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(12) **United States Design Patent** (10) **Patent No.:** **US D805,632 S**
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(54) **INJECTOR DEVICE**
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D471,274 S 3/2003 Diaz et al.
6,530,900 B1 3/2003 Daily et al.
D474,543 S 5/2003 Lee et al.
6,613,015 B2 9/2003 Sandstrom et al.
6,800,071 B1 10/2004 McConnell et al.
6,843,782 B2 1/2005 Gross et al.
D544,092 S * 6/2007 Lewis D24/108
D619,338 S 7/2010 Teichert et al.
(Continued)

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FOREIGN PATENT DOCUMENTS

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

WO WO2011090956 A2 7/2011
WO WO2012032411 A2 3/2012
(Continued)

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OTHER PUBLICATIONS

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Reynolds, "Integrated Solutions for the Delivery of High-Volume
Biologics", West Pharmaceutical Services, www.ondrugdelivery.
com, Copyright 2014, 4 pages.

(51) **LOC (10) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/113**

(58) **Field of Classification Search**
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CPC A61M 2005/14252; A61M 2005/1581;
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A61M 2005/206

See application file for complete search history.

(Continued)

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(57) **CLAIM**

The design of an injector device, as shown and described.

(56) **References Cited**

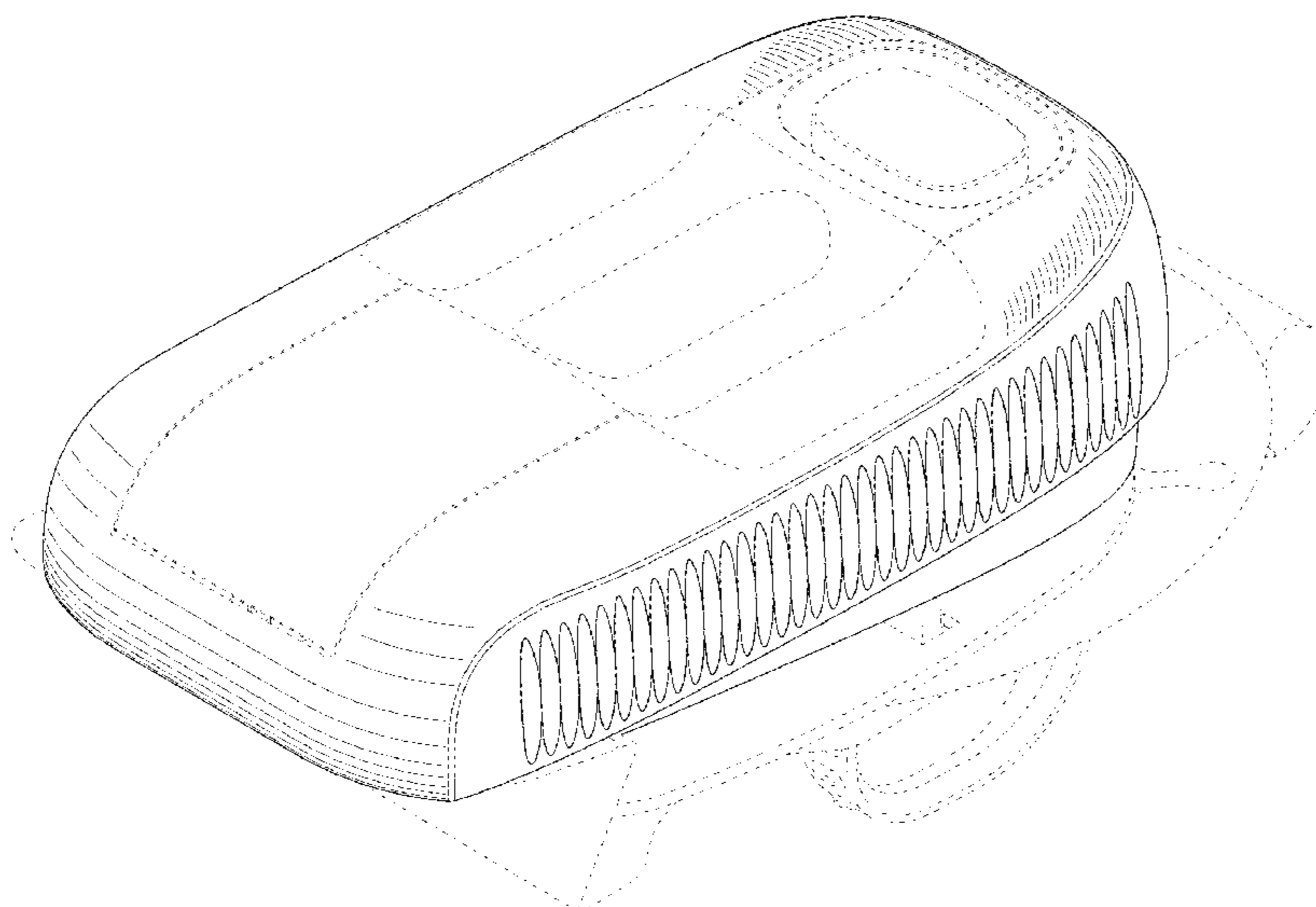
U.S. PATENT DOCUMENTS

D369,864 S 5/1996 Petersen
D370,011 S * 5/1996 Lindeman D14/137
D389,139 S * 1/1998 Oross D14/137
D421,902 S 3/2000 Hill
6,186,982 B1 2/2001 Gross et al.
D443,508 S * 6/2001 Braaten D9/734
D445,496 S 7/2001 Anderson
6,500,150 B1 12/2002 Gross et al.

DESCRIPTION

FIG. 1 is a top, front, right perspective view of an injector
device showing our new design;
FIG. 2 is a front elevation view thereof;
FIG. 3 is a rear plan elevation view thereof;
FIG. 4 is a top plan view thereof;
FIG. 5 is a bottom plan view thereof.
FIG. 6 is a left side elevation view thereof; and,
FIG. 7 is a right side elevation view thereof.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D622,685 S * 8/2010 Garra D14/137
 7,780,636 B2 8/2010 Radmer et al.
 7,967,795 B1 6/2011 Cabiri
 D640,920 S 7/2011 Giraud et al.
 D646,159 S 10/2011 Bellamah et al.
 8,152,779 B2 4/2012 Cabiri
 8,157,769 B2 4/2012 Cabiri
 8,210,172 B2 * 7/2012 Crowder A61M 15/0045
 128/200.24
 8,303,549 B2 11/2012 Mejlhede et al.
 8,313,467 B2 11/2012 Chong et al.
 8,348,898 B2 1/2013 Cabiri
 8,393,357 B2 3/2013 Chong et al.
 D684,686 S 6/2013 Cronenberg
 D685,083 S * 6/2013 Schneider D24/108
 D685,084 S * 6/2013 Guarraia D24/108
 8,465,455 B2 6/2013 Cabiri
 D687,140 S 7/2013 Guarraia et al.
 D687,141 S 7/2013 Schneider et al.
 D687,536 S * 8/2013 Guarraia D24/108
 D688,784 S 8/2013 Schneider et al.
 D702,834 S 4/2014 Norton et al.
 D714,266 S * 9/2014 Okamura D14/191
 8,882,711 B2 11/2014 Saulenas et al.
 D722,870 S 2/2015 Fohner et al.
 8,986,250 B2 3/2015 Beebe et al.
 9,011,164 B2 4/2015 Filman et al.
 9,173,997 B2 11/2015 Gross et al.
 D745,661 S 12/2015 Collins et al.
 D753,810 S 4/2016 Chang
 D755,950 S 5/2016 Meliniotis et al.
 D760,374 S 6/2016 Nagar et al.
 9,373,269 B2 6/2016 Bergman et al.
 D764,047 S 8/2016 Bjelovuk et al.
 9,421,323 B2 8/2016 Cabiri et al.
 D769,438 S * 10/2016 Crosby D24/110
 D770,037 S 10/2016 Schleicher et al.
 9,463,280 B2 10/2016 Cabiri
 9,492,614 B2 11/2016 Kamen et al.
 D776,262 S 1/2017 Tyce et al.
 D776,265 S 1/2017 Tyce et al.
 D777,331 S 1/2017 Jayalath et al.
 9,656,019 B2 5/2017 Cabiri et al.
 2007/0021733 A1 1/2007 Hansen et al.
 2008/0215015 A1 9/2008 Cindrich et al.
 2009/0093792 A1 4/2009 Gross et al.
 2012/0035546 A1 2/2012 Cabiri
 2013/0110049 A1 5/2013 Cronenberg et al.

2013/0245596 A1 9/2013 Cabiri et al.
 2013/0253472 A1 9/2013 Cabiri
 2013/0296799 A1 11/2013 Degtiar et al.
 2013/0304021 A1 11/2013 Cabiri et al.
 2013/0310753 A1 11/2013 Cabiri
 2014/0128815 A1 5/2014 Cabiri et al.
 2014/0207067 A1 7/2014 Kamen et al.
 2014/0330240 A1 11/2014 Cabiri et al.
 2014/0346378 A1 11/2014 Kua et al.
 2014/0350459 A1 11/2014 Lanier, Jr. et al.
 2015/0011965 A1 1/2015 Cabiri
 2015/0157786 A1 6/2015 Sonderegger et al.
 2015/0165121 A1 6/2015 Murakami et al.
 2015/0250943 A1 * 9/2015 Momose A61M 5/14276
 604/151
 2015/0306307 A1 * 10/2015 Cole A61M 5/14248
 604/508
 2015/0359965 A1 12/2015 O'Connor et al.
 2016/0058941 A1 3/2016 Wu et al.
 2016/0082184 A1 3/2016 Hanagan et al.
 2016/0121043 A1 5/2016 Weibel
 2016/0256352 A1 9/2016 Bar-El et al.
 2016/0256353 A1 9/2016 Bar-El et al.
 2016/0284239 A1 9/2016 Bergman et al.
 2016/0296699 A1 10/2016 Cabiri
 2016/0296716 A1 10/2016 Cabiri et al.
 2017/0028132 A1 2/2017 Cronenberg et al.

FOREIGN PATENT DOCUMENTS

WO WO2014081411 A1 5/2014
 WO WO2016196934 A1 12/2016

OTHER PUBLICATIONS

Amgen Inc., "The Neulasta Onpro Kit", <http://www.neulastahcp.com/neulasta-onpro/>, Copyright 2016, 16 pages.
 BD Worldwide, "Self-Injection Systems", <http://www.bd.com/pharmaceuticals/products/self-injection/patch-injectors.asp>, Copyright 2017, 2 pages.
 OndrugDelivery, "Wearable Injectors", Sep. 19, 2016 Issue No. 70, 48 pages.
 Sensile Medical AG, "SensePatch", https://www.sensile-medical.com/assets/data-sheet_5002_senspatch.pdf, 2017, 2 pages.
 Unilife Corporation, "Wearable Injectors", <http://www.unilife.com/product-platforms/WearableInjectors>, Copyright 2016, 3 pages.
 West Pharmaceutical Services, Inc. "SmartDose Platform" <http://www.westpharma.com/products/self-injection-platforms/smartdoes>, Copyright 2017, 3 pages.

* cited by examiner

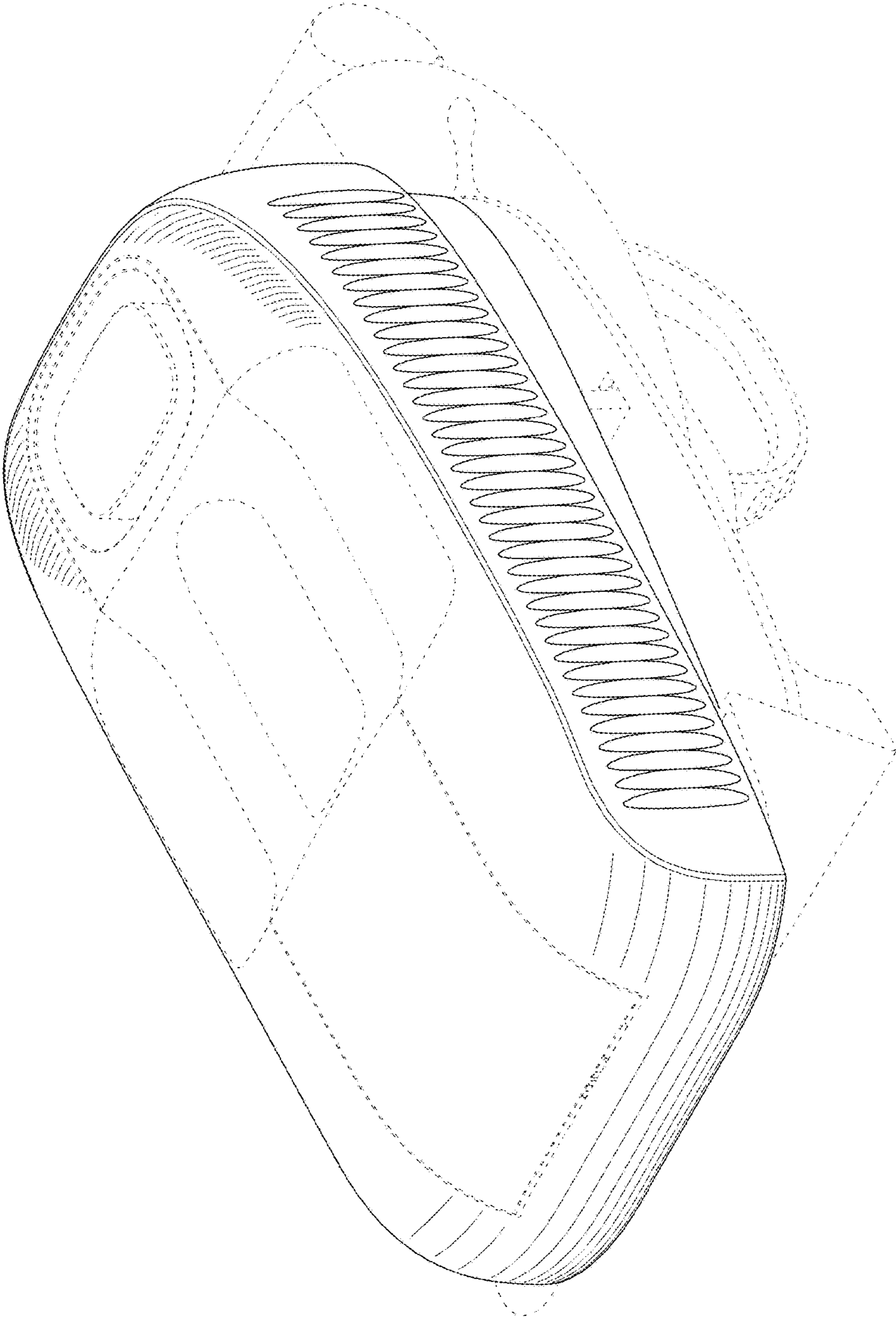


FIG. 1

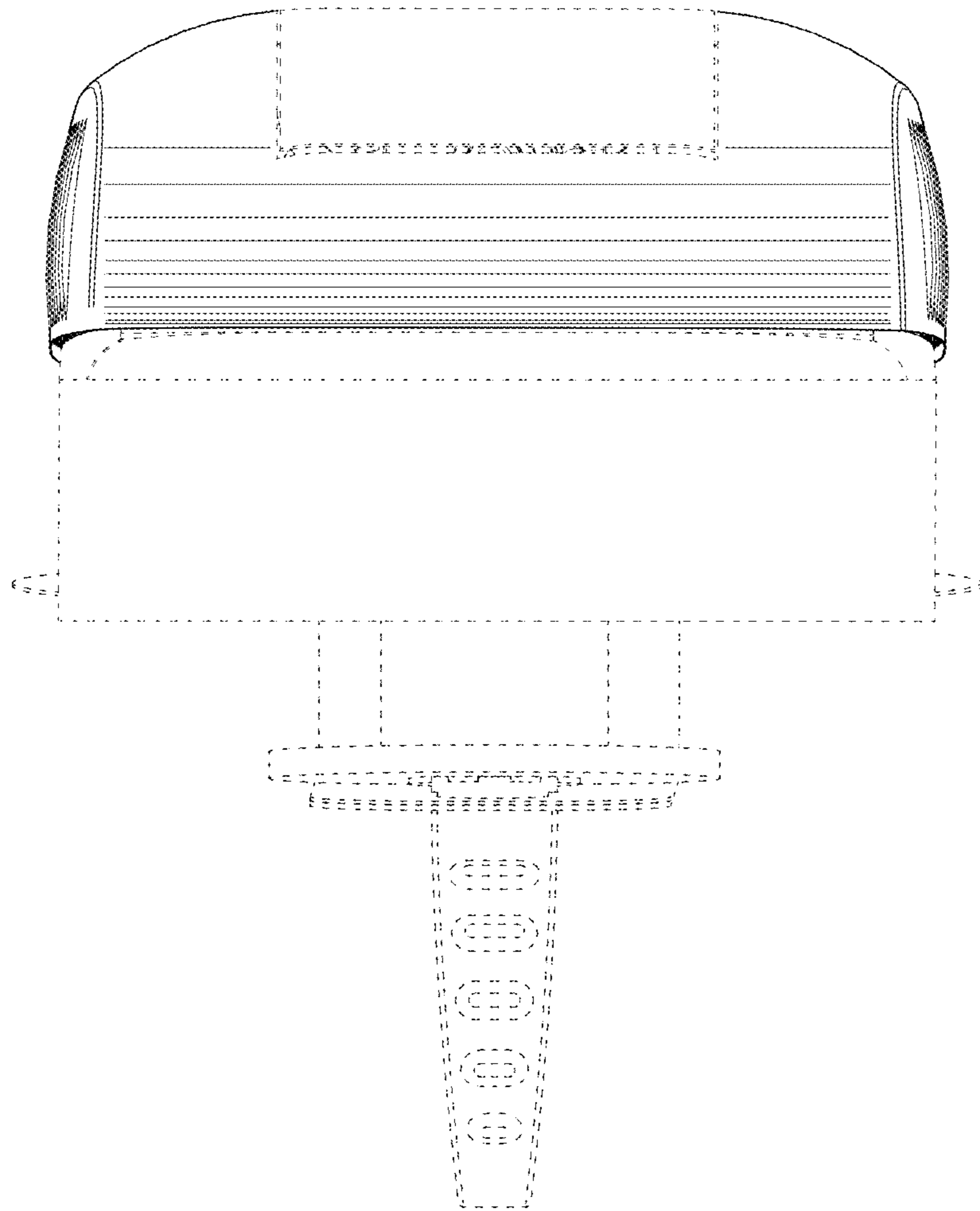


FIG. 2

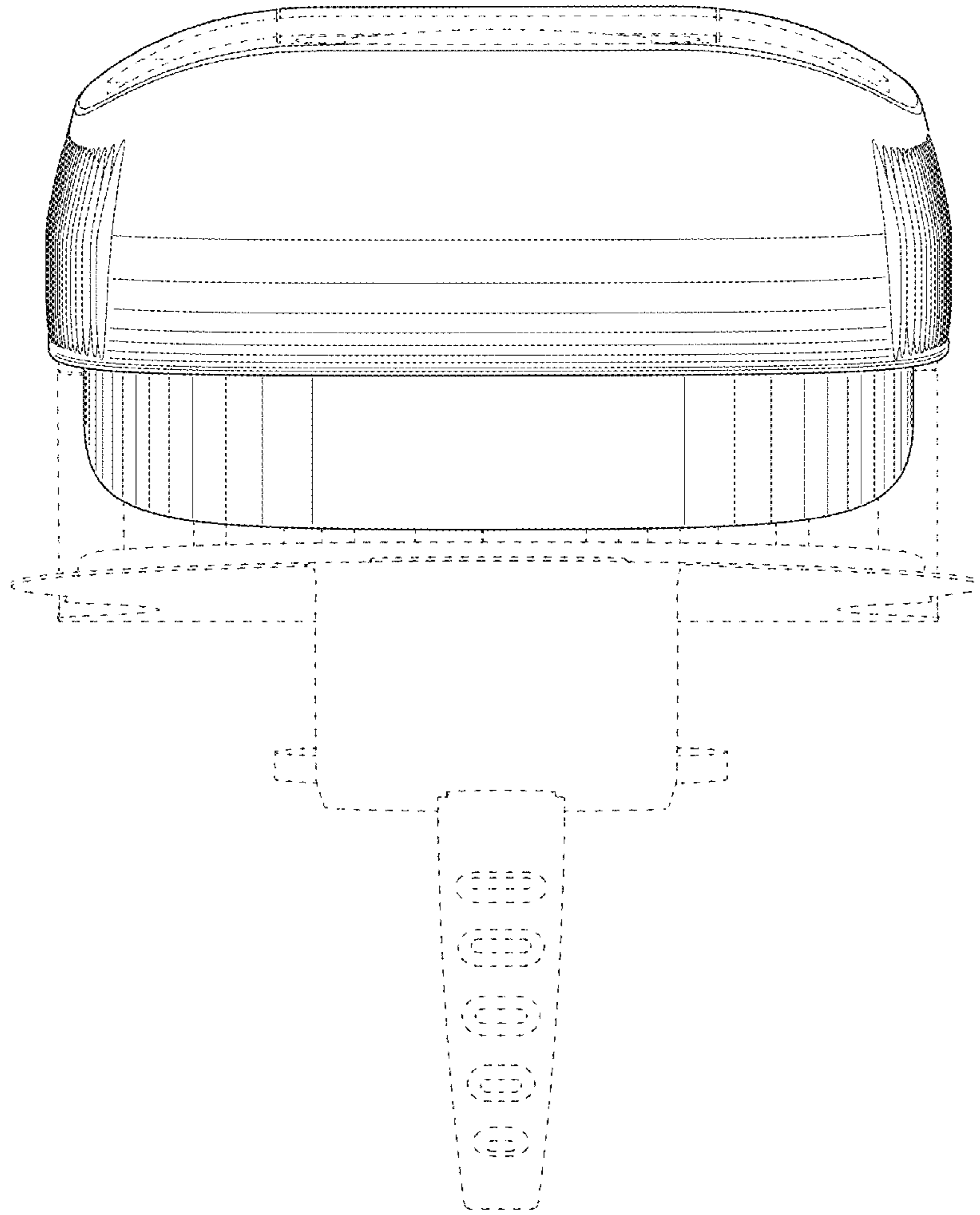


FIG. 3

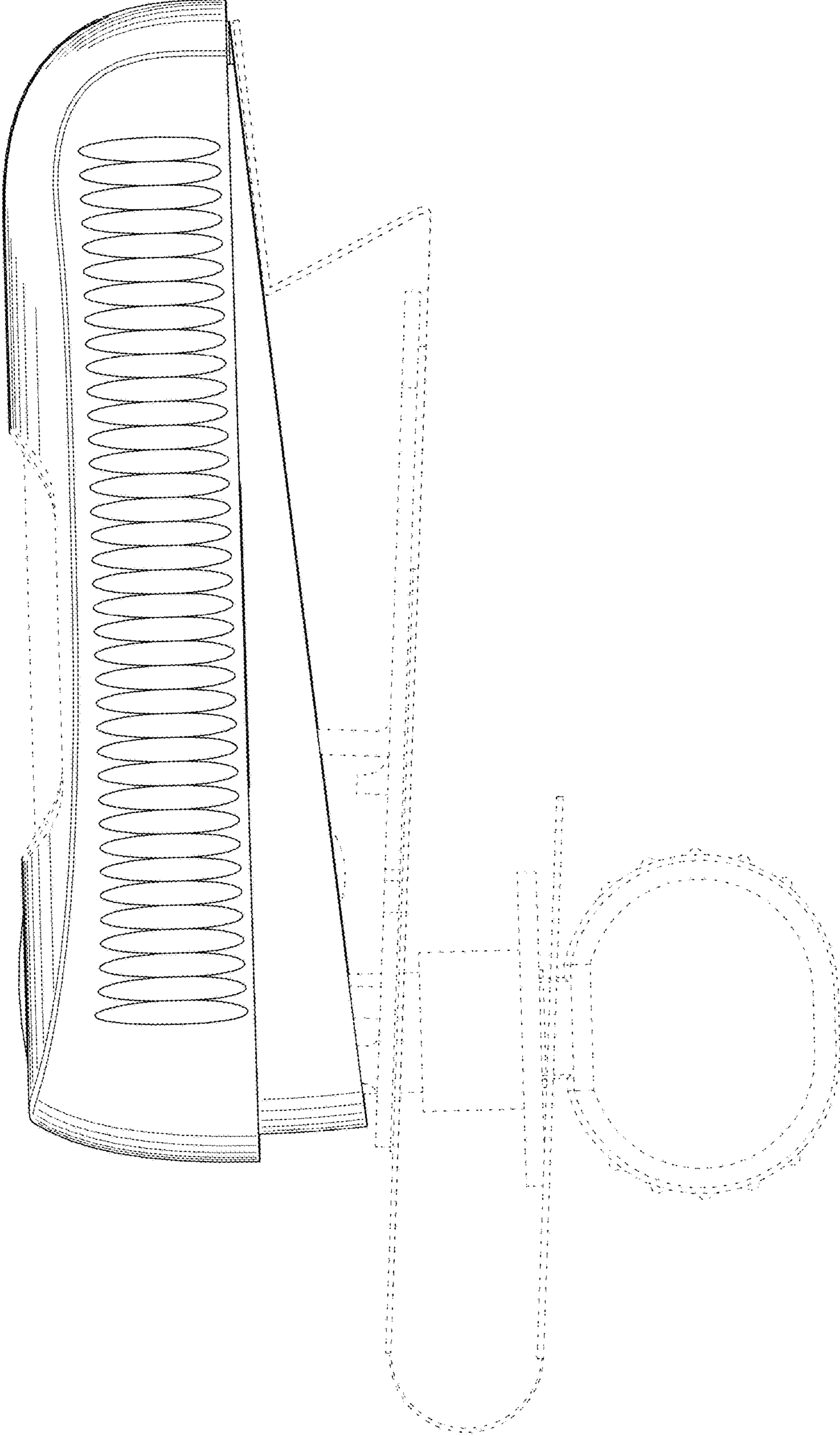


FIG. 4

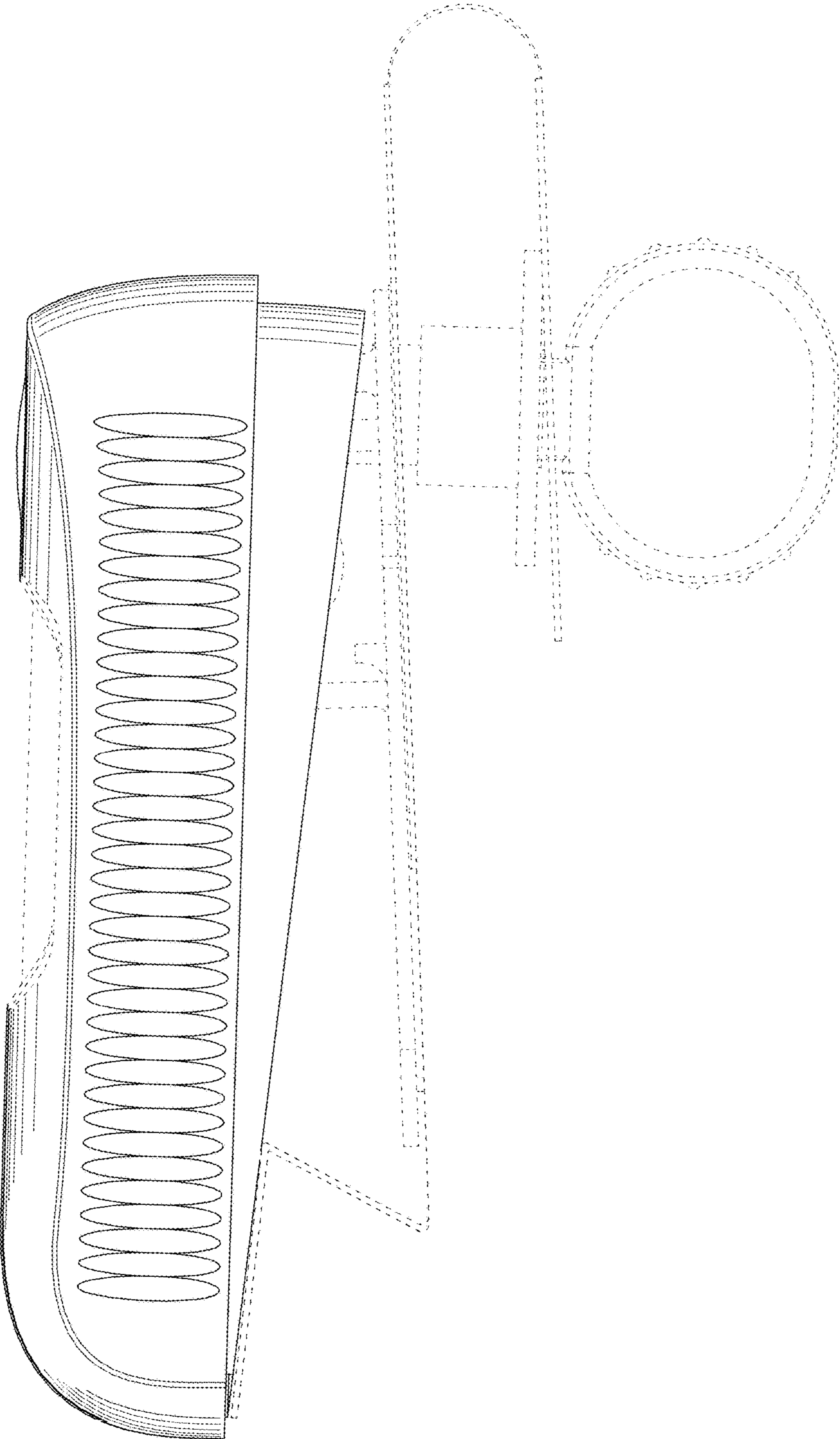


FIG. 5

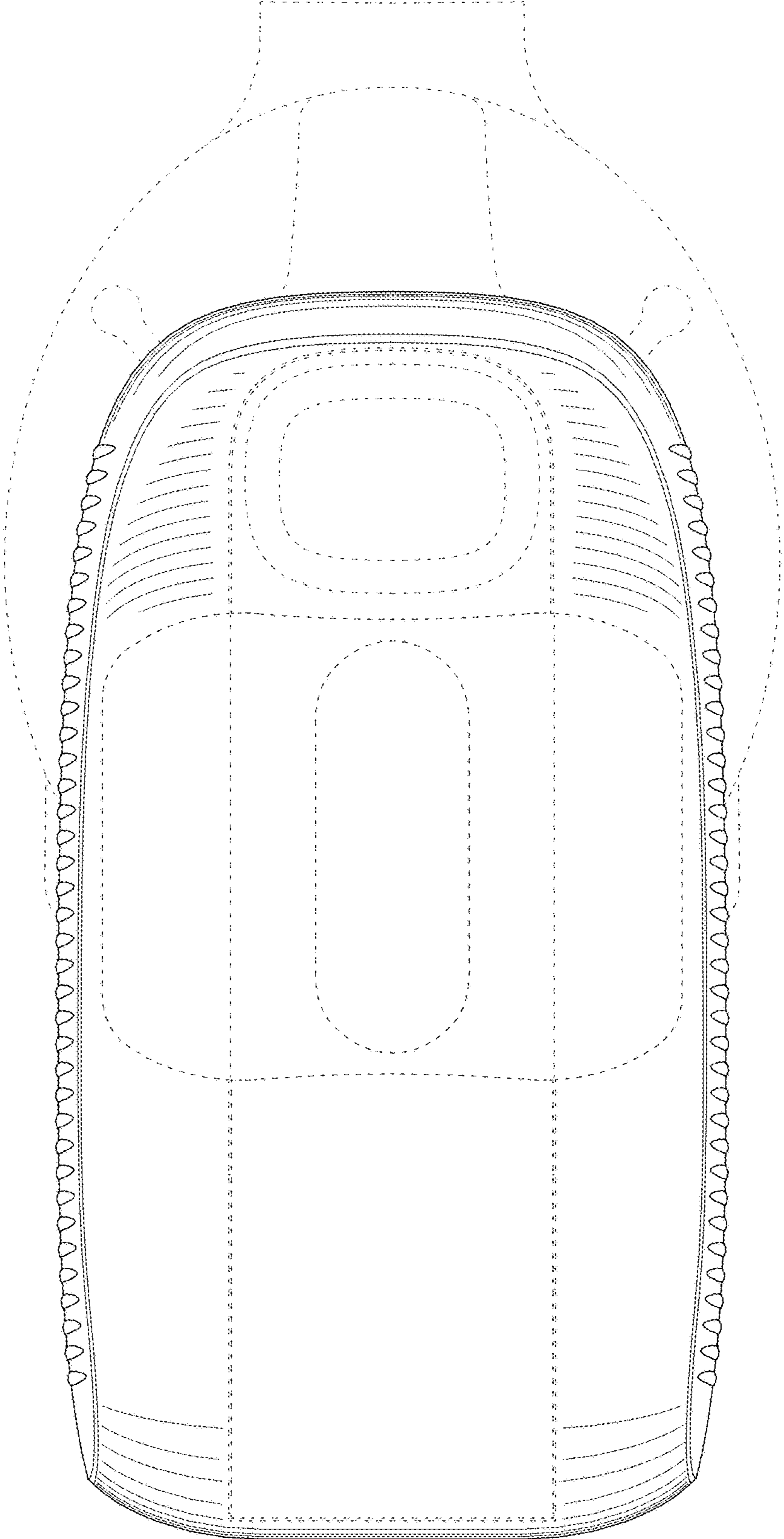


FIG. 6

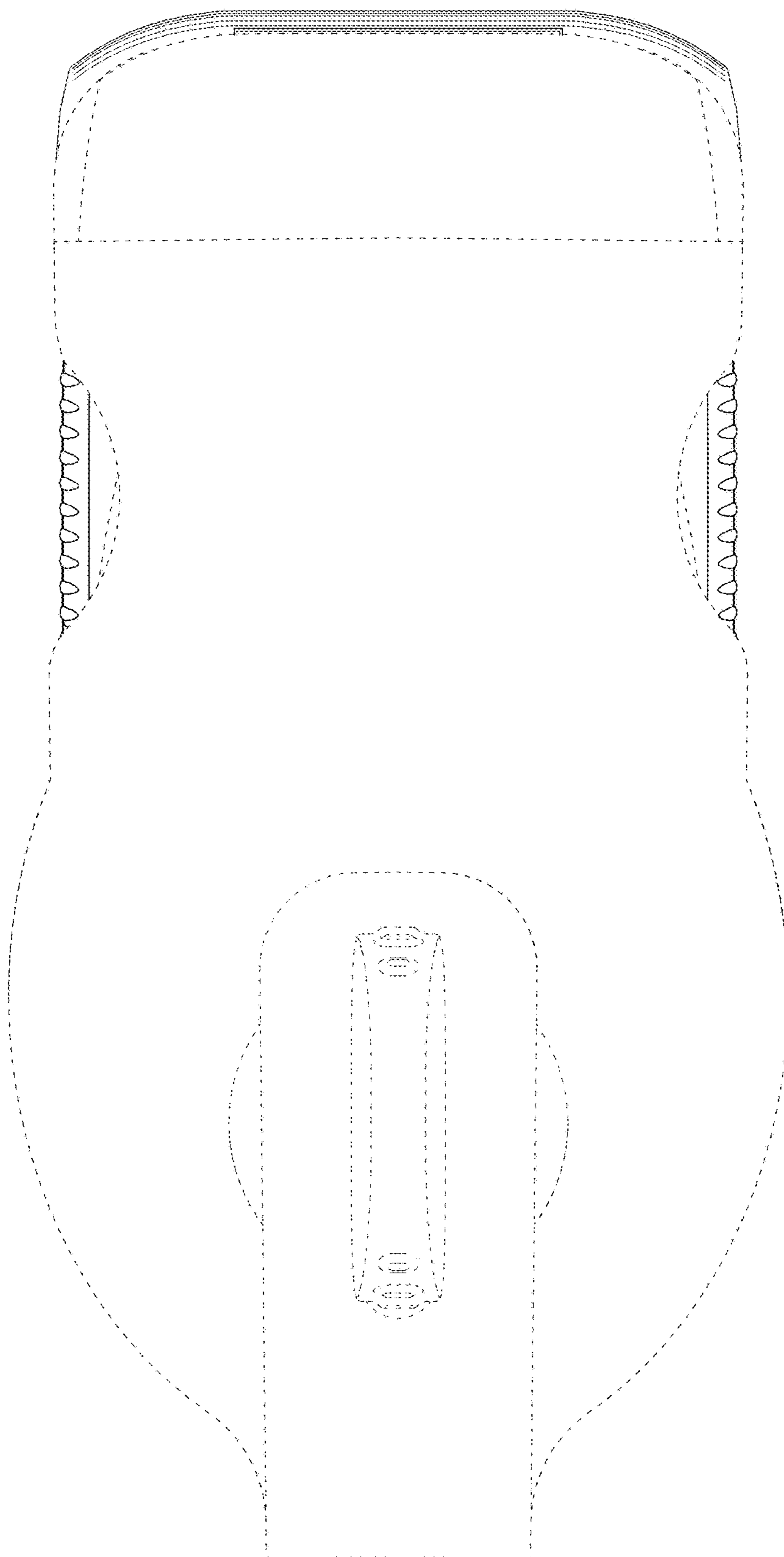


FIG. 7