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

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(54) **HYBRID ELECTRIC BICYCLE**

5,685,388 A * 11/1997 Bothwell B62H 1/06
180/219

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(US)

5,690,582 A 11/1997 Ulrich et al.
5,806,622 A * 9/1998 Murphy B60J 5/02
180/210

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(Continued)

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

FOREIGN PATENT DOCUMENTS

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EP 1614616 A2 1/2006
JP 2001114184 A 4/2001

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Related U.S. Application Data

OTHER PUBLICATIONS

(63) Continuation of application No. 15/361,875, filed on
Nov. 28, 2016, now Pat. No. 9,956,880, which is a
continuation of application No. 14/300,883, filed on
Jun. 10, 2014, now Pat. No. 9,505,310, which is a
continuation-in-part of application No. 13/633,078,
filed on Oct. 1, 2012, now abandoned.

“Aero rider: Support Innovation”, [Online]. Retrieved from the
Internet: <URL: <https://web.archive.org/web/20121109070726/http://www.aerorider.com/index.html>>, (Jan. 2, 2013), 1 pg.

(Continued)

(51) **LOC (12) Cl.** **12-08**

Primary Examiner — Darlington Ly

(52) **U.S. Cl.**

(74) *Attorney, Agent, or Firm* — Suiter Swantz pc llo

USPC **D12/85**

(58) **Field of Classification Search**

(57) **CLAIM**

USPC D12/85, 86, 107, 110, 112; D21/424,
D21/433, 434

The ornamental design for a hybrid electric bicycle, as
shown and described.

CPC B62D 21/11; B62D 29/043; B62D 31/00;
B62D 49/00; B62D 61/065; B62L 3/00;
B62K 3/005; B62K 5/01; B62K 5/08;
B62K 5/027

DESCRIPTION

See application file for complete search history.

FIG. 1 is a front and left side perspective view of a hybrid
electric bicycle showing my new design;
FIG. 2 is a rear and right side perspective view thereof;
FIG. 3 is a left side elevation view thereof;
FIG. 4 is a top plan view thereof;
FIG. 5 is a bottom plan view thereof;
FIG. 6 is a front elevation view thereof; and,
FIG. 7 is a rear elevation view thereof.

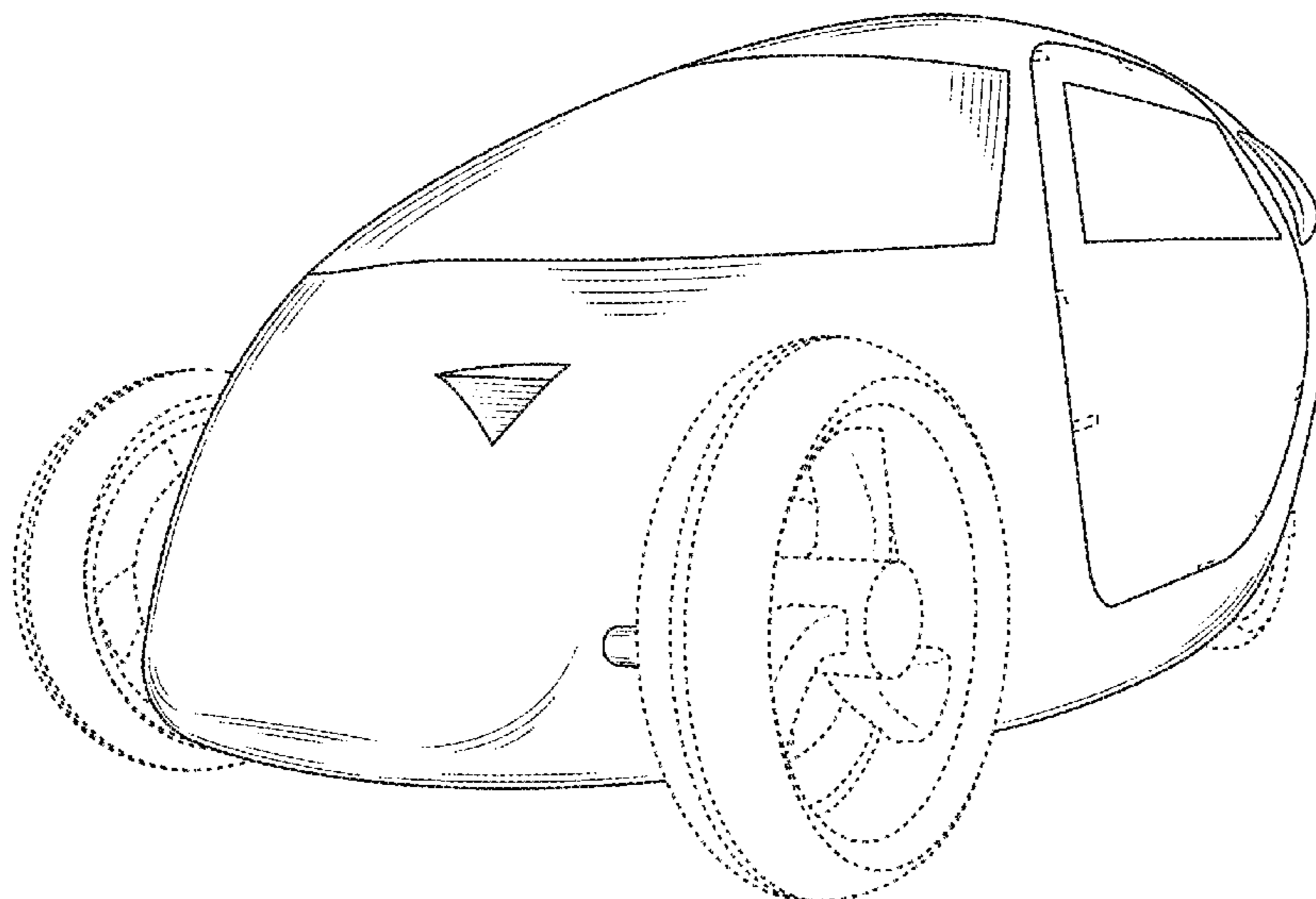
The broken lines in the drawings illustrate portions of the
hybrid electric bicycle that form no part of the claimed
design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D242,696 S * 12/1976 Keyes D12/85
D266,918 S * 11/1982 Buczak D12/112
D268,920 S * 5/1983 Bragdon D12/110
D275,381 S * 9/1984 Fernandes D12/107
D293,697 S * 1/1988 Thornalley D21/433
D307,925 S * 5/1990 Rylands D21/548

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D404,688 S * 1/1999 Hanagan D12/85
 D407,348 S * 3/1999 Riley D12/85
 5,960,901 A * 10/1999 Hanagan B6G 3/145
 180/210
 6,021,862 A 2/2000 Sharan
 6,087,806 A 7/2000 Fujioka
 6,155,369 A 12/2000 Whittaker
 6,196,347 B1 3/2001 Chao et al.
 6,445,080 B1 9/2002 Daqa et al.
 6,450,922 B1 9/2002 Henderson et al.
 D484,439 S * 12/2003 Hanagan D12/85
 6,685,208 B1 * 2/2004 Cowie B62H 1/10
 280/293
 D495,627 S * 9/2004 Tahara D12/107
 7,017,685 B2 3/2006 Schoenberg
 7,354,055 B2 4/2008 Rasmussen
 7,661,501 B1 2/2010 Perdue
 7,690,453 B2 4/2010 Kinoshita et al.
 8,256,554 B2 9/2012 Chan
 8,276,935 B2 10/2012 Minato et al.
 8,328,218 B2 * 12/2012 Rush B62J 17/08
 280/212
 D689,403 S * 9/2013 Bruce D12/110
 D690,622 S * 10/2013 Bruce D12/110
 D723,978 S * 3/2015 Tada D12/85
 D729,121 S * 5/2015 Engler D12/86
 D730,774 S * 6/2015 Bruce D12/86
 9,505,310 B2 11/2016 Kronfeld et al.
 D787,984 S * 5/2017 Fang D12/86
 D824,805 S * 8/2018 Karka D12/85
 D826,779 S * 8/2018 Benedini D12/86
 2003/0217874 A1 11/2003 Schoenberg
 2007/0042868 A1 2/2007 Fisher et al.
 2008/0143292 A1 6/2008 Ward
 2009/0095552 A1 4/2009 Gulas
 2011/0144841 A1 6/2011 Ruben
 2011/0183793 A1 7/2011 Chan
 2012/0053804 A1 3/2012 Saida et al.
 2012/0168242 A1 7/2012 Kulatunga
 2012/0290160 A1 11/2012 Charles McVean

2013/0075176 A1 3/2013 Chan
 2013/0081892 A1 4/2013 Kronfeld et al.
 2014/0353055 A1 12/2014 Kronfeld et al.

FOREIGN PATENT DOCUMENTS

JP 2002255081 A 9/2002
 WO 2010052236 A1 5/2010
 WO 2015191536 A1 12/2015

OTHER PUBLICATIONS

“D & H Enterprises P/L Australia”, [www.dhenterprises.com.au, \[Online\] retrieved from the internet: <http://www.dhenterprises.com.au/gallery.html>](http://www.dhenterprises.com.au/gallery.html), (Jan. 2, 2013), 19 pgs.
 “Humancar Inc.”, [Online] retrieved on the internet: www.humancar.com, domain record created Jun. 28, 1999 <<http://wayback.archive.org> and <http://www.humancar.com/>>, (Jan. 2, 2013).
 “Twike: Home Page”, [Online] retrieved from the internet: <<https://web.archive.org/web/20130406140434/http://www.twike.com/en/home/home.html>>, (Jan. 2, 2013), 1 pg.
 Blanco, Sebastian, “Auto Slog: HumanCar coming in April with a \$15,000 price tag”, [Online]. Retrieved from the Internet: <[URL:http://www.autoblog.com/2008/01/30/humancar-coming-in-april-with-a-15-000-price-tag/](http://www.autoblog.com/2008/01/30/humancar-coming-in-april-with-a-15-000-price-tag/)>, (Jan. 30, 2008).
 Rodrigo, DB, “ELF velomobile—a solar and pedal powered electric hybrid vehicle”, [Online]. Retrieved from the Internet: <[URL:http://www.designboom.com/technology/elf-asolar-and-pedal-powered-electric-hybrid-vehicle-by-organic-transit/](http://www.designboom.com/technology/elf-asolar-and-pedal-powered-electric-hybrid-vehicle-by-organic-transit/)>, (Dec. 4, 2012).
 Sutton, Mark, “JD Group creates ‘automatic’ e-bike”, [Online]. Retrieved from the Internet: <[URL:http://www.bikebiz.com/news/read/jd-group-creates-automatic-ebike/011471](http://www.bikebiz.com/news/read/jd-group-creates-automatic-ebike/011471)>, (Jul. 6, 2011).
 “Series Hybrid Electric Bike Compared to Traditional E-Bikes”, Electric bike report, (Nov. 14, 2012), 1-19.
 “Understanding Electric Bike Modes: Throttle vs. Pedal Assist (Pedelec) 1 Electric Bike Report 1 Electric Bike, Ebikes, Electric Bicycles, E Bike, Reviews”, Electric bike report, (May 8, 2013), 29 pgs.

* cited by examiner

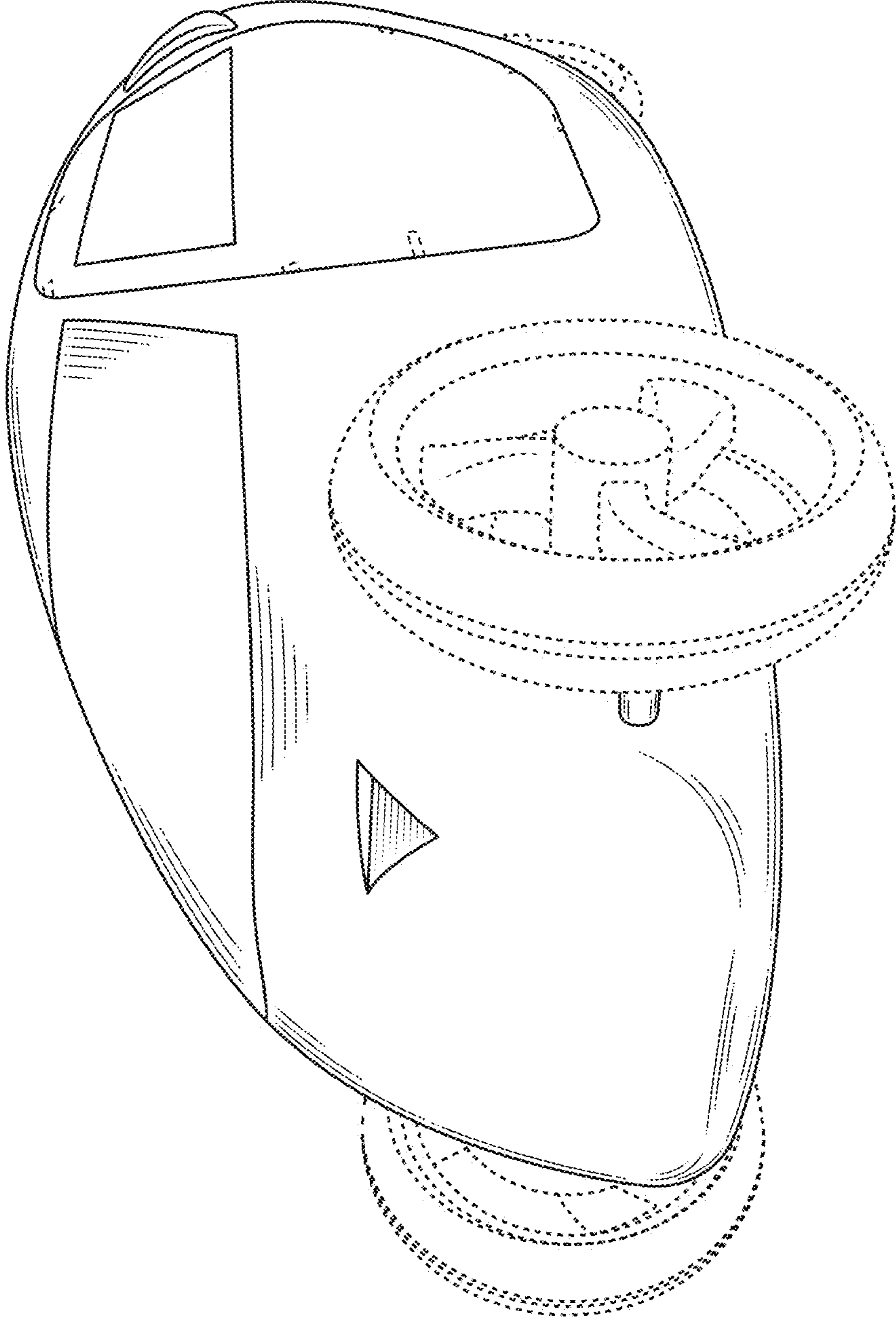


FIG.1

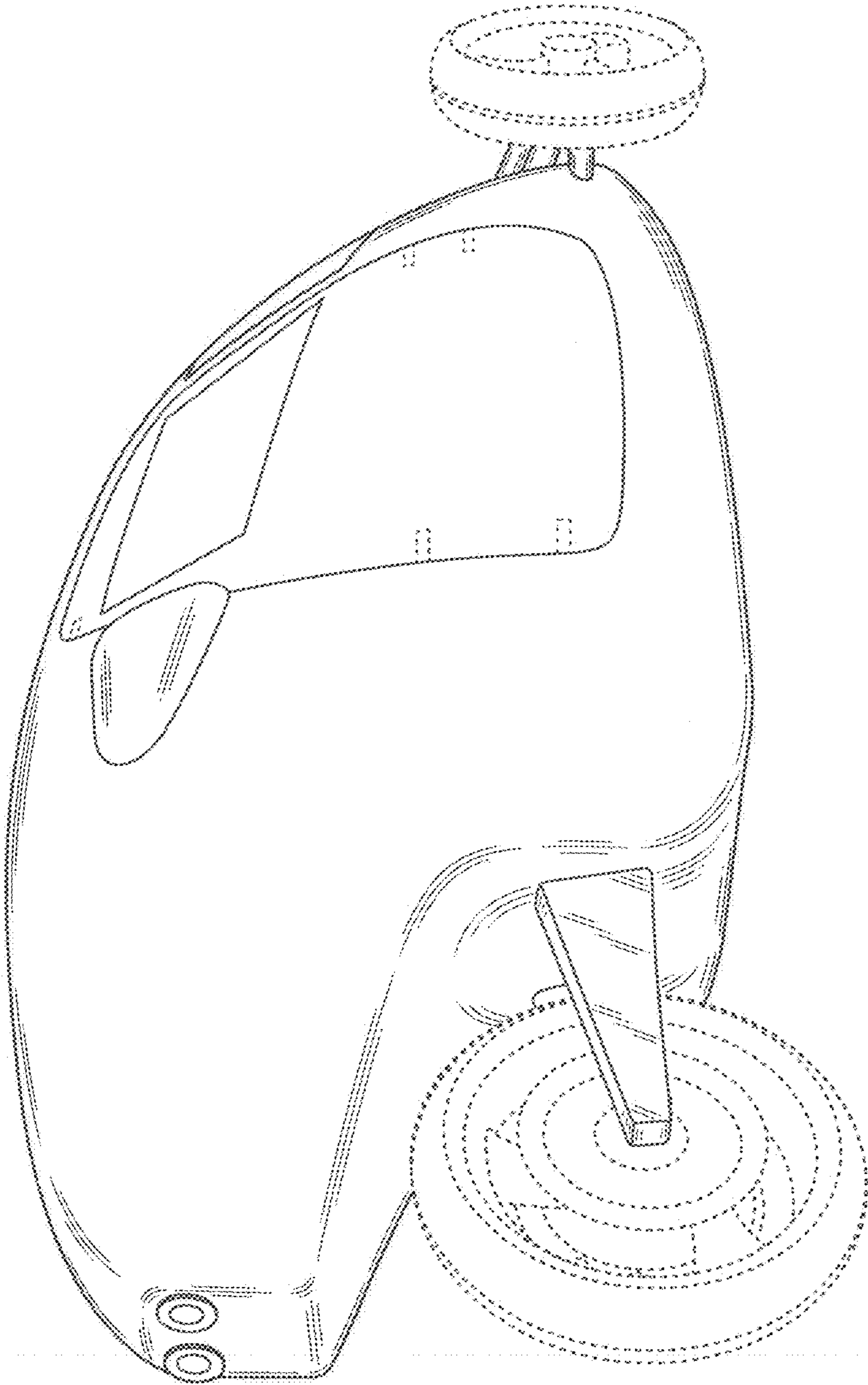


FIG.2

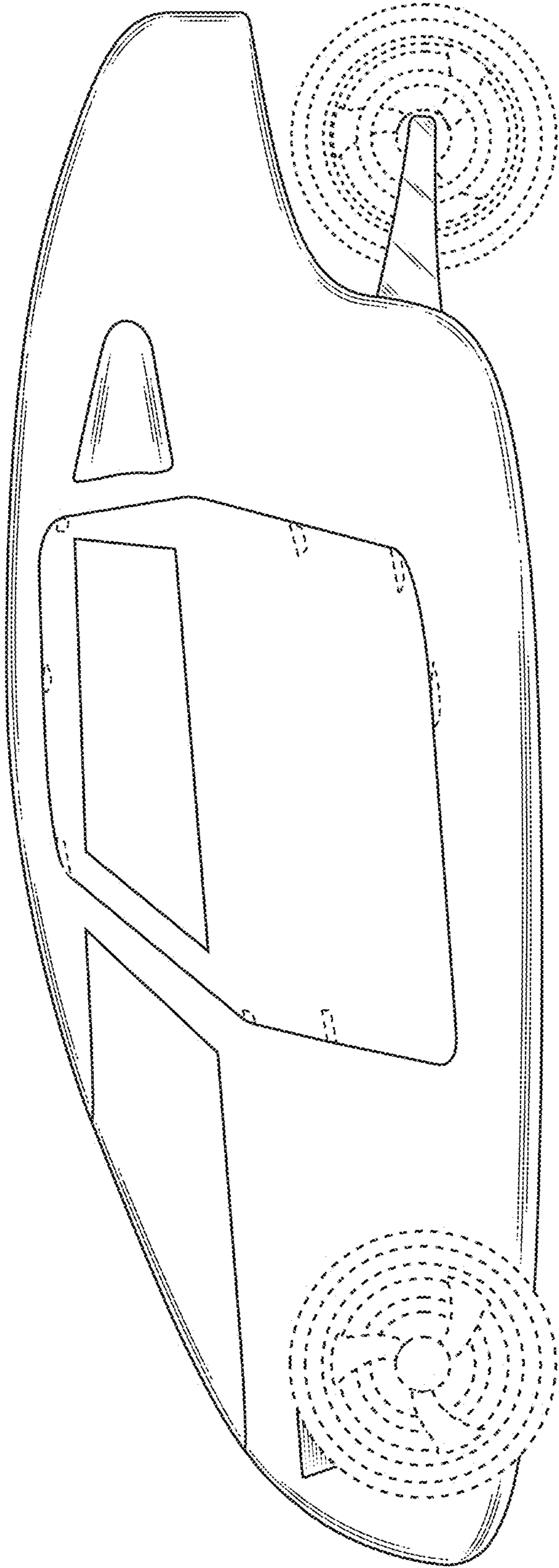


FIG. 3

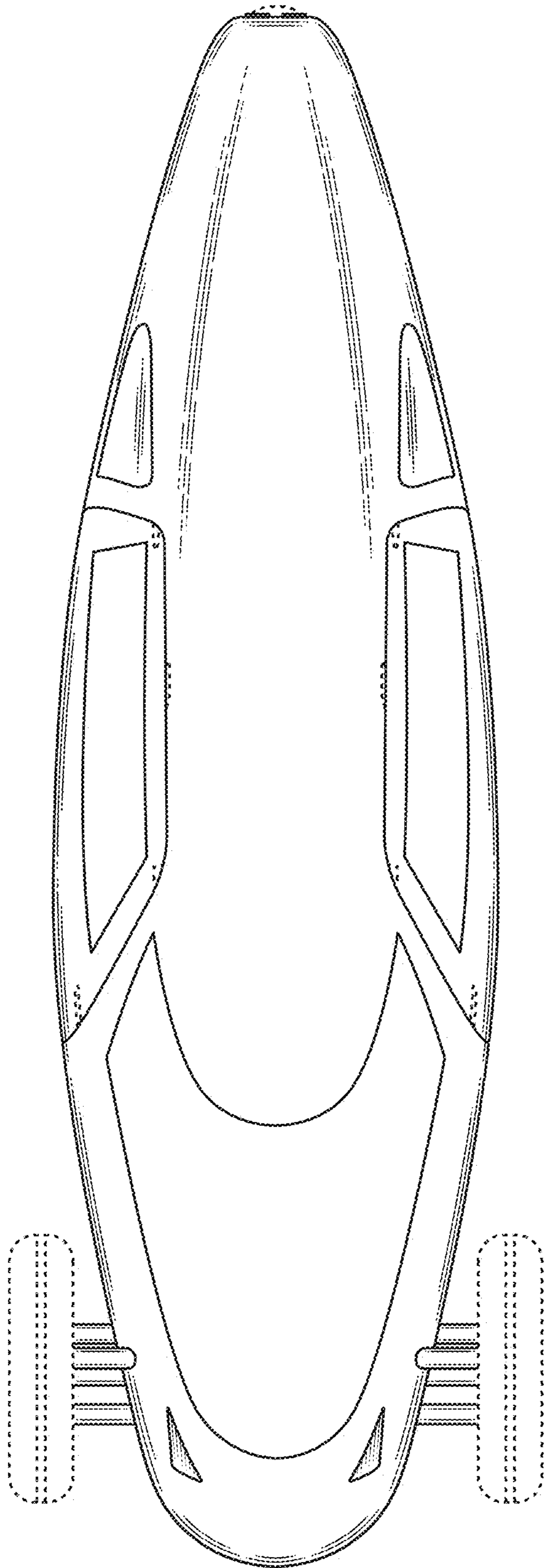


FIG. 4

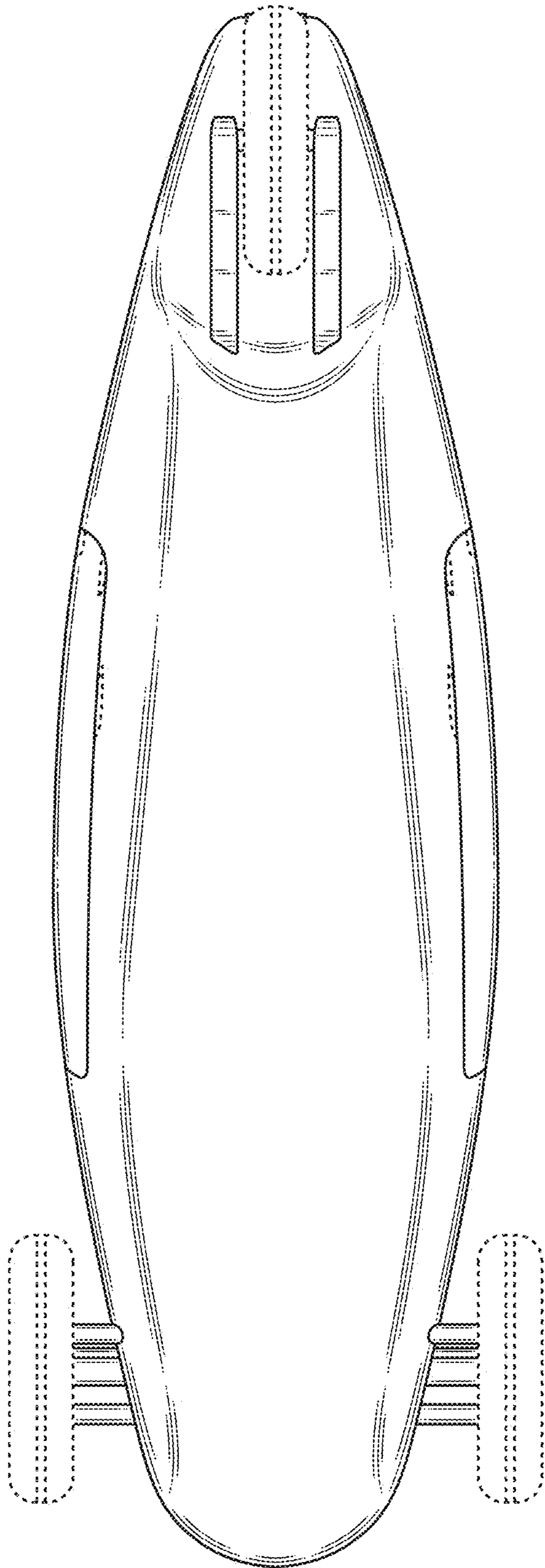


FIG. 5

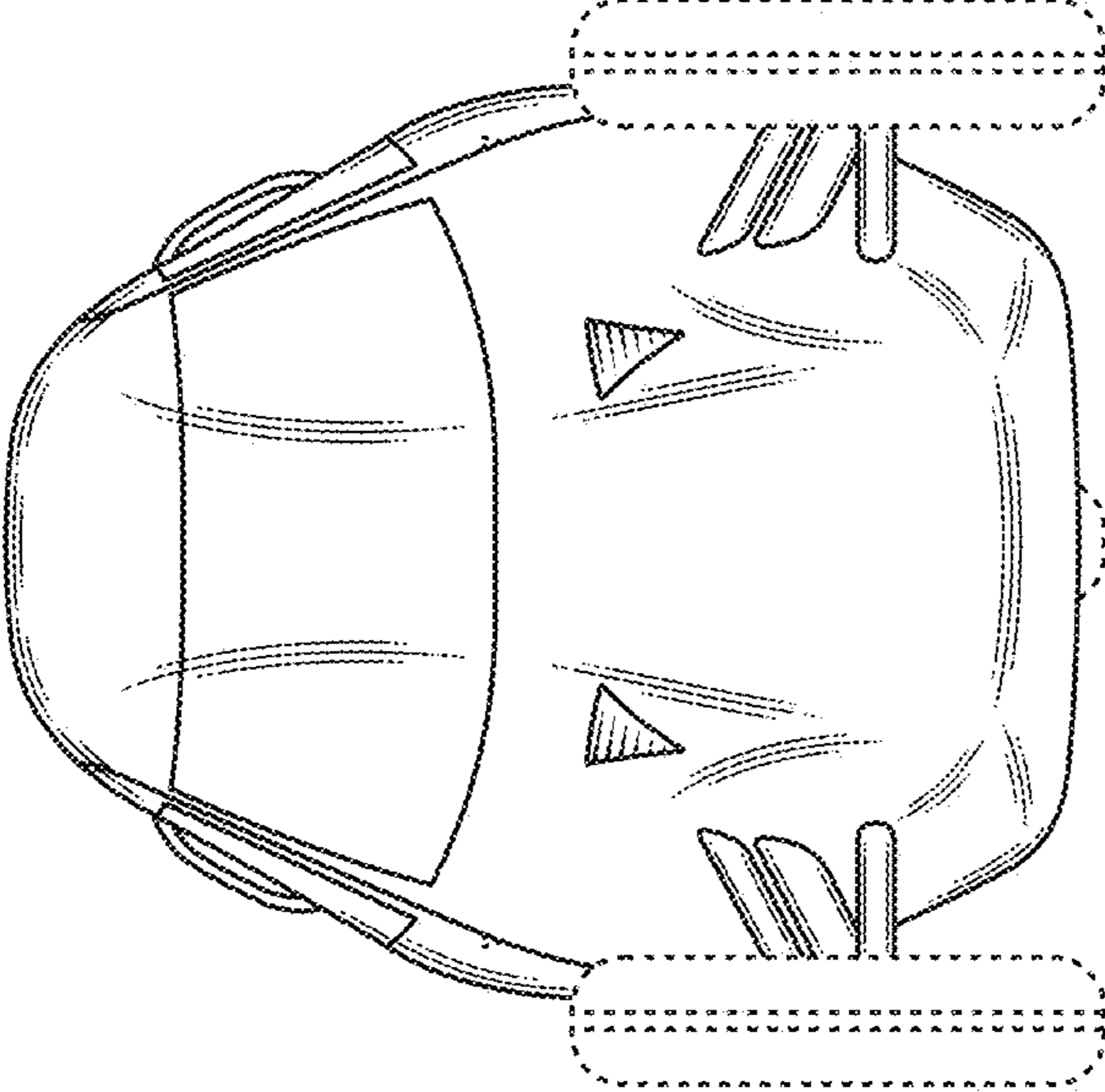


FIG.6

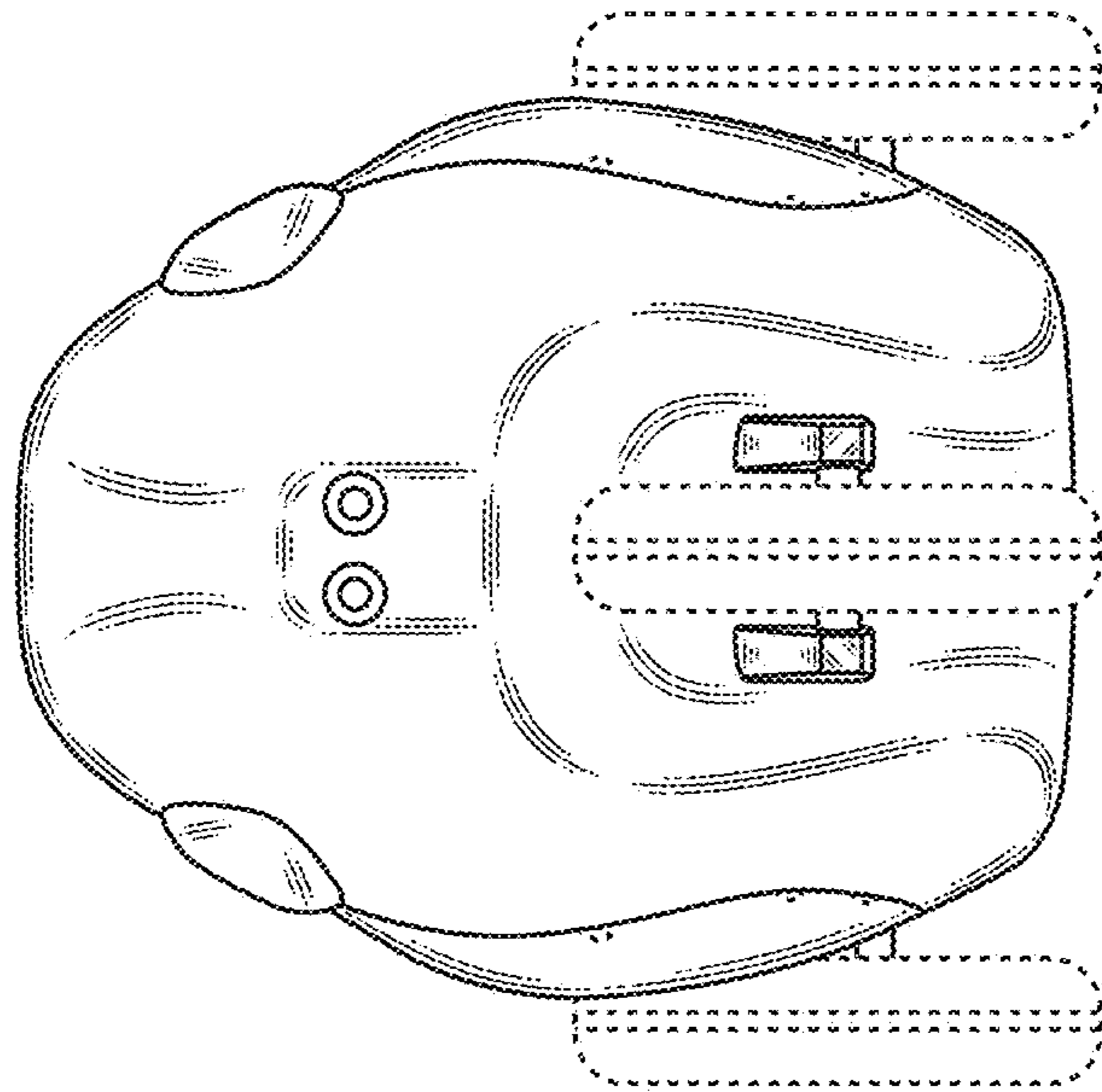


FIG. 7