



US00D938676S

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

(10) **Patent No.:** **US D938,676 S**  
(45) **Date of Patent:** **\*\* Dec. 14, 2021**

(54) **ROBOTIC VACUUM CLEANER**

(71) Applicant: **MAKITA CORPORATION**, Anjo (JP)

(72) Inventors: **Koji Takahashi**, Anjo (JP); **Kentaro Koura**, Anjo (JP)

(73) Assignee: **MAKITA CORPORATION**, Anjo (JP)

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

(21) Appl. No.: **29/692,713**

(22) Filed: **May 28, 2019**

(30) **Foreign Application Priority Data**

Nov. 30, 2018 (JP) ..... 2018-026033

(51) **LOC (13) Cl.** ..... **15-05**

(52) **U.S. Cl.**  
USPC ..... **D32/21**

(58) **Field of Classification Search**  
USPC ..... D32/21, 31; D21/526, 578; D8/70, 310,  
D8/330; D10/37, 38, 50, 106.2, 106.5;  
D13/108, 209; D23/254  
(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D526,753 S \* 8/2006 Tani ..... D32/21  
D593,265 S \* 5/2009 Carr ..... D32/21  
(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 302081445 \* 9/2012  
EM 006372512-0001 \* 2/2021  
(Continued)

**OTHER PUBLICATIONS**

Neato Robotics Botvac, available in Amazon.ca, date first available Mar. 17, 2018 [online], [site visited Apr. 10, 2021], Available from

the internet . . . [https://www.amazon.ca/Neato-Botvac-Connected-Featuring-Compatible/dp/B078MPFN55/ref=sr\\_1\\_3?dchild=1&keywords=Neato+Robotics+Botvac+D7&qid=1618100380&s=kitchen&sr=1-3](https://www.amazon.ca/Neato-Botvac-Connected-Featuring-Compatible/dp/B078MPFN55/ref=sr_1_3?dchild=1&keywords=Neato+Robotics+Botvac+D7&qid=1618100380&s=kitchen&sr=1-3) (Year: 2018).\*

(Continued)

*Primary Examiner* — Dana K Weiland  
*Assistant Examiner* — Jennylou M Binas

(74) *Attorney, Agent, or Firm* — Global IP Counselors, LLP

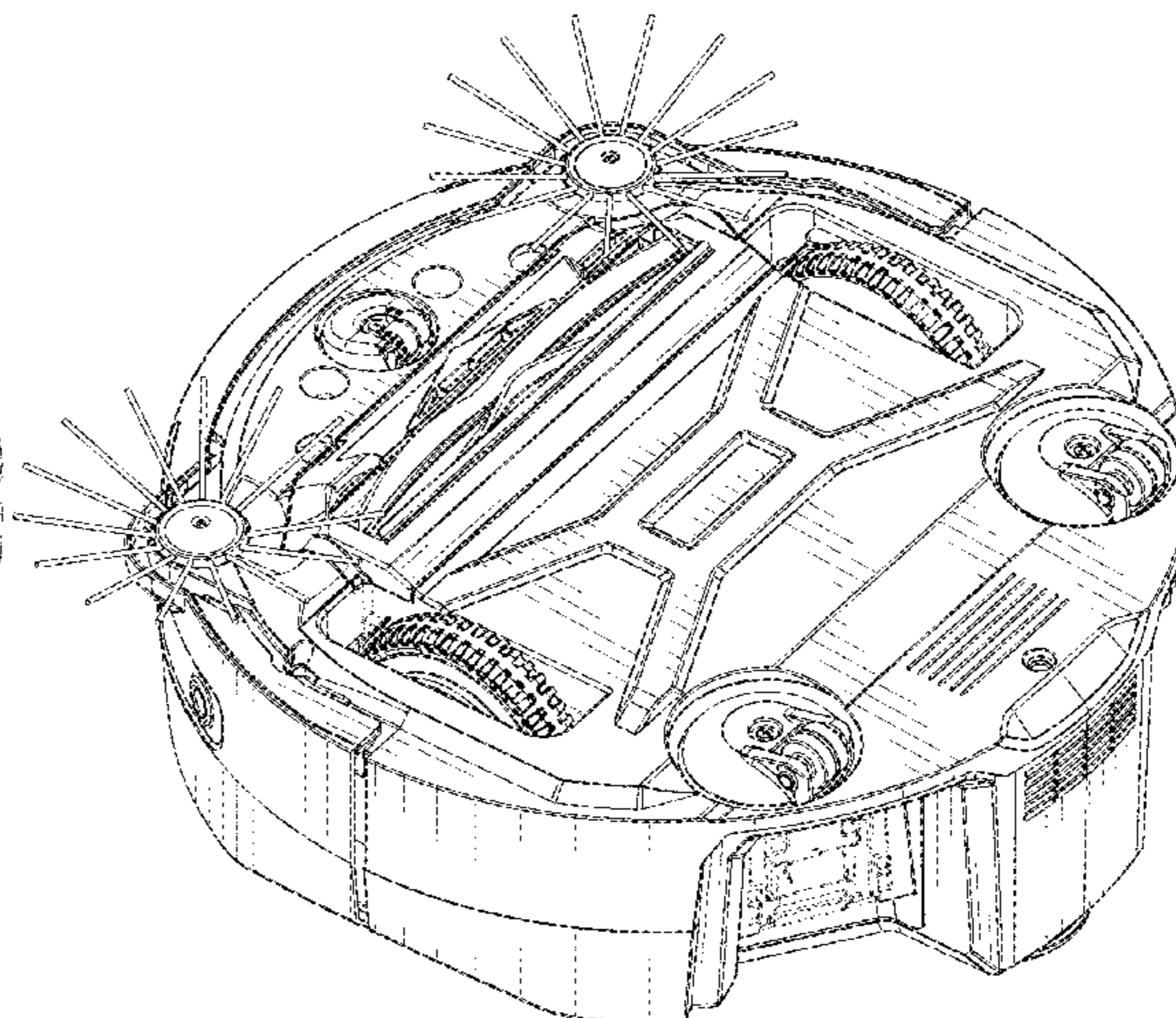
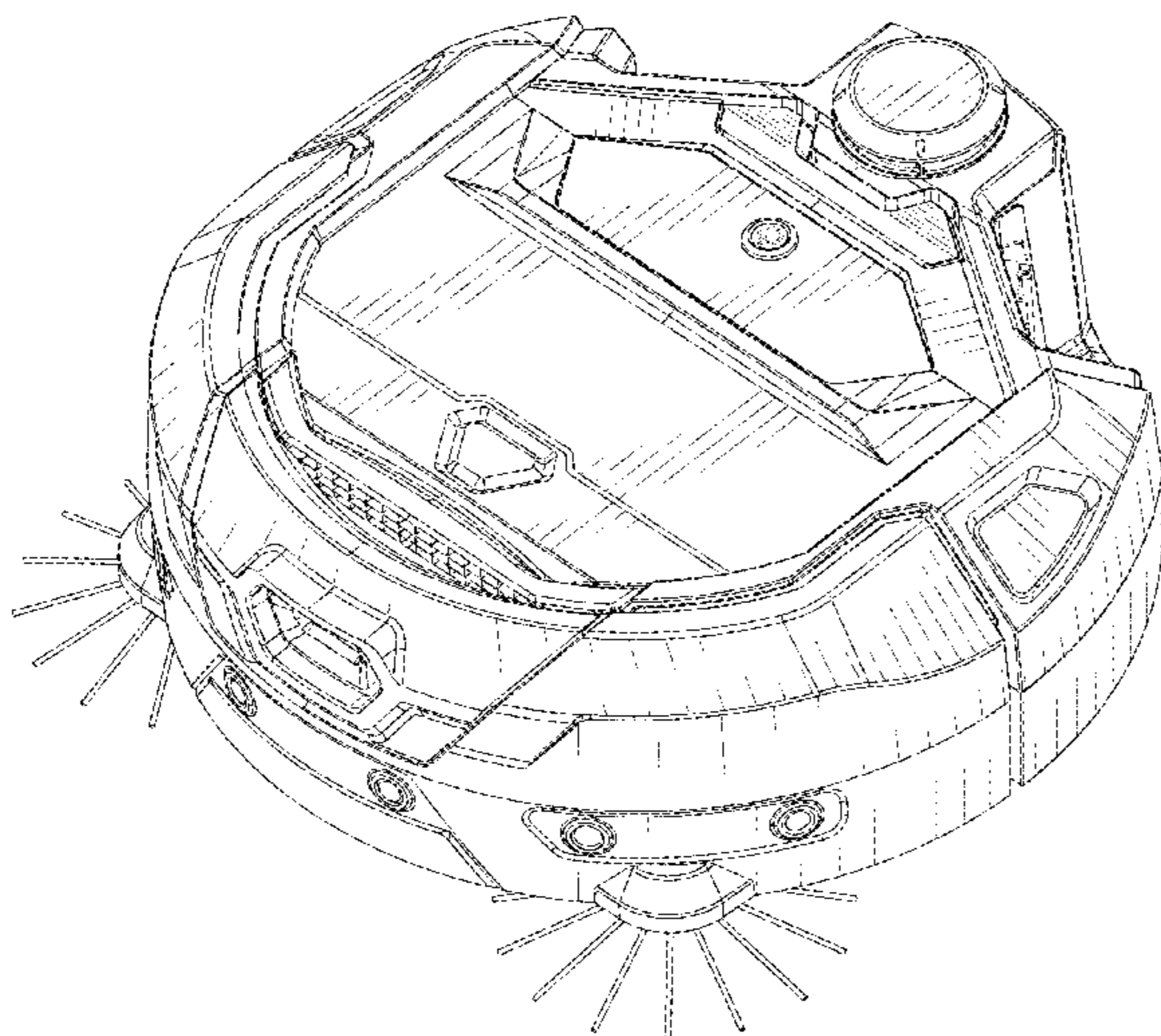
(57) **CLAIM**

The ornamental design for a robotic vacuum cleaner, as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of a robotic vacuum cleaner in accordance with our new design;  
FIG. 2 is a bottom perspective view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 3 is a front elevational view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 4 is a rear elevational view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 5 is a top plan view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 6 is a bottom plan view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 7 is a right side elevational view of the robotic vacuum cleaner in accordance with our new design;  
FIG. 8 is a left side elevational view of the robotic vacuum cleaner in accordance with our new design; and,  
FIG. 9 is a top perspective view showing a state in which batteries are attached to the robotic vacuum cleaner in accordance with our new design.  
The broken line showing of the batteries in FIG. 9 is for the purpose of illustrating environmental structure and forms no part of the claimed design. All other broken lines shown in the figures depict portions of the robotic vacuum cleaner that form no part of the claimed design.

**1 Claim, 9 Drawing Sheets**



(58) **Field of Classification Search**

CPC . A47L 5/08; A47L 5/30; A47L 7/0004; A47L 9/04; A47L 9/168; A47L 9/2805; A47L 9/2873; A47L 11/4011; A47L 11/4016; A47L 11/4038; A47L 11/4041; A47L 11/4044; A47L 2201/02; A47L 2201/04; A47L 2201/06; B25J 9/0003; B25J 9/1694; E04H 4/1636; G05D 1/0225; G06N 3/008

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D720,103 S \* 12/2014 Haug ..... D32/21  
 D733,603 S \* 7/2015 Graf ..... D10/128  
 D751,777 S \* 3/2016 Cheon ..... D32/21  
 D778,515 S \* 2/2017 Choi ..... D32/21  
 D785,879 S \* 5/2017 Bu ..... D32/21  
 D840,617 S \* 2/2019 Dou ..... D32/21  
 10,222,805 B2 \* 3/2019 Munich ..... G05D 1/0088  
 D859,764 S \* 9/2019 Sexton ..... D32/21  
 D860,557 S \* 9/2019 Gnielka ..... D32/21  
 D860,558 S \* 9/2019 Lee ..... D32/21  
 D862,010 S \* 10/2019 Smith ..... D32/21  
 D869,109 S \* 12/2019 Yu ..... D32/21  
 D870,402 S \* 12/2019 Yun ..... D32/21  
 D872,395 S \* 1/2020 Fathi Djalali ..... D32/21  
 D872,953 S \* 1/2020 Ebrahimi Afrouzi ..... D32/21  
 D874,079 S \* 1/2020 Ebrahimi Afrouzi ..... D32/21  
 D884,298 S \* 5/2020 Li ..... D32/21  
 D885,698 S \* 5/2020 Li ..... D32/21  
 D890,457 S \* 7/2020 Pearce ..... D32/21  
 D917,117 S \* 4/2021 Cao ..... D32/21  
 D919,211 S \* 5/2021 Chang ..... D32/21  
 D921,308 S \* 6/2021 Cao ..... D32/21  
 D921,309 S \* 6/2021 Liu ..... D32/21

11,064,858 B2 \* 7/2021 Yoon ..... G05D 1/0219  
 11,083,356 B2 \* 8/2021 Koura ..... A47L 9/2815  
 11,096,535 B2 \* 8/2021 Koura ..... A47L 9/2884  
 2006/0288519 A1 \* 12/2006 Jaworski ..... A47L 11/4083  
 15/340.1  
 2012/0084934 A1 \* 4/2012 Li ..... A47L 11/33  
 15/319  
 2015/0335220 A1 \* 11/2015 Kim ..... A47L 9/0477  
 15/49.1  
 2019/0059674 A1 \* 2/2019 Koura ..... A47L 9/2842  
 2019/0357743 A1 \* 11/2019 Koura ..... A47L 9/2857  
 2020/0138257 A1 \* 5/2020 Koura ..... A47L 9/1445  
 2020/0221917 A1 \* 7/2020 Yan ..... A47L 11/4061  
 2020/0405111 A1 \* 12/2020 Koura ..... A47L 9/2805  
 2021/0093136 A1 \* 4/2021 Koura ..... A47L 9/0466  
 2021/0219803 A1 \* 7/2021 Lee ..... B25J 19/00

FOREIGN PATENT DOCUMENTS

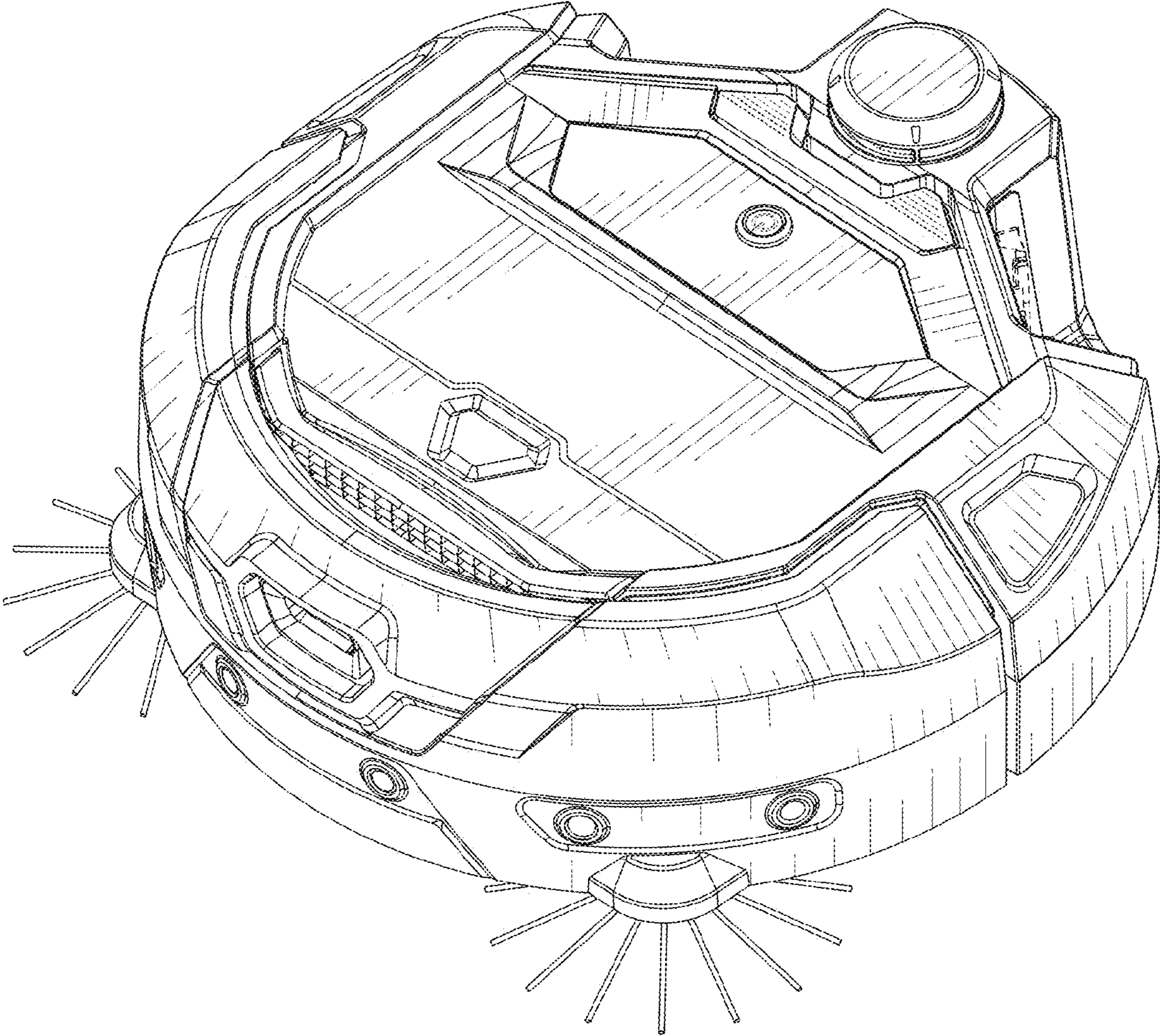
EM 006372512-0003 \* 2/2021  
 EM 006372512-0004 \* 2/2021  
 JP D1539991 S 11/2015  
 JP D1539991 \* 12/2015

OTHER PUBLICATIONS

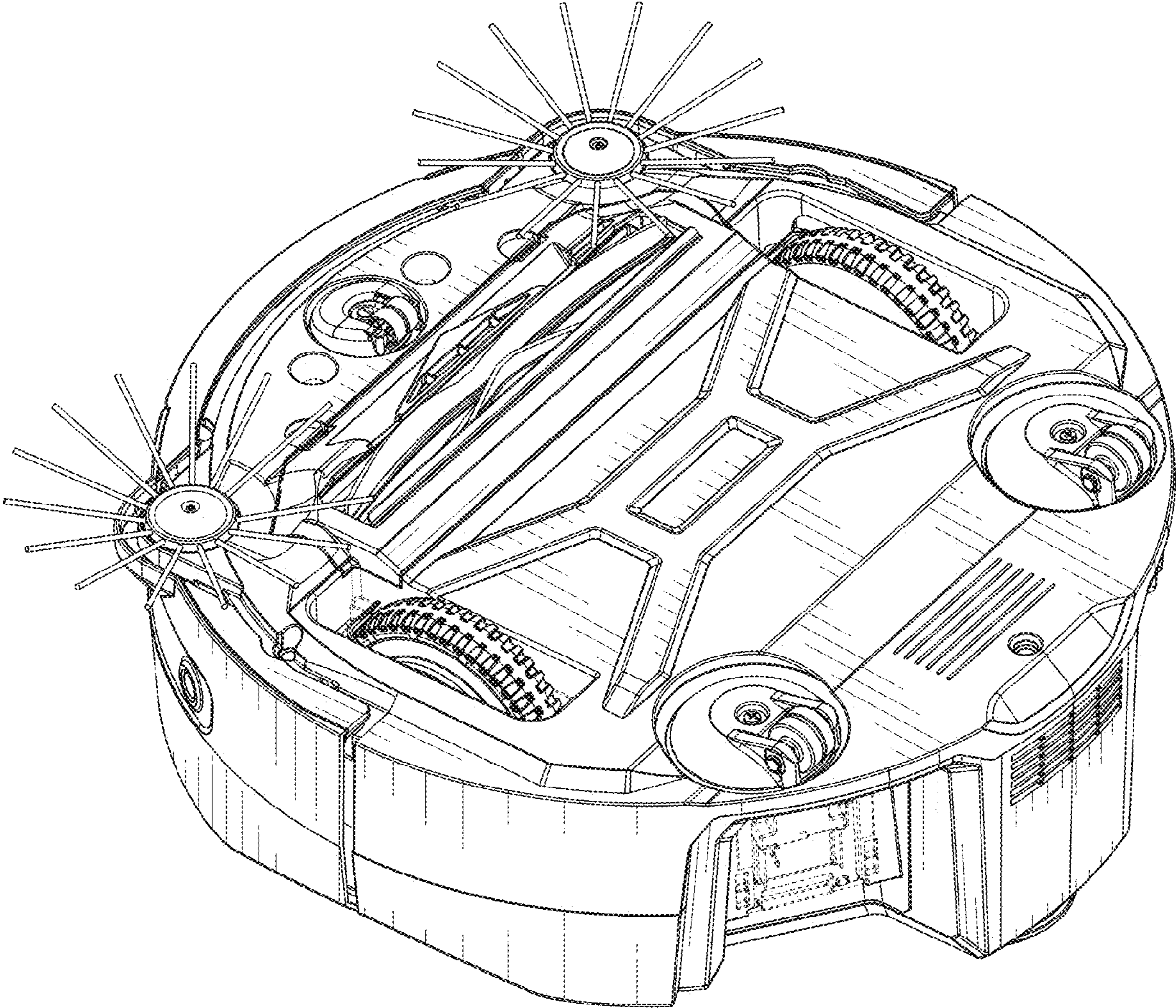
Lefant Robot Vacuums M201, available in Amazon.ca, date first available Aug. 31, 2020 [online], [site visited Apr. 10, 2021], Available from the internet . . . URL: [https://www.amazon.ca/M201-Self-Charging-Upgraded-Collision-Cleaning/dp/B08CZR5GCW/ref=sr\\_1\\_3?dchild=1&keywords=lefant+robot+vacuum+m201&qid=1618100569&s=kitchen&sr=1-3](https://www.amazon.ca/M201-Self-Charging-Upgraded-Collision-Cleaning/dp/B08CZR5GCW/ref=sr_1_3?dchild=1&keywords=lefant+robot+vacuum+m201&qid=1618100569&s=kitchen&sr=1-3) (Year: 2020).\*

Makita DRC200PT, available in Amazon.com, date first available Apr. 6, 2017 [online], [site visited Apr. 2, 2021], Available from the internet URL: [https://www.amazon.com/dp/B06Y2Q2RWW/ref=cm\\_sw\\_r\\_em\\_apafabc\\_R4MQFV0N5E4XG5K9E11J](https://www.amazon.com/dp/B06Y2Q2RWW/ref=cm_sw_r_em_apafabc_R4MQFV0N5E4XG5K9E11J) (Year: 2017).\*

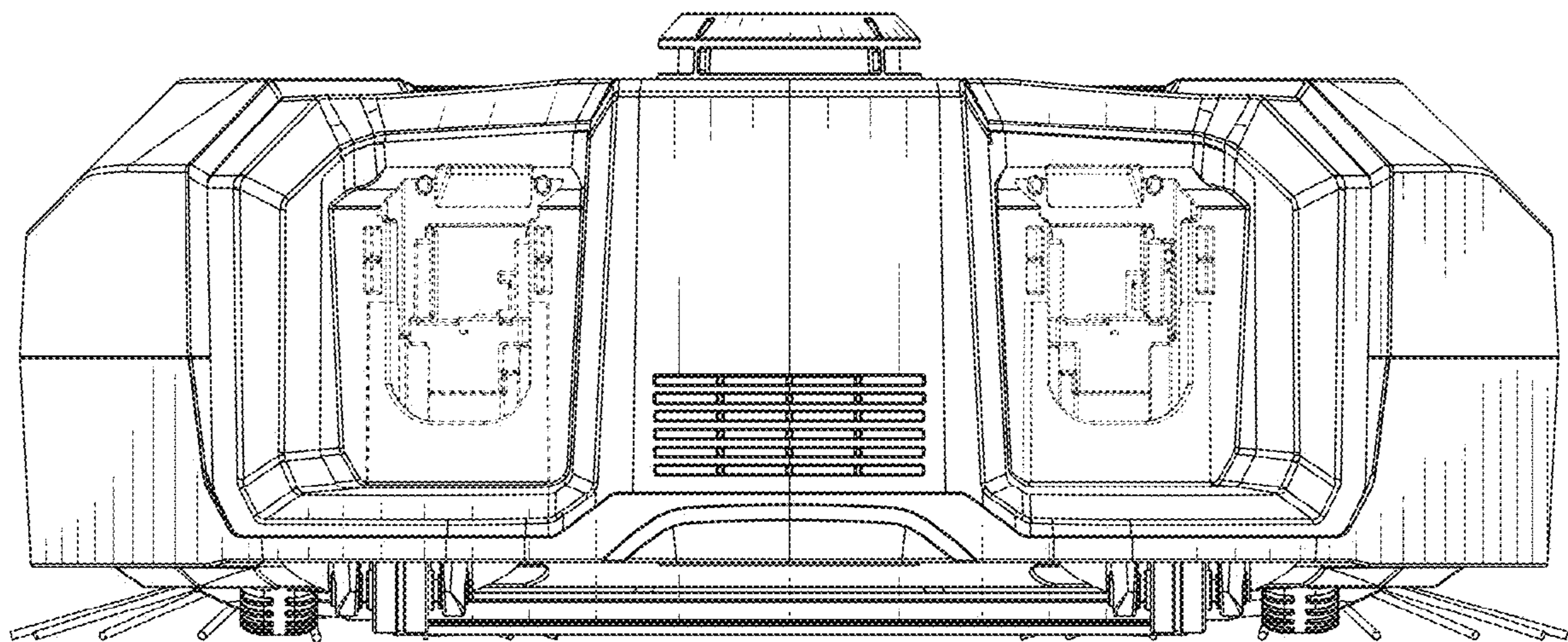
\* cited by examiner



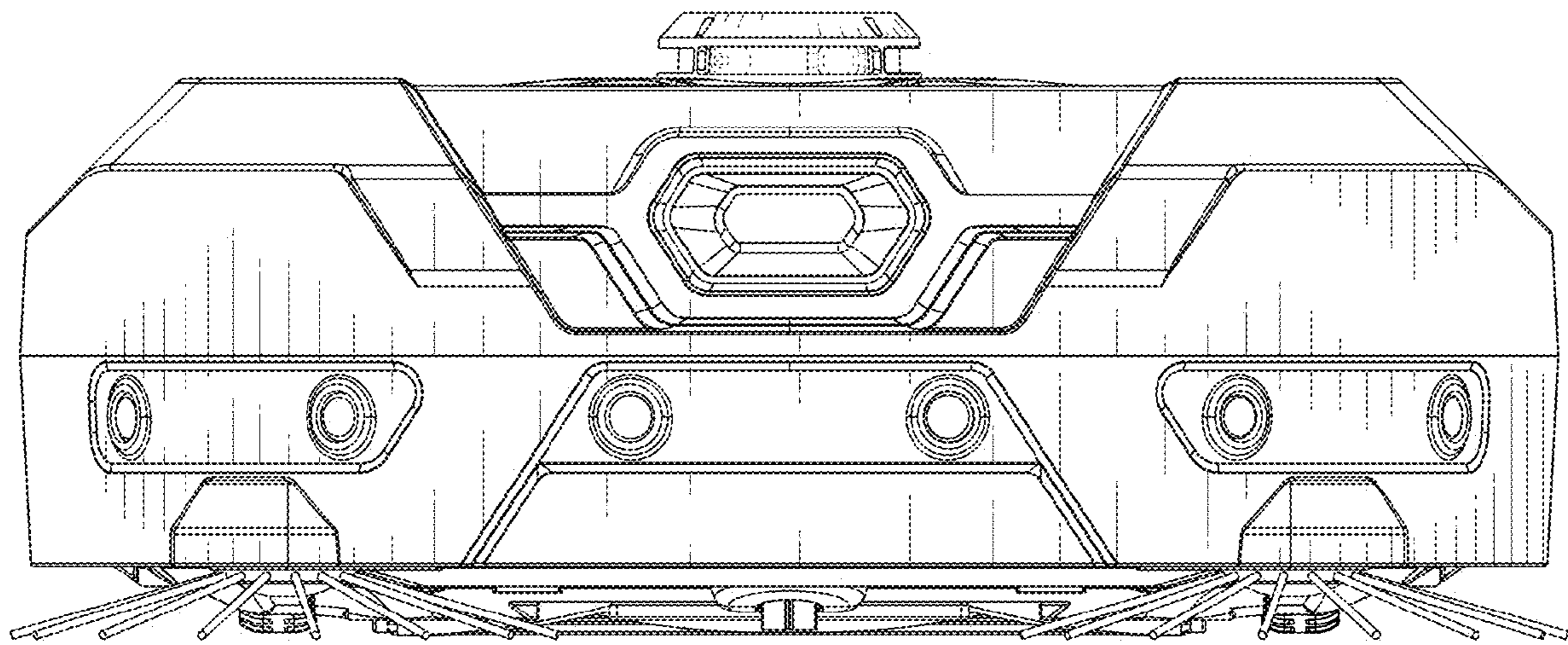
**FIG. 1**



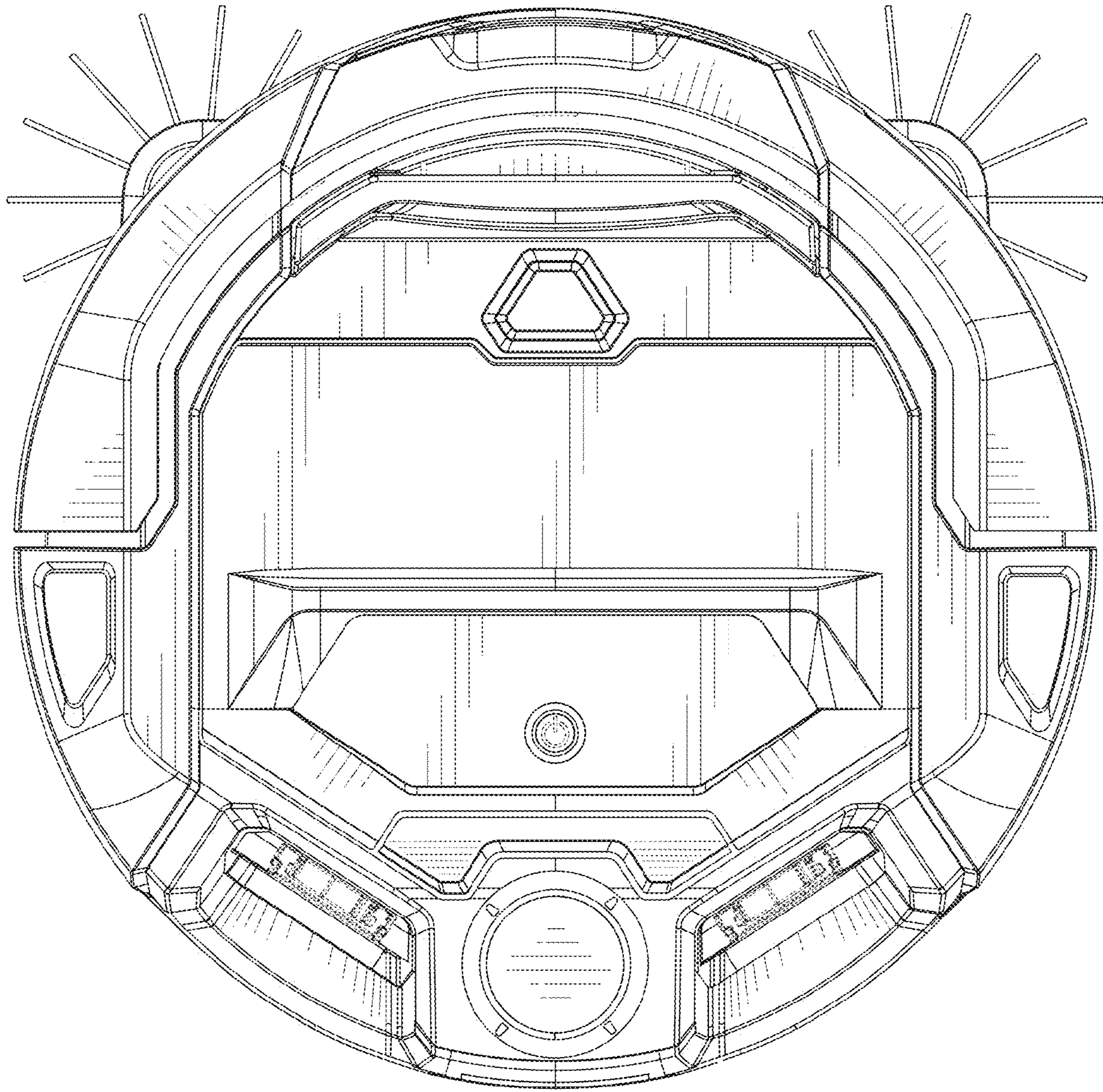
**FIG. 2**



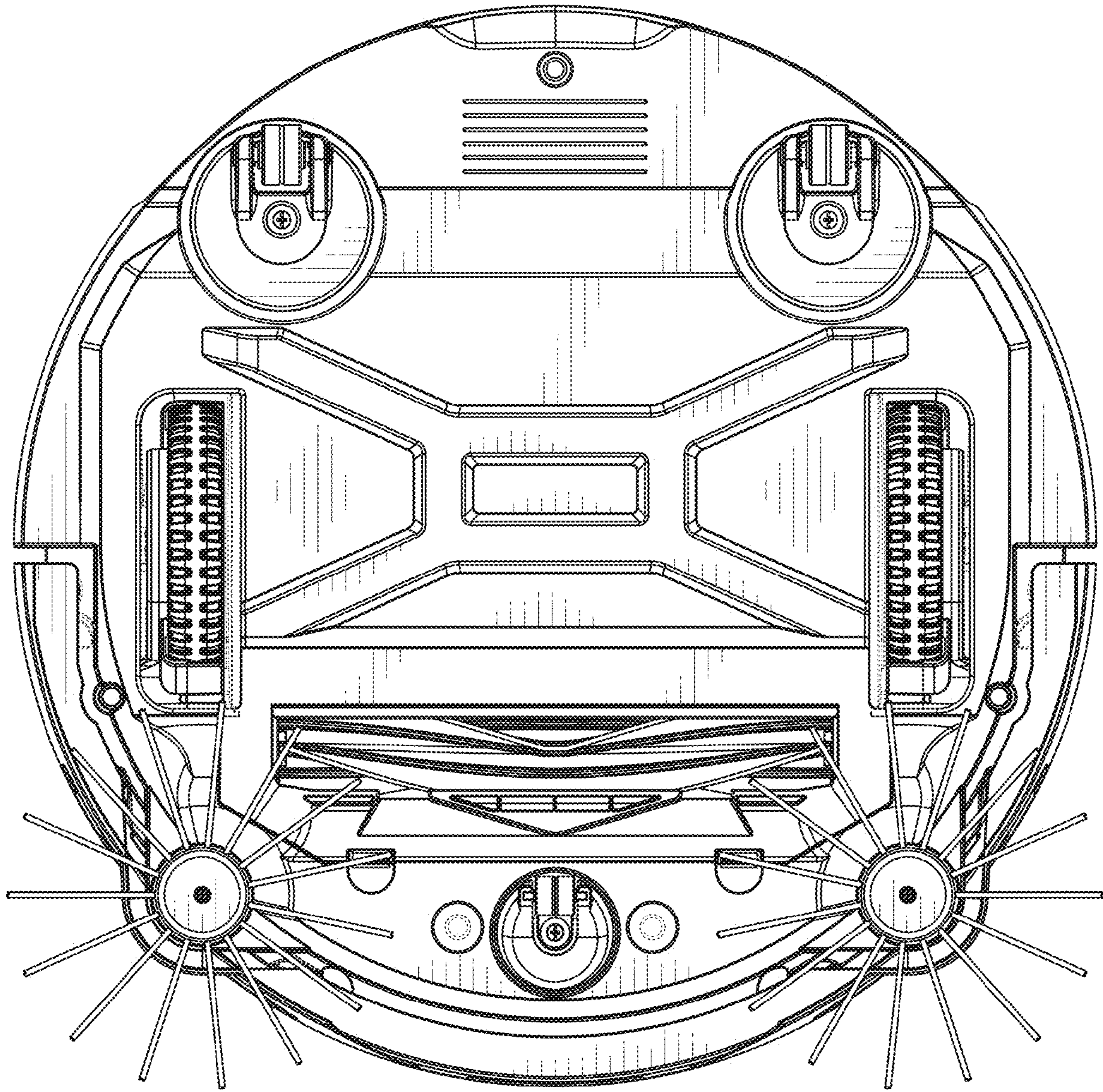
**FIG. 3**



**FIG. 4**

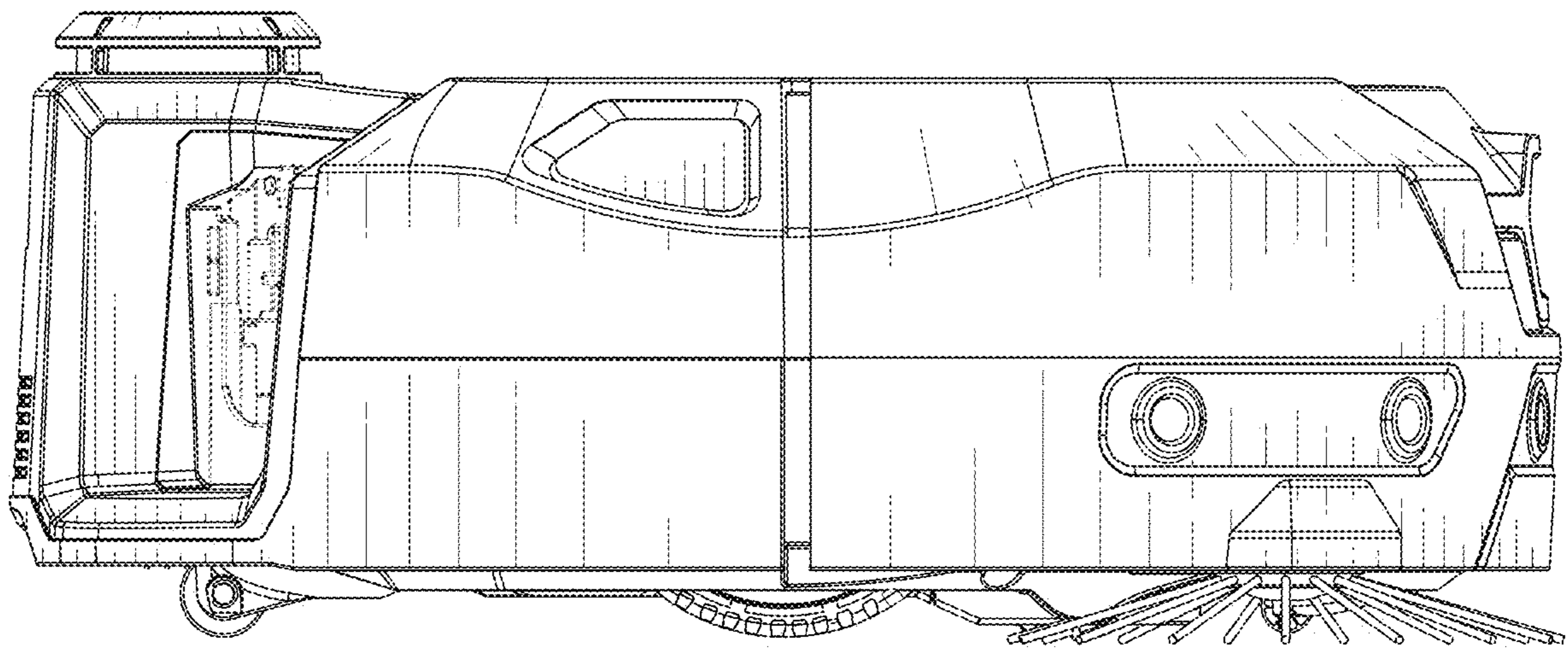


**FIG. 5**

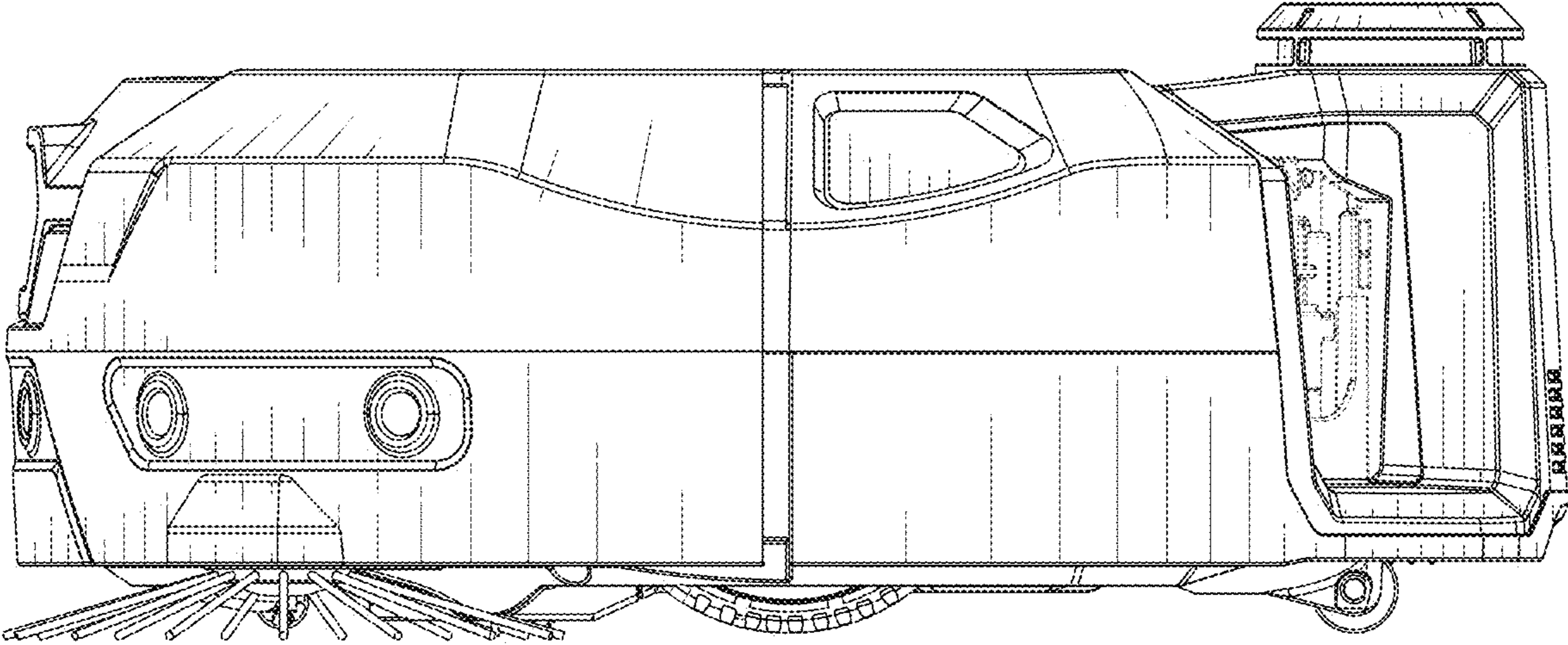


**FIG. 6**

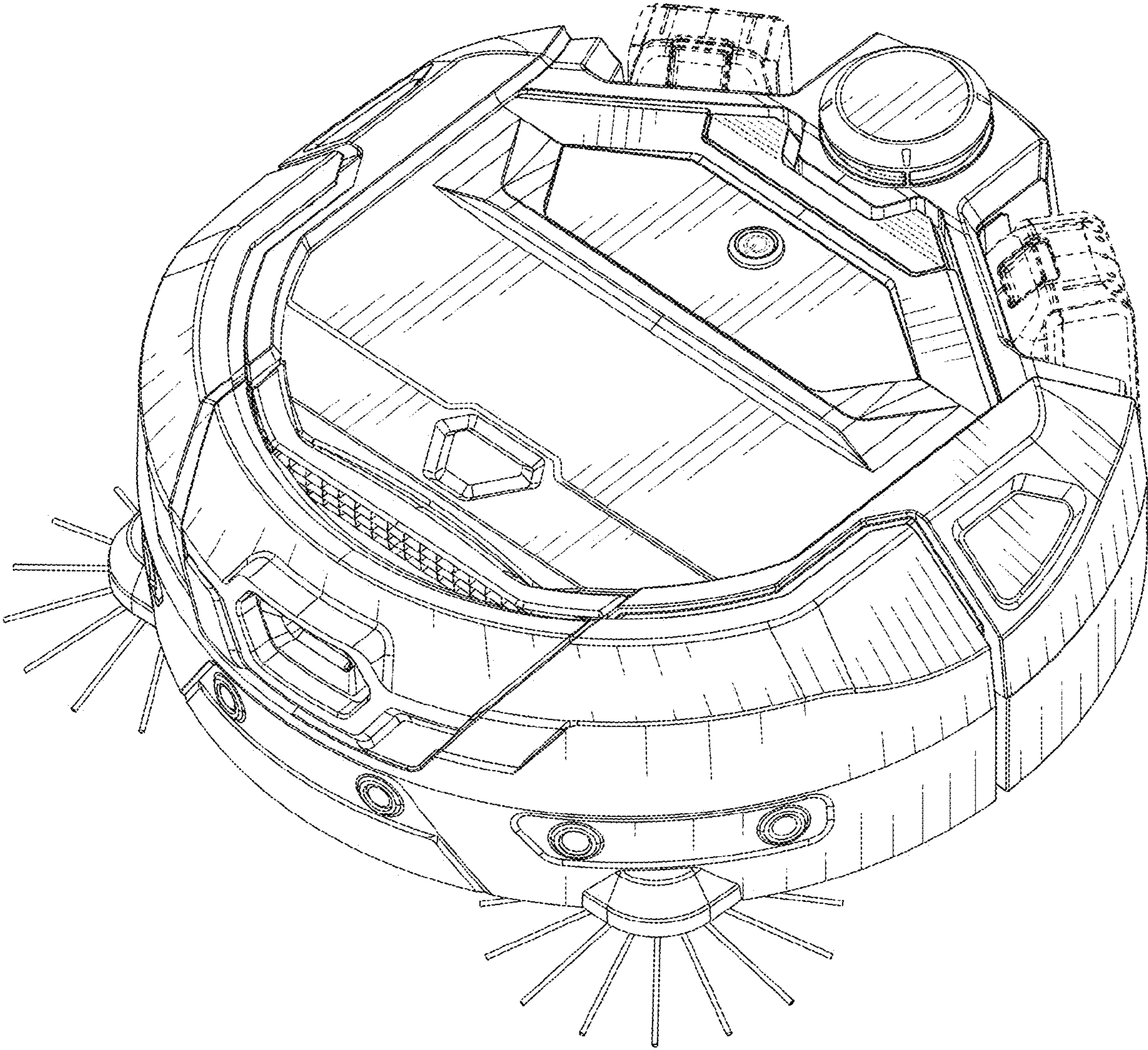




**FIG. 7**



**FIG. 8**



**FIG. 9**