



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

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(54) **FLOW CELL DEVICE**

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

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(51) **LOC (13) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/224**

(58) **Field of Classification Search**
USPC D24/107, 108, 119, 121, 162, 169, 186,
D24/201, 216–232; D10/75, 80, 81
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D333,630 S 3/1993 Marks
D351,913 S 10/1994 Hieb et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 201830270068 10/2018
RU 109136 S 6/2018

OTHER PUBLICATIONS

10 x more sensitivity with the Agilent 1290/1260 Infinity Diode Array Detector compared to Agilent 1200 Series UV Detectors.

Online, published date Dec. 15, 2010. Retrieved on Nov. 1, 2021 from URL: <https://www.agilent.com/cs/library/technicaloverviews/Public/5990-5326EN.pdf>.*

(Continued)

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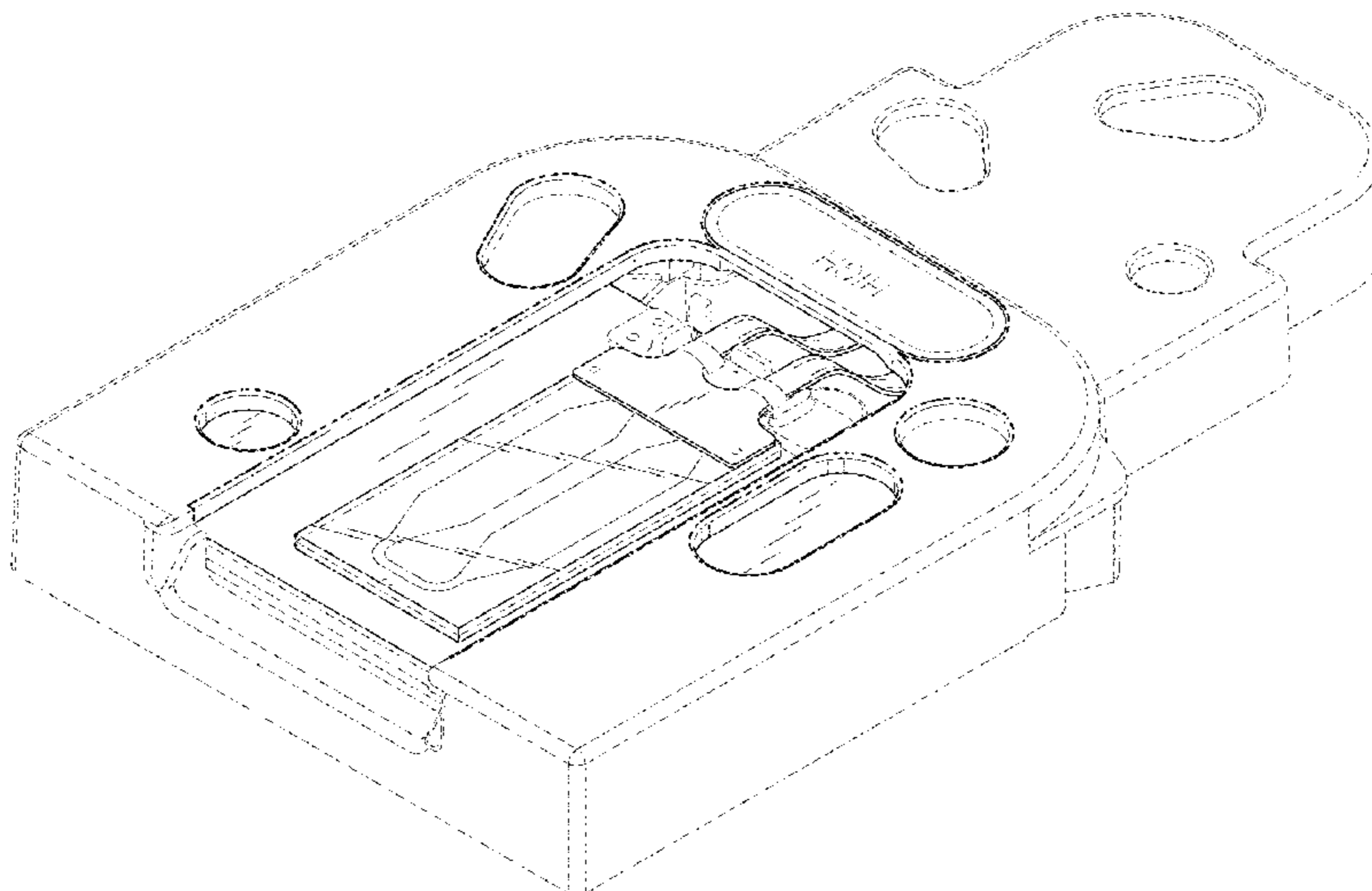
(57) **CLAIM**

The ornamental design for a flow cell device, as shown and described.

DESCRIPTION

FIG. 1 is a top plan view of a flow cell device comprising our new design;
FIG. 2 is a bottom plan of the design of FIG. 1;
FIG. 3 is a left side elevational view of the design of FIG. 1;
FIG. 4 is a right side elevational view of the design of FIG. 1;
FIG. 5 is a front elevational view of the design of FIG. 1;
FIG. 6 is an enlarged rear elevational view of the design of FIG. 1;
FIG. 7 is a right-rear perspective view of the design of FIG. 1;
FIG. 8 is a left-rear perspective view of the design of FIG. 1;
FIG. 9 is a top plan view of an alternate embodiment of the flow cell device of FIG. 1;
FIG. 10 is an enlarged rear elevational view of the design of FIG. 9;
FIG. 11 is a right-rear perspective view of the design of FIG. 9; and,
FIG. 12 is a left-rear perspective view of the design of FIG. 9.
The bottom plan, left and right side, and front elevational views for the embodiment shown in FIGS. 9-12 are respectively identical to the views shown in FIGS. 2-5.

1 Claim, 11 Drawing Sheets



(58) **Field of Classification Search**

CPC G01N 2035/00306; G01N 2035/00326;
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 G01N 2035/0401; G01N 2035/0403;
 G01N 2035/0405; G01N 2035/00019;
 G01N 35/021; G01N 35/026; G01N
 35/028; G01N 35/04; G01N 1/22; G01N
 27/44791; B01L 2300/0809; B01L
 2300/0816; B01L 2300/0822; B01L
 2300/0832; B01L 2300/0806

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D438,632 S	3/2001	Miller
D438,633 S	3/2001	Miller
D473,318 S	4/2003	Barbera-Guillem
D491,273 S	6/2004	Biegler et al.
D559,995 S	1/2008	Handique et al.
D566,291 S	4/2008	Parunak et al.
D639,975 S	6/2011	Doyle et al.
D685,494 S	7/2013	Oonuma et al.
D686,311 S	7/2013	Mori
D697,198 S	1/2014	Amirouche et al.
D729,403 S	5/2015	Hage et al.
D745,698 S	12/2015	Hage et al.
D750,272 S	2/2016	Hage et al.
D752,770 S	3/2016	Kuhn et al.
D768,870 S	10/2016	Kuhn et al.
D771,833 S	* 11/2016	Leaver D24/224
D784,551 S	4/2017	Todd et al.
D785,811 S	5/2017	Watts et al.
D794,817 S	8/2017	Yi et al.
D794,818 S	8/2017	Yi et al.
D794,819 S	8/2017	Yi et al.
D799,056 S	10/2017	Bourgeois et al.
D800,336 S	10/2017	Chang et al.
D800,912 S	10/2017	Uzri et al.
D806,890 S	1/2018	Williams et al.
D812,242 S	3/2018	Chang et al.
D812,767 S	3/2018	Osmus et al.
D819,829 S	6/2018	Osmus et al.
D825,078 S	8/2018	Osmus et al.
D840,050 S	2/2019	Schulz et al.
D843,009 S	3/2019	Watts et al.
D851,275 S	6/2019	Spuhler et al.
10,343,160 B2	7/2019	Lemoine et al.
D856,527 S	8/2019	Kaplan et al.
D861,914 S	10/2019	Blake et al.
D864,411 S	10/2019	Dangelo et al.
D864,412 S	10/2019	Dangelo et al.
D865,213 S	10/2019	Dangelo et al.
D865,214 S	10/2019	Dangelo et al.
D865,215 S	10/2019	Dangelo et al.
D875,271 S	2/2020	Ringold et al.

D877,356 S	3/2020	Clive-Smith et al.
D886,901 S	6/2020	Hussey et al.
D919,115 S	* 5/2021	Kaplan D24/225
D926,684 S	* 8/2021	Cheung D13/108
2009/0311796 A1	* 12/2009	Griss C12Q 1/54 436/166
2010/0143963 A1	6/2010	Pollack et al.
2011/0034758 A1	* 2/2011	Shany A61B 10/0045 600/35
2014/0220668 A1	* 8/2014	Tachibana B01L 7/52 435/287.2
2015/0118739 A1	4/2015	Kobayashi
2016/0097763 A1	* 4/2016	Powers G01N 33/5302 435/7.1
2016/0130640 A1	* 5/2016	Wright B01F 7/00141 506/39
2016/0175840 A1	6/2016	Ingber et al.
2016/0375438 A1	12/2016	Marcy et al.
2017/0016060 A1	1/2017	Sabounchi et al.
2017/0209865 A1	7/2017	Carrano et al.
2018/0117587 A1	5/2018	Lemoine et al.
2018/0185849 A1	7/2018	Kaplan et al.
2018/0304260 A1	* 10/2018	Thomas C12Q 1/6806
2020/0110108 A1	4/2020	Cox-Muranami et al.
2020/0171502 A1	6/2020	Kumar et al.
2020/0217740 A1	7/2020	Holst et al.

OTHER PUBLICATIONS

Osmus et al., "Reagent Cartridge", U.S. Appl. No. 29/714,653, filed Nov. 25, 2019.

Osmus et al., "Reagent Cartridge", U.S. Appl. No. 29/714,705, filed Nov. 25, 2019.

Osmus et al., "Flow Cell Cartridge", U.S. Appl. No. 29/714,660, filed Nov. 25, 2019.

Taylor et al., "Flow Cell Cartridge", U.S. Appl. No. 29/714,671, filed Nov. 25, 2019.

Osmus et al., "Sequencing Cartridge Assembly", U.S. Appl. No. 29/714,661, filed Nov. 25, 2019.

Taylor et al., "Cartridge Cover", U.S. Appl. No. 29/714,669, filed Nov. 25, 2019.

Osmus et al., "Reagent Cartridge", U.S. Appl. No. 29/714,656, filed Nov. 25, 2019.

Osmus et al., "Reagent Cartridge", U.S. Appl. No. 29/714,706, filed Nov. 25, 2019.

Taylor et al., "Flow Cell Cartridge", U.S. Appl. No. 29/714,665, filed Nov. 25, 2019.

G4212-60032—3.7mm HDR max light cartridge cell. Online, published date unknown. from URL:<https://www.chromtech.com/g4212-60032-37mm-hdr-max-light-cartridge-cell>. Retrieved on May 5, 2021.

G4212-60008—Max-Light Cartridge Cell 10mm V(o)1.0ul. Online, published date unknown. Retrieved on Apr. 29, 2021 from URL:<https://www.chromtech.com/g4212-60008-max-light-cartridge-cell-10mm-vo10ul> (Year: 2021).

* cited by examiner

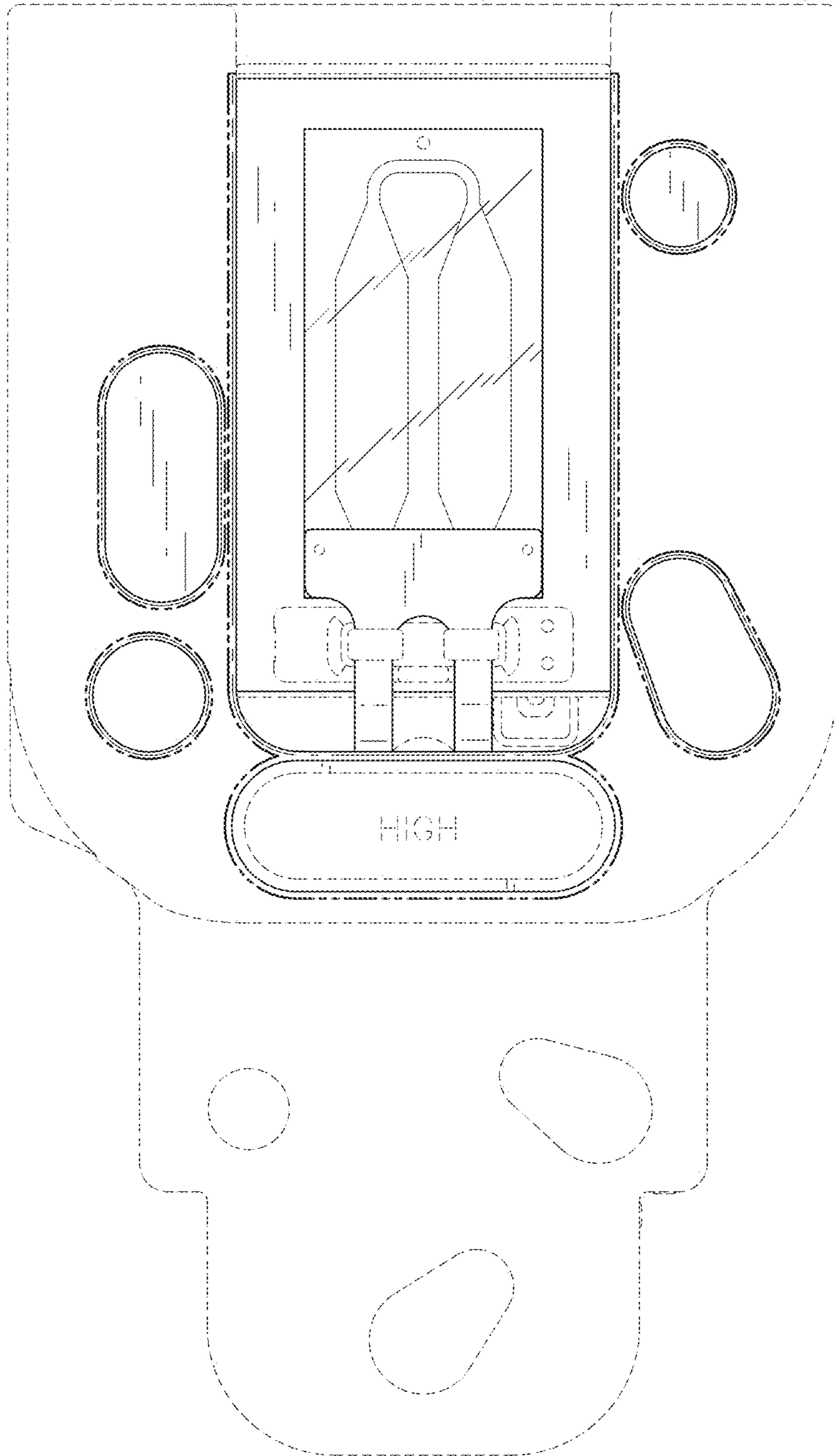


FIG. 1

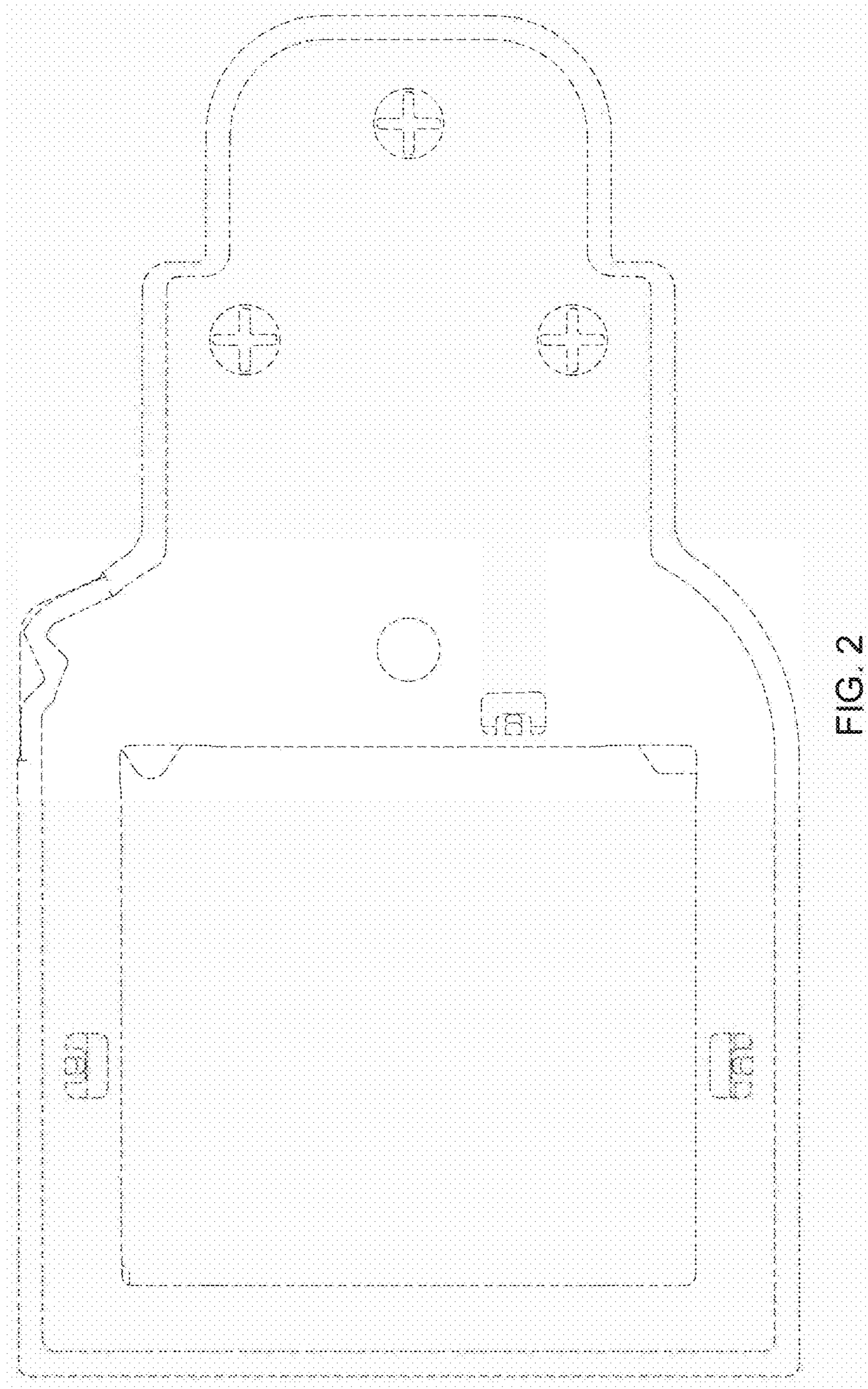
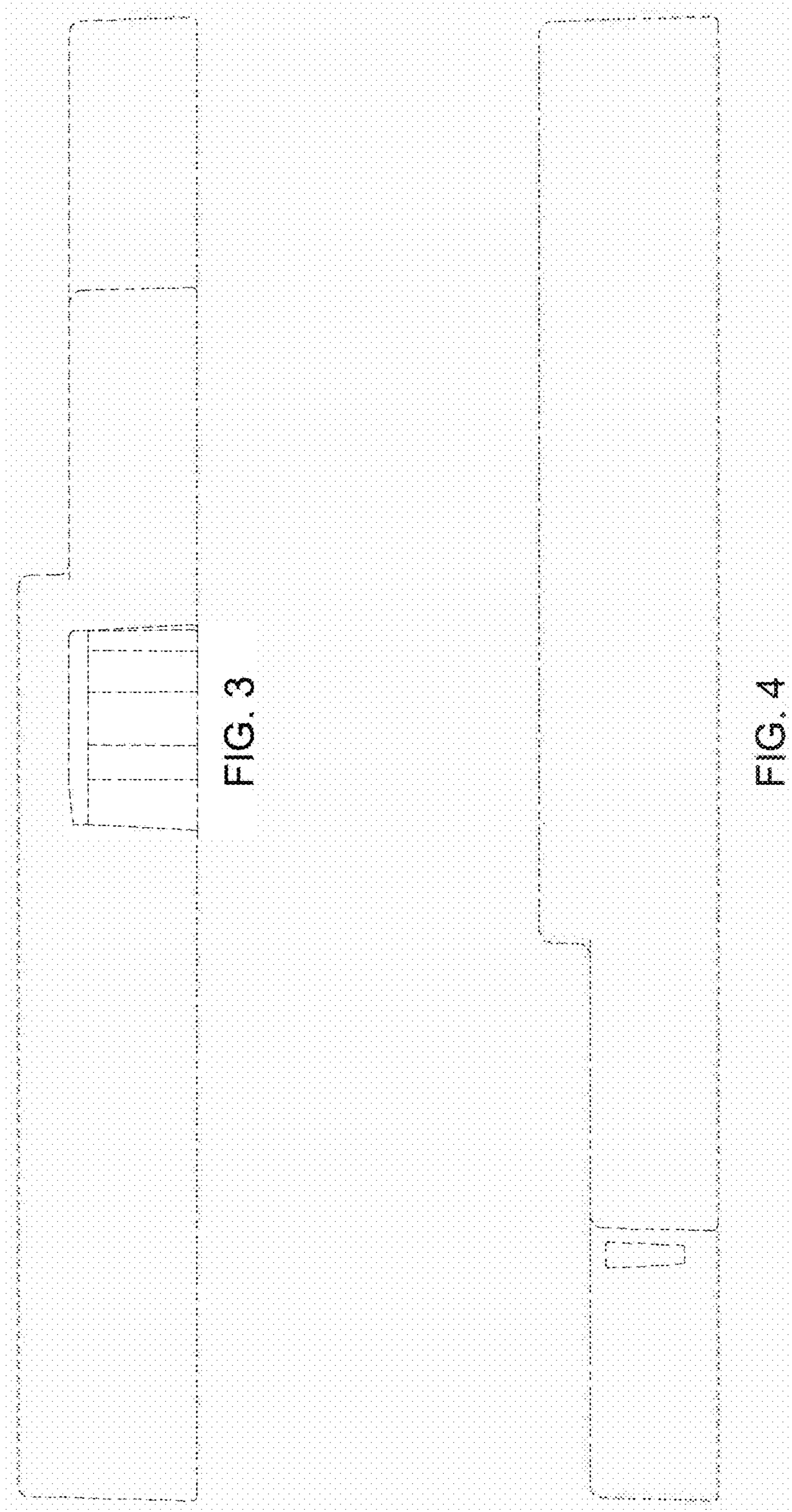
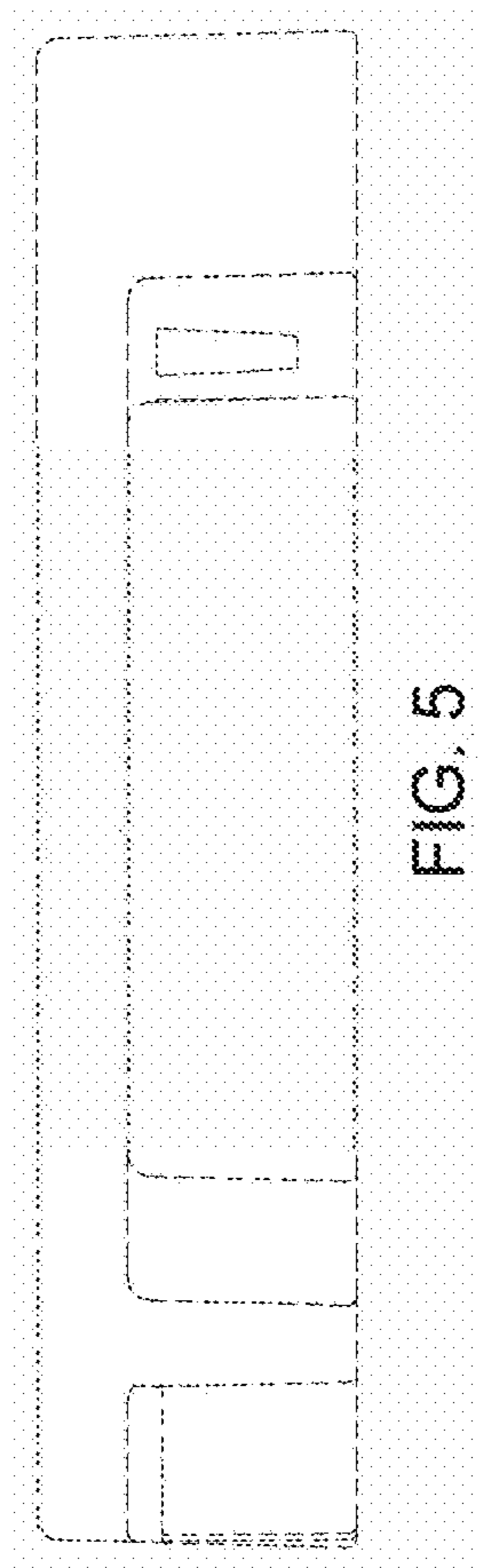


FIG. 2





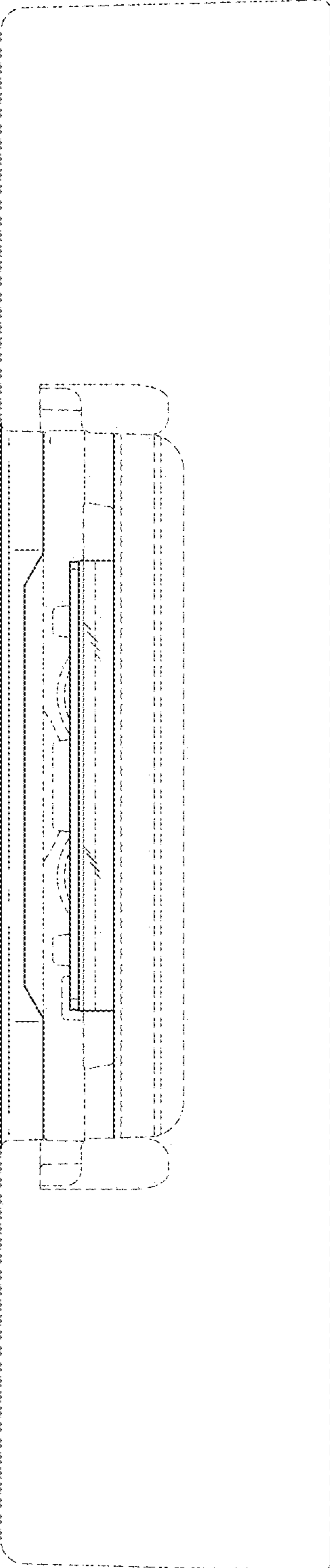


FIG. 6

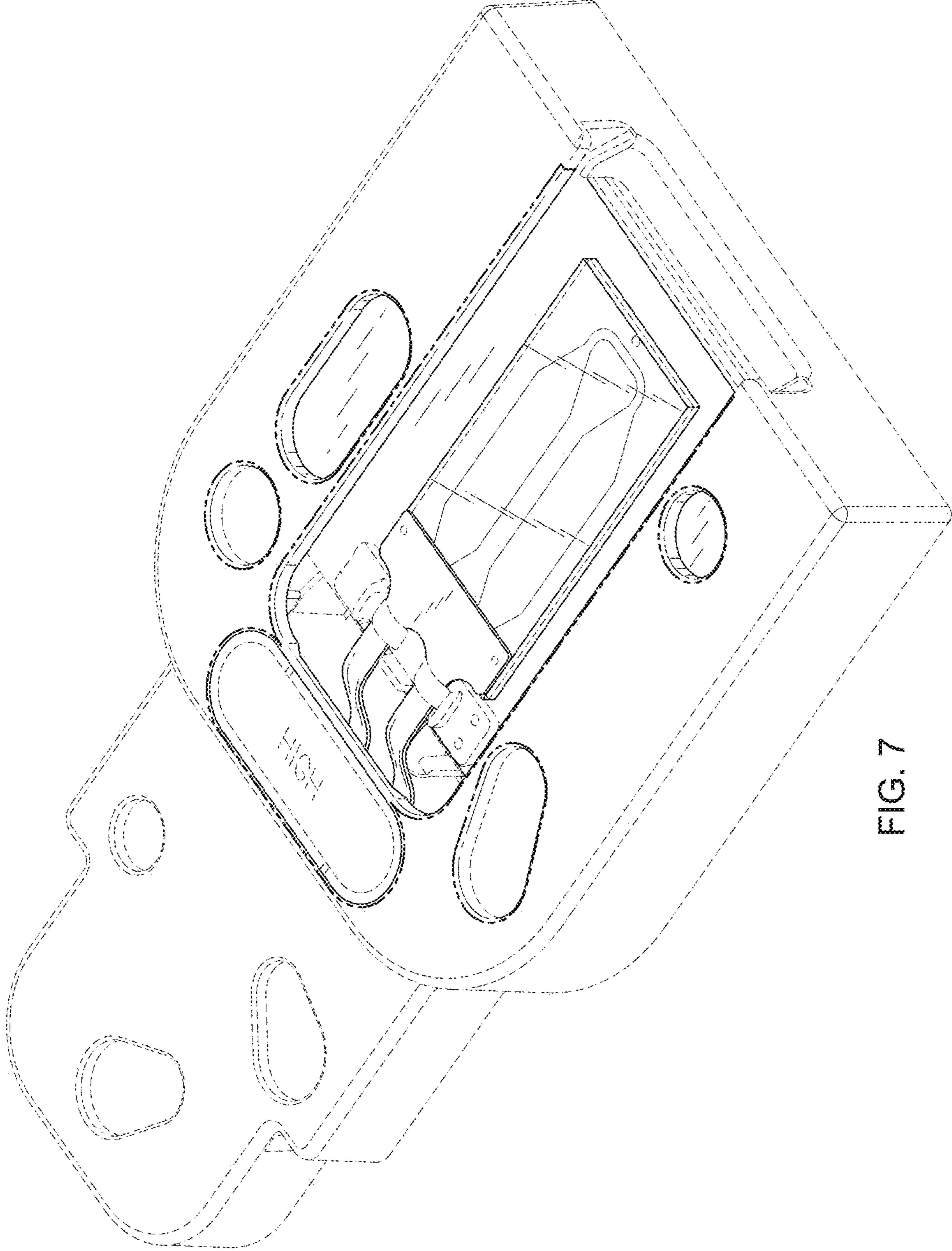


FIG. 7

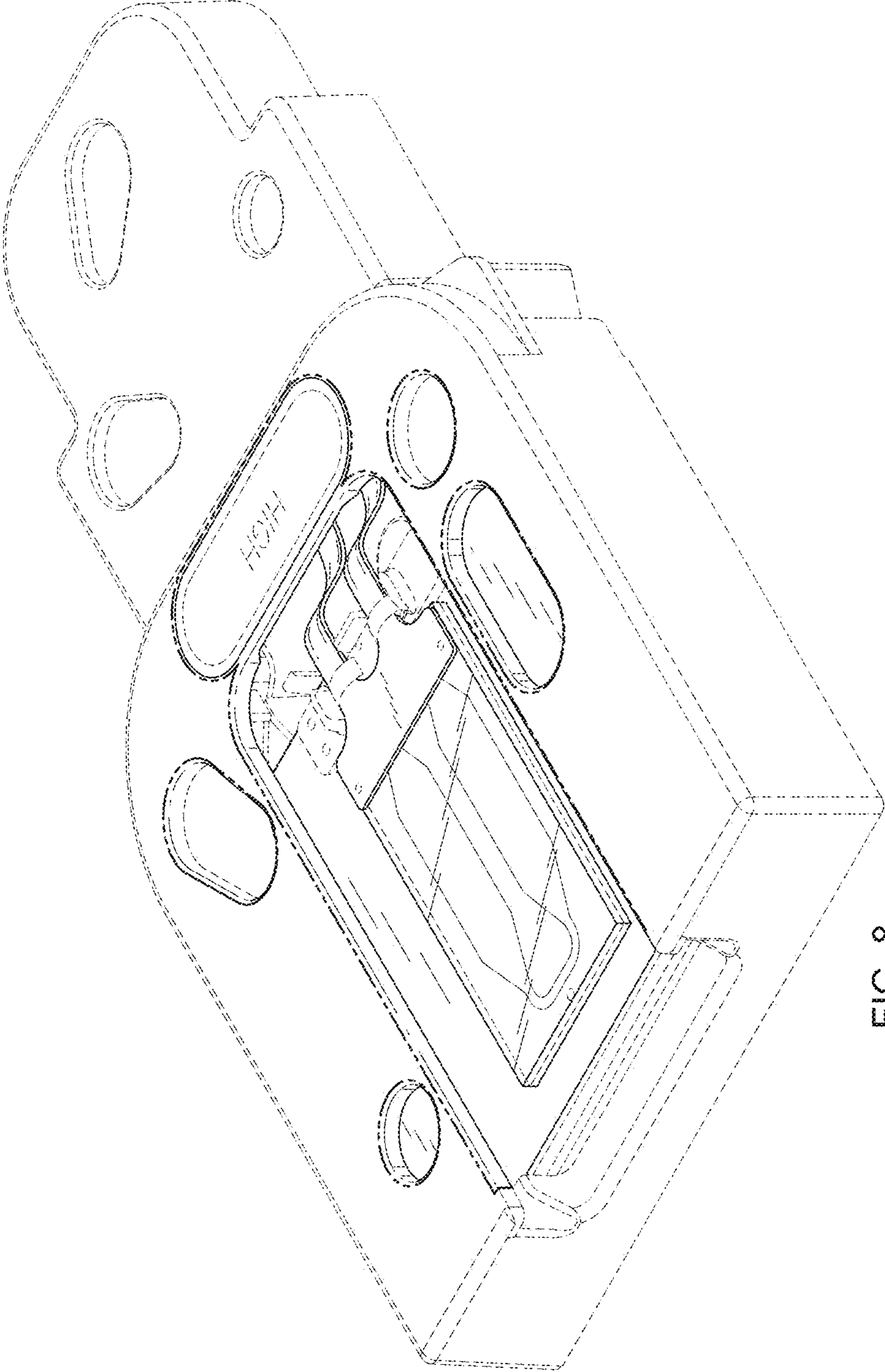


FIG. 8

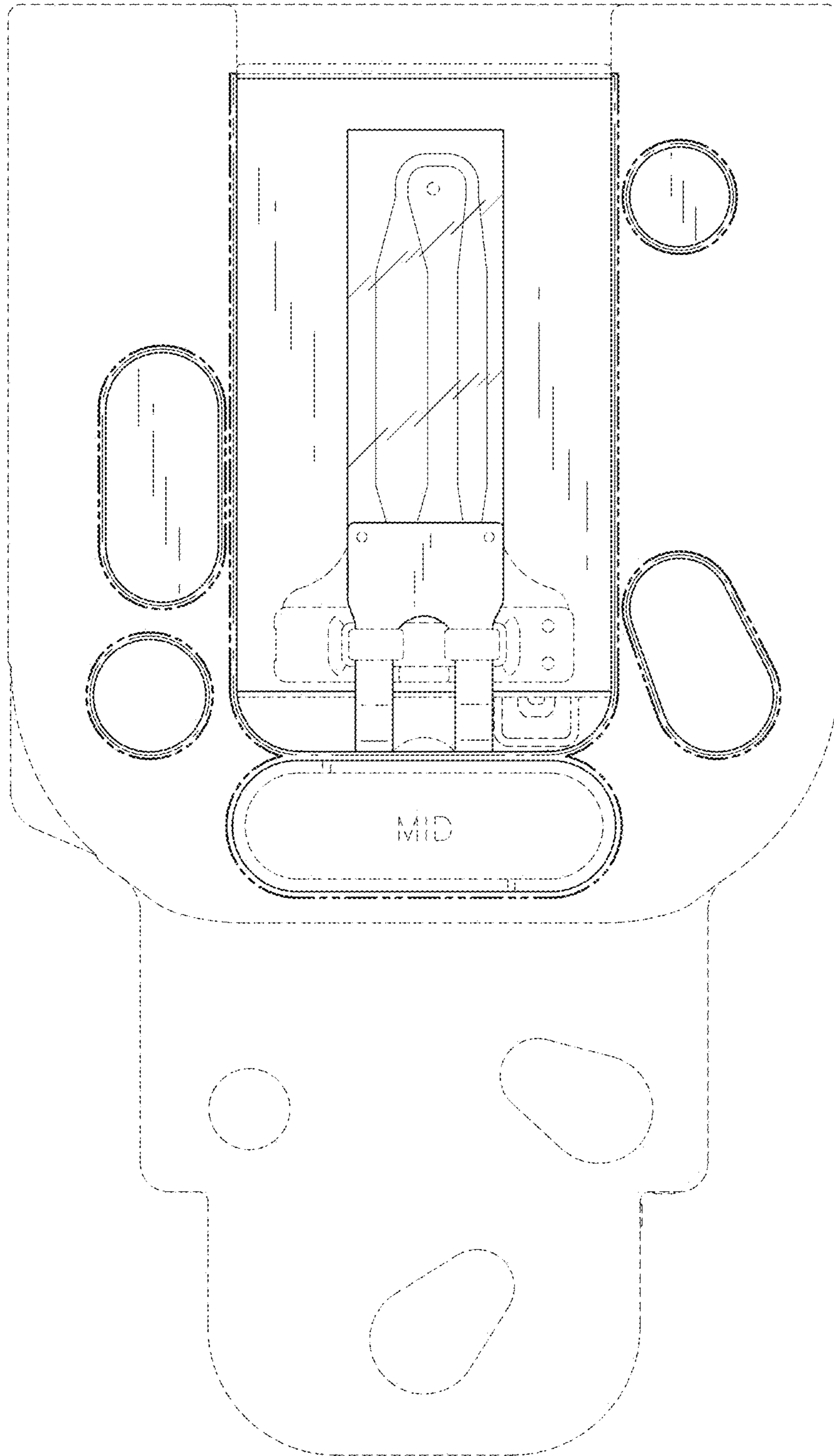


FIG. 9

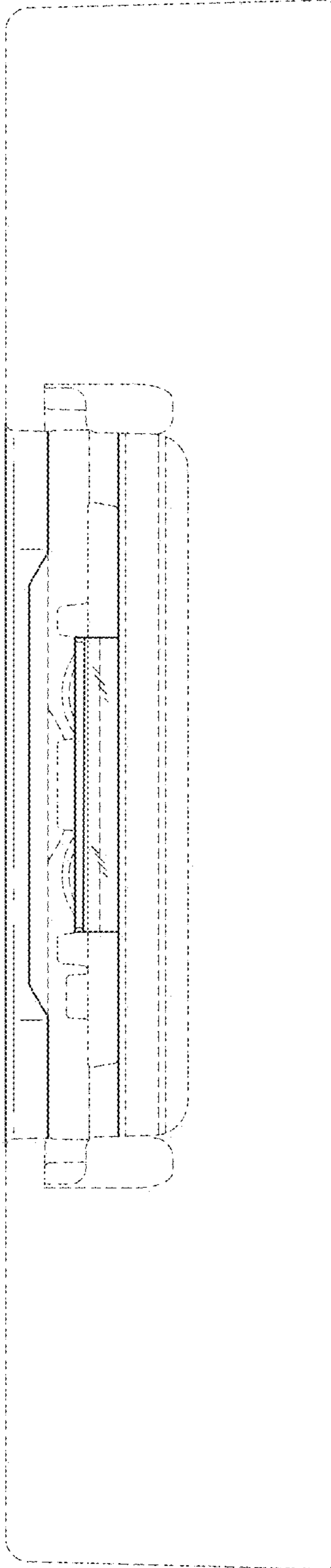


FIG. 10

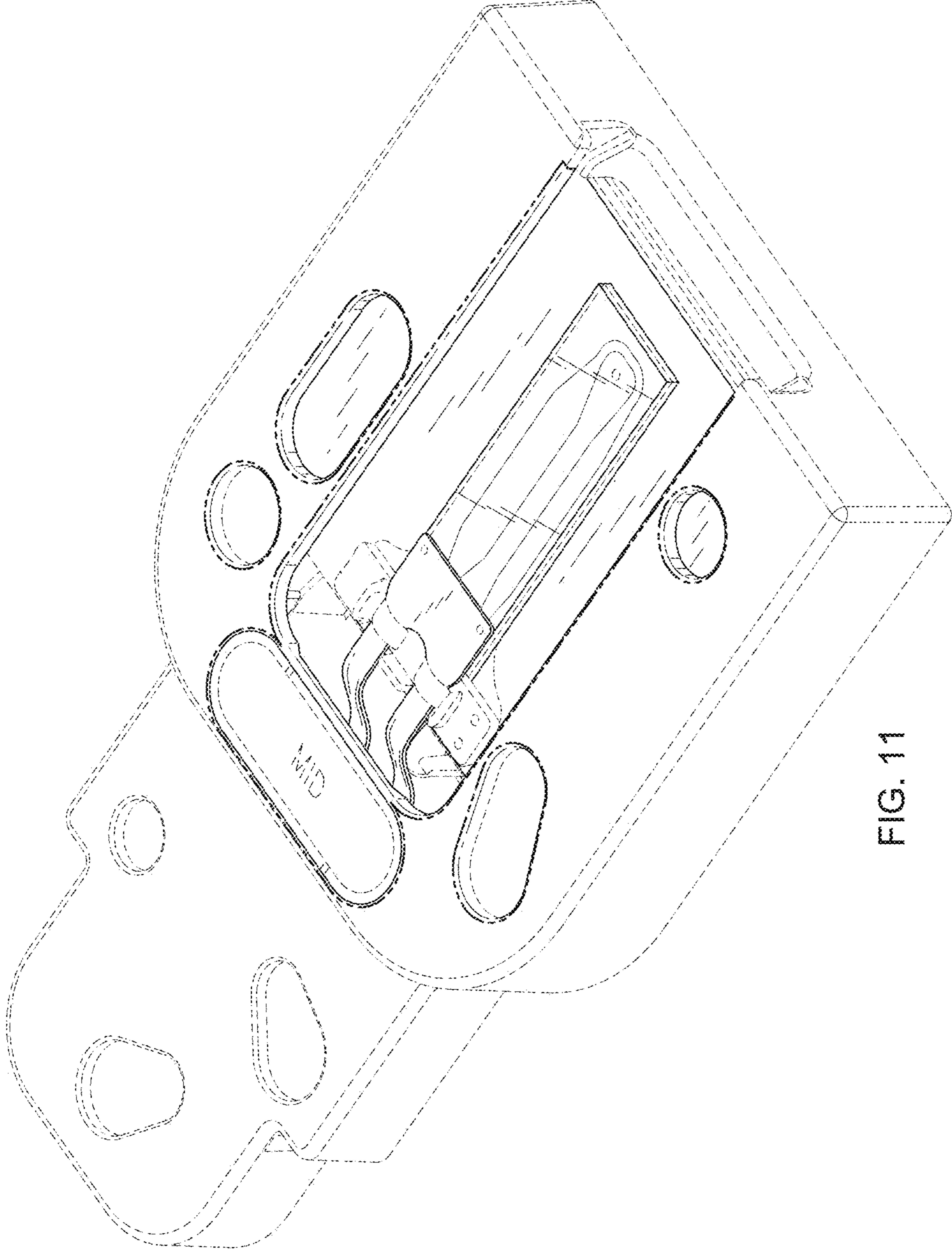


FIG. 11

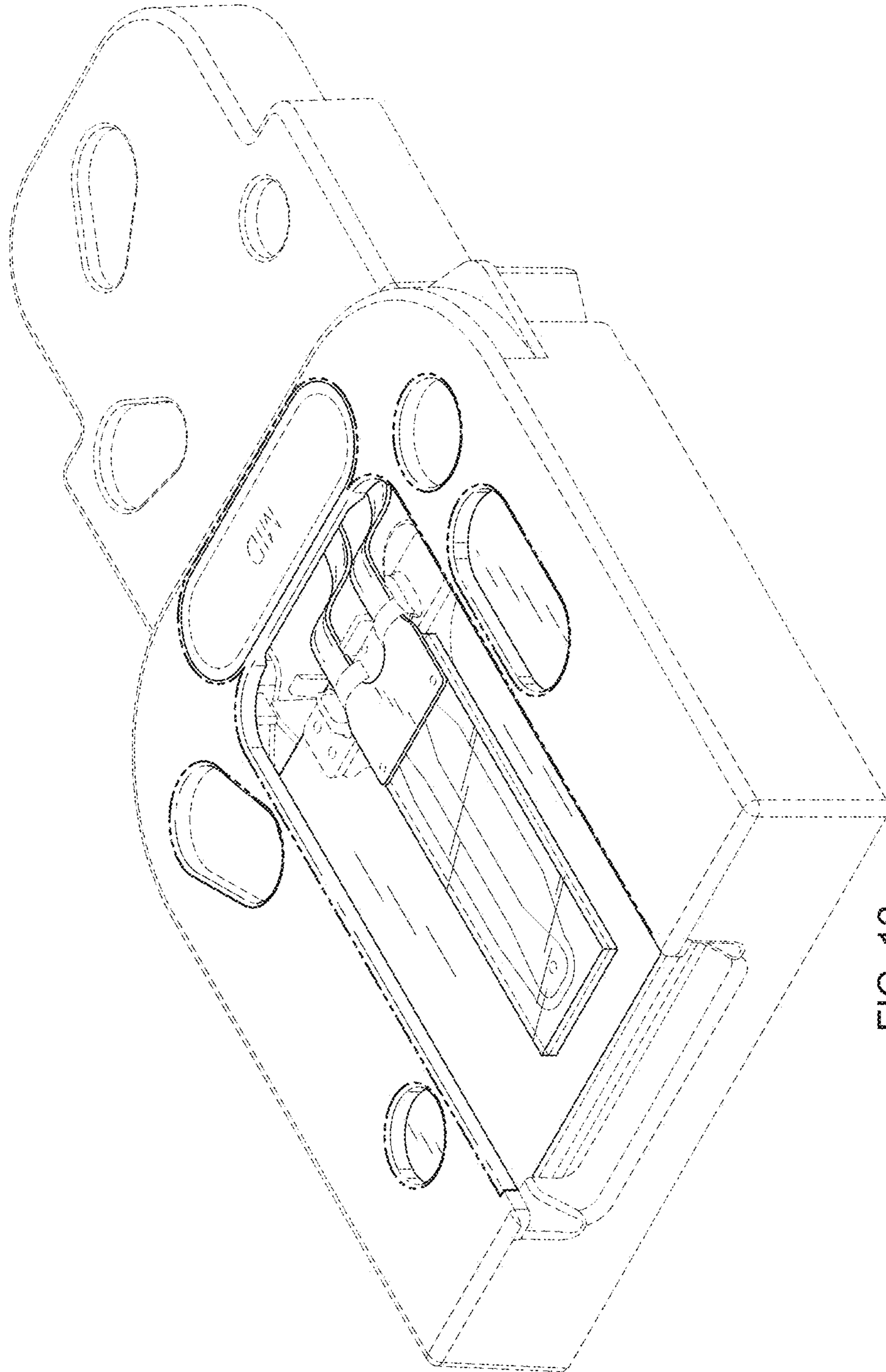


FIG. 12