



US00D955579S

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

(10) **Patent No.:** **US D955,579 S**
(45) **Date of Patent:** **** Jun. 21, 2022**

(54) **SURGICAL IMPLANT**
(71) Applicant: **Warsaw Orthopedic, Inc.**, Warsaw, IN (US)
(72) Inventors: **Adriaan J. Kuyler**, Germantown, TN (US); **Benjamin D. Cowan**, Memphis, TN (US); **Anthony J. Melkent**, Germantown, TN (US); **Keith E. Miller**, Germantown, TN (US); **Cristian A. Capote**, Memphis, TN (US); **Jonathan E. Blackwell**, Lakeland, TN (US); **Jennifer B. McNab**, Memphis, TN (US)

5,059,193 A 10/1991 Kuslich
5,171,278 A 12/1992 Pisharodi
5,336,223 A 8/1994 Rogers
5,390,683 A 2/1995 Pisharodi
5,522,899 A 6/1996 Michelson
5,554,191 A 9/1996 Lahille et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP 1430858 A1 6/2004
JP 5758485 B2 8/2015

Primary Examiner — Charles D Hanson
(74) *Attorney, Agent, or Firm* — Fox Rothschild LLP

(73) Assignee: **WARSAW ORTHOPEDIC, INC.**, Warsaw, IN (US)

(57) **CLAIM**

The ornamental design for a surgical implant, as shown and described.

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

DESCRIPTION

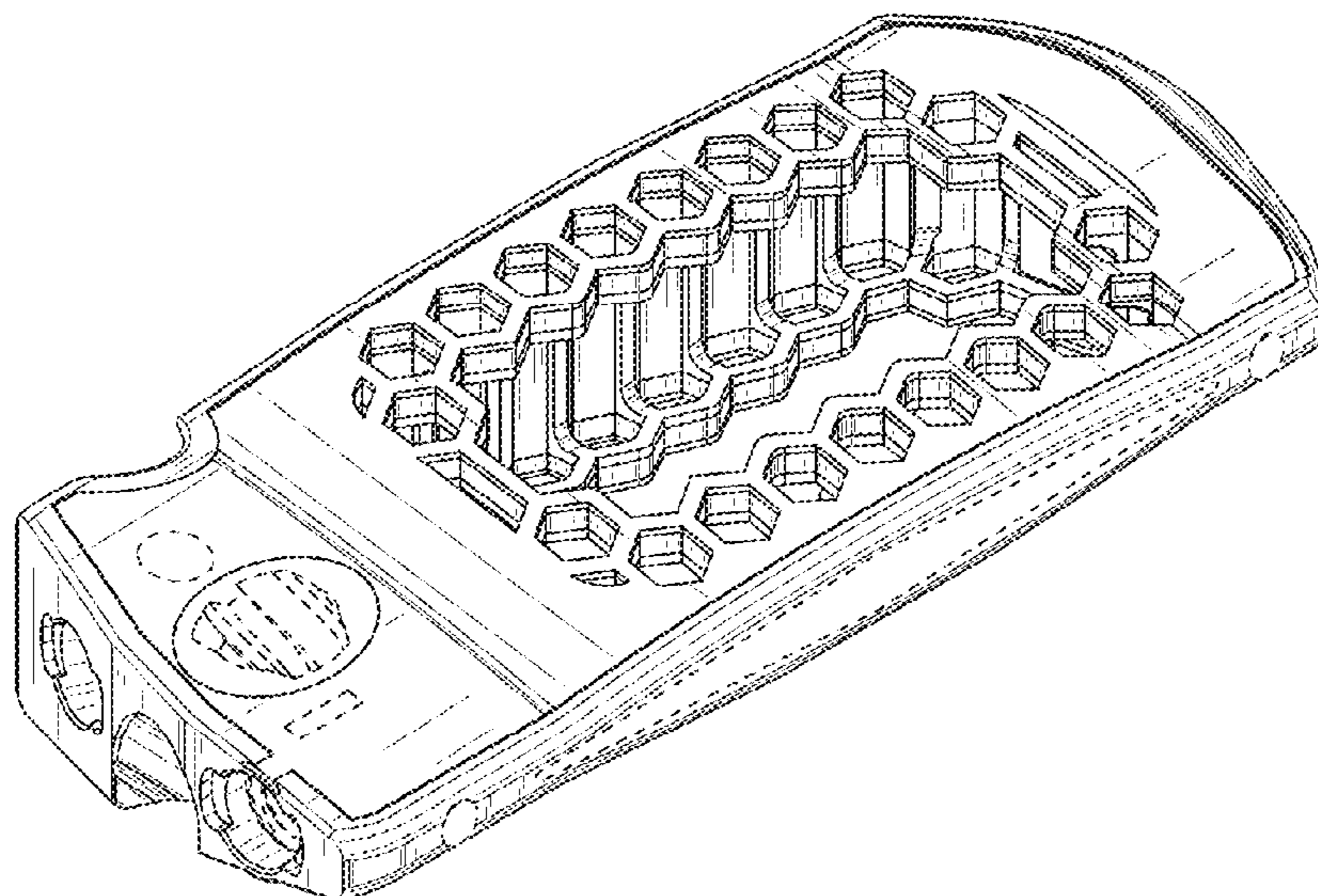
(21) Appl. No.: **29/689,091**
(22) Filed: **Apr. 26, 2019**
(51) **LOC (13) Cl.** **24-03**
(52) **U.S. Cl.**
USPC **D24/155**
(58) **Field of Classification Search**
USPC D24/155
CPC A61F 2/4611; A61F 2/442; A61F 2/447;
A61F 2220/0025; A61F 2310/00023;
A61F 2310/00017; A61F 2002/4475;
A61F 2002/30841; A61F 2002/2835;
A61F 2002/30904; A61F 2002/30785;
A61F 2002/443; A61F 2002/30578
See application file for complete search history.

FIG. 1 is a top, back, right perspective view of a surgical implant according to the present disclosure;
FIG. 2 is a top view of the surgical implant of FIG. 1;
FIG. 3 is a bottom view of the surgical implant of FIG. 1;
FIG. 4 is a right view of the surgical implant of FIG. 1;
FIG. 5 is a left view of the surgical implant of FIG. 1;
FIG. 6 is a front view of the surgical implant of FIG. 1;
FIG. 7 is a back view of the surgical implant of FIG. 1;
FIG. 8 is a top, back, right side perspective view of another embodiment of a surgical implant according to the present disclosure;
FIG. 9 is a top view of the surgical implant of FIG. 8;
FIG. 10 is a bottom view of the surgical implant of FIG. 8;
FIG. 11 is a right view of the surgical implant of FIG. 8;
FIG. 12 is a left view of the surgical implant of FIG. 8;
FIG. 13 is a front view of the surgical implant of FIG. 8; and
FIG. 14 is a back view of the surgical implant of FIG. 8.
The broken lines in the Figures illustrate portions of the article that form no part of the claimed design.

(56) **References Cited**
U.S. PATENT DOCUMENTS

4,401,112 A 8/1983 Rezaian
4,553,273 A 11/1985 Wu
4,636,217 A 1/1987 Ogilvie et al.

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,575,790	A	11/1996	Chen et al.	7,204,853	B2	4/2007	Gordon et al.
5,609,635	A	3/1997	Michelson	7,232,464	B2	6/2007	Mathieu et al.
5,653,762	A	8/1997	Pisharodi	7,238,203	B2	7/2007	Bagga et al.
5,658,336	A	8/1997	Pisharodi	7,316,714	B2	1/2008	Gordon et al.
5,665,122	A	9/1997	Kambin	7,618,456	B2	11/2009	Mathieu et al.
5,683,463	A	11/1997	Godefroy et al.	7,708,778	B2	5/2010	Gordon et al.
5,693,100	A	12/1997	Pisharodi	7,727,280	B2	6/2010	McLuen
5,697,977	A	12/1997	Pisharodi	7,753,958	B2	7/2010	Gordon et al.
5,702,391	A	12/1997	Lin	7,806,932	B2	10/2010	Webb et al.
5,702,453	A	12/1997	Rabbe et al.	7,815,682	B1	10/2010	Peterson et al.
5,702,455	A	12/1997	Saggar	7,846,207	B2	12/2010	Lechmann et al.
5,800,550	A	9/1998	Sertich	7,850,731	B2	12/2010	Brittan et al.
5,865,848	A	2/1999	Baker	7,850,733	B2	12/2010	Baynham et al.
5,893,890	A	4/1999	Pisharodi	7,862,616	B2	1/2011	Lechmann et al.
5,980,522	A	11/1999	Koros et al.	7,875,076	B2	1/2011	Mathieu et al.
6,045,579	A	4/2000	Hochshuler et al.	7,909,869	B2	3/2011	Gordon et al.
6,080,193	A	6/2000	Hochshuler et al.	8,118,870	B2	2/2012	Gordon et al.
6,099,531	A	8/2000	Bonutti	8,118,871	B2	2/2012	Gordon et al.
6,102,949	A	8/2000	Biedermann et al.	8,182,539	B2	5/2012	Tyber et al.
6,102,950	A	8/2000	Vaccaro	8,211,177	B2	7/2012	Richelsoph
6,106,557	A	8/2000	Robioneck et al.	8,262,737	B2	9/2012	Bagga et al.
6,113,638	A	9/2000	Williams et al.	8,287,597	B1	10/2012	Pimenta et al.
6,117,174	A	9/2000	Nolan	8,425,528	B2	4/2013	Berry et al.
6,126,689	A	10/2000	Brett	8,425,610	B2	4/2013	Guyer et al.
6,132,465	A	10/2000	Ray et al.	8,496,710	B2	7/2013	Bagga et al.
6,159,211	A	12/2000	Boriani et al.	8,579,980	B2	11/2013	DeLurio et al.
6,159,244	A	12/2000	Suddaby	8,585,767	B2	11/2013	Ullrich, Jr. et al.
6,176,882	B1	1/2001	Biedermann et al.	8,641,767	B2	2/2014	Landry et al.
6,179,873	B1	1/2001	Zientek	8,641,768	B2	2/2014	Duffield et al.
6,190,414	B1	2/2001	Young et al.	8,647,386	B2	2/2014	Gordon et al.
6,193,757	B1	2/2001	Foley et al.	8,685,098	B2	4/2014	Glerum et al.
6,217,579	B1	4/2001	Koros	8,709,083	B2	4/2014	Duffield et al.
6,245,108	B1	6/2001	Biscup	8,709,085	B2	4/2014	Lechmann et al.
6,309,421	B1	10/2001	Pisharodi	8,715,353	B2	5/2014	Bagga et al.
6,342,074	B1	1/2002	Simpson	8,795,366	B2	8/2014	Varela
6,371,989	B1	4/2002	Chauvin et al.	8,808,305	B2	8/2014	Kleiner
6,395,031	B1	5/2002	Foley et al.	8,834,571	B2	9/2014	Bagga et al.
6,409,766	B1	6/2002	Brett	8,852,282	B2	10/2014	Farley et al.
6,423,063	B1	7/2002	Bonutti	8,894,708	B2	11/2014	Thalgott et al.
6,432,106	B1	8/2002	Fraser	8,900,312	B2	12/2014	McLean et al.
6,436,140	B1	8/2002	Liu et al.	8,906,095	B2	12/2014	Christensen et al.
6,443,989	B1	9/2002	Jackson	8,920,500	B1	12/2014	Pimenta et al.
6,443,990	B1	9/2002	Aebi et al.	8,926,704	B2	1/2015	Glerum et al.
6,454,805	B1	9/2002	Baccelli et al.	9,005,293	B2	4/2015	Moskowitz et al.
6,454,806	B1	9/2002	Cohen et al.	9,005,295	B2	4/2015	Kueenzi et al.
6,454,807	B1	9/2002	Jackson	9,034,045	B2	5/2015	Davenport et al.
6,461,359	B1	10/2002	Tribus et al.	9,060,877	B2	6/2015	Kleiner
6,491,724	B1	12/2002	Ferree	9,125,757	B2	9/2015	Weiman
6,520,991	B2	2/2003	Huene	9,132,021	B2	9/2015	Mermuys et al.
6,520,993	B2	2/2003	James et al.	9,138,330	B2	9/2015	Hansell et al.
6,527,803	B1	3/2003	Crozet et al.	9,149,367	B2	10/2015	Davenport et al.
6,562,074	B2	5/2003	Gerbec et al.	9,155,631	B2	10/2015	Seifert et al.
6,576,016	B1	6/2003	Hochshuler et al.	9,186,193	B2	11/2015	Kleiner et al.
6,623,525	B2	9/2003	Ralph et al.	9,186,258	B2	11/2015	Davenport et al.
6,629,998	B1	10/2003	Lin	9,192,482	B1	11/2015	Pimenta et al.
6,635,086	B2	10/2003	Lin	9,198,772	B2	12/2015	Weiman
6,648,917	B2	11/2003	Gerbec et al.	9,211,194	B2	12/2015	Bagga et al.
6,676,703	B2	1/2004	Biscup	9,211,196	B2	12/2015	Glerum et al.
6,770,096	B2	8/2004	Bolger et al.	9,216,095	B2	12/2015	Glerum et al.
6,773,460	B2	8/2004	Jackson	9,226,836	B2	1/2016	Glerum
6,821,298	B1	11/2004	Jackson	9,233,009	B2	1/2016	Gray et al.
6,835,206	B2	12/2004	Jackson	9,233,010	B2	1/2016	Thalgott et al.
6,849,093	B2	2/2005	Michelson	9,259,327	B2	2/2016	Niemiec et al.
6,852,129	B2	2/2005	Gerbec et al.	9,351,845	B1	5/2016	Pimenta et al.
6,863,673	B2	3/2005	Gerbec et al.	9,351,848	B2	5/2016	Glerum et al.
6,923,814	B1	8/2005	Hildebrand et al.	9,358,126	B2	6/2016	Glerum et al.
6,926,737	B2	8/2005	Jackson	9,358,127	B2	6/2016	Duffield et al.
6,964,687	B1	11/2005	Bernard et al.	9,358,128	B2	6/2016	Glerum et al.
6,974,480	B2	12/2005	Messerli et al.	9,358,129	B2	6/2016	Weiman
6,984,234	B2	1/2006	Bray	9,364,343	B2	6/2016	Duffield et al.
7,112,222	B2	9/2006	Fraser et al.	9,370,434	B2	6/2016	Weiman
7,135,043	B2	11/2006	Nakahara et al.	9,370,435	B2	6/2016	Walkenhorst et al.
7,137,997	B2	11/2006	Paul	9,387,092	B2	7/2016	Mermuys et al.
7,172,627	B2	2/2007	Fiere et al.	9,414,937	B2	8/2016	Carlson et al.
7,195,643	B2	3/2007	Jackson	9,427,328	B2	8/2016	Drochner et al.
				9,452,063	B2	9/2016	Glerum et al.
				9,456,906	B2	10/2016	Gray et al.
				9,474,625	B2	10/2016	Weiman
				9,480,573	B2	11/2016	Perloff et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

9,480,576 B2	11/2016	Pepper et al.	2003/0050701 A1	3/2003	Michelson
9,480,578 B2	11/2016	Pinto	2003/0130739 A1	7/2003	Gerbec et al.
9,480,579 B2	11/2016	Davenport et al.	2003/0208275 A1	11/2003	Michelson
9,486,325 B2	11/2016	Davenport et al.	2004/0172134 A1	9/2004	Berry
9,492,287 B2	11/2016	Glerum et al.	2004/0186570 A1	9/2004	Rapp
9,492,288 B2	11/2016	Wagner et al.	2004/0193158 A1	9/2004	Lim et al.
9,492,289 B2	11/2016	Davenport et al.	2004/0249461 A1	12/2004	Ferree
9,510,954 B2	12/2016	Glerum et al.	2004/0254643 A1	12/2004	Jackson
9,532,821 B2	1/2017	Moskowitz et al.	2004/0254644 A1	12/2004	Taylor
9,561,116 B2	2/2017	Weiman et al.	2005/0015149 A1	1/2005	Michelson
9,566,168 B2	2/2017	Glerum et al.	2005/0033429 A1	2/2005	Kuo
9,572,677 B2	2/2017	Davenport et al.	2005/0033439 A1	2/2005	Gordon et al.
9,579,124 B2	2/2017	Gordon et al.	2008/0161933 A1	7/2008	Grotz et al.
9,585,762 B2	3/2017	Suddaby et al.	2012/0239150 A1	9/2012	Ullrich, Jr. et al.
9,603,713 B2	3/2017	Moskowitz et al.	2013/0110238 A1	5/2013	Lindemann et al.
9,622,875 B2	4/2017	Moskowitz et al.	2014/0277482 A1	9/2014	Gfeller et al.
9,629,729 B2	4/2017	Grimberg, Jr. et al.	2014/0277500 A1	9/2014	Logan et al.
9,655,746 B2	5/2017	Seifert	2015/0094813 A1*	4/2015	Lechmann A61F 2/441 623/17.15
9,655,747 B2	5/2017	Glerum et al.	2015/0173915 A1	6/2015	Laubert et al.
9,662,224 B2	5/2017	Weiman et al.	2016/0270920 A1*	9/2016	Dawson A61F 2/4601
9,675,467 B2	6/2017	Duffield et al.	2017/0020685 A1*	1/2017	Geisler A61F 2/442
9,700,428 B2	7/2017	Niemiec et al.	2017/0049651 A1	2/2017	Lim et al.
9,707,092 B2	7/2017	Davenport et al.	2017/0049653 A1	2/2017	Lim et al.
9,713,536 B2	7/2017	Foley et al.	2017/0095345 A1	4/2017	Davenport et al.
9,730,684 B2	8/2017	Beale et al.	2017/0105844 A1	4/2017	Kuyler et al.
9,801,733 B2	10/2017	Wolters et al.	2017/0296352 A1	10/2017	Richerme et al.
10,369,009 B2*	8/2019	Joly A61F 2/44	2018/0036138 A1	2/2018	Robinson
10,744,003 B2*	8/2020	Ryan A61F 2/447	2018/0110624 A1*	4/2018	Arnone A61F 2/30767
D920,515 S *	5/2021	Miller D24/155	2018/0116891 A1	5/2018	Beale et al.
D920,516 S *	5/2021	Miller D24/155	2018/0256336 A1*	9/2018	Mueller A61F 2/30
D920,517 S *	5/2021	Miller D24/155	2018/0303624 A1	10/2018	Shoshtaev
11,147,679 B2*	10/2021	Kowalczyk A61F 2/4202	2018/0338838 A1*	11/2018	Cryder A61F 2/4611
2002/0045943 A1	4/2002	Uk	2019/0000702 A1	1/2019	Lim et al.
2002/0045945 A1	4/2002	Liu et al.	2019/0000707 A1	1/2019	Lim et al.
2002/0116066 A1	8/2002	Chauvin et al.	2019/0046381 A1	2/2019	Lim et al.
2002/0128713 A1	9/2002	Ferree	2019/0046383 A1	2/2019	Lim et al.
2002/0151976 A1	10/2002	Foley et al.	2019/0070015 A1	3/2019	Emerick et al.
			2019/0076258 A1*	3/2019	Black B33Y 80/00

* cited by examiner

FIG. 1

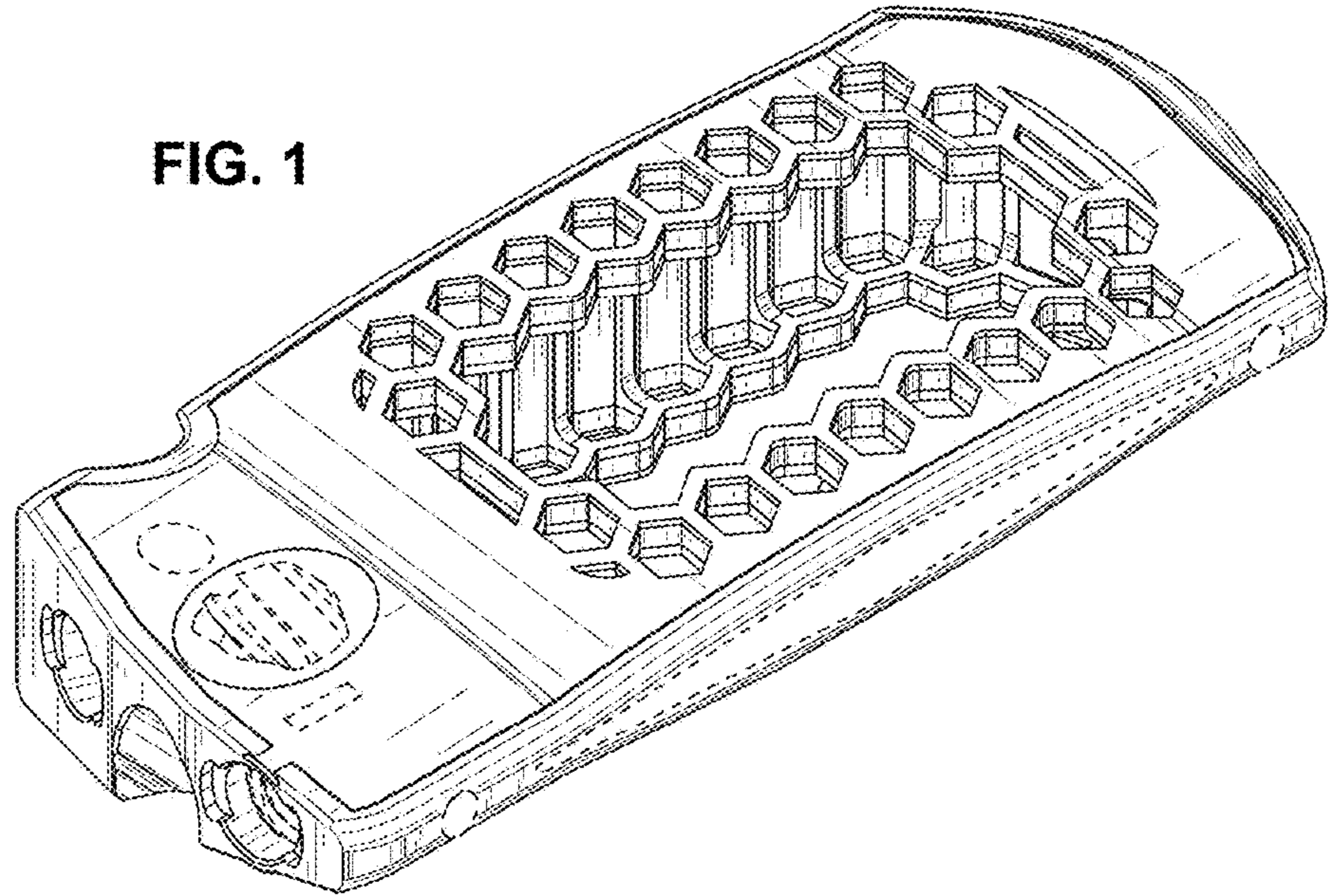


FIG. 2

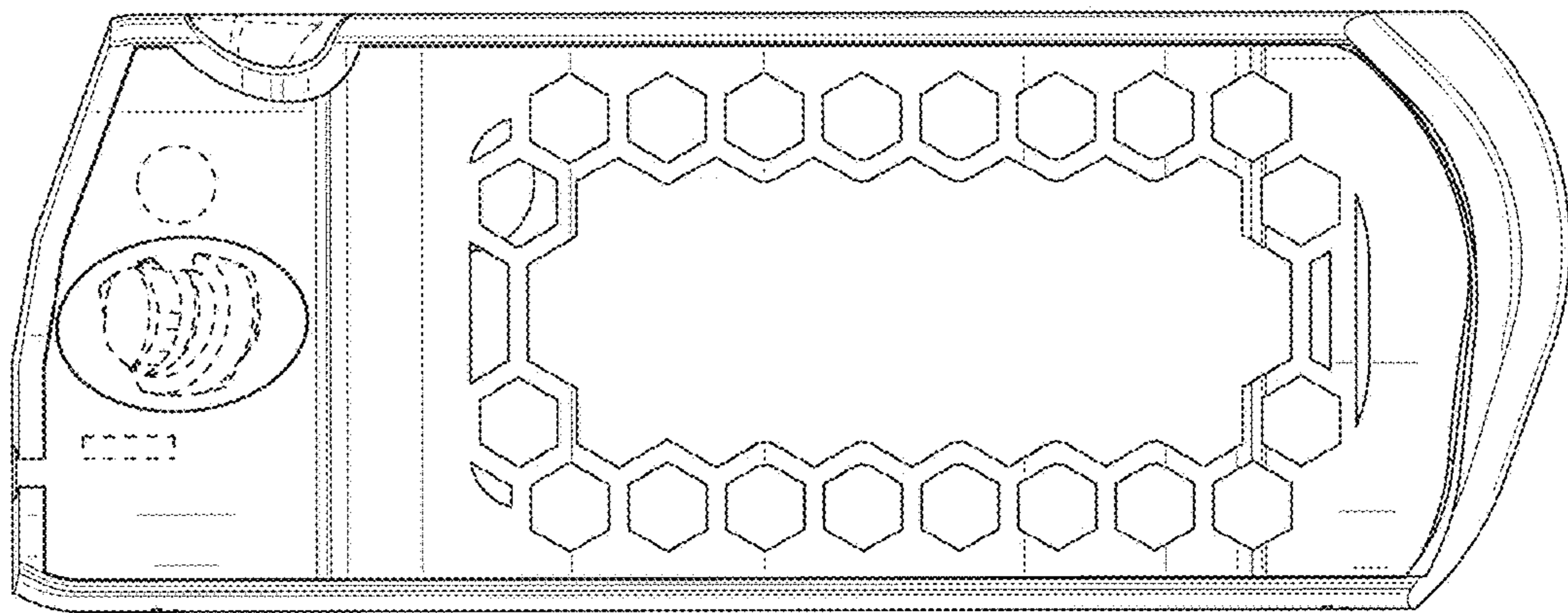
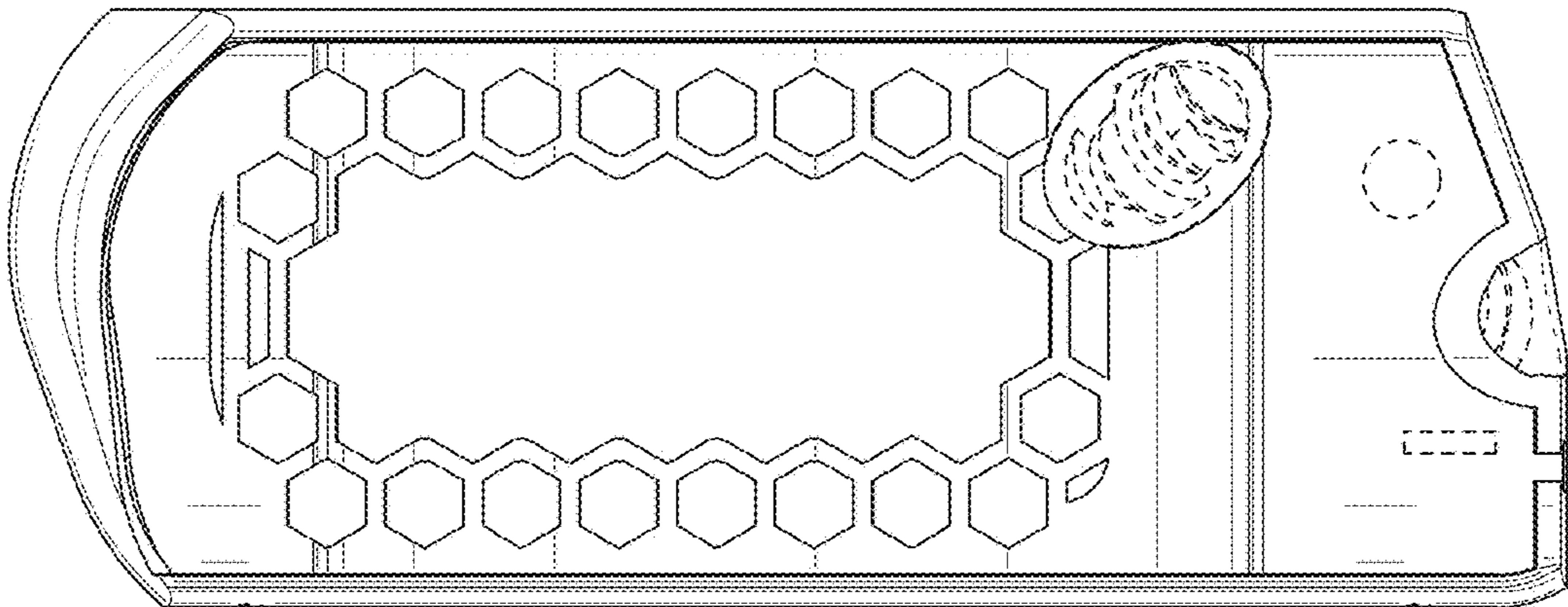


FIG. 3



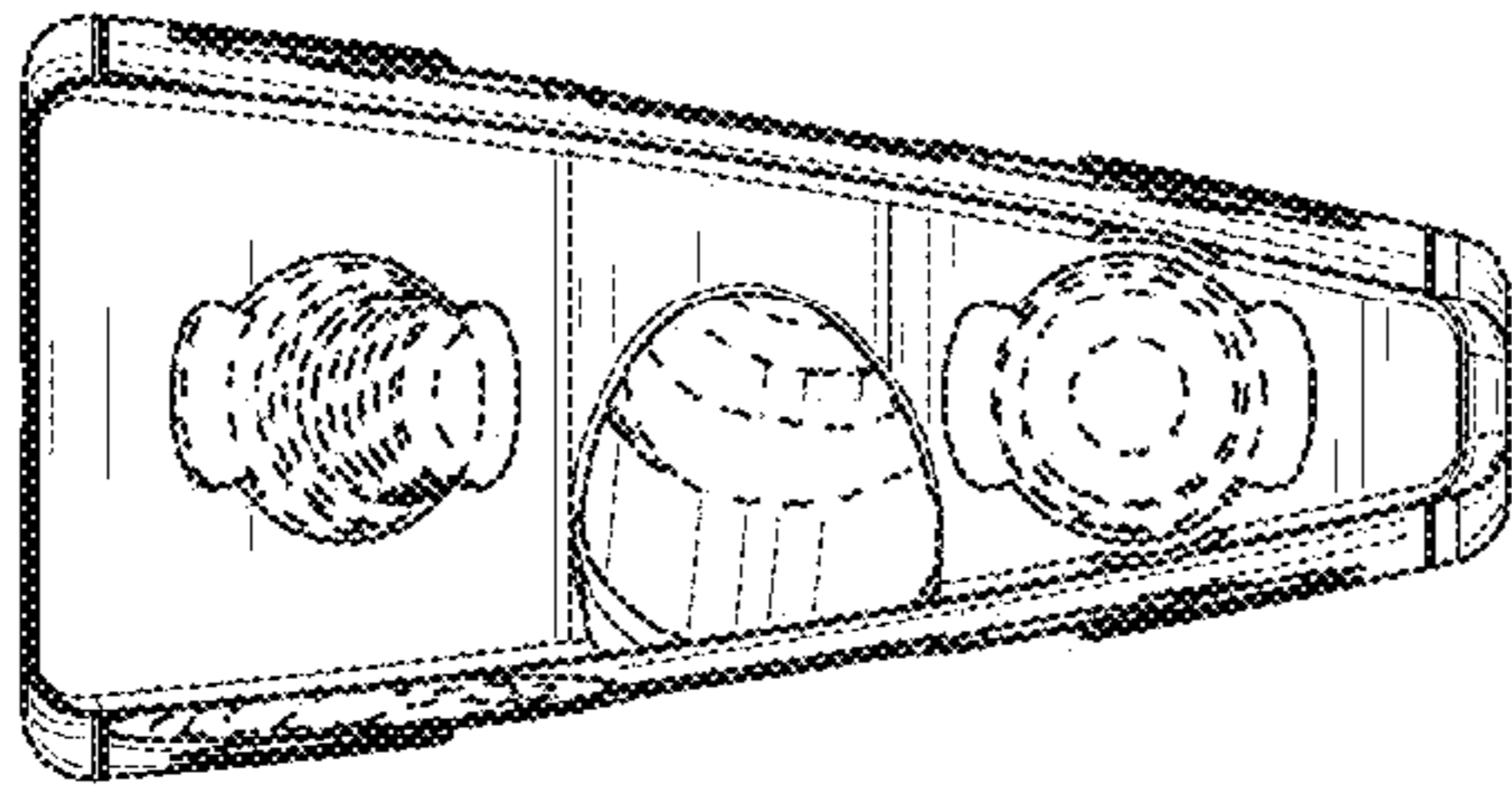


FIG. 4

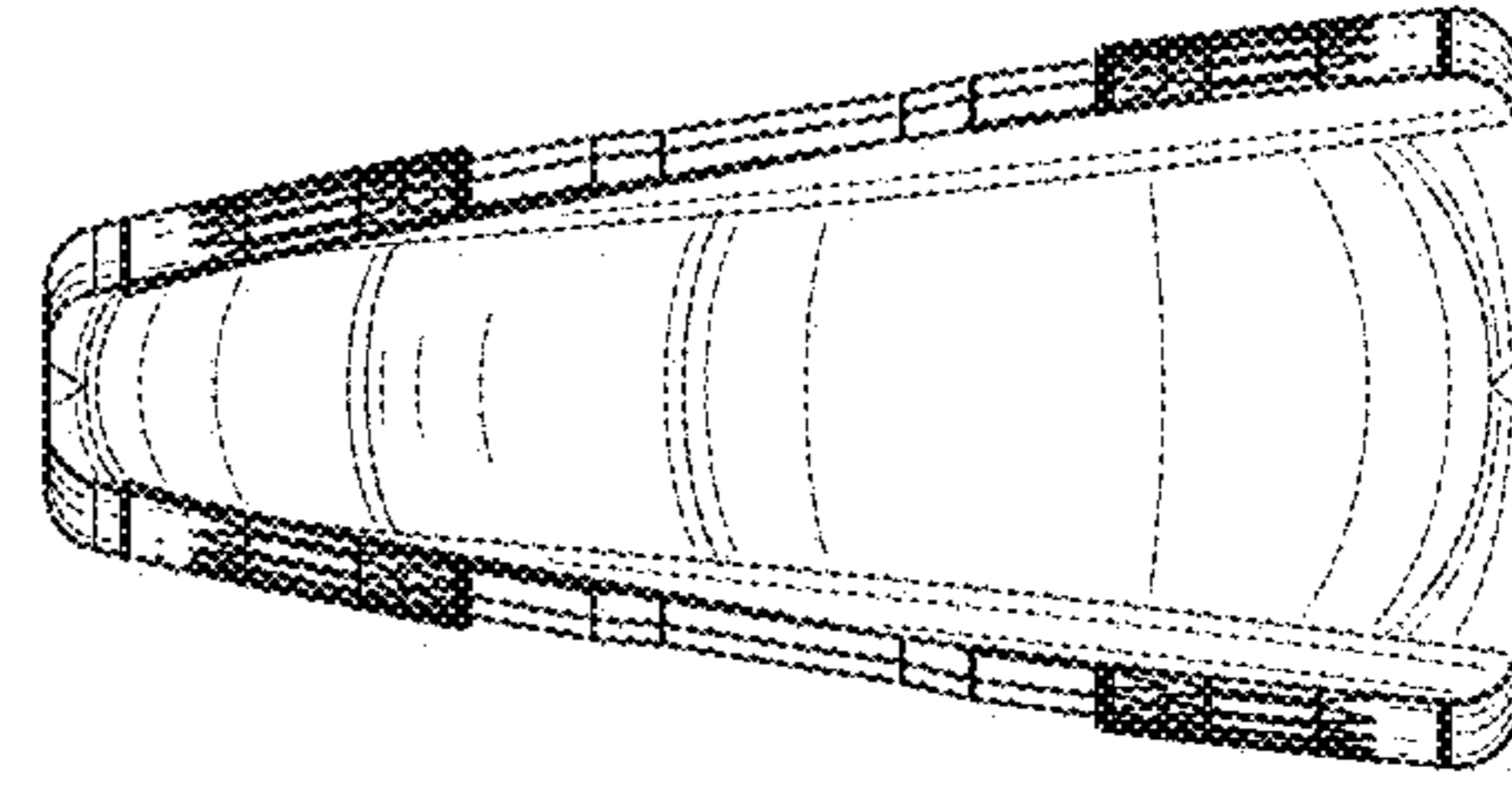


FIG. 5

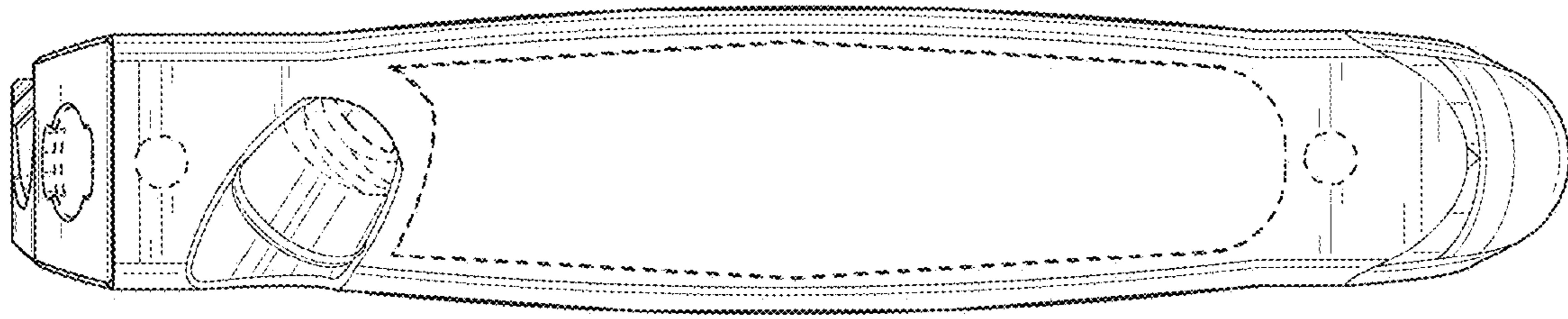


FIG. 6

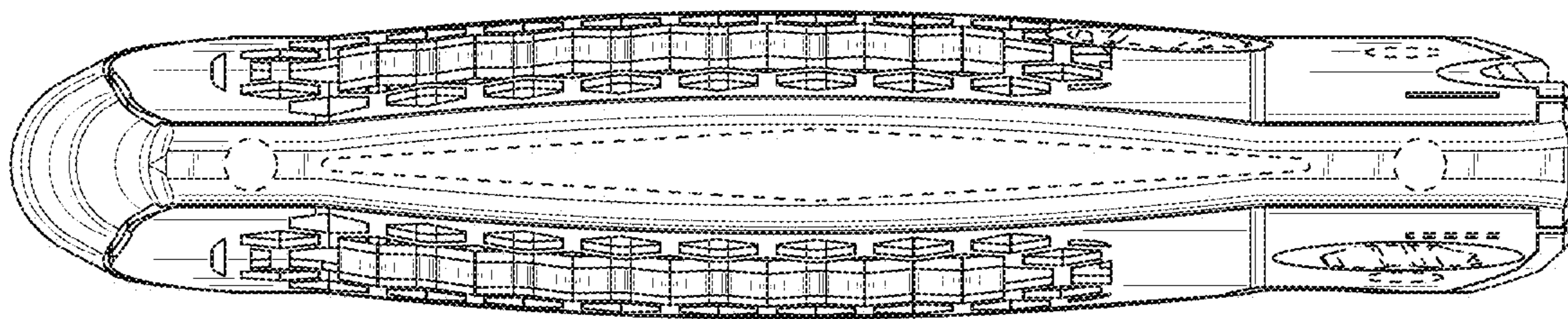


FIG. 7

FIG. 8

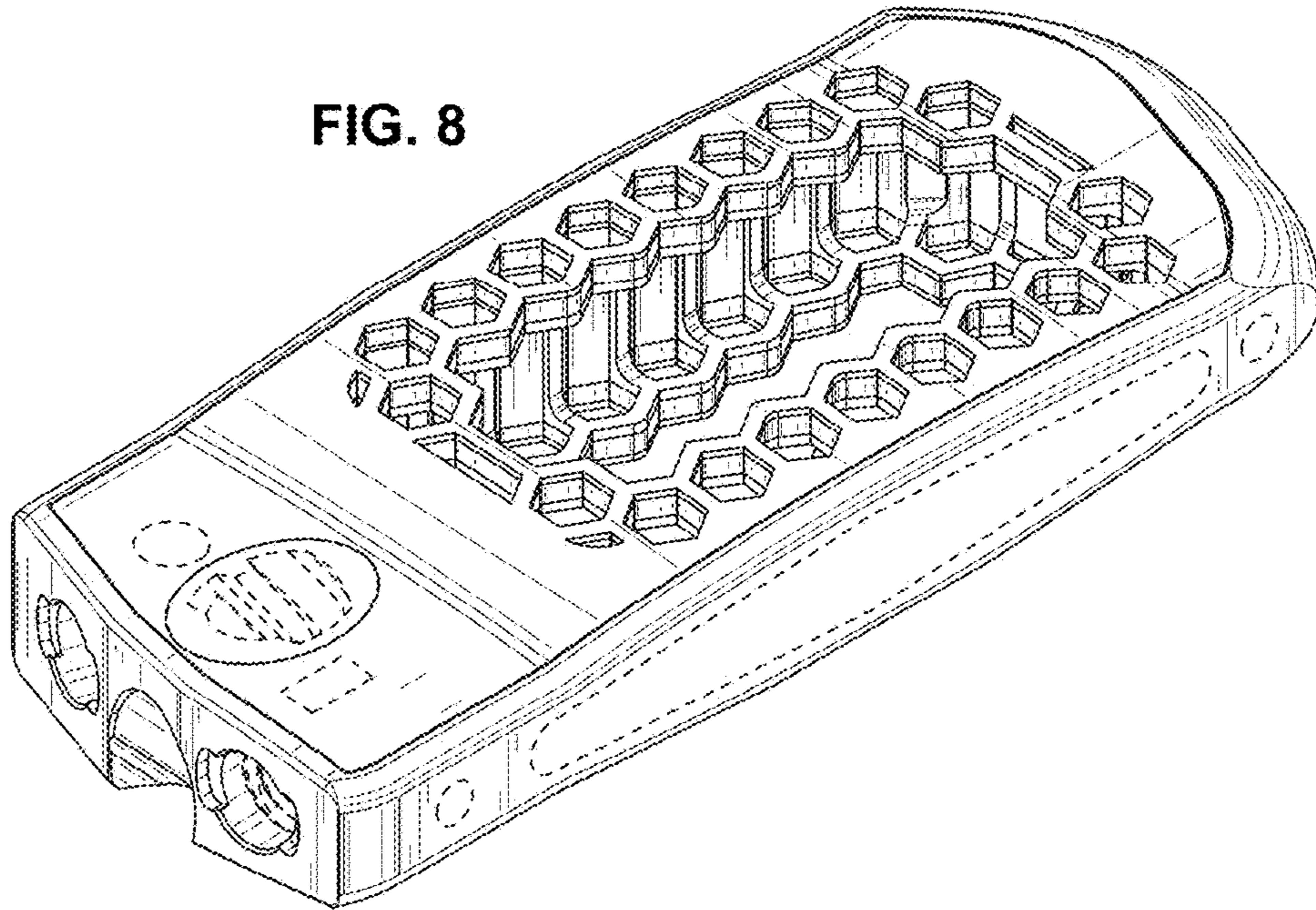


FIG. 9

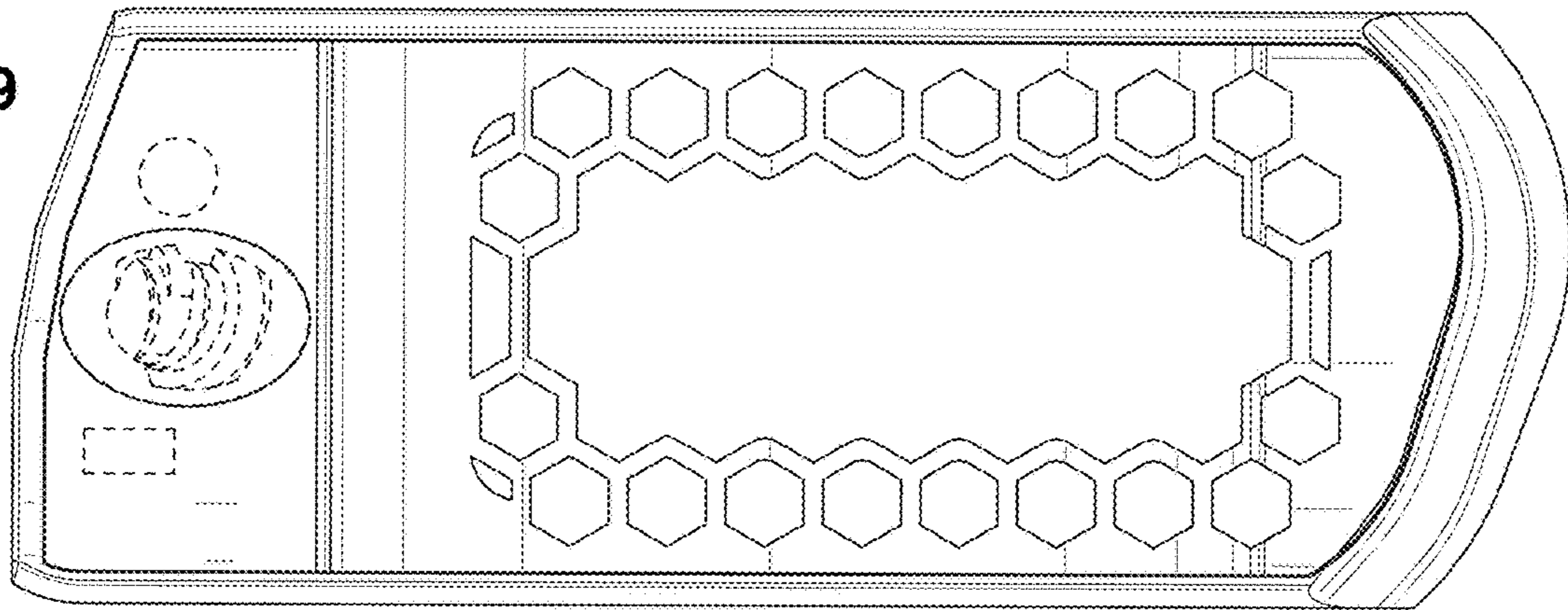
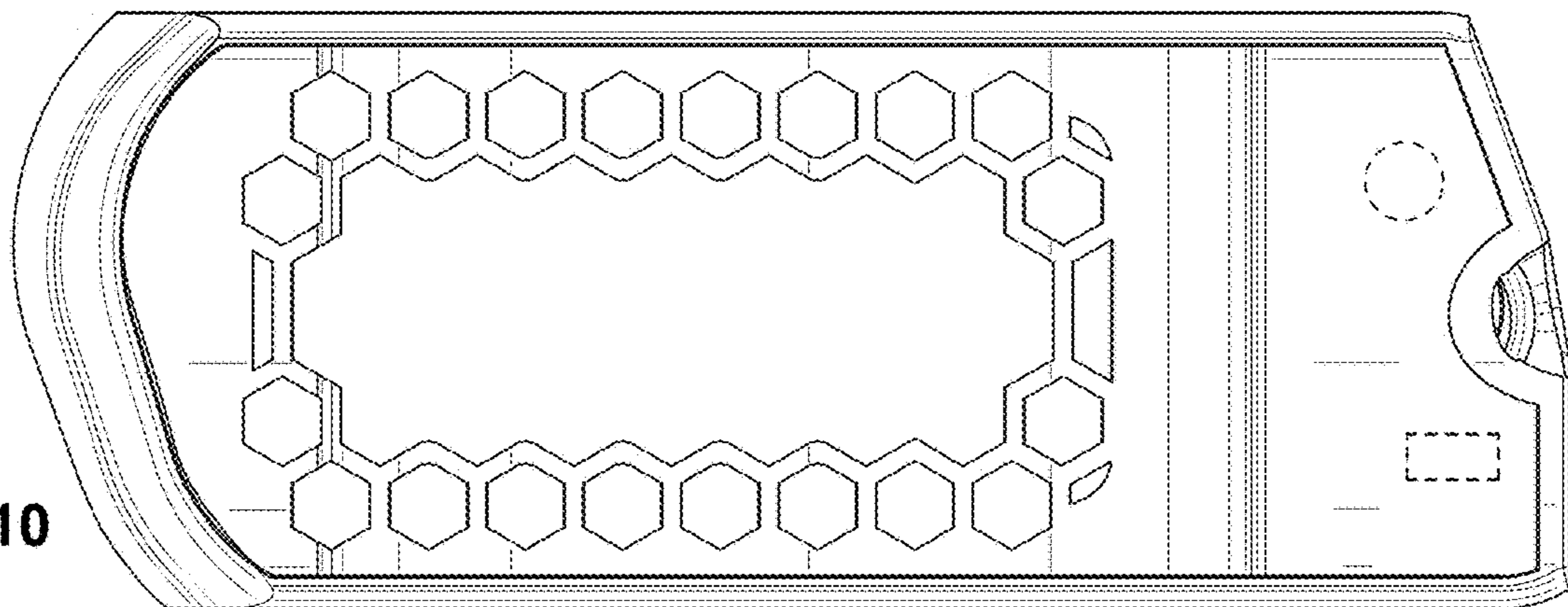


FIG. 10



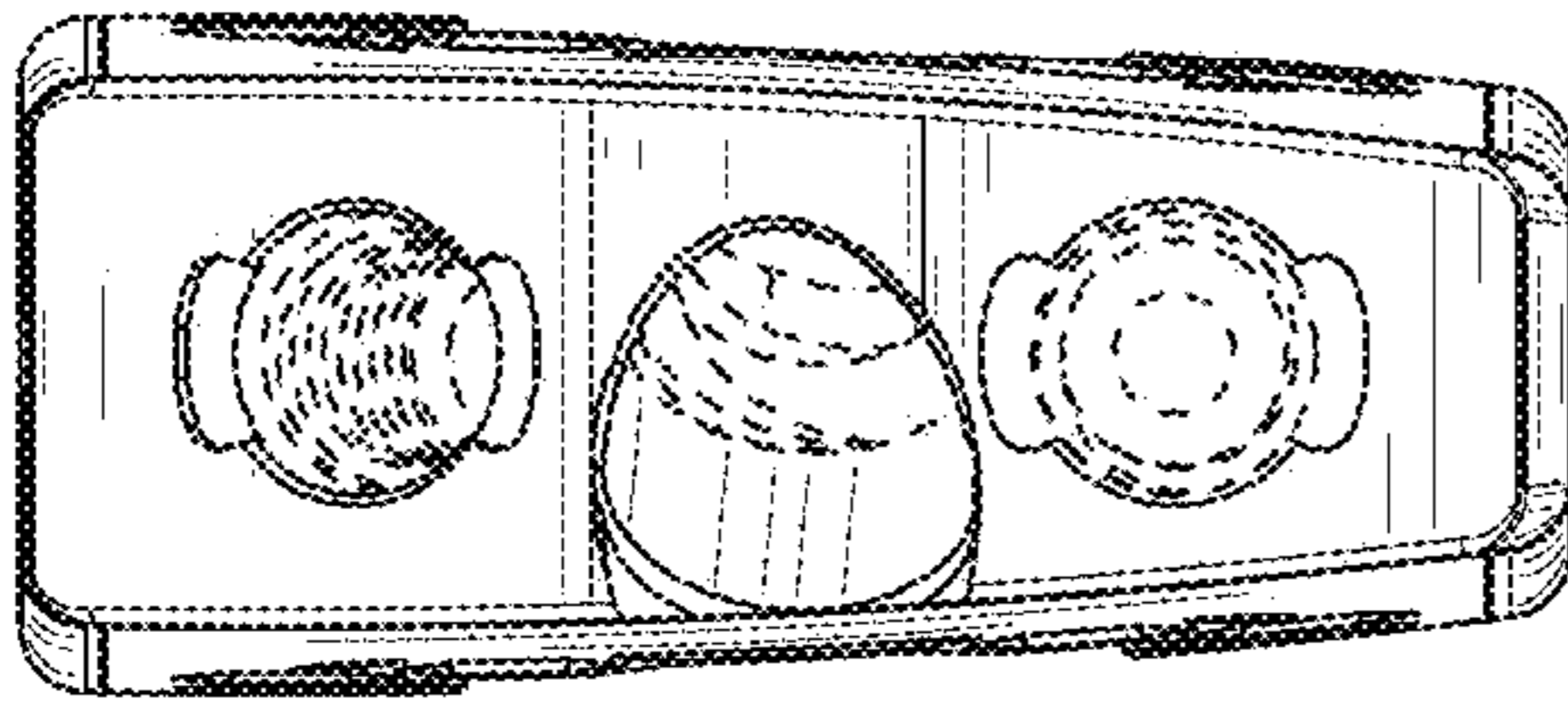


FIG. 11

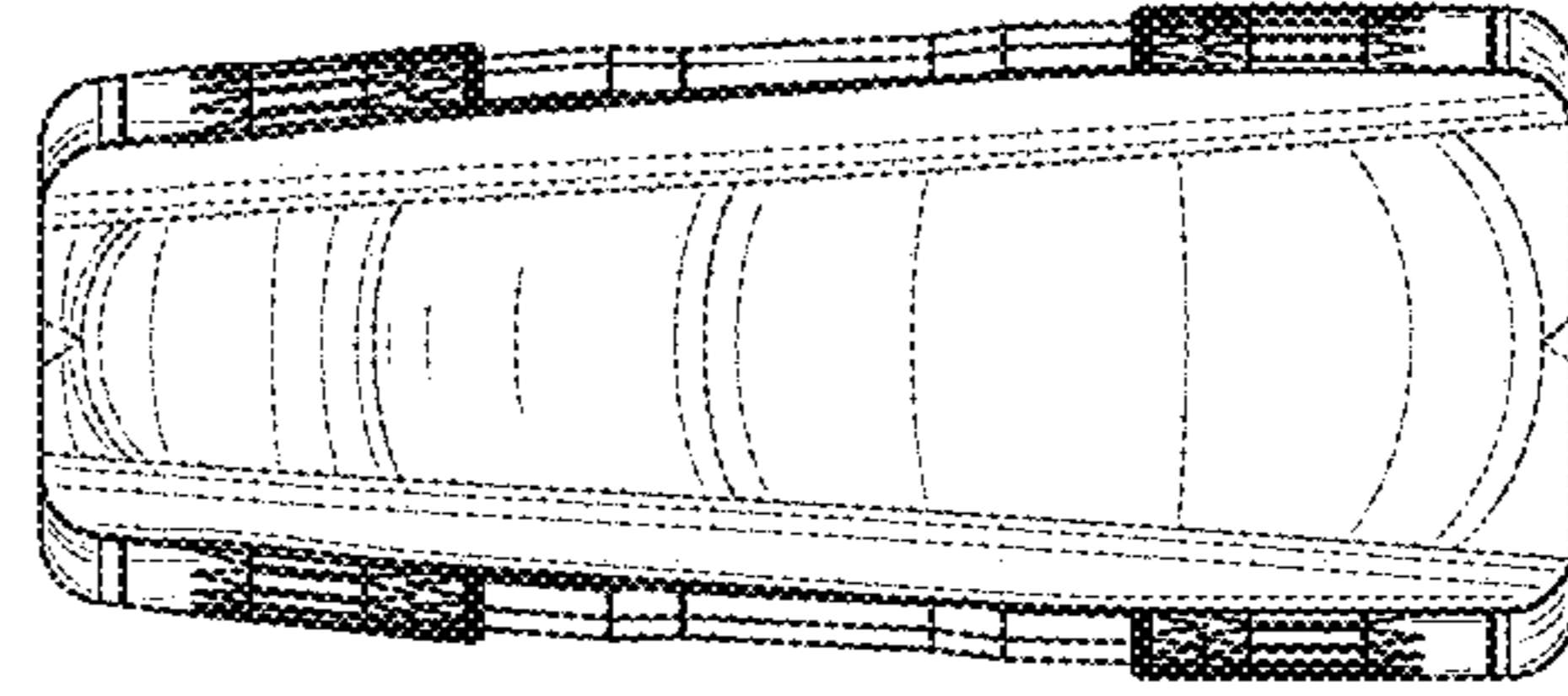


FIG. 12

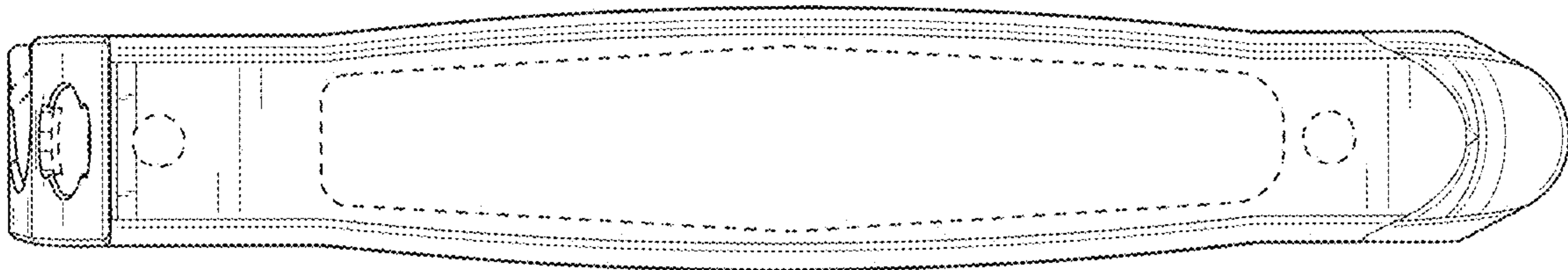


FIG. 13

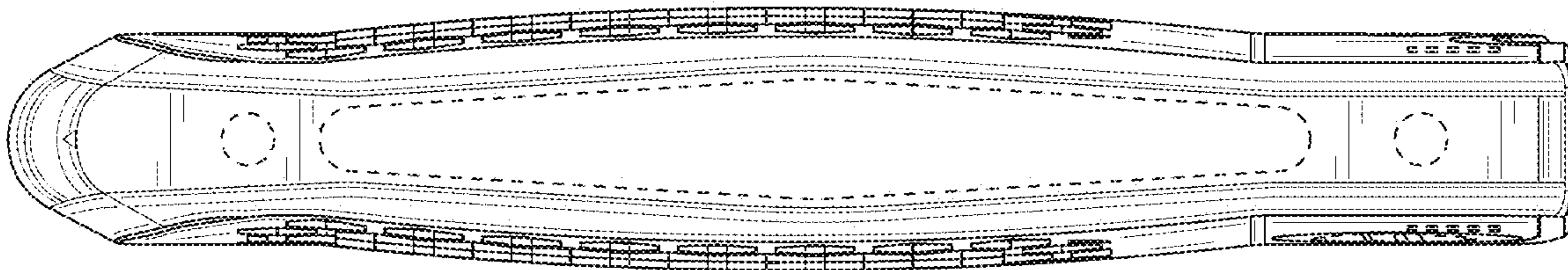


FIG. 14