



US00D913235S

(12) **United States Design Patent**
DeKeuster

(10) **Patent No.:** **US D913,235 S**
(45) **Date of Patent:** **** Mar. 16, 2021**

(54) **BATTERY MODULE CONNECTOR BARREL**

D389,457 S 1/1998 Beranek
6,312,277 B1 11/2001 Holub
6,372,377 B1 4/2002 Ovshinsky et al.
(Continued)

(71) Applicant: **CPS Technology Holdings LLC**, New York, NY (US)

(72) Inventor: **Richard M. DeKeuster**, Racine, WI (US)

FOREIGN PATENT DOCUMENTS

EP 0921607 6/1999
EP 2355209 10/2011
(Continued)

(73) Assignee: **CPS Technology Holdings LLC**, New York, NY (US)

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

Primary Examiner — Jennifer O King
(74) *Attorney, Agent, or Firm* — Boardman & Clark LLP

(21) Appl. No.: **29/714,423**

(57) **CLAIM**

The ornamental design for a connector barrel of a battery module, as shown and described in FIGS. 1-8.

(22) Filed: **Nov. 22, 2019**

DESCRIPTION

Related U.S. Application Data

(62) Division of application No. 29/576,504, filed on Sep. 2, 2016, now Pat. No. Des. 867,993.

(51) **LOC (13) Cl.** **13-01**

(52) **U.S. Cl.**
USPC **D13/119**

(58) **Field of Classification Search**
USPC D13/103, 104, 110, 107, 119, 120, 133, D13/156

CPC H01R 13/641; H01M 2/1027; H01M 2/1022; H01M 2/1072; H01M 2/105; H01M 2/1077

See application file for complete search history.

(56) **References Cited**

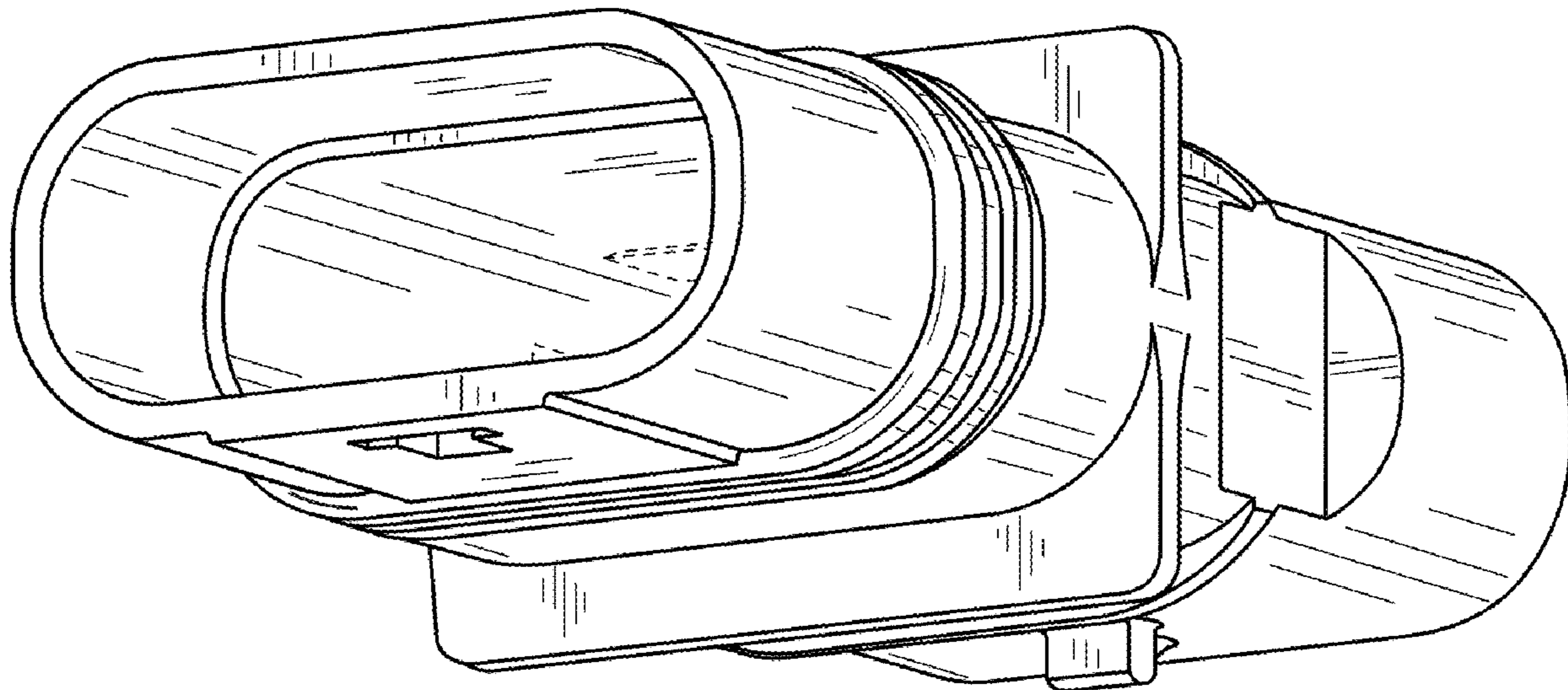
U.S. PATENT DOCUMENTS

D256,356 S 8/1980 Lazerson
D319,813 S 9/1991 Kozono
5,127,848 A 7/1992 Taguchi
D335,647 S 5/1993 Hood
5,378,552 A 1/1995 Dixon, Jr.
5,681,178 A 10/1997 Kunkle

FIG. 1 is a back underside perspective view of a connector barrel showing my new design;
FIG. 2 is a front overhead perspective view of the connector barrel of FIG. 1;
FIG. 3 is a top plan view of the connector barrel of FIG. 1;
FIG. 4 is a bottom plan view of the connector barrel of FIG. 1;
FIG. 5 is a right side elevational view of the connector barrel of FIG. 1;
FIG. 6 is a left side elevational view of the connector barrel of FIG. 1;
FIG. 7 is a front elevational view of the connector barrel of FIG. 1; and,
FIG. 8 is a back elevational view of the connector barrel of FIG. 1.

The broken lines shown in the drawings show portions of the battery module connector barrel which form no part of the claimed design. Where the dot-dash broken lines abut the shaded surface it is understood that those broken lines represent an unclaimed boundary between the claimed and unclaimed surfaces.

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,376,122 B1 * 4/2002 Cheeseman H01M 2/0202
429/100

D475,014 S 5/2003 Kano
D588,990 S 3/2009 Kok
D589,444 S 3/2009 Kok
7,722,372 B2 5/2010 Matsumoto et al.
7,879,485 B2 2/2011 Yoon et al.
7,892,011 B2 2/2011 Beer
8,038,450 B2 10/2011 Nakagawa
8,147,280 B2 4/2012 Fernandez et al.
8,221,165 B2 7/2012 DeWitte
8,237,400 B2 8/2012 Gamboa et al.
8,241,043 B1 * 8/2012 Lin H01R 13/64
439/39

8,328,581 B2 12/2012 DeChazal
D675,568 S 2/2013 Drew
D678,203 S 3/2013 Corona
8,460,008 B1 6/2013 Lin et al.
8,679,666 B1 3/2014 Tsukamoto et al.
8,808,031 B2 8/2014 Zhao
9,150,107 B2 10/2015 Ferrel
9,321,340 B2 4/2016 Maskew
D760,650 S 7/2016 Juds et al.
D765,030 S * 8/2016 Tyler D13/119
9,413,040 B2 8/2016 Murakami
D774,458 S 12/2016 Naarup

D788,037 S 5/2017 Hung et al.
D817,278 S * 5/2018 Tyler D13/119
D860,131 S * 9/2019 Siminoff D13/103
D867,993 S * 11/2019 DeKeuster D13/119
D876,358 S * 2/2020 Tabata D13/133
D877,064 S * 3/2020 Jiang D13/103
D879,707 S * 3/2020 Chuang D13/103

2007/0087266 A1 4/2007 Bourke et al.
2009/0136831 A1 5/2009 Wyser
2014/0327444 A1 11/2014 Rollan et al.
2015/0069829 A1 3/2015 Dulle et al.
2015/0243946 A1 8/2015 Ahn
2016/0043448 A1 2/2016 Fritz
2016/0107530 A1 4/2016 Roberts et al.
2016/0133908 A1 5/2016 Zhao
2016/0197320 A1 7/2016 Mack et al.
2016/0226112 A1 8/2016 Maskew et al.
2016/0233632 A1 8/2016 Scruggs et al.
2017/0179461 A1 6/2017 Moon et al.
2018/0008760 A1 1/2018 Zilbershlag et al.

FOREIGN PATENT DOCUMENTS

WO 9831059 7/1998
WO 2013188680 12/2013
WO 2016112008 7/2016
WO 2016167866 10/2016

* cited by examiner

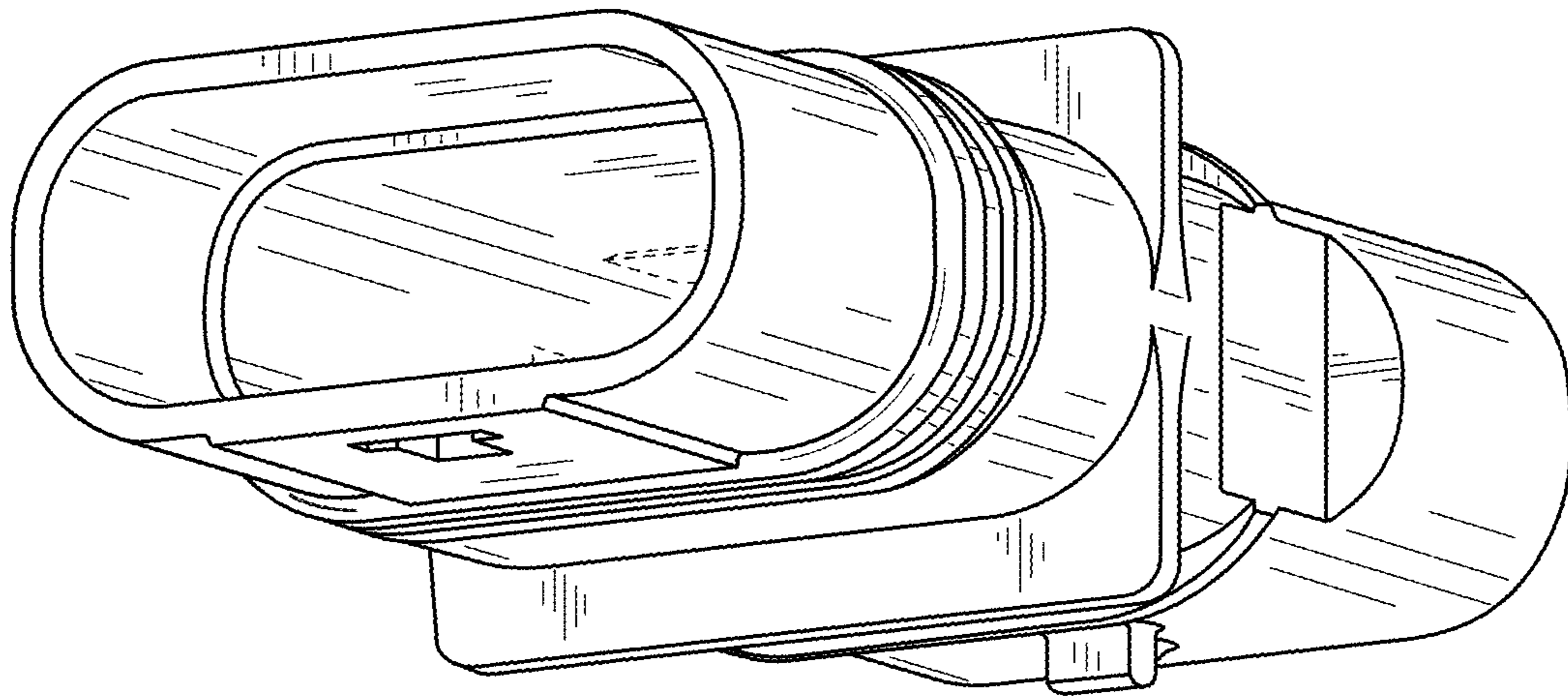


FIG. 1

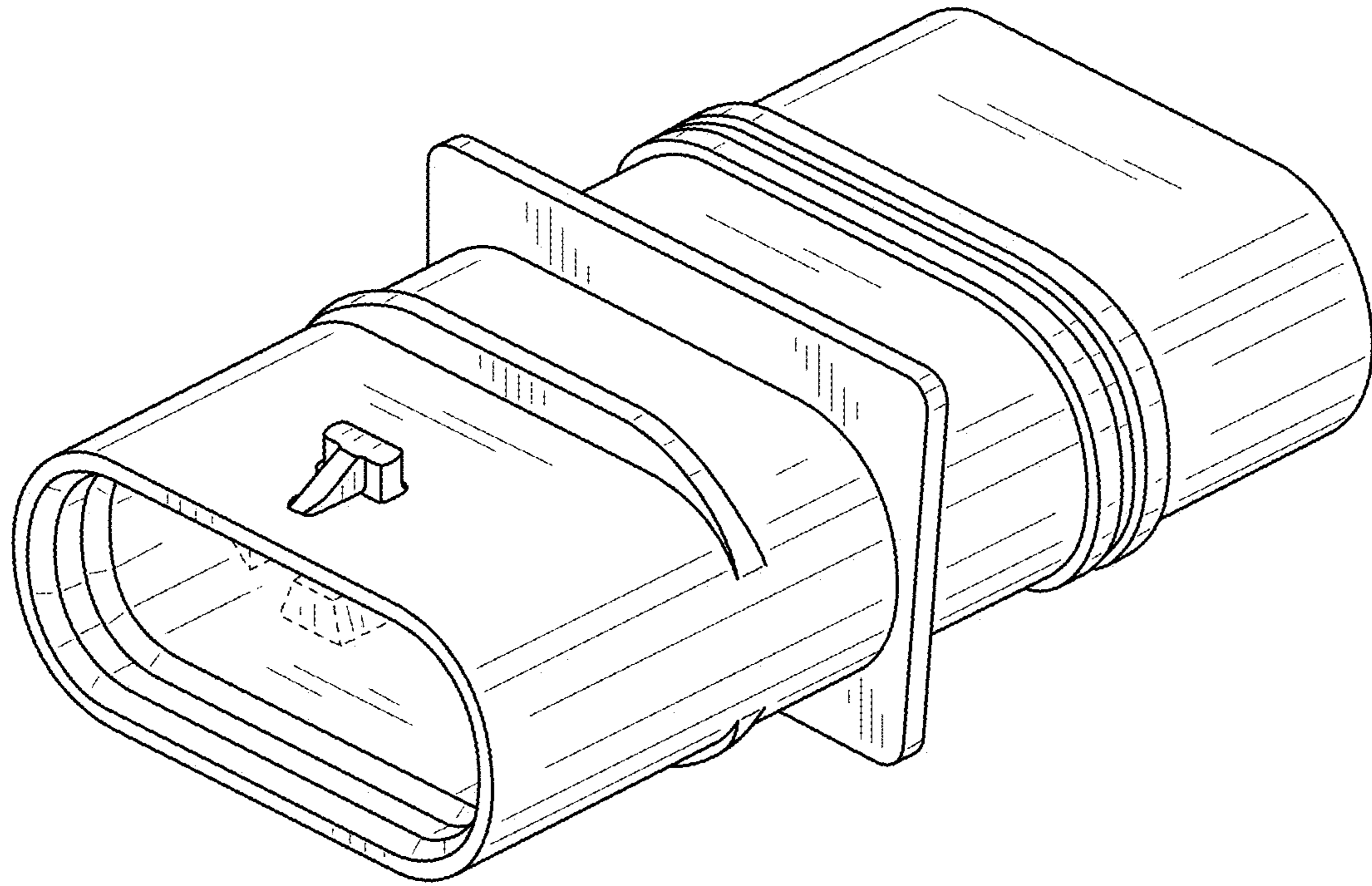


FIG. 2

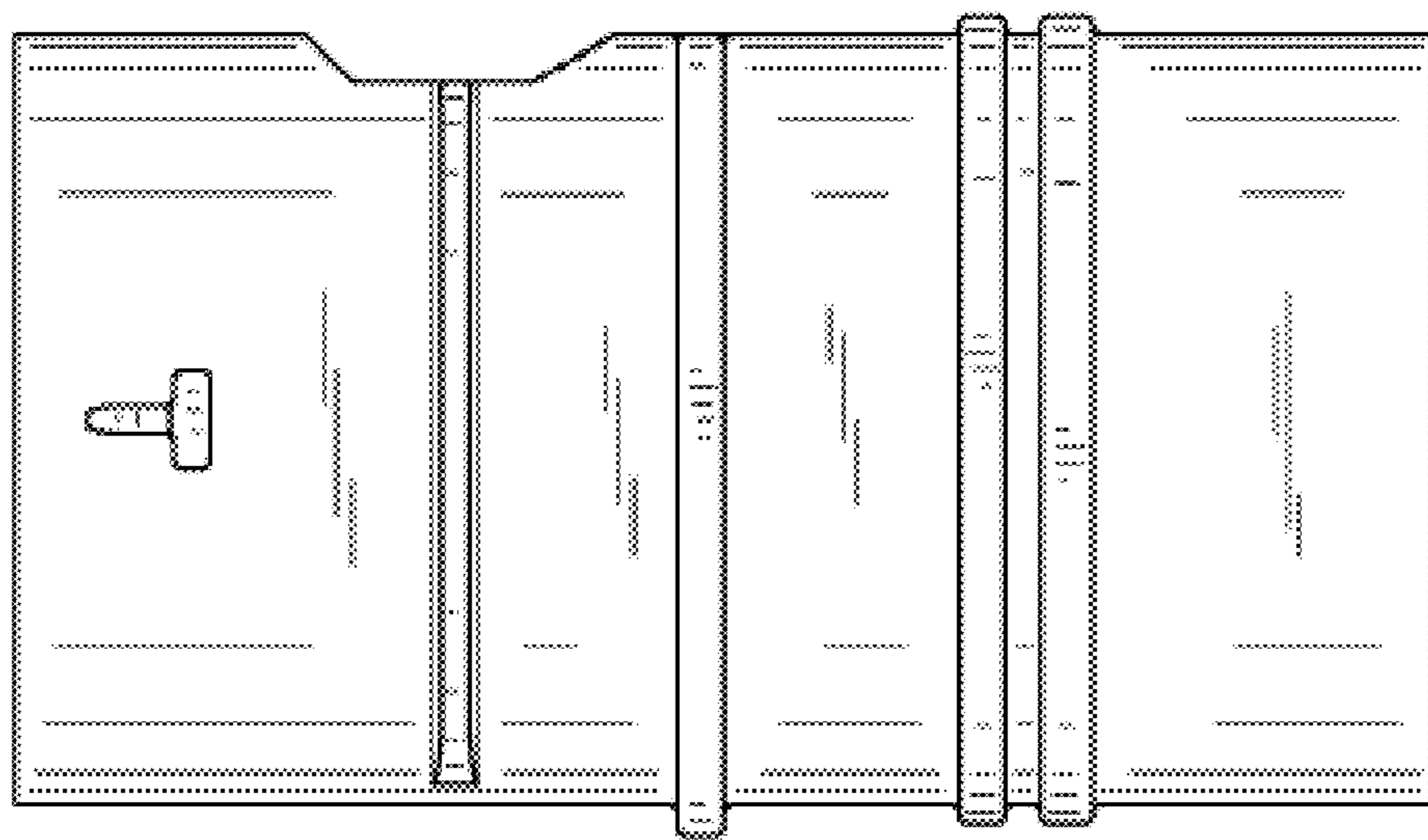


FIG. 3

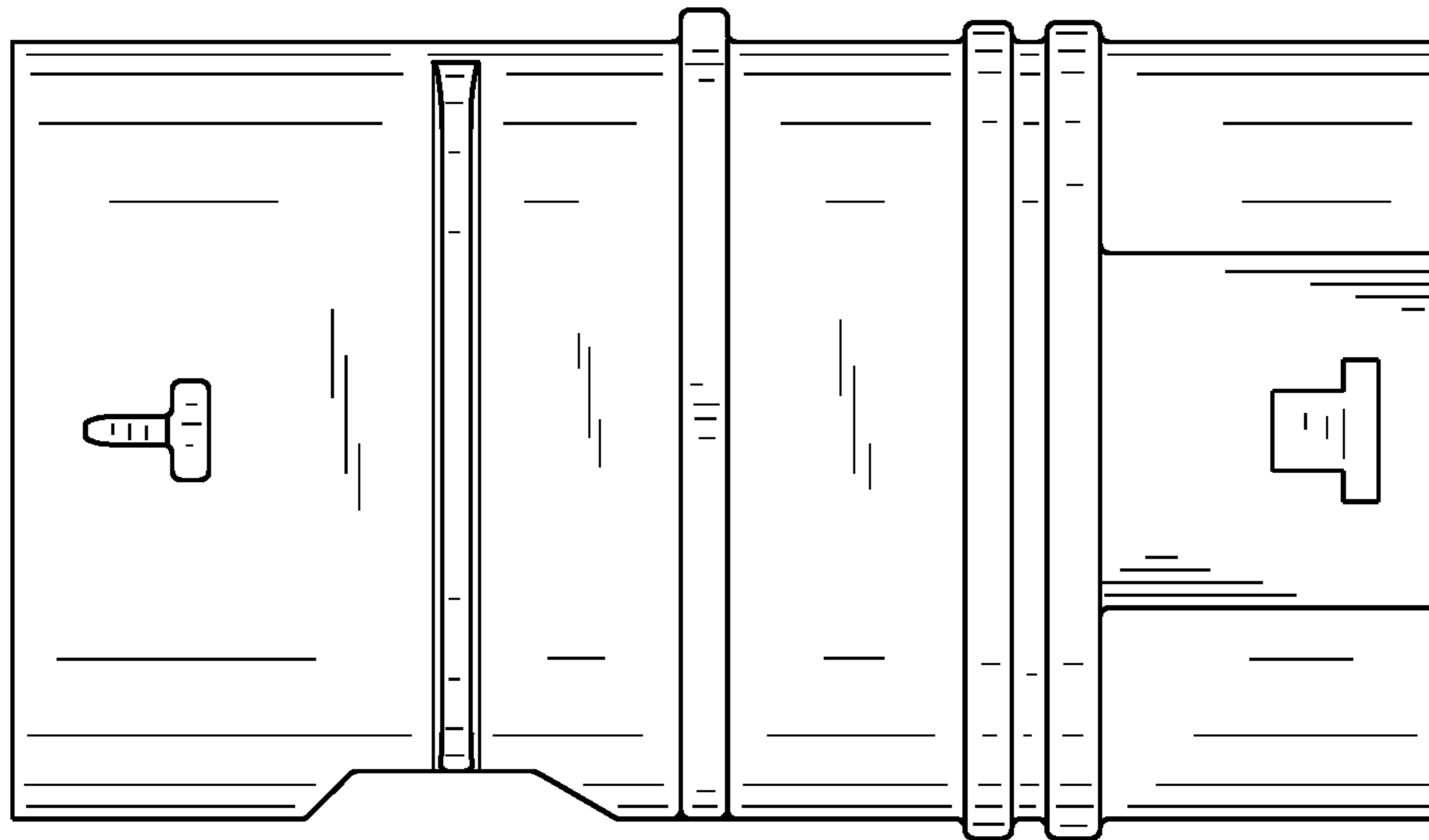


FIG. 4

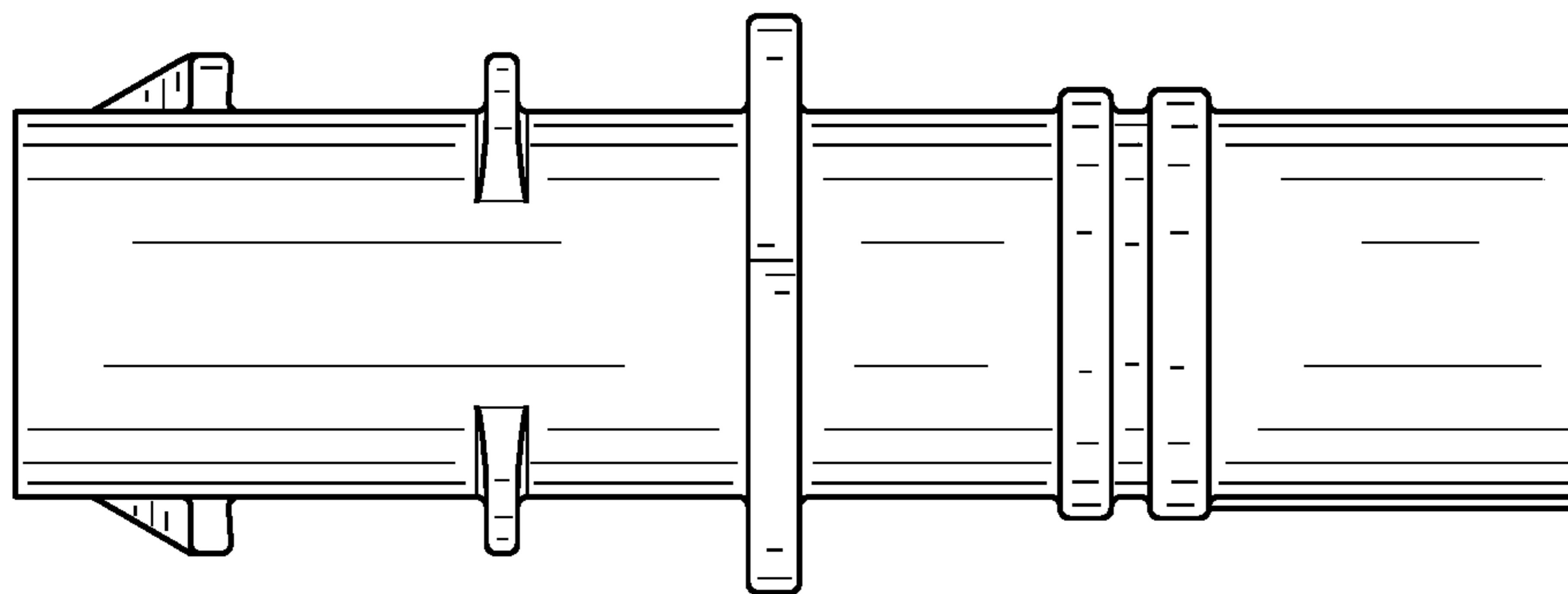


FIG. 5

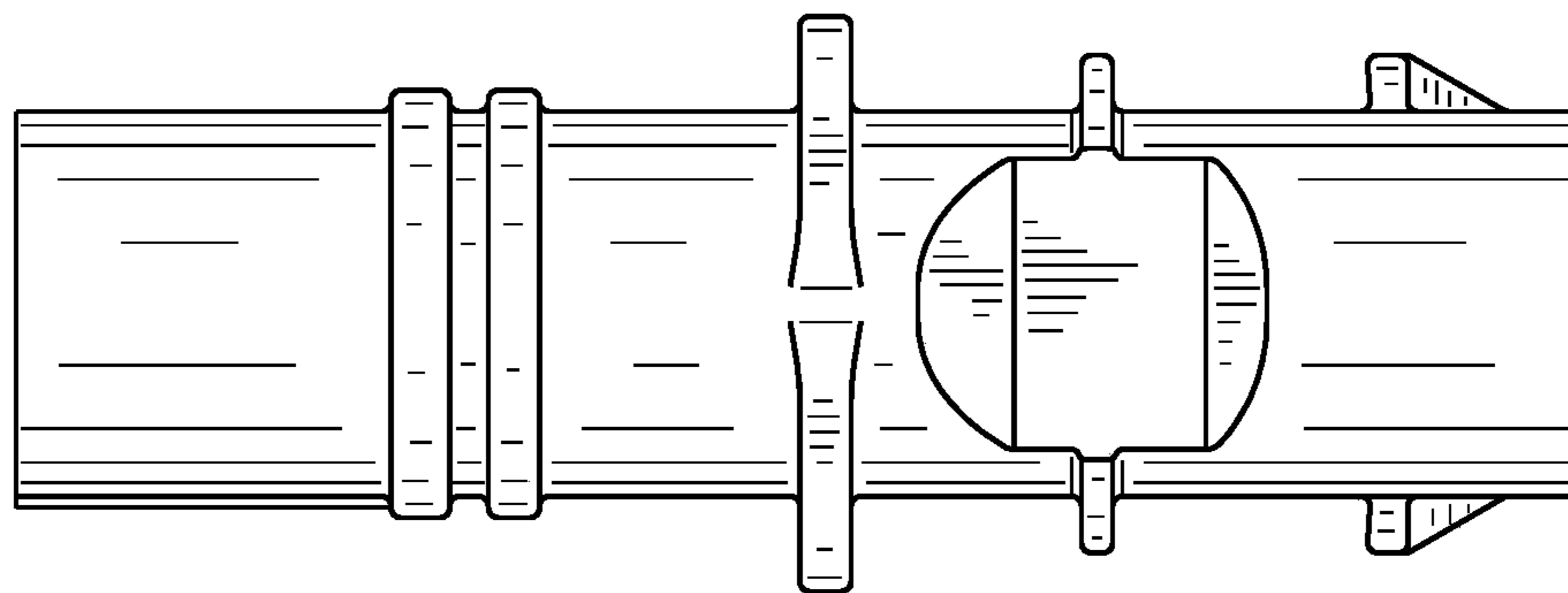


FIG. 6

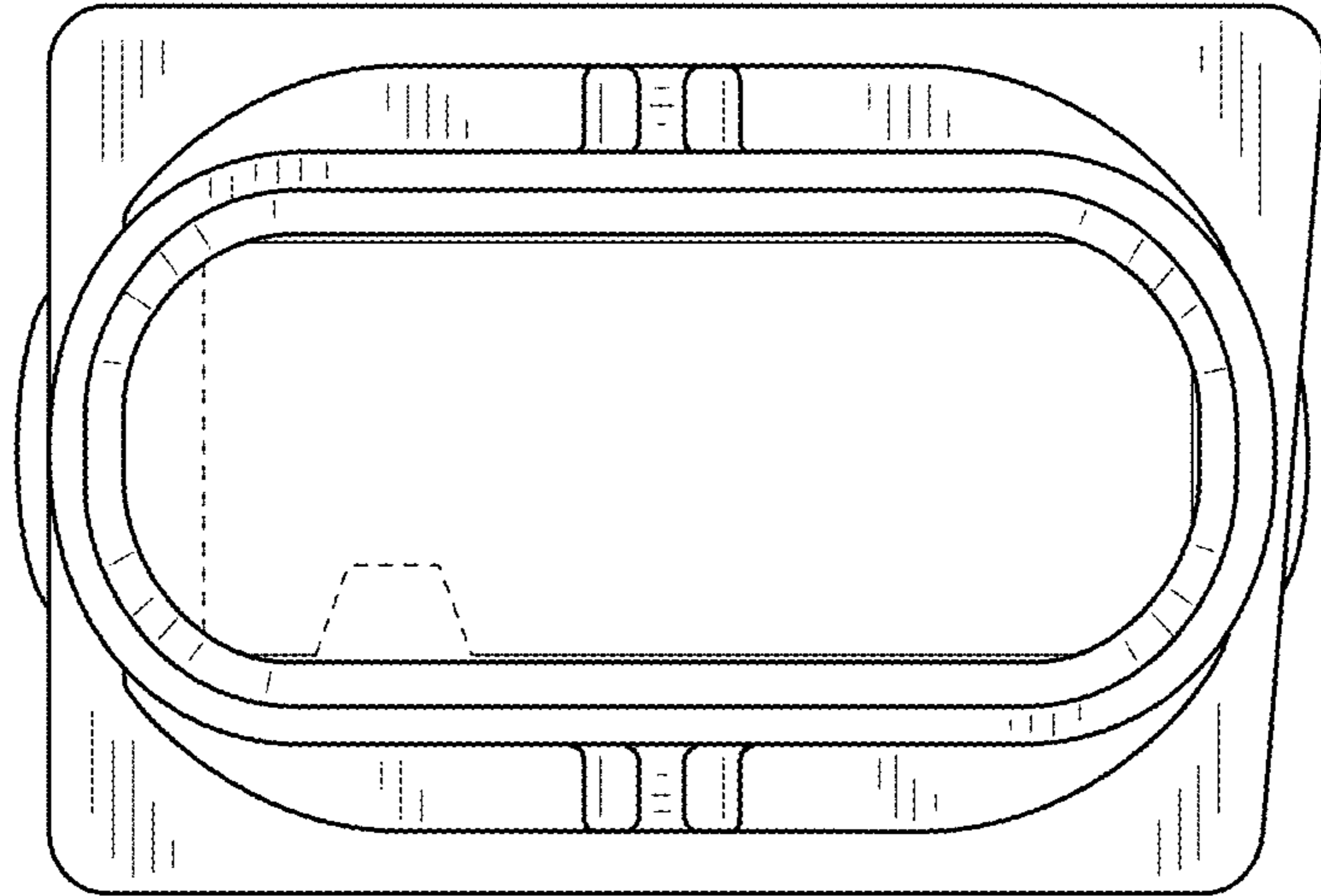


FIG. 7

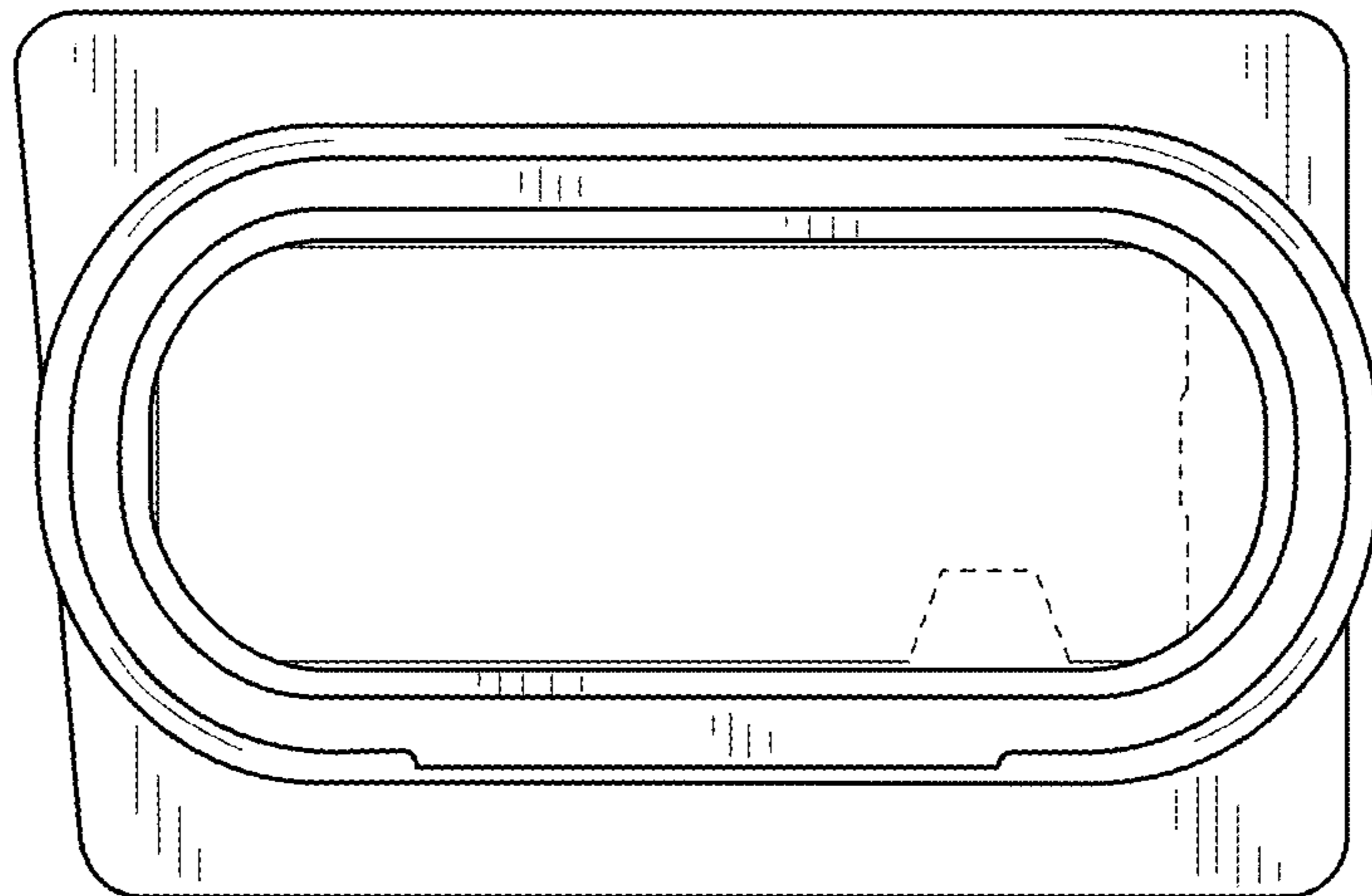


FIG. 8