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(12) **United States Design Patent**  
**Chang**

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(54) **HEART RATE SENSOR**

(71) Applicant: **Cal-Comp Electronics & Communications Company Limited,**  
New Taipei (TW)

(72) Inventor: **Chun-Chieh Chang,** New Taipei (TW)

(73) Assignee: **Cal-Comp Electronics & Communications Company Limited,**  
New Taipei (TW)

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

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(52) **U.S. Cl.**  
USPC ..... **D24/167**

(58) **Field of Classification Search**  
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D10/30-40, 70, 75, 78, 97, 98, 103;  
D11/3; D14/344, 511; 600/485, 490,  
600/503

CPC ..... A61B 5/0402; A61B 5/0404; A61B 5/024;  
A61B 5/02438; A61B 5/81; A61B 5/22;  
A61B 5/0225; A61B 5/681; A61B  
5/0008; A61B 5/02141; A61B 5/742;  
A61B 2650/00; A61B 2650/0443; A61B  
2650/0406

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D557,624 S \* 12/2007 Coster ..... D10/70  
D571,855 S \* 6/2008 Law ..... D14/436

D584,974 S \* 1/2009 Fukuda ..... D10/70  
D714,942 S \* 10/2014 Hwang ..... D24/167  
D731,898 S \* 6/2015 Squires ..... D10/30  
D733,888 S \* 7/2015 Tuhkanen ..... D24/167  
D736,205 S \* 8/2015 Park ..... D14/138 R  
D742,524 S \* 11/2015 Yao ..... D24/169  
D744,109 S \* 11/2015 Yoneta ..... D24/186

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 302866516 7/2014  
CN 303209073 5/2015

(Continued)

**OTHER PUBLICATIONS**

“Office Action of Taiwan Counterpart Application”, issued on Oct. 25, 2016, p. 1-p. 3, in which the listed references were cited.

*Primary Examiner* — Wan Laymon

*Assistant Examiner* — Clint A Samuel

(74) *Attorney, Agent, or Firm* — Jianq Chyun IP Office

(57) **CLAIM**

The ornamental design for a heart rate sensor, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a heart rate sensor showing my new design;

FIG. 2 is another perspective view thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a left side view thereof;

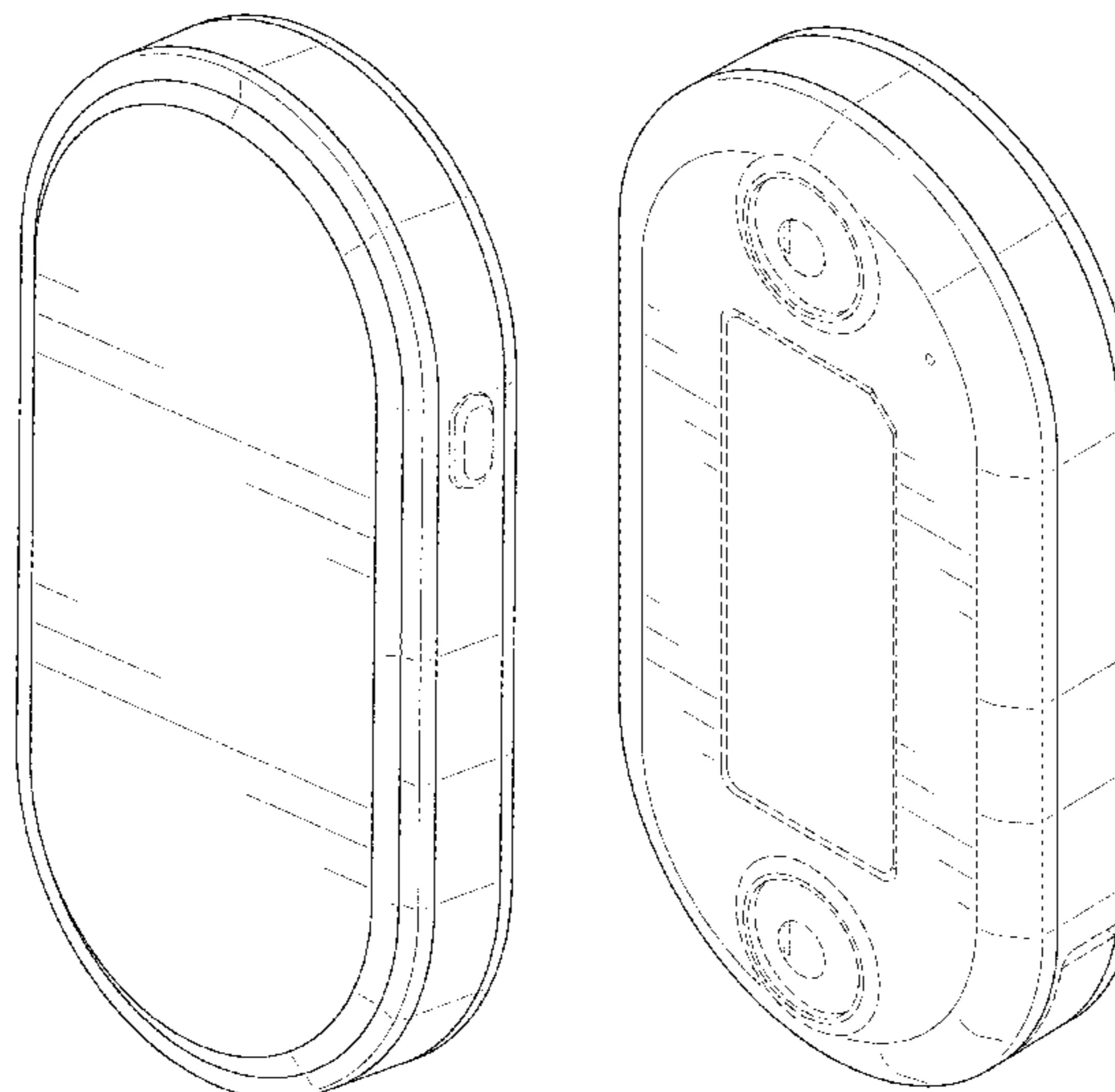
FIG. 6 is a right side view thereof;

FIG. 7 is a top view thereof; and,

FIG. 8 is a bottom view thereof.

The broken lines in the drawings illustrate the portions of the heart rate sensor and form no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D744,110 S \* 11/2015 Kubo ..... D24/186  
 D745,167 S \* 12/2015 Canas ..... D10/78  
 D748,273 S \* 1/2016 Chang ..... D24/186  
 D755,974 S \* 5/2016 Chen ..... D24/165  
 D757,942 S \* 5/2016 Suwito ..... D24/167  
 D760,766 S \* 7/2016 Repka ..... D14/487  
 D760,903 S \* 7/2016 Lin ..... D24/165  
 D764,060 S \* 8/2016 Singh ..... D24/167  
 D767,770 S \* 9/2016 Purfey ..... D24/186  
 D775,978 S \* 1/2017 Christianson ..... D10/106.8  
 D777,331 S \* 1/2017 Jayalath ..... D14/344  
 D778,445 S \* 2/2017 Cadio ..... D24/169  
 D783,170 S \* 4/2017 Carreon ..... D24/167  
 D787,066 S \* 5/2017 Kim ..... D10/97  
 D788,312 S \* 5/2017 Al-Ali ..... D24/186  
 D788,603 S \* 6/2017 Liu ..... D10/102  
 D790,708 S \* 6/2017 Personelli ..... D24/158  
 D791,952 S \* 7/2017 Florescu ..... D24/169

2010/0317951 A1\* 12/2010 Rutkowski ..... A61B 5/14532  
 600/365  
 2016/0029974 A1\* 2/2016 Armstrong ..... A61B 5/7278  
 600/301  
 2016/0192526 A1\* 6/2016 Gao ..... G06F 1/163  
 361/679.01  
 2016/0192856 A1\* 7/2016 Lee ..... A61B 5/6804  
 600/384  
 2016/0192857 A1\* 7/2016 Lee ..... A61B 5/681  
 600/382  
 2017/0027513 A1\* 2/2017 Mulpuru ..... A61B 5/6831  
 2017/0172448 A1\* 6/2017 Shin ..... A61B 5/0022  
 2017/0215805 A1\* 8/2017 Goode ..... A61B 5/7203  
 600/347

FOREIGN PATENT DOCUMENTS

CN 303306646 7/2015  
 TW 447987 7/2001

\* cited by examiner

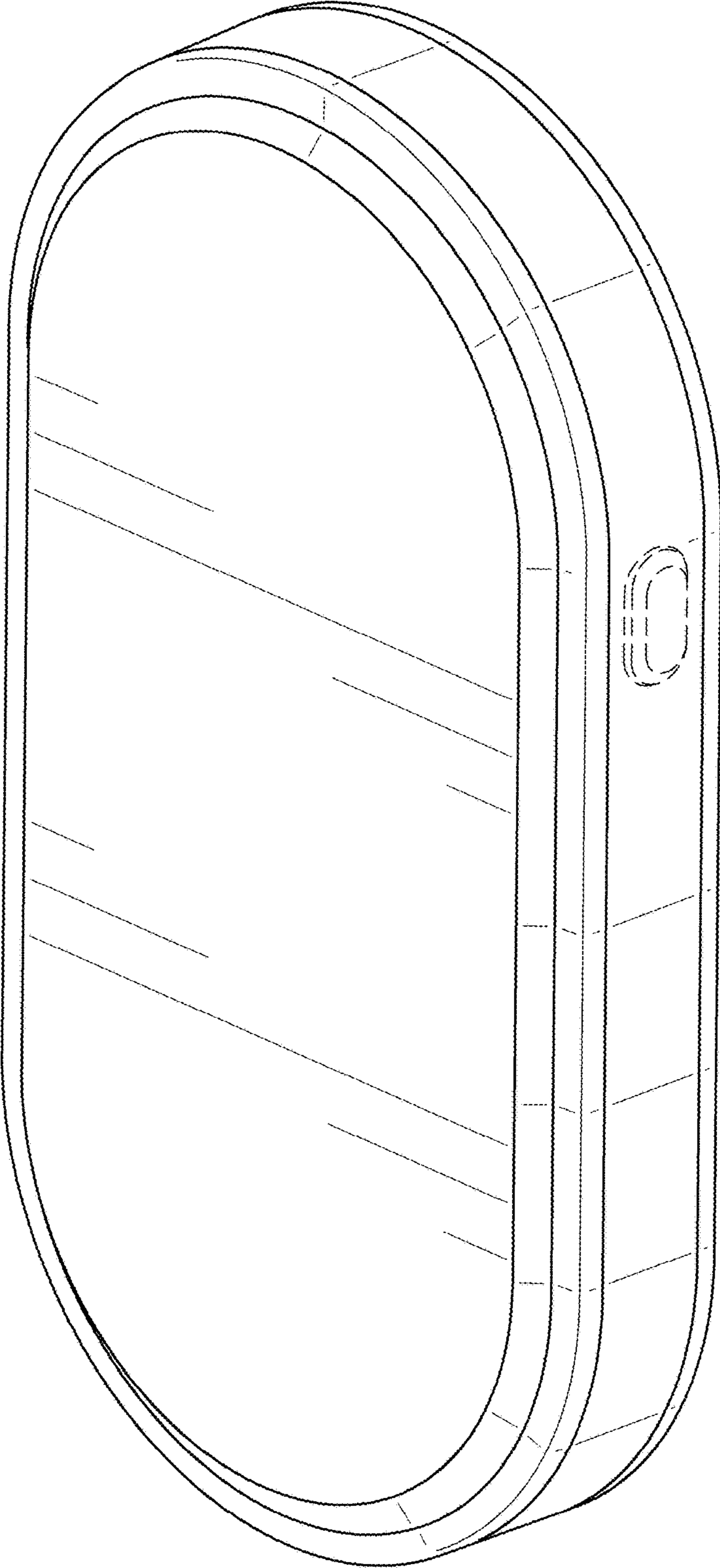


FIG. 1

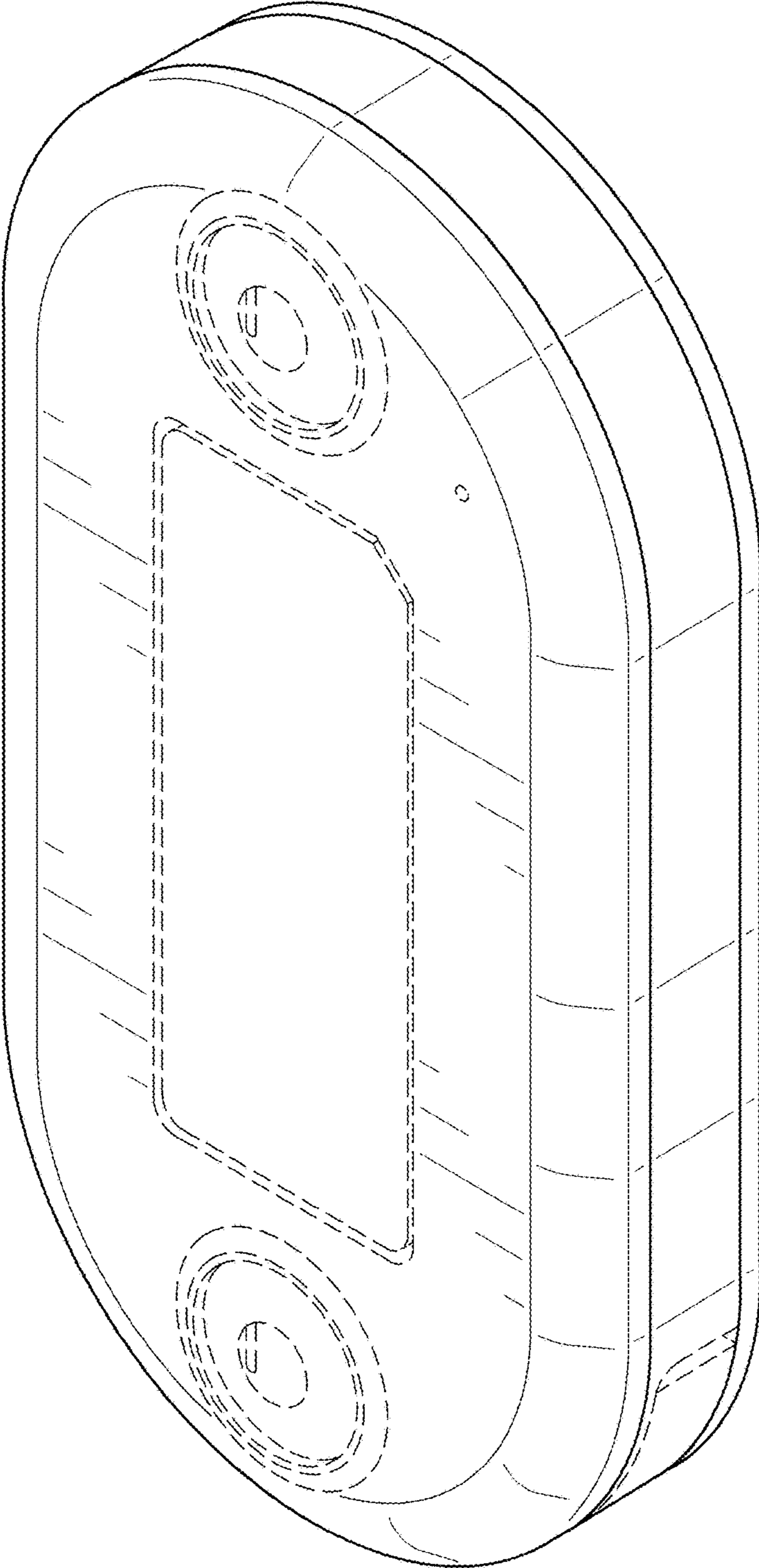


FIG. 2

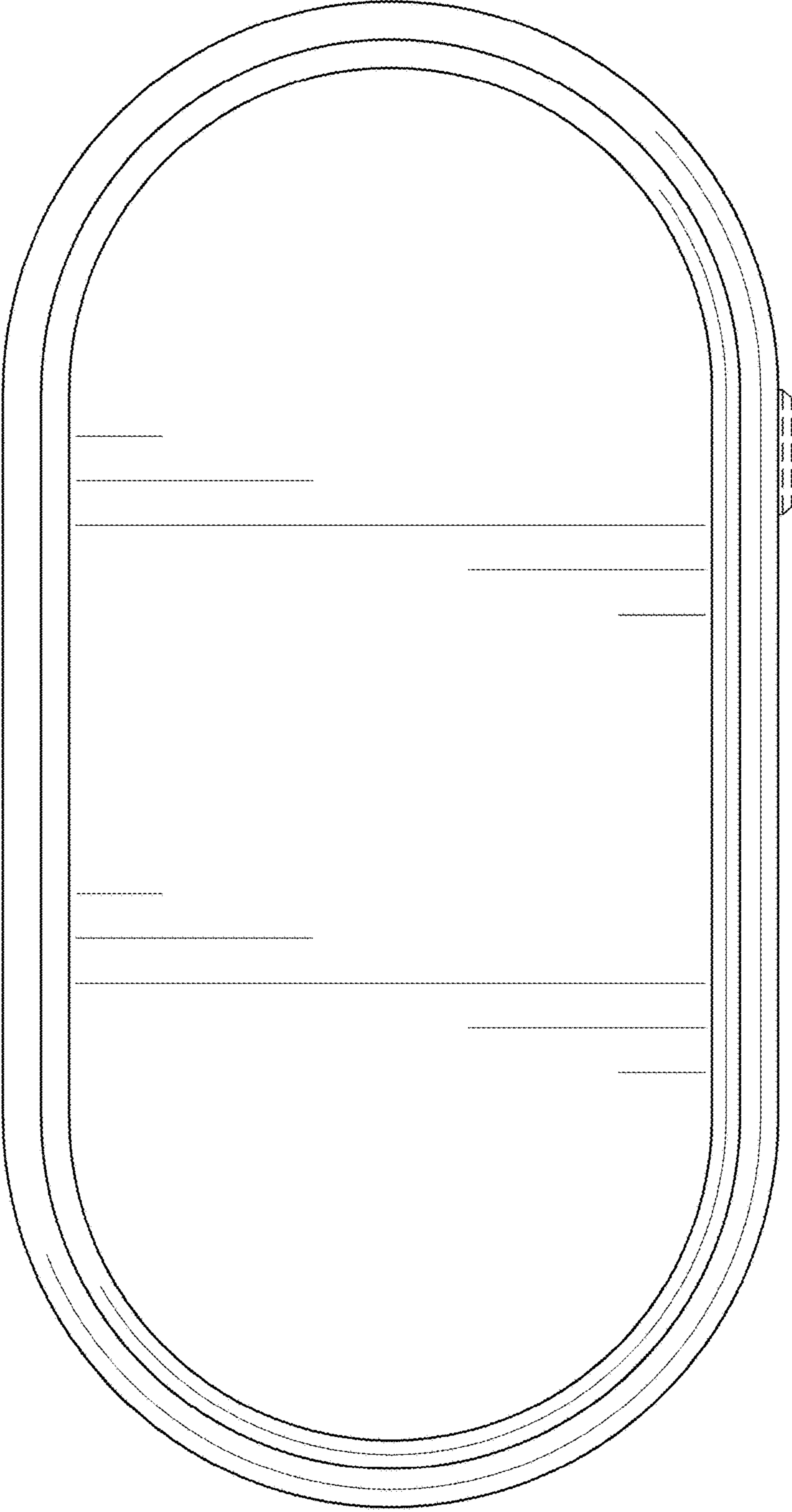


FIG. 3

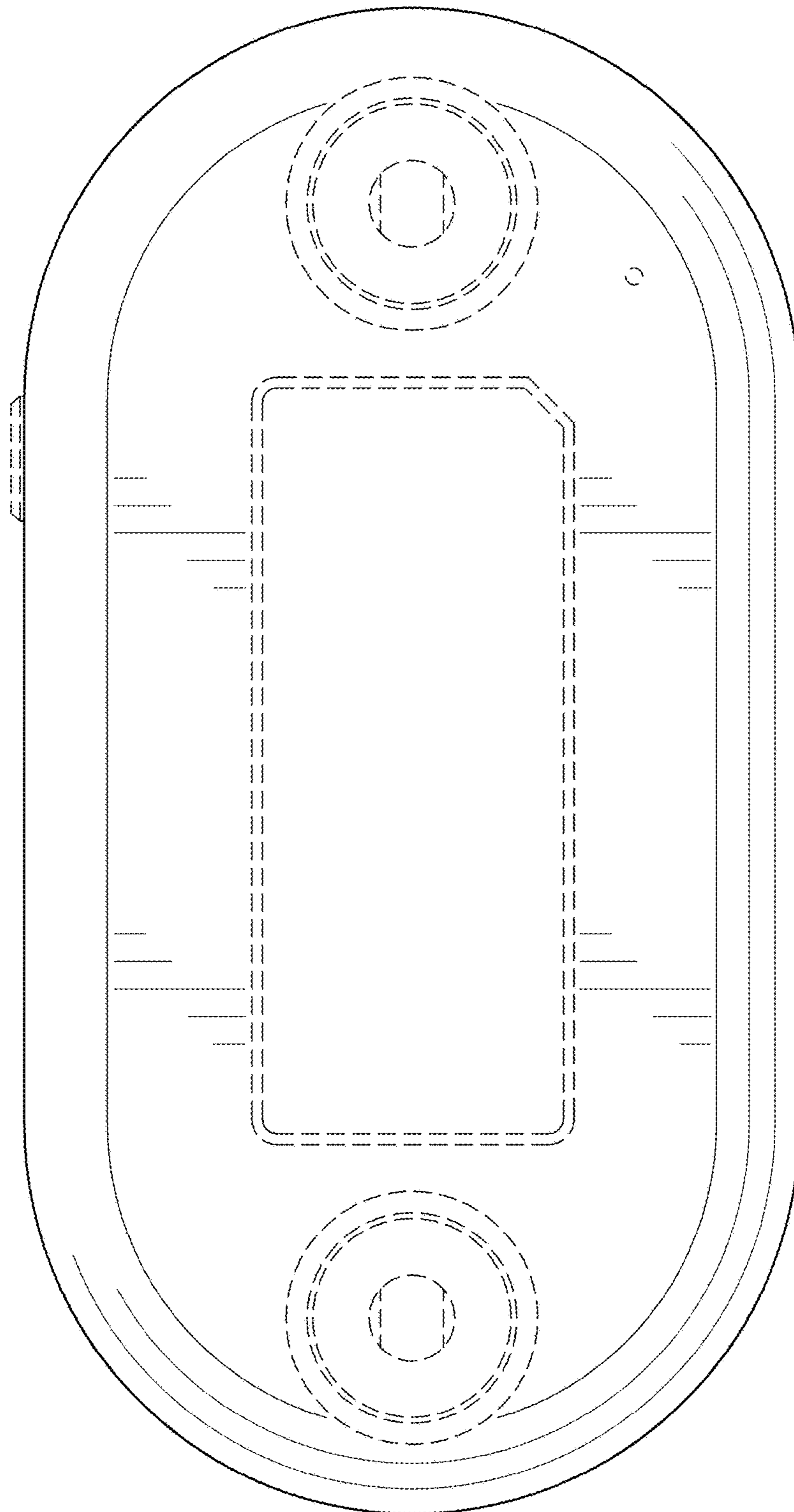


FIG. 4

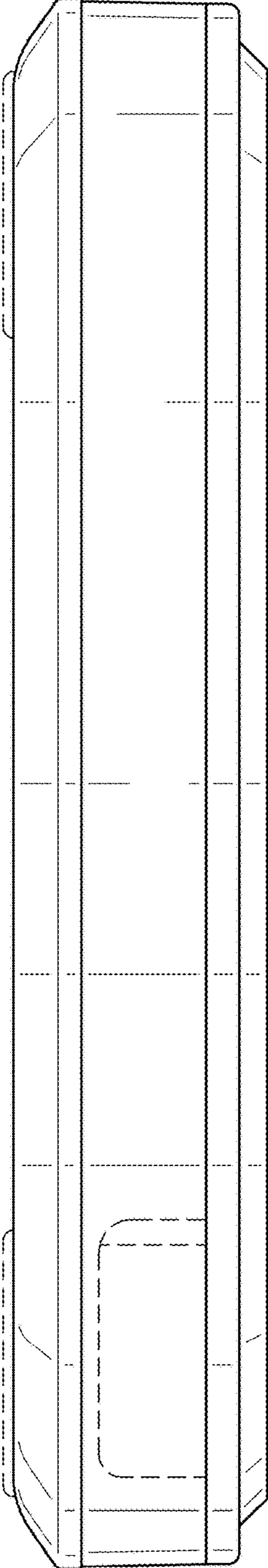


FIG. 5

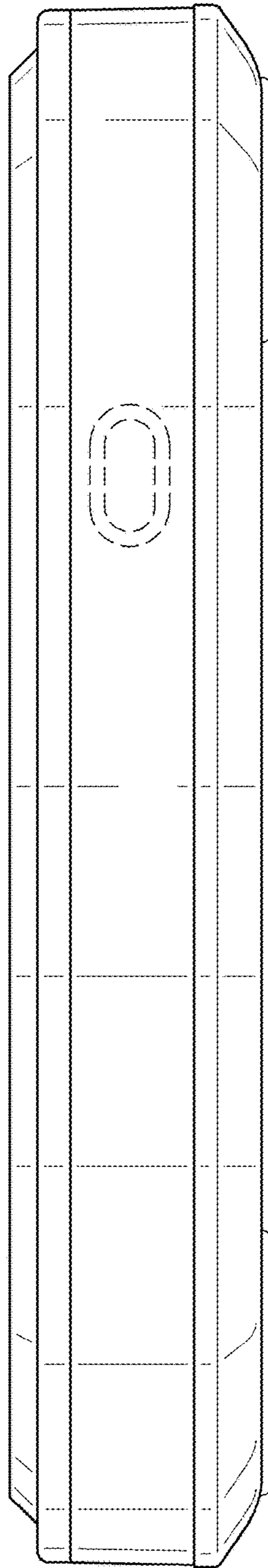


FIG. 6



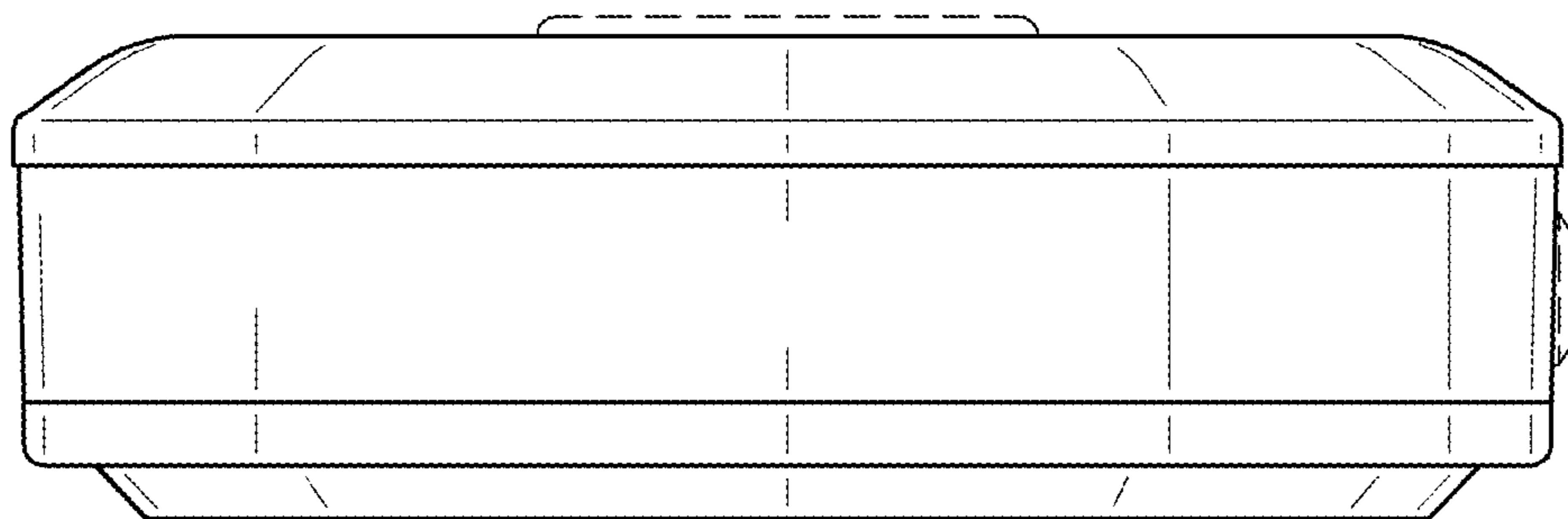


FIG. 7

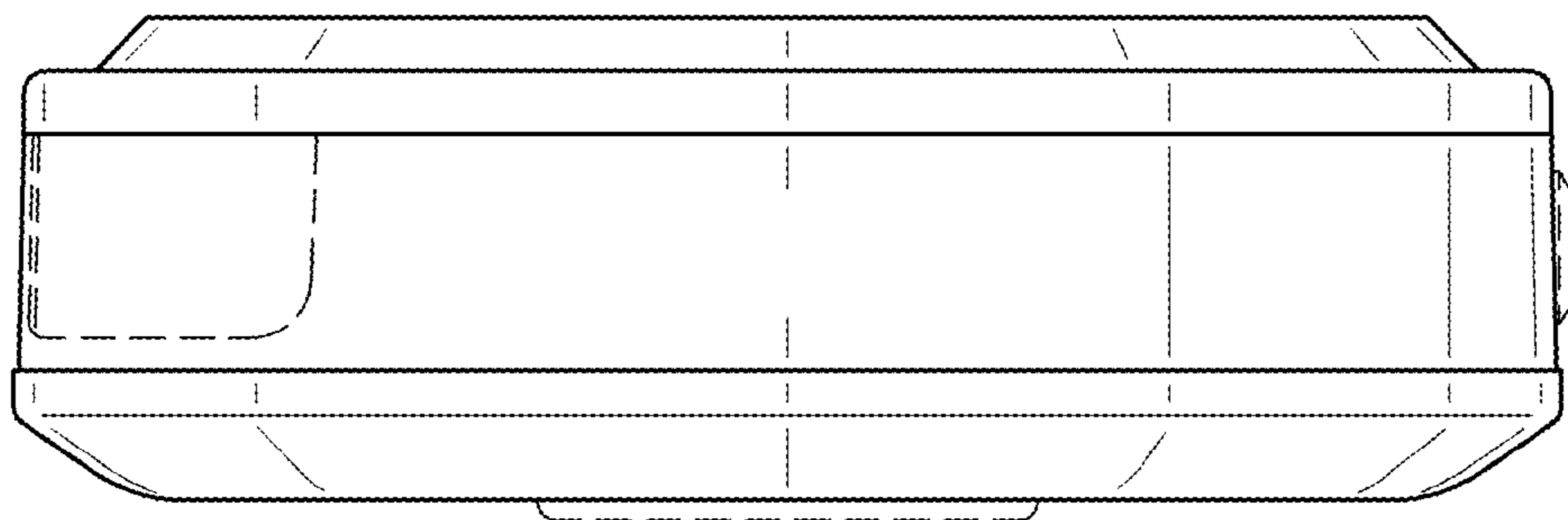


FIG. 8