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

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(54) **PATIENT INTERFACE ASSEMBLY**

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(**) Term: **14 Years**

(21) Appl. No.: **29/401,929**

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(51) **LOC (9) Cl.** **29-02**

(52) **U.S. Cl.**
USPC **D24/110.4; D24/110.1**

(58) **Field of Classification Search**
USPC D24/110.1-110.6; 128/204.18-207.13
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,167,185 A 9/1979 Lewis
6,374,826 B1 * 4/2002 Gunaratnam et al. ... 128/206.27
6,467,483 B1 10/2002 Kopacko et al.
D476,732 S * 7/2003 Smart D24/110.4
6,651,663 B2 11/2003 Barnett et al.
D486,226 S * 2/2004 Guney et al. D24/110.1
D549,322 S * 8/2007 Stallard et al. D24/110.1
D555,785 S * 11/2007 McAuley et al. D24/110.1
D557,411 S * 12/2007 Smart et al. D24/110.1
D558,334 S * 12/2007 Stallard et al. D24/110.1
D582,546 S * 12/2008 Fujiura et al. D24/110.1
D583,930 S * 12/2008 McAuley et al. D24/110.1
D586,458 S * 2/2009 Kooij et al. D24/110.1
D586,906 S * 2/2009 Stallard et al. D24/110.1
7,523,754 B2 4/2009 Lithgow et al.
D595,841 S * 7/2009 McAuley et al. D24/110.1
D597,661 S * 8/2009 Reid et al. D24/110.1
7,665,464 B2 2/2010 Kopacko et al.

D612,483 S * 3/2010 Chang D24/110.1
D612,932 S * 3/2010 Davidson et al. D24/110.1
D614,763 S * 4/2010 Maurer et al. D24/110.1
D624,642 S * 9/2010 Collazo et al. D24/110.1
7,827,990 B1 11/2010 Melidis et al.
7,861,718 B2 * 1/2011 Janbakhsh et al. 128/205.25
D639,419 S * 6/2011 Eves et al. D24/110.1
D639,932 S * 6/2011 D'Souza et al. D24/110.1
D645,955 S * 9/2011 Kooij et al. D24/110.1
D653,328 S * 1/2012 Eves et al. D24/110.1
D665,494 S * 8/2012 Stallard et al. D24/110.1
2007/0215161 A1 9/2007 Frater et al.
2007/0267017 A1 11/2007 McAuley et al.
2008/0110464 A1 5/2008 Davidson et al.
2010/0122701 A1 * 5/2010 Gunaratnam et al. ... 128/205.25

FOREIGN PATENT DOCUMENTS

EP 1258266 11/2002
NZ 551715 2/2011
WO WO 01/32250 5/2001
WO WO 2005/094928 10/2005
WO WO 2005/123166 12/2005
WO WO 2006/074513 7/2006
WO WO 2010/009877 1/2010
WO WO 2010/135785 12/2010

* cited by examiner

Primary Examiner — Richard E Chilcot

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(57) **CLAIM**

The ornamental design for a patient interface assembly, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a patient interface which incorporates our design;
FIG. 2 is a rear perspective view of the patient interface of FIG. 1;
FIG. 3 is a left side elevational view of the patient interface of FIG. 1;
FIG. 4 is a right side elevational view of the patient interface of FIG. 1;

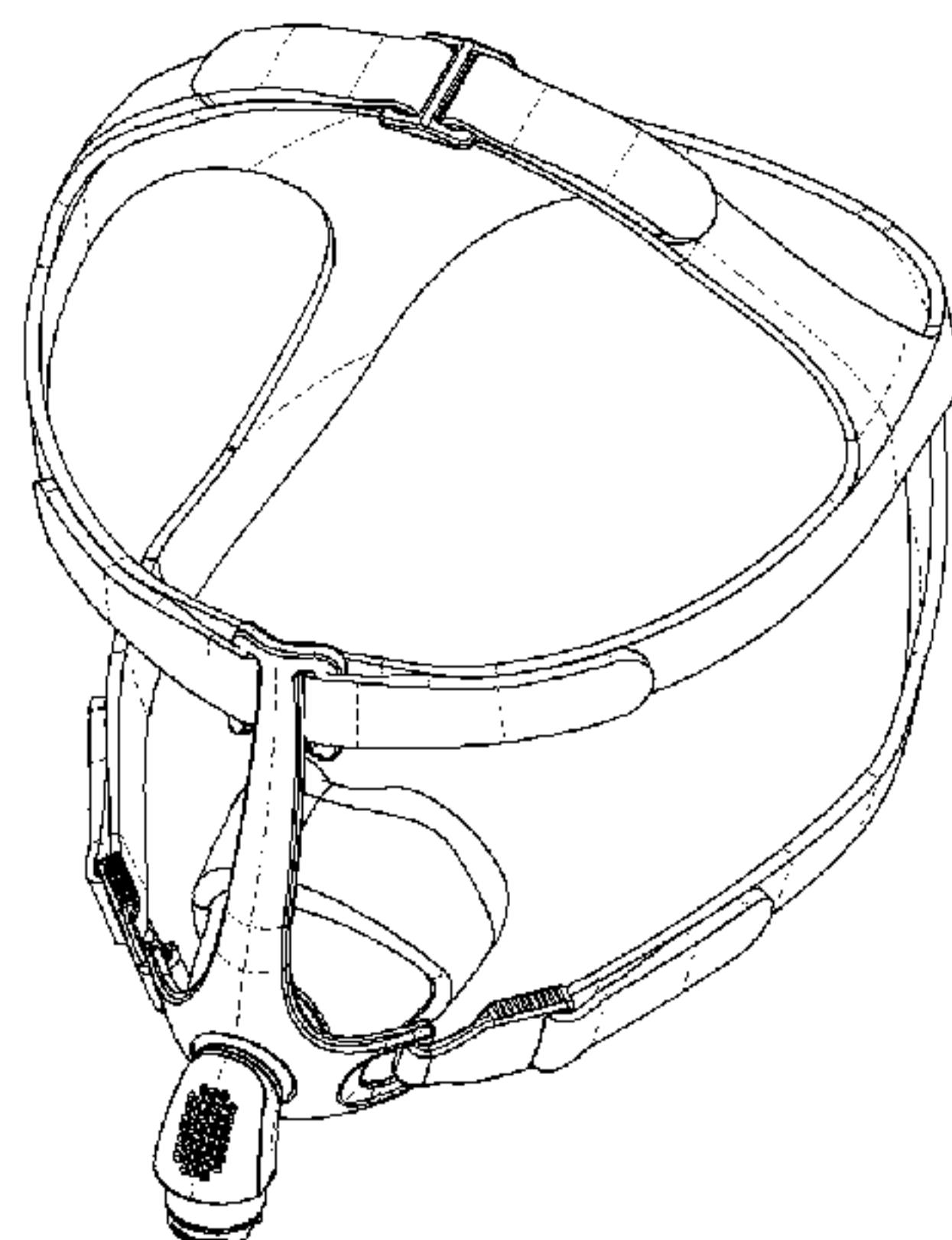


FIG. 5 is a front elevational view of the patient interface of FIG. 1;
FIG. 6 is a rear elevational view of the patient interface of FIG. 1;
FIG. 7 is a top elevational view of the patient interface of FIG. 1;
FIG. 8 is a bottom elevational view of the patient interface of FIG. 1;
FIG. 9 is a front perspective view of a headgear assembly of the patient interface of FIG. 1;
FIG. 10 is a rear perspective view of the headgear assembly of FIG. 9;
FIG. 11 is a left side elevational view of the headgear assembly of FIG. 9;
FIG. 12 is a right side elevational view of the headgear assembly of FIG. 9;
FIG. 13 is a front elevational view of the headgear assembly of FIG. 9;
FIG. 14 is a rear elevational view of the headgear assembly of FIG. 9;
FIG. 15 is a top elevational view of the headgear assembly of FIG. 9;
FIG. 16 is a bottom elevational view of the headgear assembly of FIG. 9;
FIG. 17 is a rear perspective view of a seal of the patient interface of FIG. 1;
FIG. 18 is a front perspective view of a seal of the patient interface of FIG. 1;
FIG. 19 is a left side elevational view of the seal of FIG. 17;
FIG. 20 is a right side elevational view of the seal of FIG. 17;
FIG. 21 is a rear elevational view of the seal of FIG. 17;
FIG. 22 is a front elevational view of the seal of FIG. 17;
FIG. 23 is a top elevational view of the seal of FIG. 17;
FIG. 24 is a bottom elevational view of the seal of FIG. 17;
FIG. 25 is a close-up of the view of FIG. 22;

FIG. 26 is a cross-sectional view taken along line 26-26 of FIG. 25;
FIG. 27 is a rear perspective view of a frame of the patient interface of FIG. 1;
FIG. 28 is a left side elevational view of the frame of FIG. 27;
FIG. 29 is a right side elevational view of the frame of FIG. 27;
FIG. 30 is a front elevational view of the frame of FIG. 27;
FIG. 31 is a rear perspective view of the frame of FIG. 27;
FIG. 32 is a top elevational view of the frame of FIG. 27;
FIG. 33 is a bottom elevational view of the frame of FIG. 27;
FIG. 34 is a rear perspective view of an elbow of the patient interface of FIG. 1;
FIG. 35 is a right side elevational view of the elbow of FIG. 34;
FIG. 36 is a left side elevational view of the elbow of FIG. 34;
FIG. 37 is a rear elevational view of the elbow of FIG. 34;
FIG. 38 is a front elevational view of the elbow of FIG. 34;
FIG. 39 is a top elevational view of the elbow of FIG. 34;
FIG. 40 is a bottom elevational view of the elbow of FIG. 34;
FIG. 41 is a perspective view of the headstrap of the headgear assembly of FIG. 9 oriented in a vertical plane;
FIG. 42 is a front elevational view of the headstrap of FIG. 41, the rear elevational view being identical to the view of FIG. 42;
FIG. 43 is a top elevational view of the headstrap of FIG. 41;
FIG. 44 is a bottom elevational view of the headstrap of FIG. 41; and,
FIG. 45 is a left side elevational view of the headstrap of FIG. 41, the right side elevational view being identical to the view of FIG. 45.
The headgear assembly, the seal, the frame, the elbow and headstrap of the patient interfaces assembly have been illustrated and described separately for clarity of disclosure.

1 Claim, 14 Drawing Sheets

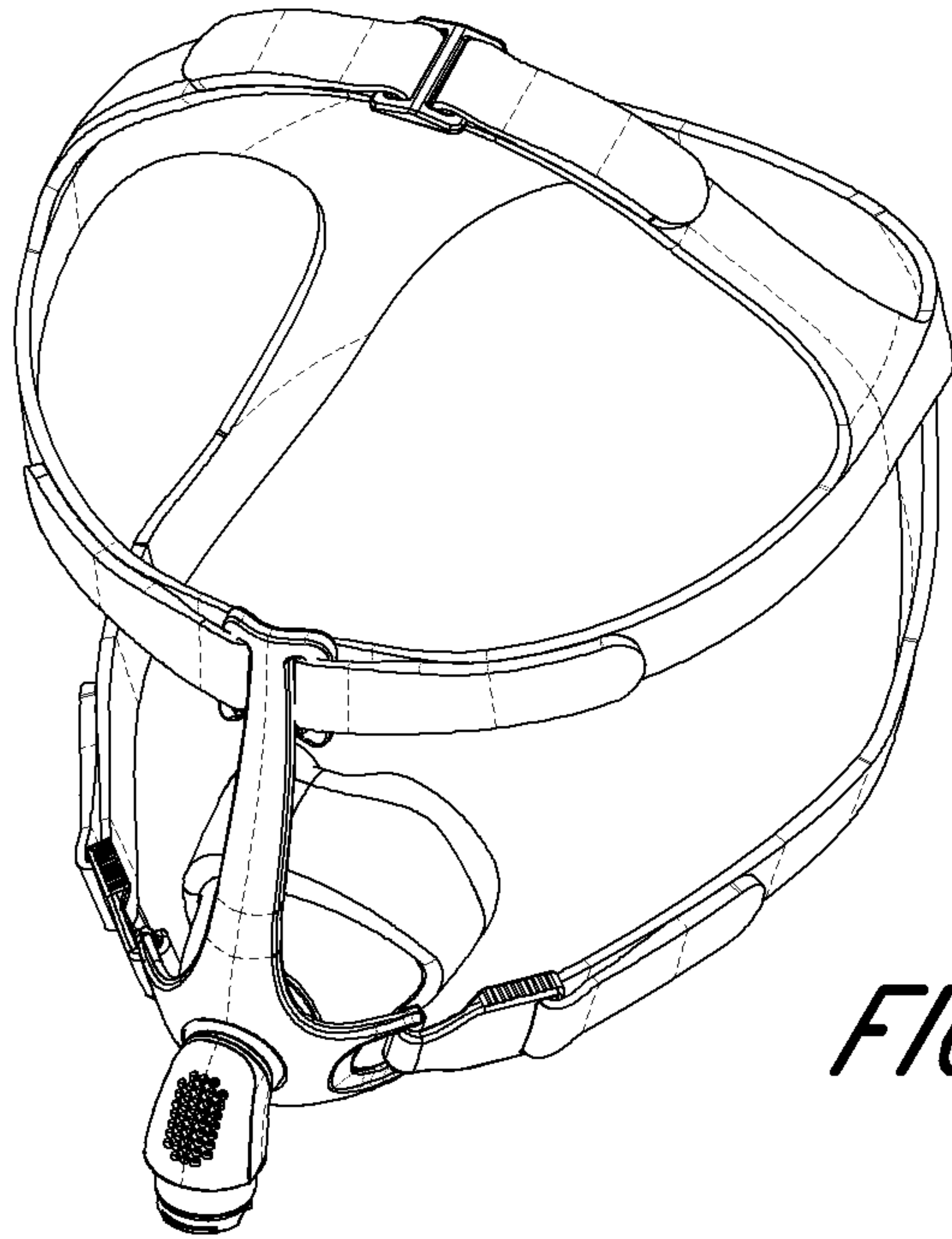


FIG. 1

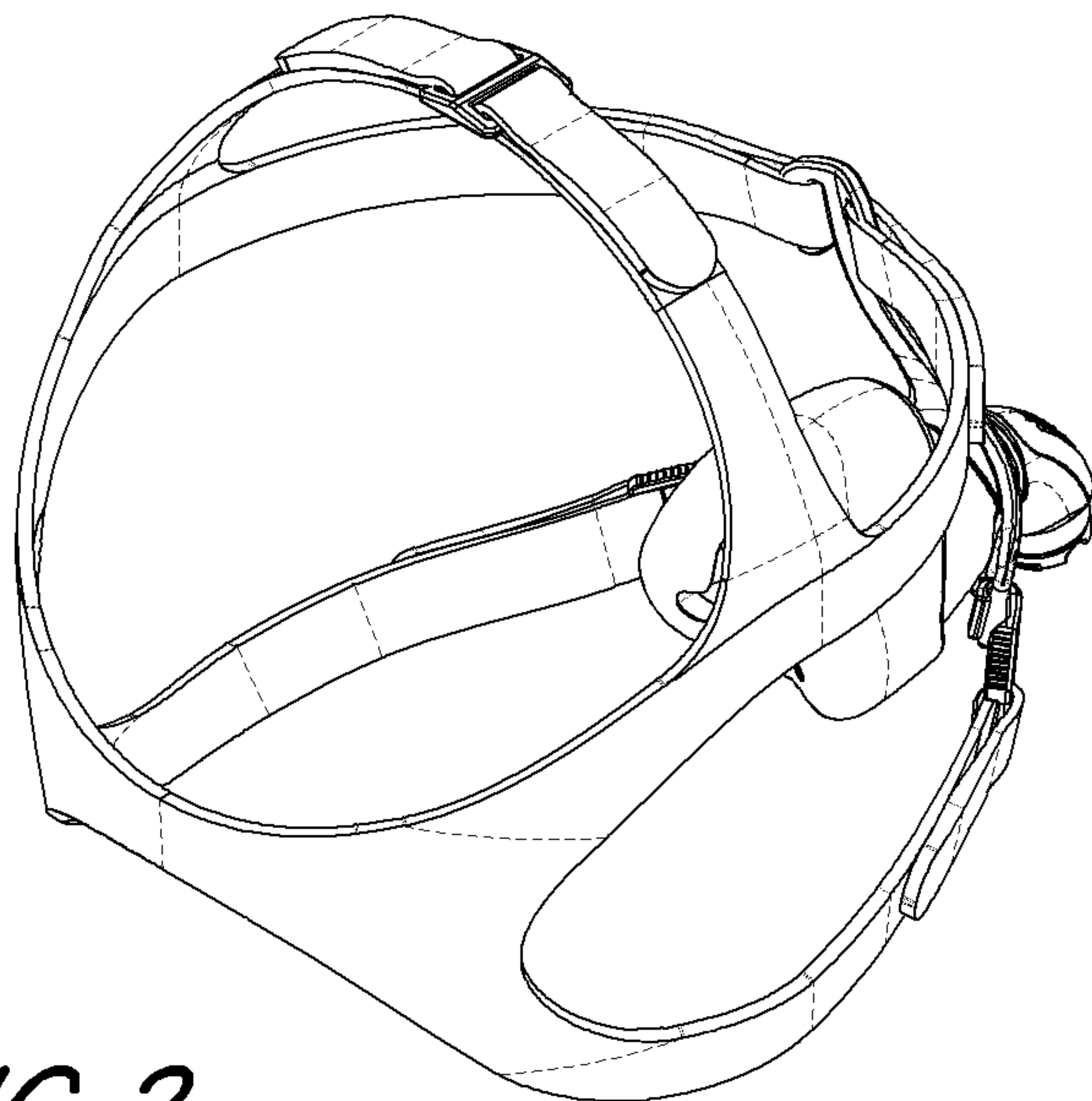


FIG. 2

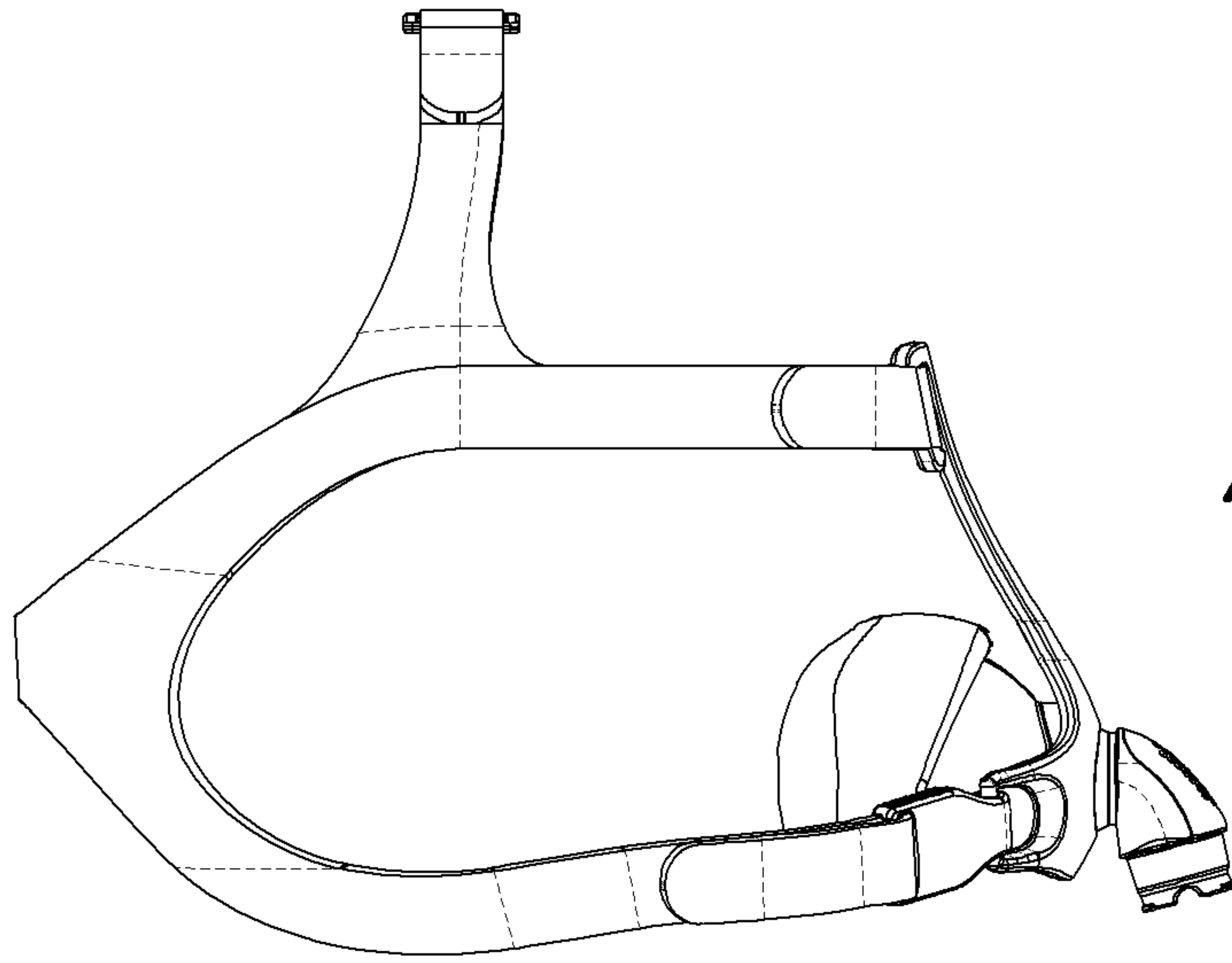


FIG. 3

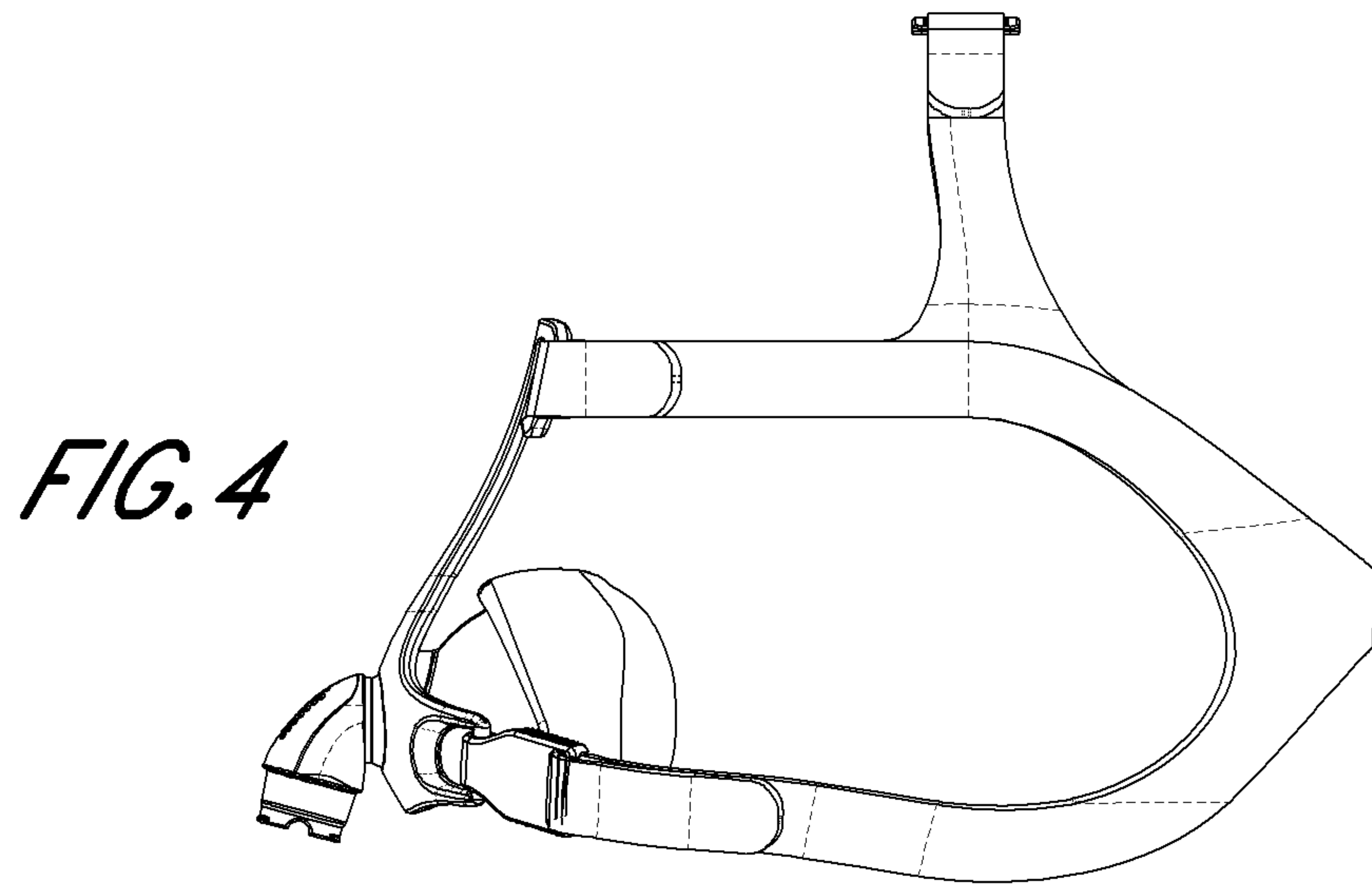


FIG. 4

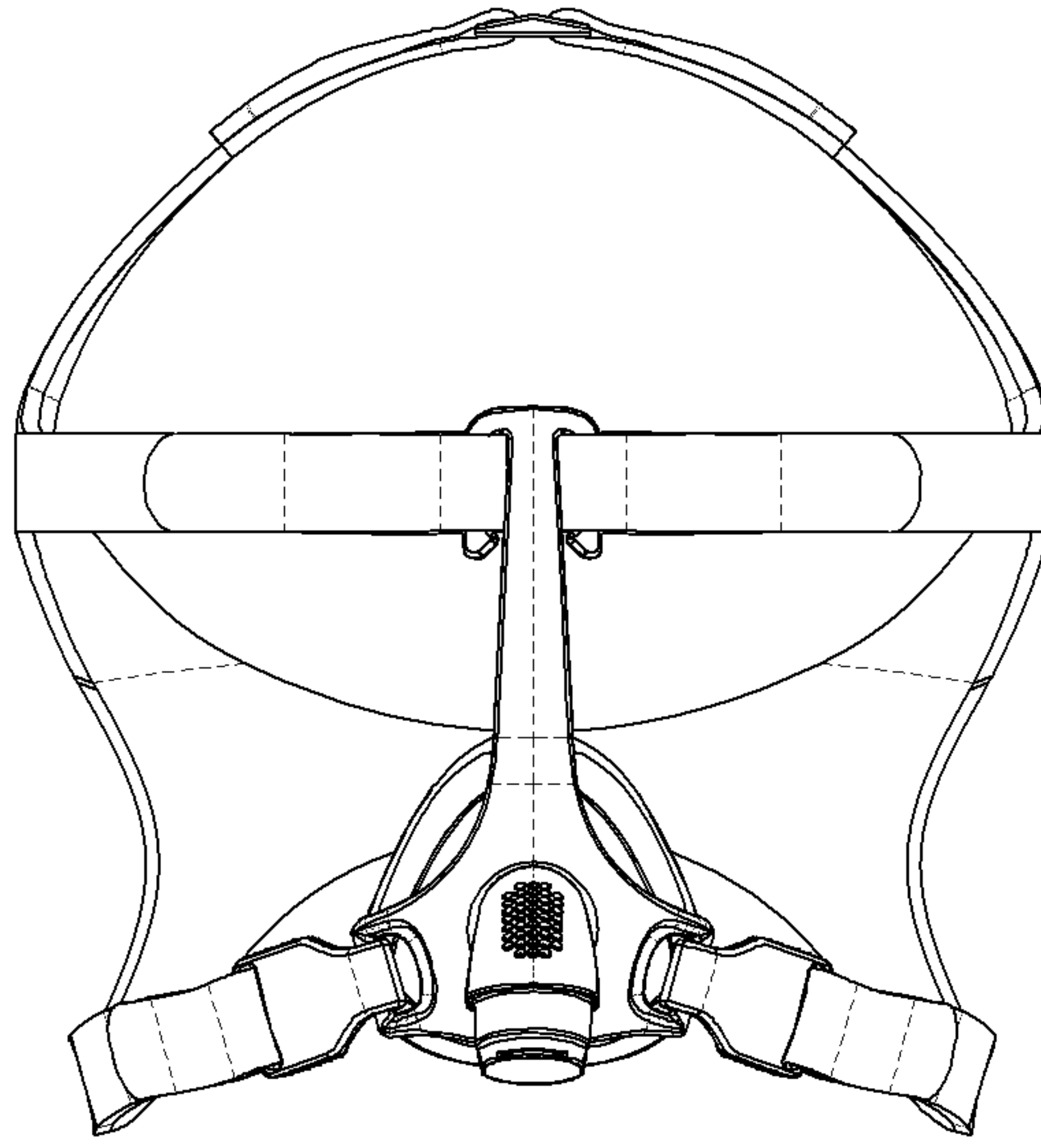
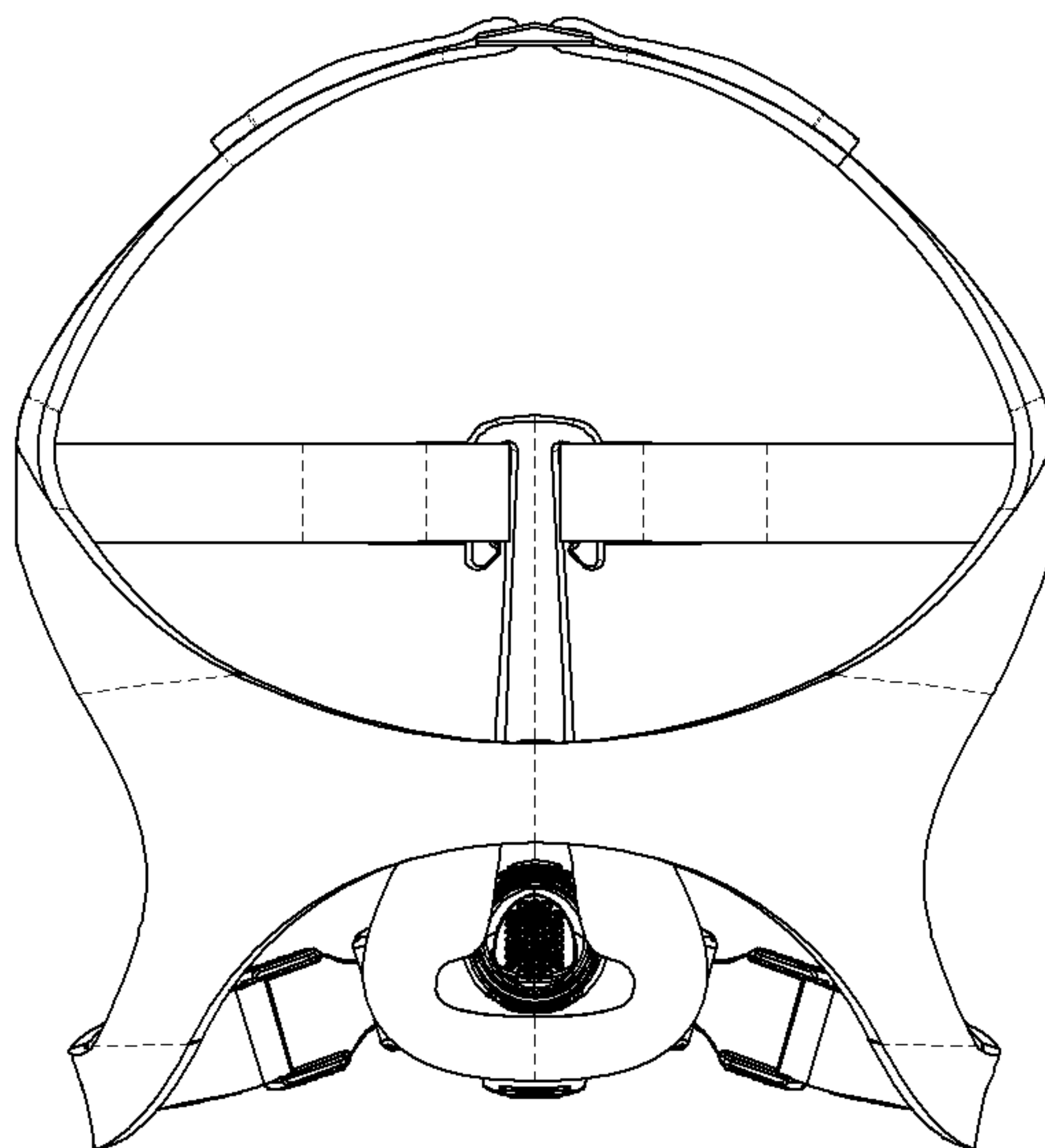


FIG. 5

FIG. 6



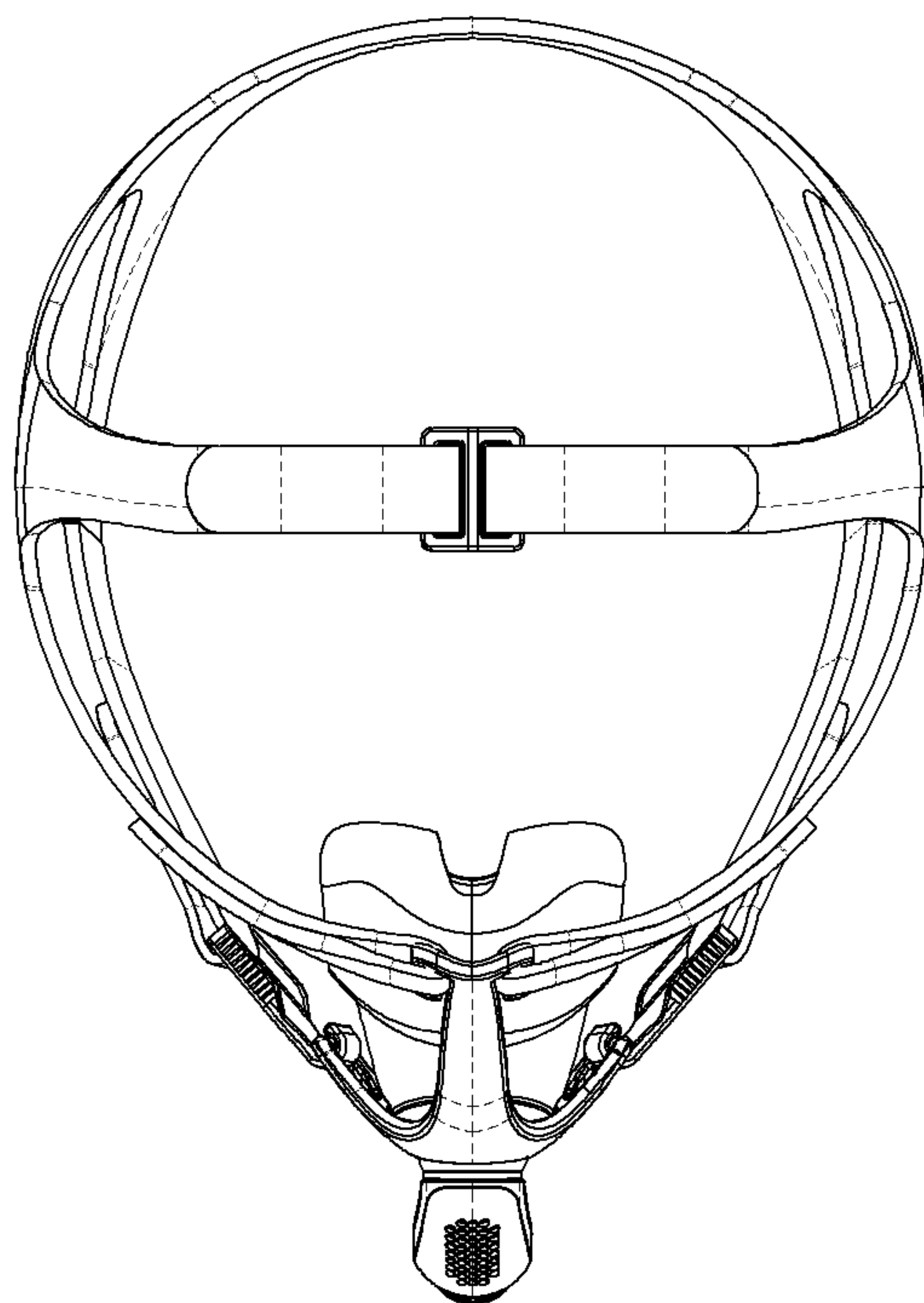


FIG. 7

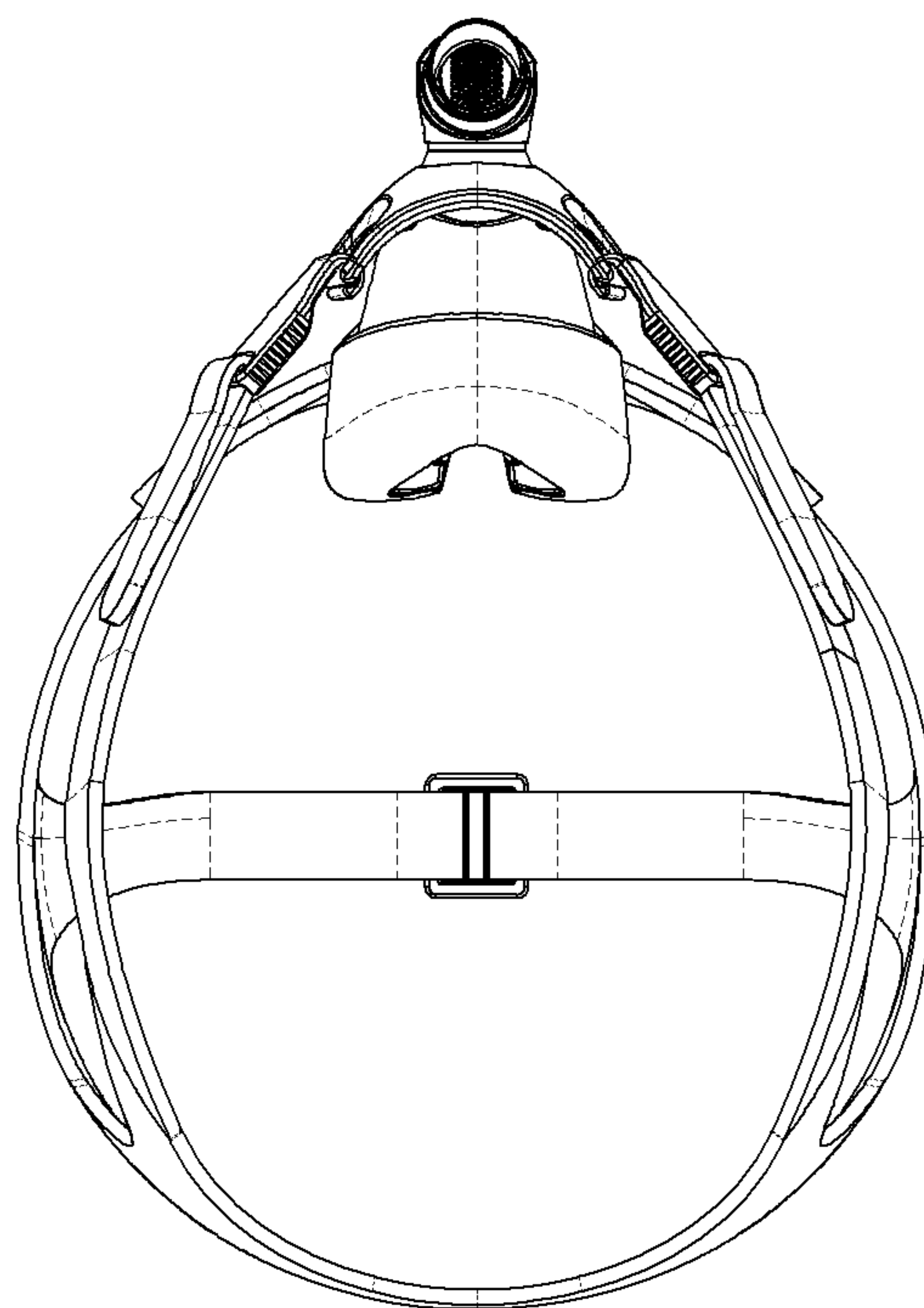


FIG. 8

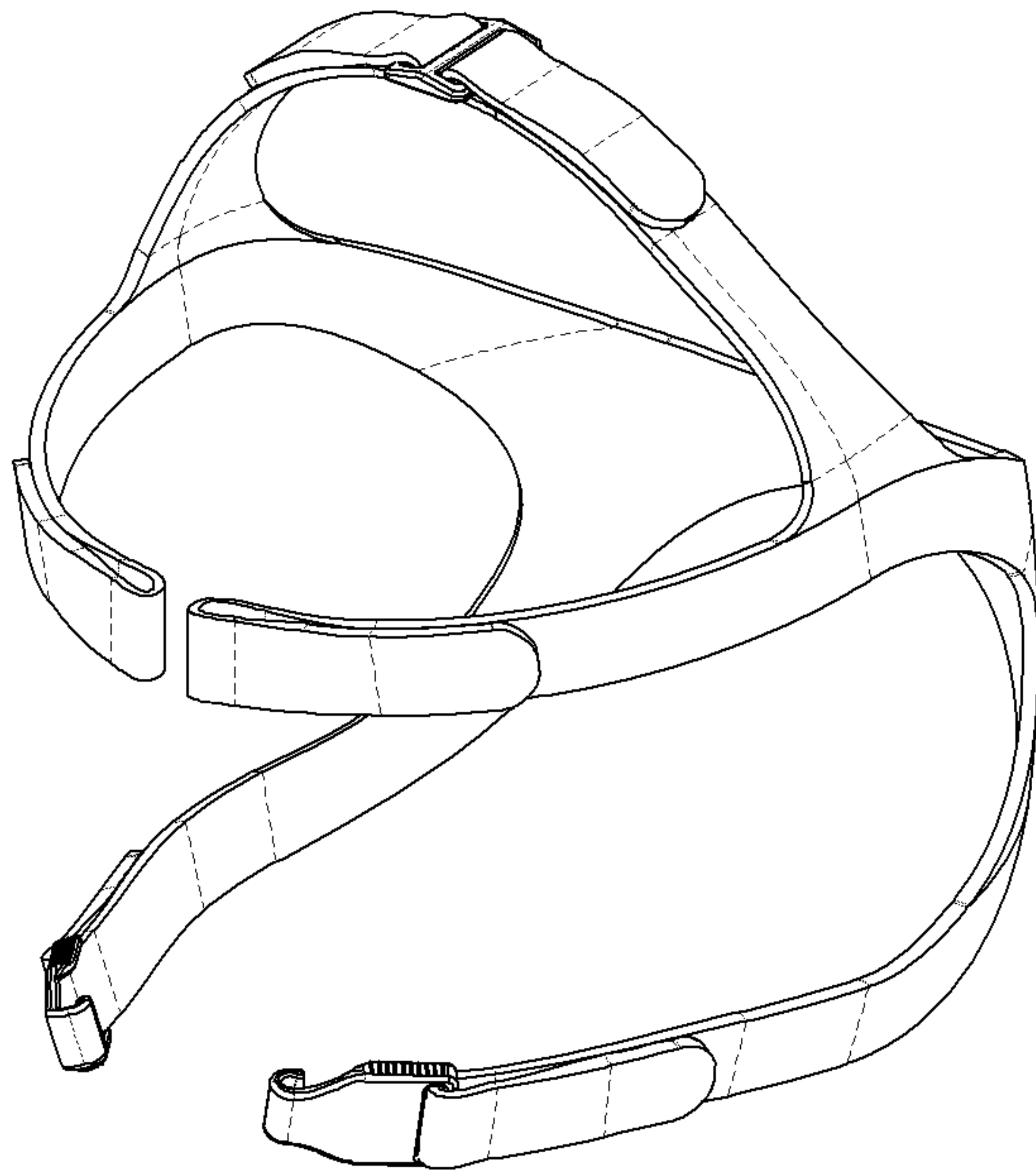


FIG. 9

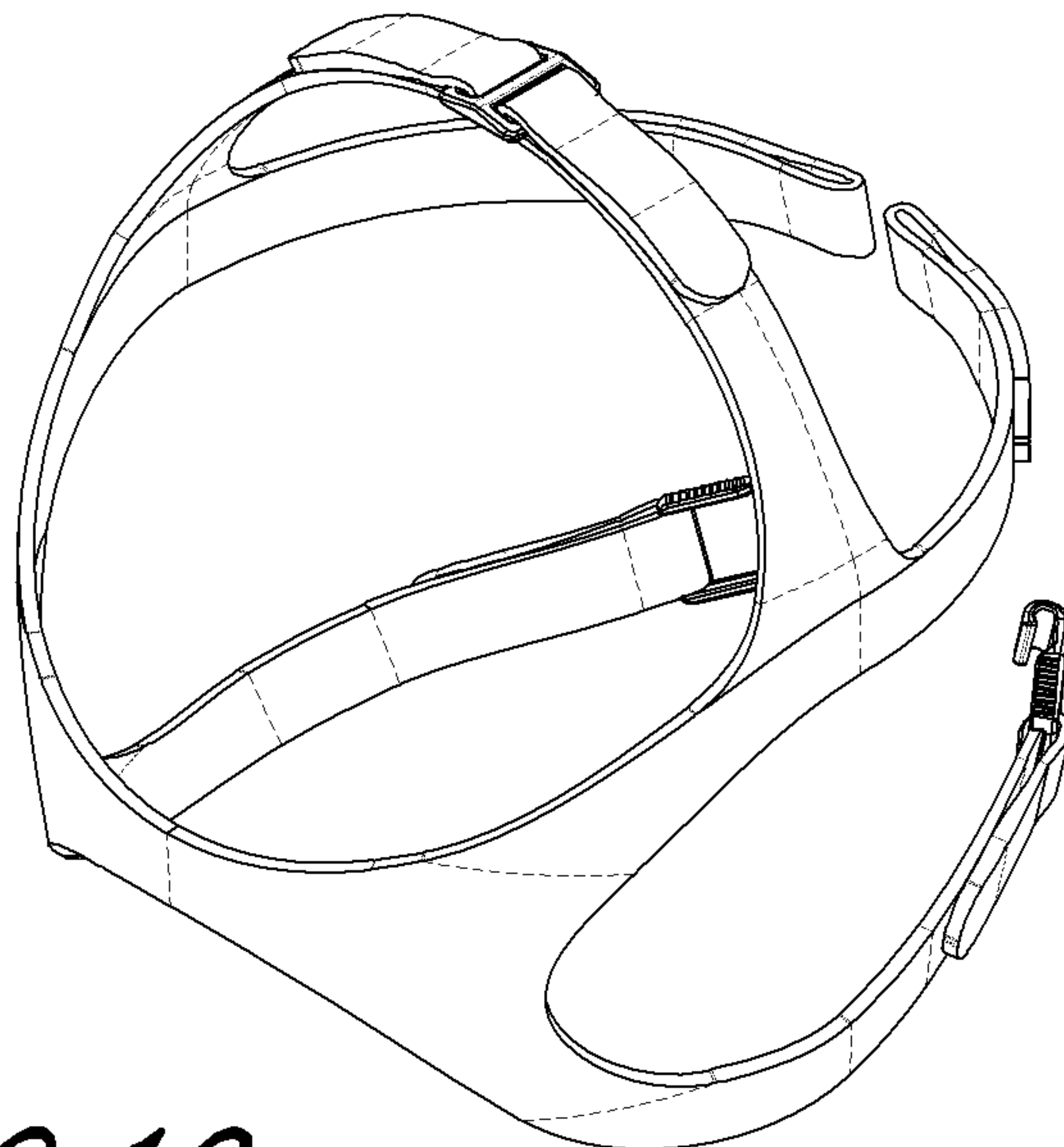


FIG. 10

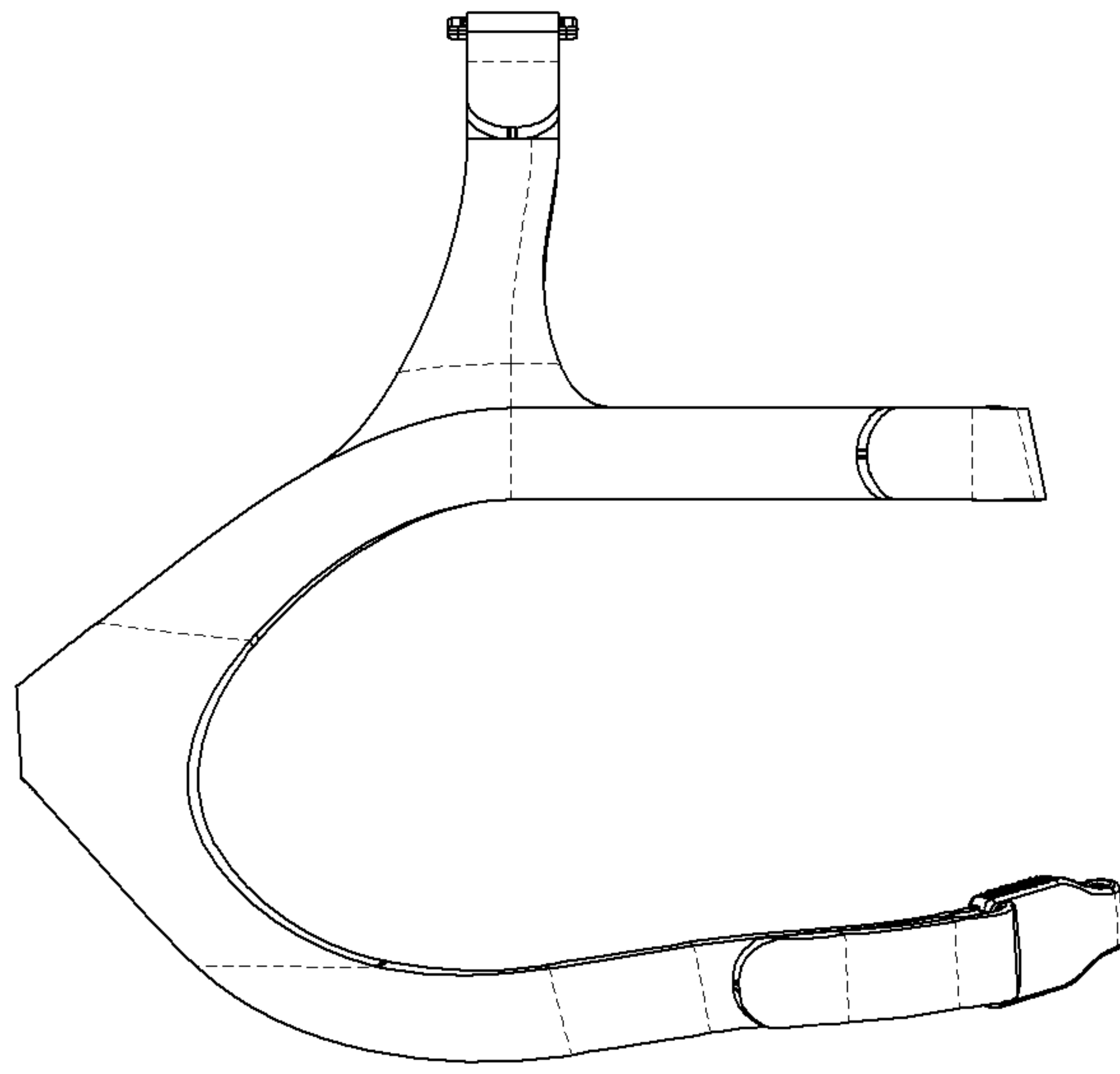


FIG. 11

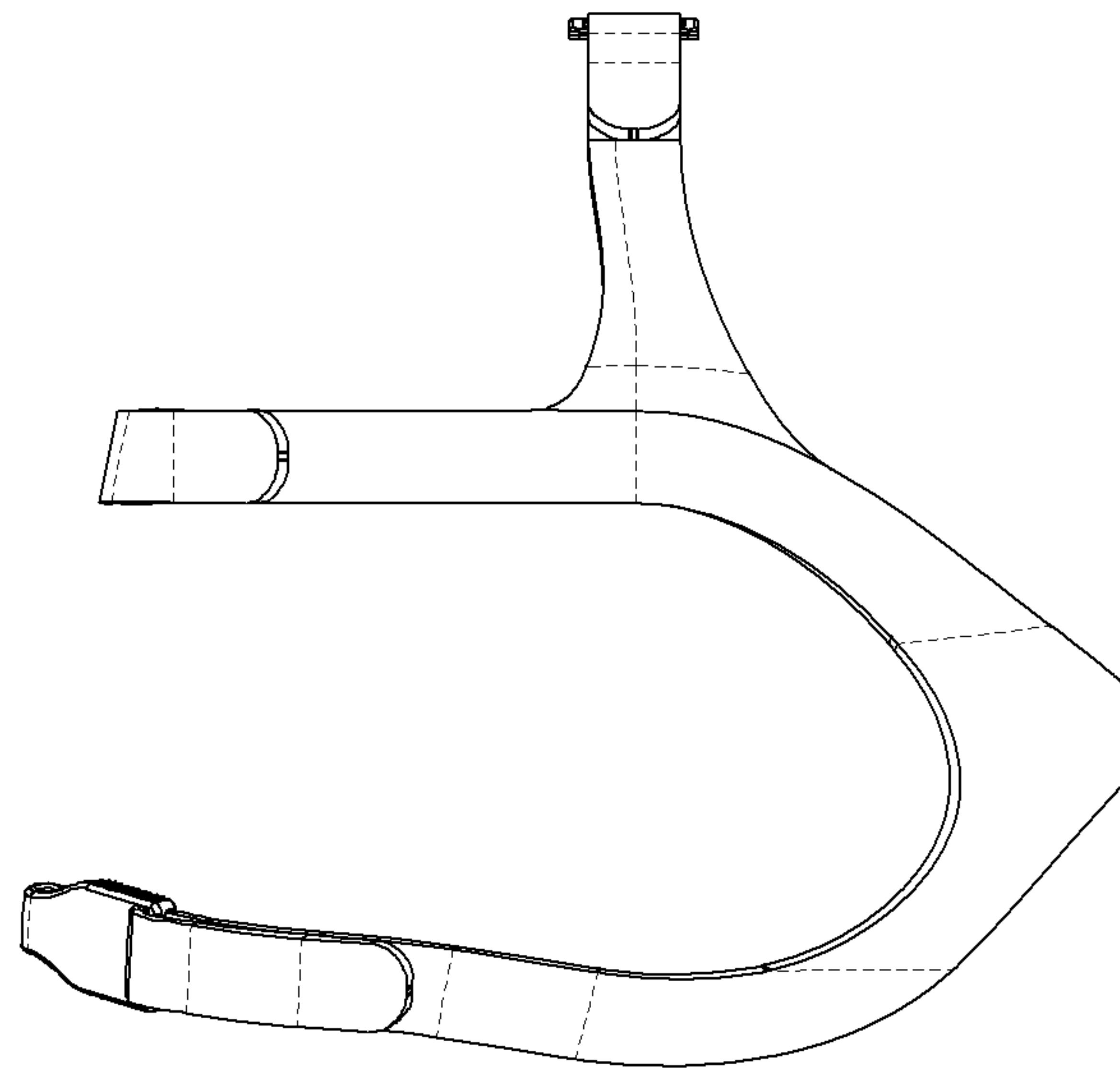


FIG. 12

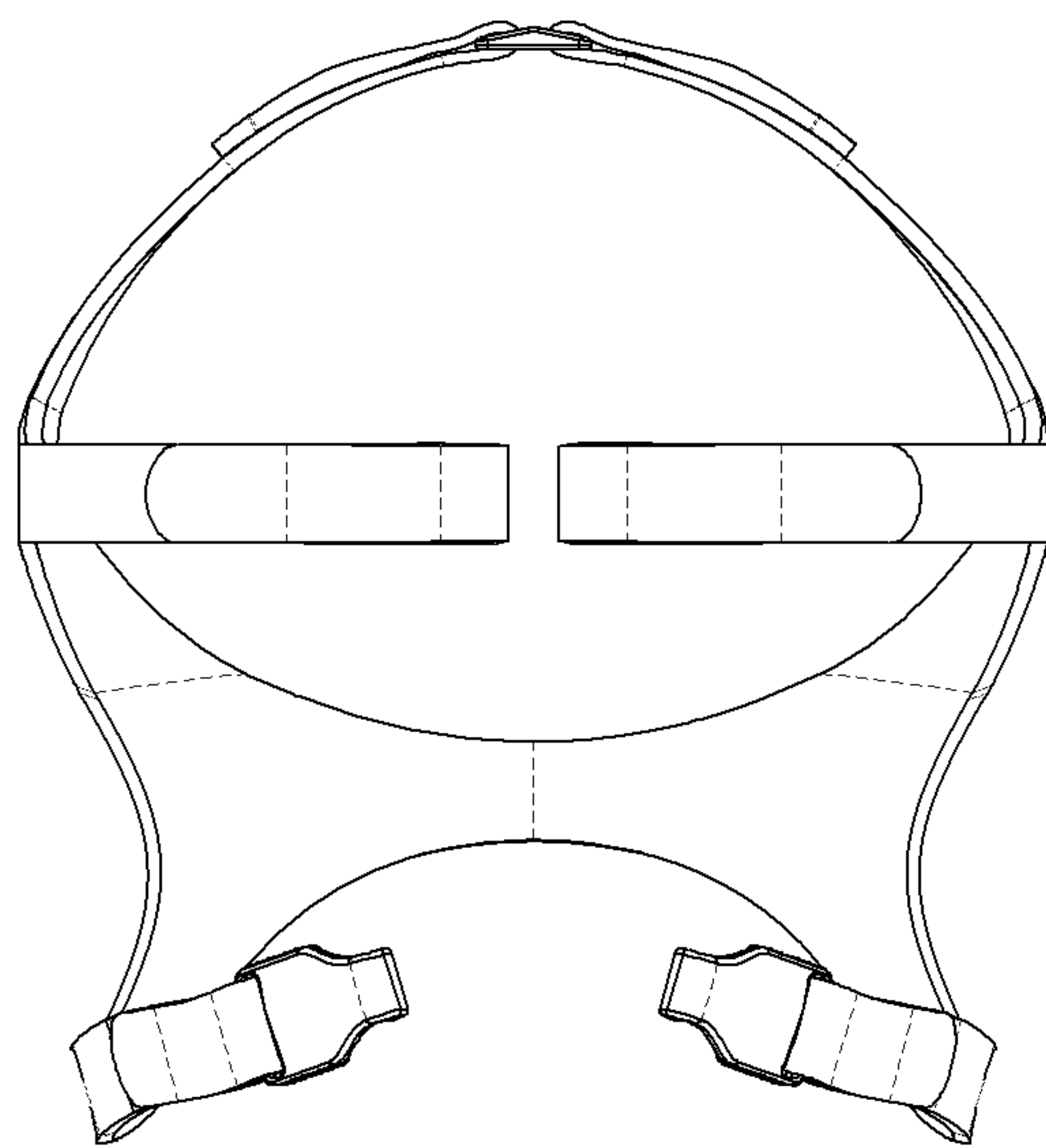


FIG. 13

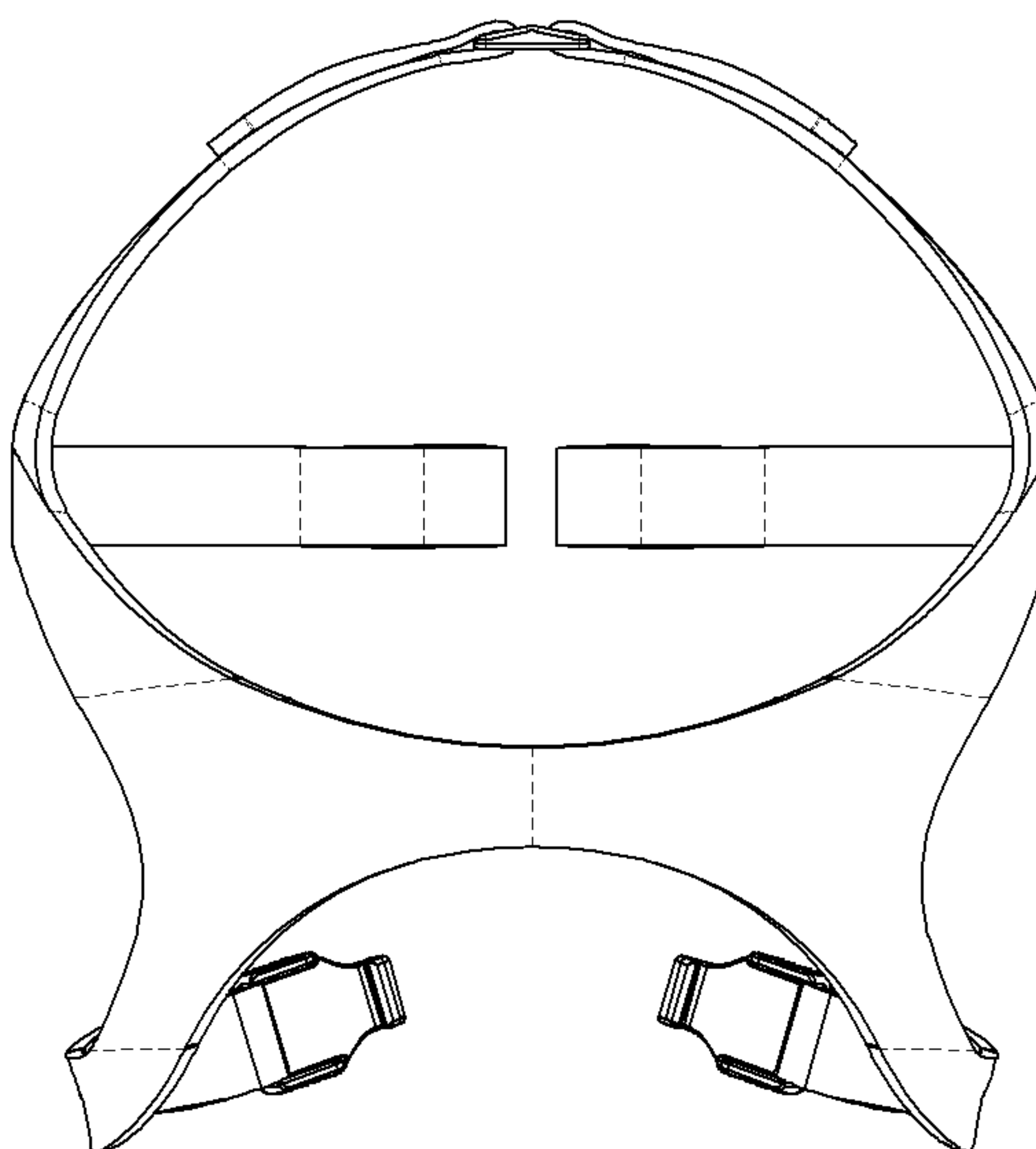


FIG. 14

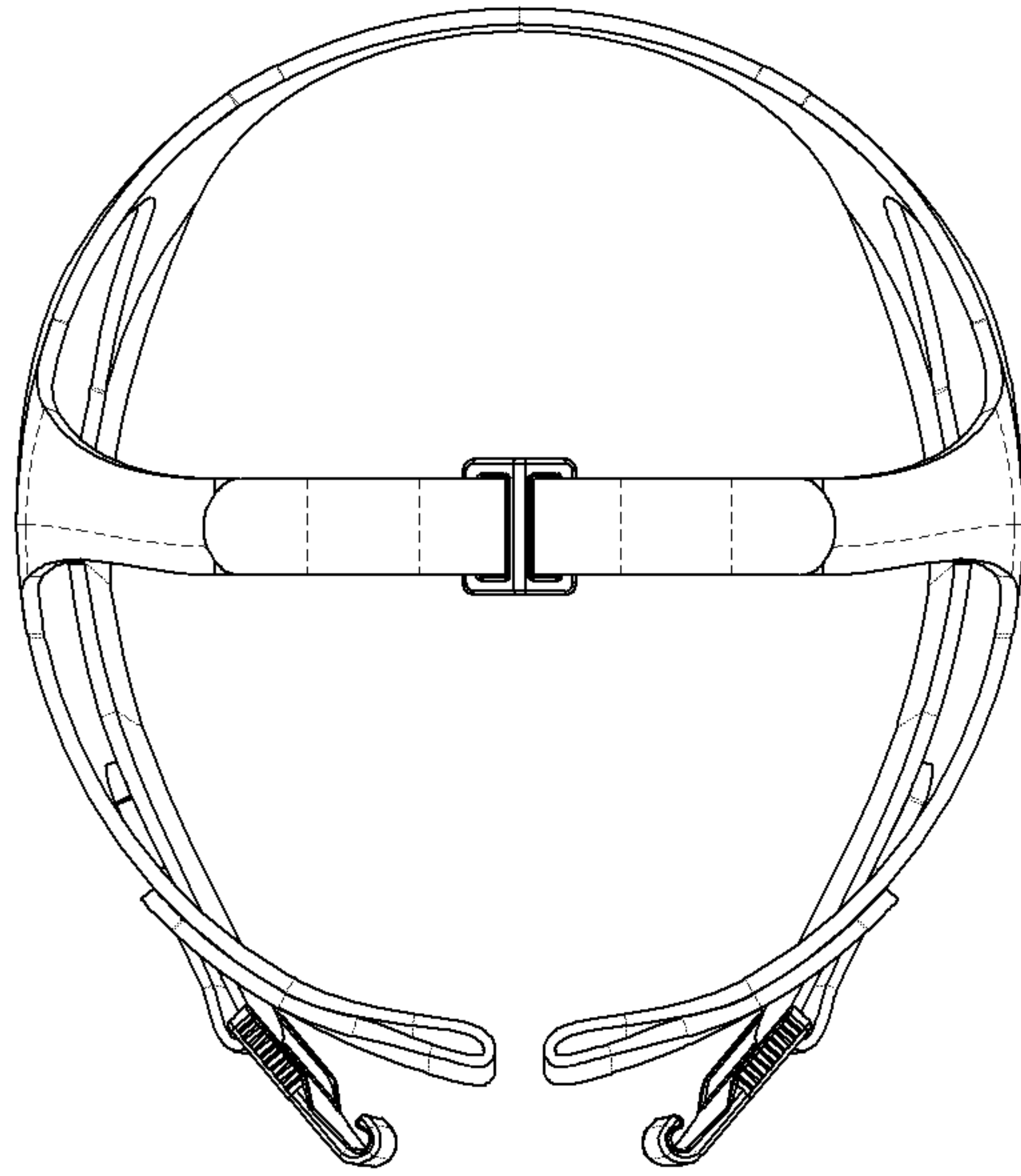


FIG. 15

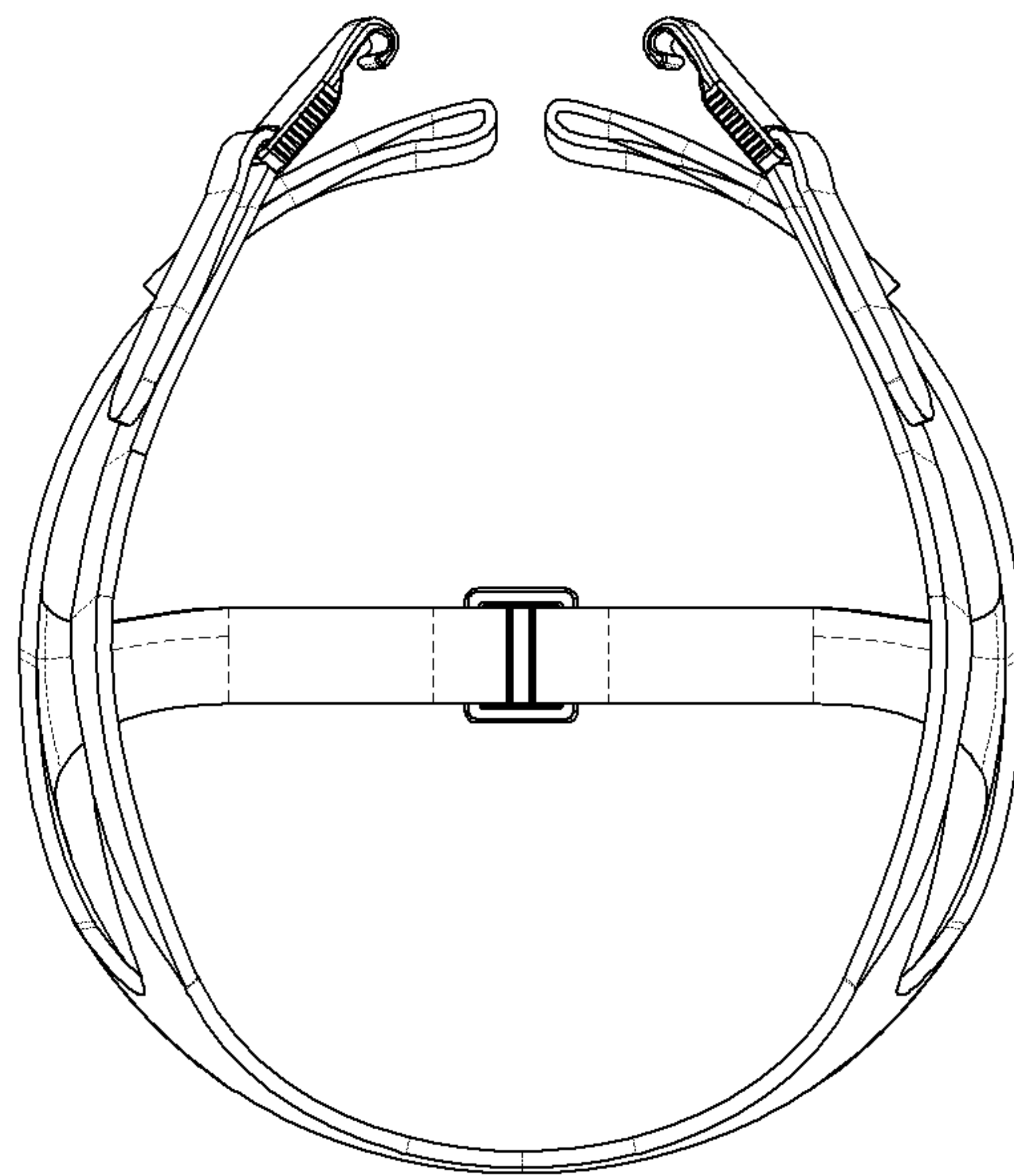


FIG. 16

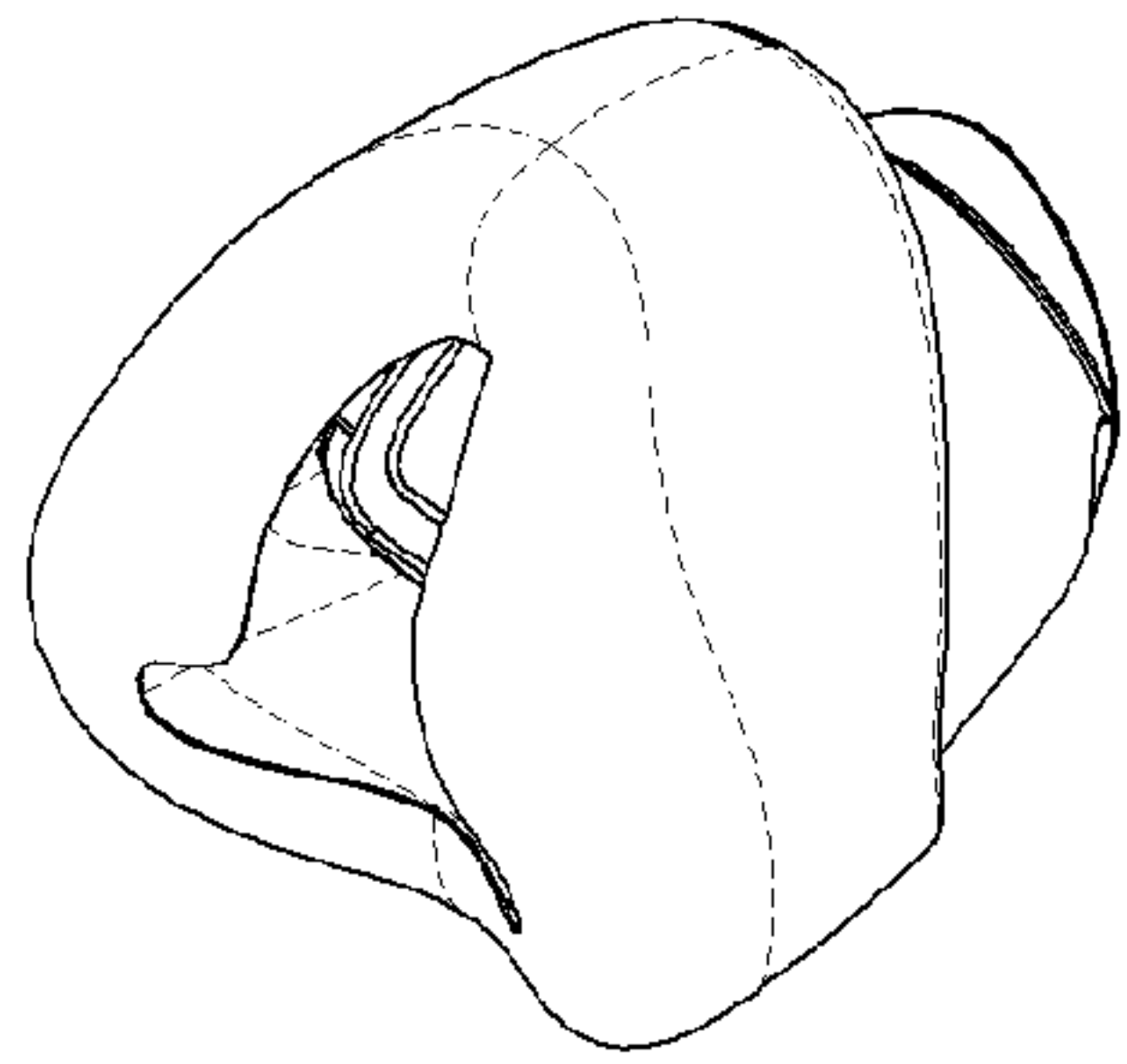


FIG. 17

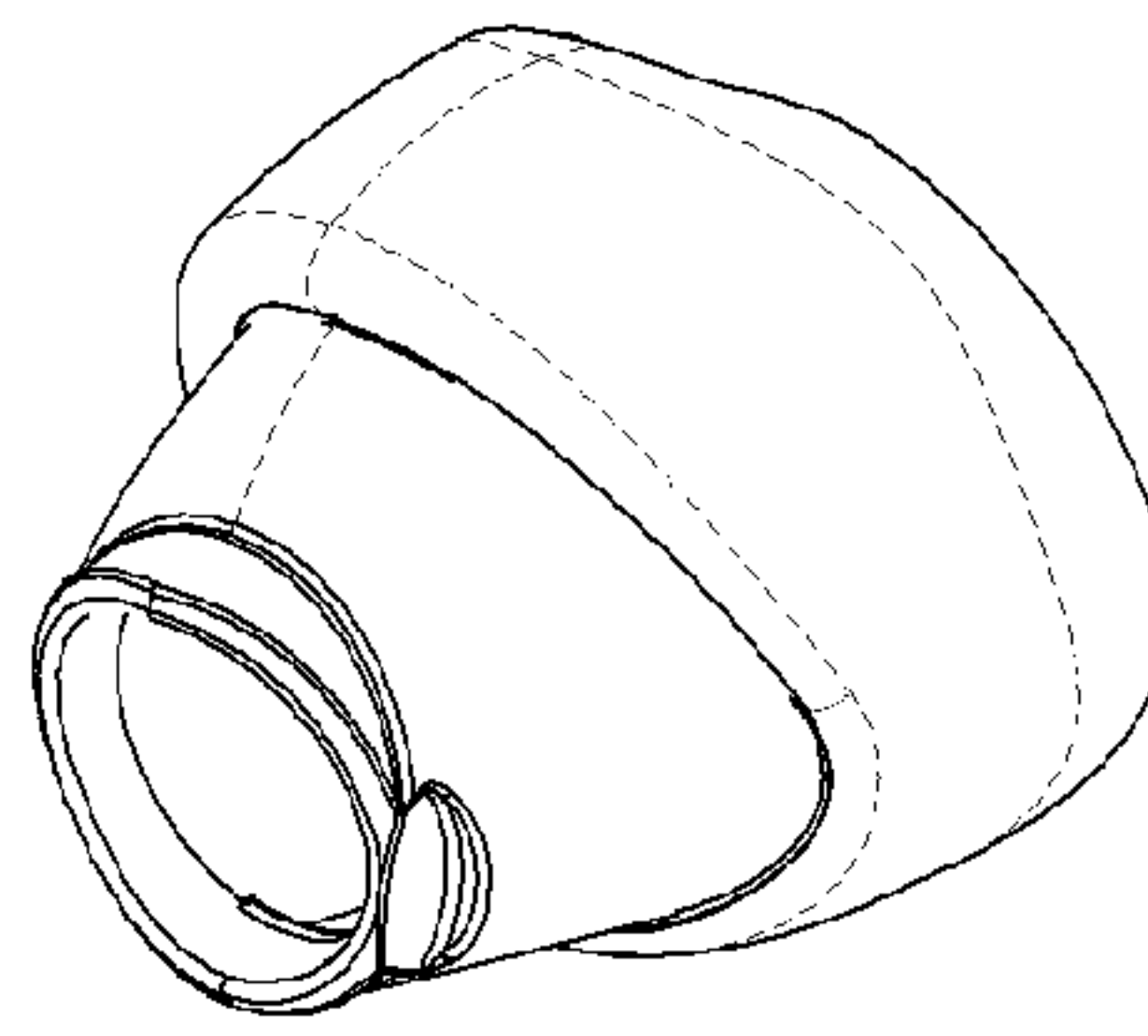


FIG. 18

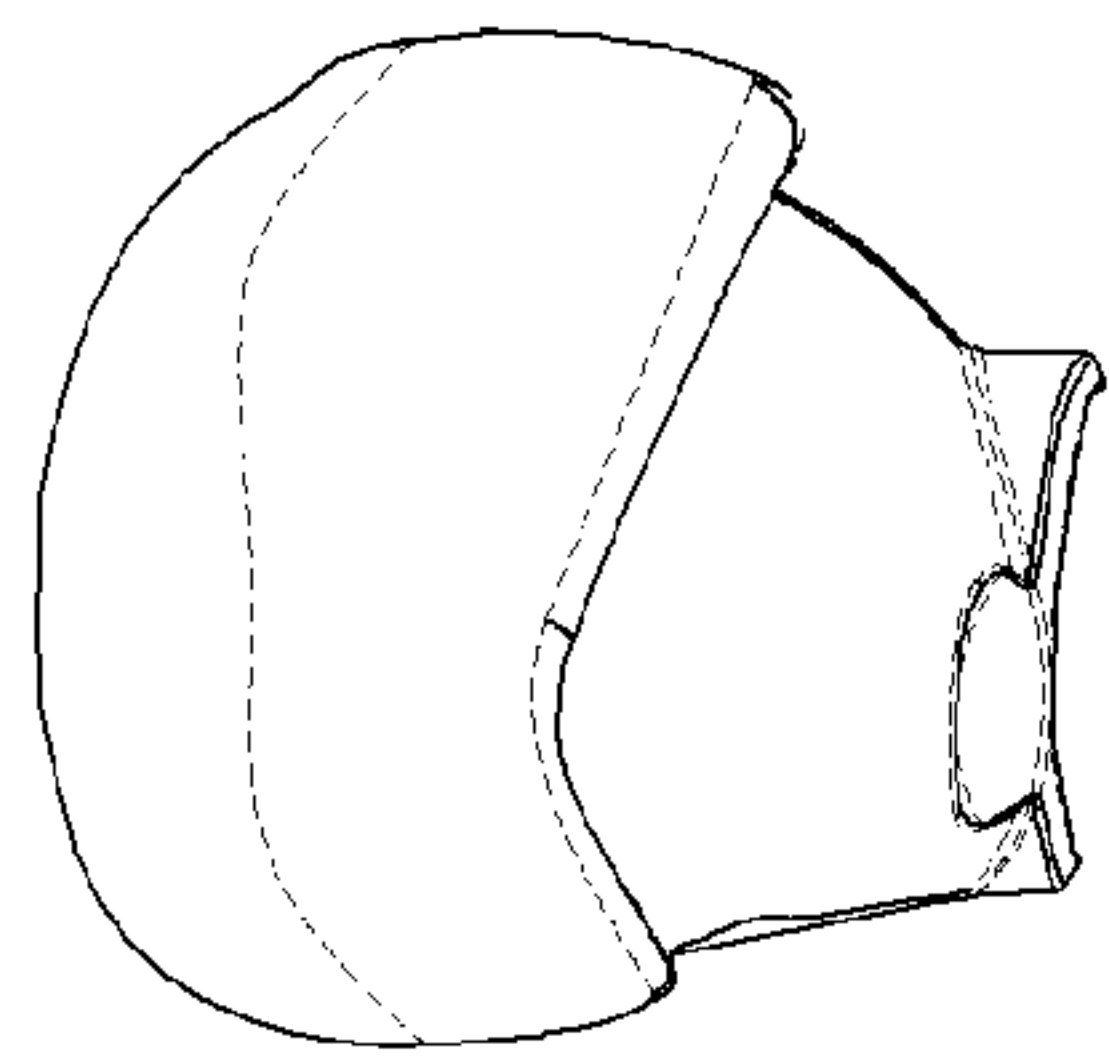


FIG. 19

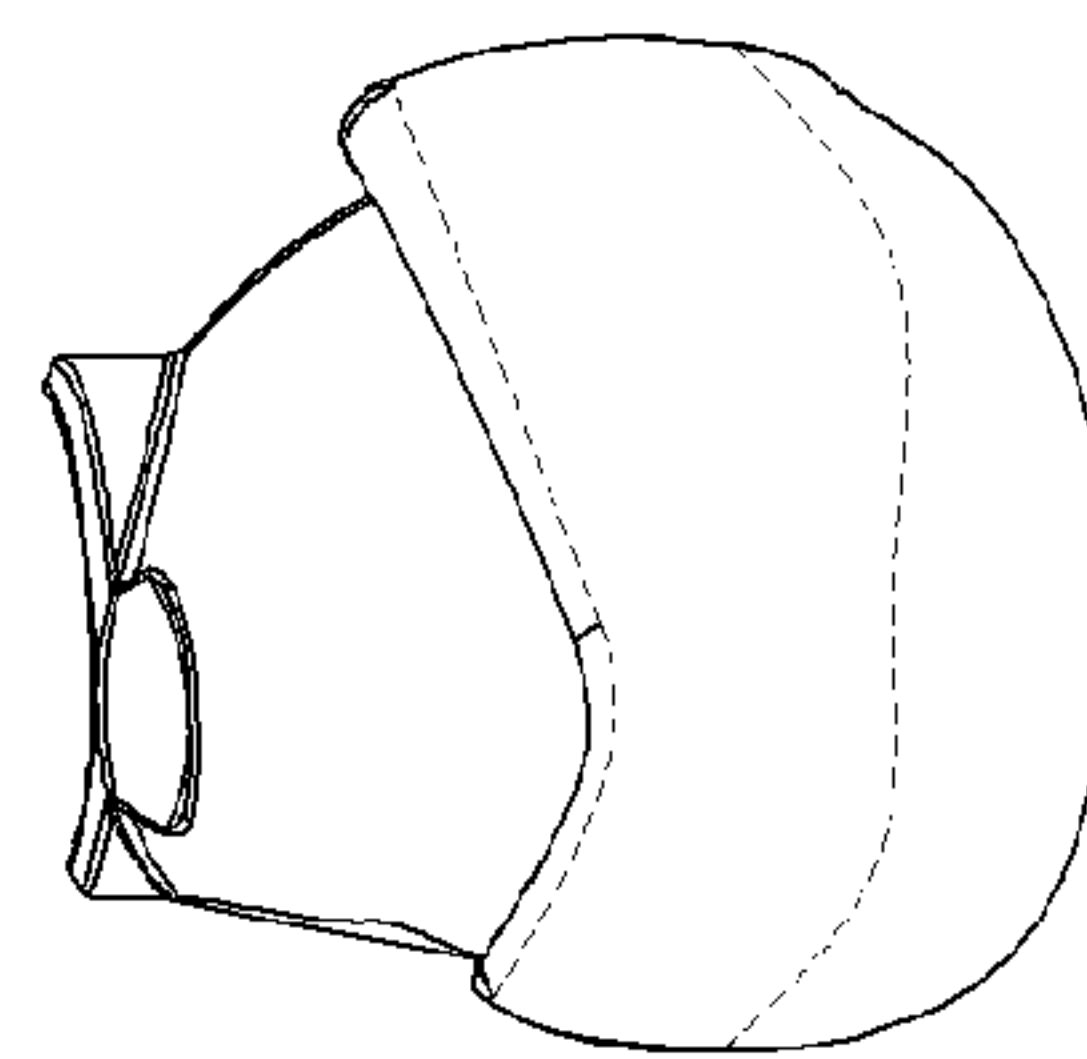


FIG. 20

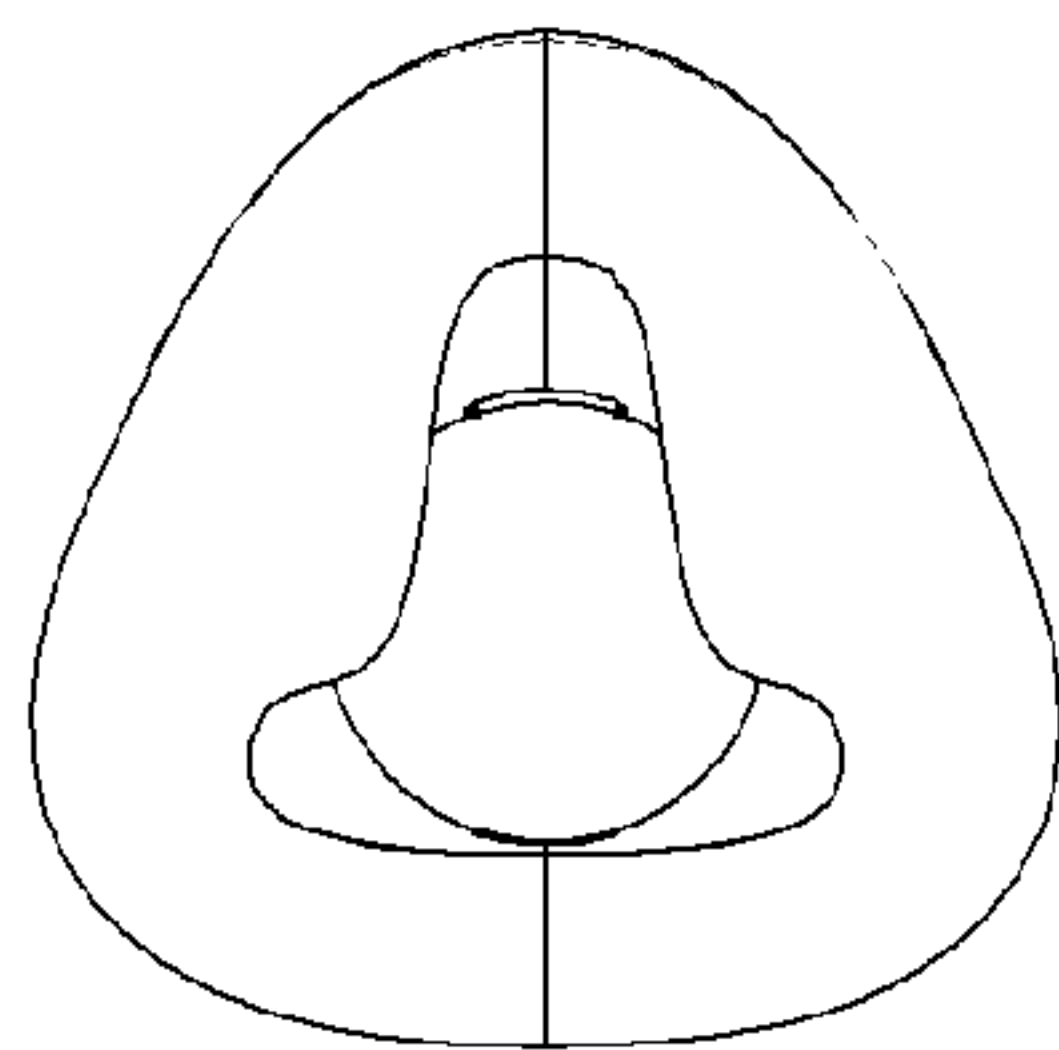


FIG. 21

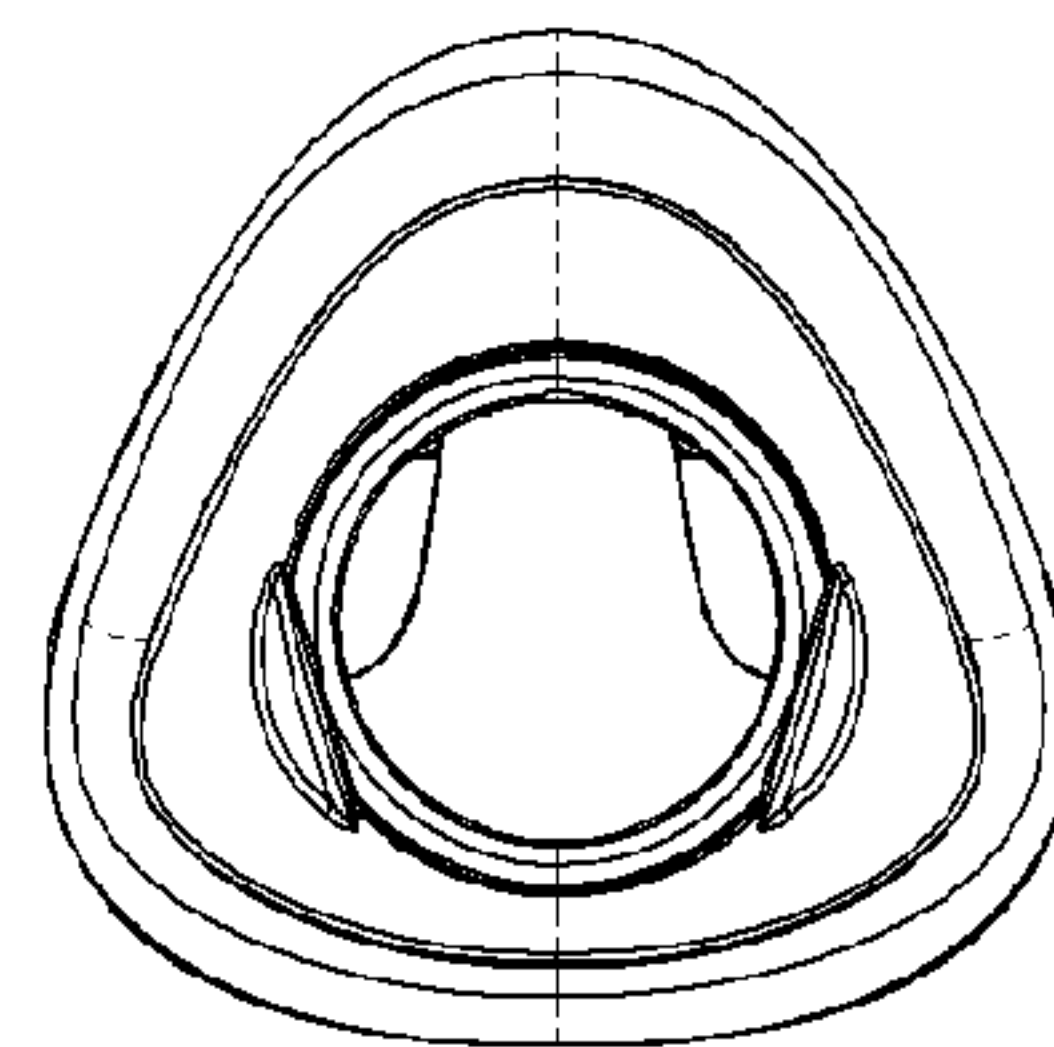


FIG. 22

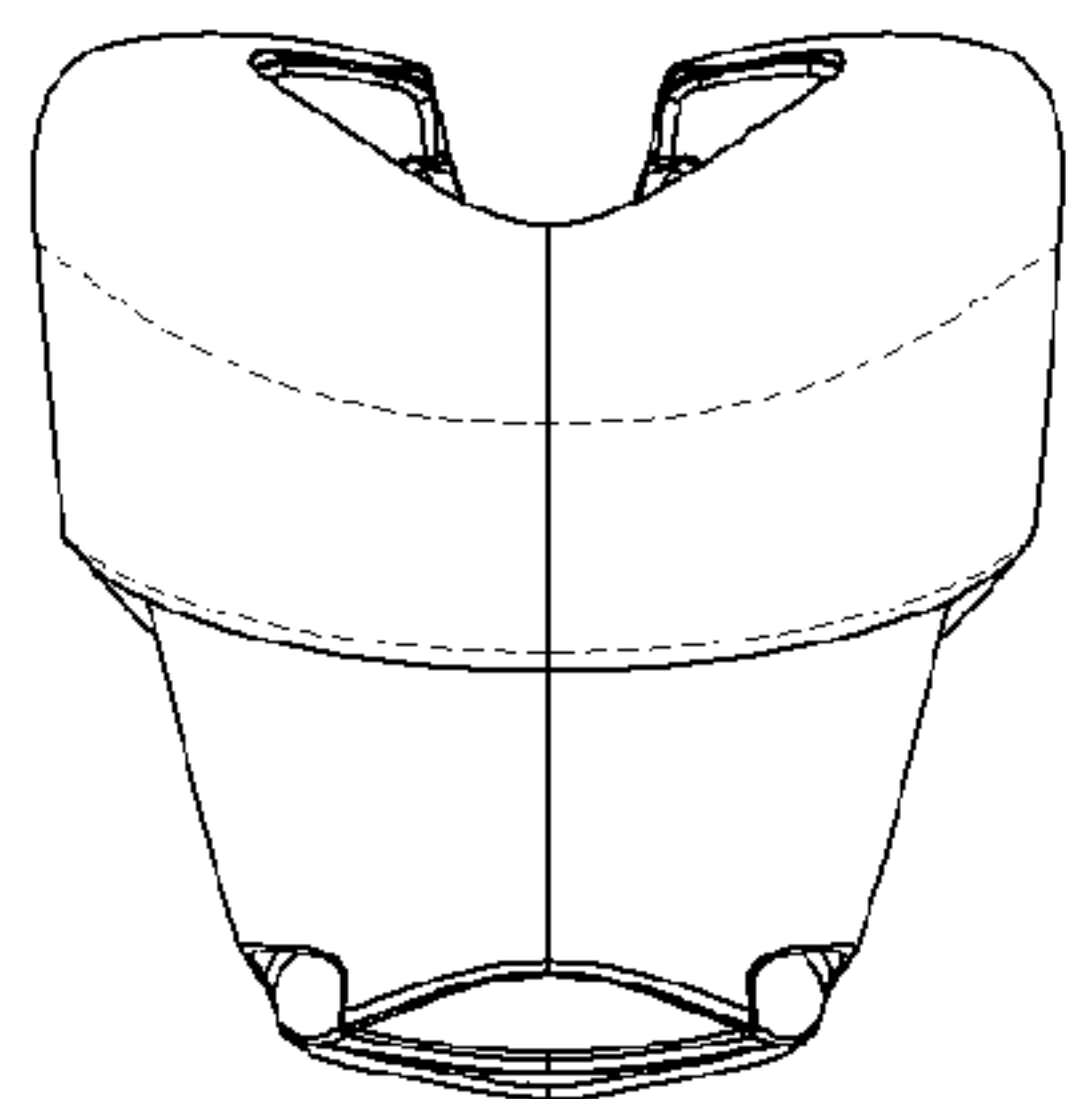


FIG. 23

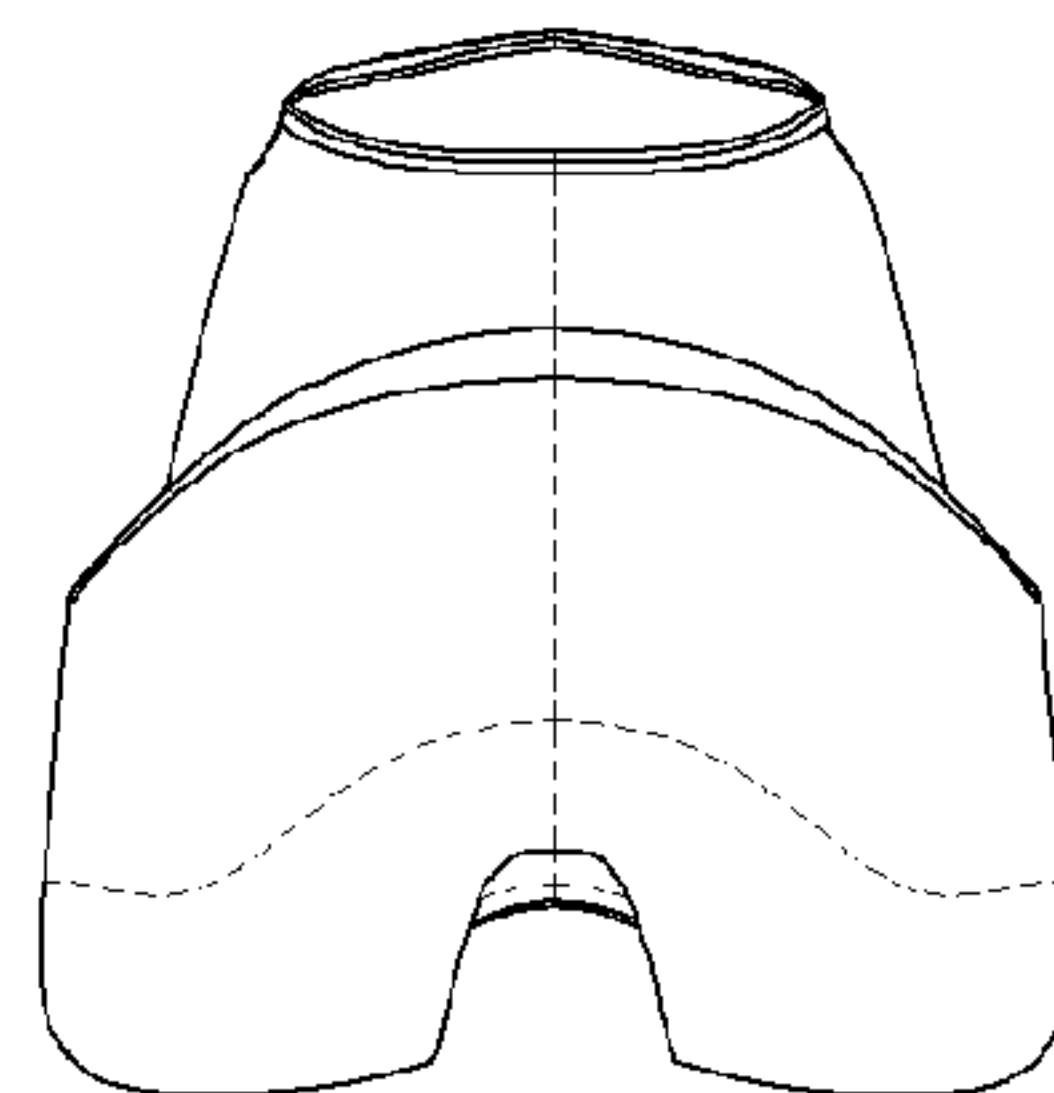


FIG. 24

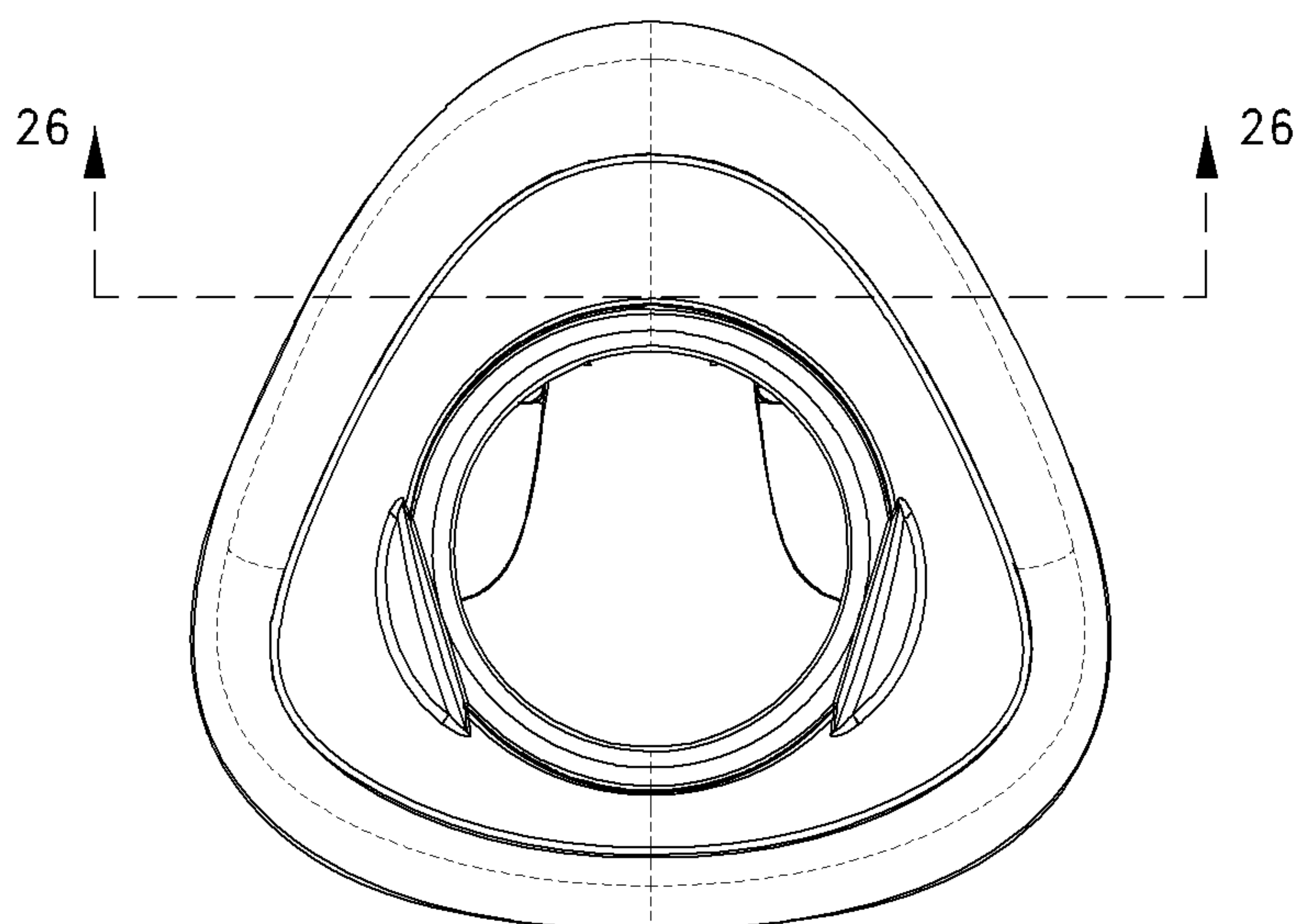


FIG. 25

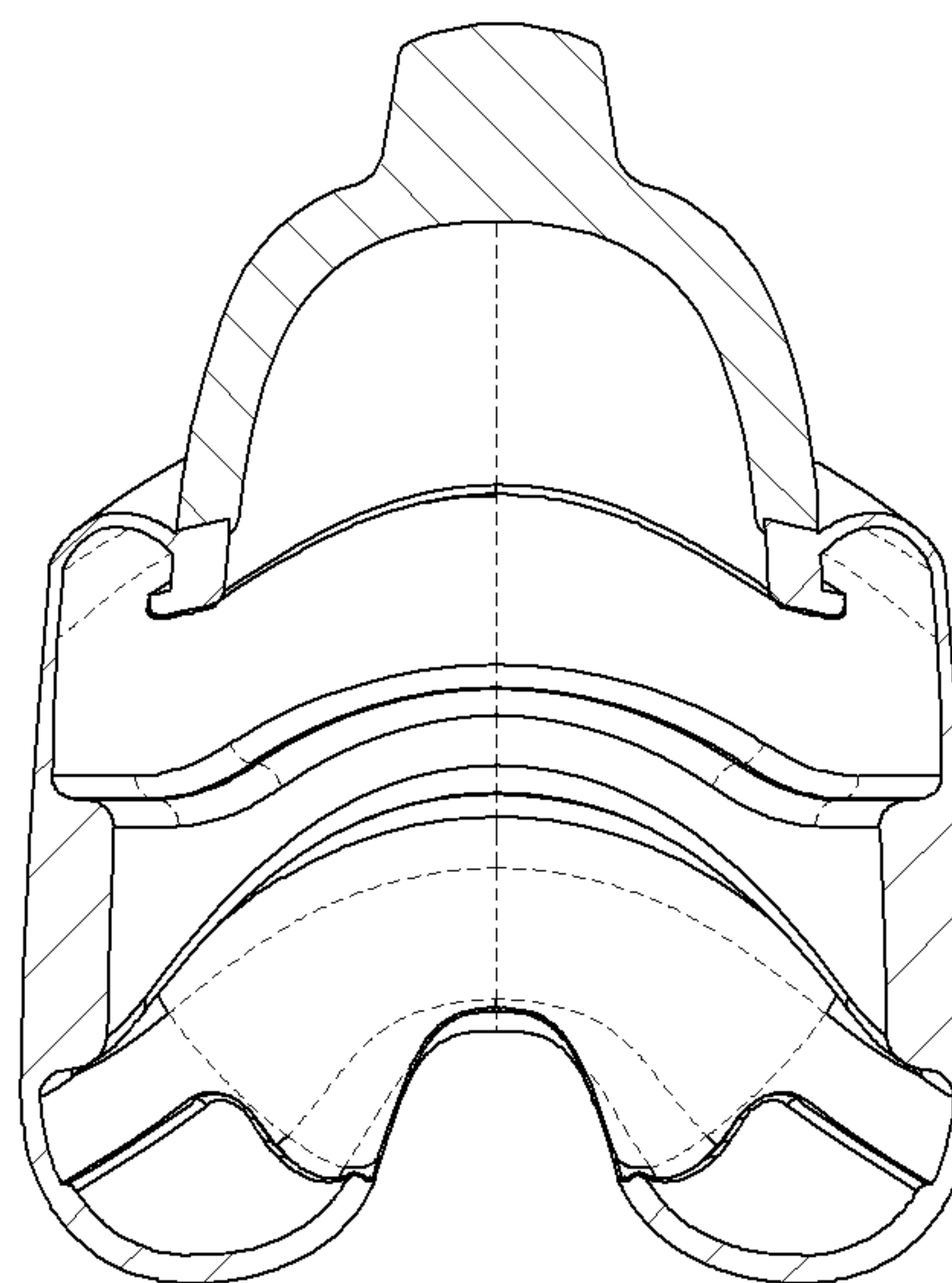


FIG. 26

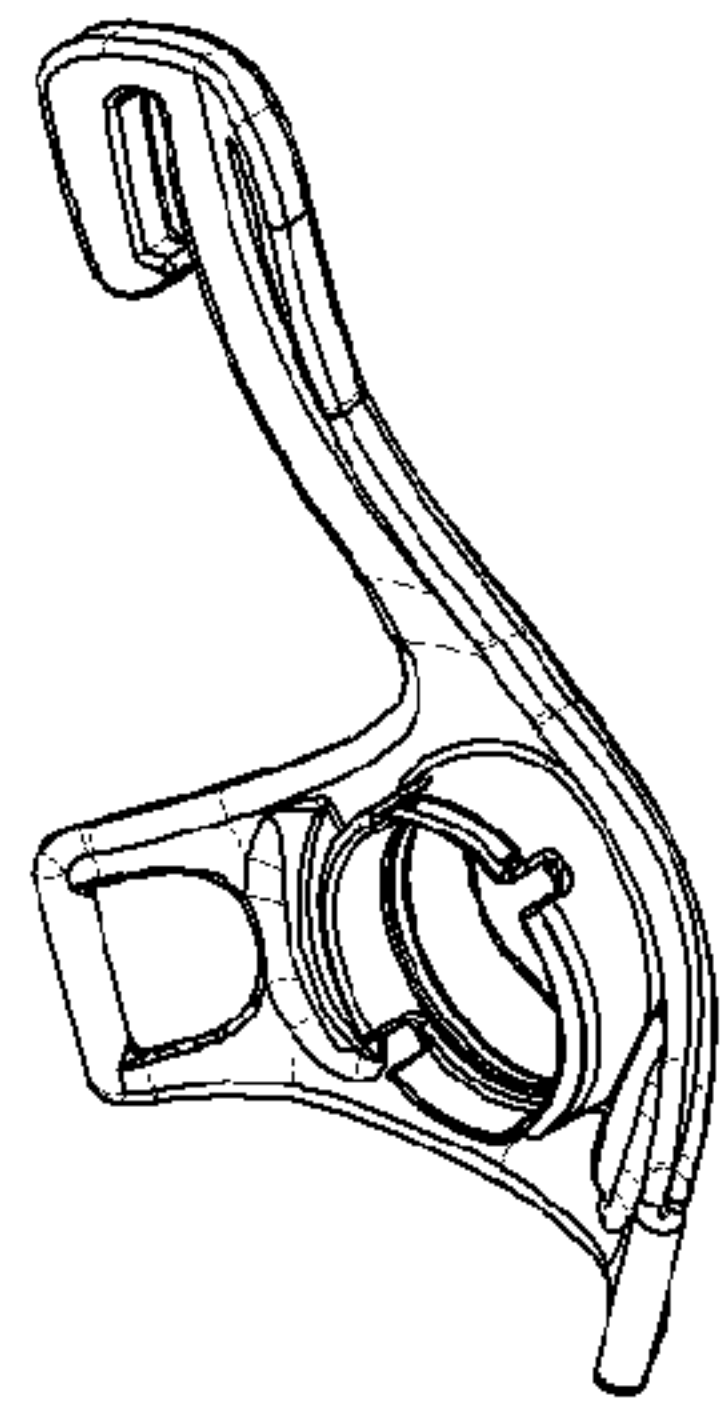


FIG. 27

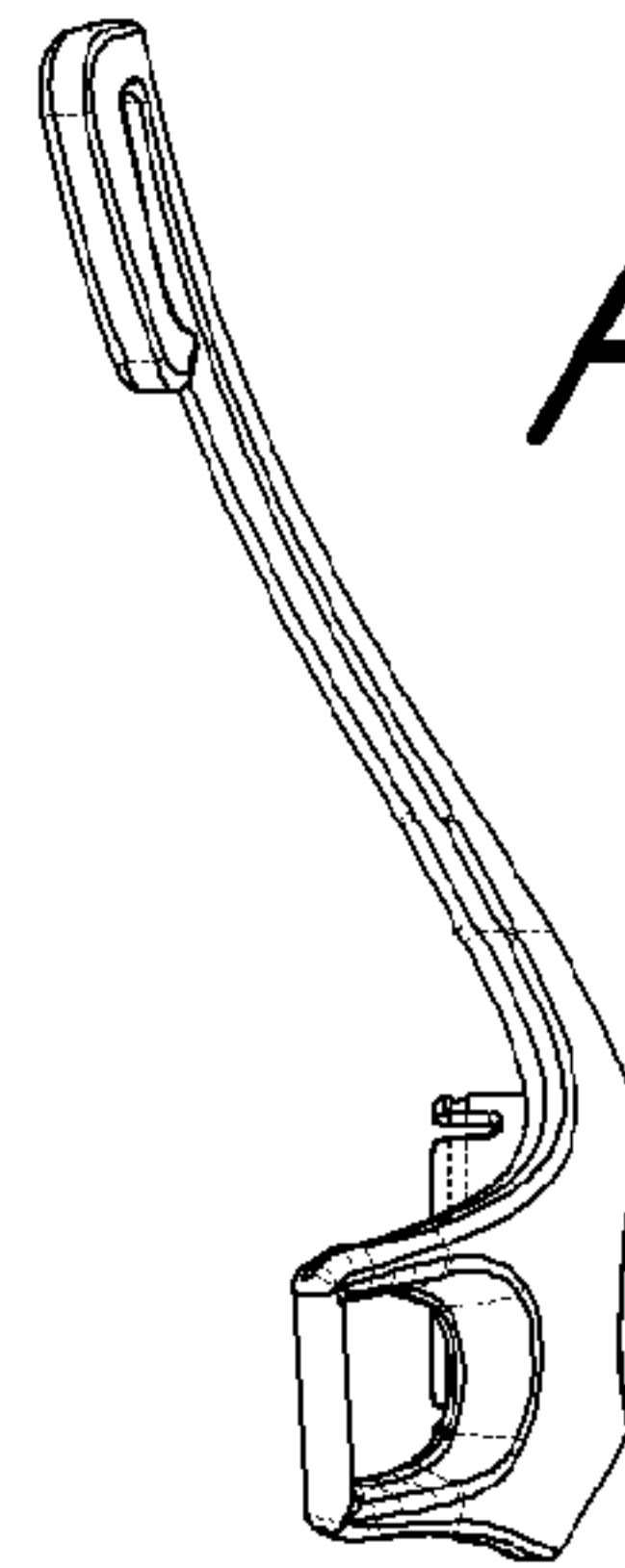


FIG. 28

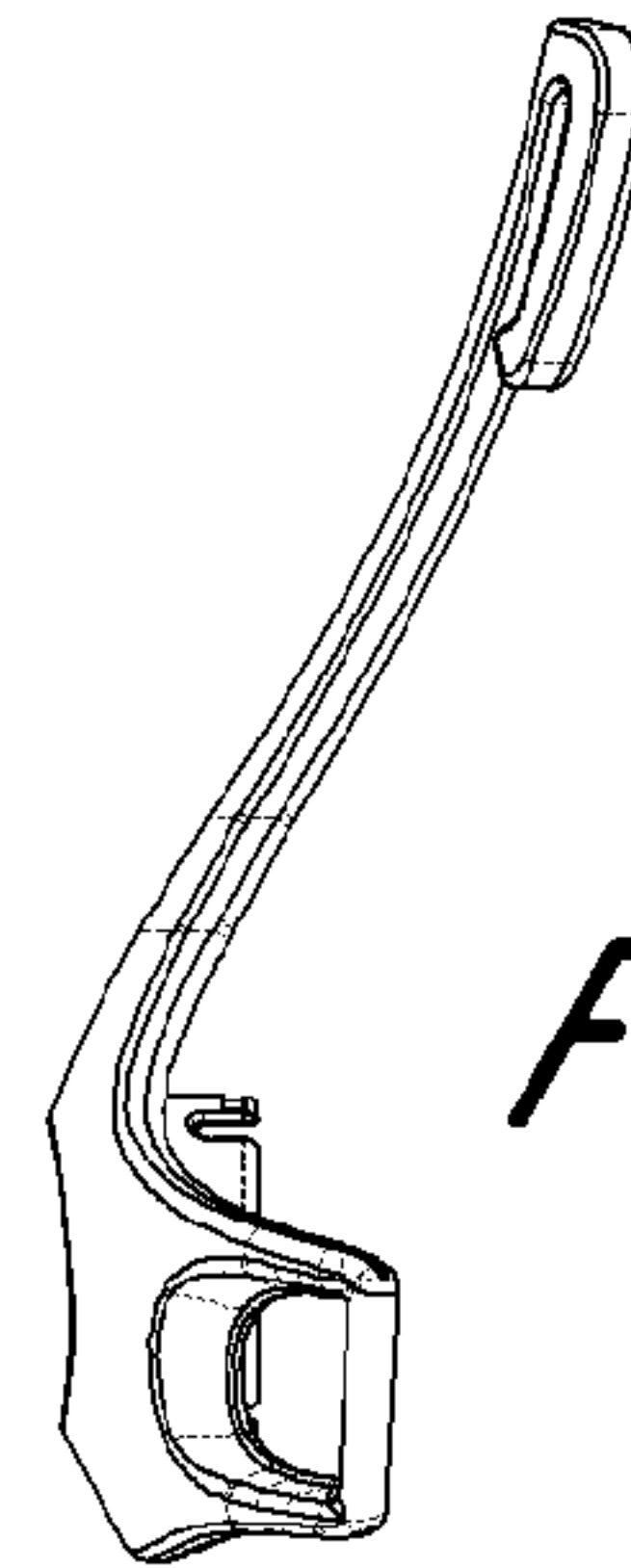


FIG. 29

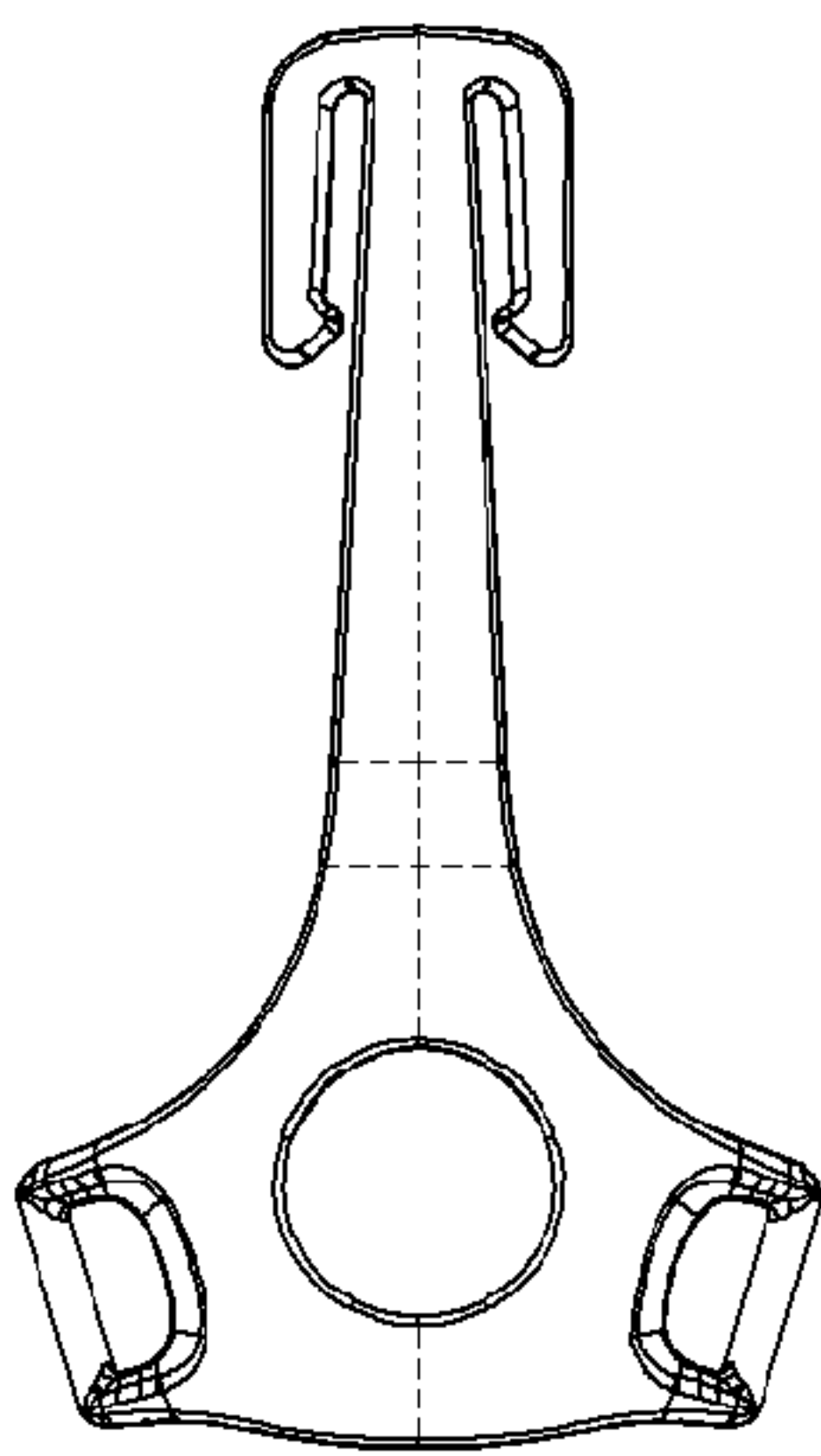


FIG. 30

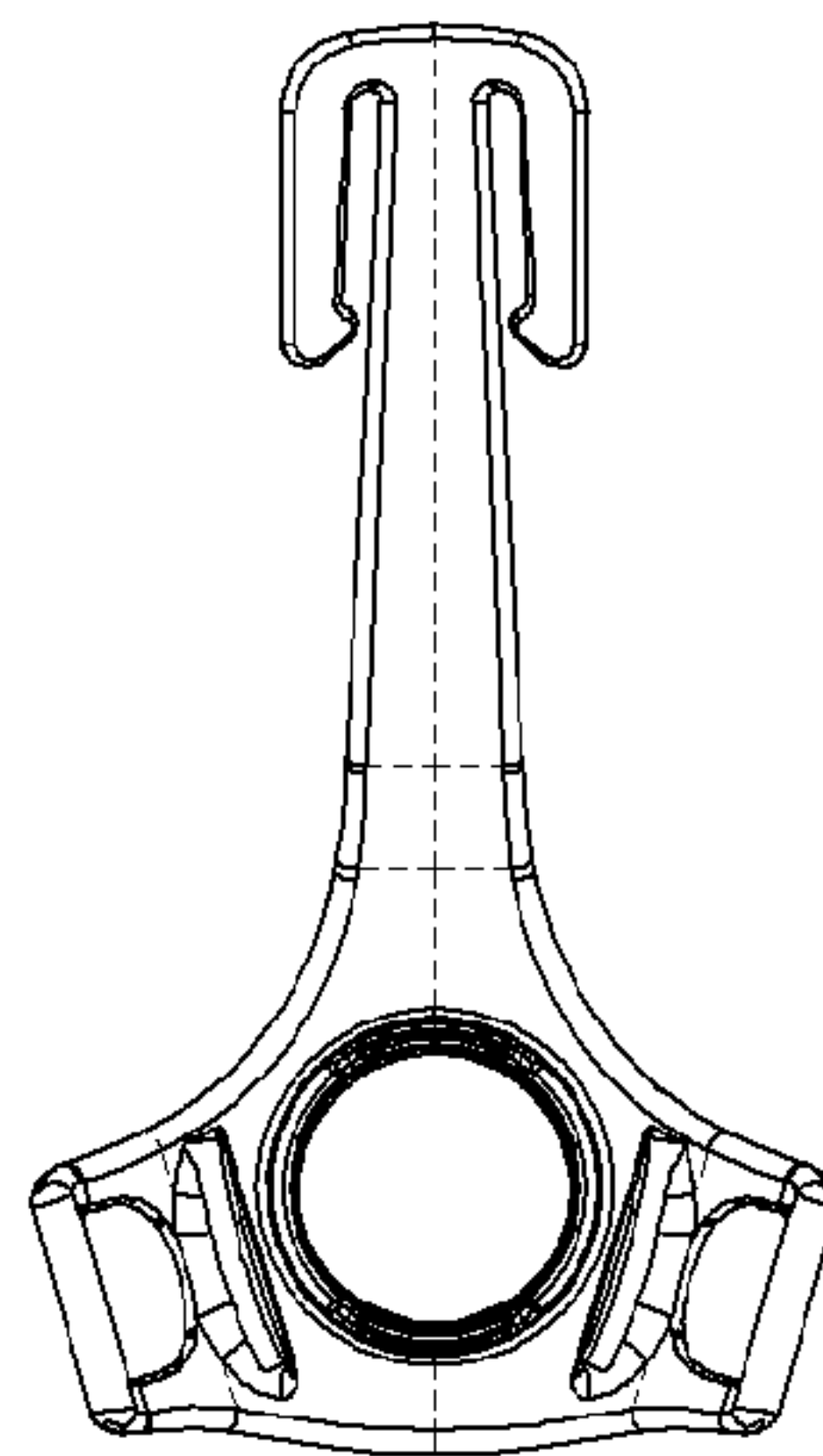


FIG. 31

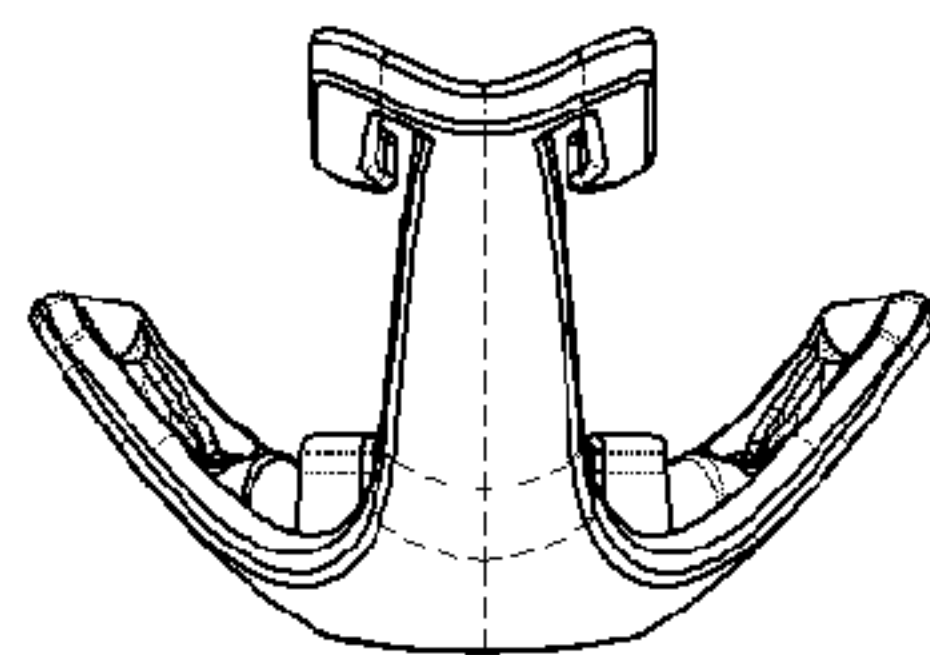


FIG. 32

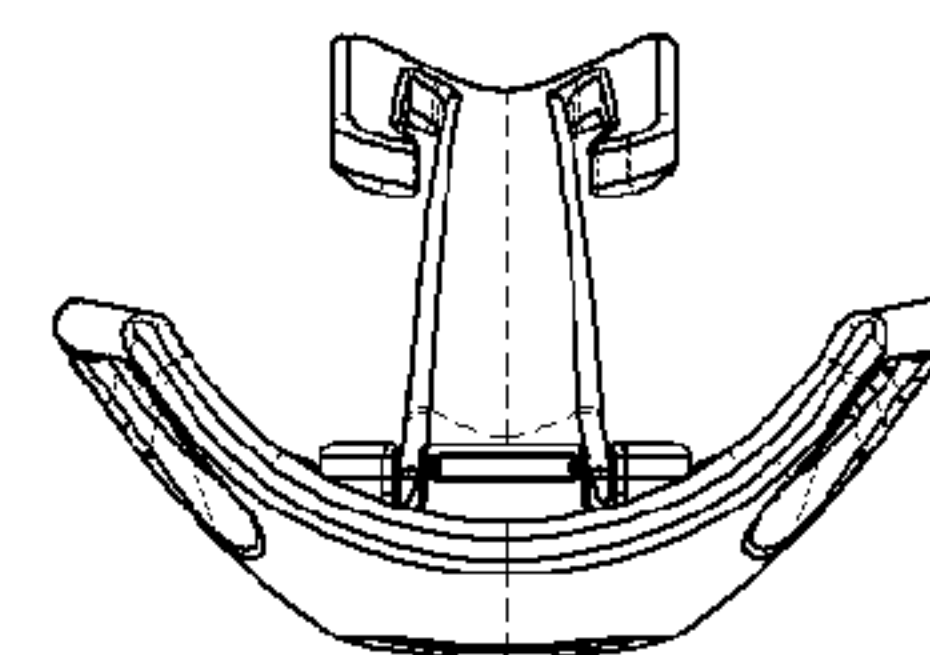


FIG. 33

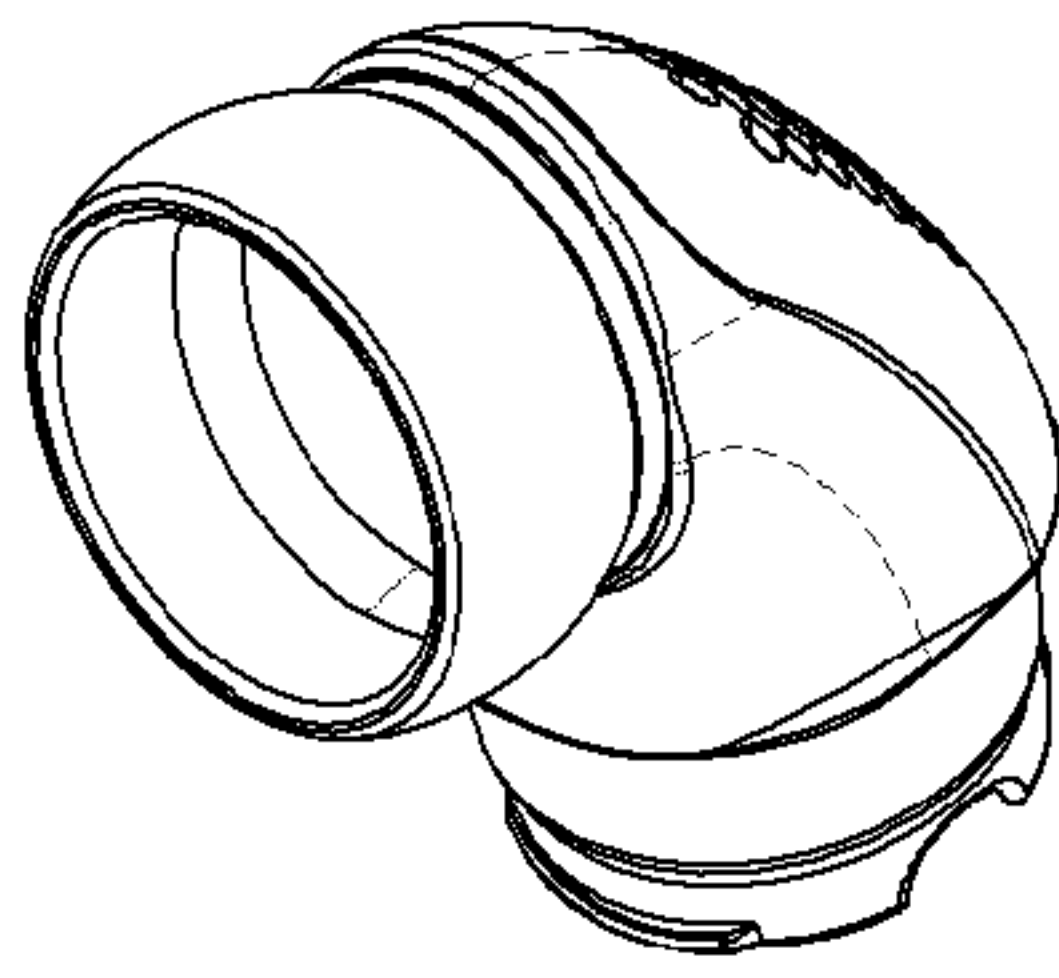


FIG. 34

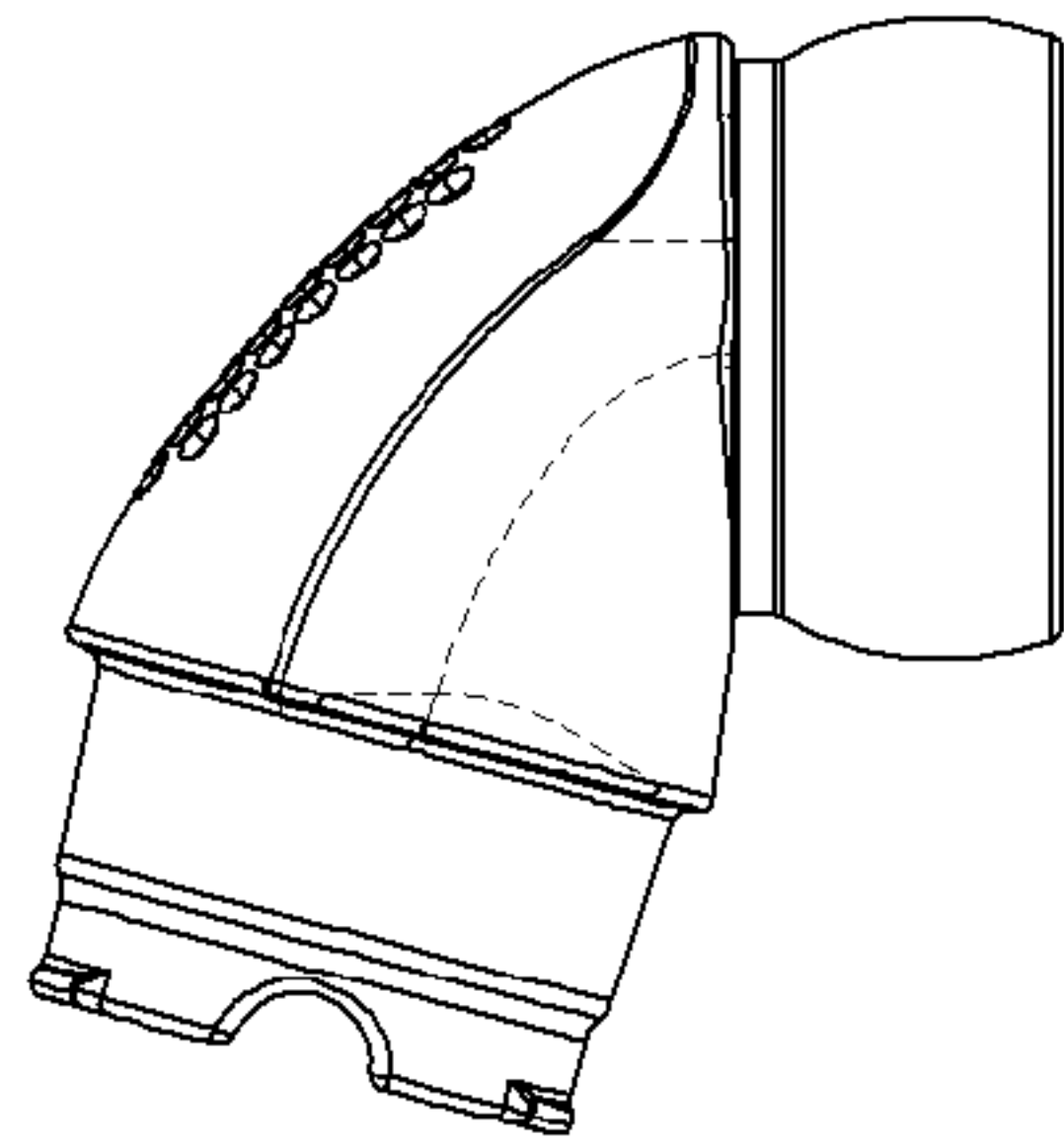


FIG. 35

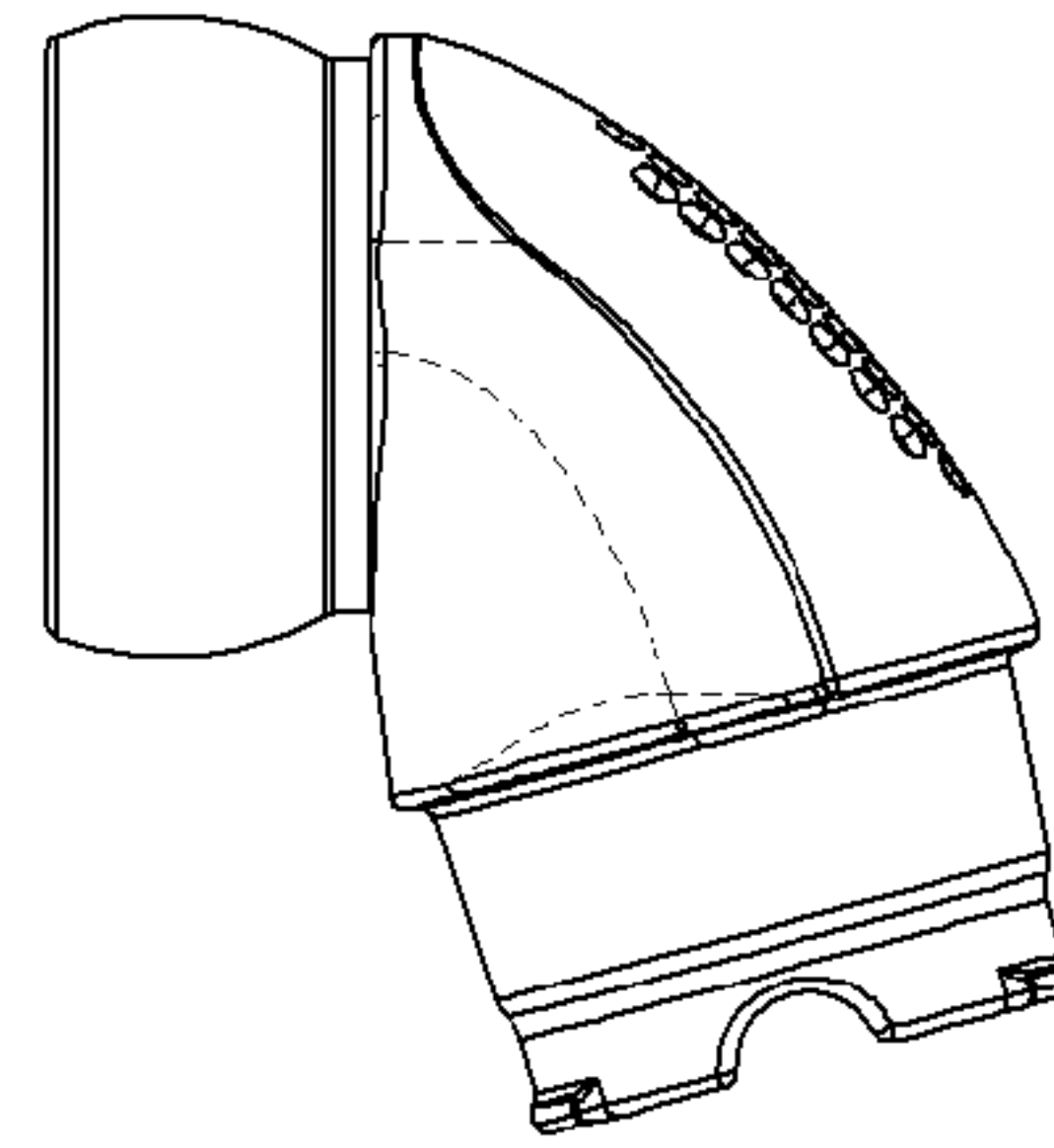


FIG. 36

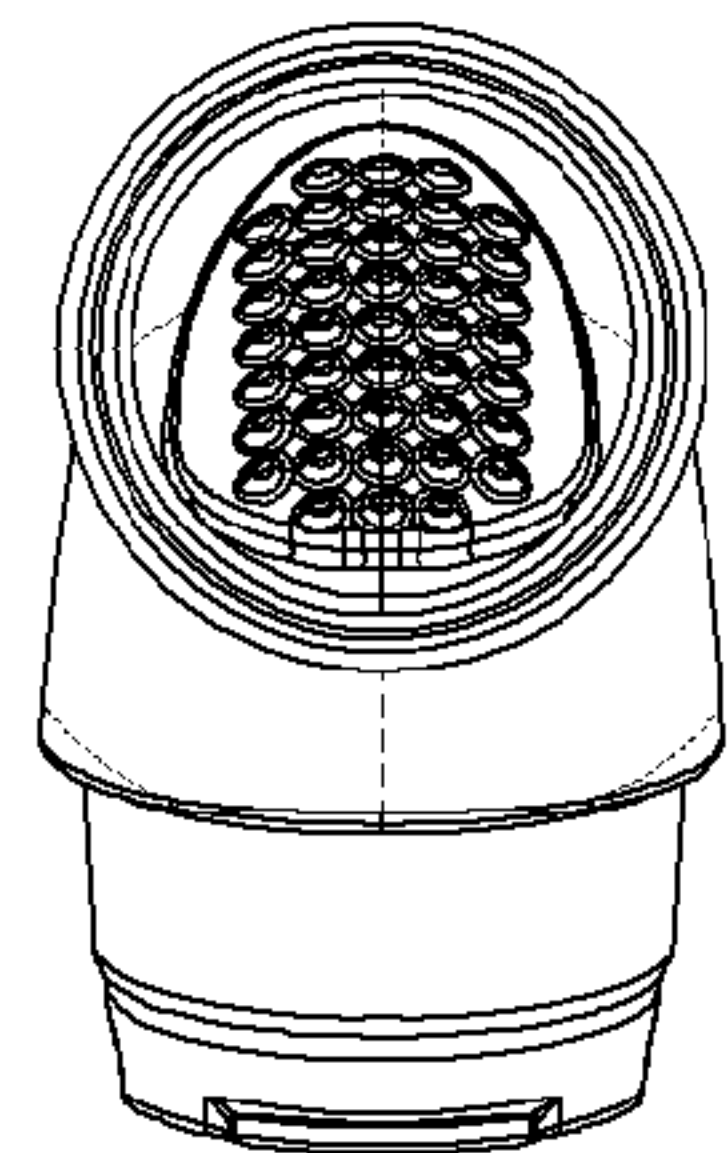


FIG. 37

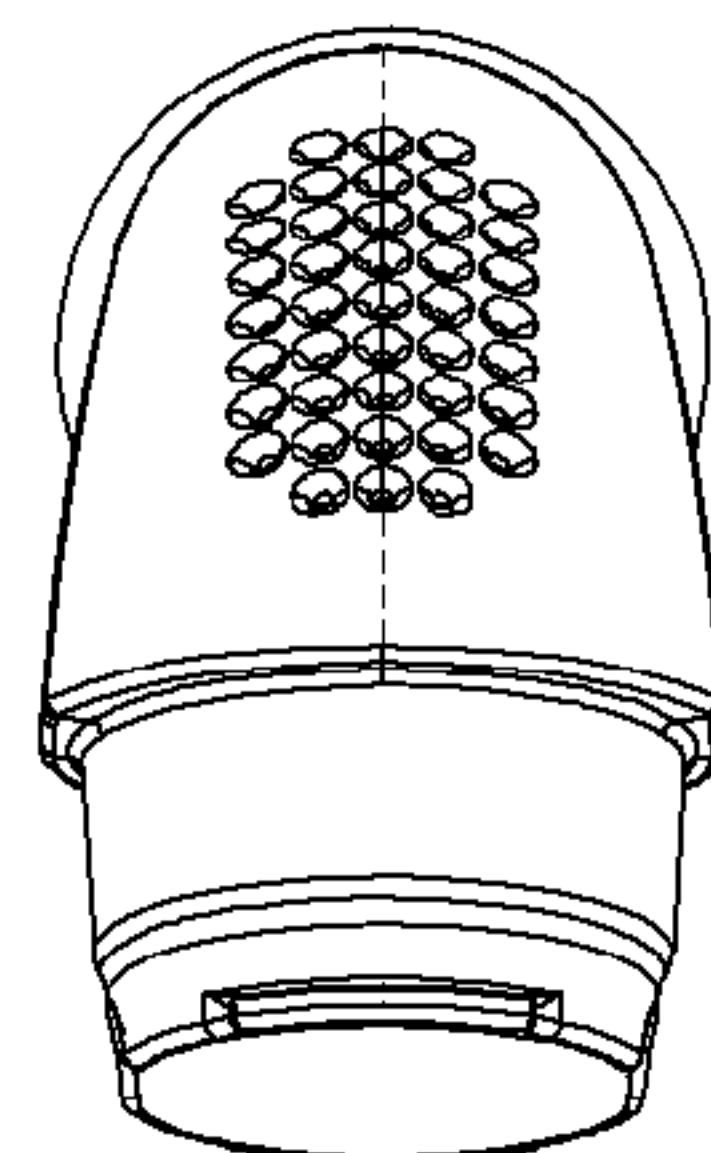


FIG. 38

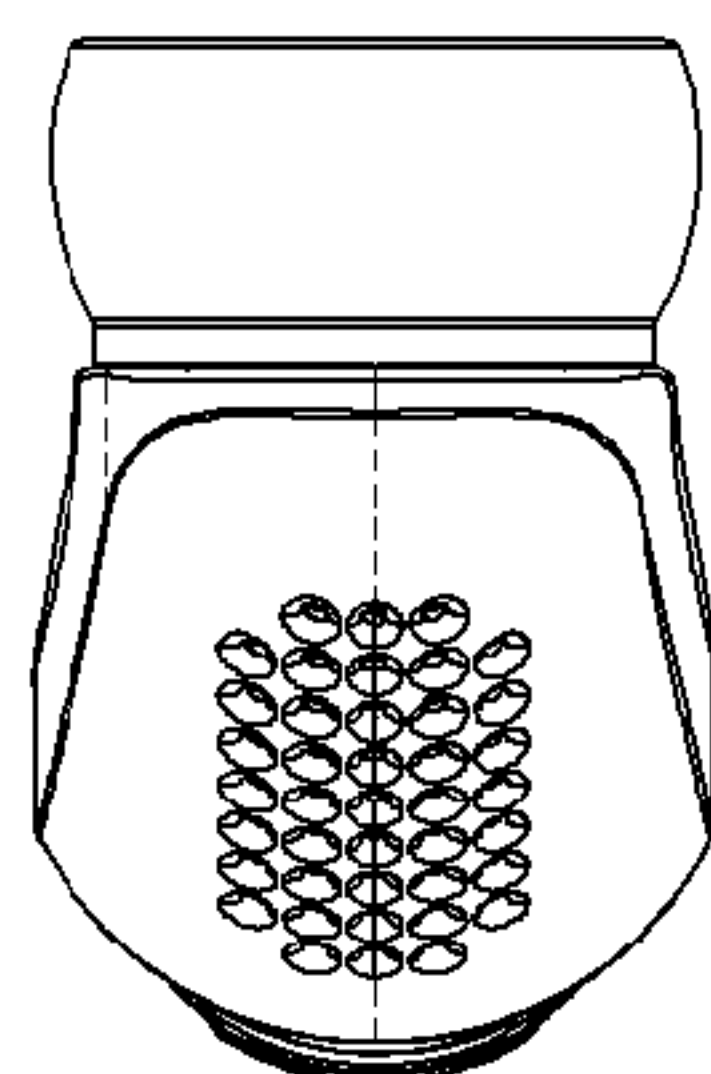


FIG. 39

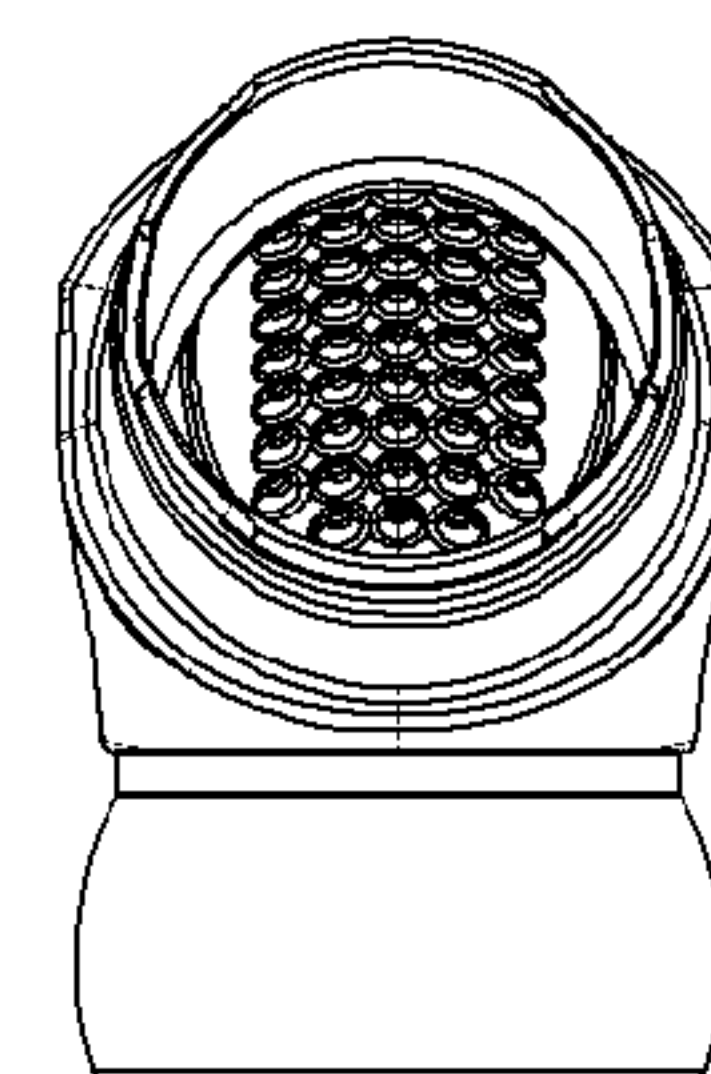


FIG. 40

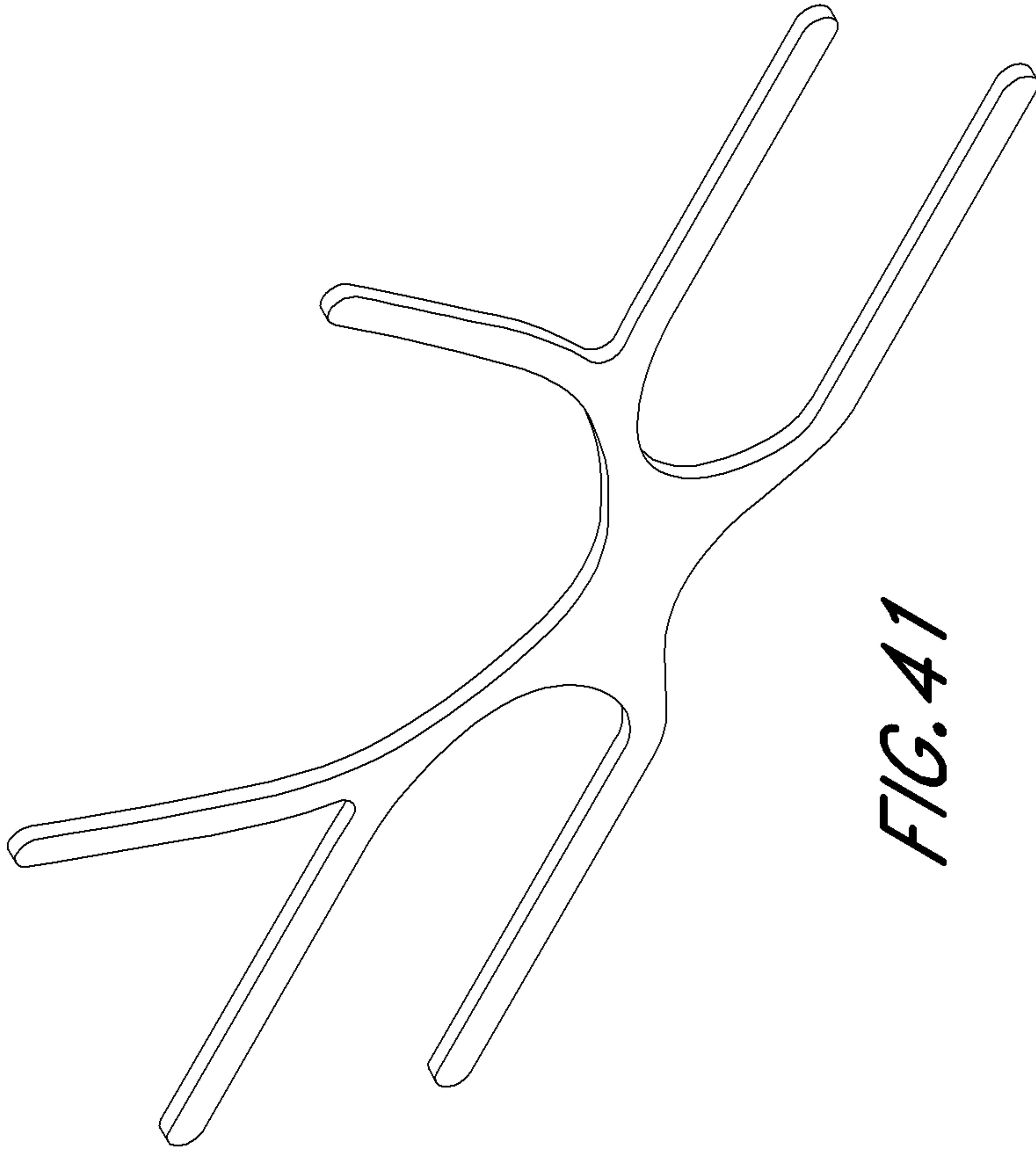


FIG. 41



FIG. 43

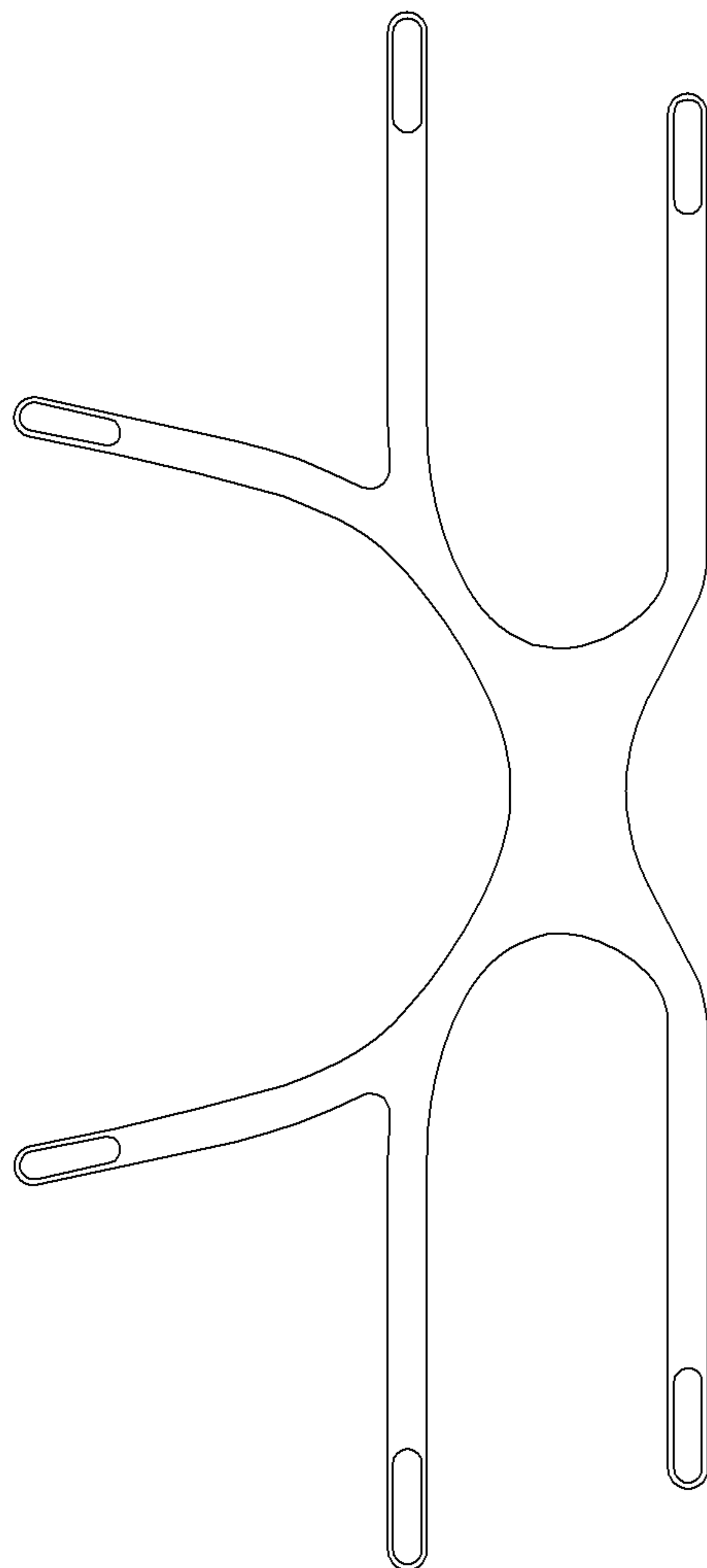


FIG. 42



FIG. 44

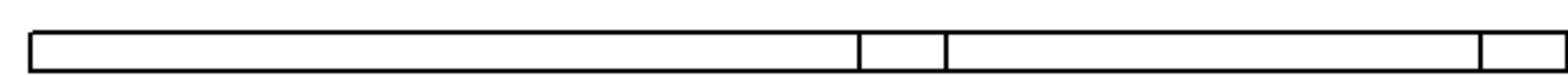


FIG. 45