



US00D922465S

(12) **United States Design Patent** (10) **Patent No.:** **US D922,465 S**
Lee et al. (45) **Date of Patent:** **** Jun. 15, 2021**

(54) **HOUSEHOLD ROBOT**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **LG ELECTRONICS INC.**, Seoul (KR)

JP 2007260822 A * 10/2007

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(72) Inventors: **Younghwan Lee**, Seoul (KR); **Hophil Lee**, Seoul (KR); **Jaebom Im**, Seoul (KR)

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(73) Assignee: **LG Electronics Inc.**, Seoul (KR)

(57) **CLAIM**

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

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

DESCRIPTION

(21) Appl. No.: **35/509,238**

1. Household robot

(22) Filed: **Jun. 20, 2019**

1.1 : Perspective

(80) **Hague Agreement Data**

1.2 : Front

Int. Filing Date: **Jun. 20, 2019**

1.3 : Back

Int. Reg. No.: **DM/207390**

1.4 : Left

Int. Reg. Date: **Jun. 20, 2019**

1.5 : Right

Int. Reg. Pub. Date: **May 1, 2020**

1.6 : Top

1.7 : Bottom

1.8 : Perspective

1.9 : Front

1.10 : Back

(30) **Foreign Application Priority Data**

Jan. 30, 2019 (KR) 30-2019-0004694

1.11 : Left

1.12 : Right

1.13 : Top

1.14 : Bottom

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

1.15 : Perspective

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

1.16 : Front

USPC **D15/199**

1.17 : Back

(58) **Field of Classification Search**

1.18 : Left

USPC D15/199; D21/419-435, 533, 537, 760, D21/765, 771; 280/87.021, 87.041, 200,

1.19 : Right

1.20 : Top

1.21 : Bottom

1.22 : Perspective

1.23 : Front

(Continued)

(56) **References Cited**

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U.S. PATENT DOCUMENTS

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4,717,364 A * 1/1988 Furukawa A63H 11/00 367/198

1.26 : Right

D298,766 S * 11/1988 Tanno D21/578

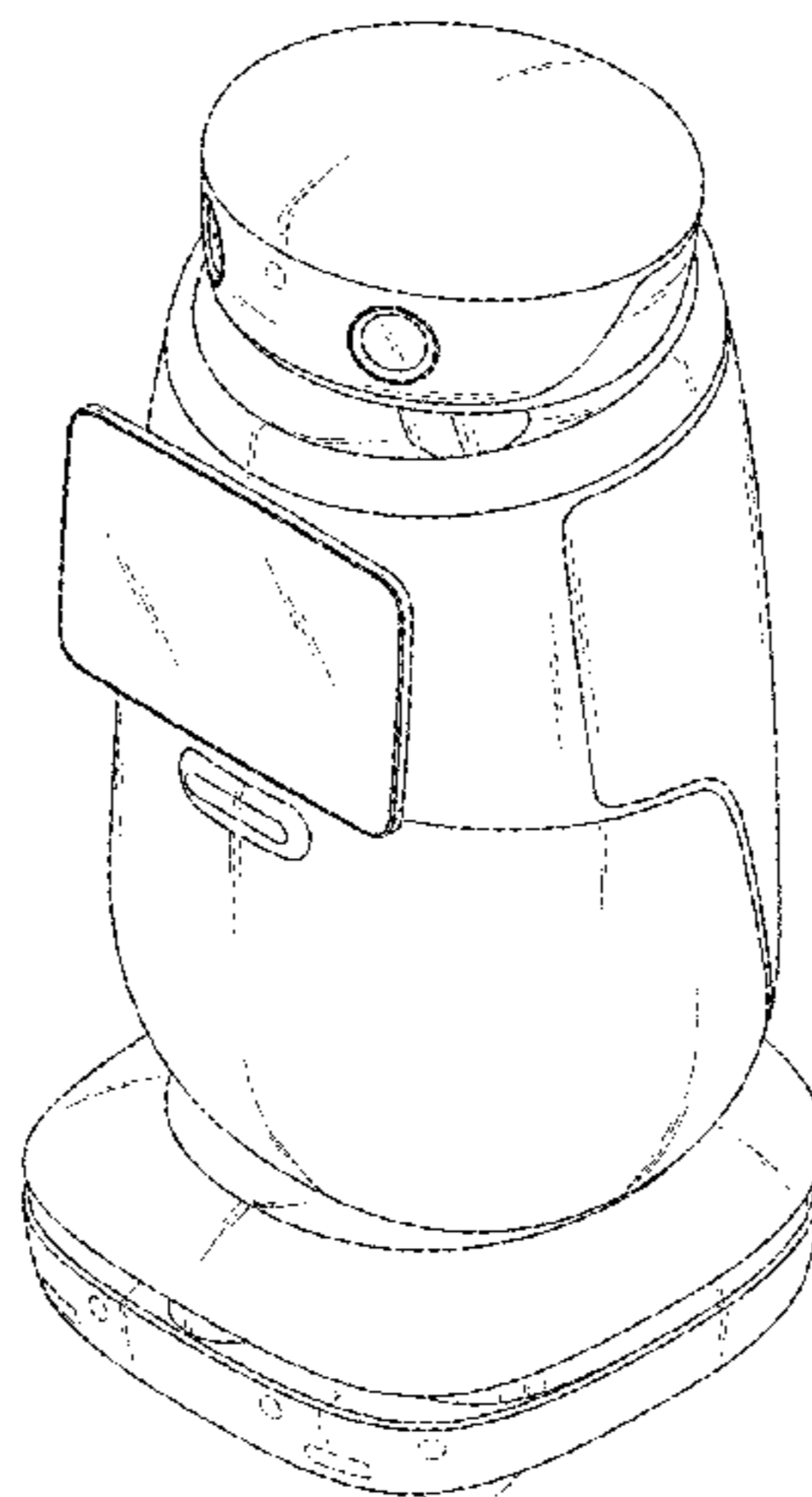
1.27 : Top

1.28 : Bottom

1.29 : Perspective

(Continued)

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1.30 : Front

1.31 : Back

1.32 : Left

1.33 : Right

1.34 : Top

1.35 : Bottom

The parts shown by means of broken lines in the reproductions are not part of the claimed design.

1 Claim, 35 Drawing Sheets

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

CPC *B25J 11/00* (2013.01)

(58) **Field of Classification Search**

USPC 280/210, 214, 239, 263, 282,
280/288.1–288.4; 180/180, 181, 21, 8.2,
180/5.26, 6.5, 7.1, 65.8, 907

CPC B25J 11/00; B25J 11/008

See application file for complete search history.

(56)

References Cited

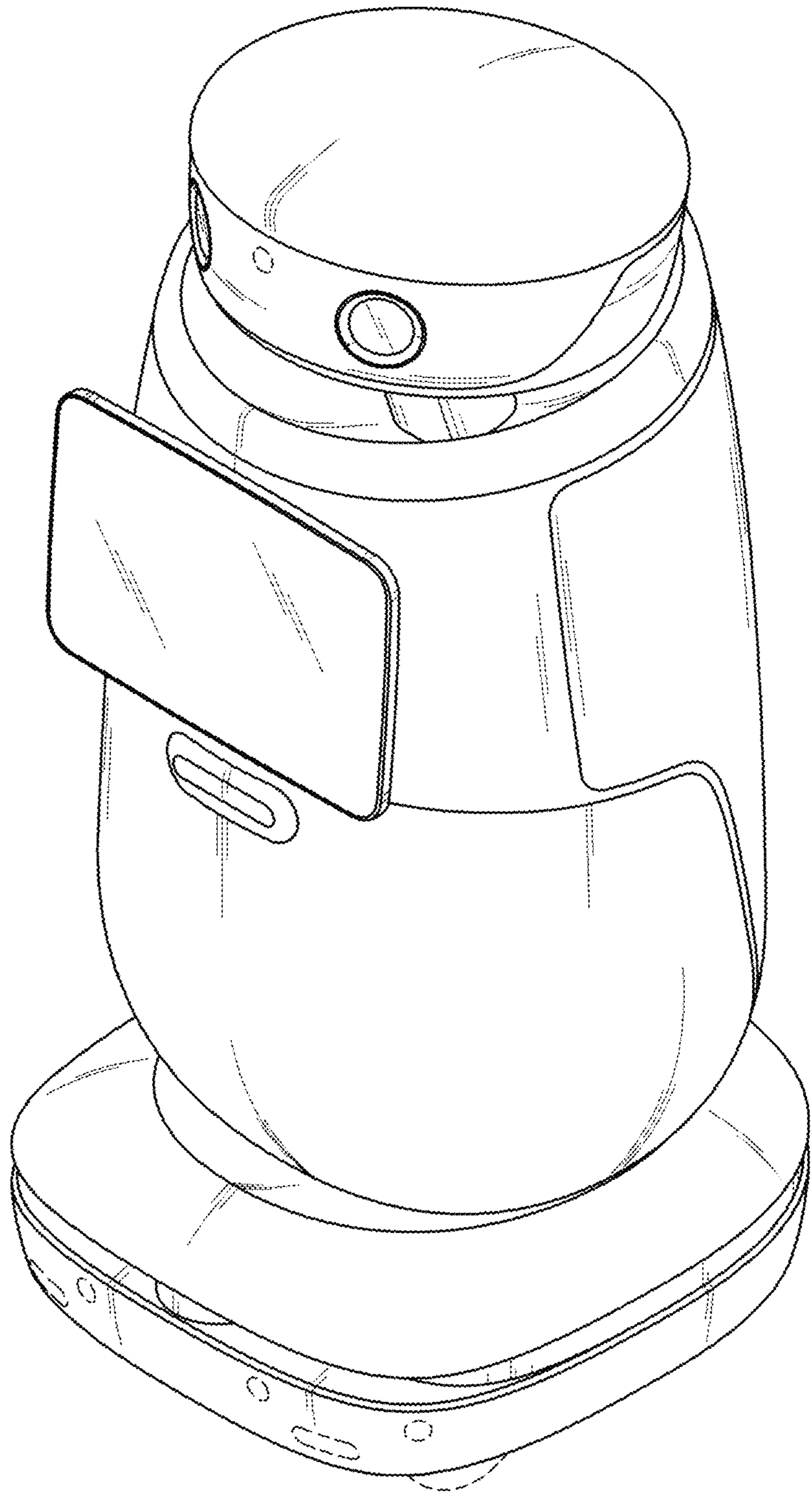
U.S. PATENT DOCUMENTS

D456,080 S * 4/2002 Karlsson D24/185
D549,756 S * 8/2007 Park D15/199
D563,443 S * 3/2008 Ahn D15/199
D566,737 S * 4/2008 Matsuda D15/199
D572,739 S * 7/2008 Jennings D15/199
D579,035 S * 10/2008 Kim B25J 11/008
D15/199
D608,804 S * 1/2010 Labak D15/199
D631,074 S * 1/2011 Peters D15/144
D635,603 S * 4/2011 Paz Rodriguez D15/199
D644,256 S * 8/2011 Kitano D15/199
D663,333 S * 7/2012 Kitano D15/199
D675,656 S * 2/2013 Sutherland D15/199

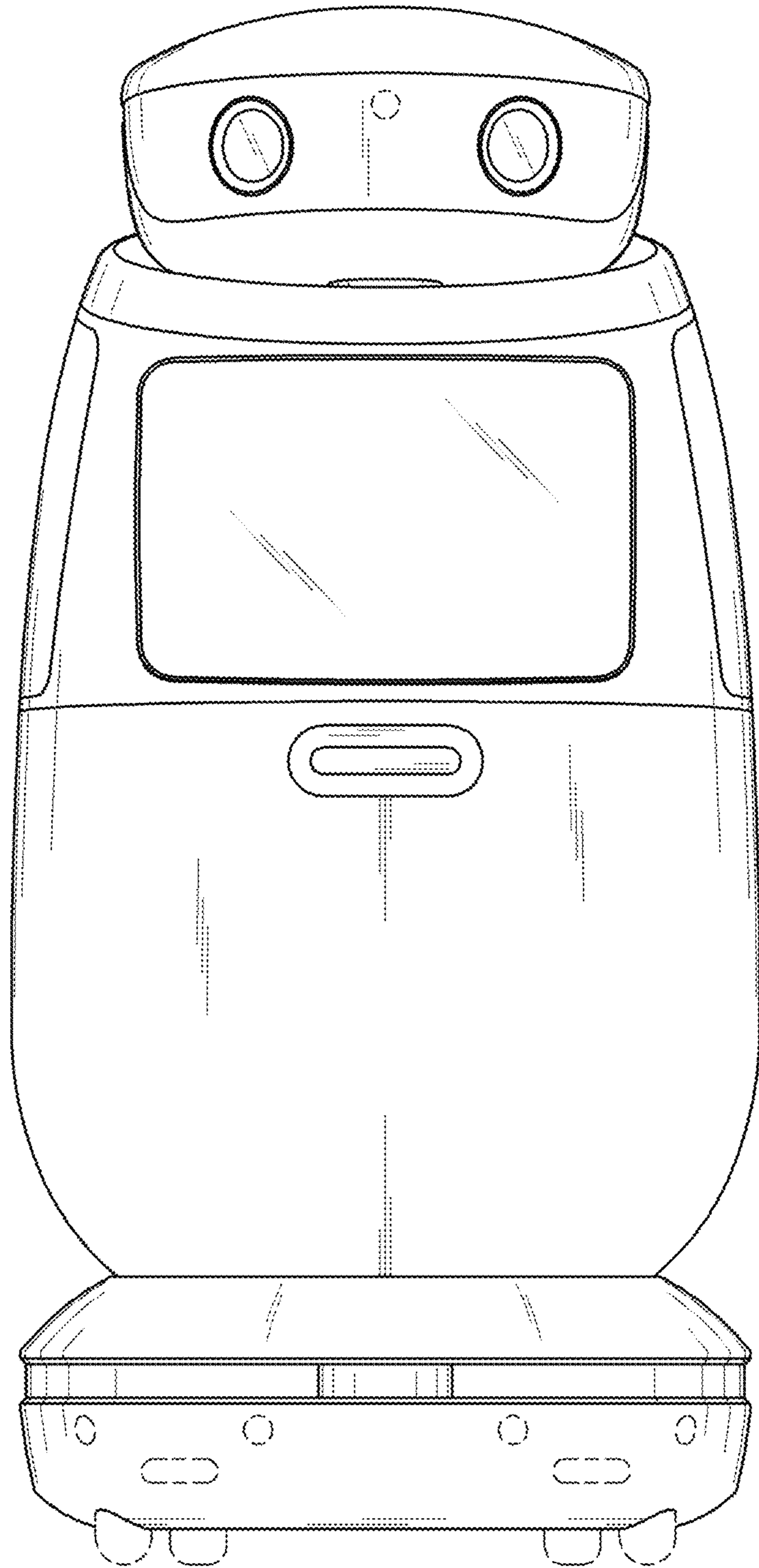
8,494,675 B2 * 7/2013 Ichinose G05D 1/0272
700/245
8,620,547 B2 * 12/2013 Monsere B60T 7/042
701/70
D701,256 S * 3/2014 Song D15/199
D720,378 S * 12/2014 Dye D15/199
8,935,006 B2 * 1/2015 Vu B25J 11/008
700/264
D725,166 S * 3/2015 Paik D15/199
D732,096 S * 6/2015 Jang D15/199
D735,258 S * 7/2015 Jang D15/199
D739,450 S * 9/2015 Jain D15/199
D752,668 S * 3/2016 Pedersen D15/199
9,291,698 B2 * 3/2016 Watanabe G01S 11/06
D761,339 S * 7/2016 White, Jr. D15/199
D761,894 S * 7/2016 Ho D15/199
D769,953 S * 10/2016 Bauman D15/199
9,469,031 B2 * 10/2016 Saito B25J 9/1676
D781,945 S * 3/2017 Uno D15/199
D802,040 S * 11/2017 Canoso D15/199
D810,167 S * 2/2018 Yang D15/199
D810,800 S * 2/2018 Wang D15/199
D811,458 S * 2/2018 Wang D15/199
D813,284 S * 3/2018 Wei D15/199
D813,285 S * 3/2018 Wei D15/199
D817,375 S * 5/2018 Deyle D15/199
D820,334 S * 6/2018 Lee D15/199
D826,303 S * 8/2018 Metta D15/199
D839,334 S * 1/2019 Chen D15/199
D871,474 S * 12/2019 Kolb D15/199
D884,764 S * 5/2020 Mori D15/199
D884,765 S * 5/2020 Mori D15/199
2007/0132419 A1 * 6/2007 Hashimoto B25J 5/007
318/568.12
2008/0147261 A1 * 6/2008 Ichinose G01C 22/006
701/24
2009/0169347 A1 * 7/2009 Teng B25J 19/005
414/401
2015/0190927 A1 * 7/2015 Sutherland B25J 11/009
700/259
2018/0178375 A1 * 6/2018 Yang B25J 19/00

* cited by examiner

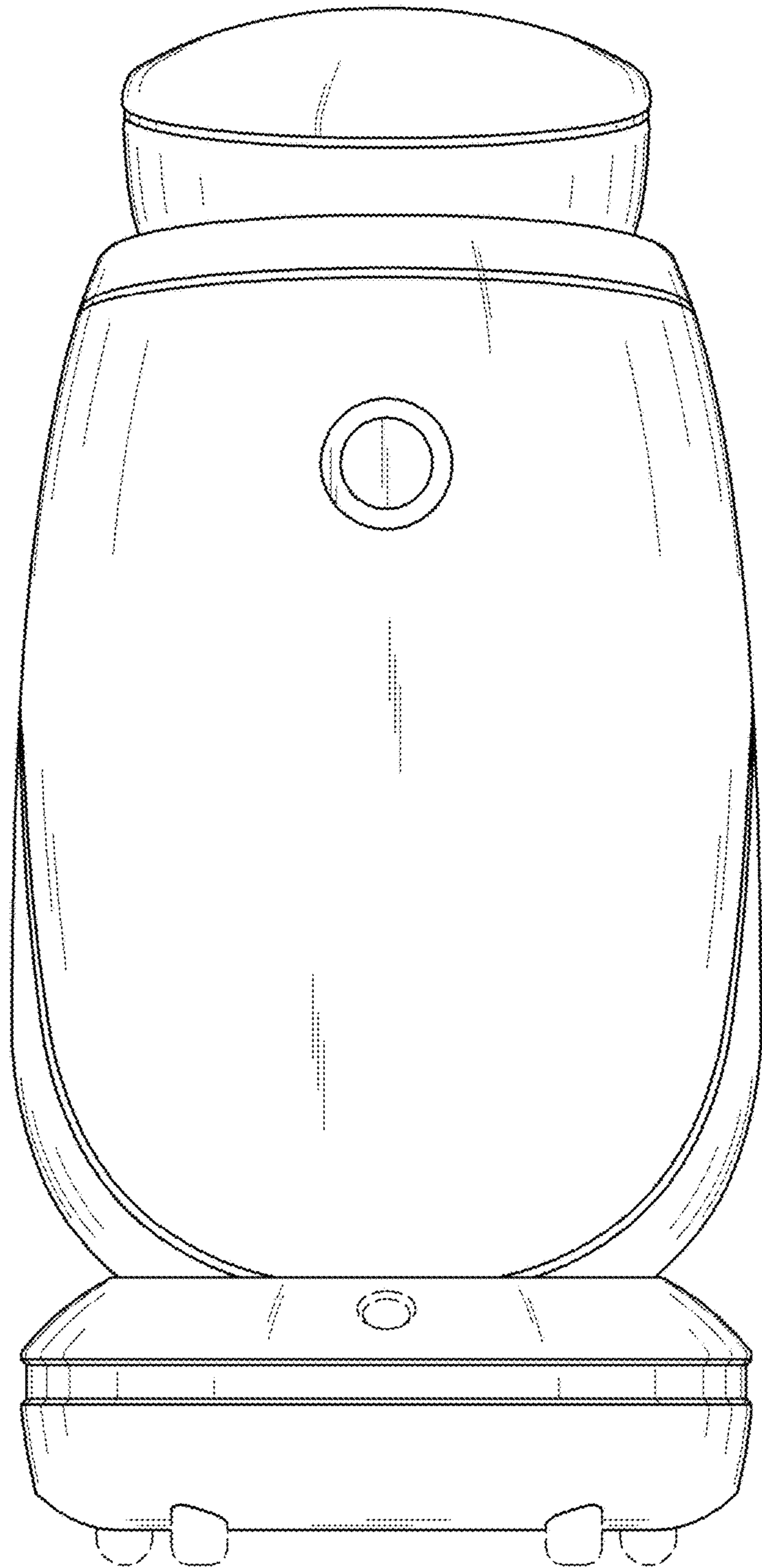
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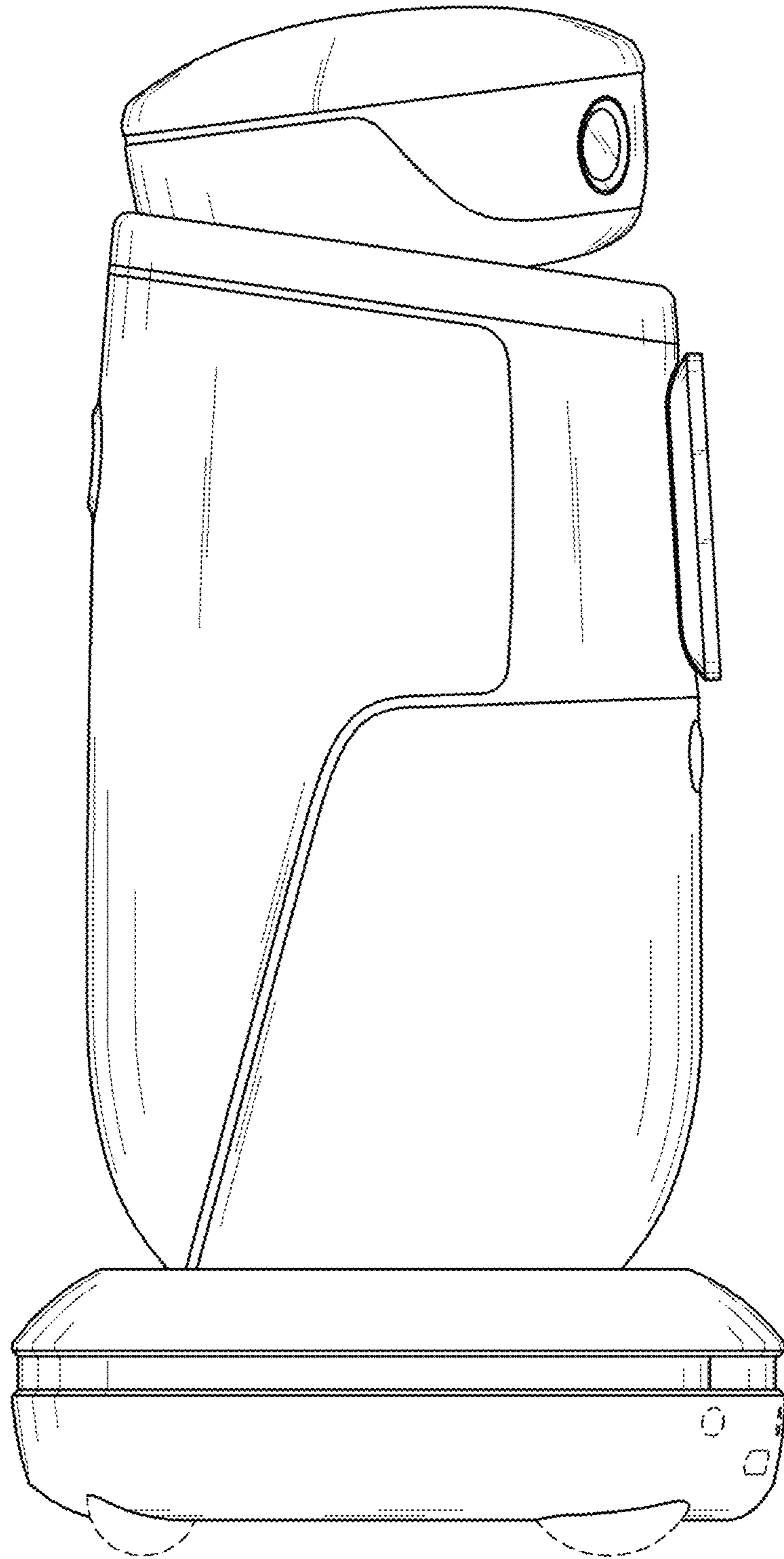
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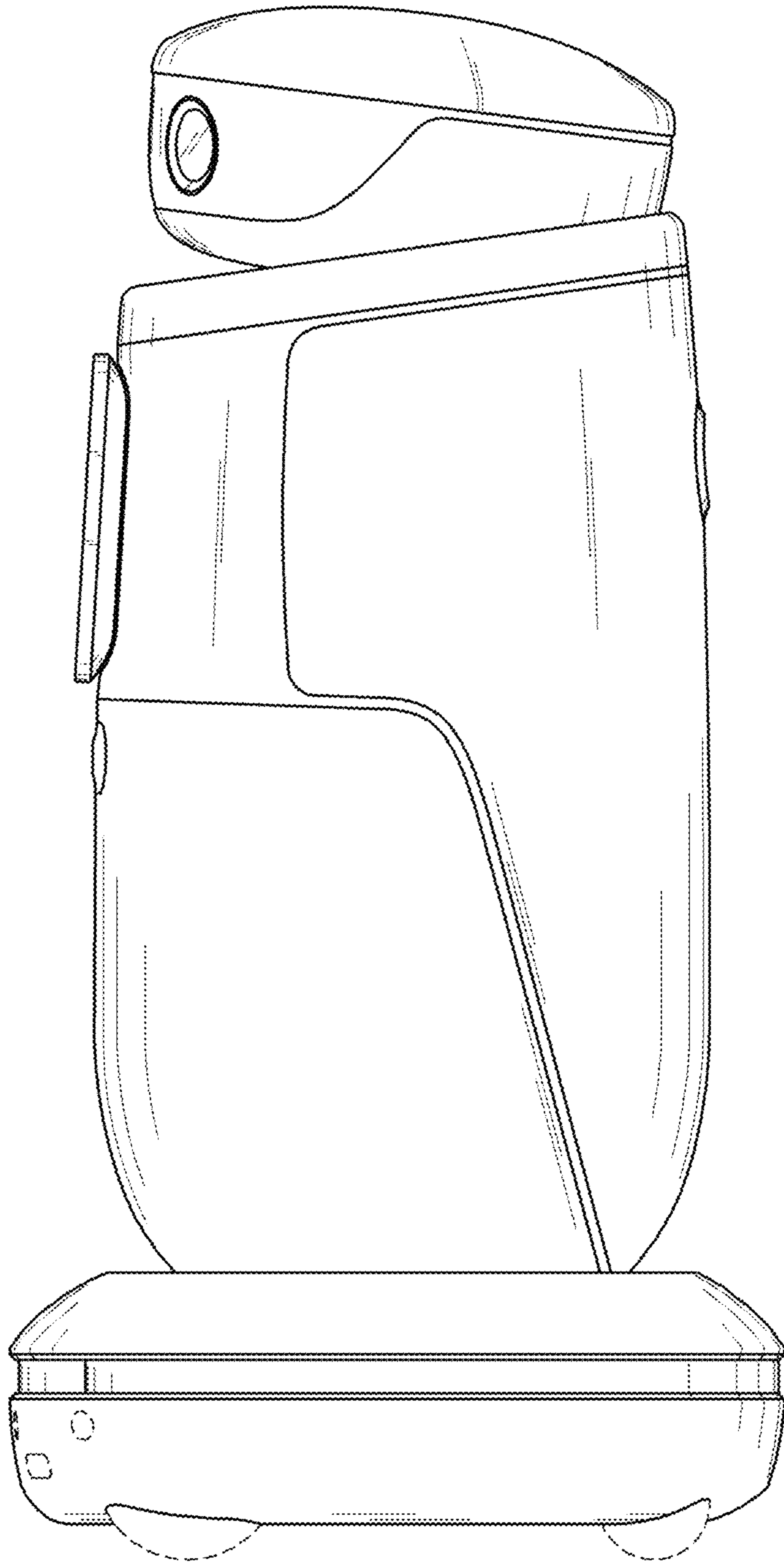
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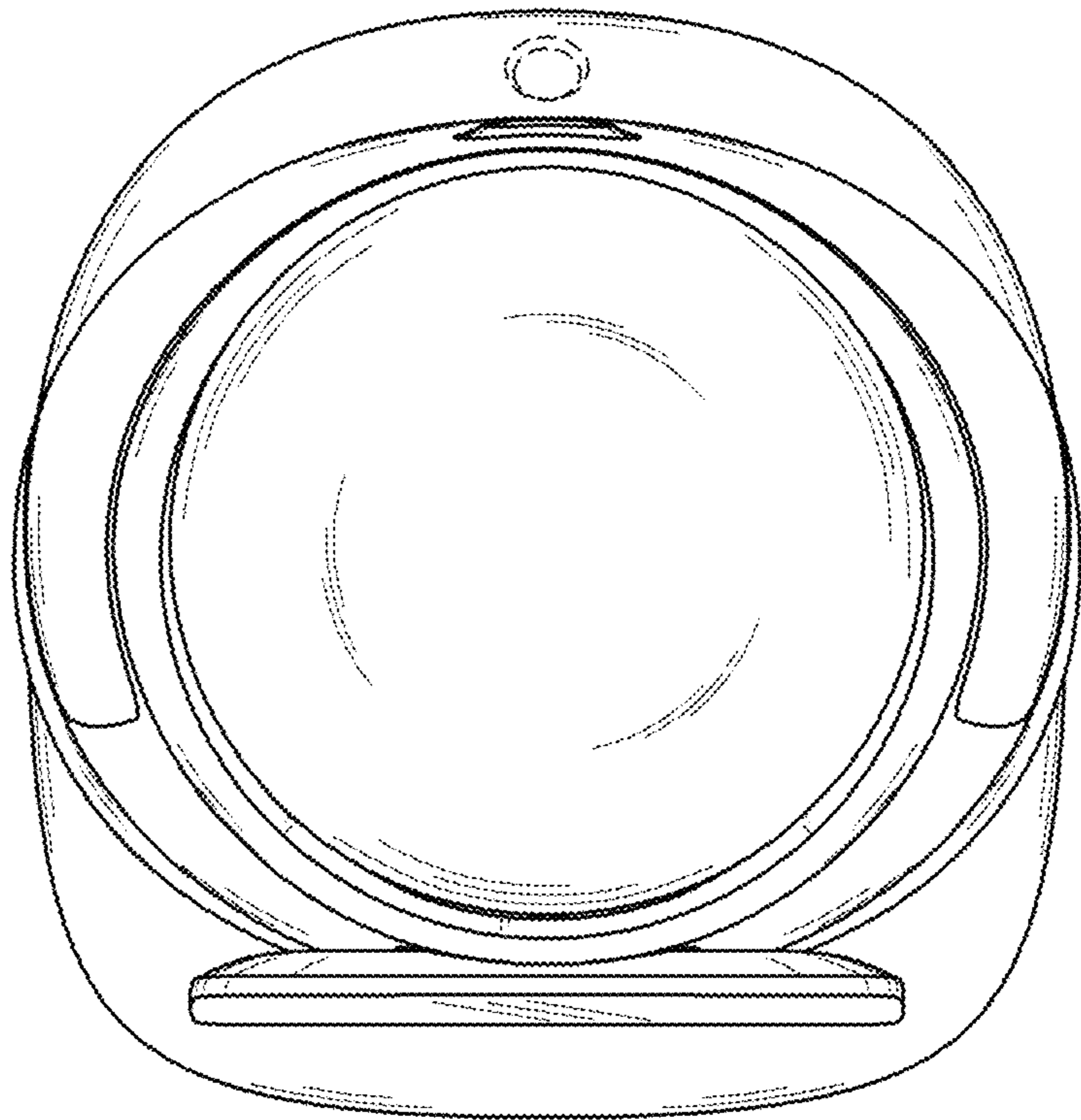
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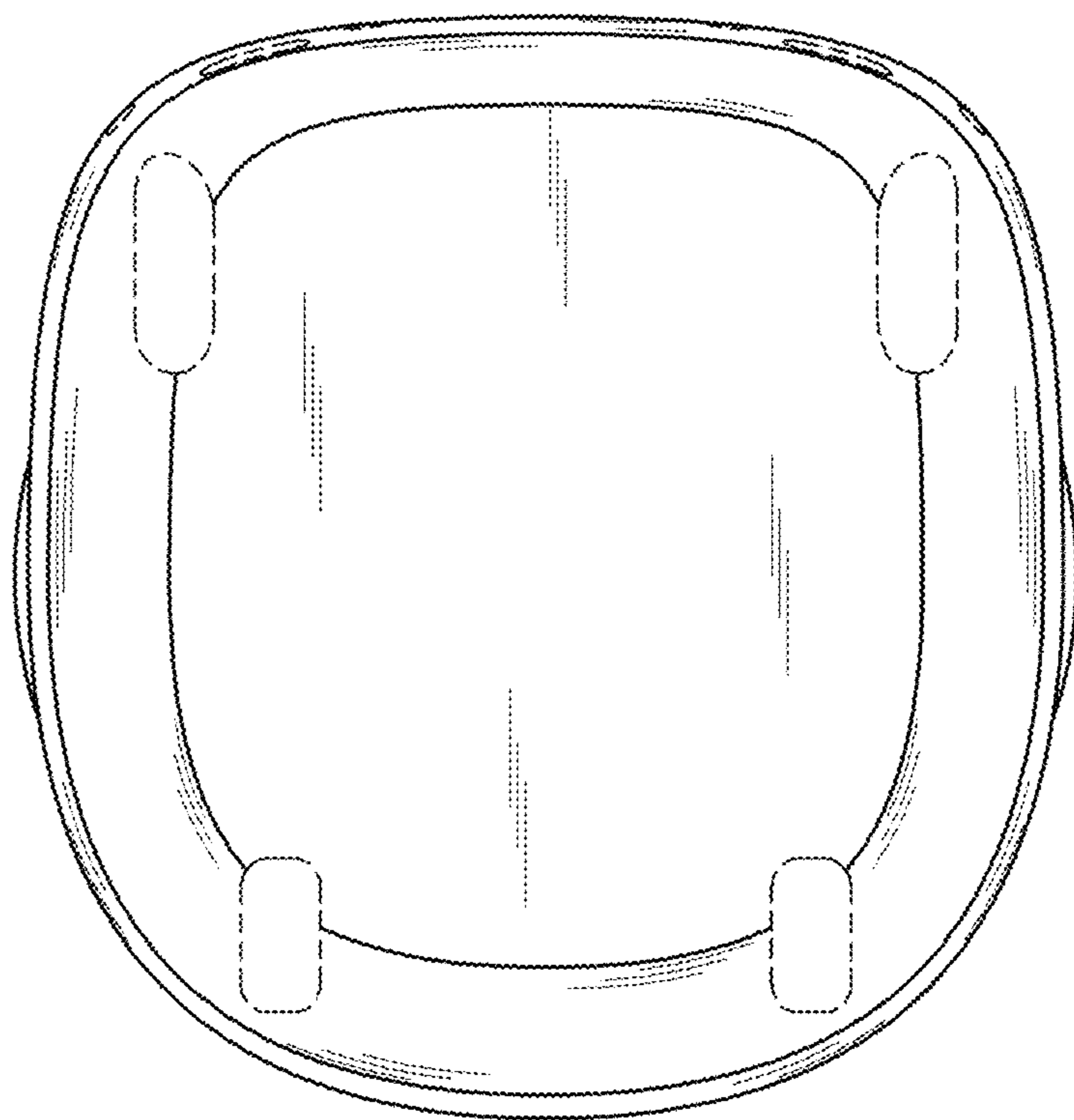
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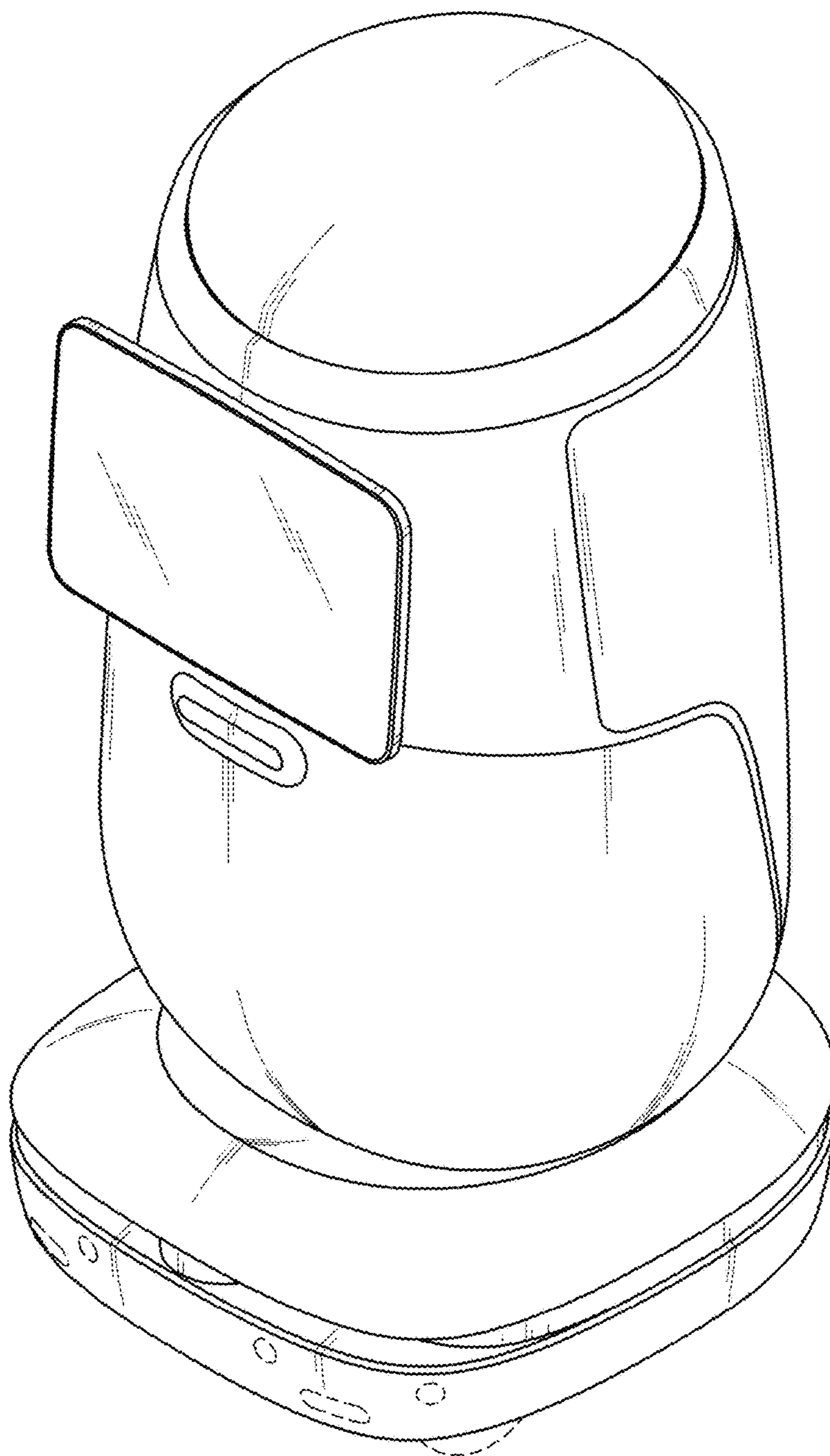
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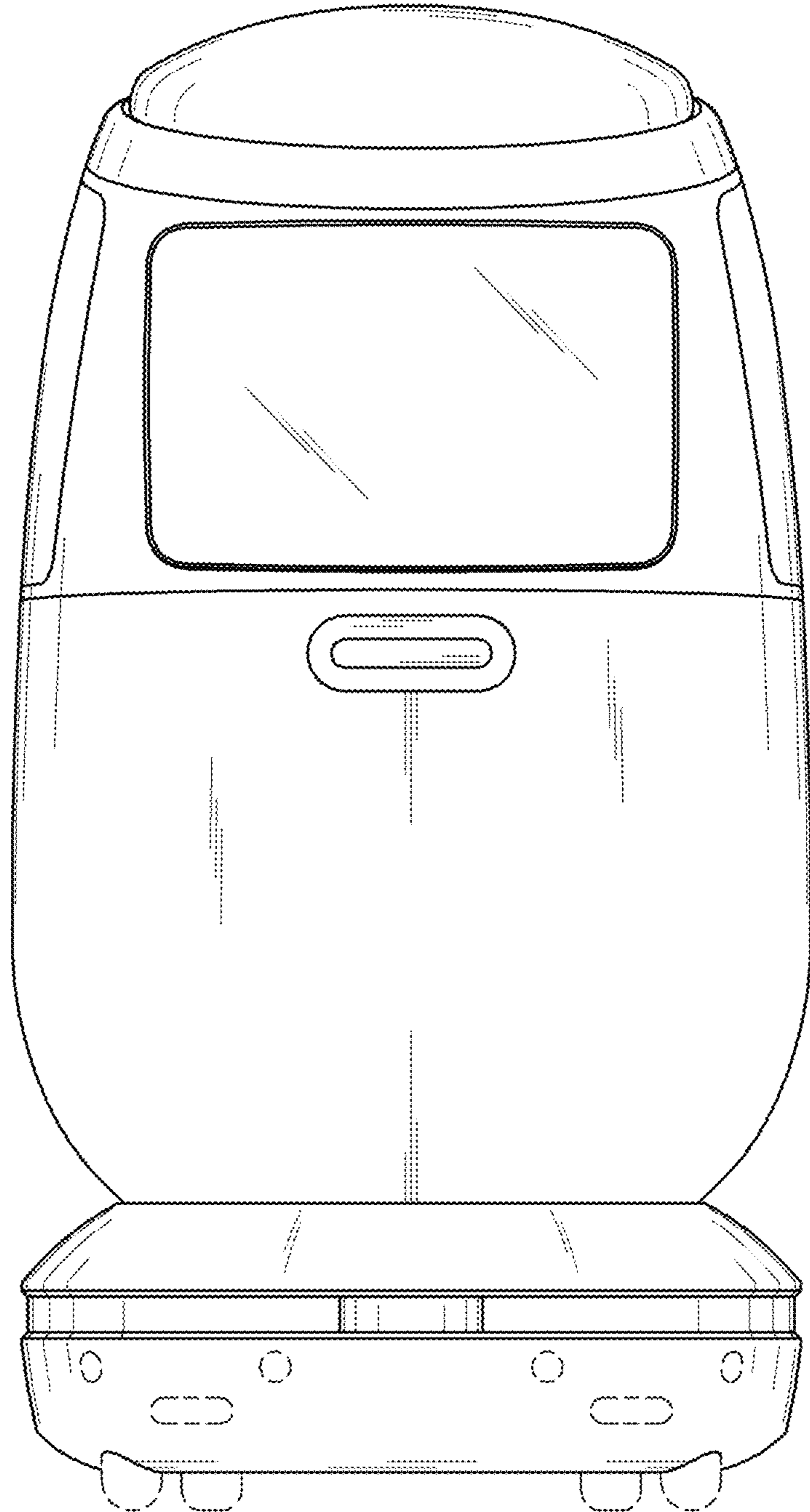
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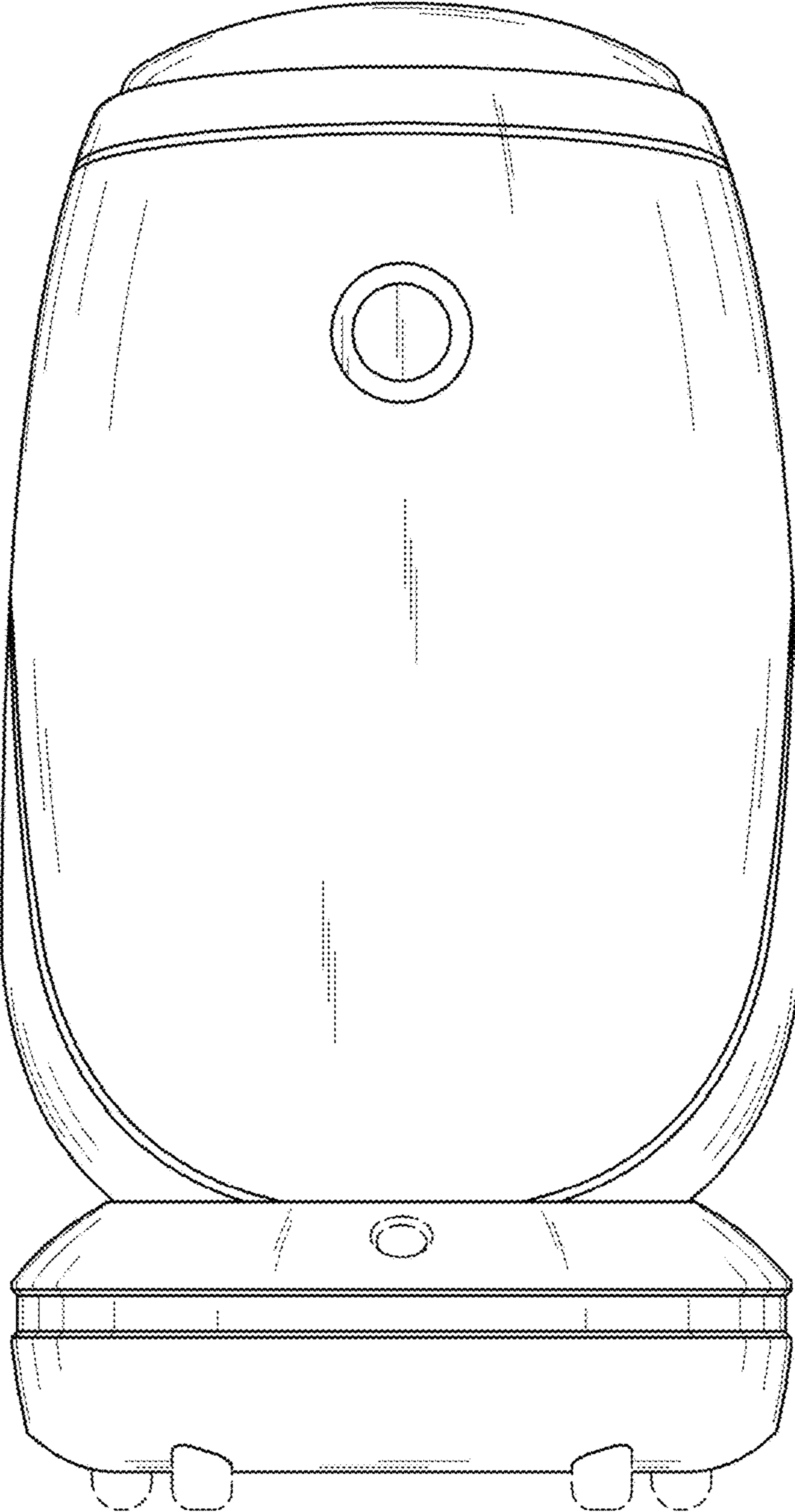
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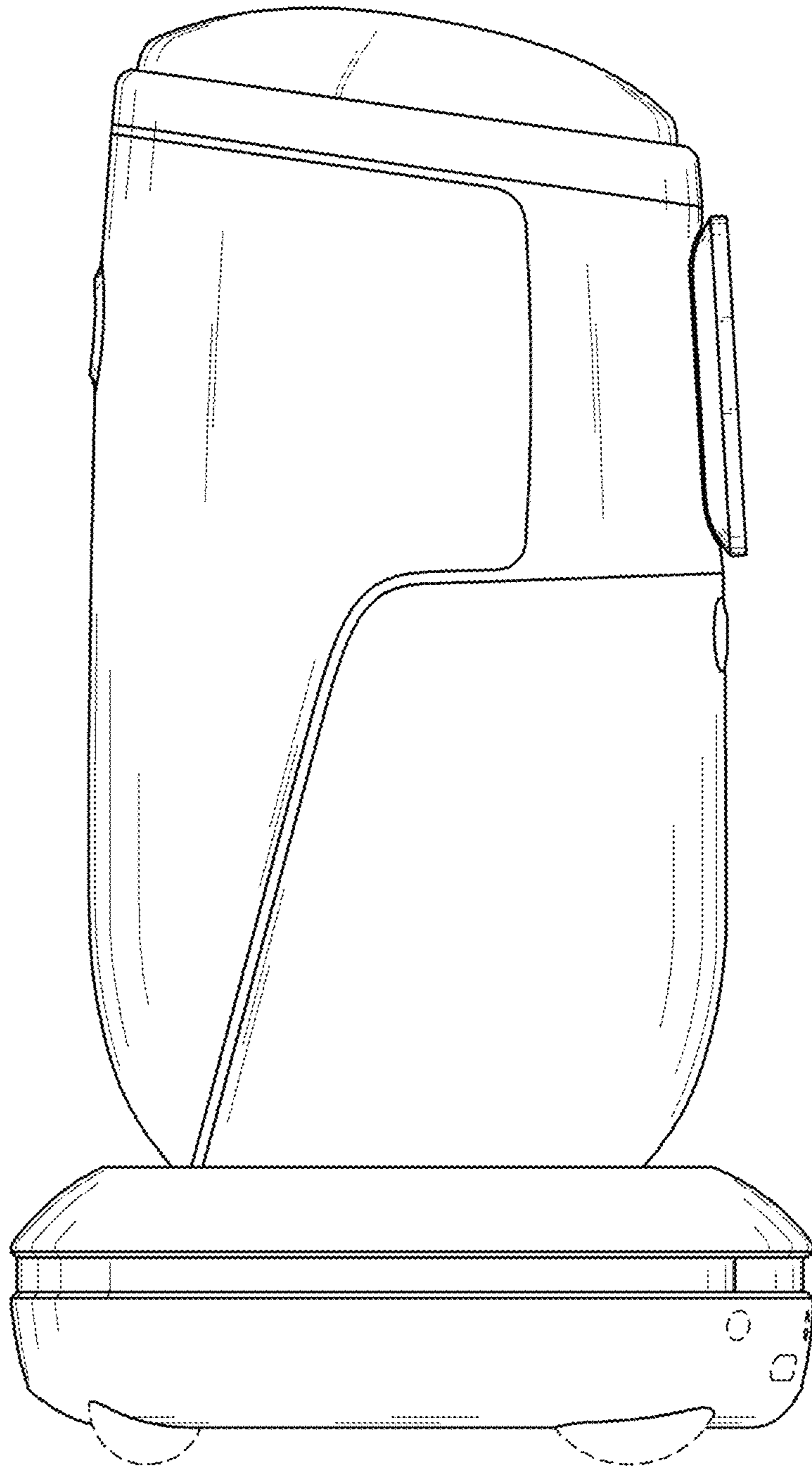
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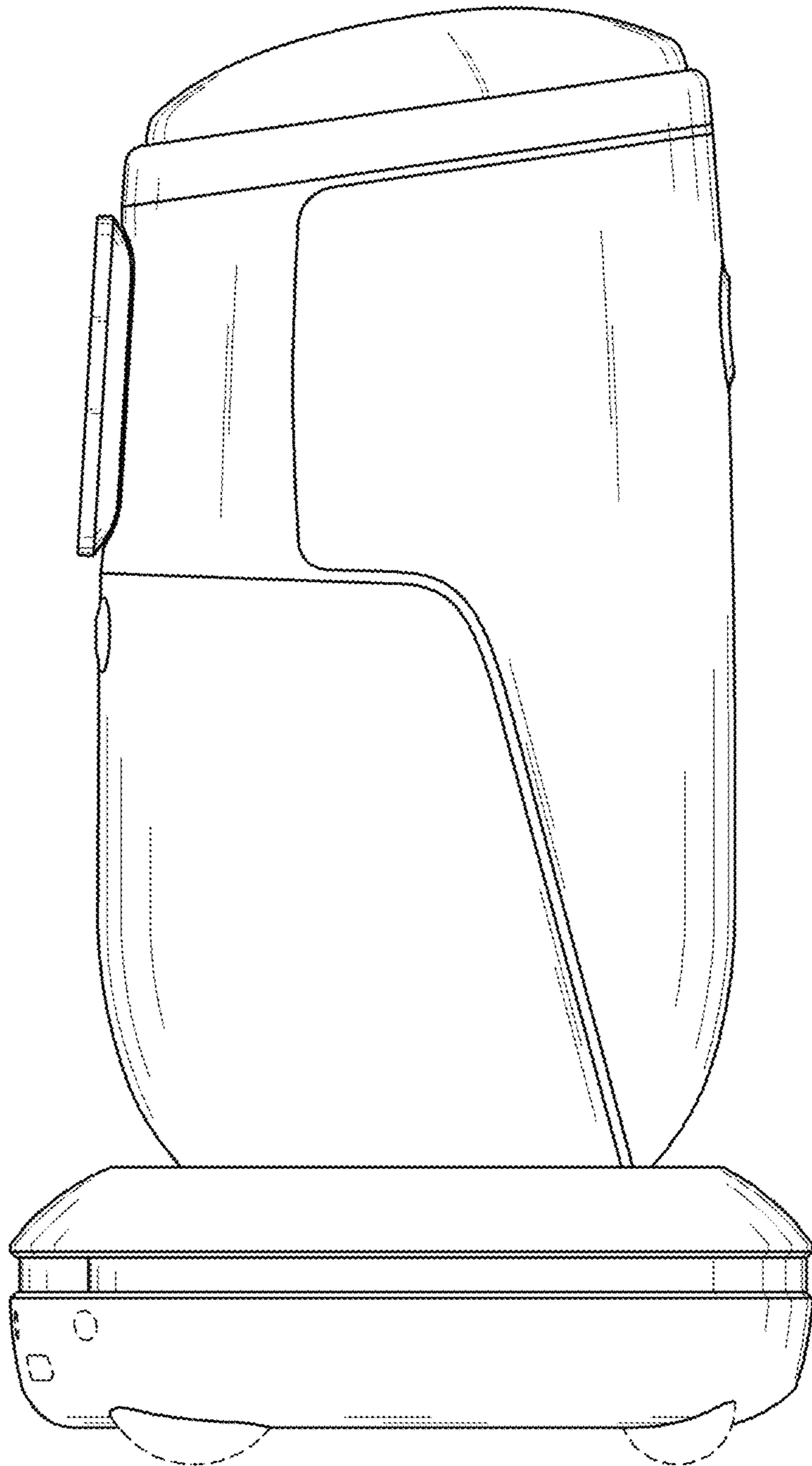
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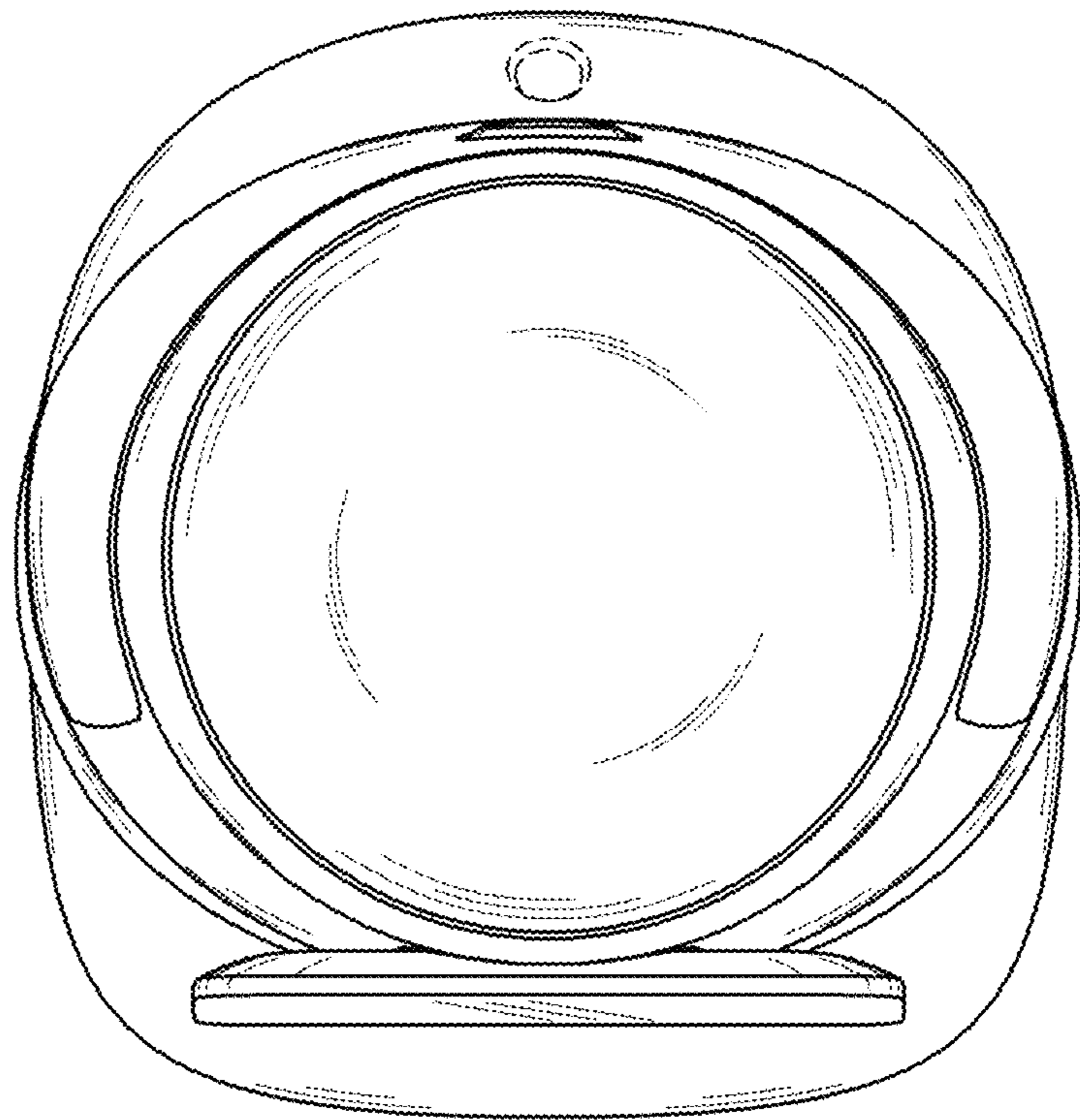
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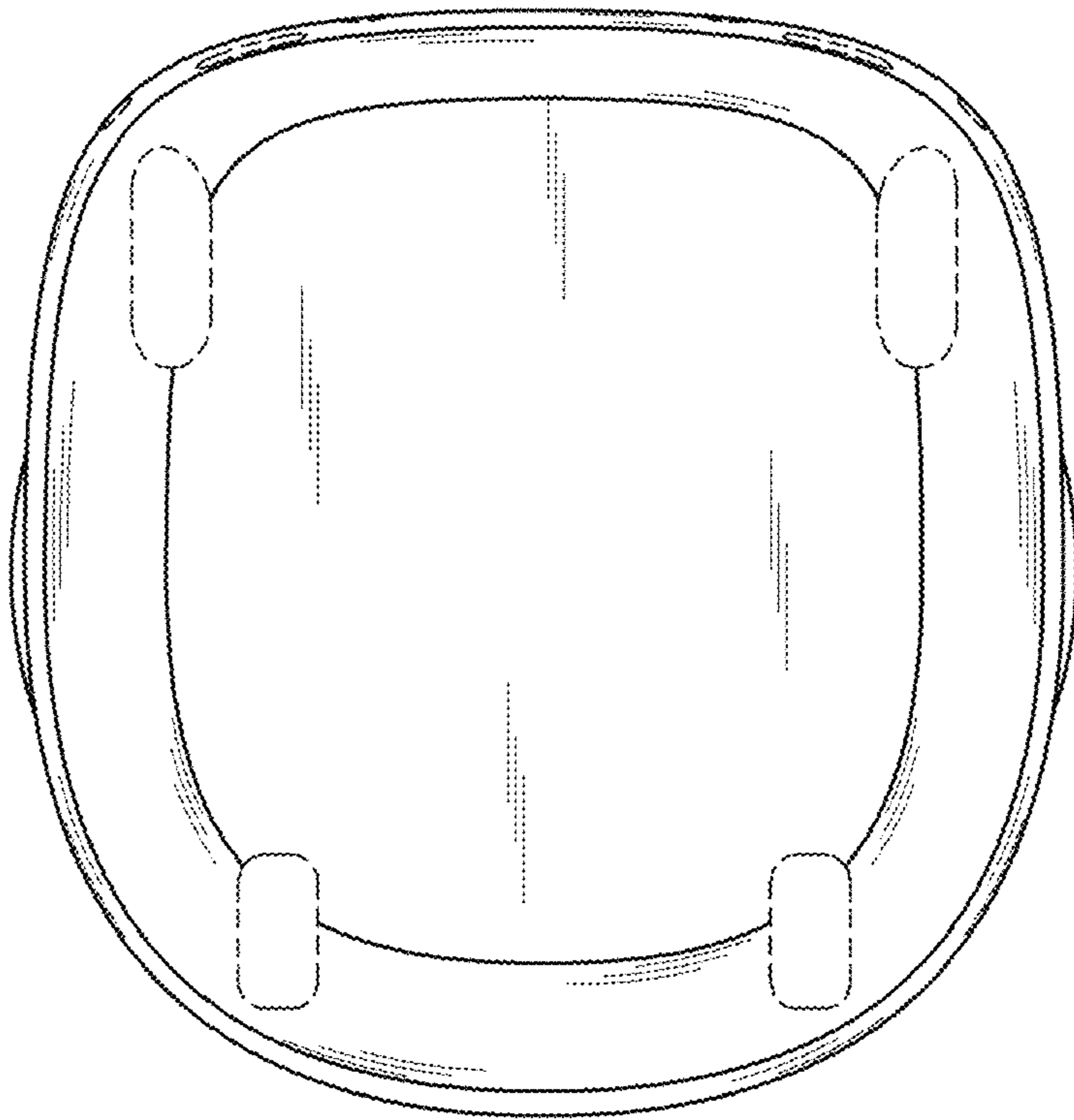
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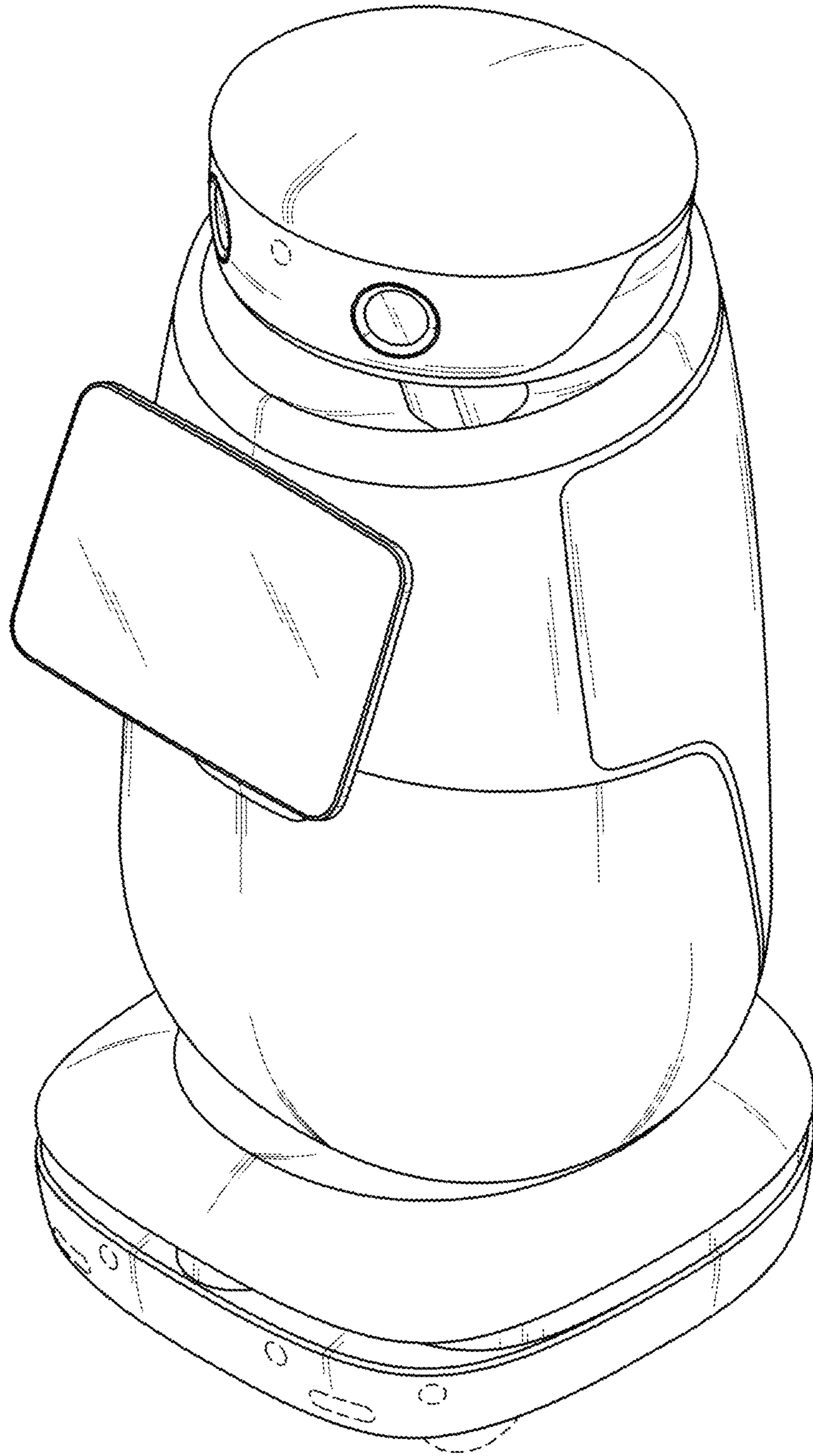
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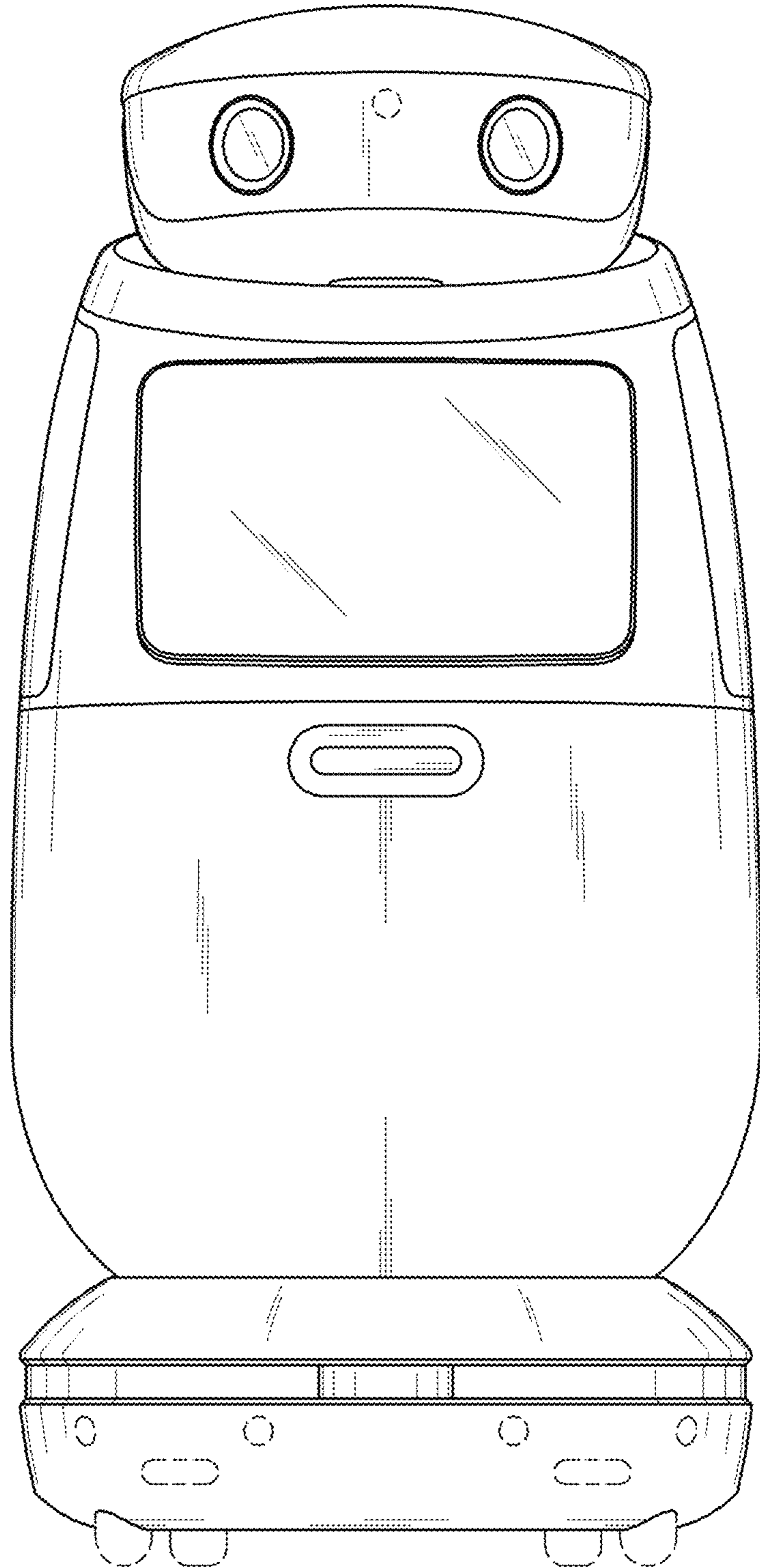
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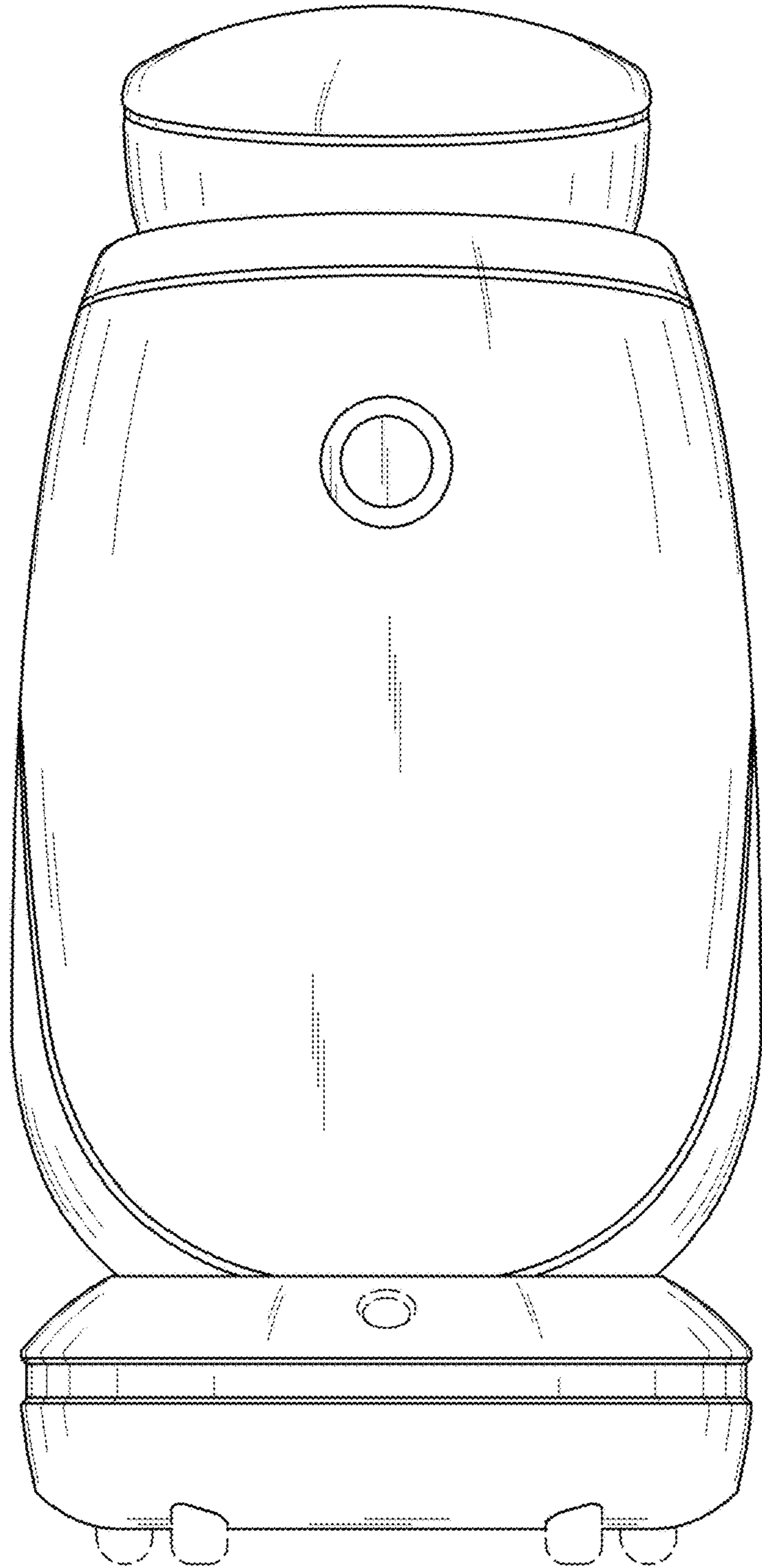
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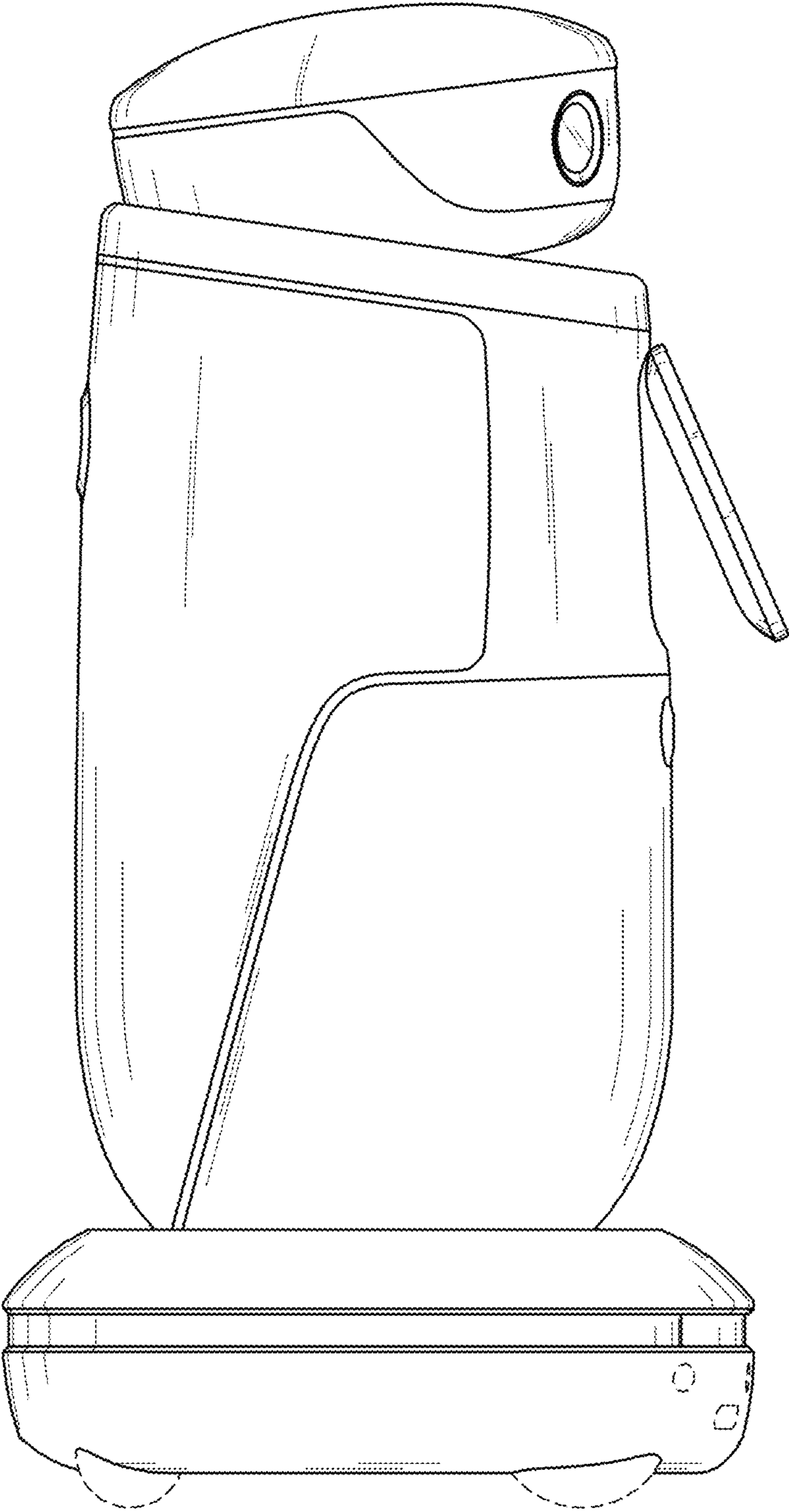
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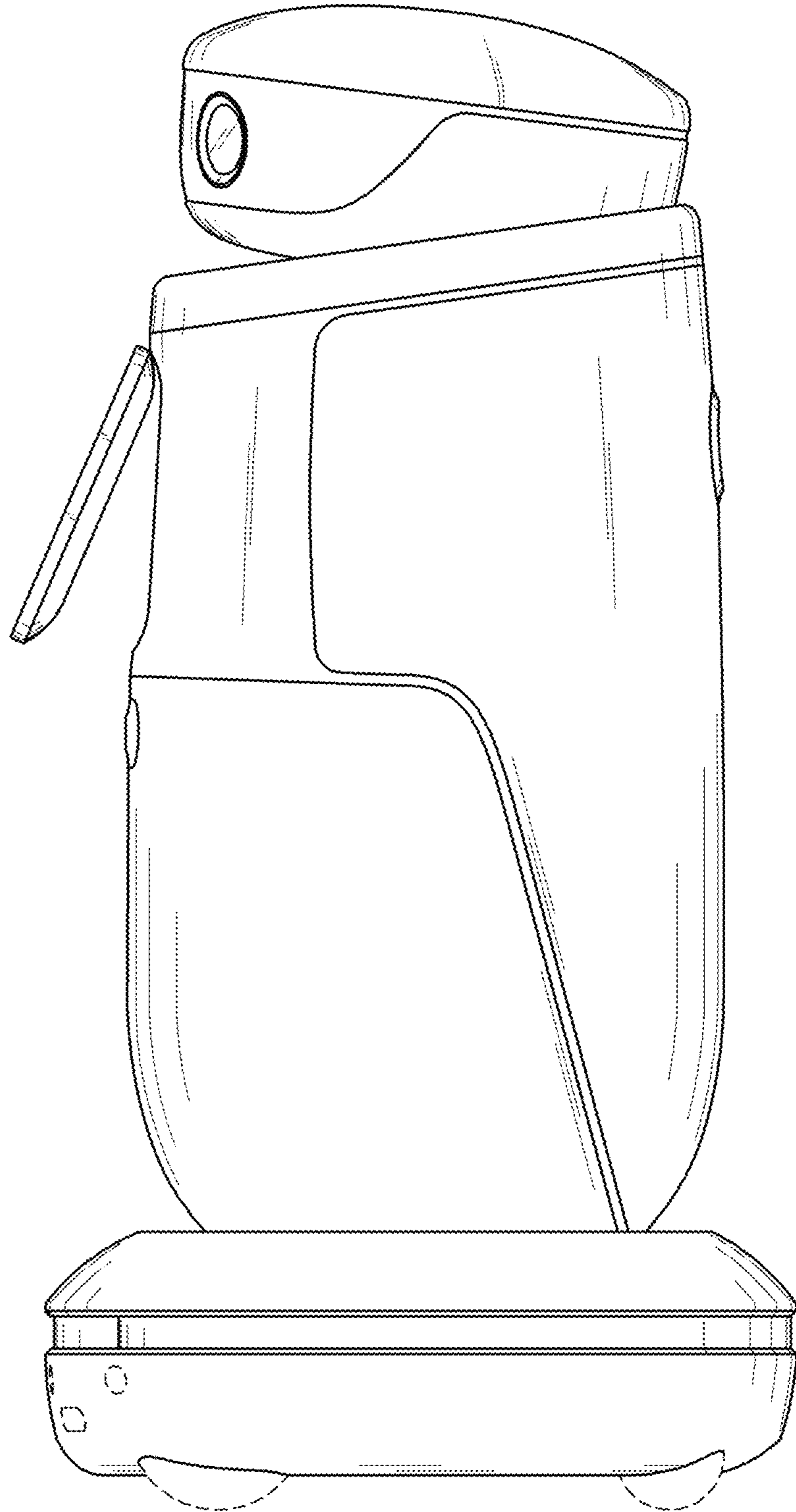
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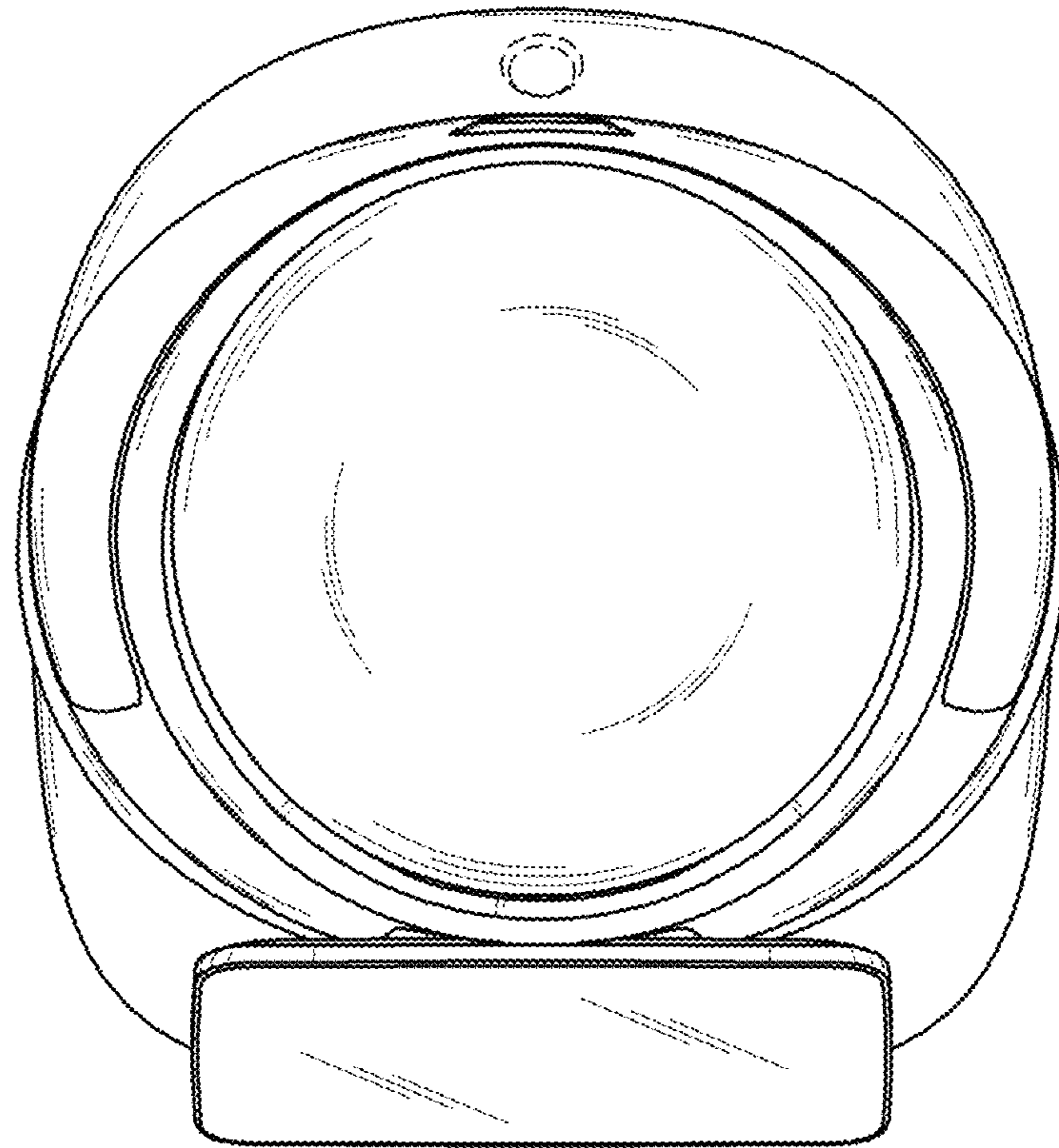
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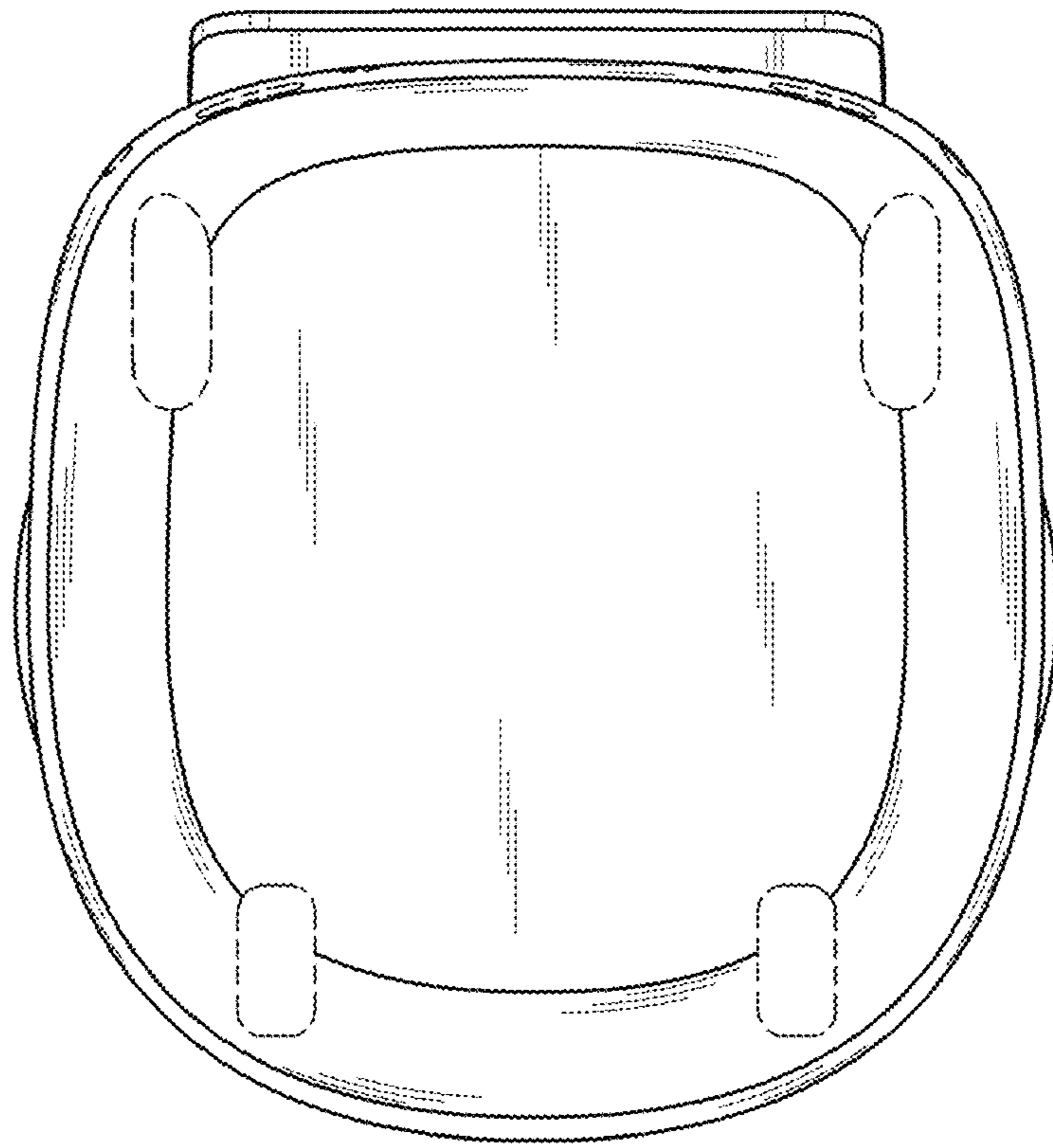
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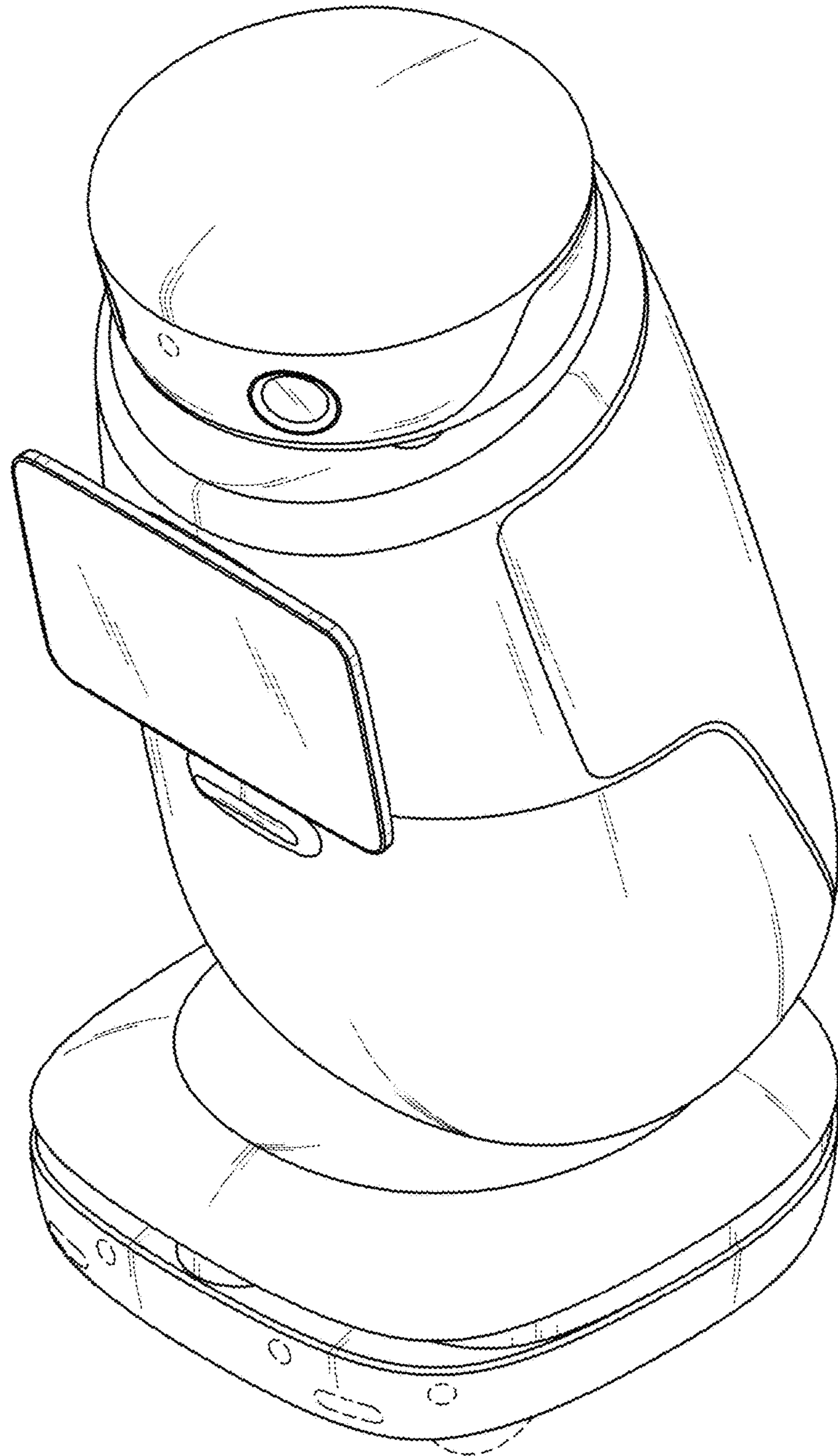
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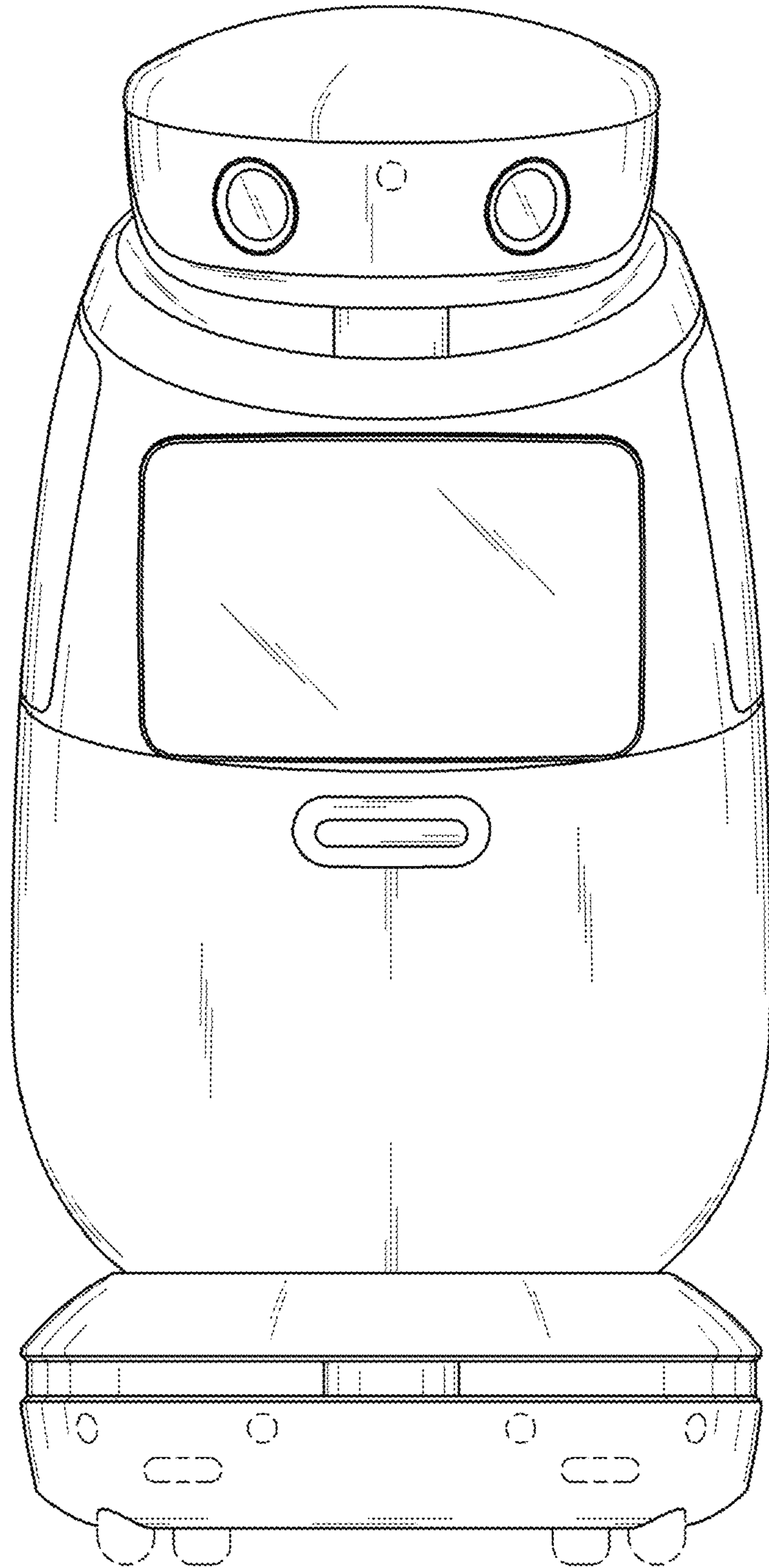
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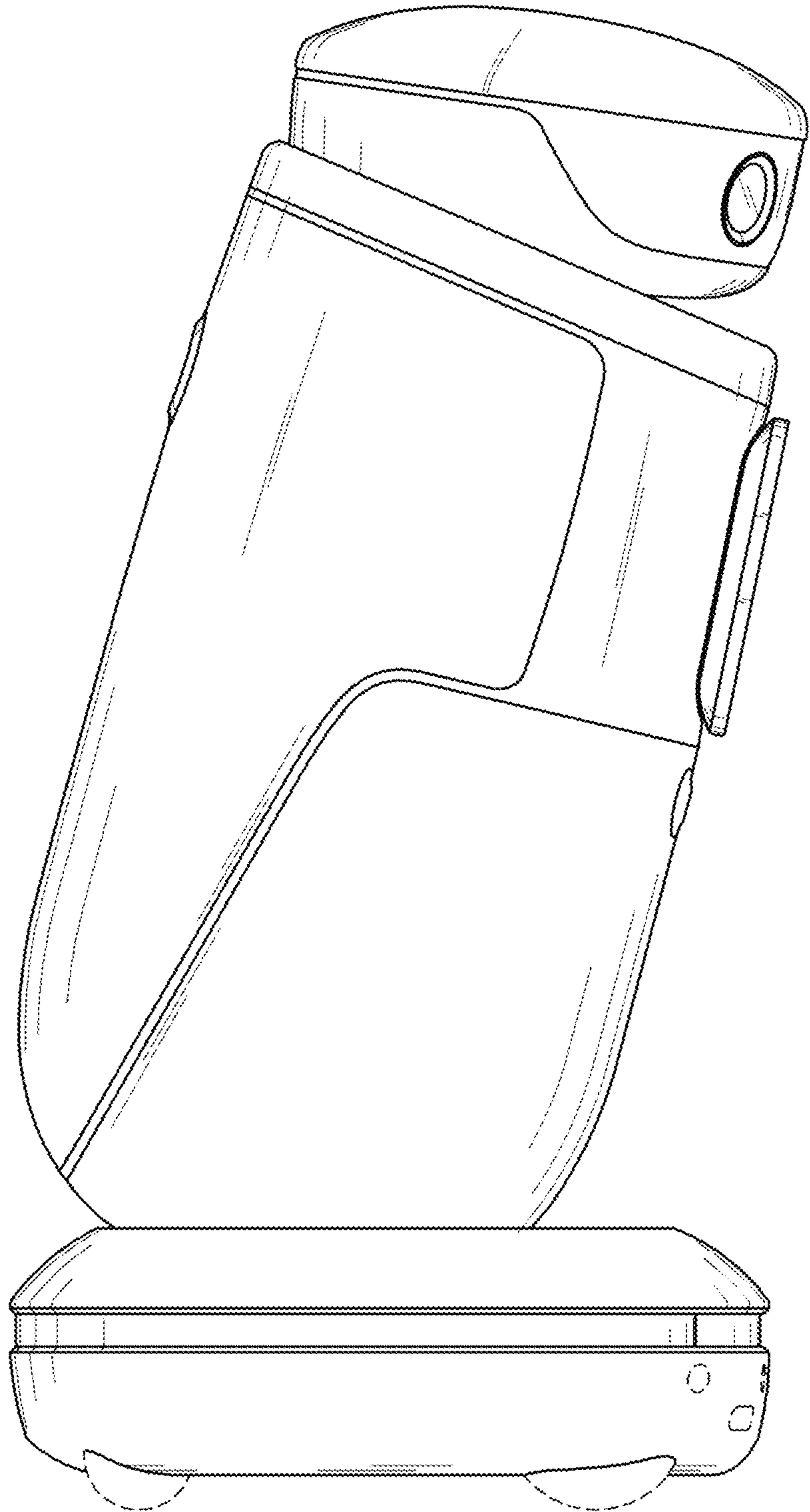
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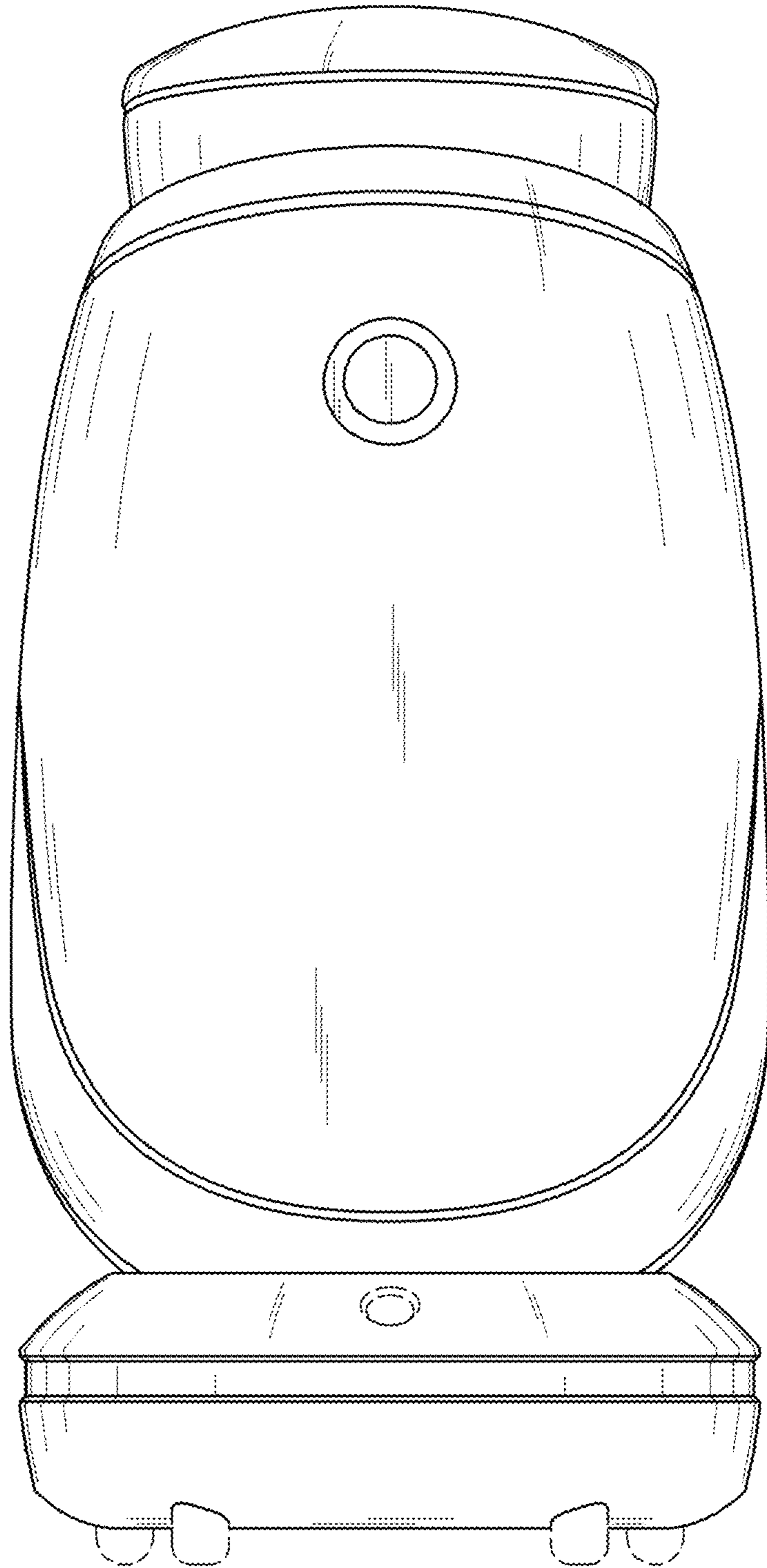
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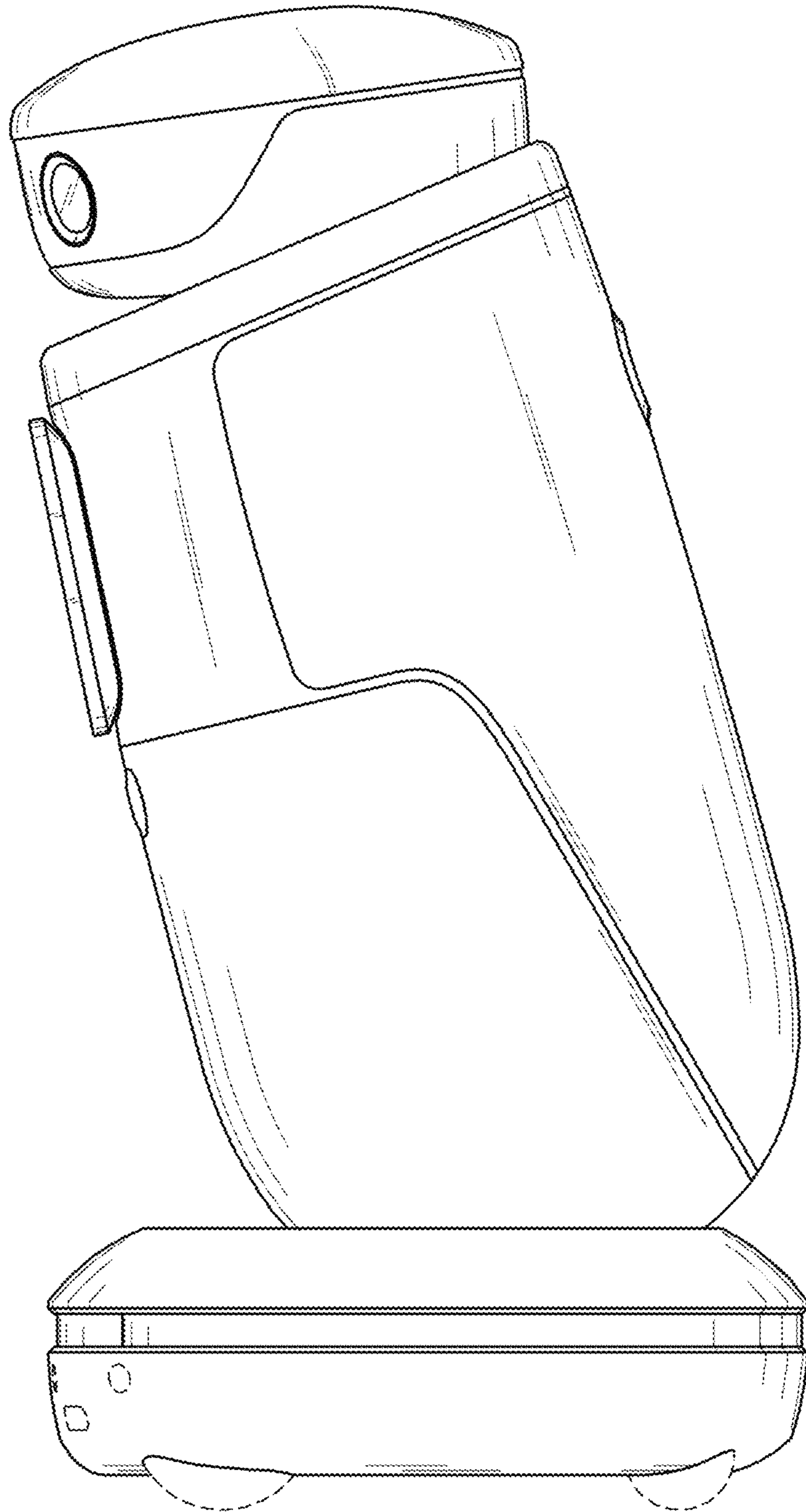
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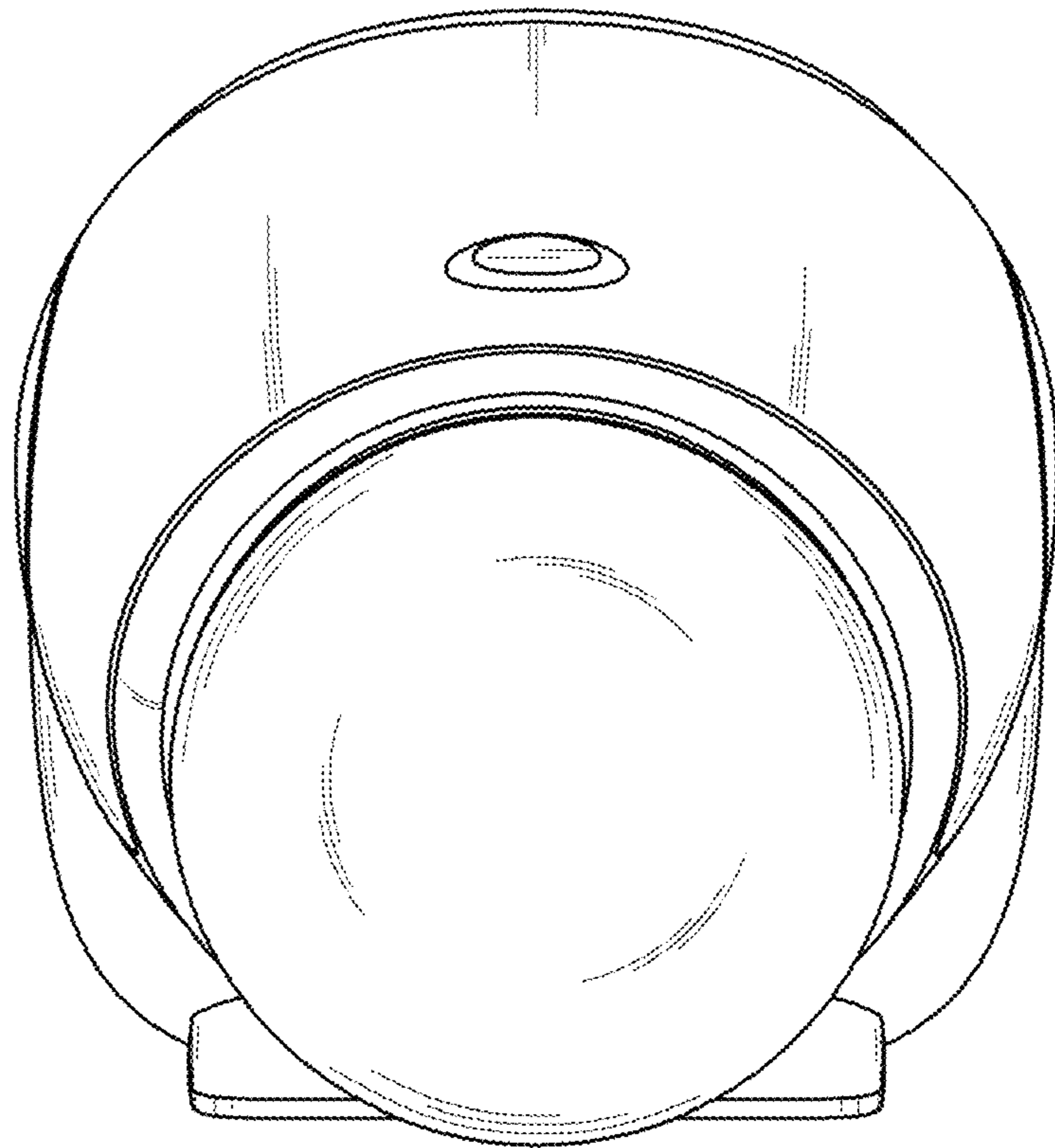
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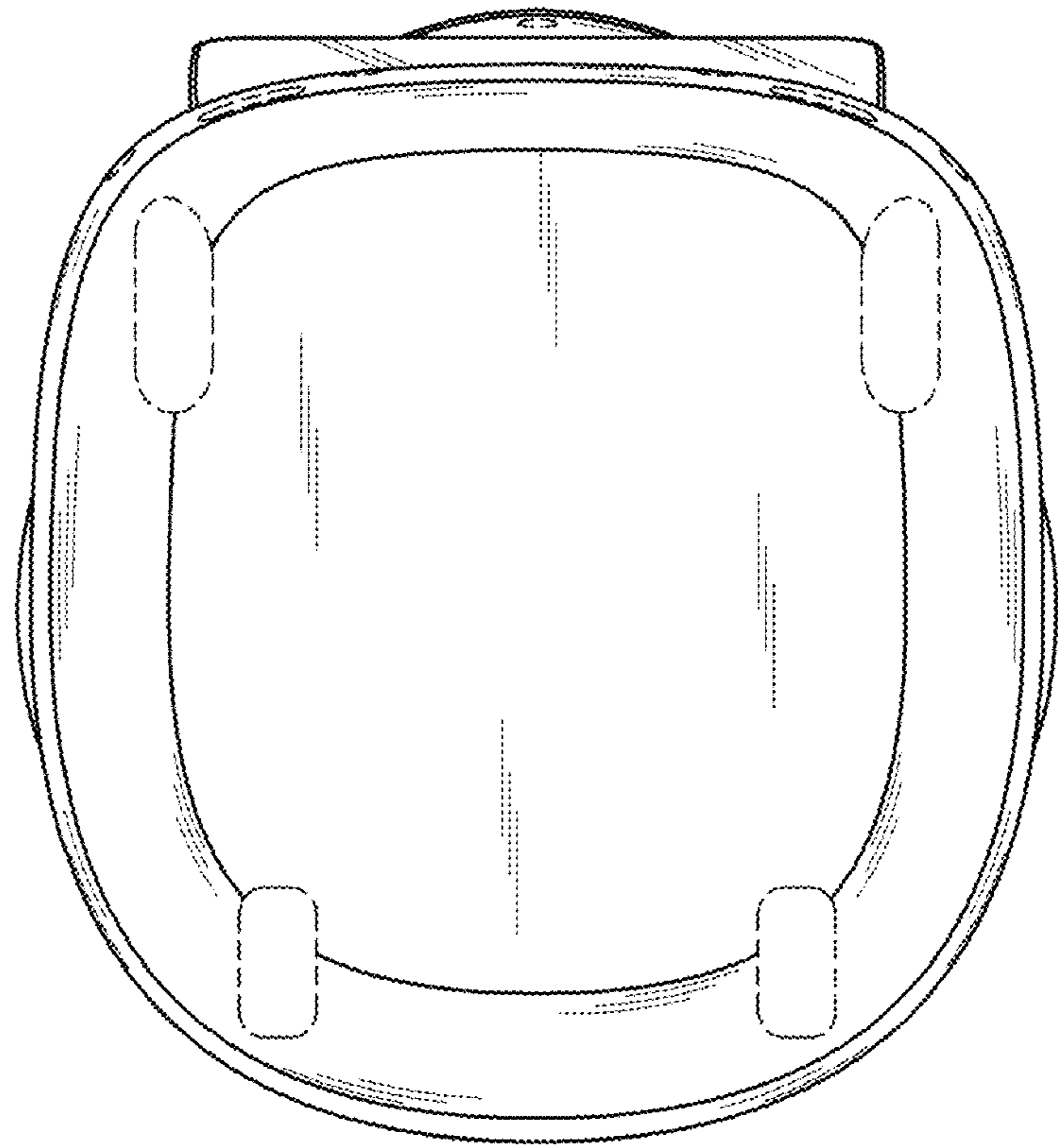
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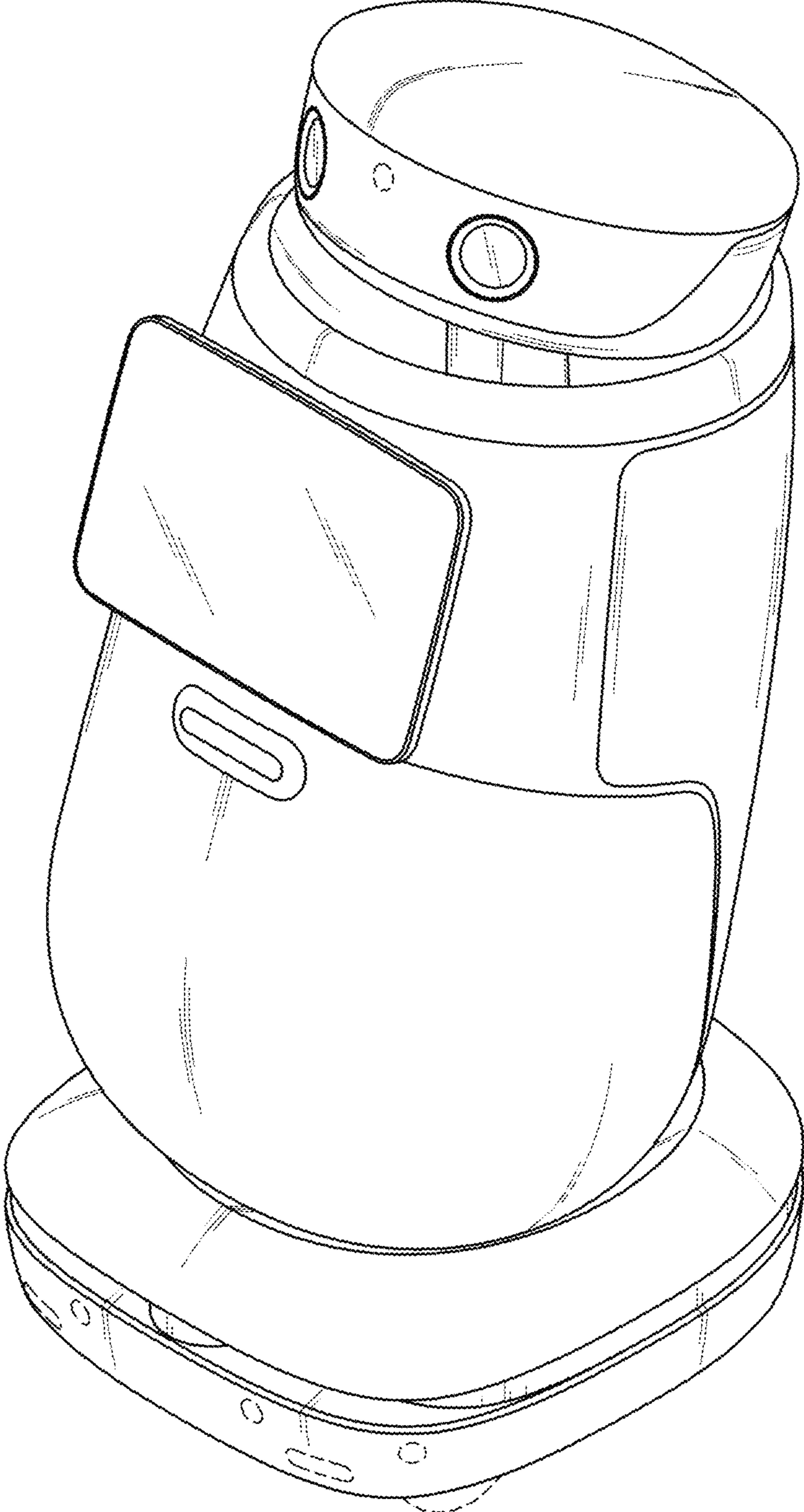
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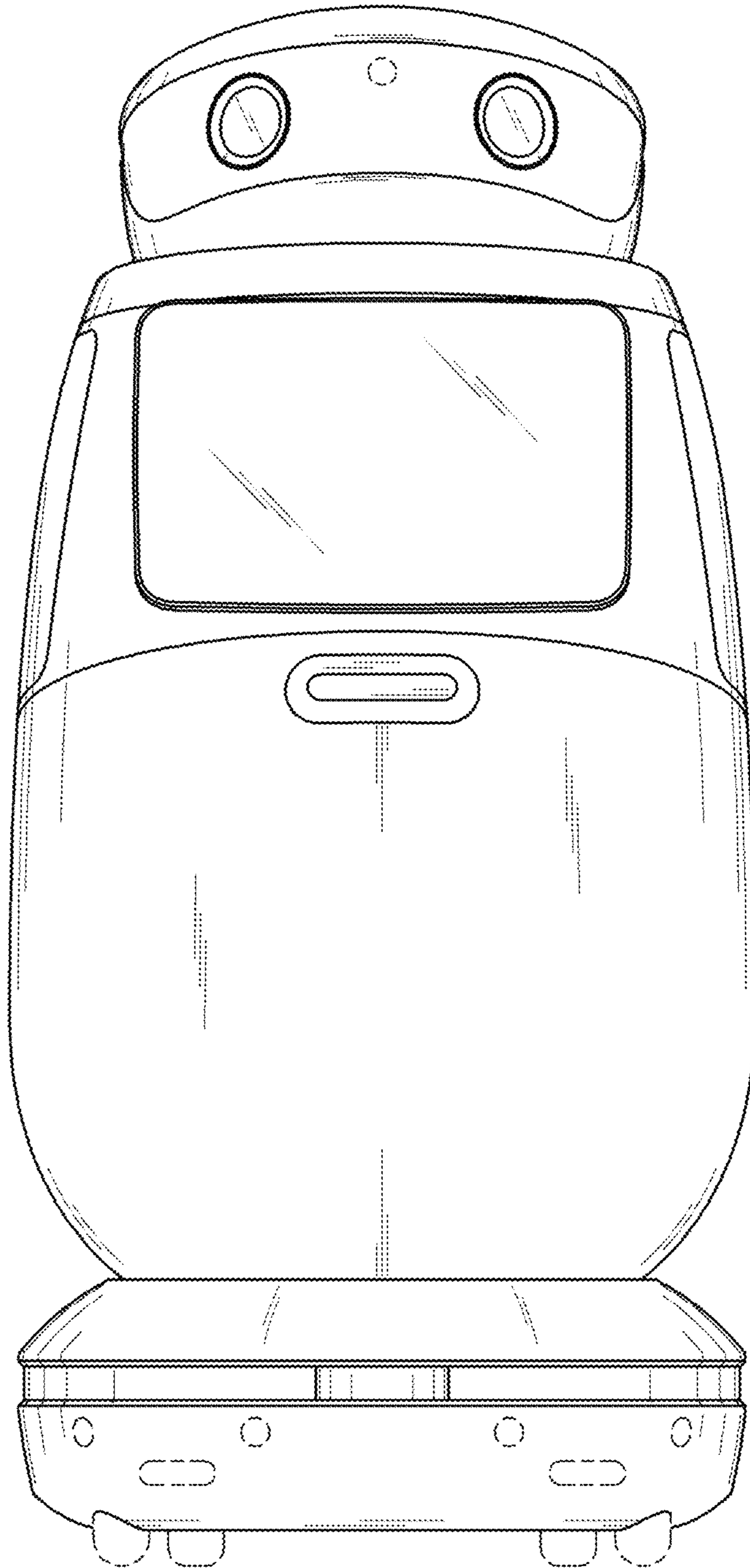
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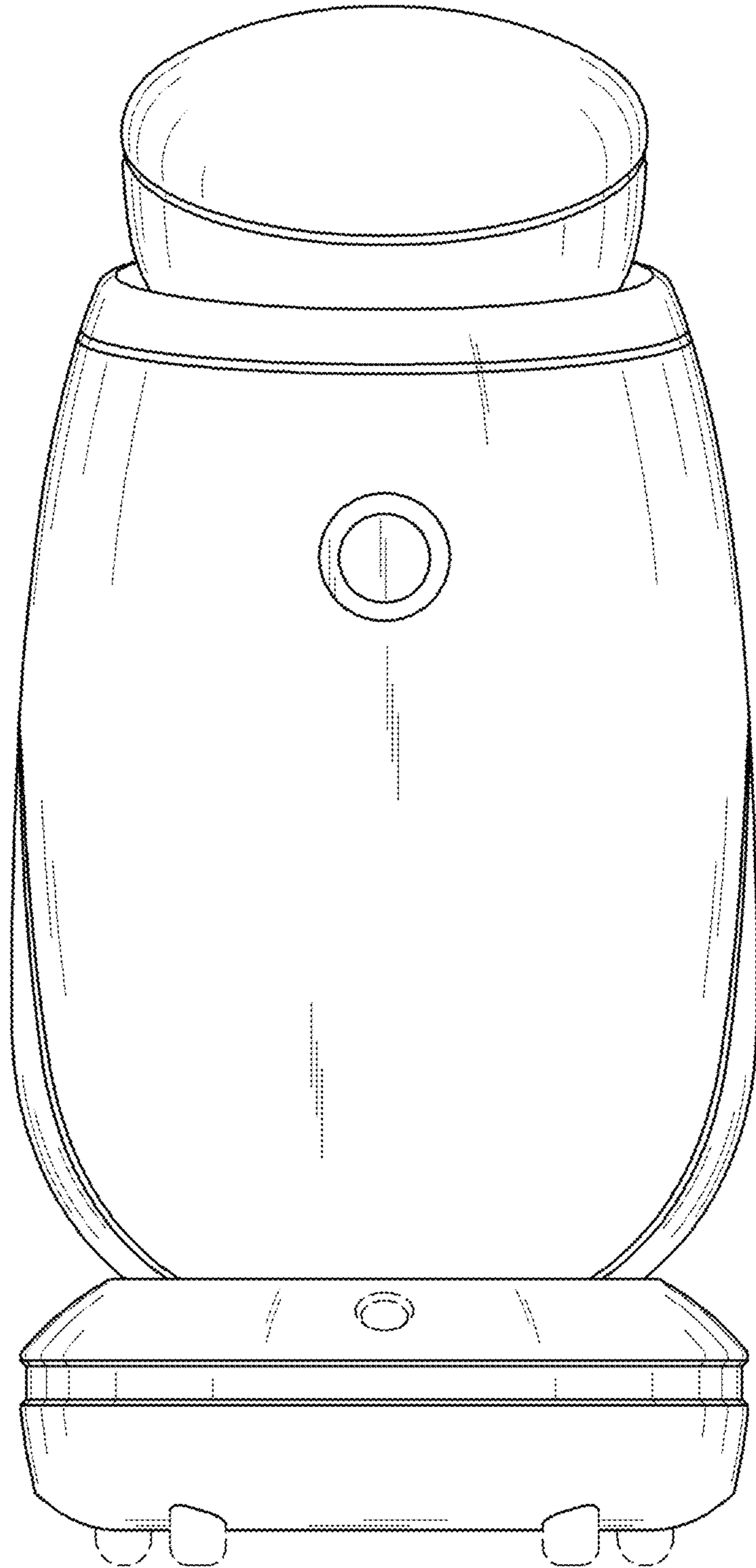
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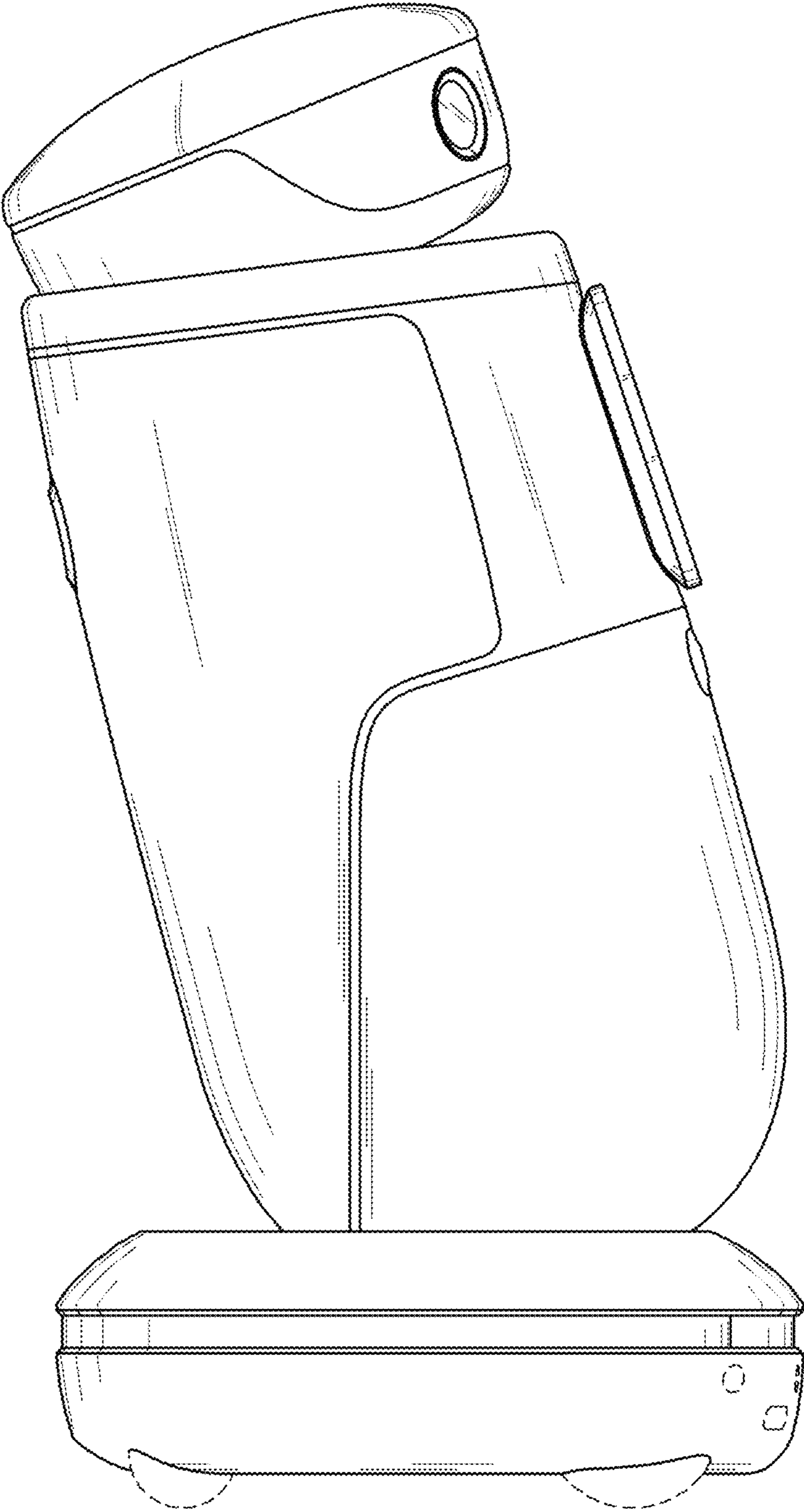
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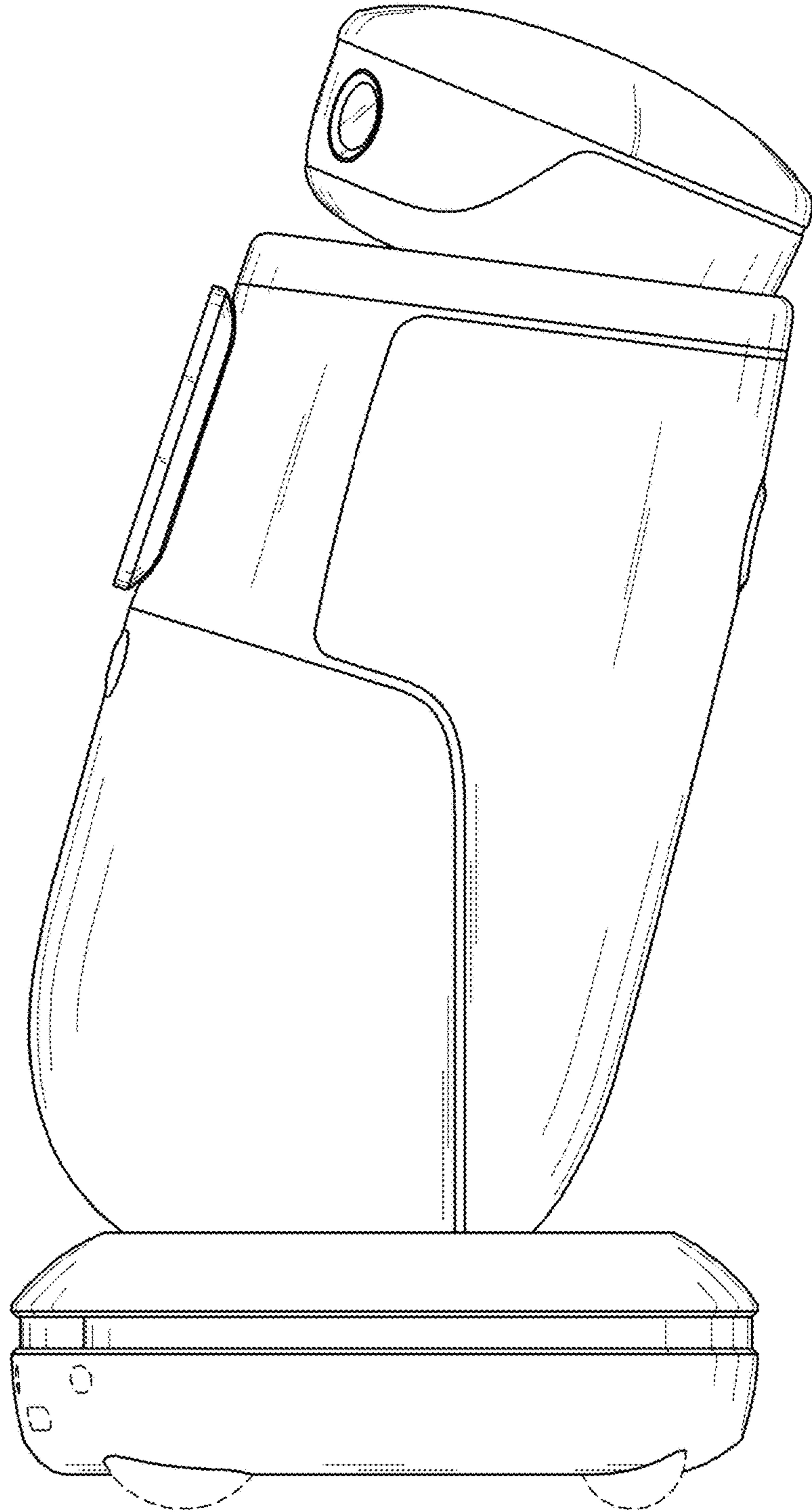
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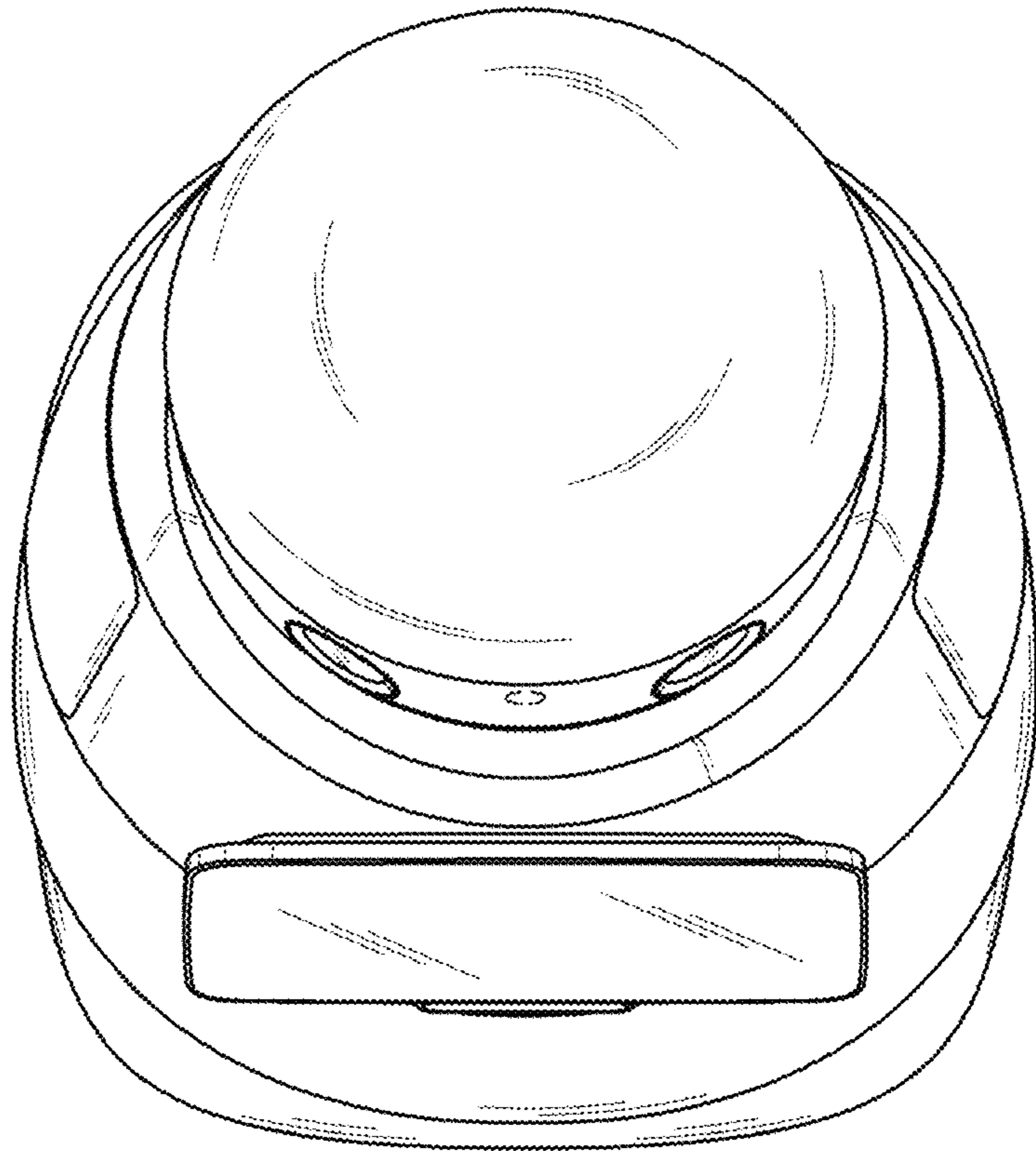
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