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

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(54) **WIRELESS ROBOTIC WINDOW CLEANER**

(71) Applicant: **Ecovacs Robotics Co., Ltd.**, Suzhou (CN)

(72) Inventors: **Xintong Yu**, Baiyin (CN); **Fang He**, Nanjing (CN); **Shuai Liu**, Hutun Town (CN)

(73) Assignee: **ECOVACS ROBOTICS CO., LTD.**, Suzhou (CN)

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

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CPC A47L 9/2894; A47L 9/009; A47L 9/2842; G05D 1/0212; G05D 1/0219; G05D 1/0265; B60L 50/52

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D625,059 S * 10/2010 Morenstein D32/21
D625,477 S * 10/2010 Morenstein D32/21
D709,255 S * 7/2014 Wang D32/21
D720,107 S * 12/2014 Meyer D32/41
D720,511 S * 12/2014 Shin D32/21
D734,907 S * 7/2015 Dooley D32/31
D743,647 S * 11/2015 Heck D32/21
D768,948 S * 10/2016 Baxter D32/41

D818,231 S * 5/2018 Helfert D32/46
D822,923 S * 7/2018 Casini D32/21
D862,010 S * 10/2019 Smith D32/21
D865,021 S * 10/2019 Hu D15/199
D869,796 S * 12/2019 Afshar Bakooshli D32/21
D869,797 S * 12/2019 Chei D32/21
D869,808 S * 12/2019 Khubani D32/45
D870,402 S * 12/2019 Yun D32/21
D870,403 S * 12/2019 Ebrahimi Afrouzi D32/21

(Continued)

FOREIGN PATENT DOCUMENTS

CN 302576458 S 9/2013
CN 303538889 S 1/2016
CN 304245844 S 8/2017

OTHER PUBLICATIONS

Groupon <https://www.groupon.com/deals/gg-ca-ecovacs-winbot-x-wireless-window-cleaning-robot> (Year: 2021).*

Primary Examiner — Michelle E. Wilson
Assistant Examiner — Richard E Yenchesky
(74) *Attorney, Agent, or Firm* — Maschoff Brennan

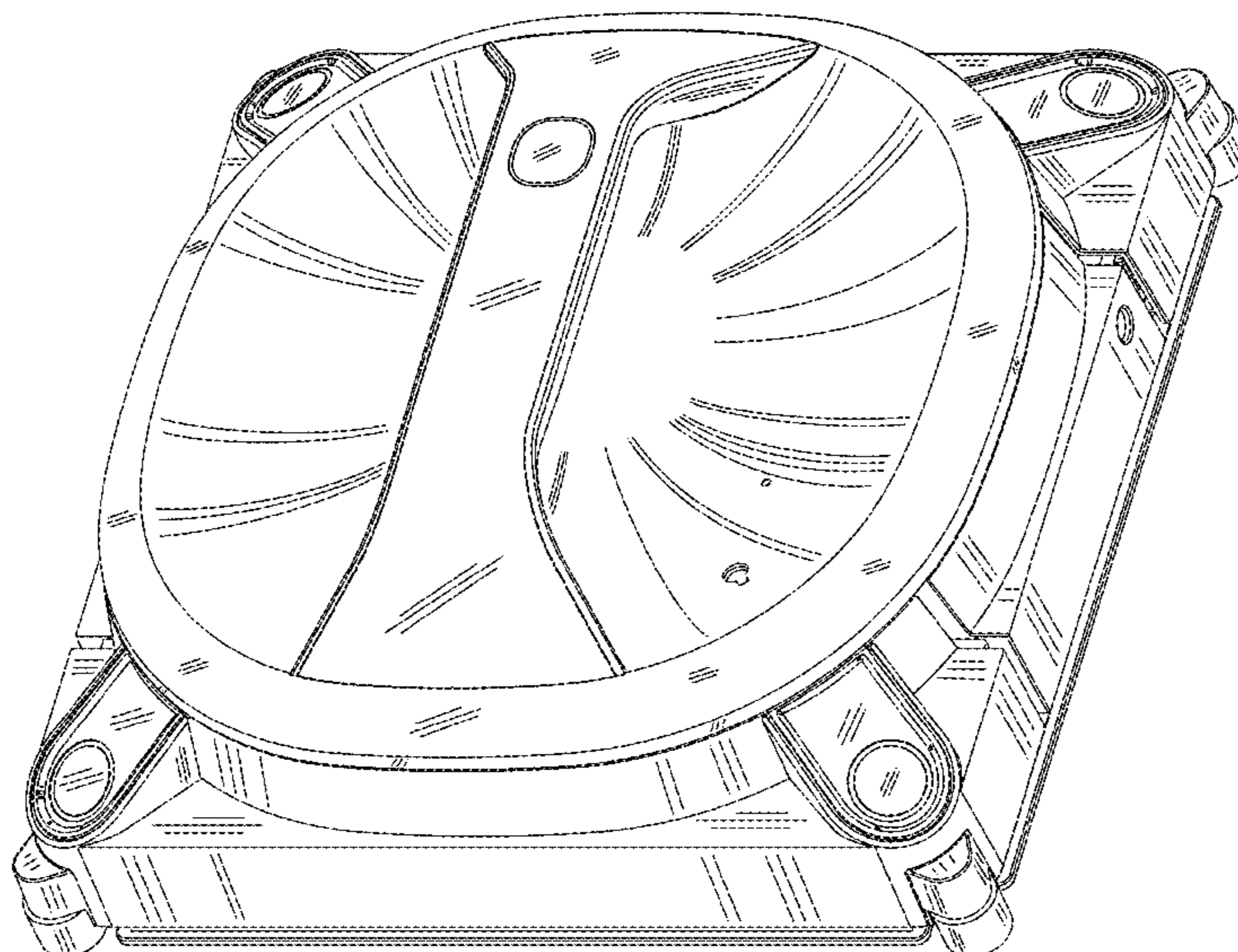
(57) **CLAIM**

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

DESCRIPTION

FIG. 1 is a front perspective view of our wireless robotic window cleaner;
FIG. 2 is the top view thereof;
FIG. 3 is the front view thereof;
FIG. 4 is the left-side view thereof;
FIG. 5 is the rear view thereof; and,
FIG. 6 is the right-side view thereof.
The broken lines shown in the drawings illustrate part of the wireless robotic window cleaner that form no part of claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D870,994 S * 12/2019 Zhou D32/21
 D871,693 S * 12/2019 Ebrahimi Afrouzi D32/21
 D871,694 S * 12/2019 Casini D32/21
 D872,395 S * 1/2020 Fathi Djalali D32/21
 D872,953 S * 1/2020 Ebrahimi Afrouzi D32/21
 D875,166 S * 2/2020 Beghelli D16/230
 D879,852 S * 3/2020 Chen D15/199
 D884,298 S * 5/2020 Li D32/21
 D884,998 S * 5/2020 Afshar Bakooshli D32/21
 D890,457 S * 7/2020 Pearce D32/21
 D893,819 S * 8/2020 Li D32/21
 D897,386 S * 9/2020 He D15/199
 D899,212 S * 10/2020 Lundbaeck D8/70
 D899,475 S * 10/2020 Xiao D15/199
 D901,110 S * 11/2020 Li D32/21
 D902,507 S * 11/2020 Ebrahimi Afrouzi D32/21
 D902,508 S * 11/2020 Ebrahimi Afrouzi D32/21
 D902,509 S * 11/2020 Ebrahimi Afrouzi D32/21
 D903,961 S * 12/2020 Li D32/21
 D906,606 S * 12/2020 Zeng D32/17
 D906,607 S * 12/2020 Chen D32/21

D906,608 S * 12/2020 Li D32/21
 D914,075 S * 3/2021 Sokuza D15/199
 D915,015 S * 3/2021 Tan D32/31
 D917,117 S * 4/2021 Cao D32/21
 D917,590 S * 4/2021 Li D15/199
 D917,808 S * 4/2021 Kim D32/21
 D917,809 S * 4/2021 Kim D32/21
 D919,211 S * 5/2021 Chang D32/21
 D919,910 S * 5/2021 Li D32/21
 D922,011 S * 6/2021 Ren D32/21
 D922,709 S * 6/2021 Xiao D32/40
 D929,479 S * 8/2021 Gao D15/199
 D929,690 S * 8/2021 Cheng A47L 9/009
 D930,299 S * 9/2021 Lee D32/21
 D932,718 S * 10/2021 Yan D32/21
 D933,319 S * 10/2021 Lyu D32/21
 2009/0281661 A1 * 11/2009 Dooley B60L 50/52
 700/258
 2018/0344114 A1 * 12/2018 Scholten A47L 9/2842
 2020/0198488 A1 * 6/2020 Liljedahl G05D 1/0265
 2020/0383265 A1 * 12/2020 Holgersson G05D 1/0219
 2021/0216070 A1 * 7/2021 VanKampen G05D 1/0212
 2021/0228039 A1 * 7/2021 Brouwers A47L 9/2894

* cited by examiner

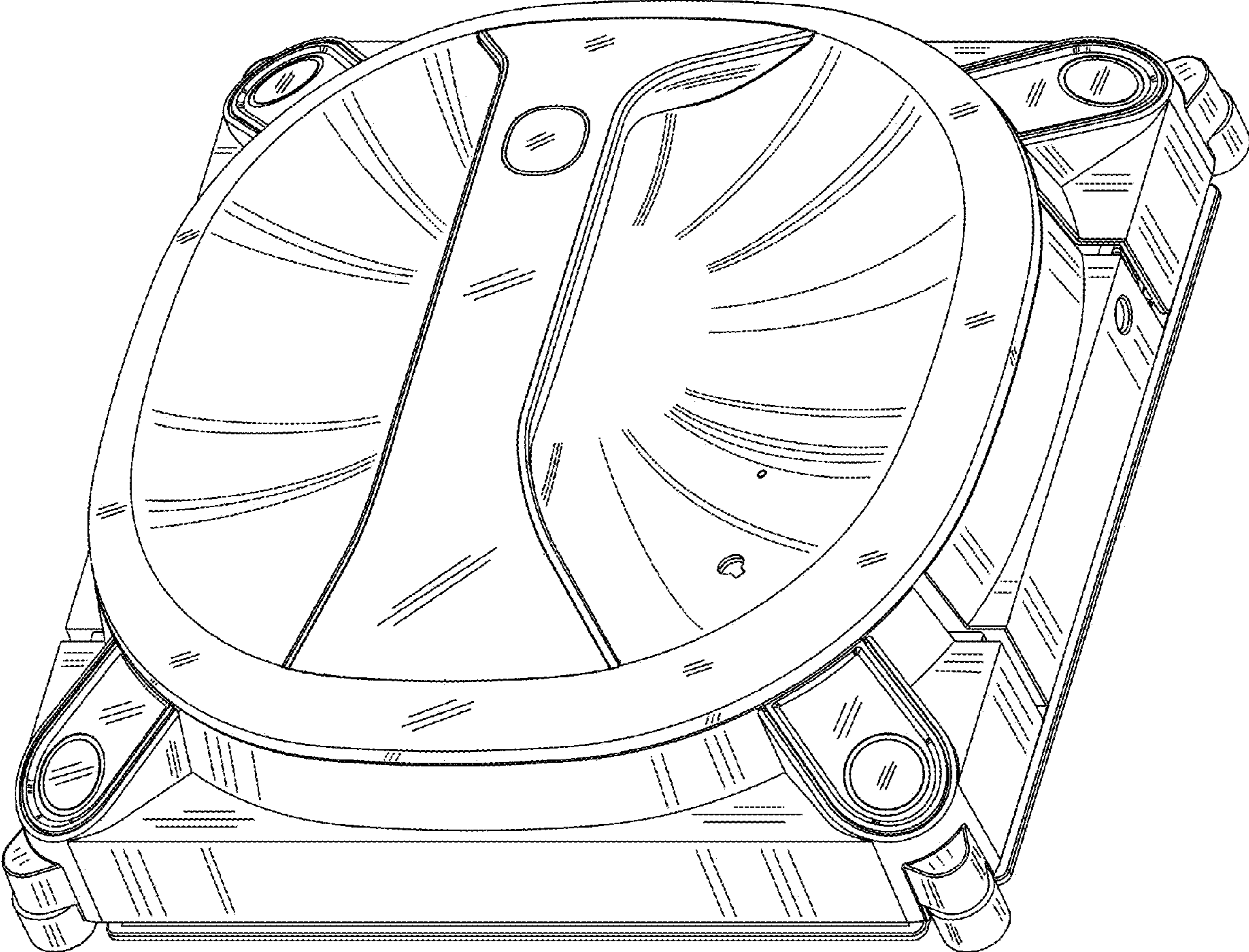


FIG. 1

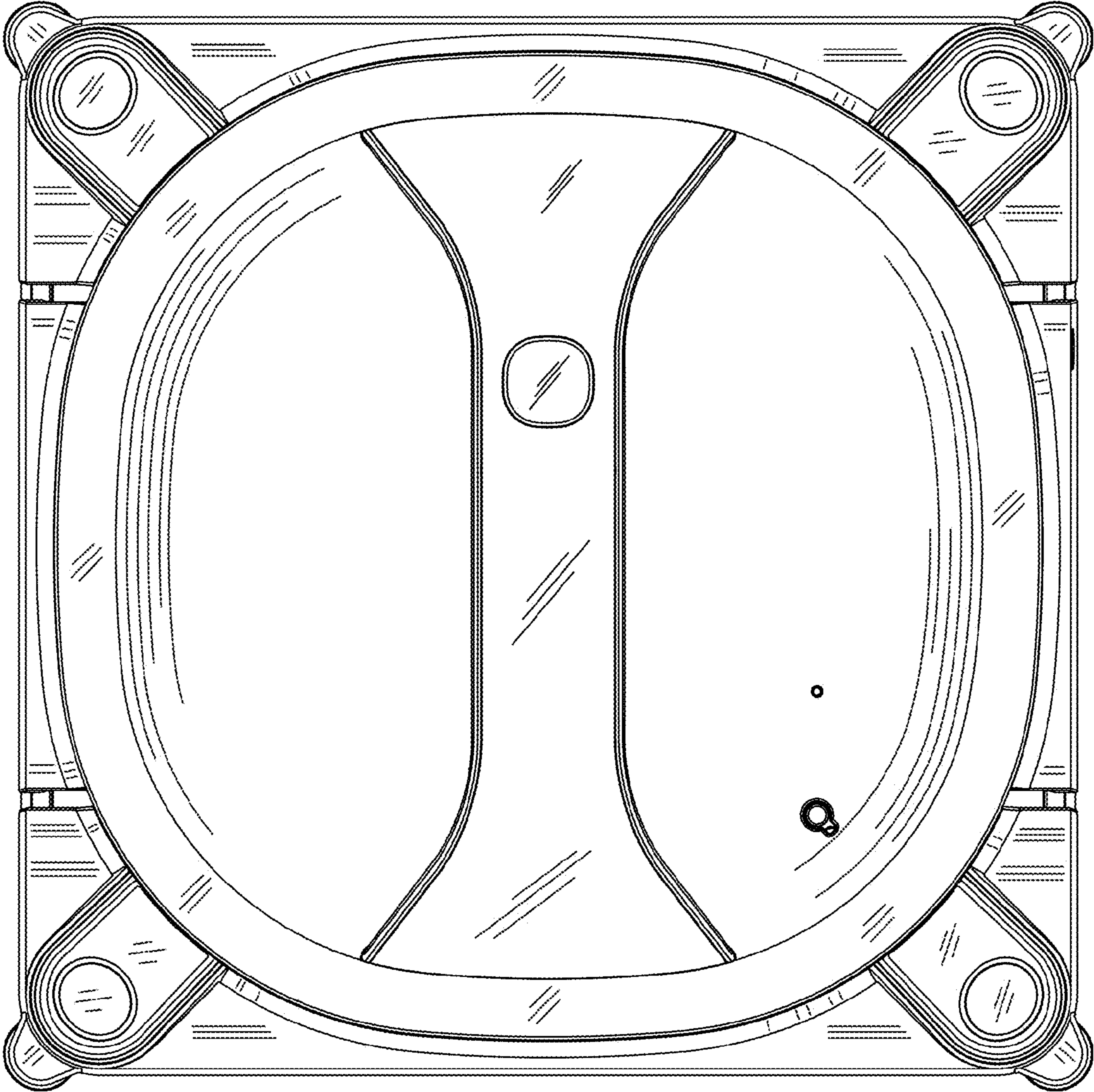


FIG.2

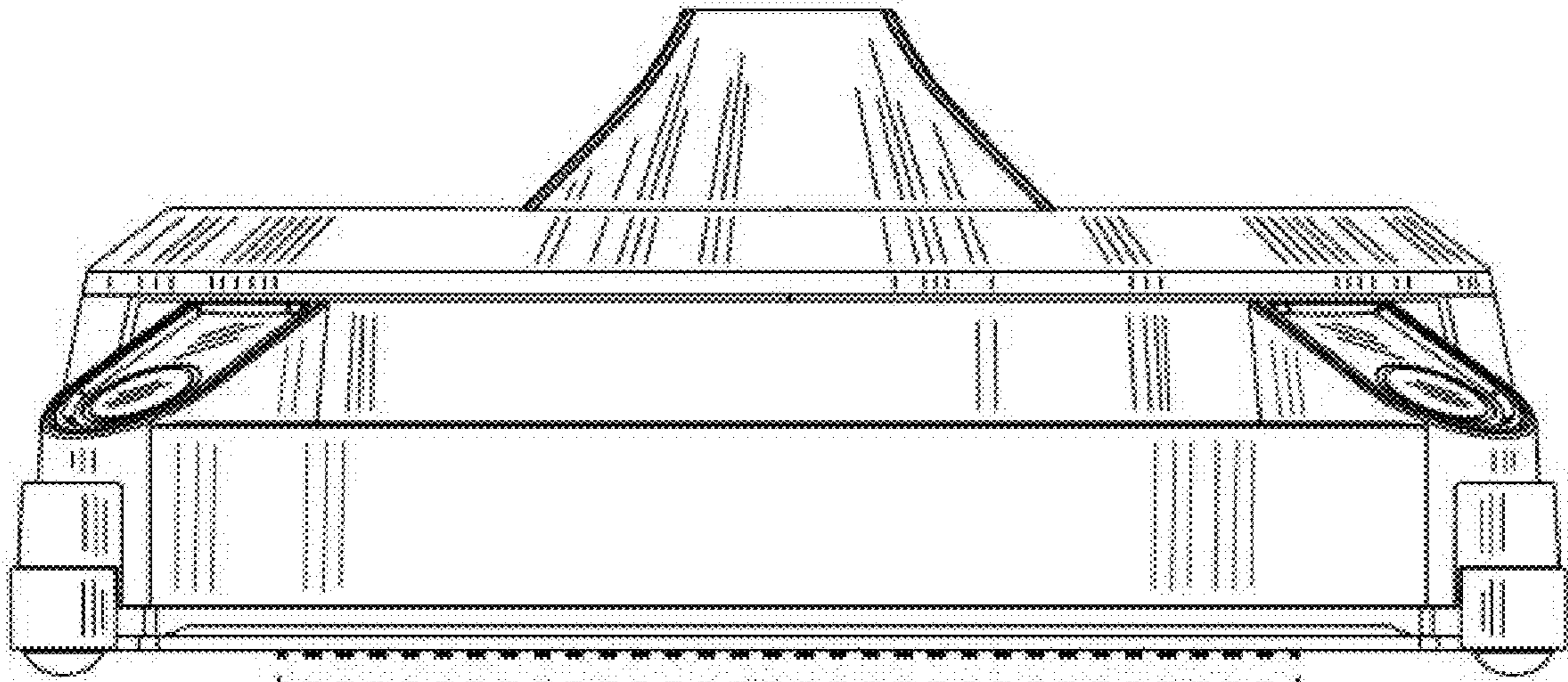


FIG. 3

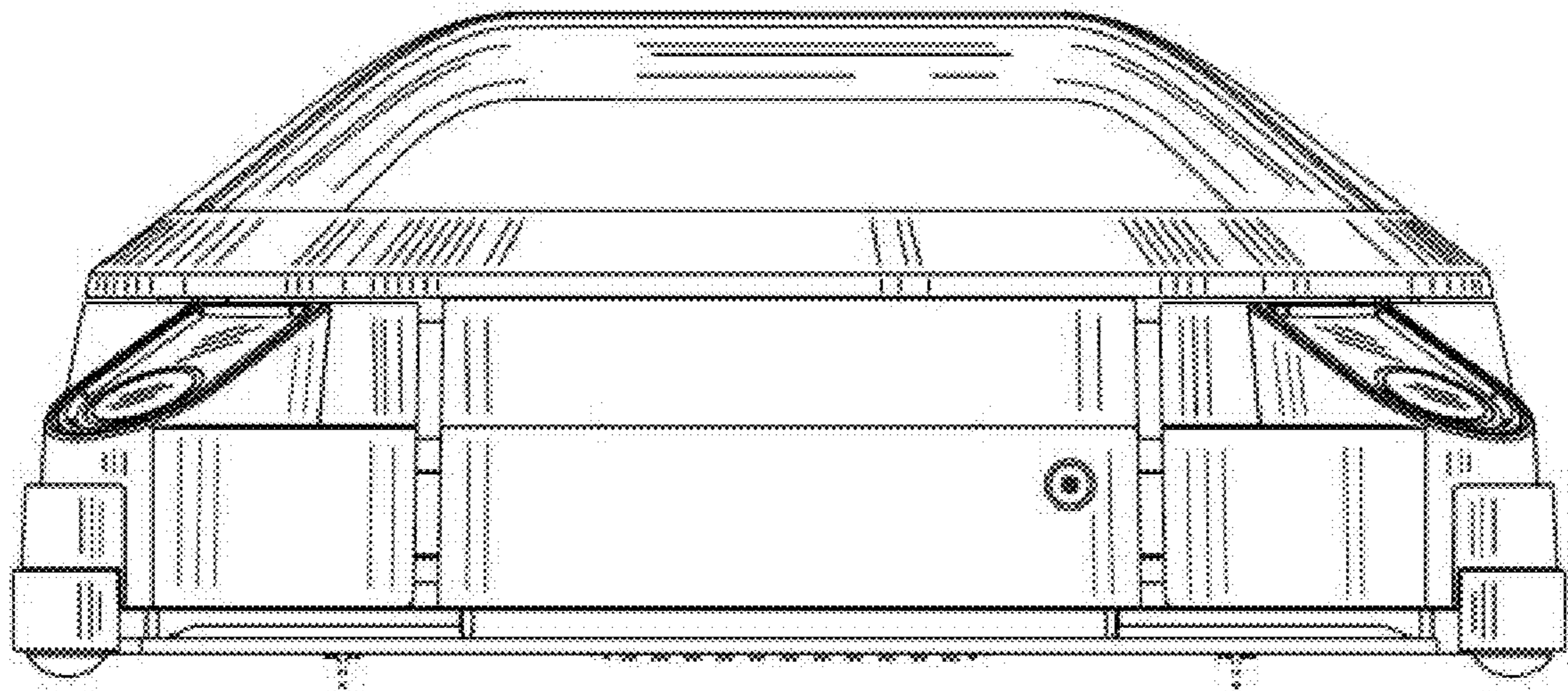


FIG. 4

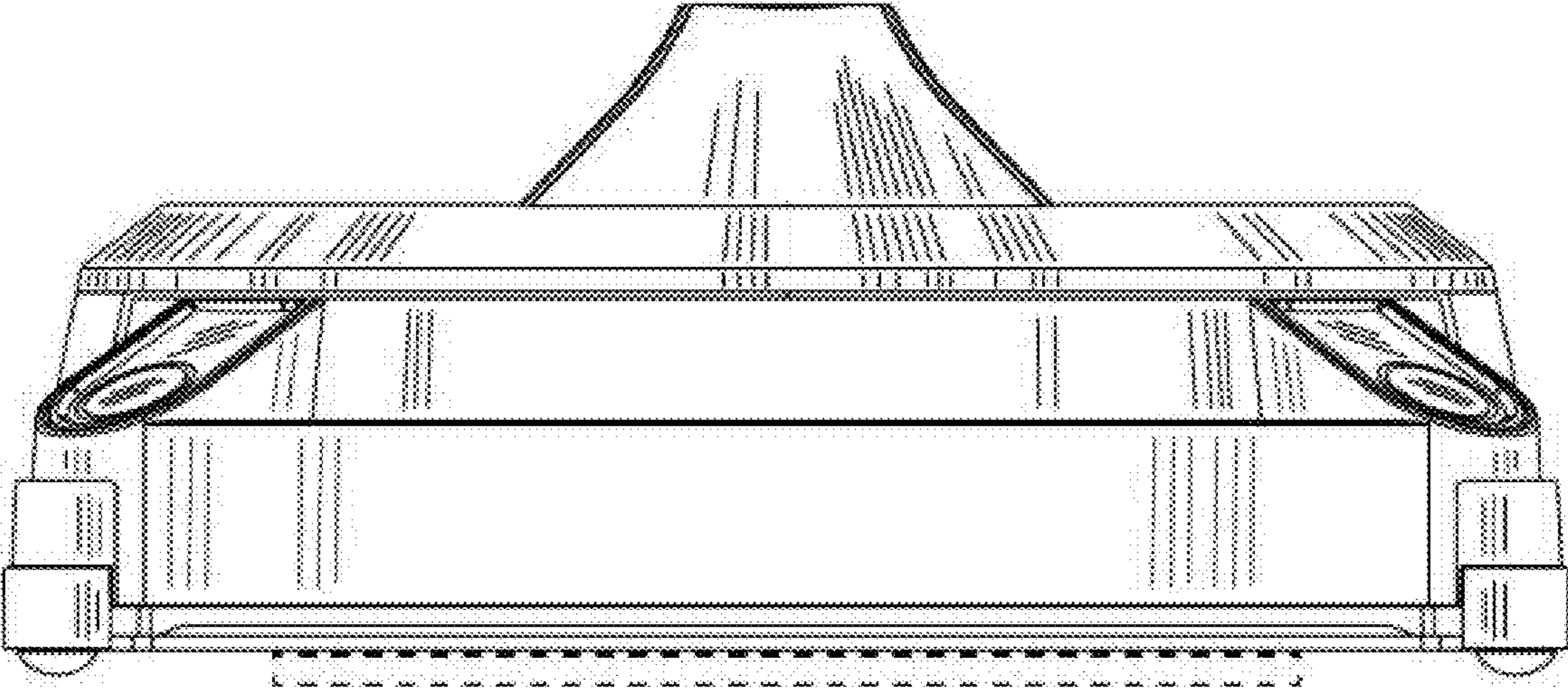


FIG. 5

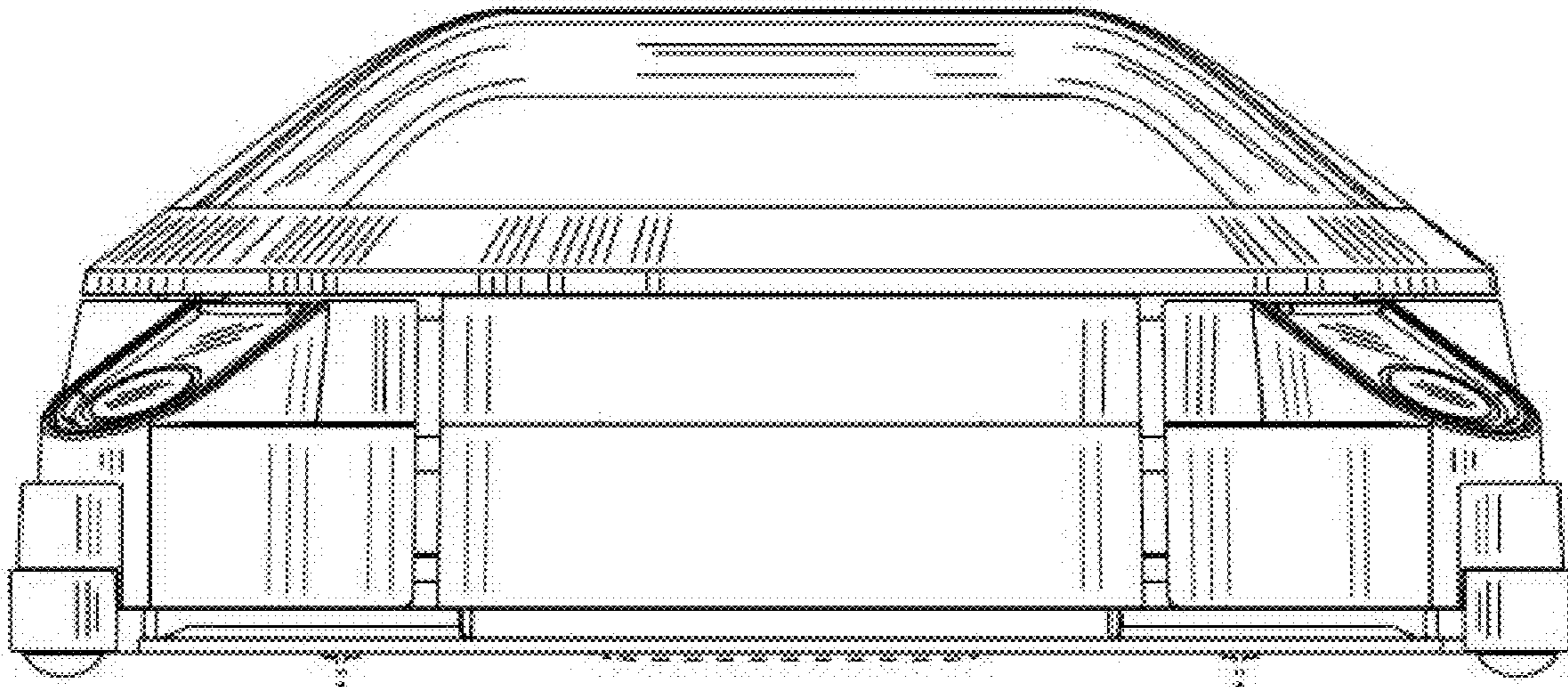


FIG. 6