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

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(54) **VIRTUAL MOBILITY ROBOT**

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

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**Related U.S. Application Data**

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(51) **LOC (13) Cl.** ..... **15-99**

(52) **U.S. Cl.**  
USPC ..... **D15/199**

(58) **Field of Classification Search**  
USPC ..... D15/199; D21/578-583, 621, 622;  
D32/21; D34/34  
CPC ..... B23K 9/133; B23K 9/287; B25J 9/0018;  
B25J 19/0025; Y10T 74/20; Y10T  
74/20207; Y10T 74/20311; Y10T  
74/20305; Y10S 901/01  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D295,105 S \* 4/1988 Dawson ..... D34/18  
D810,167 S \* 2/2018 Yang ..... D15/199  
D810,799 S \* 2/2018 Sokuza ..... D15/199  
D811,458 S \* 2/2018 Wang ..... D15/199  
D813,281 S \* 3/2018 Kittmann ..... D15/199  
D817,375 S \* 5/2018 Deyle ..... D15/199

D819,711 S \* 6/2018 Li ..... D15/199  
D837,852 S \* 1/2019 Nilsson ..... D15/199  
D840,453 S \* 2/2019 Yoo ..... D15/199  
D841,067 S \* 2/2019 Camporesi ..... D15/199  
D849,813 S \* 5/2019 Sutherland ..... D15/199  
D855,673 S \* 8/2019 Sutherland ..... D15/199  
D857,073 S \* 8/2019 Gayne ..... D15/199  
D859,485 S \* 9/2019 Sutherland ..... D15/199  
D869,533 S \* 12/2019 Kim ..... D15/199  
D870,787 S \* 12/2019 Kim ..... D15/199  
D870,788 S \* 12/2019 Kim ..... D15/199  
D871,477 S \* 12/2019 Kolb ..... D15/199  
D872,788 S \* 1/2020 Sutherland ..... D15/199  
D873,173 S \* 1/2020 Brucker ..... D12/1  
D879,174 S \* 3/2020 Kammermeier ..... D15/199  
D879,852 S \* 3/2020 Chen ..... D15/199  
D884,764 S \* 5/2020 Mori ..... D15/199  
D887,468 S \* 6/2020 Hirvesaar ..... D15/199  
D888,790 S \* 6/2020 Yao ..... D15/199  
D890,239 S \* 7/2020 Srivastava ..... D15/199  
D892,188 S \* 8/2020 Galluzzo ..... D15/199

(Continued)

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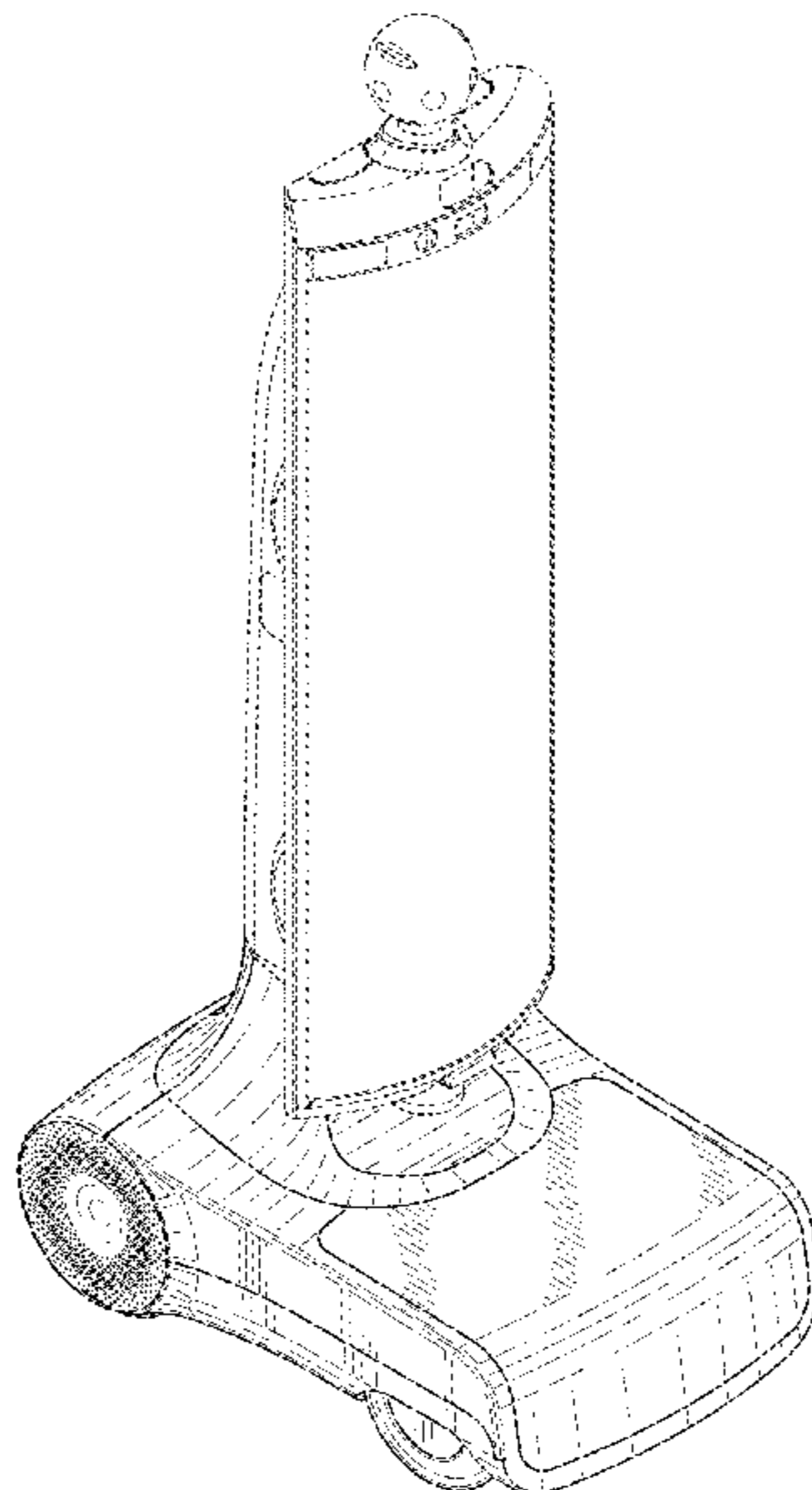
(57) **CLAIM**

The ornamental design for a virtual mobility robot, as shown and described.

**DESCRIPTION**

FIG. 1 is a front perspective view of another virtual mobility robot illustrating my new design;  
FIG. 2 is a front view of the design of FIG. 1;  
FIG. 3 is a rear view of the design of FIG. 1;  
FIG. 4 is a side view of the design of FIG. 1;  
FIG. 5 is a side view of the design of FIG. 1;  
FIG. 6 is a top view of the design of FIG. 1; and,  
FIG. 7 is a bottom view of the design of FIG. 1.  
The broken lines represent portions of the structure that form no part of the claim.

**1 Claim, 7 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D893,570 S \* 8/2020 Zheng ..... D15/199  
D894,987 S \* 9/2020 Li ..... D15/199  
D915,486 S \* 4/2021 Gidwell ..... D15/199  
D921,080 S \* 6/2021 Chen ..... D15/199  
D924,080 S \* 7/2021 Duchosal ..... D10/52  
D937,920 S \* 12/2021 Gidwell ..... D15/199  
2004/0042885 A1 \* 3/2004 Rokkaku ..... B60L 15/38  
414/529  
2009/0035181 A1 \* 2/2009 Chung ..... G01N 35/0099  
422/68.1  
2010/0316468 A1 \* 12/2010 Lert ..... B65G 1/1373  
414/273  
2011/0135189 A1 \* 6/2011 Lee ..... B25J 9/1682  
382/153  
2014/0074287 A1 \* 3/2014 LaFary ..... B25J 9/1676  
700/253  
2015/0073589 A1 \* 3/2015 Khodl ..... B65G 1/1378  
700/218  
2017/0337506 A1 \* 11/2017 Wise ..... G06Q 10/087  
2018/0072212 A1 \* 3/2018 Alfaro ..... G05D 1/0278  
2018/0099811 A1 \* 4/2018 Shen ..... B66F 9/063

\* cited by examiner

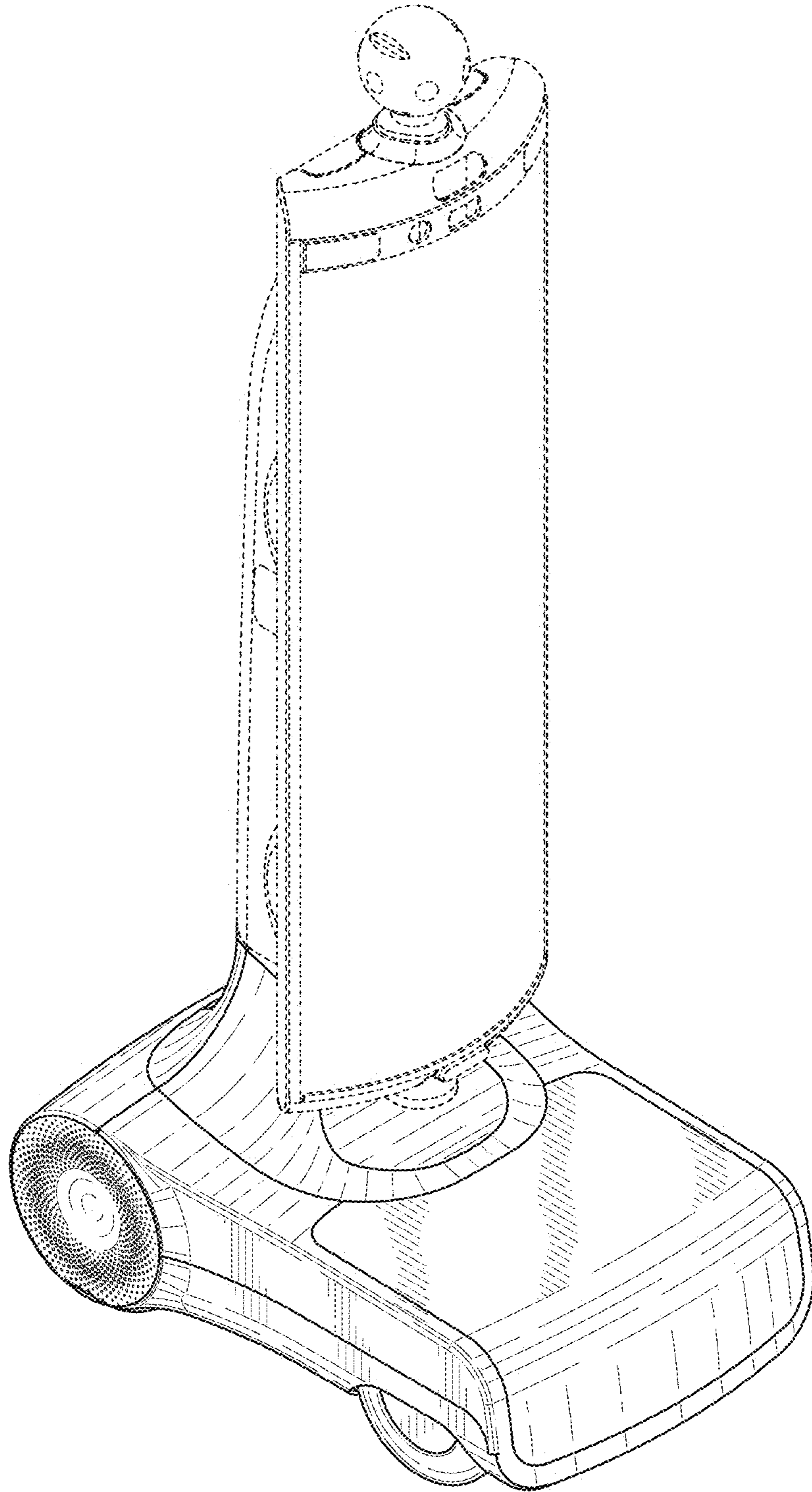


FIG. 1

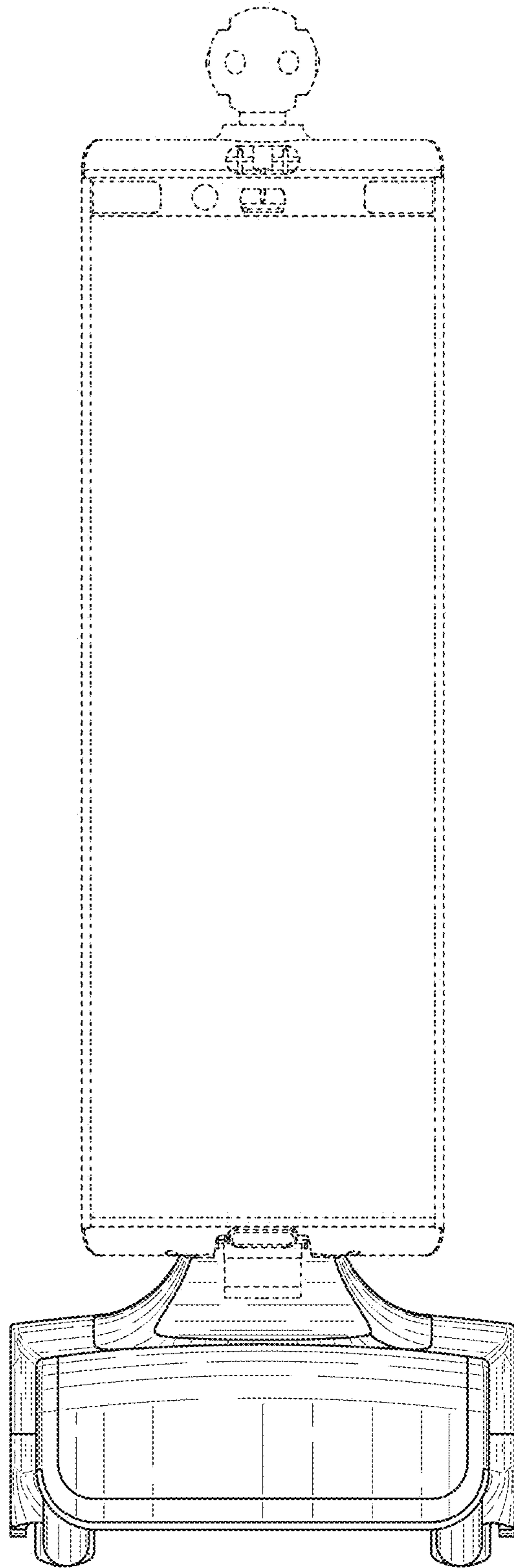


FIG. 2

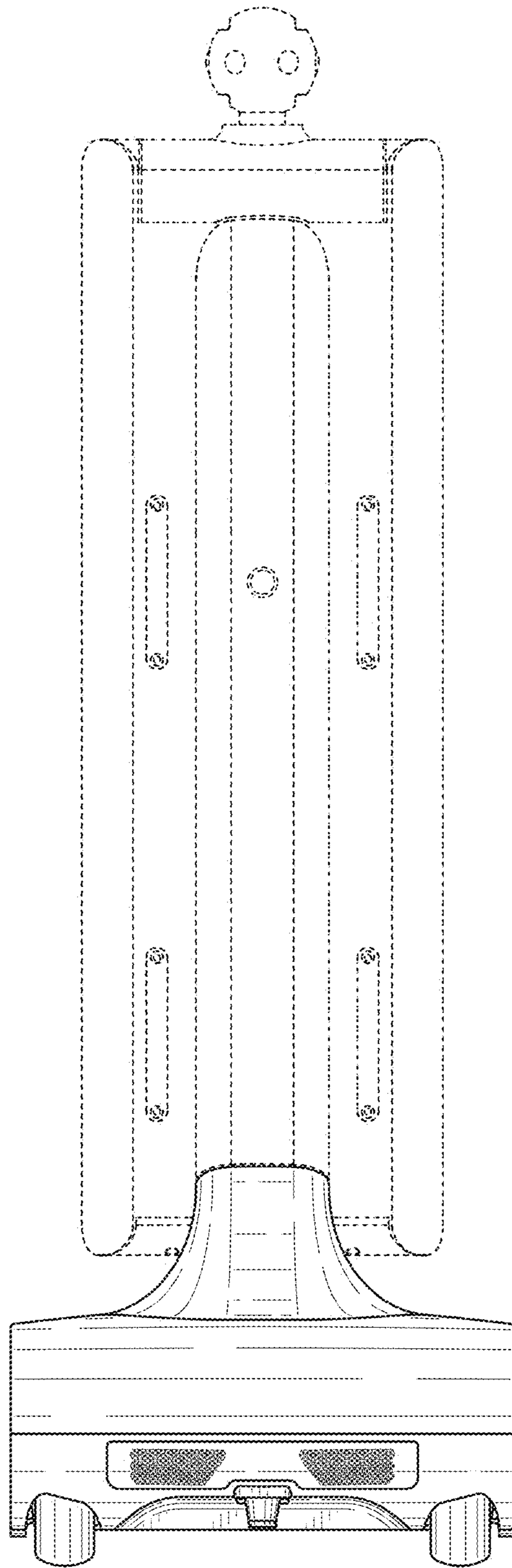


FIG. 3

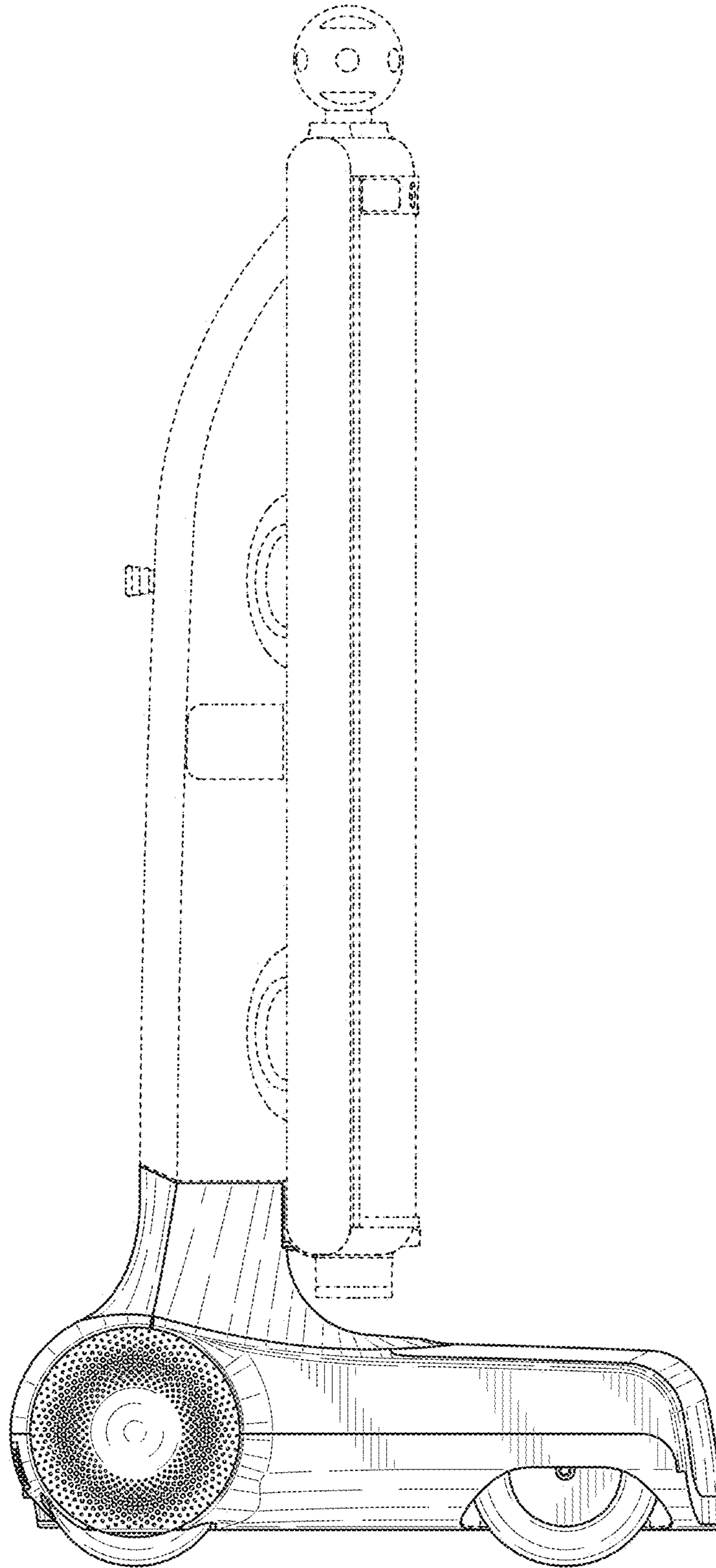


FIG. 4

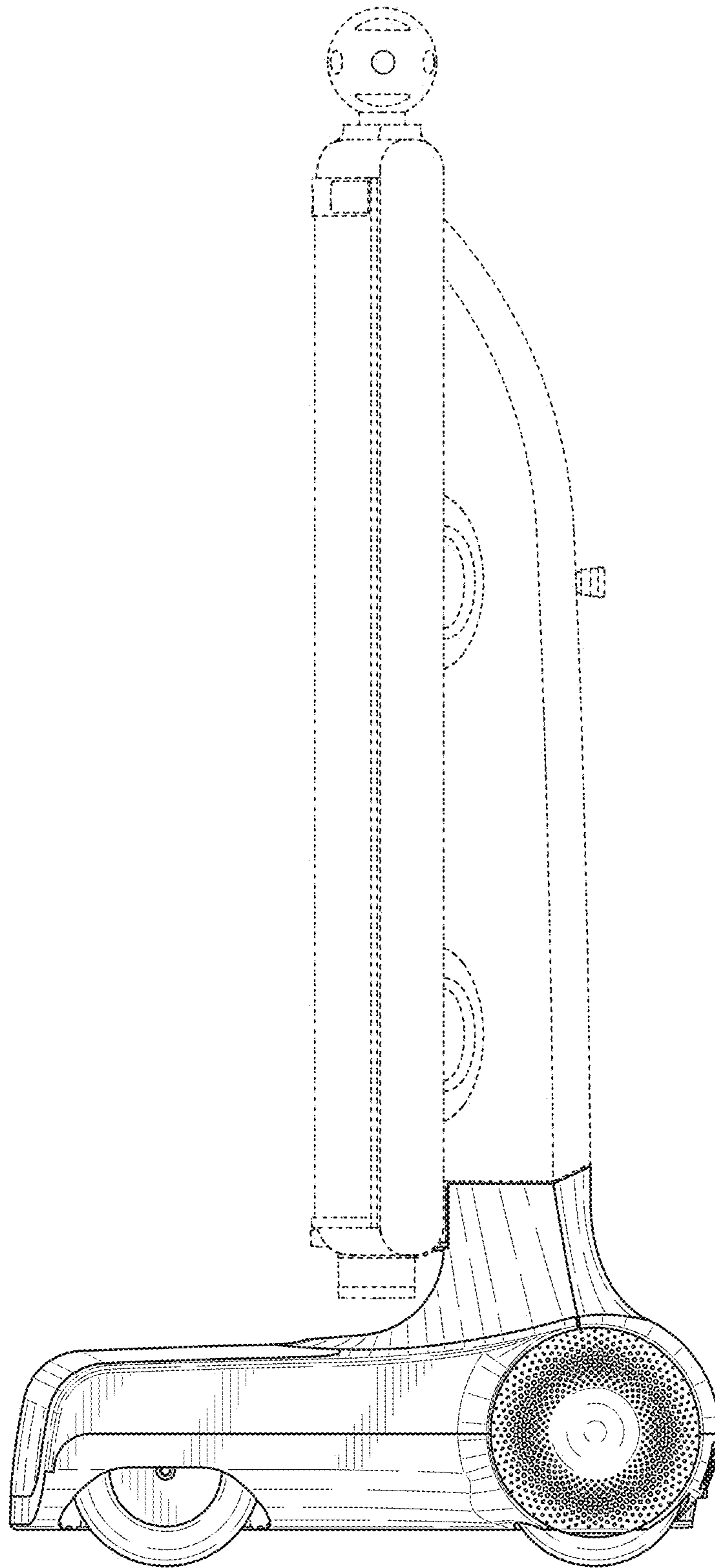


FIG. 5

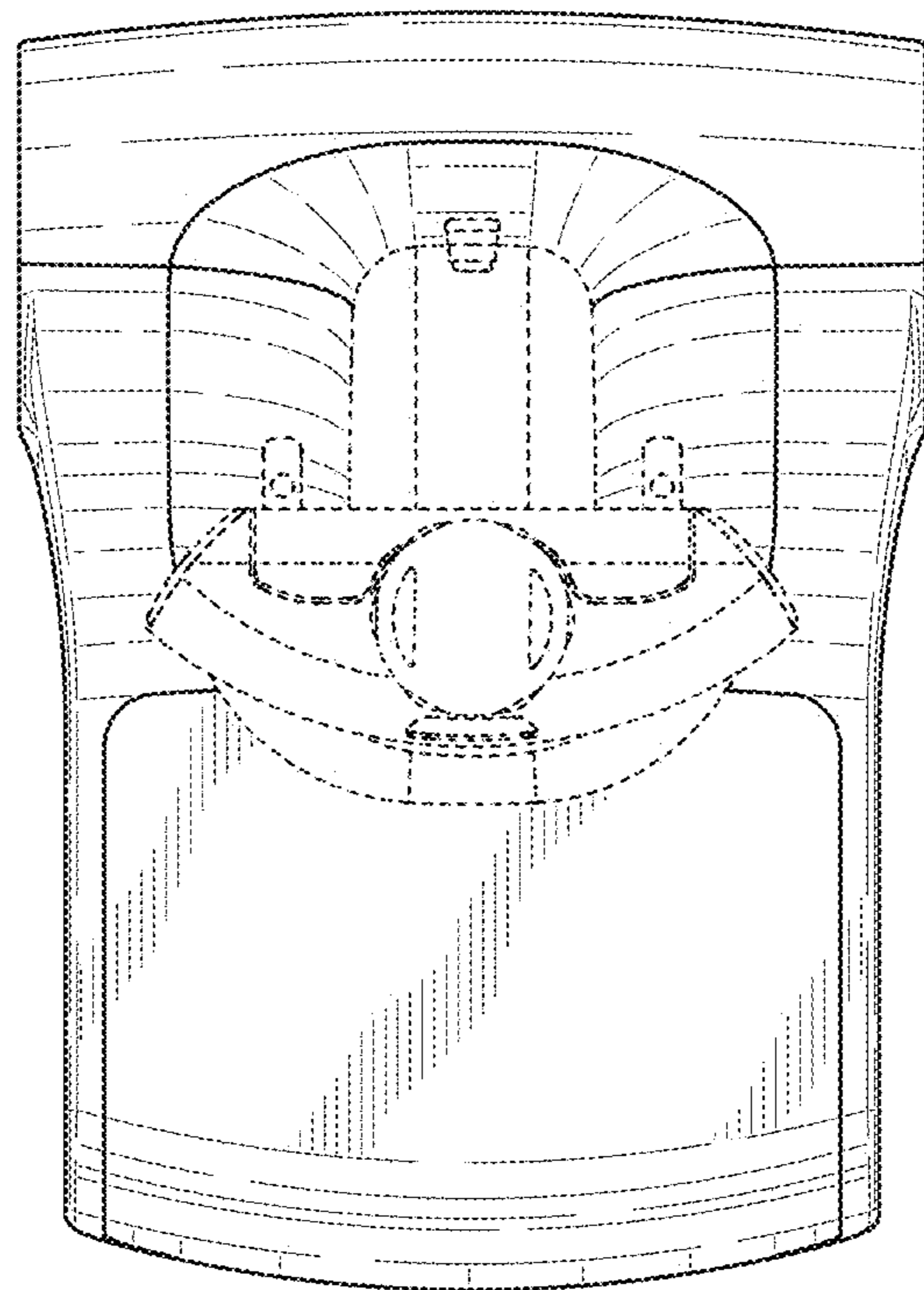


FIG. 6



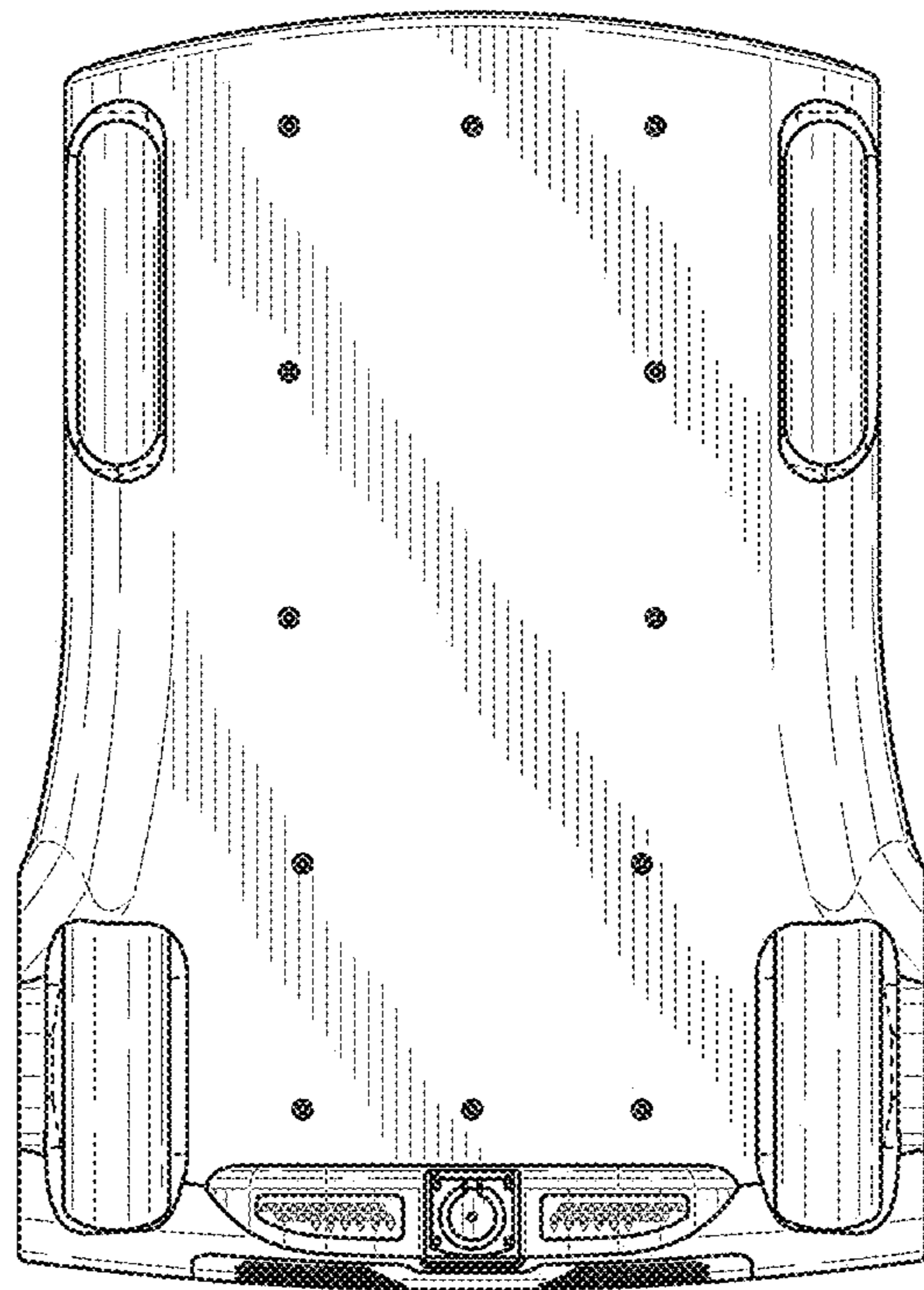


FIG. 7