



US0D1021990S

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

(10) **Patent No.:** **US D1,021,990 S**

(45) **Date of Patent:** **** Apr. 9, 2024**

- (54) **WEARABLE ROBOT**
- (71) Applicant: **Samsung Electronics Co., Ltd.**,
Suwon-si (KR)
- (72) Inventors: **Jong-Deuk Son**, Suwon-si (KR); **Jiyun Park**, Suwon-si (KR); **Jeonghan Song**, Suwon-si (KR); **Minki Ham**, Suwon-si (KR); **Seokwon Bae**, Suwon-si (KR)

- D784,547 S * 4/2017 Kwon D24/190
- D851,387 S * 6/2019 Chavarria D3/7
- D887,013 S * 6/2020 Son D24/190
- D921,734 S * 6/2021 Kim A61H 3/00
D15/199
- D975,215 S * 1/2023 Li D21/683
- D992,122 S * 7/2023 Bae D24/190

(Continued)

- (73) Assignee: **SAMSUNG ELECTRONICS CO., LTD.**, Suwon-si (KR)
- (**) Term: **15 Years**

(21) Appl. No.: **29/860,396**

(22) Filed: **Nov. 18, 2022**

(30) **Foreign Application Priority Data**

May 20, 2022 (KR) 30-2022-0020148

(51) **LOC (14) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/190**; D15/199

(58) **Field of Classification Search**
 USPC D3/5, 6, 7, 8, 9, 10; D15/199; D24/164, D24/190
 CPC A61F 5/0102; B25J 9/104; B25J 9/106; B25J 9/109; B25J 9/0006; B25J 17/0241; B25J 19/02; Y10T 74/20317; Y10T 74/20323

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,905,678 A * 3/1990 Cumins A61F 5/0193
602/19
- 5,690,609 A * 11/1997 Heinze, III A61F 5/03
2/311
- D494,273 S * 8/2004 Haugland D10/85
- D749,227 S * 2/2016 Takama D24/190

OTHER PUBLICATIONS

Unknown, "Assisted-Walking Robot", Nikkei Robotics, Issue 67, published Jan. 10, 2021, p. 31, cited in Japanese Office Action for related Japanese application 2022-024911 dated Mar. 8, 2023.

Primary Examiner — Patricia A Palasik

(74) *Attorney, Agent, or Firm* — McAndrews Held & Malloy, Ltd.

(57) **CLAIM**

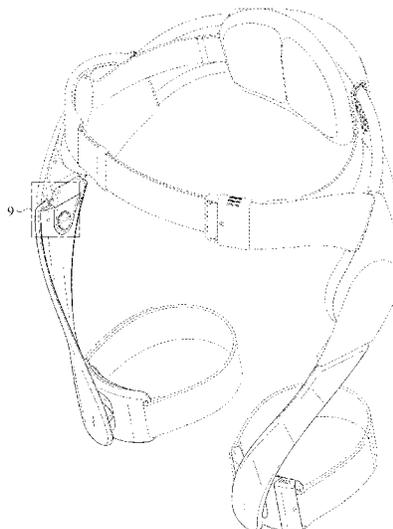
The ornamental design for a wearable robot, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a wearable robot showing our new design;
 FIG. 2 is a front view thereof;
 FIG. 3 is a rear view thereof;
 FIG. 4 is a left side view thereof;
 FIG. 5 is a right side view thereof;
 FIG. 6 is a top plan view thereof;
 FIG. 7 is a bottom plan view thereof;
 FIG. 8 is a rear perspective view thereof; and,
 FIG. 9 is an enlarged view of the portion 9 delineated in FIG. 1.

The dashed broken lines in the figures illustrate portions of the Wearable robot that form no part of the claimed design. The dot-dash broken lines in the figures delineating portions of the claimed design that are illustrated in enlargements form no part of the claimed design.

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2009/0259155 A1* 10/2009 Shimada A61H 1/0244
602/23
2009/0312682 A1* 12/2009 Hirata A61H 1/0244
602/23
2016/0038313 A1* 2/2016 Kim B25J 9/104
623/24
2016/0045387 A1* 2/2016 Lee A61H 1/0244
602/12
2016/0317340 A1* 11/2016 Jangir A61H 3/00
2018/0303699 A1* 10/2018 Romo A61F 5/013
2018/0361565 A1* 12/2018 Angold B25J 9/106
2019/0091094 A1* 3/2019 Romo A61H 3/00
2021/0291354 A1* 9/2021 Kobayashi A61H 3/00
2022/0273515 A1* 9/2022 Tucker A61H 3/008
2022/0362927 A1* 11/2022 Chikano A61F 2/68
2022/0362940 A1* 11/2022 Takada B25J 9/0006
2022/0409418 A1* 12/2022 Park A61F 5/028

* cited by examiner

FIG. 1

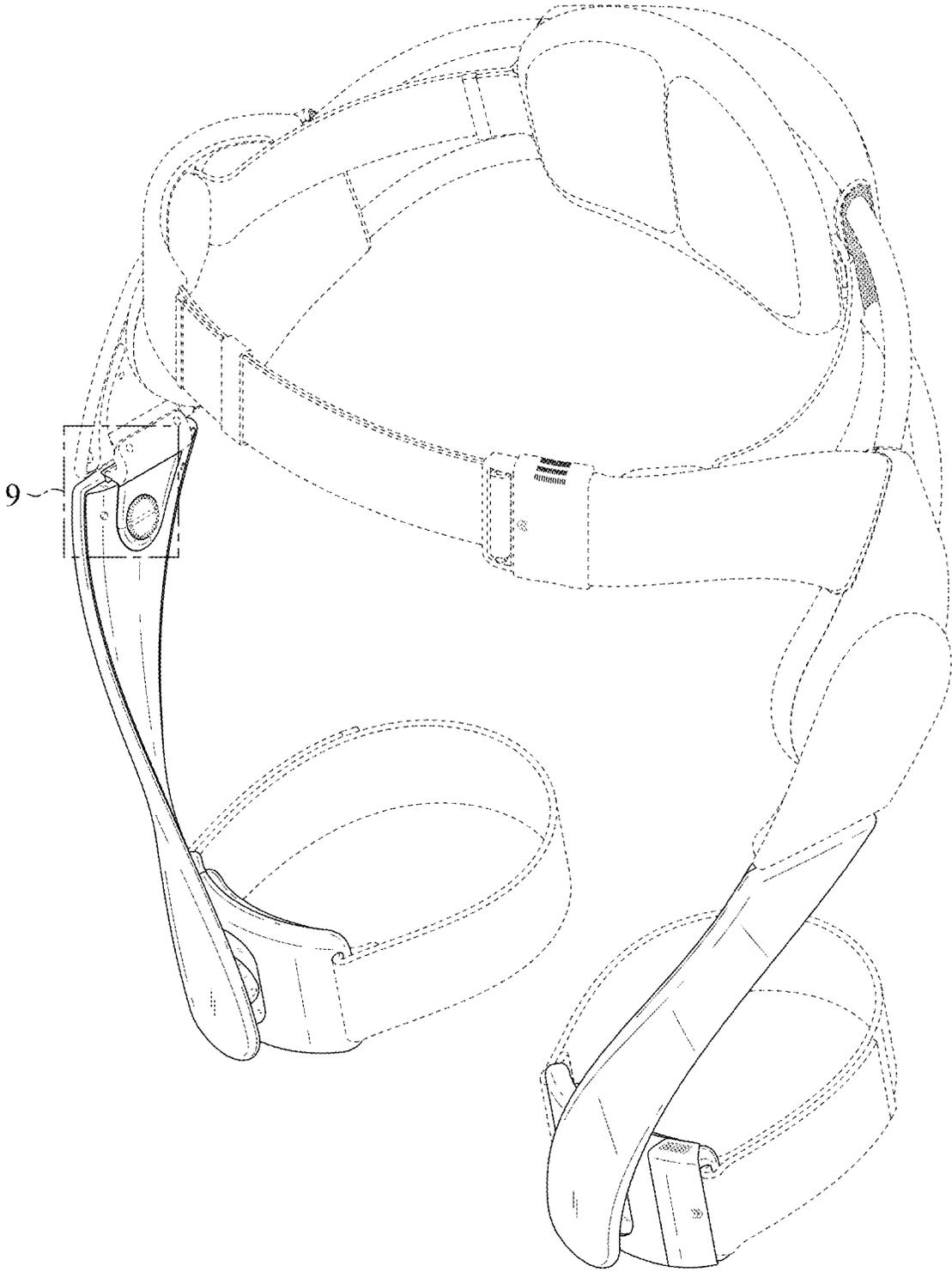


FIG. 2

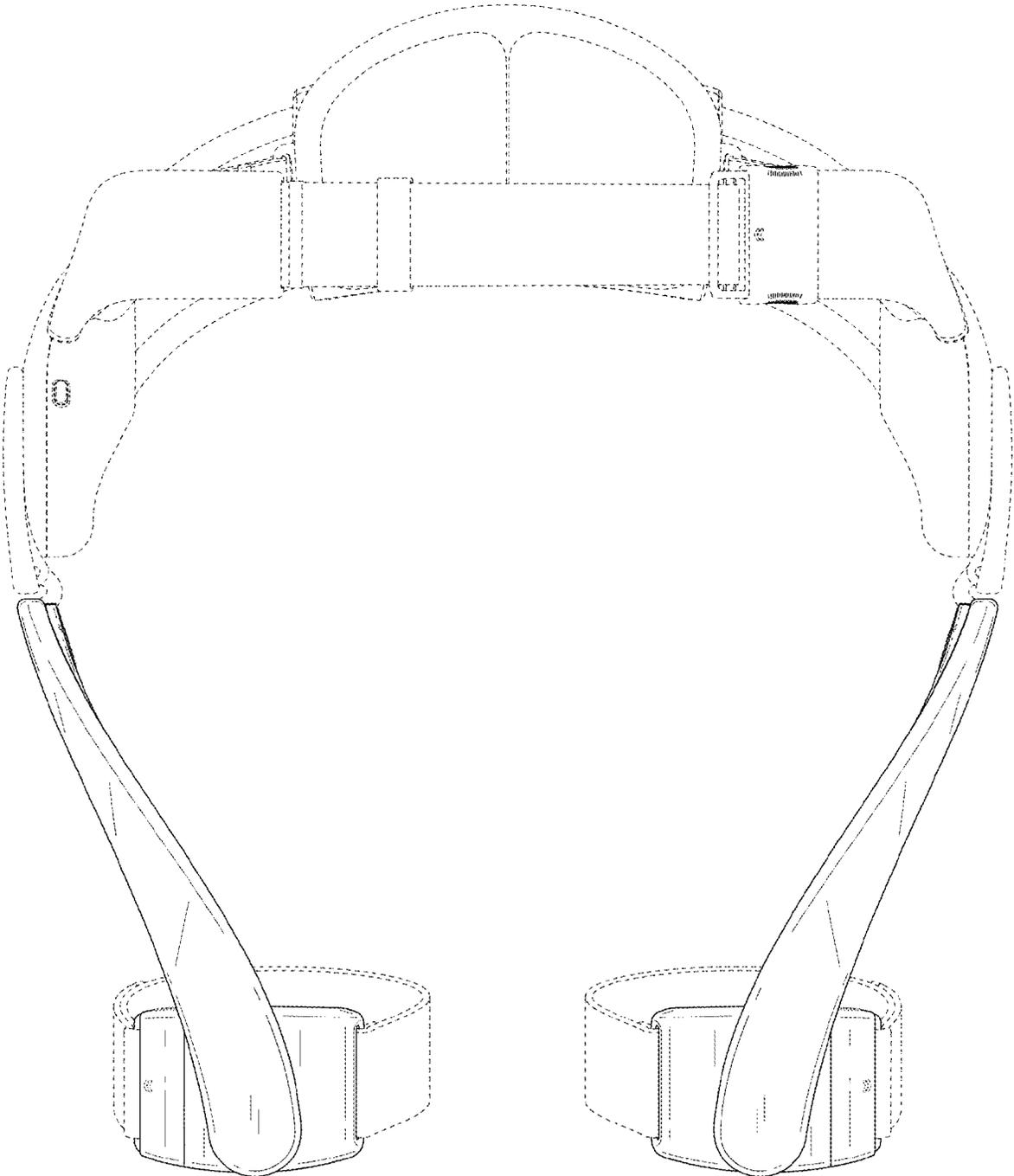


FIG. 3

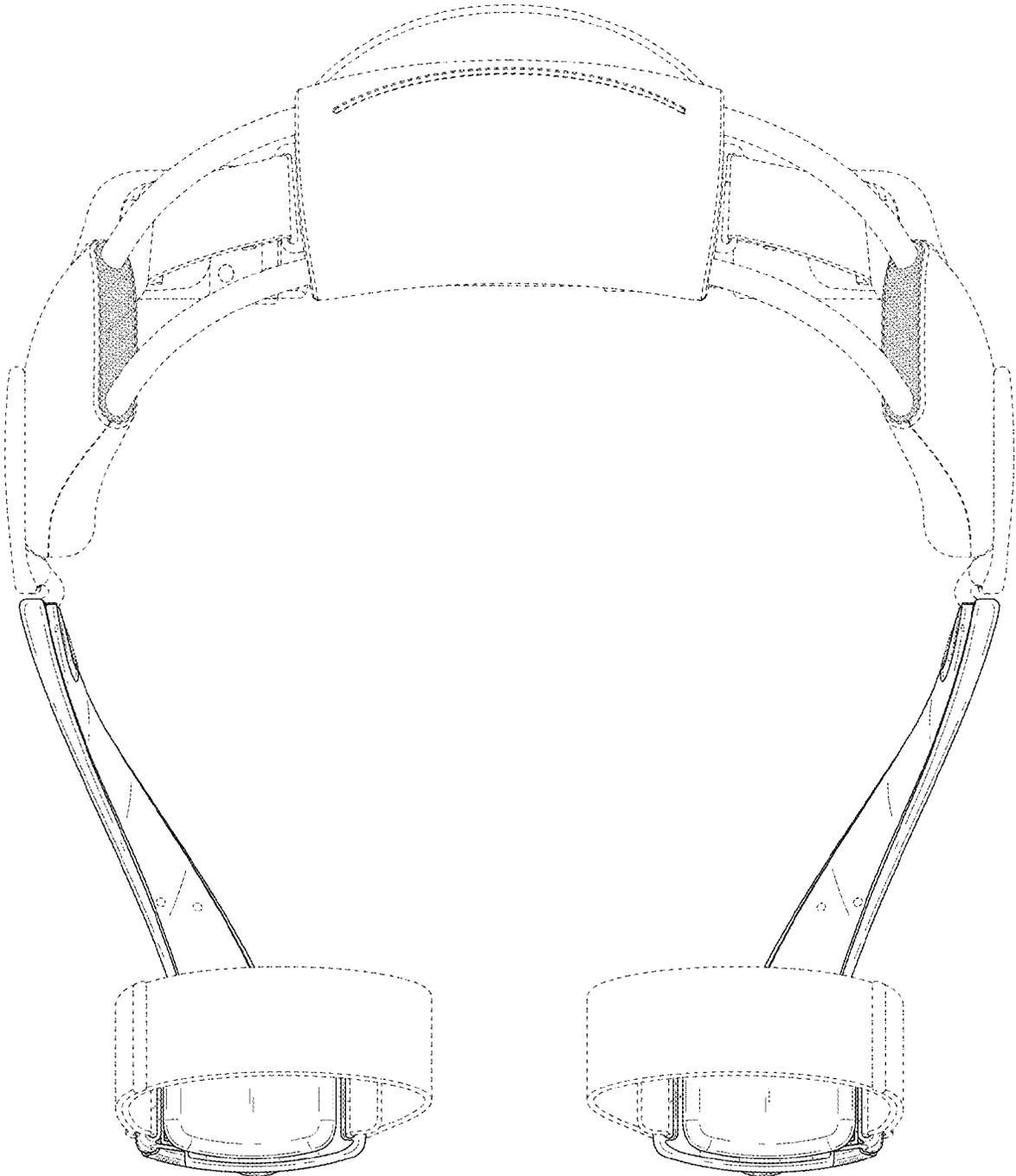


FIG. 4

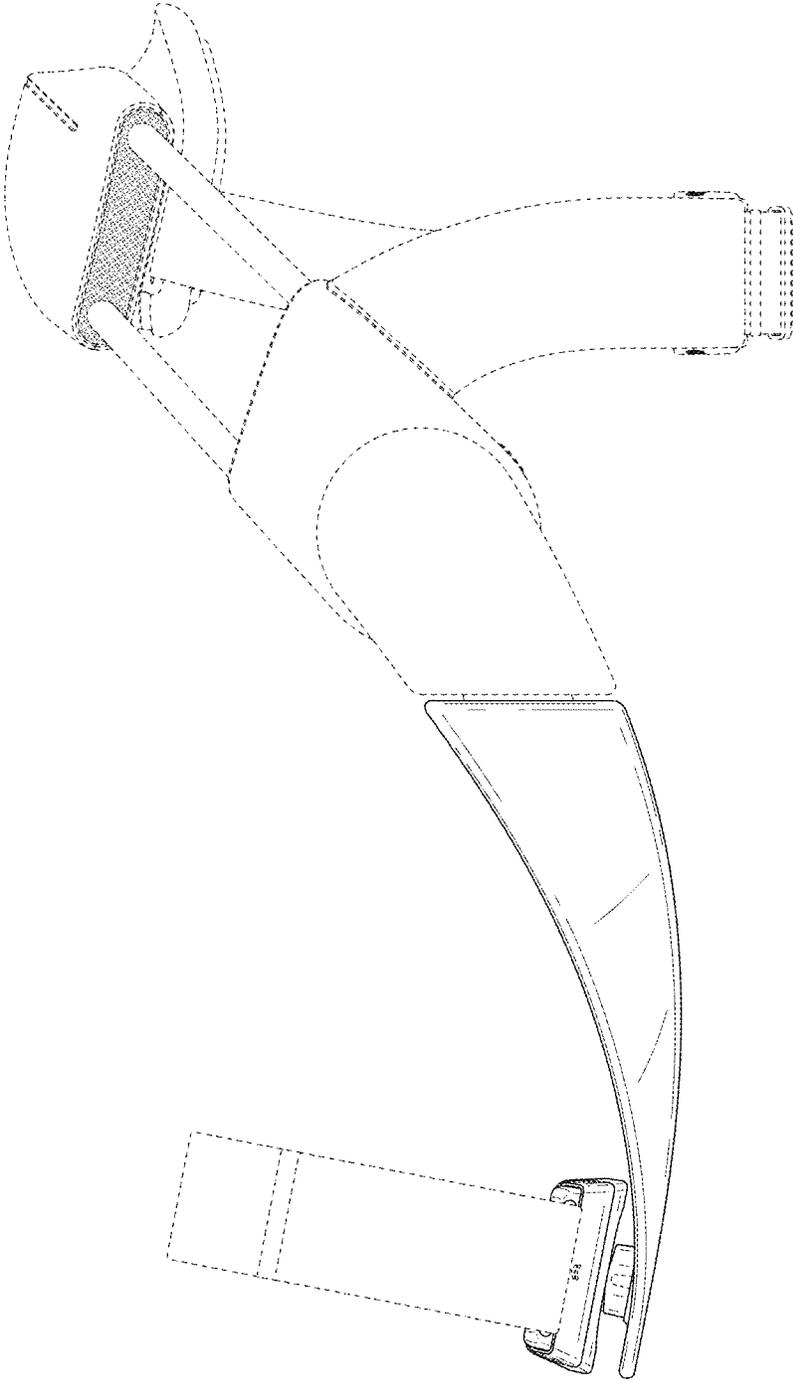


FIG. 5

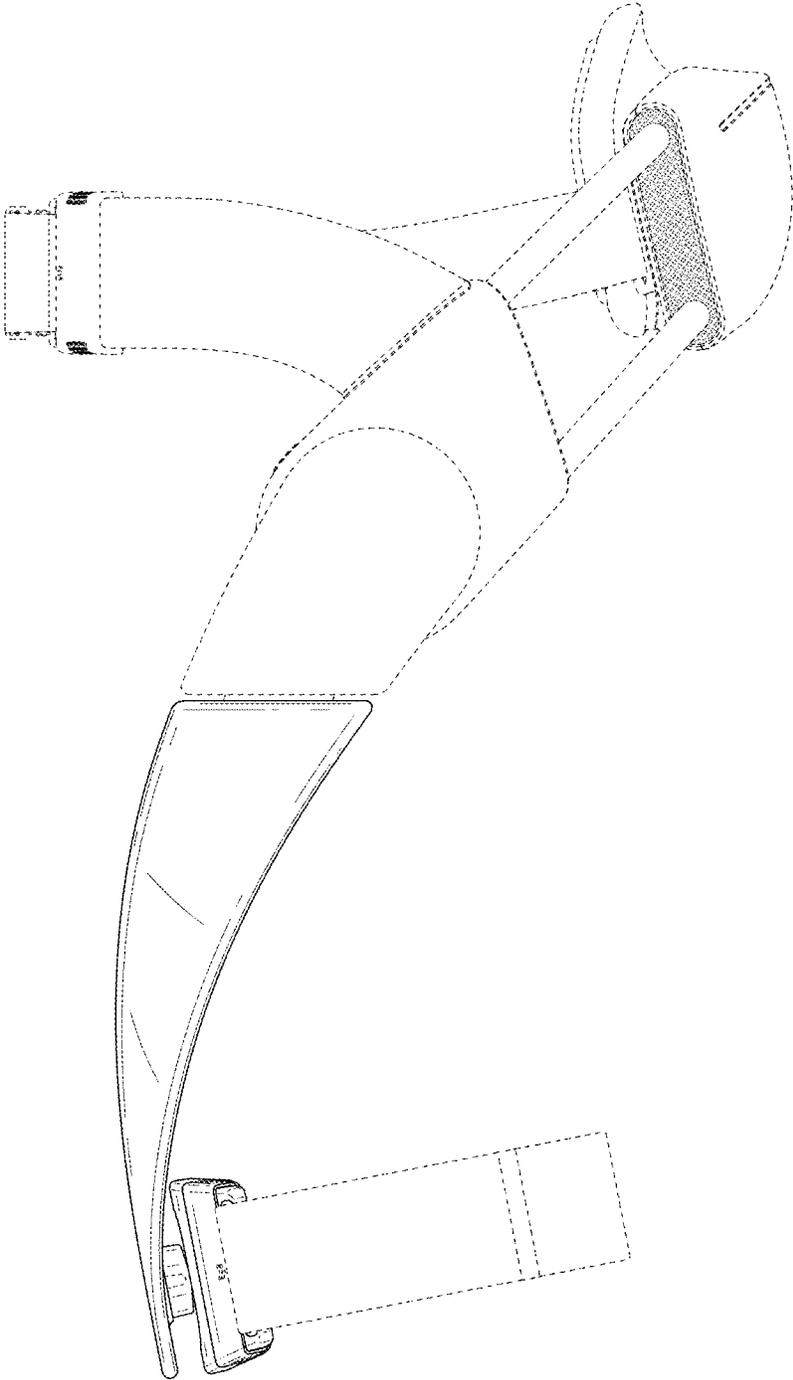


FIG. 6

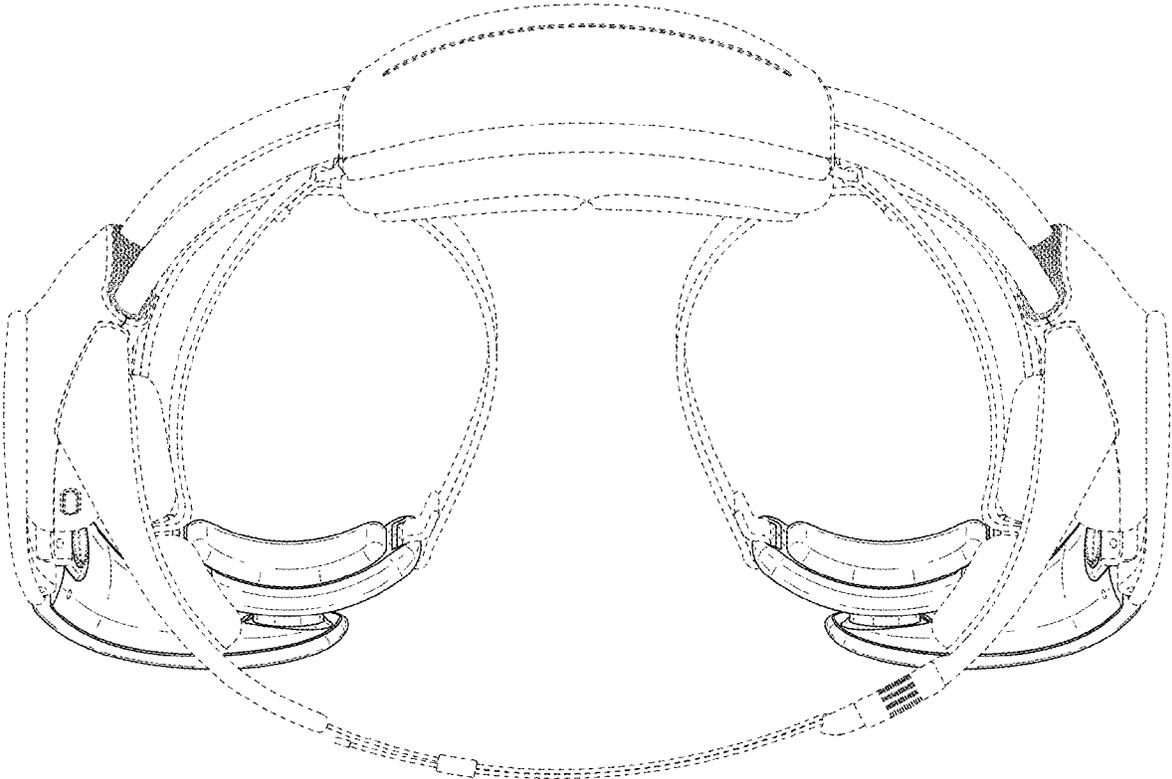


FIG. 7

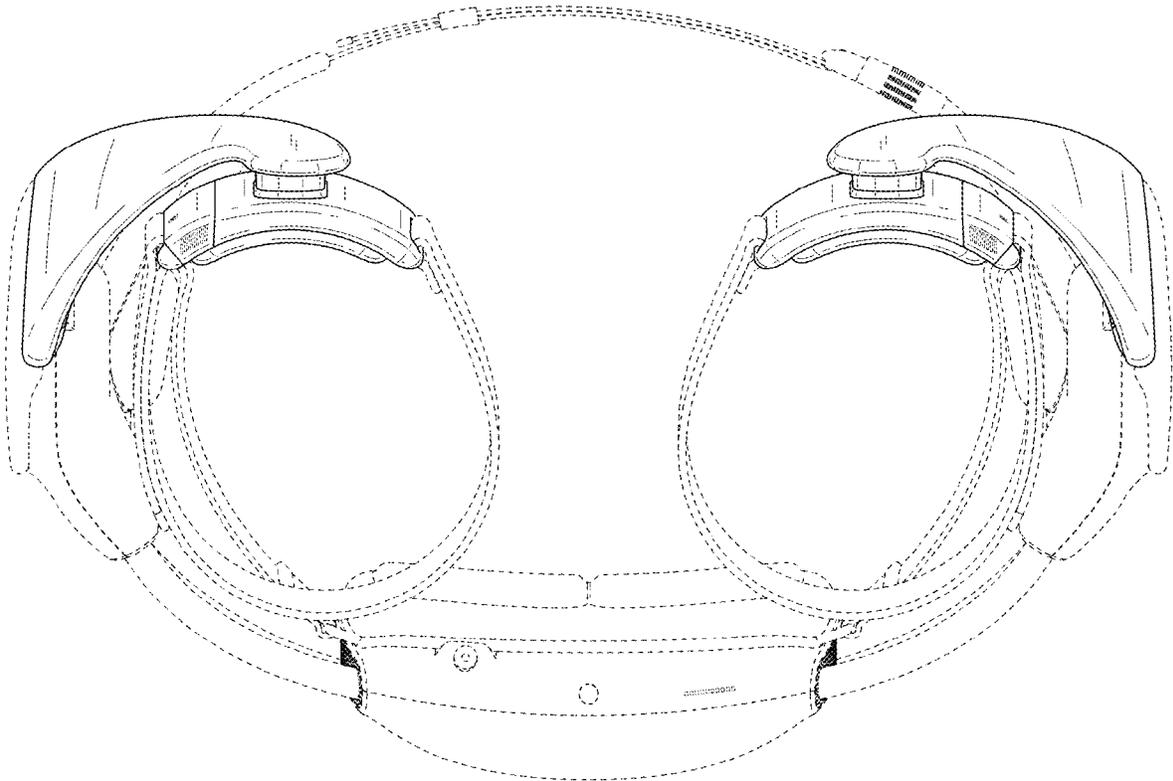


FIG. 8

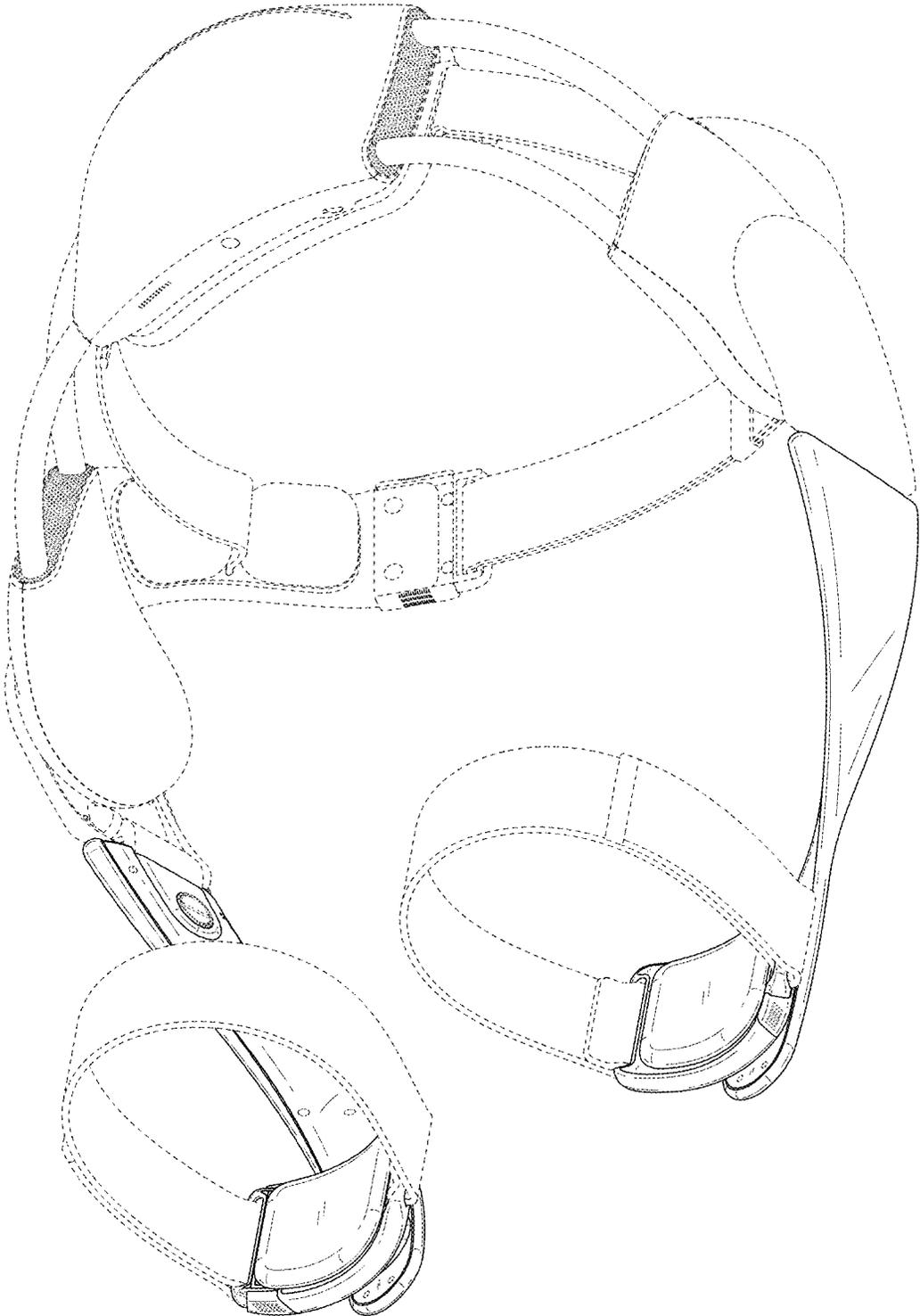


FIG. 9

