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

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(54) **RING TYPE HALITOSIS DETECTOR**

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(30) **Foreign Application Priority Data**

Jun. 13, 2006 (TW) ..... 95303255

(51) **LOC (9) Cl.** ..... **24-02**

(52) **U.S. Cl.** ..... **D24/107; D24/186**

(58) **Field of Classification Search** ..... D24/110–110.5,  
D24/107, 185, 164; D10/30–32, 38; D14/138 R,  
D14/226, 356; 600/530; 422/84; 73/23.3  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,823,803 A \* 4/1989 Nakamura ..... 600/530  
5,663,932 A \* 9/1997 Weng ..... 368/10  
D463,987 S \* 10/2002 Wilson ..... D10/32

D480,653 S \* 10/2003 Lo ..... D10/32  
D507,550 S \* 7/2005 Kim et al. .... D14/138 R  
D543,192 S \* 5/2007 Jung ..... D14/138 R  
D558,198 S \* 12/2007 Blankenship et al. .... D14/356  
D565,427 S \* 4/2008 Ellner et al. .... D10/31  
D581,826 S \* 12/2008 Molyneux ..... D11/2  
D583,815 S \* 12/2008 Giovannoni ..... D14/356  
D588,024 S \* 3/2009 Binggeli ..... D10/38  
D594,000 S \* 6/2009 Yeon ..... D14/226  
2001/0036264 A1 \* 11/2001 Ito et al. .... 379/433.1

\* cited by examiner

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(57) **CLAIM**

The ornamental design for a “ring type halitosis detector,” as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a “ring type halitosis detector” showing my design;

FIG. 2 is a front elevational view thereof;

FIG. 3 is a rear elevational view thereof;

FIG. 4 is a left side elevational view thereof;

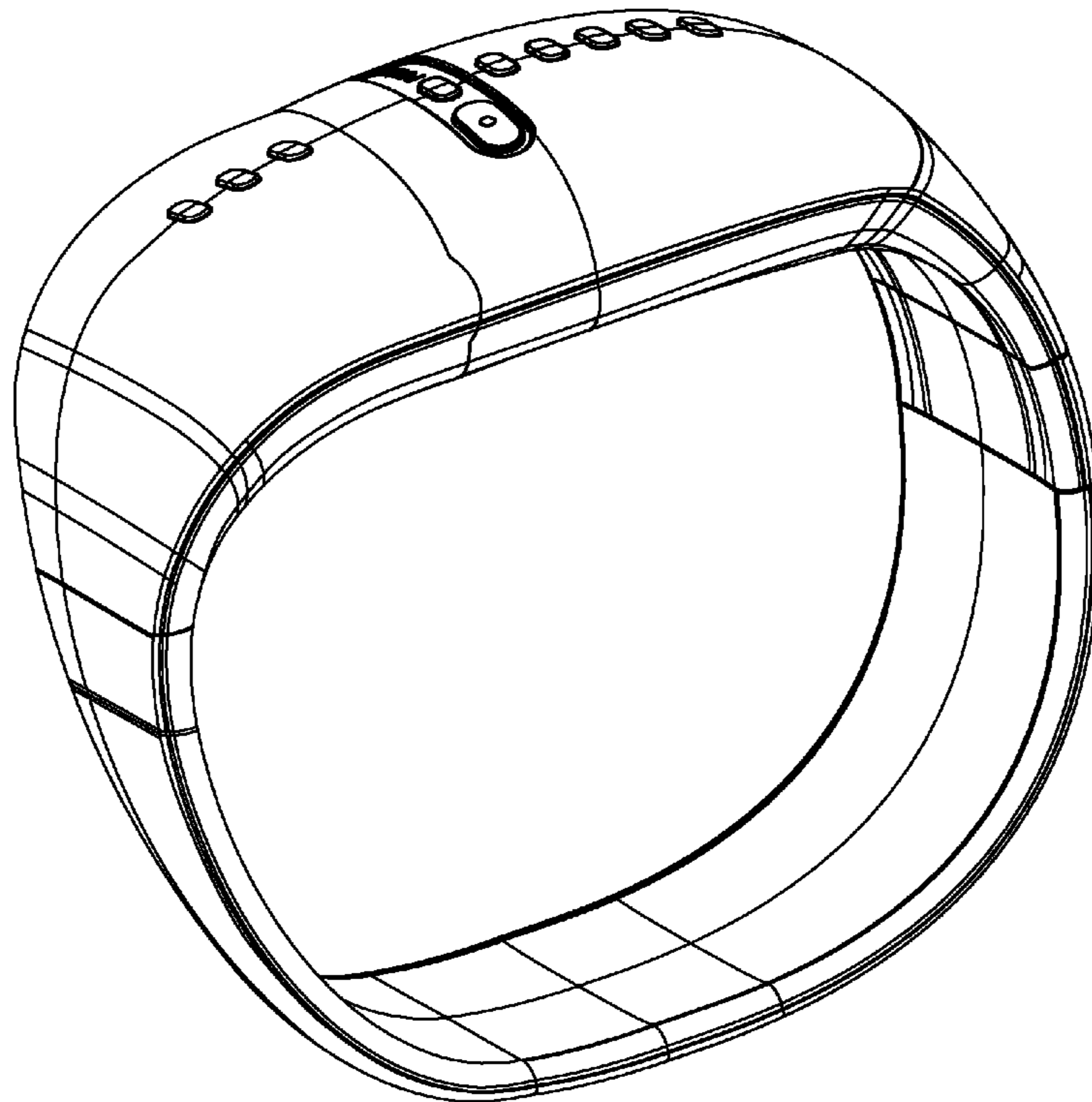
FIG. 5 is a right side elevational view thereof;

FIG. 6 is a top plan view thereof;

FIG. 7 is a bottom plan view thereof; and,

FIG. 8 is is a perspective view thereof in usage.

**1 Claim, 8 Drawing Sheets**



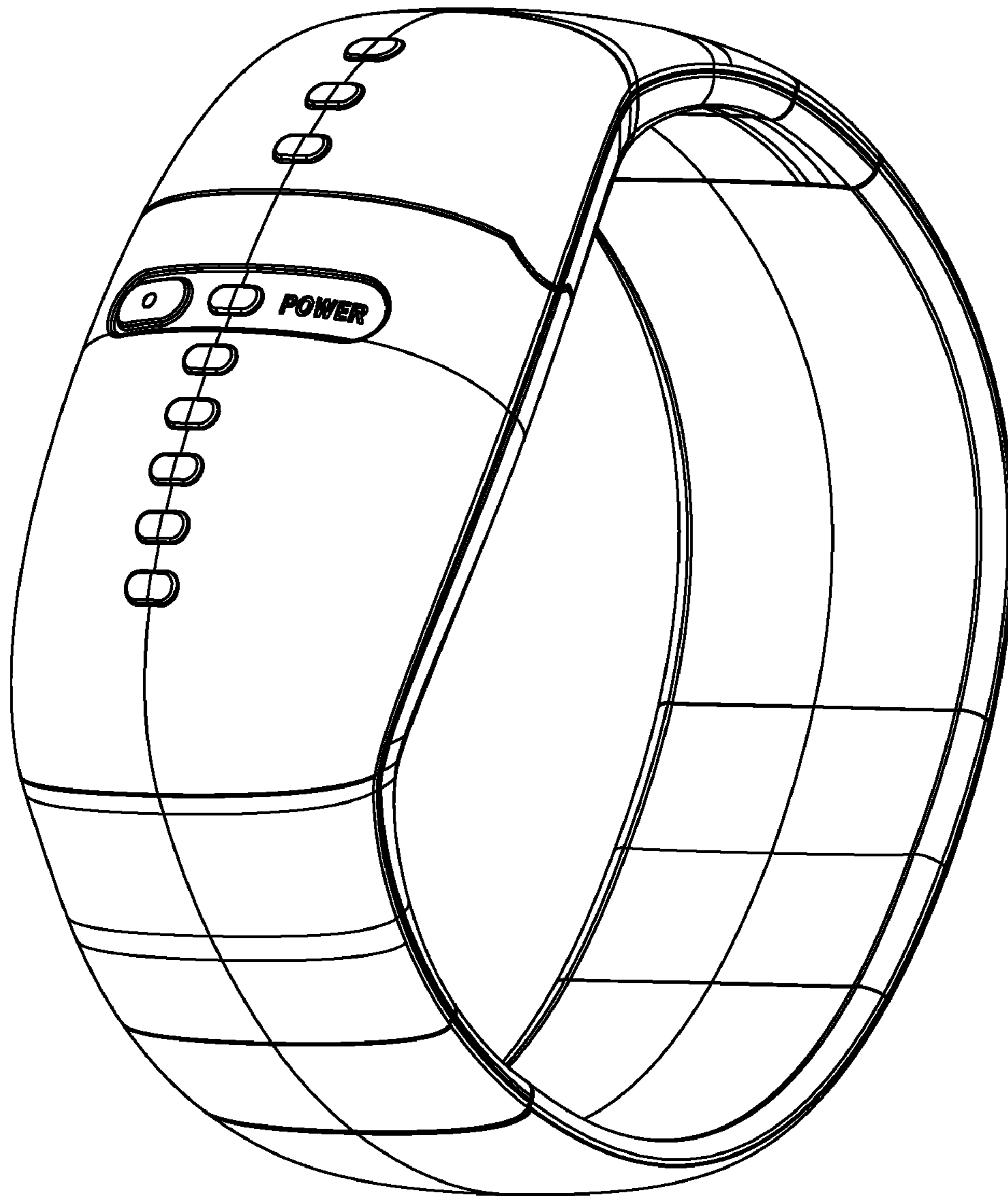


FIG. 1

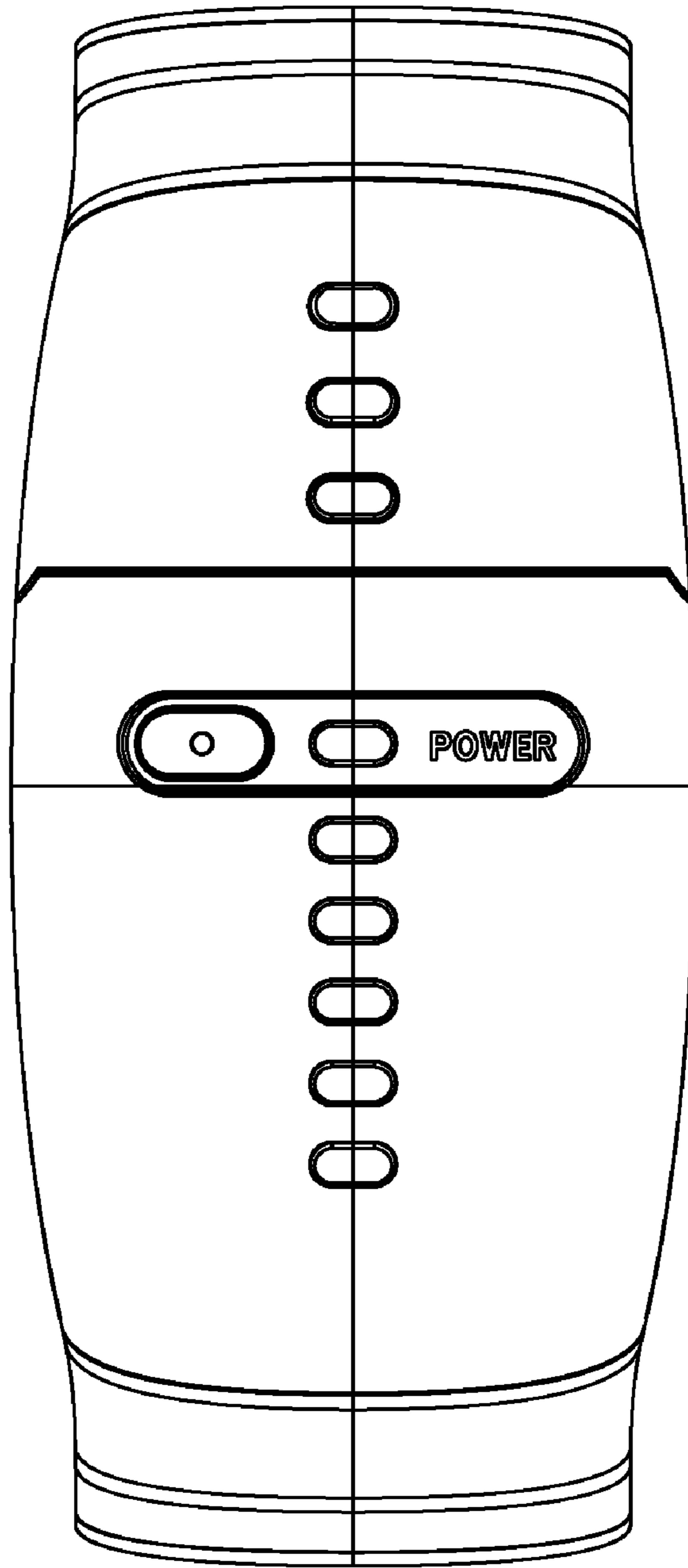


FIG. 2

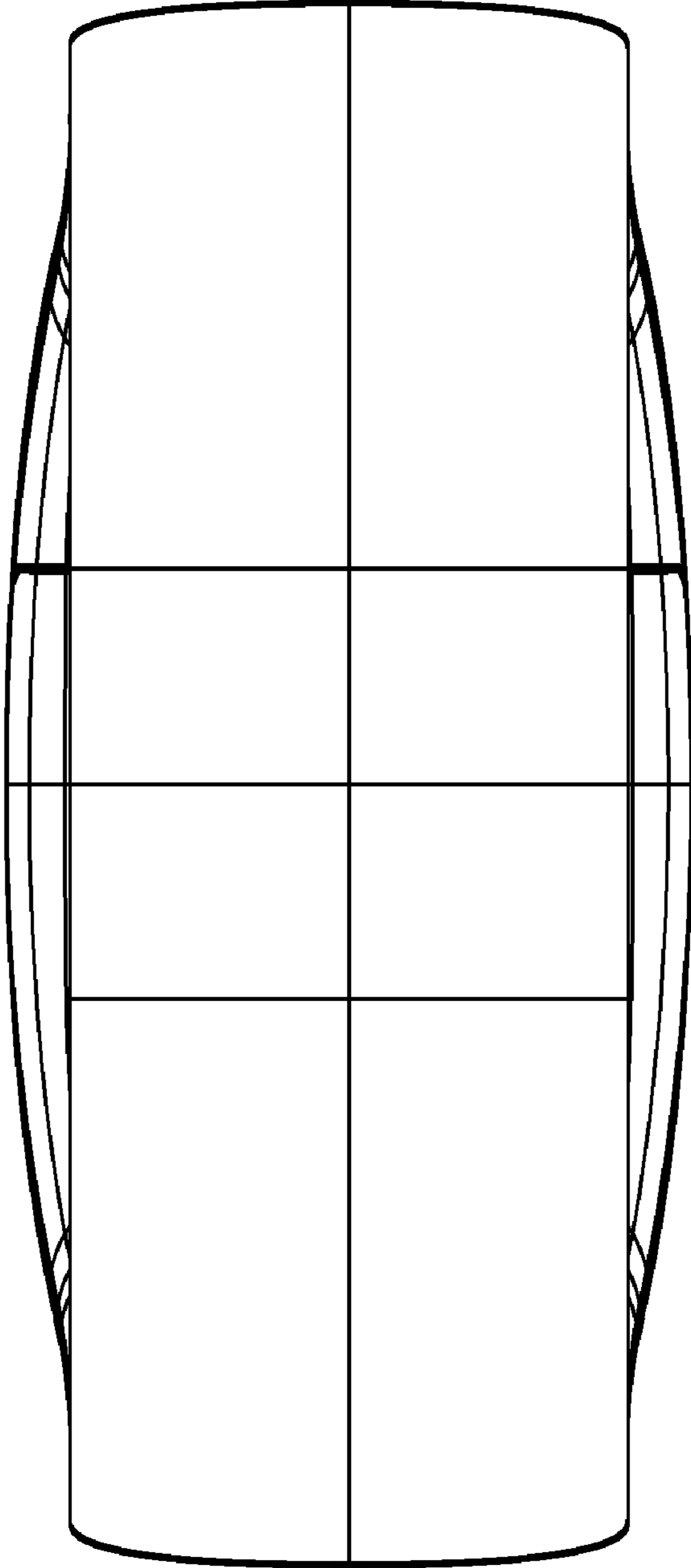


FIG. 3

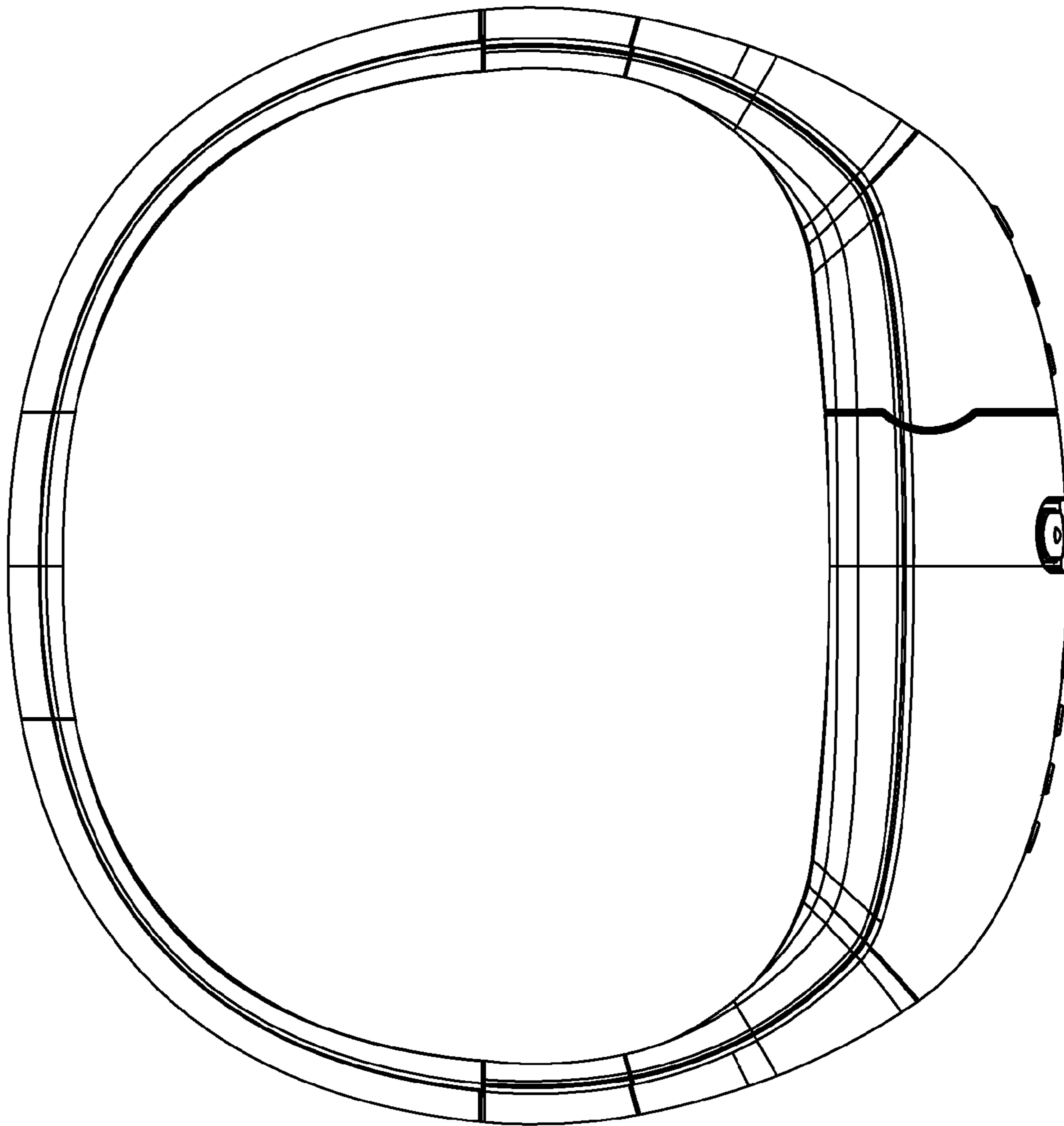


FIG. 4

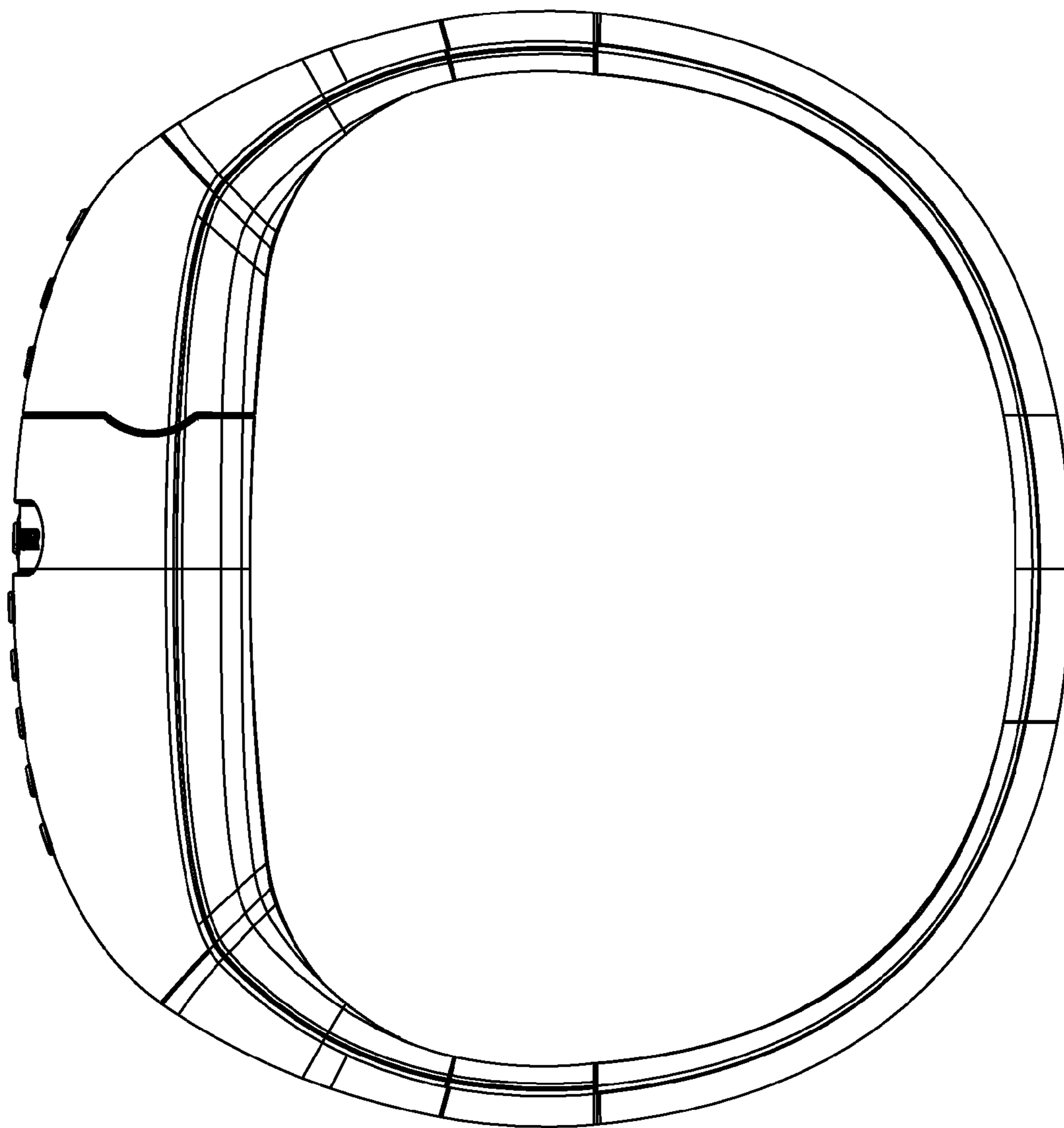


FIG. 5

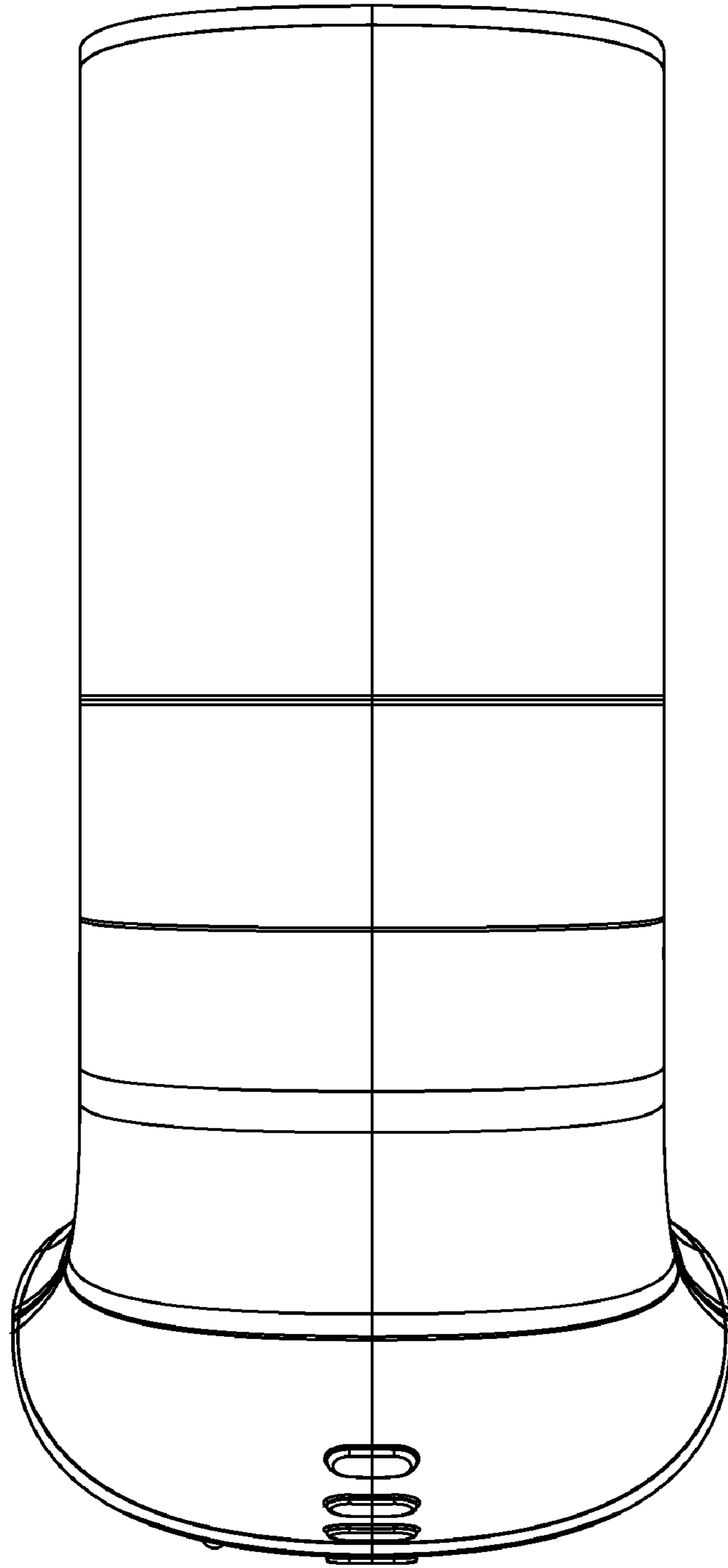


FIG. 6



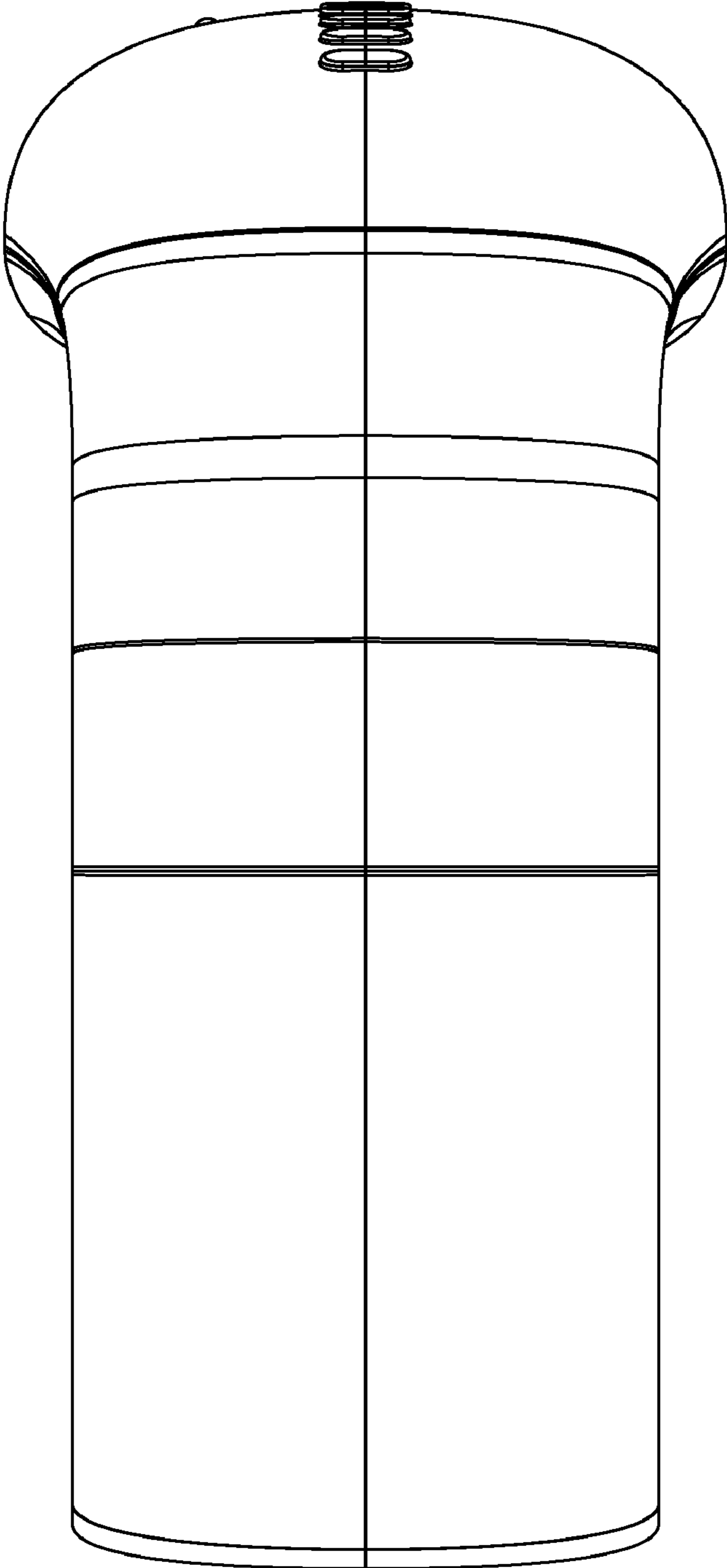


FIG. 7



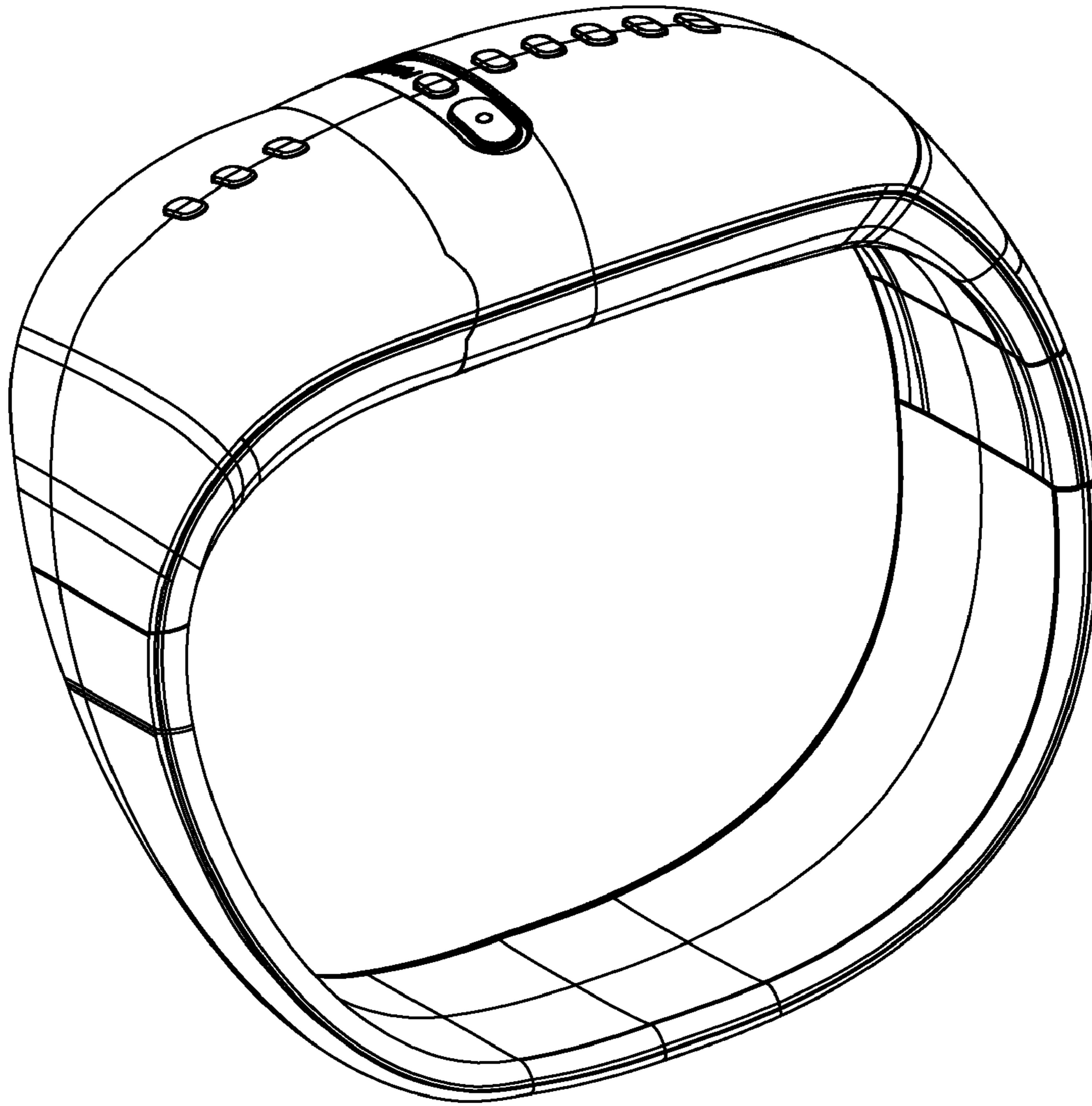


FIG. 8