



US00D949482S

(12) **United States Design Patent** (10) **Patent No.:** **US D949,482 S**
Katoh et al. (45) **Date of Patent:** **** Apr. 19, 2022**

(54) **MOTION ASSISTING DEVICE**

(56) **References Cited**

(71) Applicant: **JTEKT CORPORATION**, Kariya (JP)

U.S. PATENT DOCUMENTS

(72) Inventors: **Yoshinobu Katoh**, Toyohashi (JP);
Hikomichi Ohta, Kariya (JP);
Kazuyoshi Ohtsubo, Chiryu (JP); **Yuki Kobayashi**, Nara (JP); **Shintaro Yoshida**, Shiki (JP); **Katsuhide Kikuchi**, Saitama (JP); **Mikio Shinohara**, Hino (JP)

8,568,344 B2 10/2013 Ferguson et al.
8,968,222 B2 * 3/2015 Kazerooni B25J 9/0006
601/35

9,022,956 B2 5/2015 Kazerooni et al.
(Continued)

(73) Assignee: **JTEKT CORPORATION**, Kariya (JP)

Jtekt Corporation | News releases (on-line), dated Dec. 12, 2018. Retrieved from Internet Nov. 24, 2020, URL: https://www.jtekt.co.jp/e/news/181212_1.html (3 pages) (Year: 2018).

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

(Continued)

(21) Appl. No.: **29/772,529**

Primary Examiner — Kimberly Barnes

(22) Filed: **Mar. 2, 2021**

(74) *Attorney, Agent, or Firm* — Oblon, McClelland, Maier & Neustadt, L.L.P.

Related U.S. Application Data

(62) Division of application No. 29/693,987, filed on Jun. 6, 2019.

(57) **CLAIM**

The ornamental design for a motion assisting device, as shown and described.

Foreign Application Priority Data

(30) Dec. 10, 2018 (JP) 2018-026833
Dec. 10, 2018 (JP) 2018-026834
Dec. 10, 2018 (JP) 2018-026835
Dec. 10, 2018 (JP) 2018-026836
Dec. 10, 2018 (JP) 2018-026837
Dec. 10, 2018 (JP) 2018-026838

DESCRIPTION

(Continued)

FIG. 1 is a front elevational view of a motion assisting device showing our new design.
FIG. 2 is a rear elevational view thereof.
FIG. 3 is a top plan view thereof.
FIG. 4 is a bottom plan view thereof.
FIG. 5 is a right side elevational view thereof.
FIG. 6 is a left side elevational view thereof; and,
FIG. 7 is another front elevational view thereof showing a use state.

(51) **LOC (13) Cl.** **29-02**

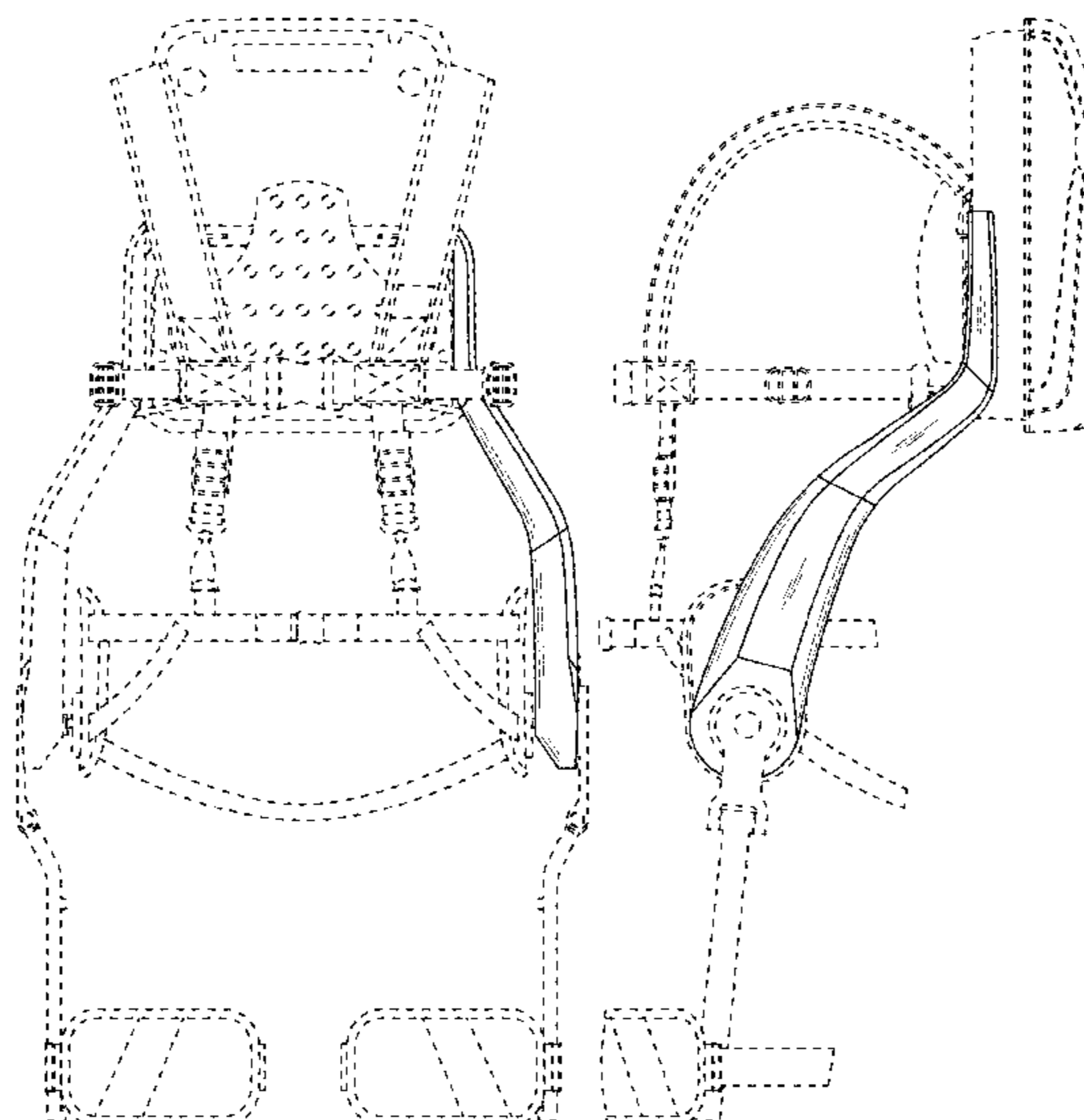
(52) **U.S. Cl.**
USPC **D29/100; D24/190**

(58) **Field of Classification Search**
USPC D29/100–101.5; D24/190
CPC ... A63B 21/00; A63B 21/065; A63B 21/4007;
A63B 21/4009; A63B 23/0405; A61H

The outline of the partial human body shown in broken lines shown in FIG. 7 is for the purpose of illustrating an environment of use of the motion assisting device and forms no part of the claimed design. The remaining broken lines that show portions of the motion assisting device also form no part of the claimed design.

(Continued)

1 Claim, 7 Drawing Sheets



(30) Foreign Application Priority Data

Dec. 10, 2018 (JP) 2018-026839
 Dec. 10, 2018 (JP) 2018-026840

(58) Field of Classification Search

CPC 3/00; A61H 2003/007; A61H 3/008; A61H
 1/00; A61H 1/0244

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

D781,430 S 3/2017 Konishi et al.
 9,604,369 B2* 3/2017 Angold B25J 17/00
 D784,545 S 4/2017 Jangir
 D784,547 S 4/2017 Kwon et al.
 9,687,409 B2 6/2017 Teng et al.
 9,731,162 B2 8/2017 Martin
 9,782,322 B2 10/2017 Nagarajan et al.
 9,808,073 B1 11/2017 Maxwell et al.
 9,907,722 B2 3/2018 Aguirre-Ollinger et al.
 D831,276 S 10/2018 Pennington, Jr. et al.
 10,166,679 B2 1/2019 Tanibayashi et al.
 10,288,384 B2 5/2019 Kinnings
 10,328,300 B2* 6/2019 Ko A63B 21/22
 10,426,688 B2* 10/2019 Robertson A61H 3/00
 10,449,105 B2 10/2019 Hollander
 10,610,439 B2 4/2020 Ohta et al.
 10,624,809 B2* 4/2020 Tsai A61H 1/0262
 D887,013 S* 6/2020 Son D24/190
 10,695,255 B2 6/2020 Choi et al.
 D889,672 S* 7/2020 Takama D24/190
 10,709,632 B2 7/2020 Endo
 10,710,237 B2 7/2020 Kumeno et al.
 D901,023 S 11/2020 Park et al.
 10,835,443 B2* 11/2020 Tsai A61H 1/0266
 D903,881 S* 12/2020 Ohta D24/190
 10,871,422 B2* 12/2020 Nabeshima G01M 7/08
 2011/0183819 A1 7/2011 Pharoee
 2011/0264014 A1* 10/2011 Angold B25J 9/0006
 601/35
 2012/0292361 A1* 11/2012 Thiruppathi A45F 3/08
 224/576
 2015/0197008 A1* 7/2015 Yoon B25J 9/0006
 700/250
 2016/0158593 A1 6/2016 Craig et al.
 2018/0071129 A1 3/2018 Ozsecen et al.
 2018/0325764 A1 11/2018 Yagi
 2018/0338880 A1* 11/2018 Ohta A61H 3/008
 2019/0001493 A1* 1/2019 Hyun B25J 9/1633

2019/0091094 A1 3/2019 Romo et al.
 2019/0192373 A1* 6/2019 Vouga A61H 1/0262
 2019/0254908 A1 8/2019 Ortlieb et al.
 2019/0282429 A1 9/2019 Son et al.
 2019/0314238 A1 10/2019 Kobayashi
 2019/0328553 A1* 10/2019 Sankai A61F 2/72
 2019/0344432 A1* 11/2019 Grenier A45F 3/10
 2019/0358808 A1 11/2019 Yoshimi et al.
 2020/0078253 A1* 3/2020 Song G16H 20/30
 2020/0078254 A1* 3/2020 Uematsu A61H 1/0237
 2020/0179218 A1 6/2020 Katoh et al.
 2020/0206062 A1* 7/2020 Kim B25J 9/0006
 2020/0237600 A1* 7/2020 Arai B25J 13/088
 2020/0281803 A1* 9/2020 Teng A45B 7/005
 2020/0289030 A1 9/2020 Ikeuchi
 2020/0289357 A1 9/2020 Sato et al.
 2020/0297571 A1* 9/2020 Takahashi G16H 50/30
 2020/0337934 A1 10/2020 Wang et al.
 2020/0368094 A1 11/2020 Yoshimi et al.
 2020/0383865 A1* 12/2020 Barnes A41D 13/0007
 2020/0405566 A1* 12/2020 Chan G06F 3/011
 2020/0406449 A1* 12/2020 Bilodeau A61H 1/0262
 2021/0000678 A1* 1/2021 Yasuhara A61H 1/0244
 2021/0030613 A1 2/2021 Kodama et al.
 2021/0052408 A1* 2/2021 Takahashi A61F 5/0123
 2021/0052460 A1* 2/2021 Soucy A61H 1/0262
 2021/0069053 A1* 3/2021 Terada A61H 3/00
 2021/0077335 A1 3/2021 Yoshimi et al.
 2021/0077839 A1 3/2021 Arai et al.
 2021/0078162 A1 3/2021 Yoshimi et al.
 2021/0078163 A1 3/2021 Ohtsubo et al.
 2021/0128389 A1 5/2021 Ohta et al.
 2021/0128390 A1* 5/2021 Choi A61H 3/00
 2021/0137722 A1 5/2021 Arai et al.
 2021/0291354 A1 9/2021 Kobayashi et al.
 2021/0369534 A1* 12/2021 Kobayashi A61H 1/0244

OTHER PUBLICATIONS

U.S. Notice of Allowance dated Oct. 6, 2021 in parent U.S. Appl. No. 29/693,987 (6 pages).
 U.S. Non-Final Office Action dated Jun. 18, 2021 in divisional U.S. Appl. No. 29/772,524 (9 pages).
 U.S. Notice of Allowance dated Oct. 7, 2021 in divisional U.S. Appl. No. 29/772,524 (6 pages).
 U.S. Non-Final Office Action dated Jun. 18, 2021 in divisional U.S. Appl. No. 29/772,532 (8 pages).
 U.S. Notice of Allowance dated Oct. 7, 2021 in divisional U.S. Appl. No. 29/772,532 (6 pages).

* cited by examiner

FIG. 1

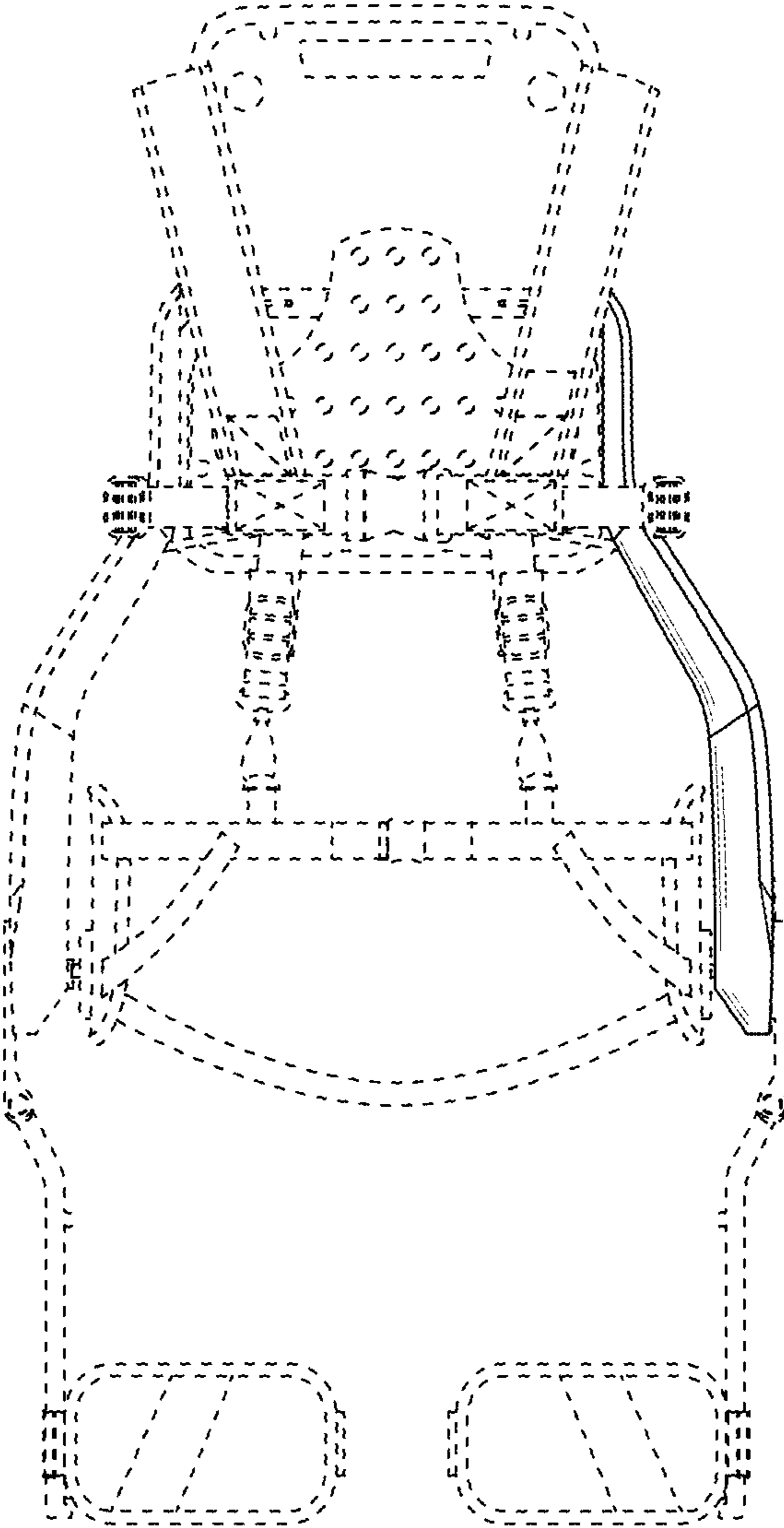


FIG. 2

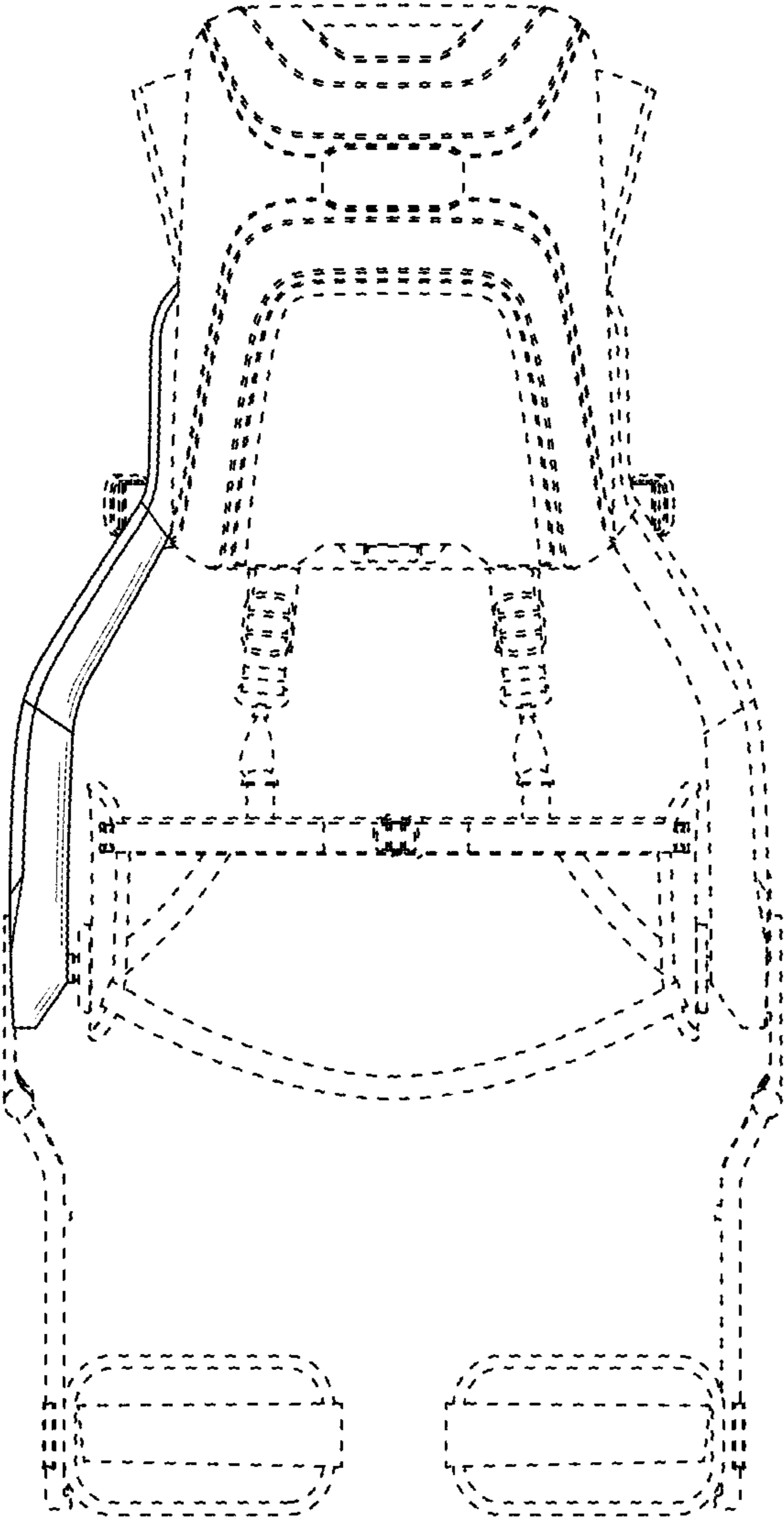


FIG. 3

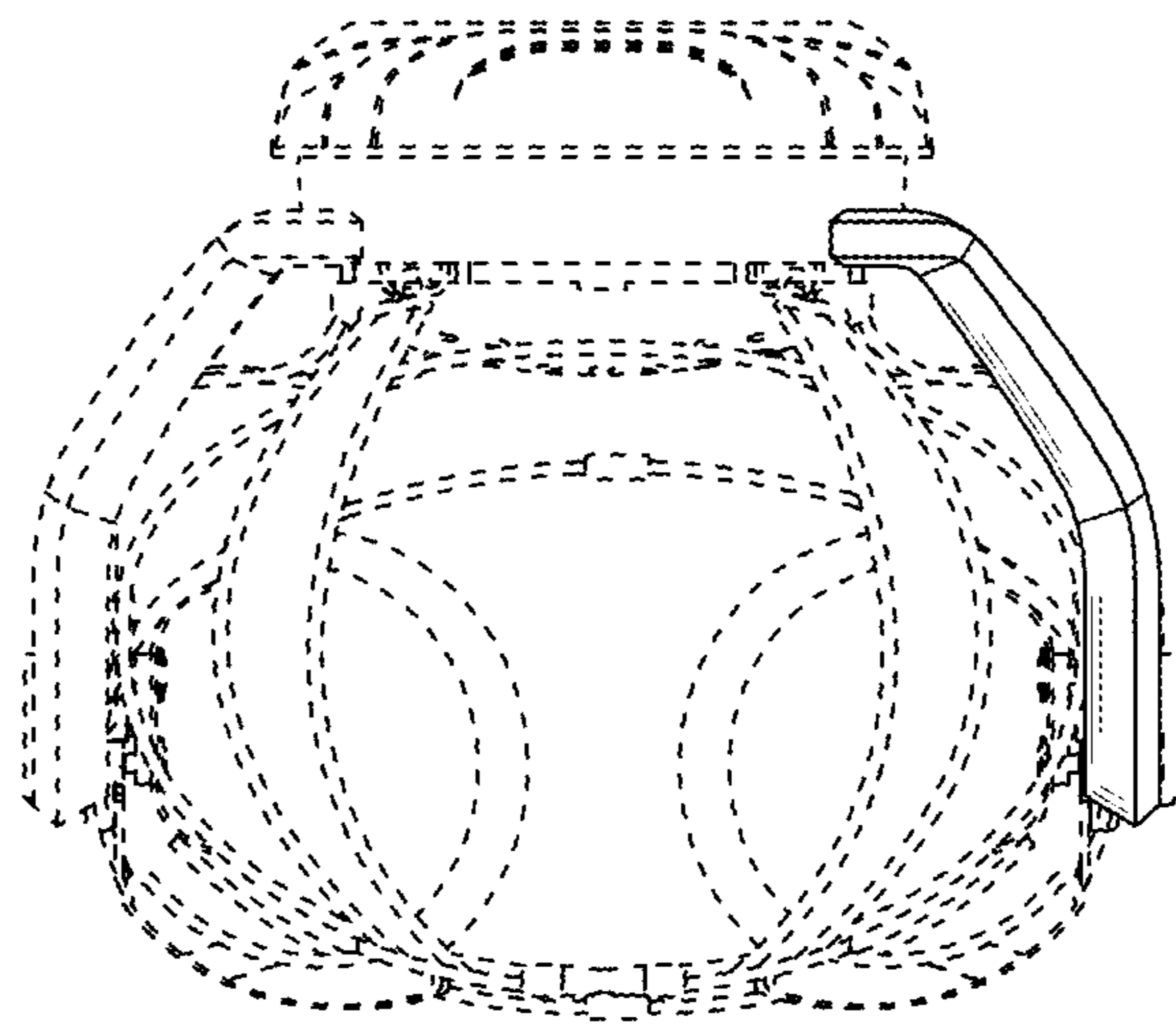


FIG. 4

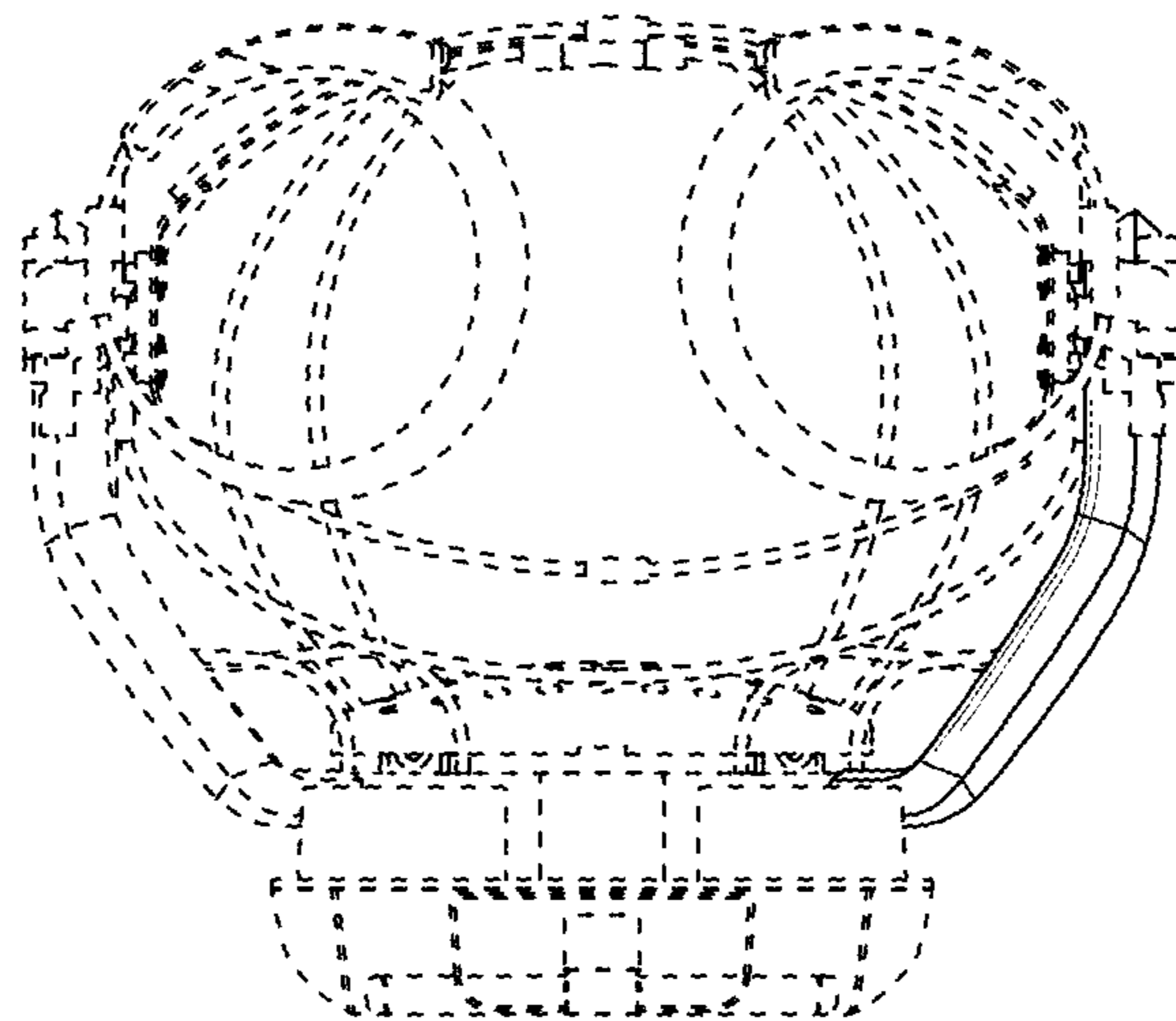


FIG. 5

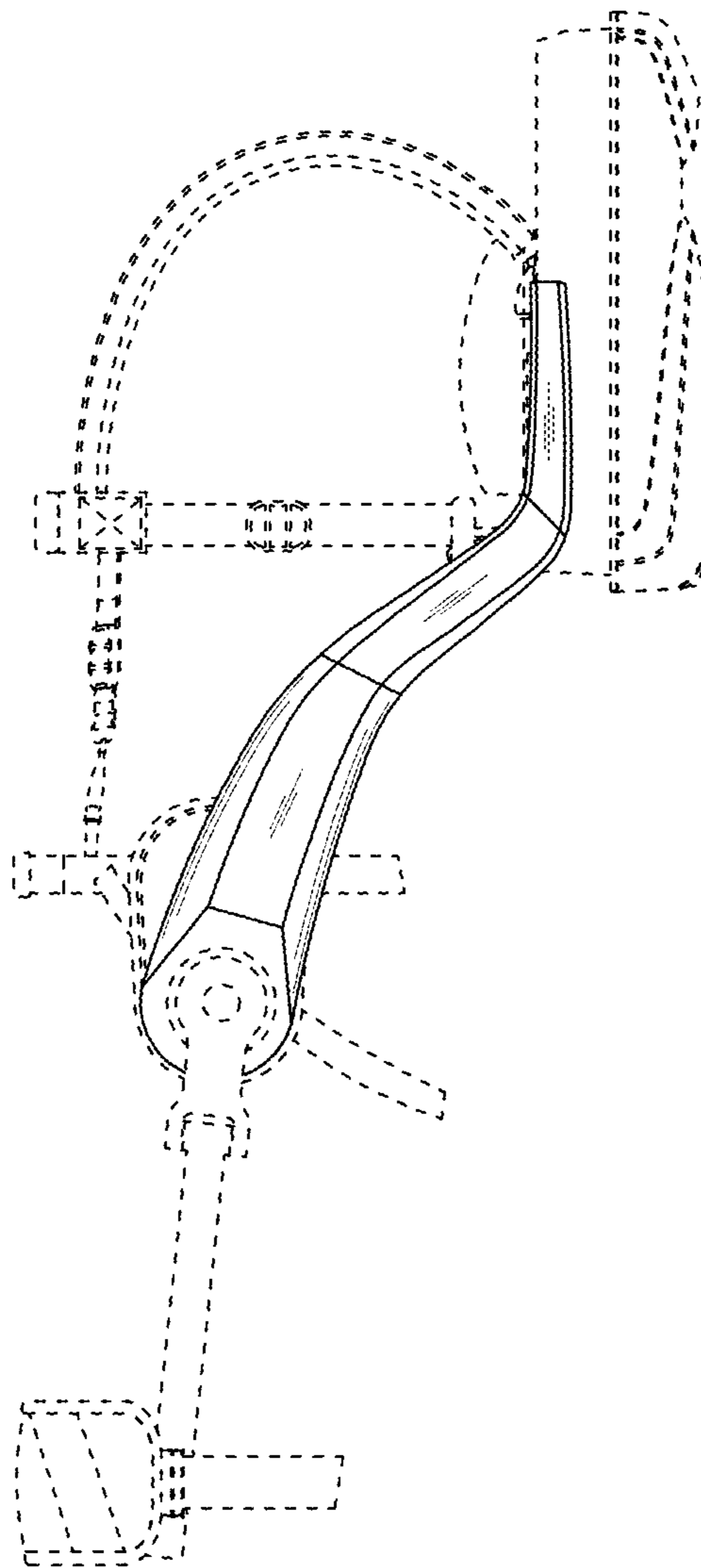


FIG. 6

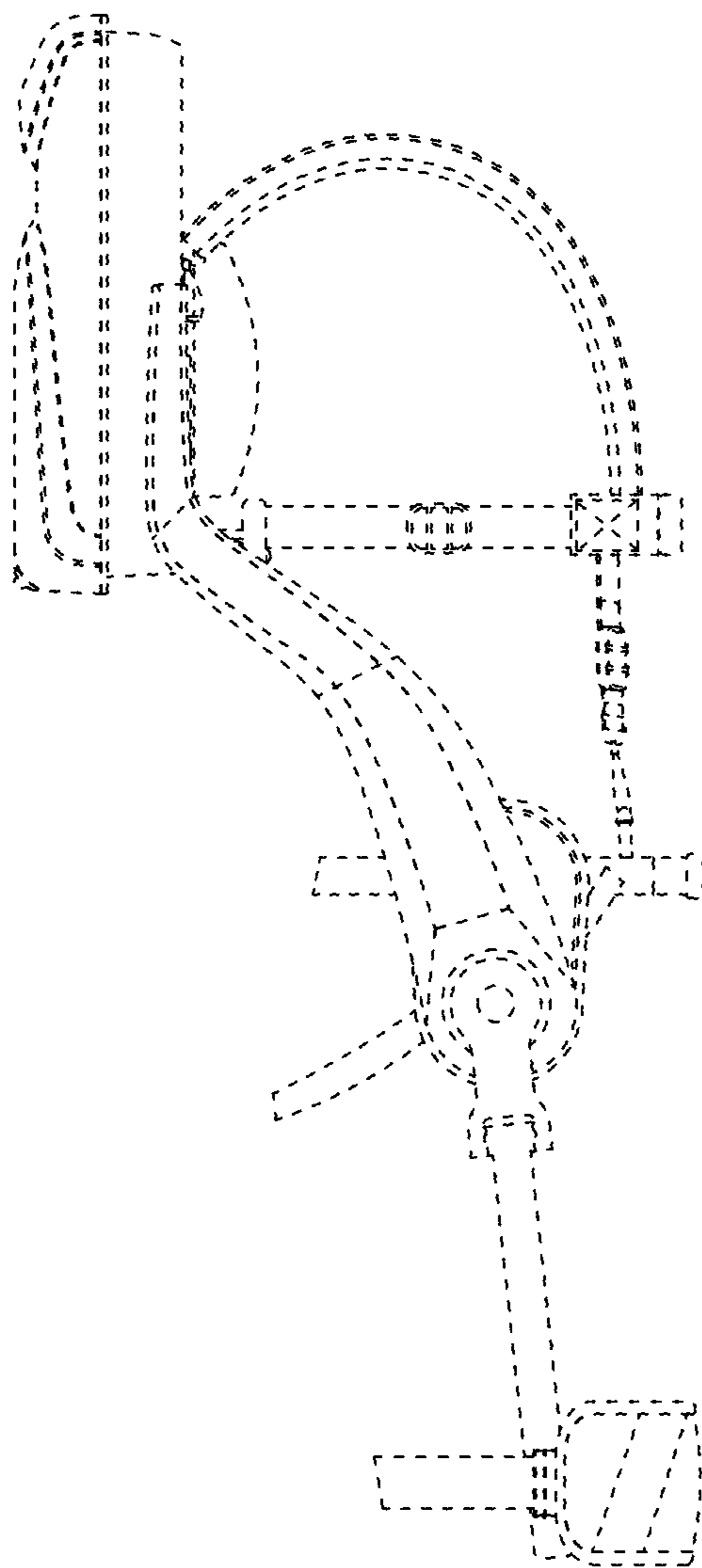


FIG. 7

