



US00D960350S

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

(10) **Patent No.:** **US D960,350 S**

(45) **Date of Patent:** **\*\* Aug. 9, 2022**

(54) **COMBINED INHALER AND MONITOR**

(71) Applicant: **Vectura Delivery Devices Limited,**  
Wiltshire (GB)

(72) Inventors: **Darryl Cotton,** Wiltshire (GB); **Roger Clarke,** Wiltshire (GB); **John Deamer,** Wiltshire (GB); **Andreas Meliniotis,** Wiltshire (GB)

(73) Assignee: **Vectura Delivery Devices Limited,**  
Wiltshire (GB)

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

(21) Appl. No.: **29/734,932**

(22) Filed: **May 15, 2020**

(30) **Foreign Application Priority Data**

Nov. 18, 2019 (EM) ..... 007255740

(51) **LOC (13) Cl.** ..... **24-04**

(52) **U.S. Cl.**  
USPC ..... **D24/110**

(58) **Field of Classification Search**  
USPC .... D24/107, 108, 110, 110.5, 111, 113, 127,  
D24/164, 167, 169, 185, 188, 217, 231,  
(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D307,388 S \* 4/1990 Newell ..... D3/203.2  
D459,252 S \* 6/2002 Radivojevic ..... D10/72  
(Continued)

**FOREIGN PATENT DOCUMENTS**

EM 007343769-0001 \* 12/2019  
JP D1590925 \* 11/2017  
(Continued)

**OTHER PUBLICATIONS**

[Vectura Signs Global Agreement With Hikma to Develop Generic Versions of GSK's Ellipta® Portfolio], vectura.com, 2018 [online],

[site visited Sep. 10, 2021], Internet URL: [https://www.vectura.com/wp-content/uploads/2020/03/Vectura\\_Briefing\\_Document\\_19.12.18\\_v8.1.pdf](https://www.vectura.com/wp-content/uploads/2020/03/Vectura_Briefing_Document_19.12.18_v8.1.pdf) (Year: 2018).\*

(Continued)

*Primary Examiner* — Jonathan J Han  
*Assistant Examiner* — Amanda J Berlinski

(74) *Attorney, Agent, or Firm* — Davidson, Davidson & Kappel, LLC

(57) **CLAIM**

The ornamental design for a combined inhaler and monitor, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a combined inhaler and monitor from above and one side with the mouthpiece cover in the closed position.

FIG. 2 is a perspective view of the device from below and other side with the mouthpiece cover in the closed position.

FIG. 3 is a front view of the device with the mouthpiece cover in the closed position.

FIG. 4 is a rear view of the device with the mouthpiece cover in the closed position.

FIG. 5 is a side view of the device with the mouthpiece cover in the closed position.

FIG. 6 is the other side view of the device with the mouthpiece cover in the closed position.

FIG. 7 is a top plan view of the device with the mouthpiece cover in the closed position.

FIG. 8 is a bottom plan view of the device with the mouthpiece cover in the closed position.

FIG. 9 is a perspective view of the device from above and one side with the mouthpiece cover in the open position.

FIG. 10 is a perspective view of the device from below and other side with the mouthpiece cover in the open position.

FIG. 11 is a front view of the device with the mouthpiece cover in the open position.

FIG. 12 is a rear view of the device with the mouthpiece cover in the open position.

FIG. 13 is a side view of the device with the mouthpiece cover in the open position.

(Continued)

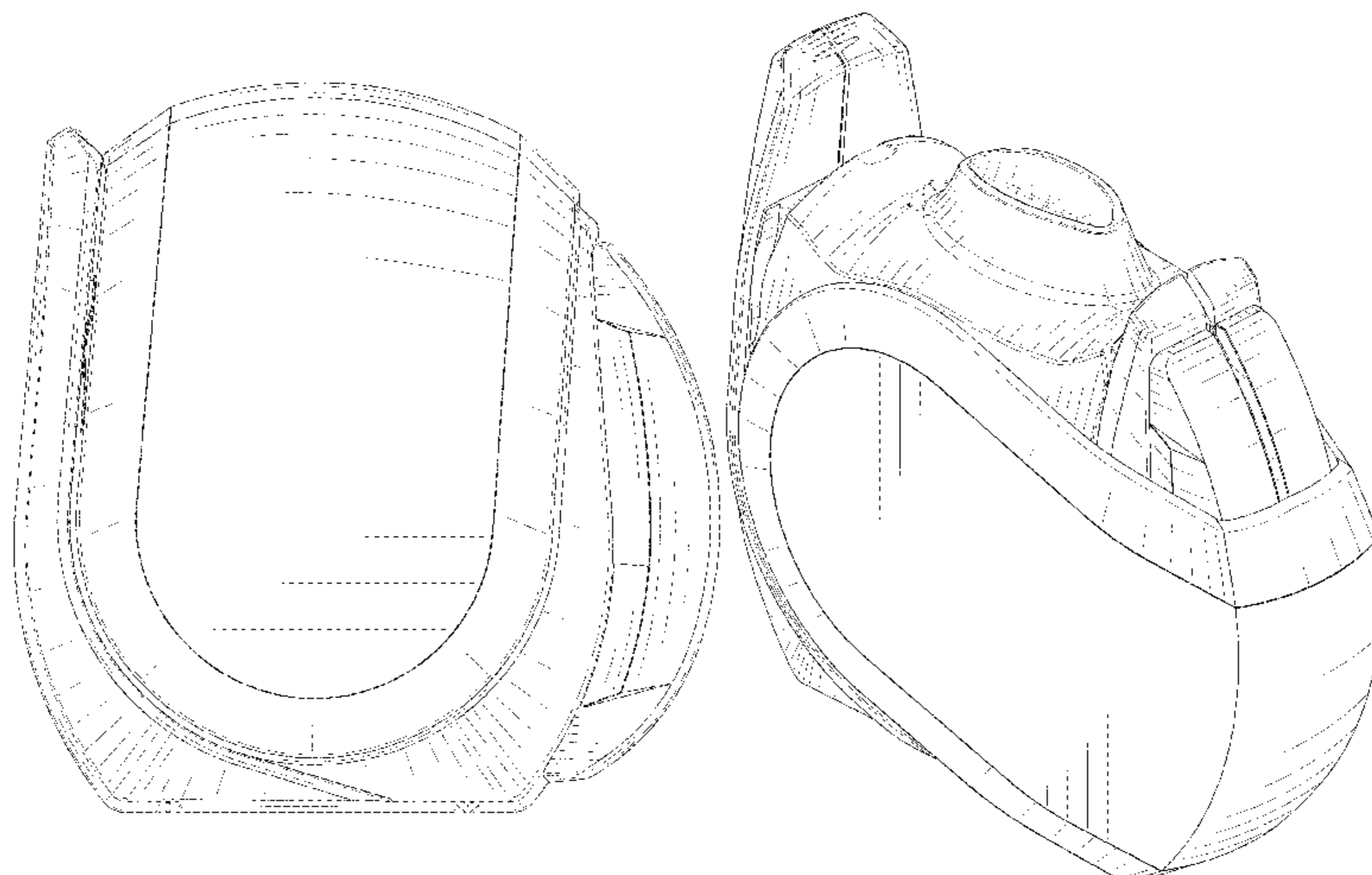




FIG. 14 is the other side view of the device with the mouthpiece cover in the open position.  
 FIG. 15 is a top plan view of the device with the mouthpiece cover in the open position; and,  
 FIG. 16 is a bottom plan view of the device with the mouthpiece cover in the open position.  
 The broken lines in the drawings show portions of the combined inhaler and monitor that form no part of the claimed design.

**1 Claim, 16 Drawing Sheets**

**(58) Field of Classification Search**

USPC ..... D24/232; D28/66; D9/420, 422;  
 D10/70, 72; D3/201, 298, 218, 295, 273;  
 D7/630; D19/69  
 CPC ..... A61M 11/00; A61M 11/02; A61M 11/04;  
 A61M 15/00; A61M 15/0001; A61M  
 15/0068; A61M 15/008; A61M 15/0083;  
 A61M 15/0025; A61M 15/0026; A61M  
 15/0021; A61M 15/0091; A61M 15/0065;  
 A61M 15/009; A61M 2202/064

See application file for complete search history.

**(56) References Cited**

**U.S. PATENT DOCUMENTS**

D460,255 S *	7/2002	Hillman	.....	D3/218
6,516,799 B1 *	2/2003	Greenwood	.....	A61M 15/009 128/203.12
D472,372 S *	4/2003	Hassett	.....	D3/218
D502,807 S *	3/2005	Jaron	.....	D3/273
D590,283 S *	4/2009	Critelli	.....	D10/74
D593,884 S *	6/2009	Wang	.....	D10/70
D637,281 S *	5/2011	Harvey	.....	D24/110
D667,105 S *	9/2012	Zuyderhoudt	.....	D24/110
D684,684 S *	6/2013	Grunstad	.....	D24/110
D693,458 S *	11/2013	Wright	.....	D24/110
D720,096 S *	12/2014	McDougall	.....	D28/66
D726,966 S *	4/2015	McDougall	.....	D28/66
D755,950 S *	5/2016	Meliniotis	.....	D24/110
D777,904 S *	1/2017	Van Sickle	.....	D24/110
D782,350 S *	3/2017	Bridges	.....	D10/72
D783,429 S *	4/2017	Wortelboer	.....	D10/72
D791,931 S *	7/2017	Kang	.....	D24/110
D831,190 S *	10/2018	Von Schuckmann	.....	D24/110
D837,969 S *	1/2019	Sutherland	.....	D24/110
D855,792 S *	8/2019	Toksoz	.....	D24/110
D869,638 S *	12/2019	Shinichi	.....	D24/110
D947,360 S *	3/2022	Cotton	.....	D24/127
D948,705 S *	4/2022	Cotton	.....	D24/110
2008/0135575 A1 *	6/2008	Ingram	.....	G06M 1/163 222/36
2008/0196718 A1 *	8/2008	Connell	.....	A61M 15/0055 128/203.15
2010/0126507 A1 *	5/2010	Lulla	.....	A61M 15/0048 128/203.15
2012/0097162 A1 *	4/2012	Keegstra	.....	A61M 15/0075 128/203.15
2012/0132205 A1 *	5/2012	Meliniotis	.....	A61M 15/0026 128/203.21
2012/0138055 A1 *	6/2012	Meliniotis	.....	A61M 15/0056 128/203.15

2012/0152245 A1 *	6/2012	Rolfs	.....	A61M 15/0045 128/203.15
2014/0182584 A1 *	7/2014	Sutherland	.....	A61M 15/0071 128/200.23
2015/0096563 A1 *	4/2015	Toksoz	.....	A61M 15/0051 128/203.15
2015/0101599 A1 *	4/2015	Berry	.....	A61M 15/0026 128/202.22
2015/0151059 A1 *	6/2015	Meliniotis	.....	A61M 15/0056 128/203.15
2015/0174345 A1 *	6/2015	Toksoz	.....	A61M 15/0053 128/203.15
2015/0235548 A1 *	8/2015	Engelhard	.....	G08B 21/24 222/1
2016/0045684 A1 *	2/2016	Ono	.....	A61M 15/0045 128/203.15
2016/0144141 A1 *	5/2016	Biswas	.....	A61M 15/009 128/200.23
2016/0175547 A1 *	6/2016	Nakamura	.....	A61M 15/0041 128/203.15
2016/0228657 A1 *	8/2016	Sutherland	.....	A61M 15/0026
2016/0325057 A1 *	11/2016	Morrison	.....	A61M 15/0026
2017/0087312 A1 *	3/2017	Shears	.....	A61M 15/0083
2017/0157345 A1 *	6/2017	Panjabi	.....	G06M 1/083
2017/0246406 A1 *	8/2017	Sutherland	.....	A61M 15/008
2018/0214647 A1 *	8/2018	Meliniotis	.....	A61M 15/0055
2018/0369514 A1 *	12/2018	Adelson	.....	A61M 15/009
2019/0255264 A1 *	8/2019	Toksoz	.....	A61M 15/0026
2020/0069897 A1 *	3/2020	Hodson	.....	A61M 15/0095
2020/0147327 A1 *	5/2020	Krasnow	.....	A61M 15/009
2021/0268214 A1 *	9/2021	Clarke	.....	A61M 15/0025

**FOREIGN PATENT DOCUMENTS**

KR	3010928990003	*	4/2021
KR	3010928990004	*	4/2021

**OTHER PUBLICATIONS**

[Vectura Expands Dry Powder Inhaler Development and Manufacturing Capabilities at its Facility in Chippenham, U.K.], vectura.com, 2021 [online], [site visited Sep. 10, 2021], Internet URL: <https://www.vectura.com/about/news/vectura-expands-dry-powder-inhaler-development-and-manufacturing-capabilities-at-its-facility-in-chippenham-u-k/> (Year: 2021).\*

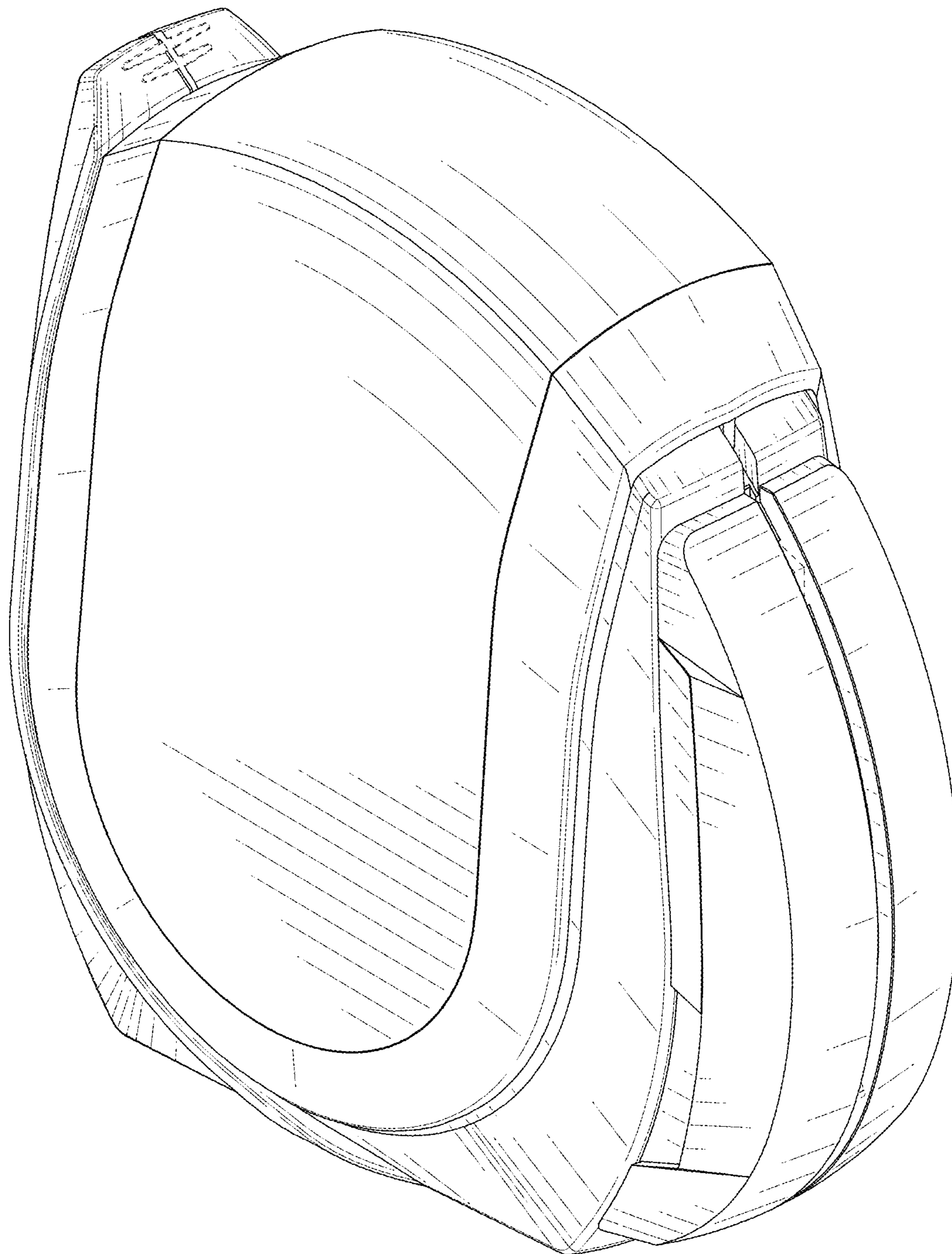
[This AI-Powered Asthma Inhaler Keeps Tabs on Your Dose so You Don't Have To], arm.com, Nov. 14, 2018 [online], [site visited Oct. 7, 2021], Internet URL: <https://www.arm.com/blogs/blueprint/video/ai-asthma-inhaler-keeps-tabs-dose> (Year: 2018).\*

[Asthma patients breathe easier with new bluetooth inhalers], pbs.org, May 10, 2017 [online], [site visited Oct. 7, 2021], Internet URL: <https://www.pbs.org/newshour/health/asthma-patients-breathe-easier-new-bluetooth-inhalers> (Year: 2017).\*

[Adherium receives OTC clearance for AstraZeneca's Symbicort inhaler], by Dave Muoio, mobihealthnews.com, Apr. 2, 2018 [online], [site visited Nov. 16, 2020], Internet URL: <https://www.mobihealthnews.com/content/adherium-receives-otc-clearance-astrazenecas-symbicort-inhaler> (Year: 2018).\*

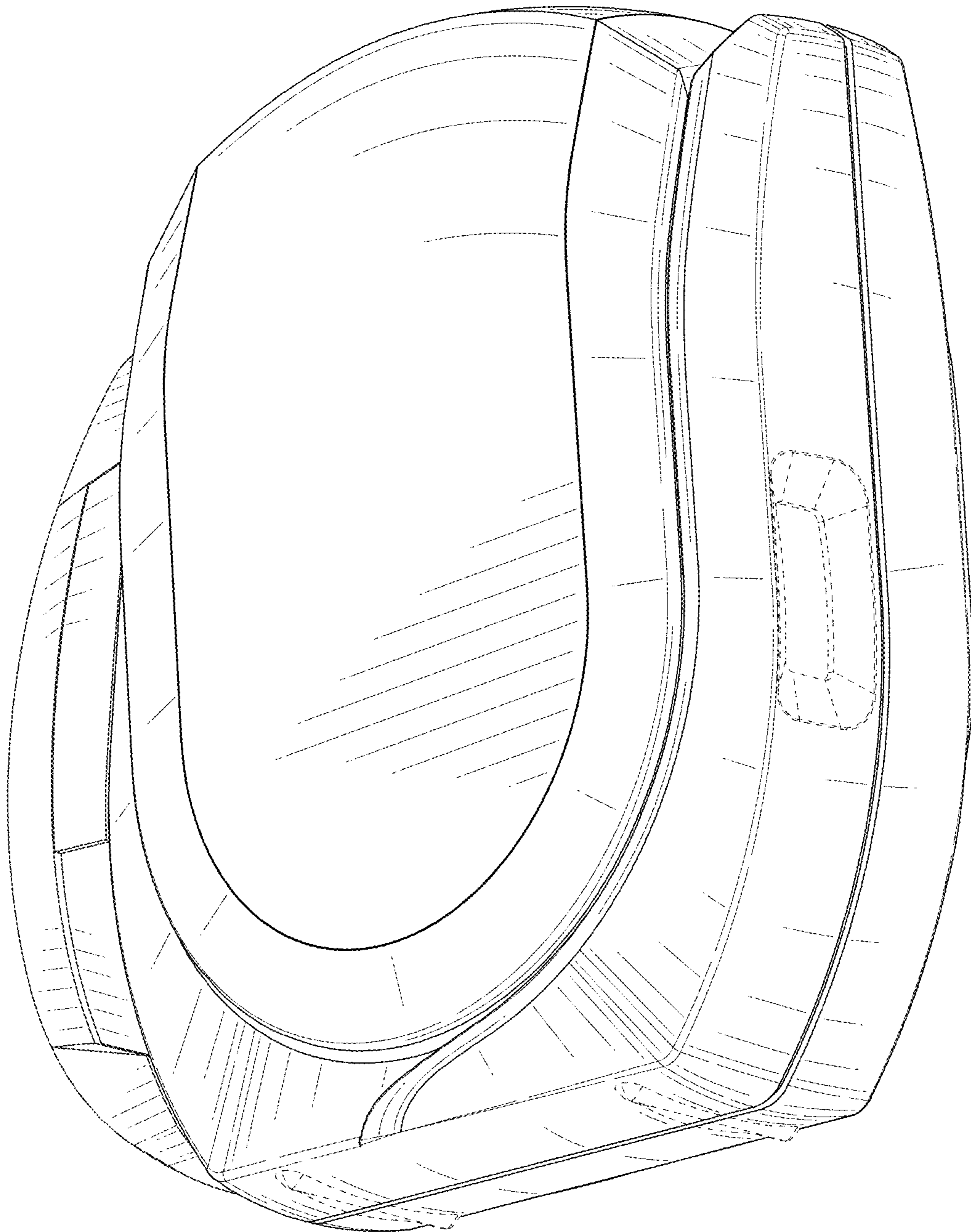
[AstraZeneca embracing smart inhalers for asthma tracking & medication adherence], by Satish Misra, imedicalapps.com, Aug. 21, 2015 [online], [site visited Oct. 7, 2021], Internet URL: <https://www.imedicalapps.com/2015/08/asthma-smart-inhaler-astrazeneca-adherium/> (Year: 2015).\*

\* cited by examiner



**FIG. 1**





**FIG. 2**

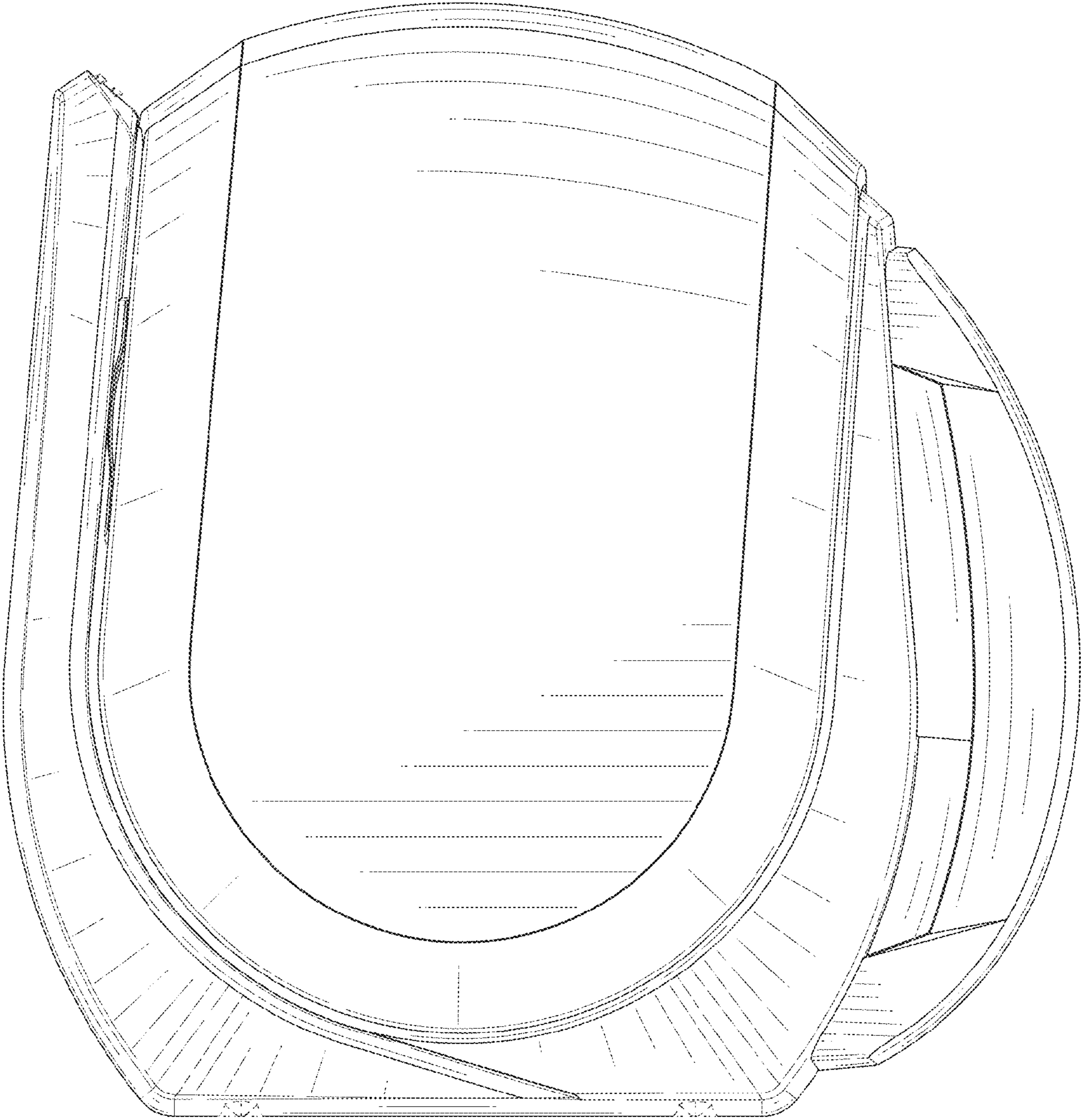
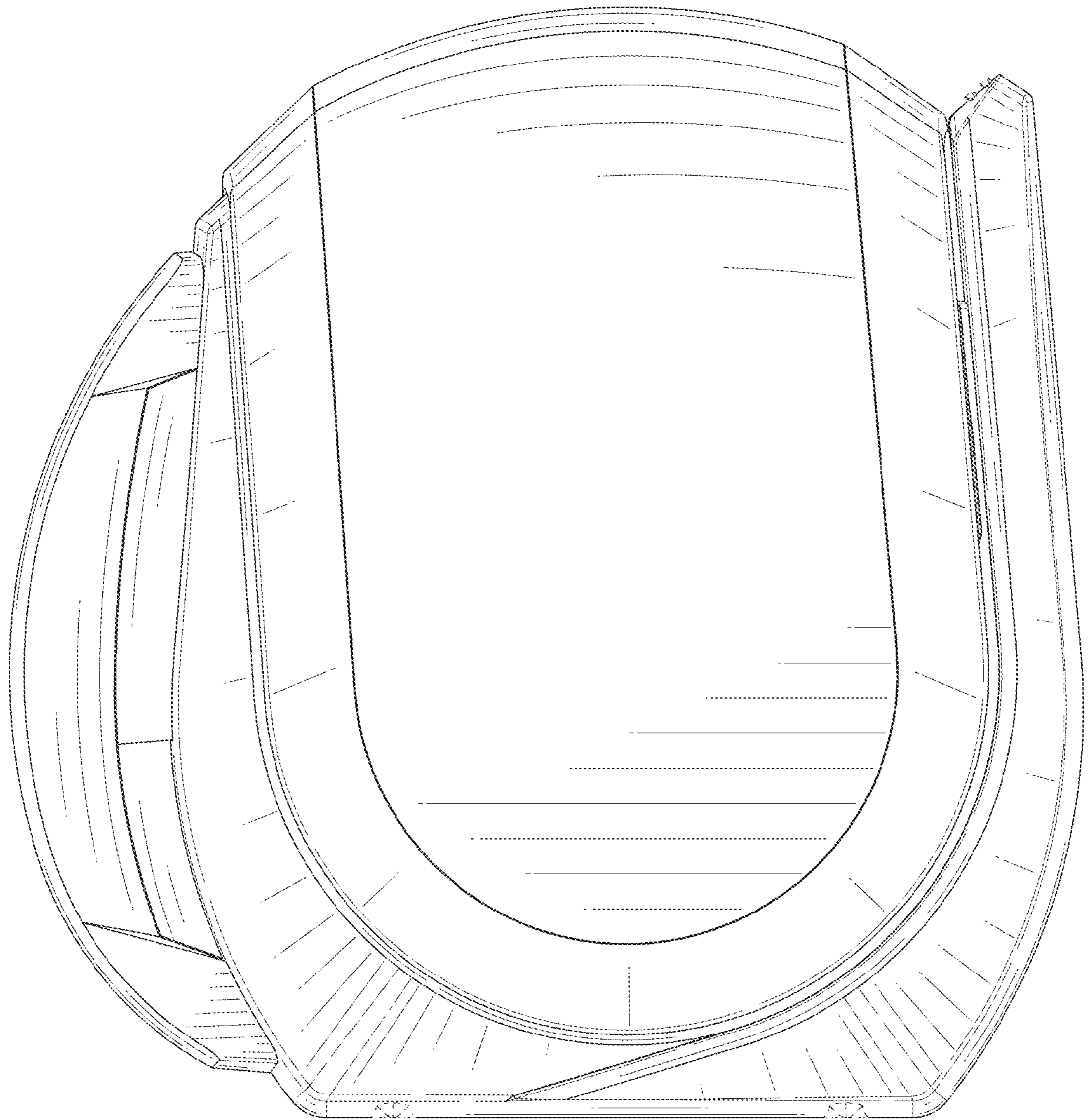
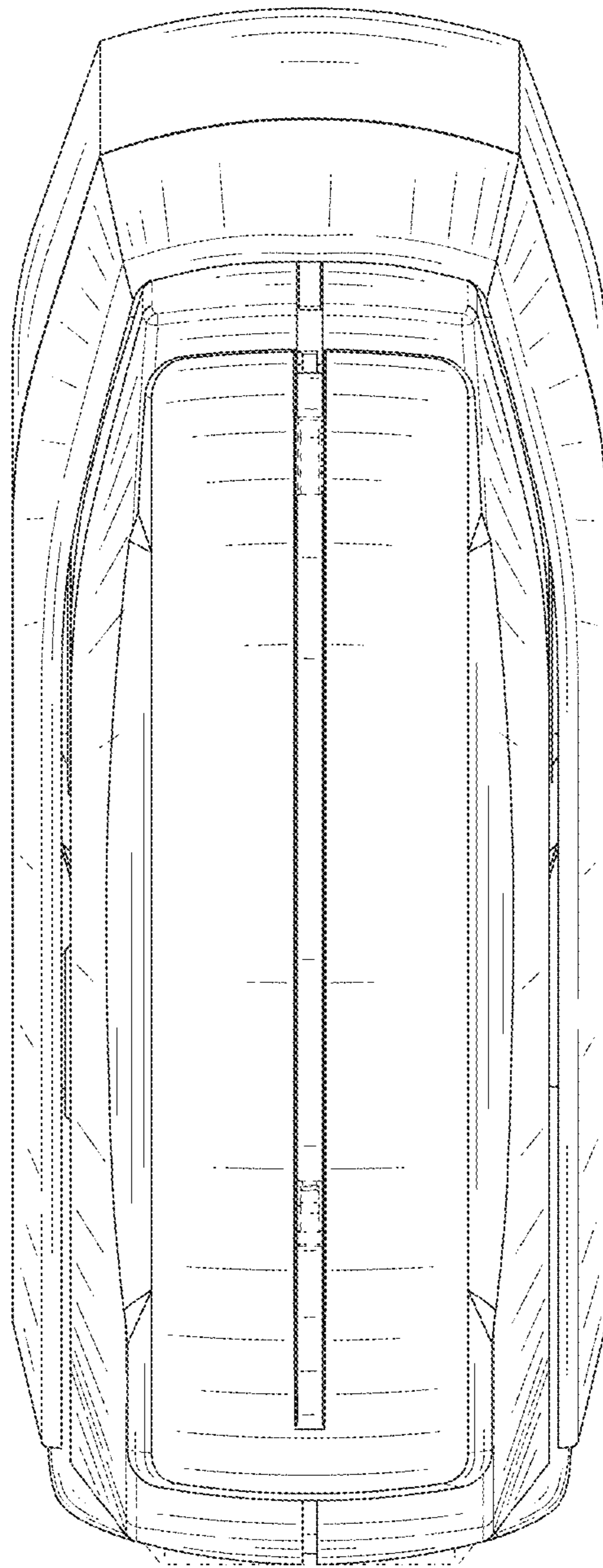


FIG. 3

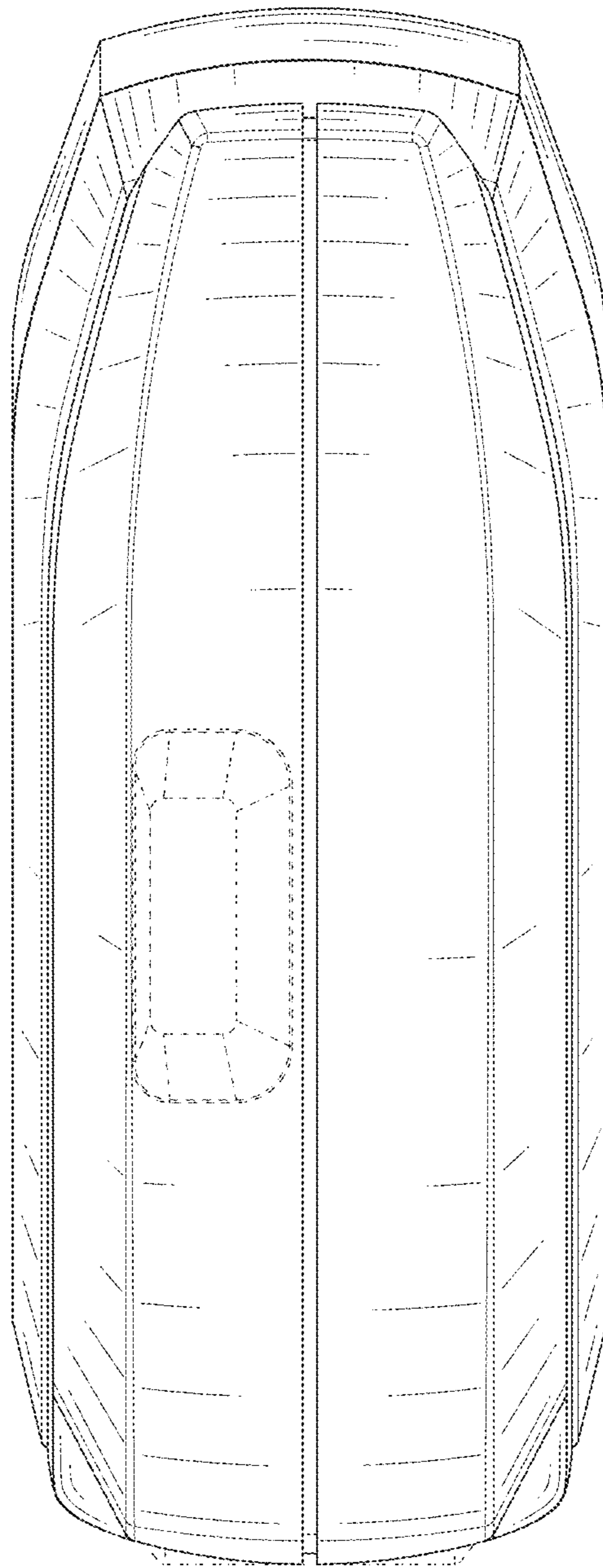


**FIG. 4**



**FIG. 5**



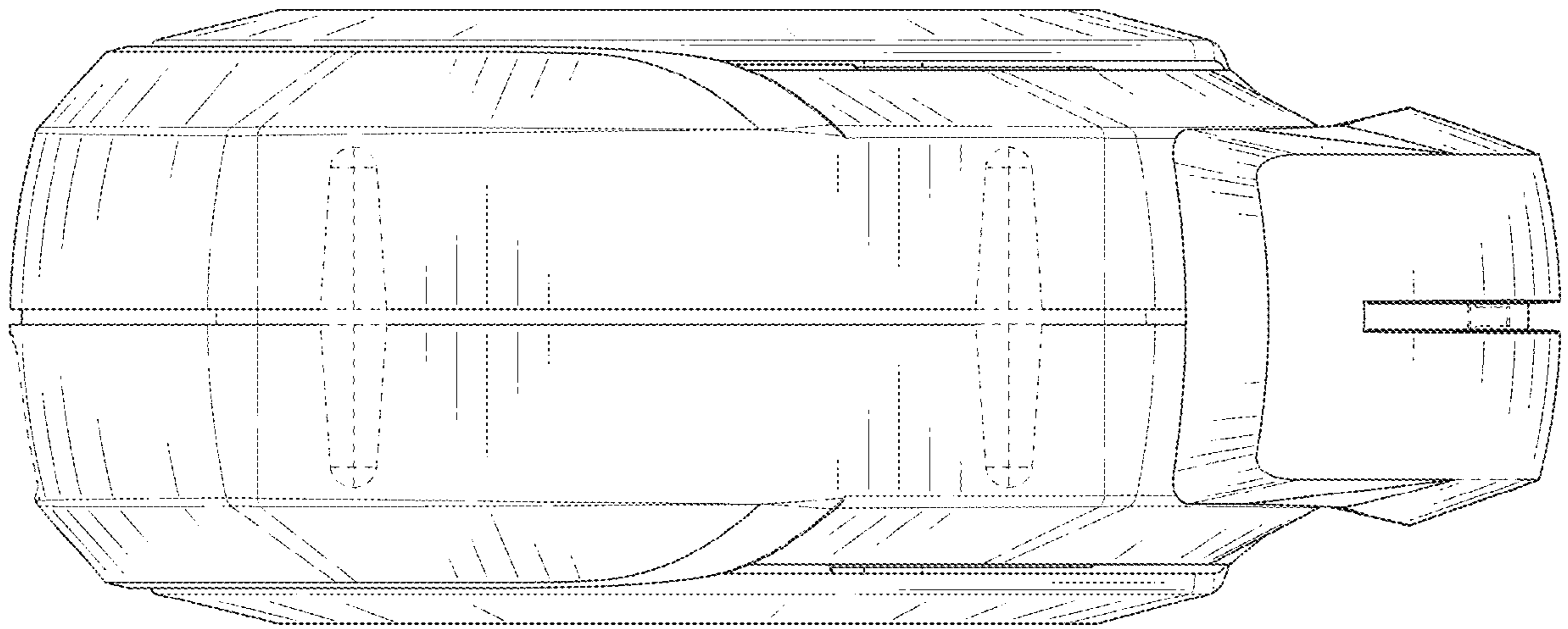


**FIG. 6**

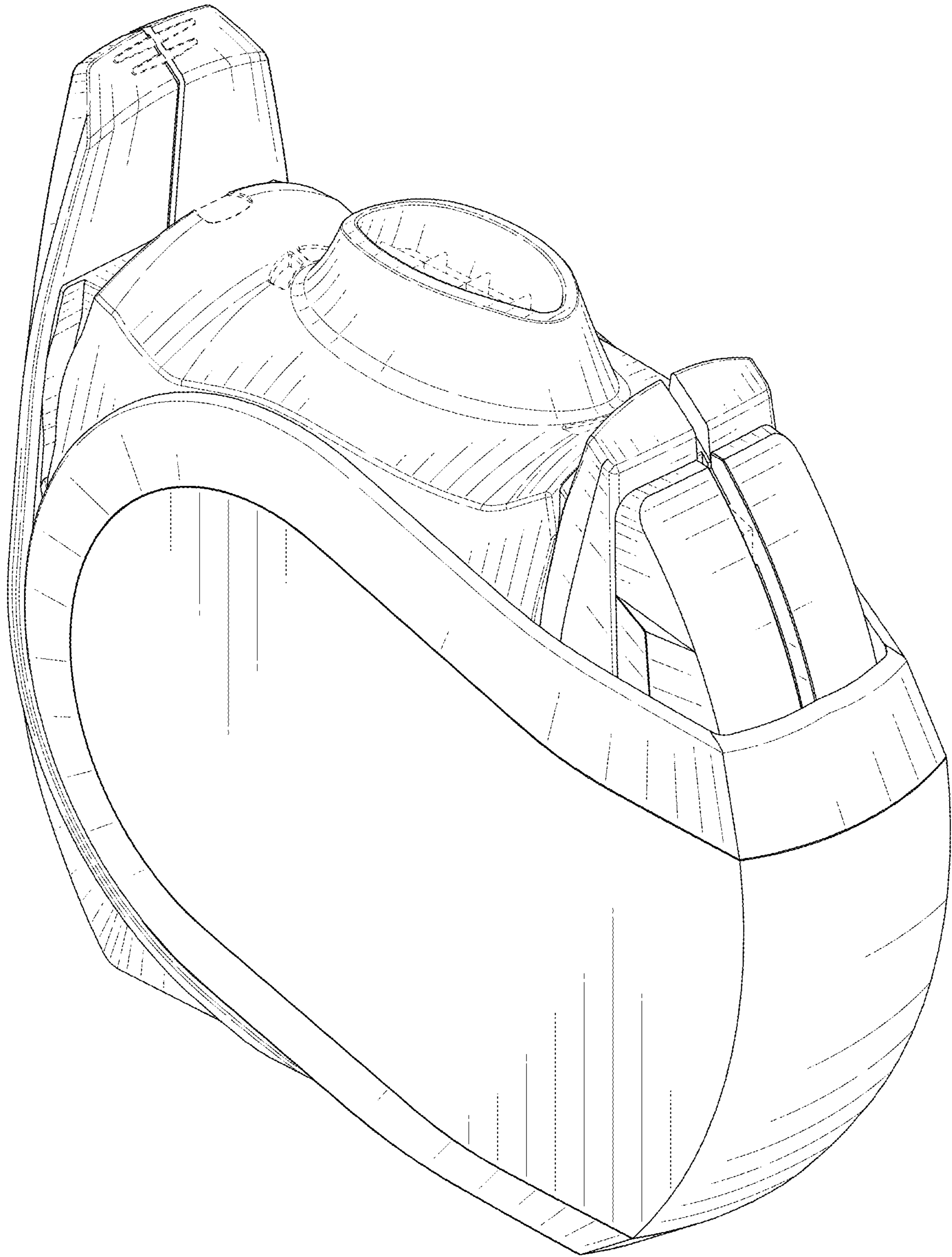




*FIG. 7*

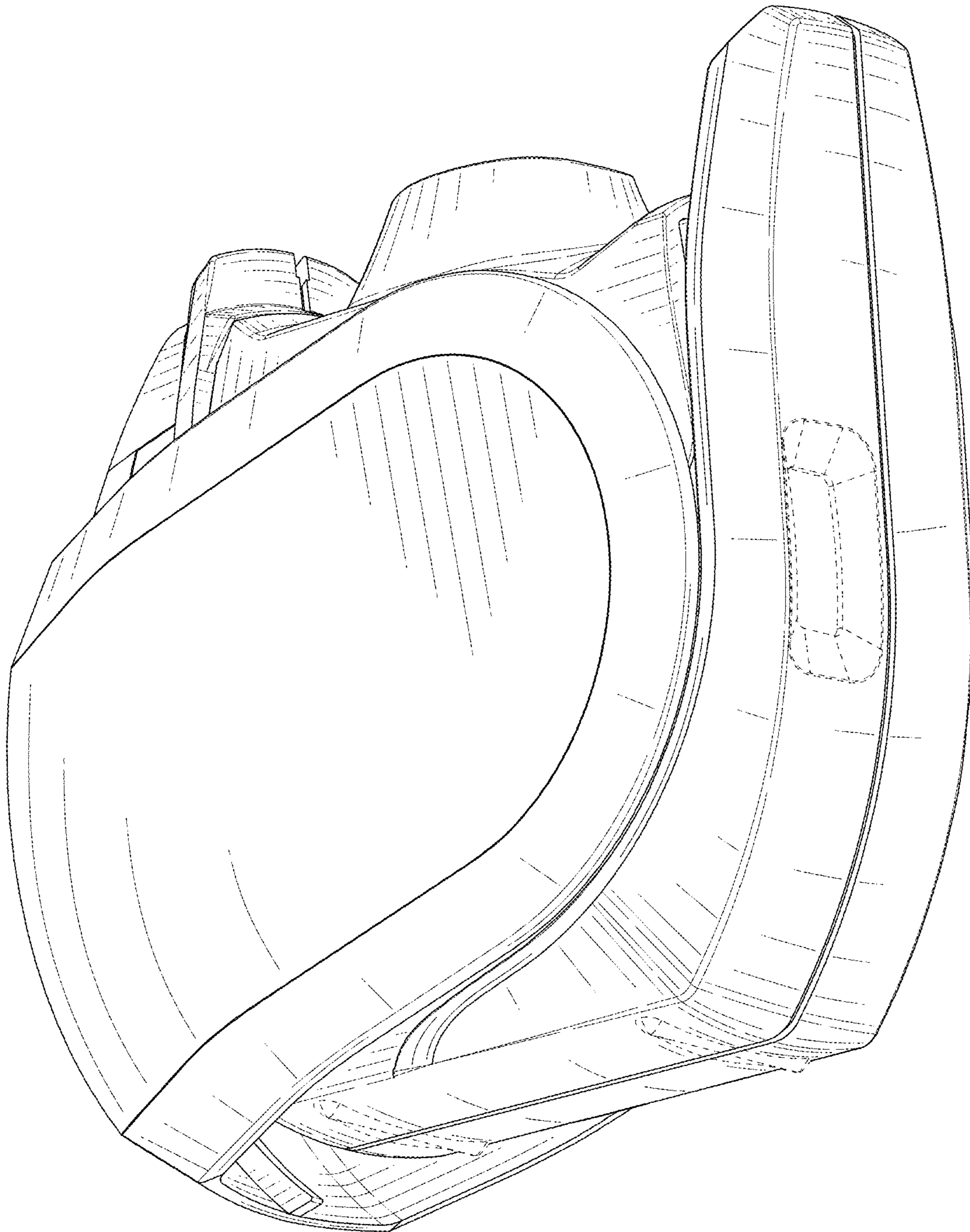


*FIG. 8*

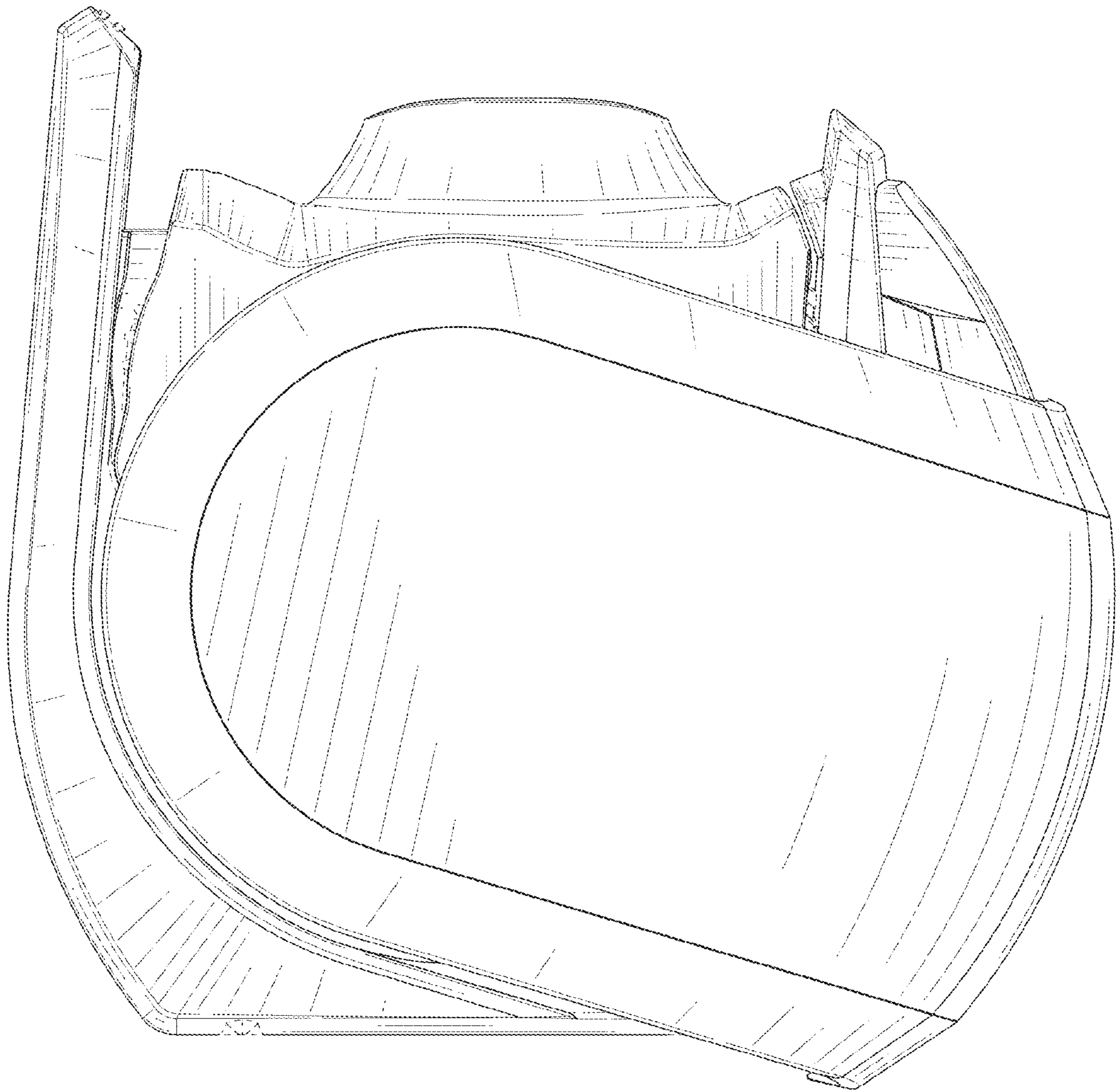


**FIG. 9**

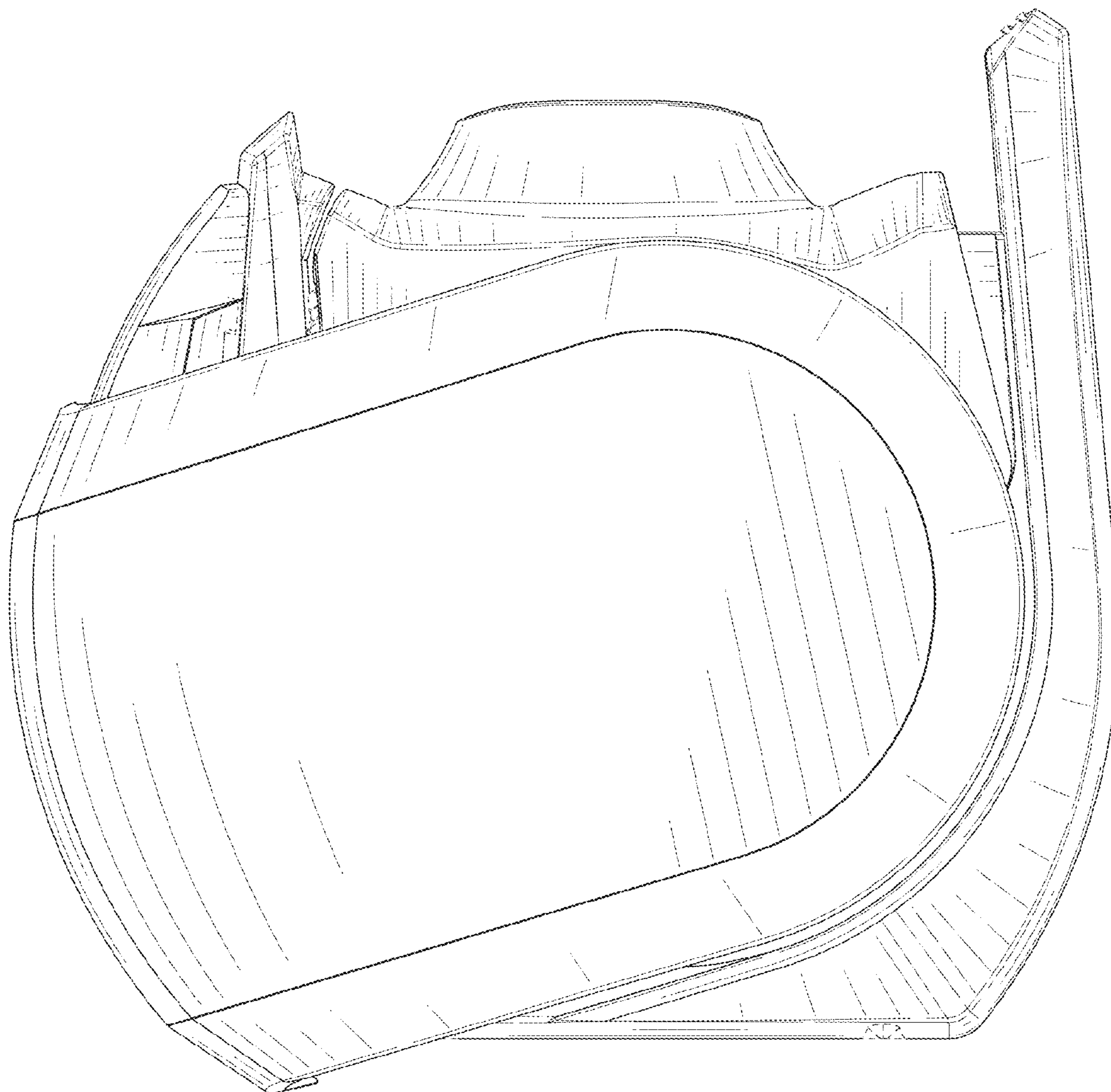




**FIG. 10**

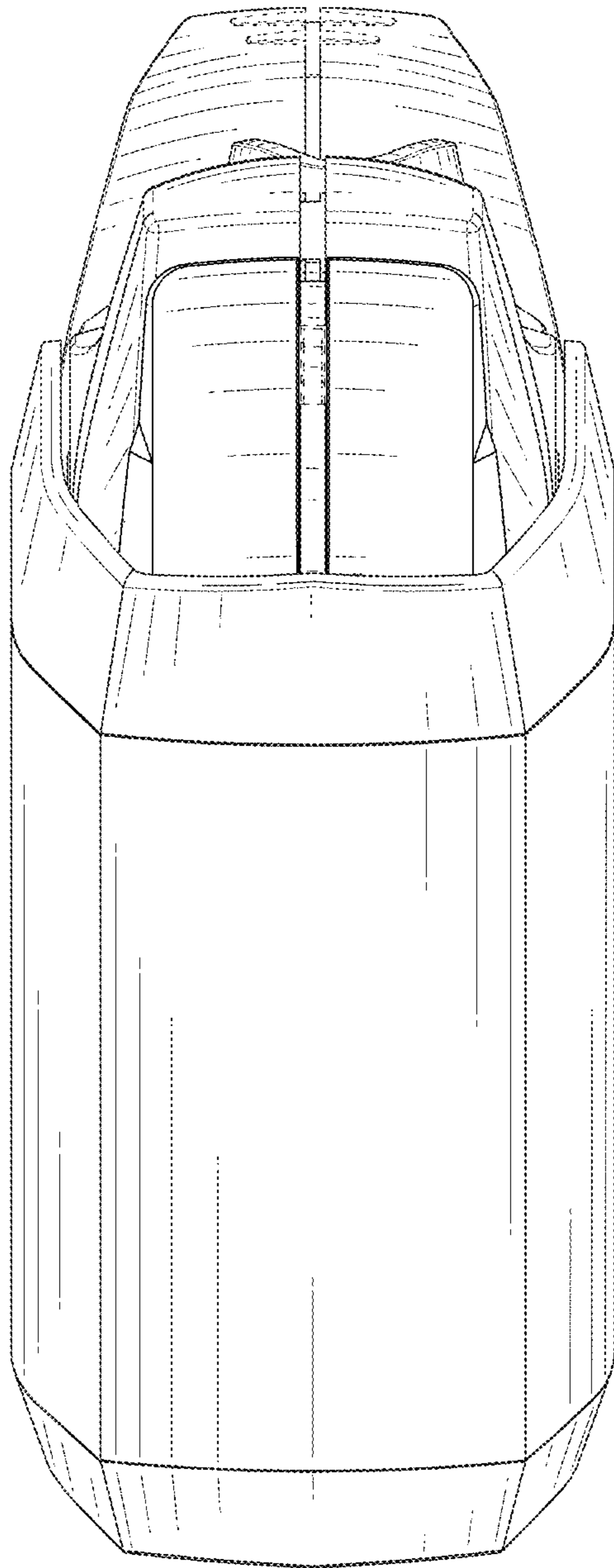


*FIG. 11*

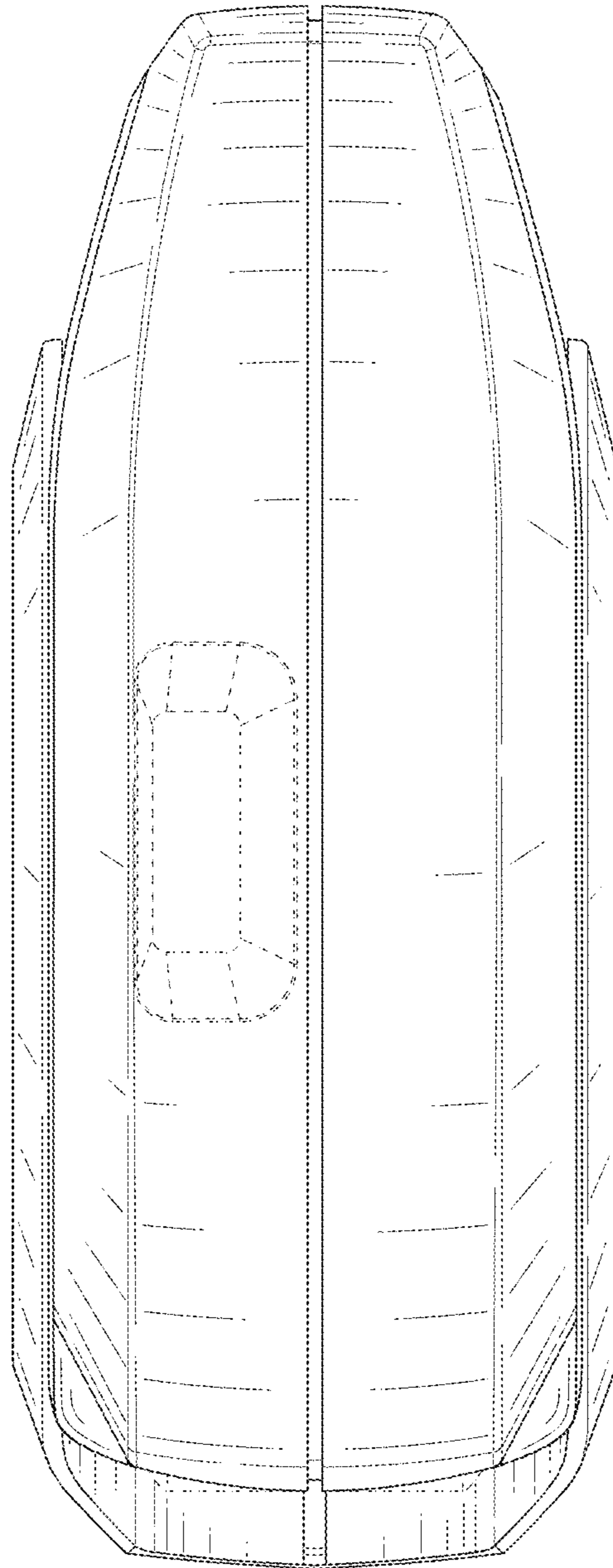


*FIG. 12*

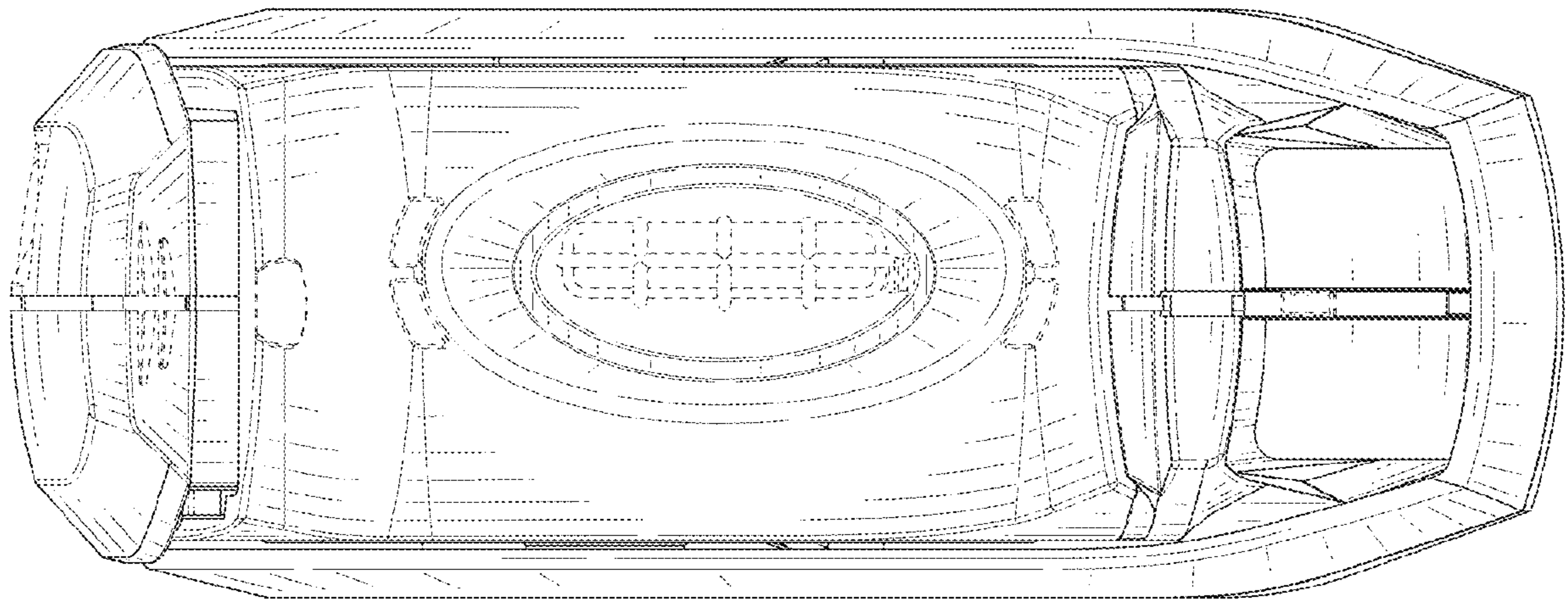




**FIG. 13**

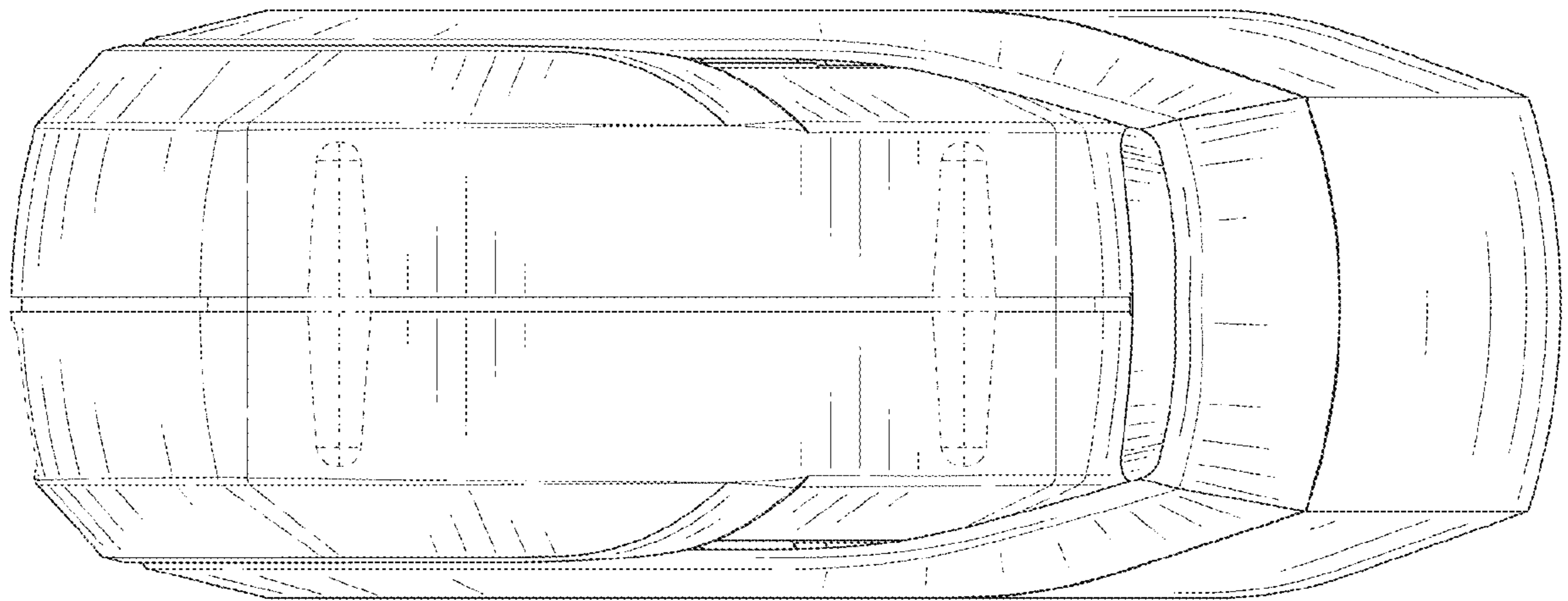


**FIG. 14**



*FIG. 15*





*FIG. 16*