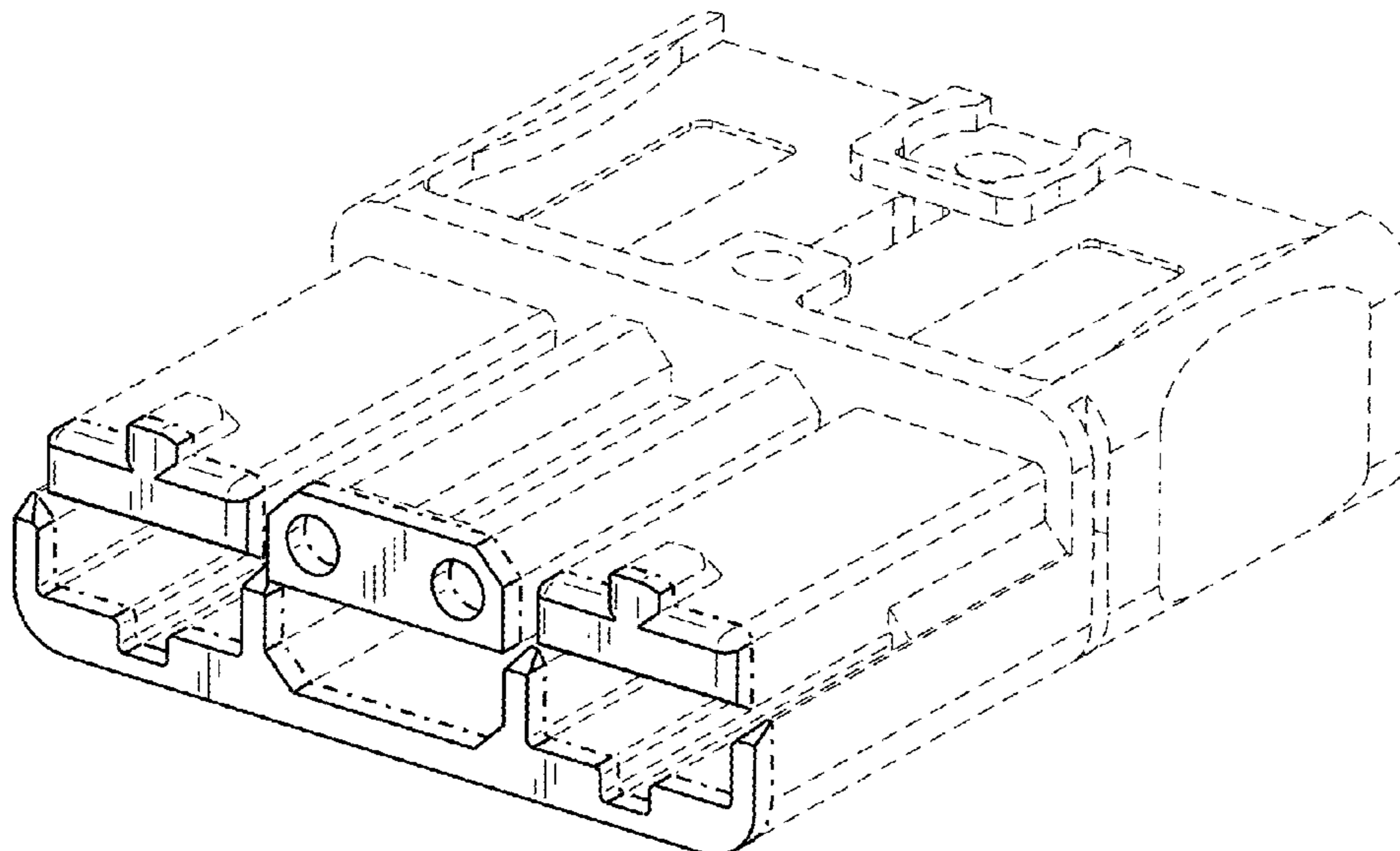
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,654,586 A 4/1972 Winkler  
3,735,784 A 5/1973 Obuch et al.  
3,794,957 A 2/1974 Winkler  
4,064,918 A 12/1977 Pobuta et al.  
4,328,742 A 5/1982 Discavage  
4,498,506 A 2/1985 Moody et al.  
4,710,135 A \* 12/1987 Aoyama ..... H01R 13/6272  
439/598

(Continued)

**1 Claim, 10 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

5,205,328 A 4/1993 Johnson  
 5,595,220 A 1/1997 Leban et al.  
 6,089,898 A 7/2000 Lincoln, III  
 6,302,157 B1 10/2001 Deschenes et al.  
 6,648,378 B1 11/2003 Torres et al.  
 D512,687 S 12/2005 Baker  
 D519,924 S 5/2006 Baker  
 7,185,680 B2 3/2007 Magno, Jr.  
 7,231,944 B2 6/2007 Magno, Jr.  
 D612,807 S 3/2010 Mancini et al.  
 D642,528 S 8/2011 Gravalin  
 D652,797 S 1/2012 Smith  
 D665,748 S 8/2012 Baker  
 9,682,806 B2 6/2017 Zantout et al.  
 9,701,428 B2 7/2017 Weiby et al.  
 D829,174 S 9/2018 O'Brien  
 D835,044 S 12/2018 Ramanna  
 D839,194 S 1/2019 Wardenburg  
 D860,136 S 9/2019 Li  
 D864,119 S 10/2019 Abe  
 D873,773 S 1/2020 Cao

D873,774 S 1/2020 Cao  
 D876,361 S 2/2020 Hu  
 D883,932 S 5/2020 Chen  
 D921,589 S \* 6/2021 Blankinship ..... D13/133  
 D929,342 S \* 8/2021 Corona ..... D13/146  
 D933,609 S \* 10/2021 Obata ..... D13/133  
 D934,176 S \* 10/2021 Obata ..... D13/133  
 11,309,661 B2 \* 4/2022 Obata ..... H01R 13/6272  
 2005/0115629 A1 6/2005 Bernard  
 2005/0178461 A1 8/2005 Magno, Jr. et al.  
 2007/0089801 A1 4/2007 Hillegonds et al.  
 2009/0242069 A1 10/2009 Segroves  
 2015/0267844 A1 9/2015 Zantout et al.  
 2016/0236804 A1 8/2016 Weiby et al.

OTHER PUBLICATIONS

ISA/US International Search Report and Written Opinion issued for International Application No. US2018062640, dated Mar. 27, 2019, 12 pages.  
 JPO, Office Action issued on Japanese design application No. 2019-024944, 4 pages.

\* cited by examiner

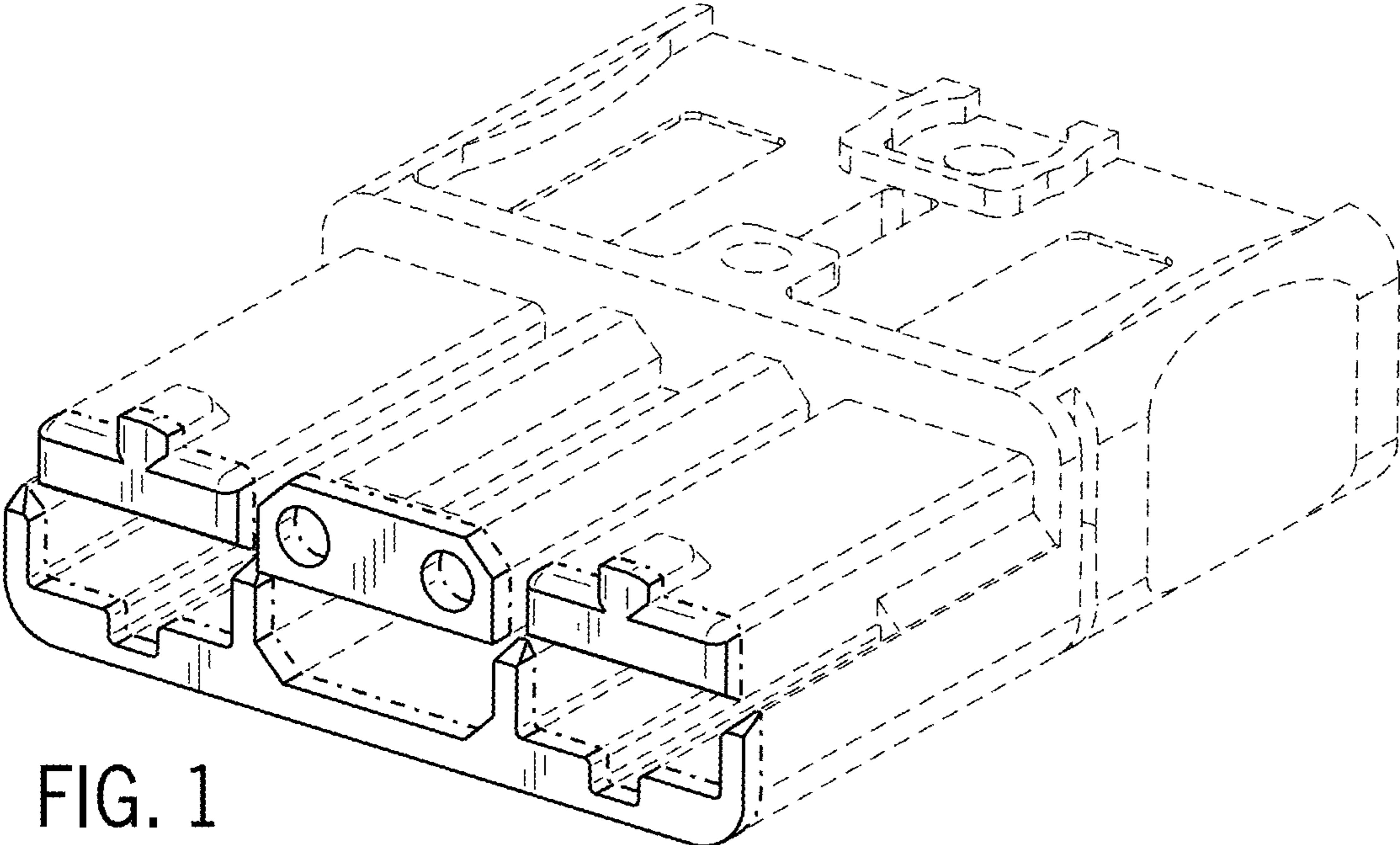


FIG. 1

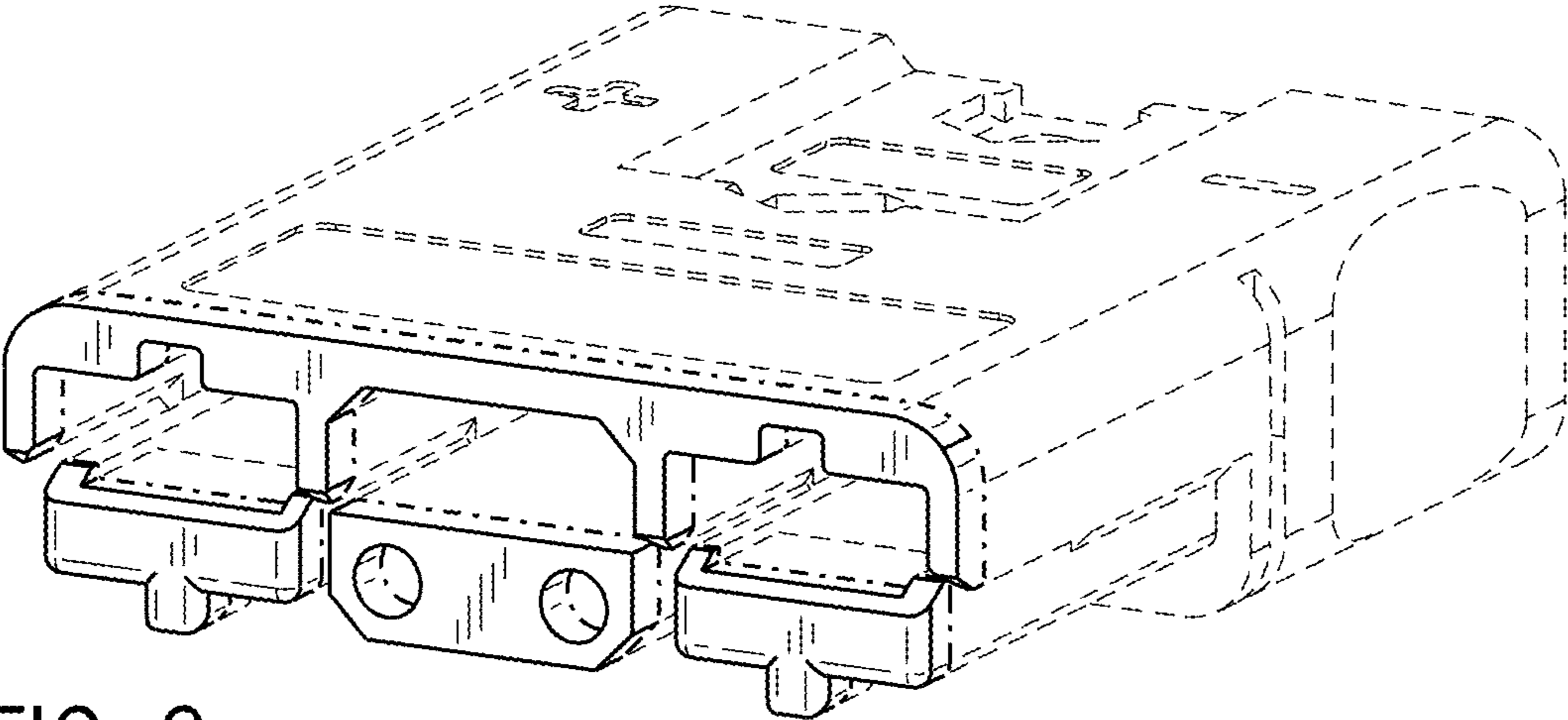


FIG. 2

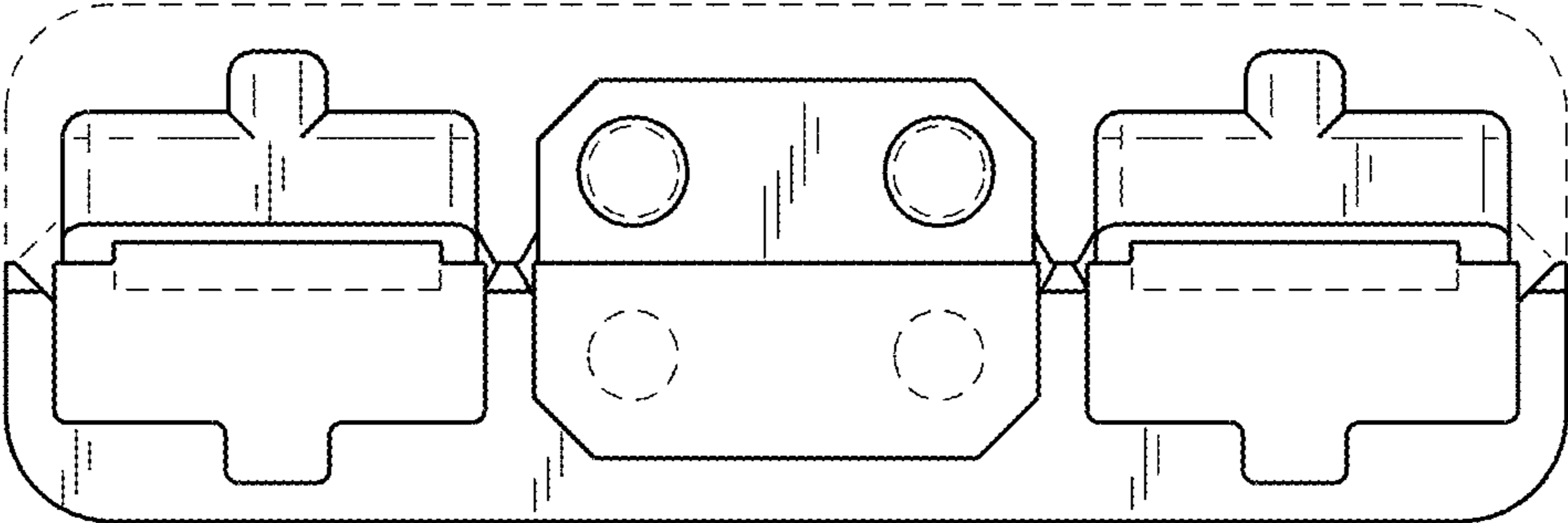


FIG. 3

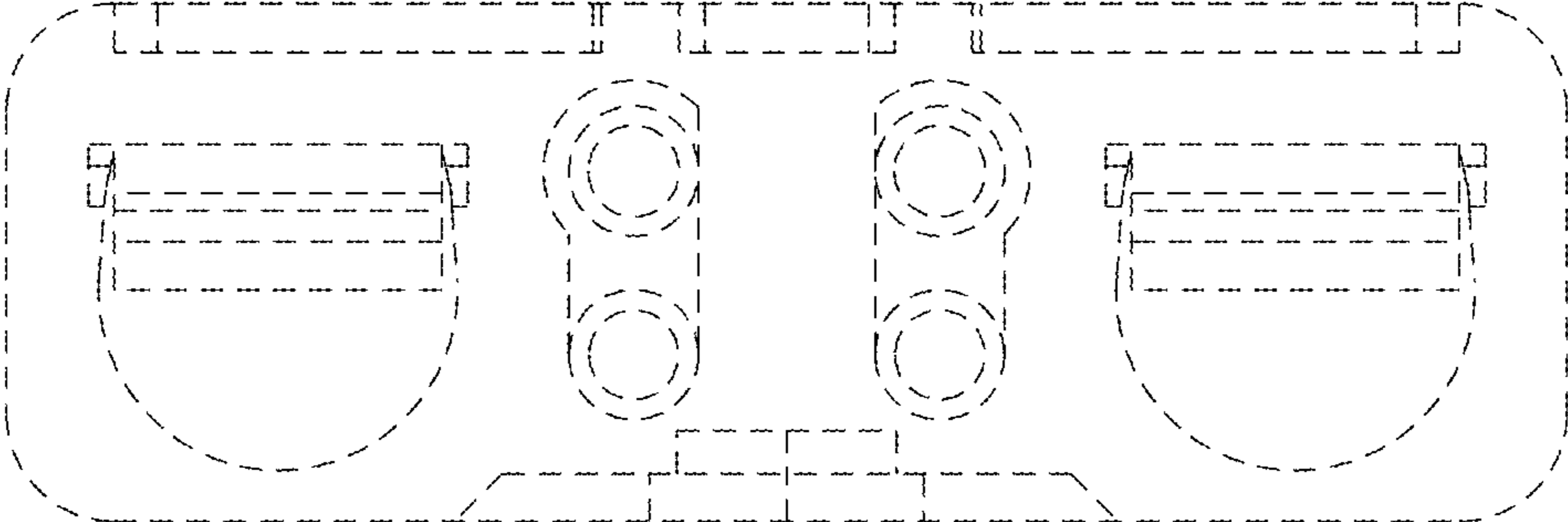


FIG. 4



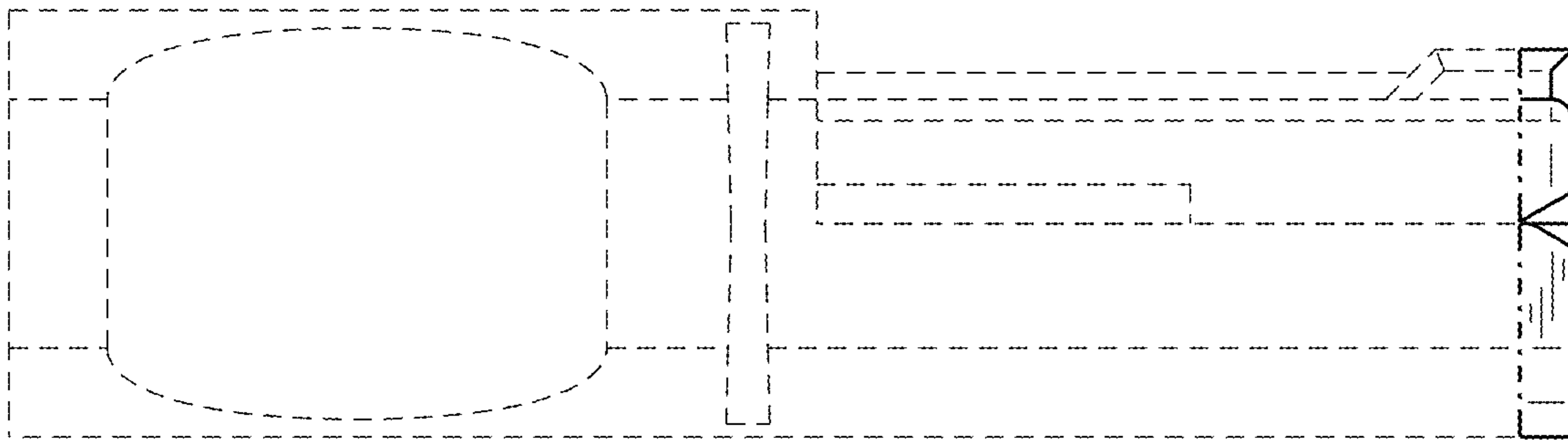


FIG. 5

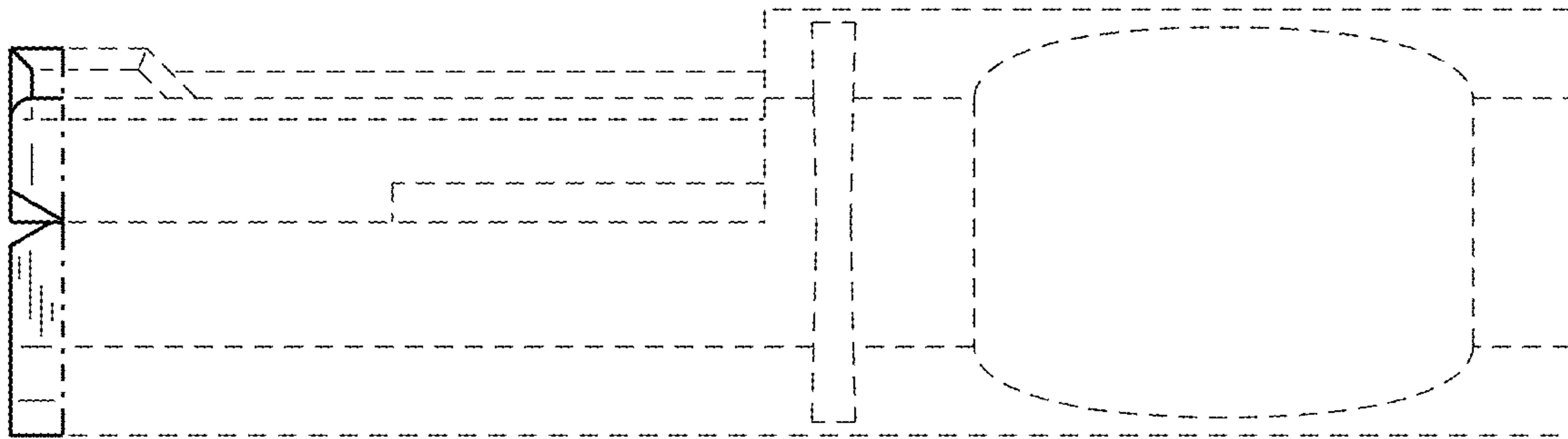


FIG. 6

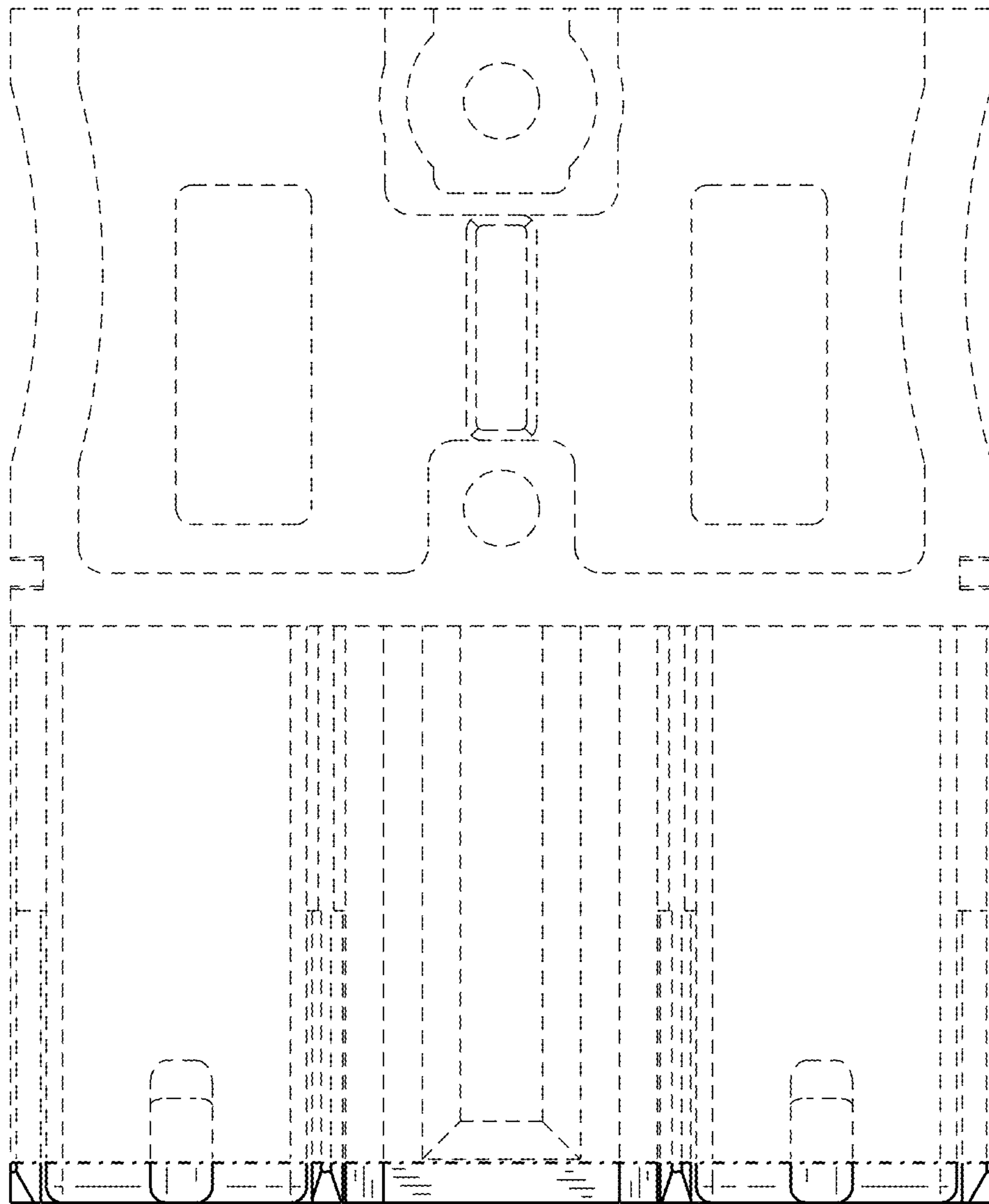


FIG. 7

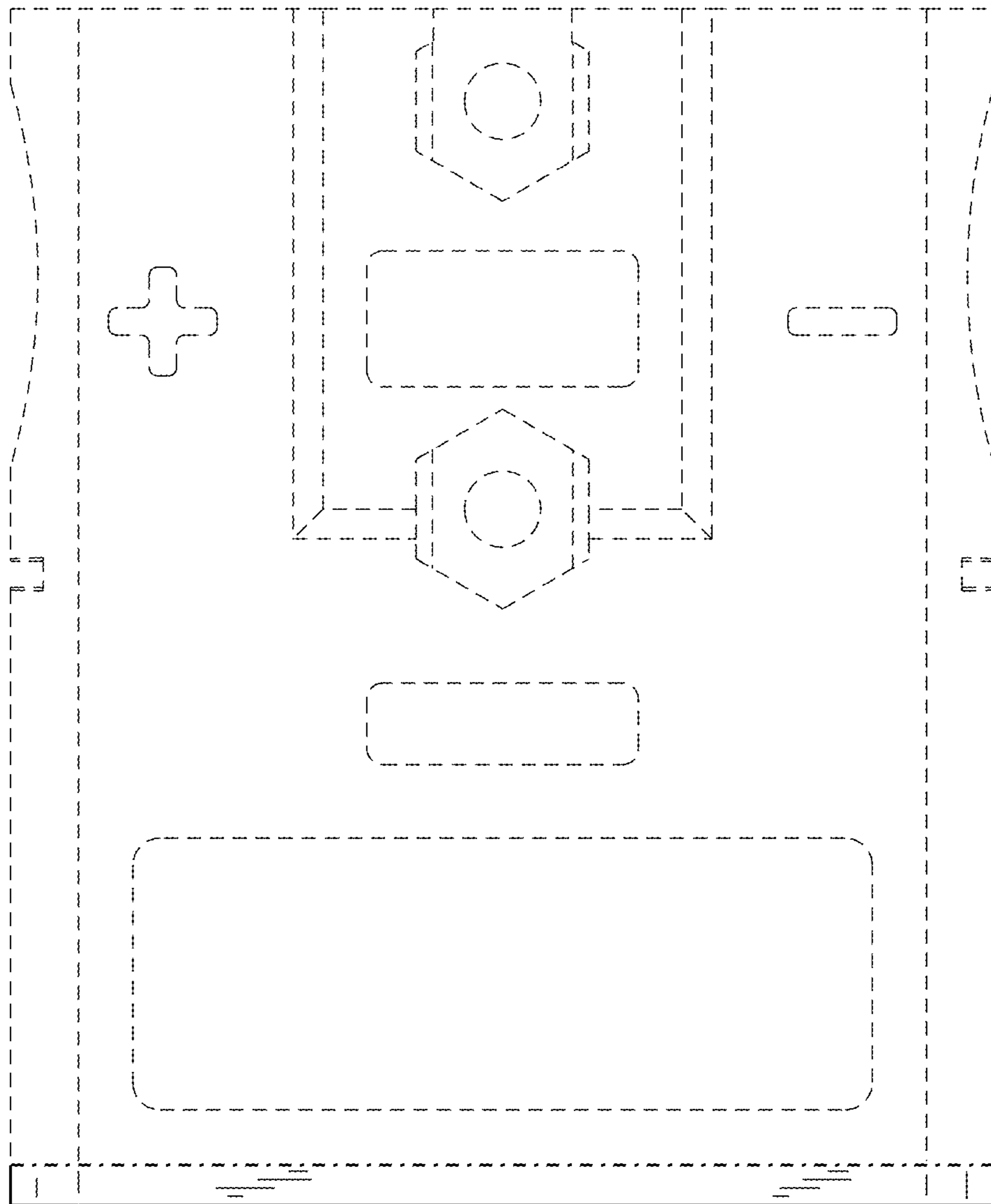


FIG. 8

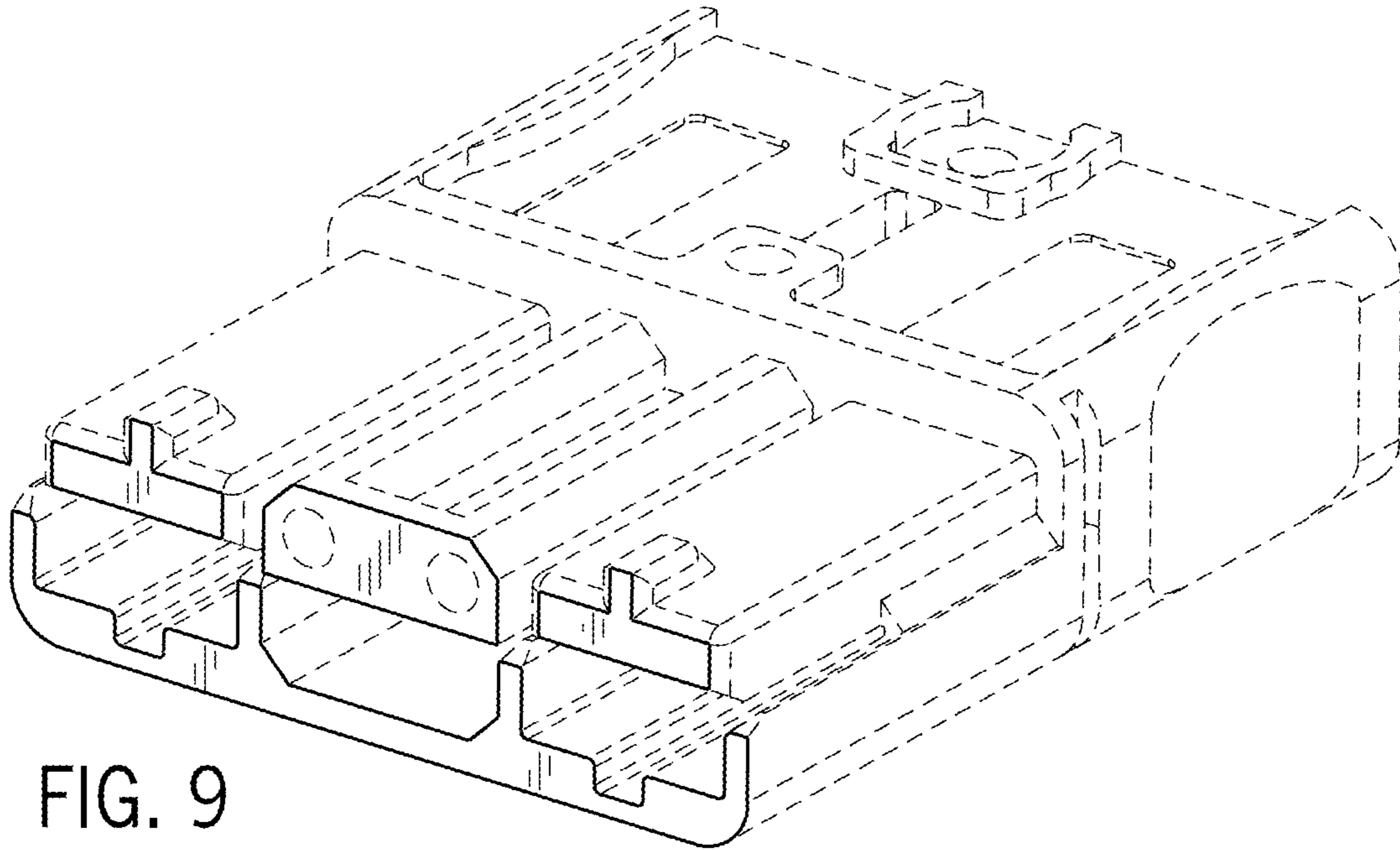


FIG. 9

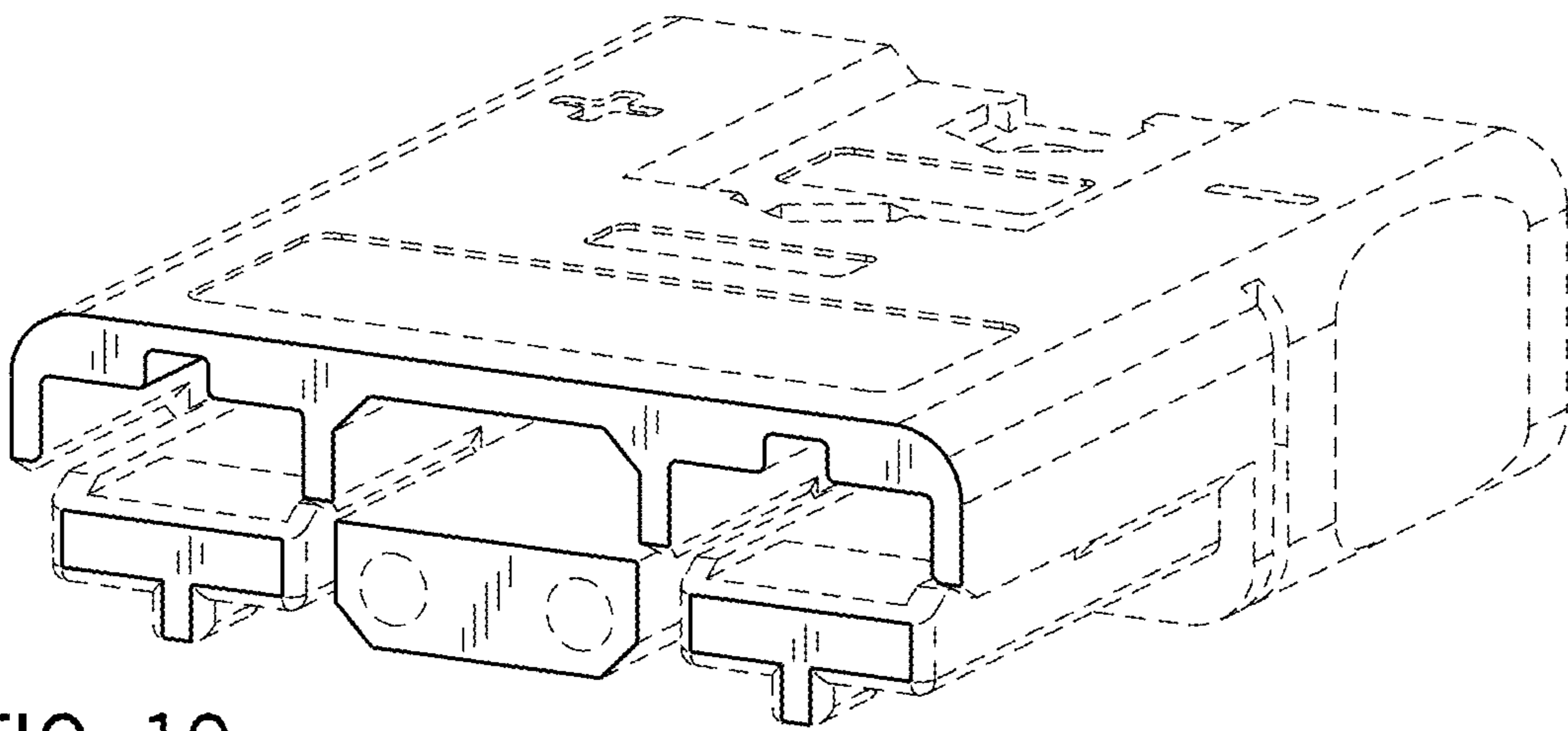


FIG. 10



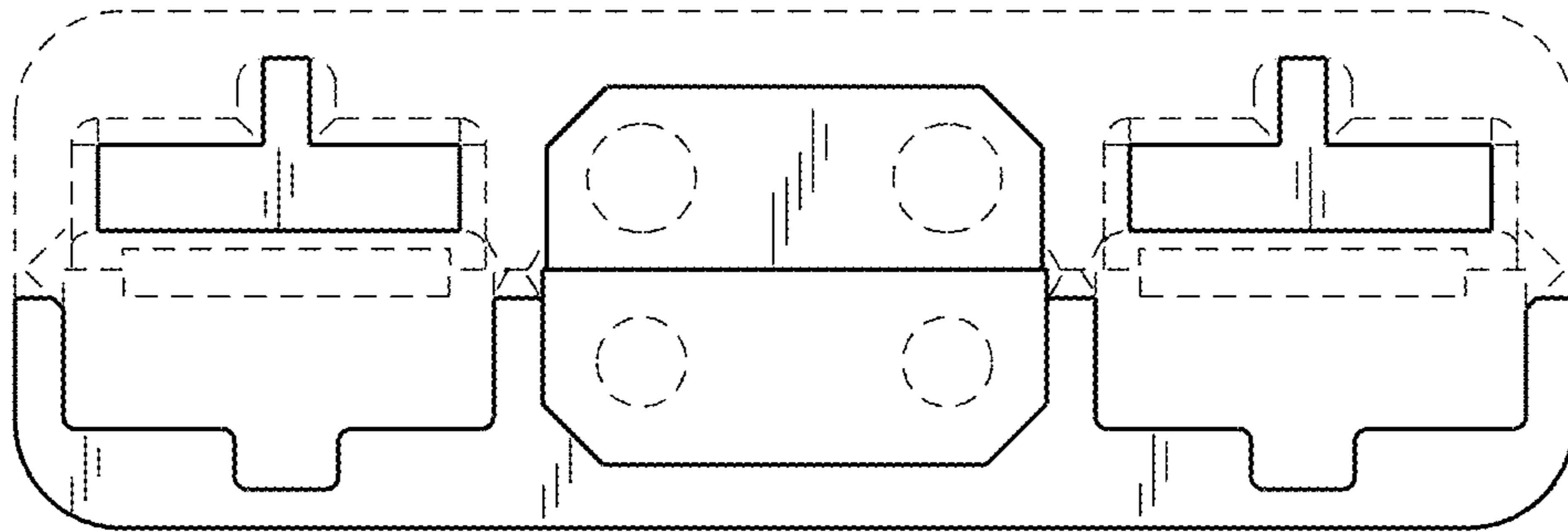


FIG. 11

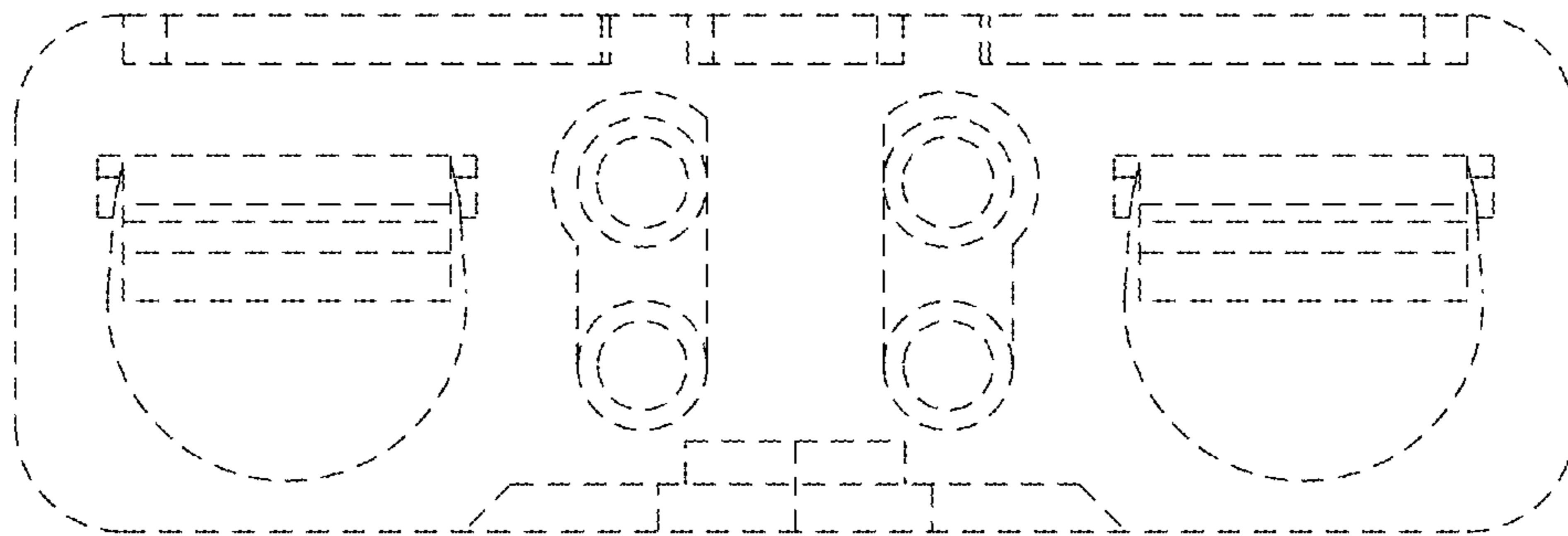


FIG. 12

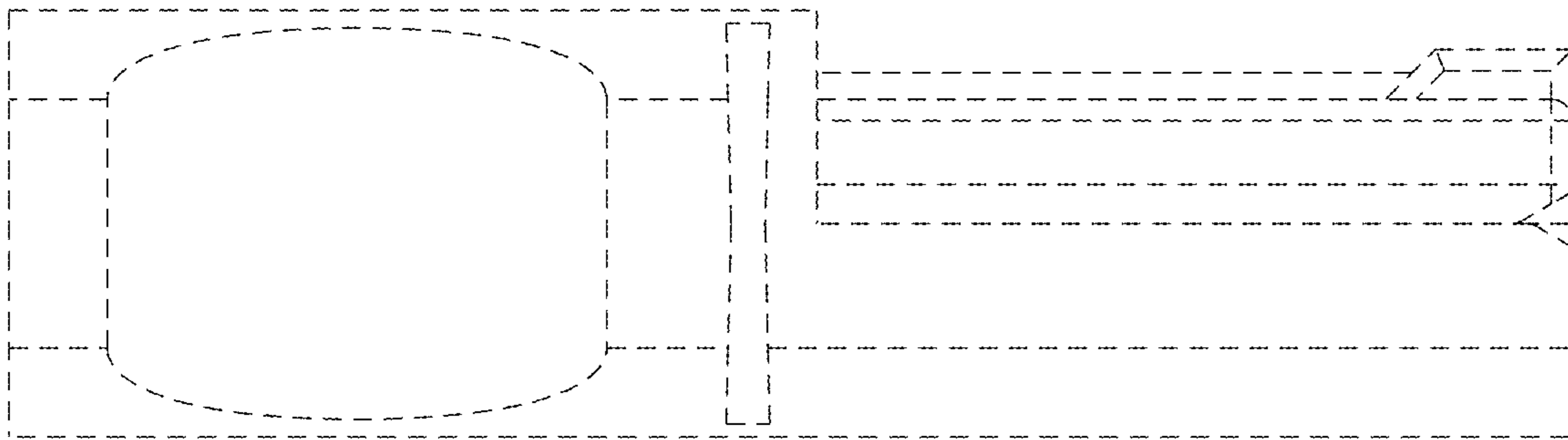


FIG. 13

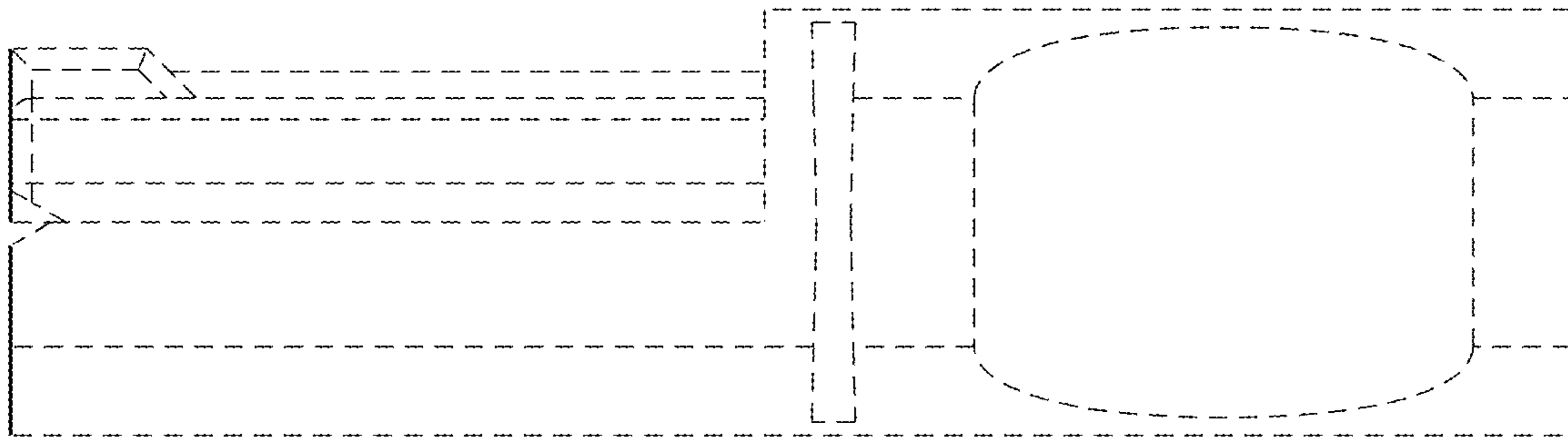


FIG. 14

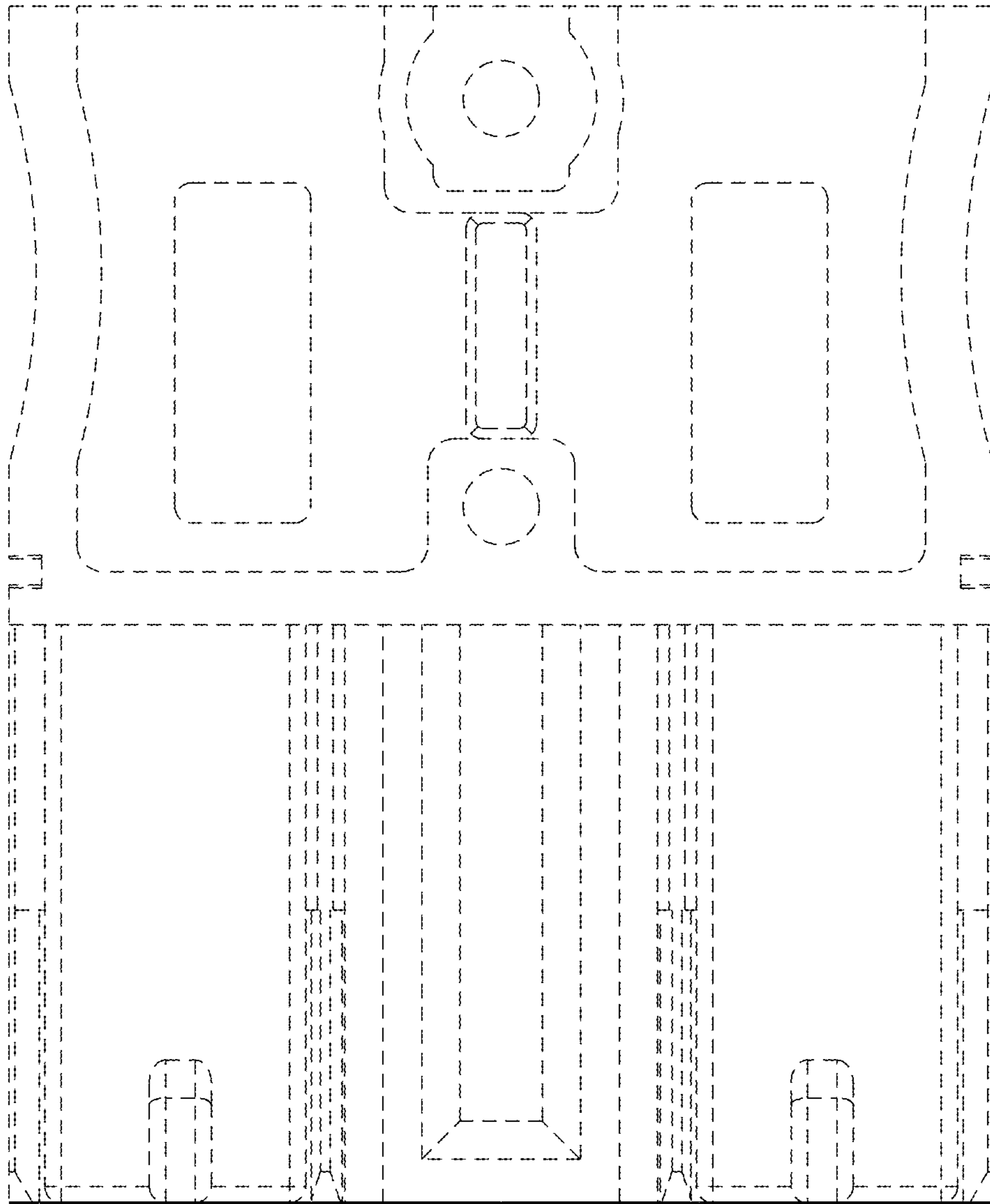


FIG. 15

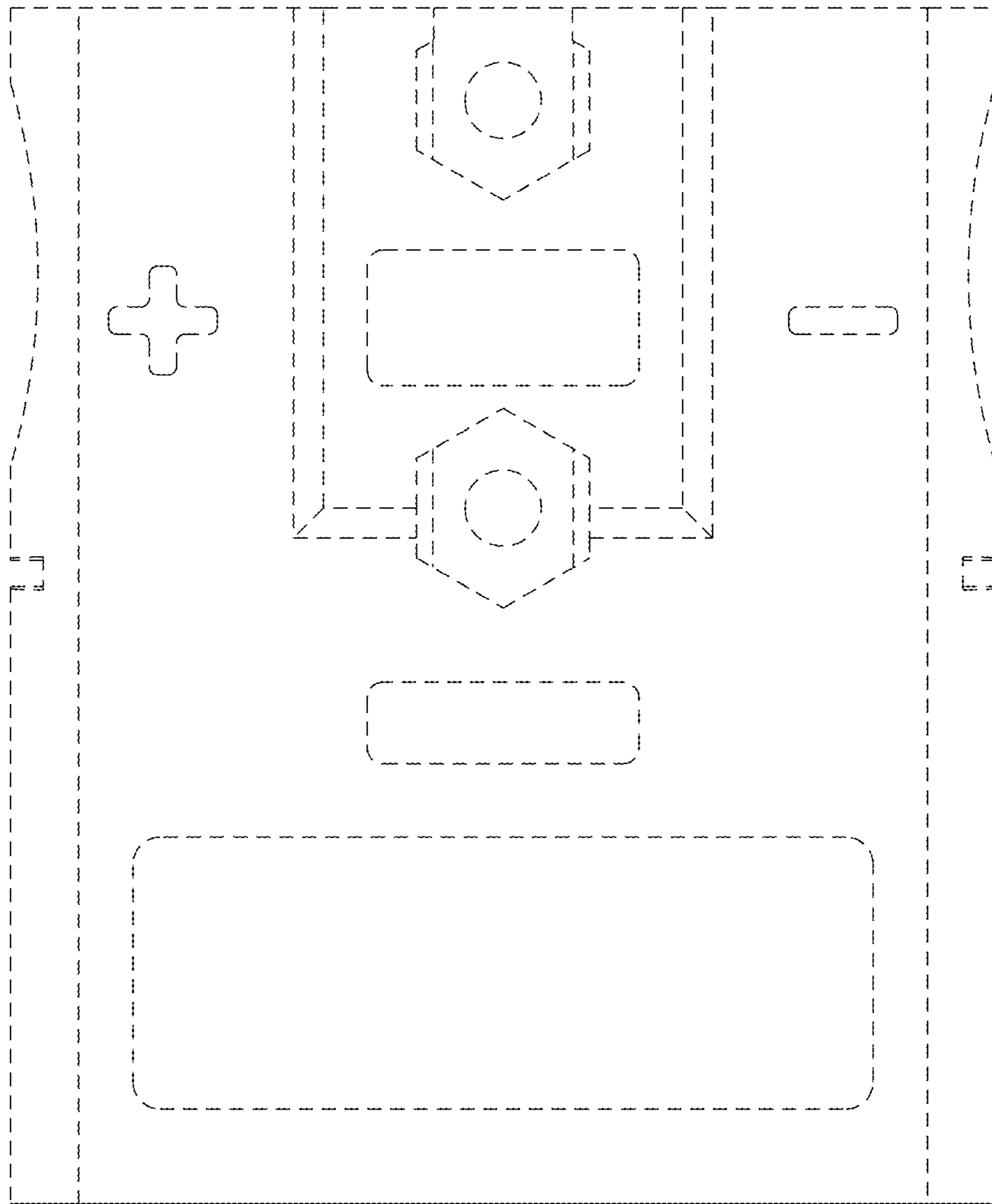


FIG. 16