



US00D837163S

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

(10) **Patent No.:** **US D837,163 S**  
(45) **Date of Patent:** **\*\* Jan. 1, 2019**

(54) **ELECTRICAL CONNECTOR**

(71) Applicant: **Japan Aviation Electronics Industry, Limited, Tokyo (JP)**

(72) Inventors: **Masaki Kimura, Tokyo (JP); Hiroyasu Koizumi, Tokyo (JP)**

(73) Assignee: **JAPAN AVIATION ELECTRONICS INDUSTRY, LIMITED, Tokyo (JP)**

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

(21) Appl. No.: **29/573,025**

(22) Filed: **Aug. 2, 2016**

(30) **Foreign Application Priority Data**

Feb. 10, 2016 (JP) ..... 2016-002840

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

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

(58) **Field of Classification Search**  
USPC ..... D13/120, 133, 146, 147, 154, 184, 199  
CPC ..... H01R 4/02; H01R 24/60; H01R 24/64;  
H01R 13/17; H01R 13/502; H01R  
13/648; H01R 13/6581; H01R 13/6583;  
H01R 13/6596; H01R 12/52; H01R  
12/71; H01R 12/79; H01R 13/24; H01R  
43/02; H01R 43/16  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

- 4,611,873 A \* 9/1986 Punako ..... H01R 13/6588  
439/277
- D320,381 S \* 10/1991 McGrane ..... 439/798
- D342,937 S \* 1/1994 Angel, Jr. .... D13/120
- D366,928 S \* 2/1996 Itafuji ..... D23/233

- D413,373 S \* 8/1999 Watanabe ..... D23/233
- D420,101 S \* 2/2000 Hiramatsu ..... D23/233
- D427,285 S \* 6/2000 Watanabe ..... D23/233
- D518,147 S \* 3/2006 Fukushima ..... D23/233
- D526,385 S \* 8/2006 Johnson ..... D23/233
- D539,751 S \* 4/2007 Kiely ..... D13/152
- D556,860 S \* 12/2007 Yokohari ..... D23/233
- D600,783 S \* 9/2009 Narita ..... D23/233
- D603,937 S \* 11/2009 Tejamo ..... D23/233
- D604,396 S \* 11/2009 Schmidt ..... D23/233
- D608,416 S \* 1/2010 Schmidt ..... D23/233
- D638,730 S \* 5/2011 Ishibashi ..... D10/85
- D667,532 S \* 9/2012 Asaba ..... D10/85
- D681,163 S \* 4/2013 Asaba ..... D10/85
- D690,392 S \* 9/2013 Miyazoe ..... D23/233
- D701,292 S \* 3/2014 Kaneko ..... D23/233
- D743,910 S \* 11/2015 Murphy ..... D13/147
- D750,745 S \* 3/2016 Sato ..... D23/233
- D758,317 S \* 6/2016 Plassiard ..... D13/154
- D804,438 S \* 12/2017 Makis ..... D13/184

(Continued)

*Primary Examiner* — Daniel D Bui

(74) *Attorney, Agent, or Firm* — Manabu Kanesaka

(57) **CLAIM**

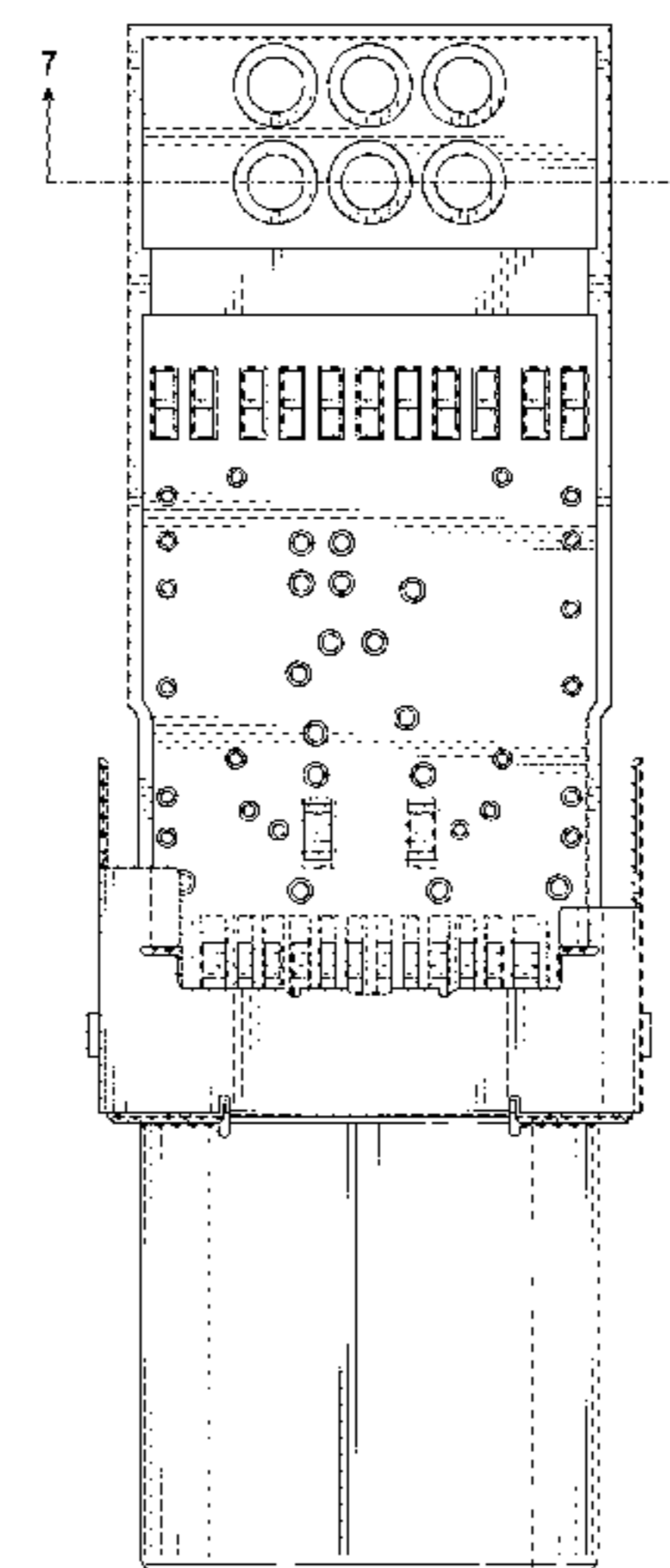
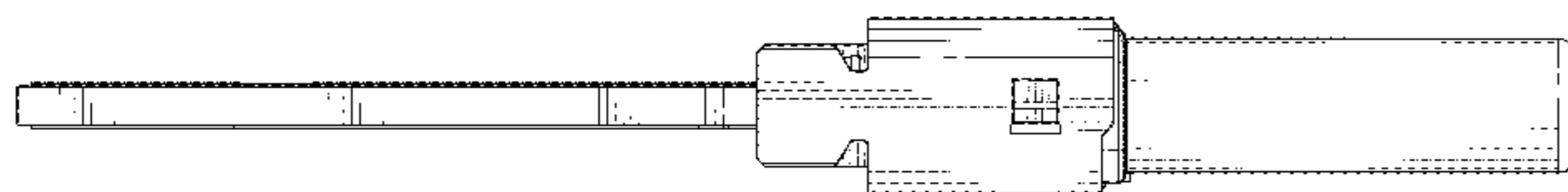
The ornamental design for an electrical connector, as shown and described.

**DESCRIPTION**

FIG. 1 is a front elevational view of an electrical connector showing our new design;  
 FIG. 2 is a rear elevational view thereof;  
 FIG. 3 is a right side elevational view thereof;  
 FIG. 4 is a left side elevational view thereof;  
 FIG. 5 is a top plan view thereof;  
 FIG. 6 is a bottom plan view thereof; and,  
 FIG. 7 is an enlarged sectional view thereof taken along line 7-7 in FIG. 5.

The broken line showing of the electrical connector is for the purpose of illustrating portions of the article and forms no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D808,341 S \* 1/2018 Kimura ..... D13/147  
D808,342 S \* 1/2018 Yamaguchi ..... D13/147  
D810,873 S \* 2/2018 Yoshida ..... D23/233  
D822,613 S \* 7/2018 Kimura ..... D13/154  
2006/0105629 A1 \* 5/2006 Hayashi ..... H01R 13/5219  
439/587  
2008/0209716 A1 \* 9/2008 Yagi ..... H01R 43/048  
29/753  
2009/0170365 A1 \* 7/2009 Wang ..... H01R 13/4223  
439/367  
2009/0253279 A1 \* 10/2009 Howell ..... H01R 13/33  
439/82  
2011/0151689 A1 \* 6/2011 Lin ..... G01R 1/0408  
439/66  
2011/0195615 A1 \* 8/2011 Falchetti ..... H01R 11/283  
439/806  
2016/0344118 A1 \* 11/2016 Hsieh ..... H01R 43/16

\* cited by examiner

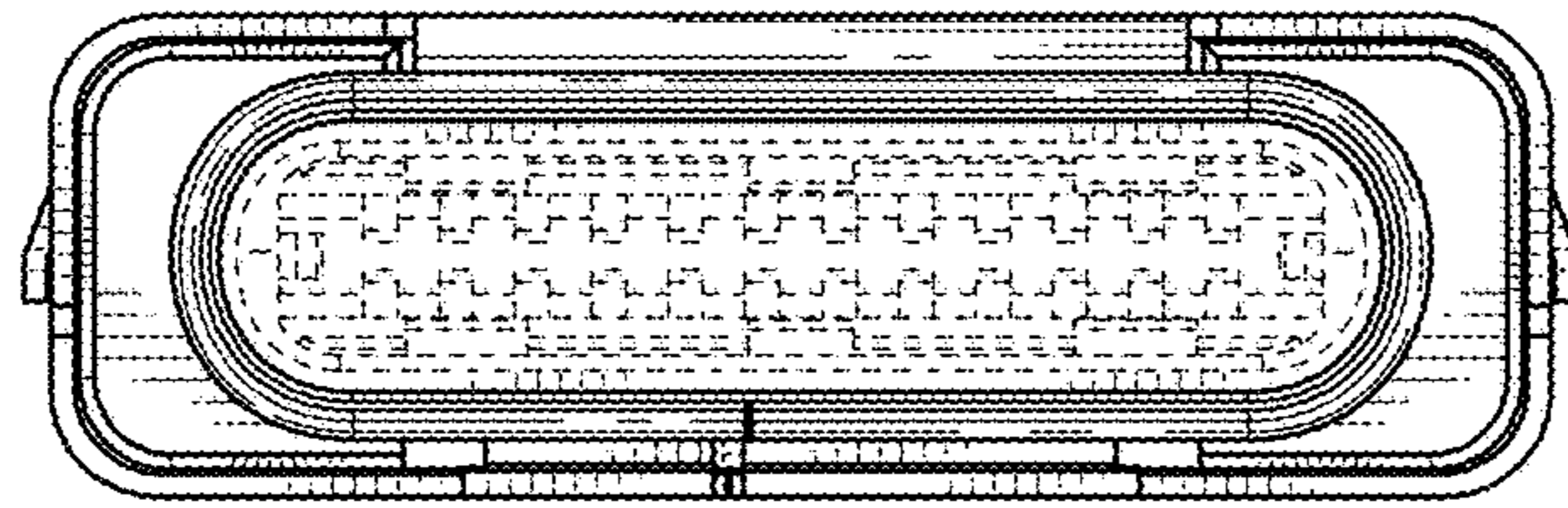


FIG. 1

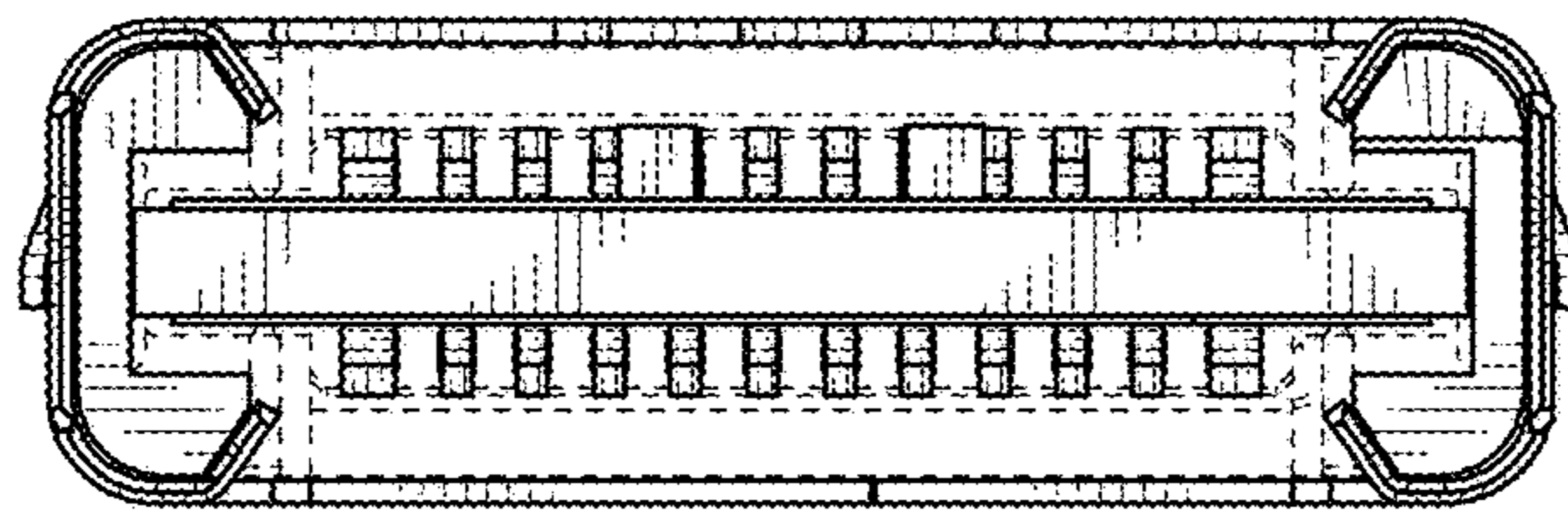


FIG. 2

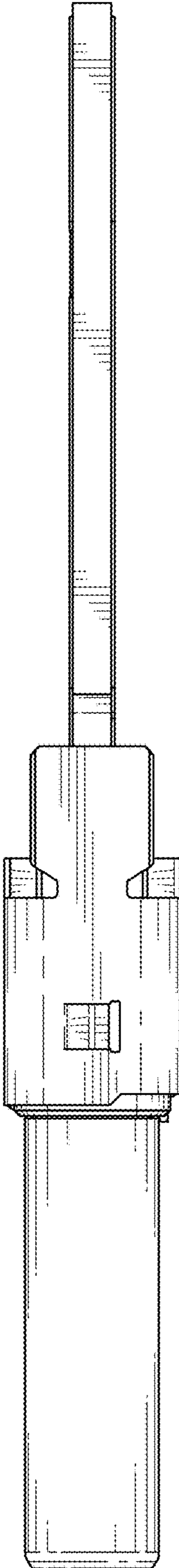


FIG. 3

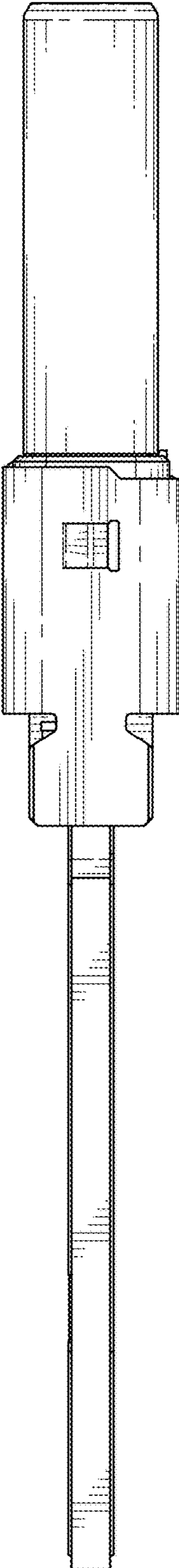


FIG. 4

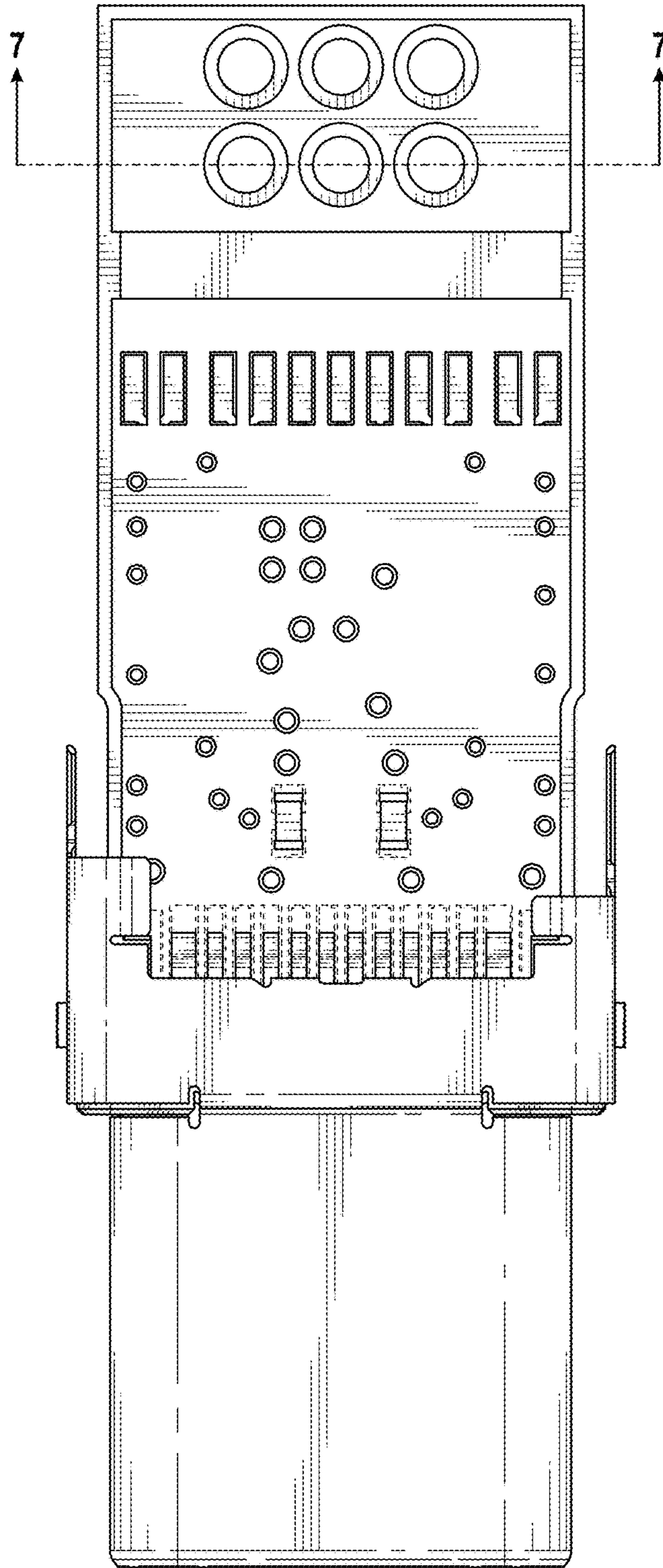


FIG. 5

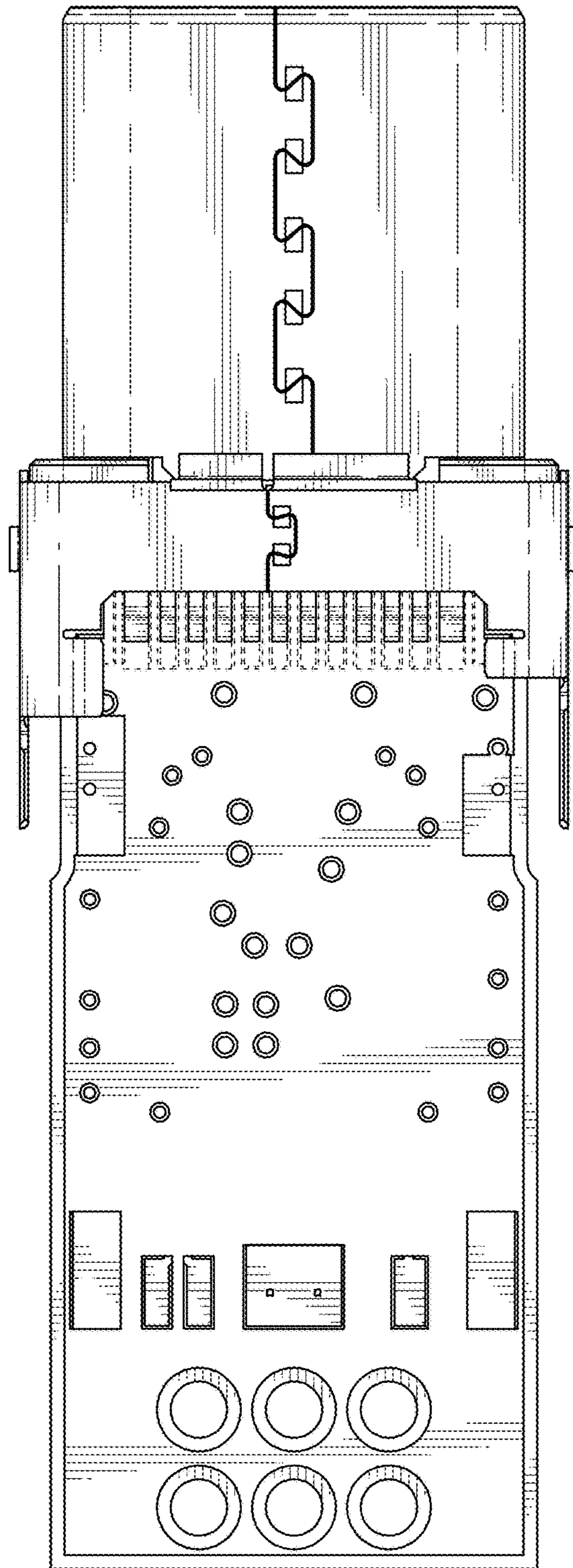


FIG. 6

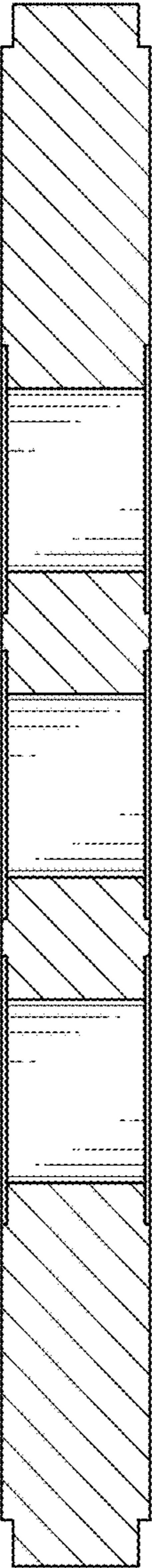


FIG. 7