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

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(54) **HALF SPIRAL CASING**

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

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(30) **Foreign Application Priority Data**

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(51) **LOC (11) Cl.** **15-02**

(52) **U.S. Cl.**
USPC **D15/7**

(58) **Field of Classification Search**
USPC D15/7-9; D23/231, 232, 225; 417/60, 417/235, 265, 321, 355, 358, 363, 359, 417/410.1, 415-416, 405, 900; 60/408, 60/412; 184/26-37; 415/140-147, 127; 123/495, 509; 137/565.34
CPC F02M 37/04; F02M 37/14
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D178,105 S * 6/1956 Zulinke D15/9
D206,502 S * 12/1966 Wells D15/7
D227,168 S * 6/1973 Chase et al. D15/7

D249,264 S * 9/1978 Bingler D15/7
D258,508 S * 3/1981 Serrambana D15/7
D273,383 S * 4/1984 Griggs, Jr. D15/7
D582,441 S * 12/2008 Shimomura D15/7
D603,878 S * 11/2009 Chu D15/9
D609,249 S * 2/2010 Foreman D15/7
D654,508 S * 2/2012 Foreman D15/7
D778,906 S * 2/2017 Grubel D10/101
D812,106 S * 3/2018 Minatodani D15/7

* cited by examiner

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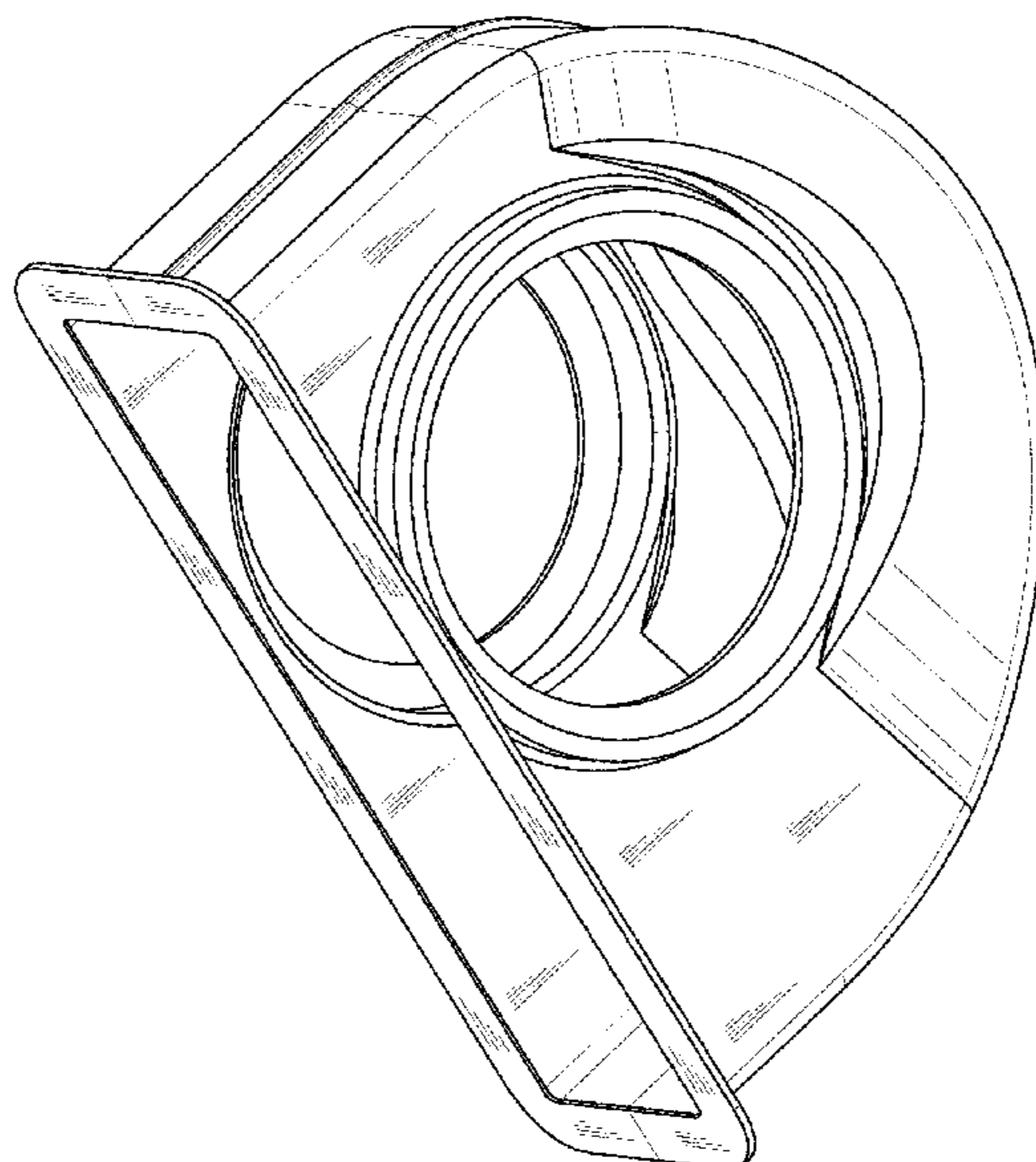
(57) **CLAIM**

The ornamental design for a half spiral casing, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the half spiral casing;
FIG. 2 is a first side view of the half spiral casing;
FIG. 3 is a second side view of the half spiral casing;
FIG. 4 is a third side view of the half spiral casing;
FIG. 5 is a fourth side view of the half spiral casing;
FIG. 6 is a fifth side view of the half spiral casing; and,
FIG. 7 is a sixth side view of the half spiral casing.

1 Claim, 7 Drawing Sheets



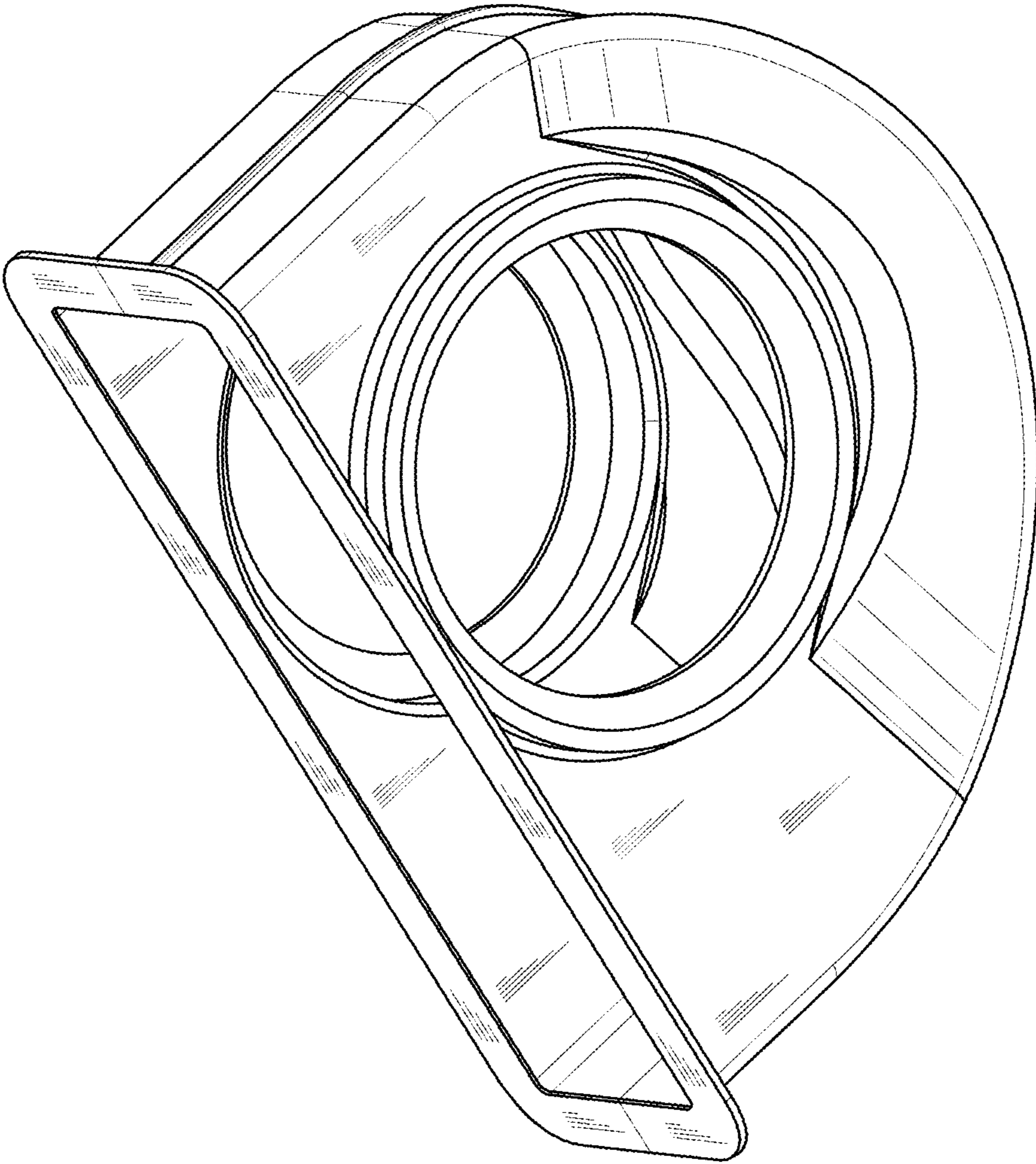


FIG. 1

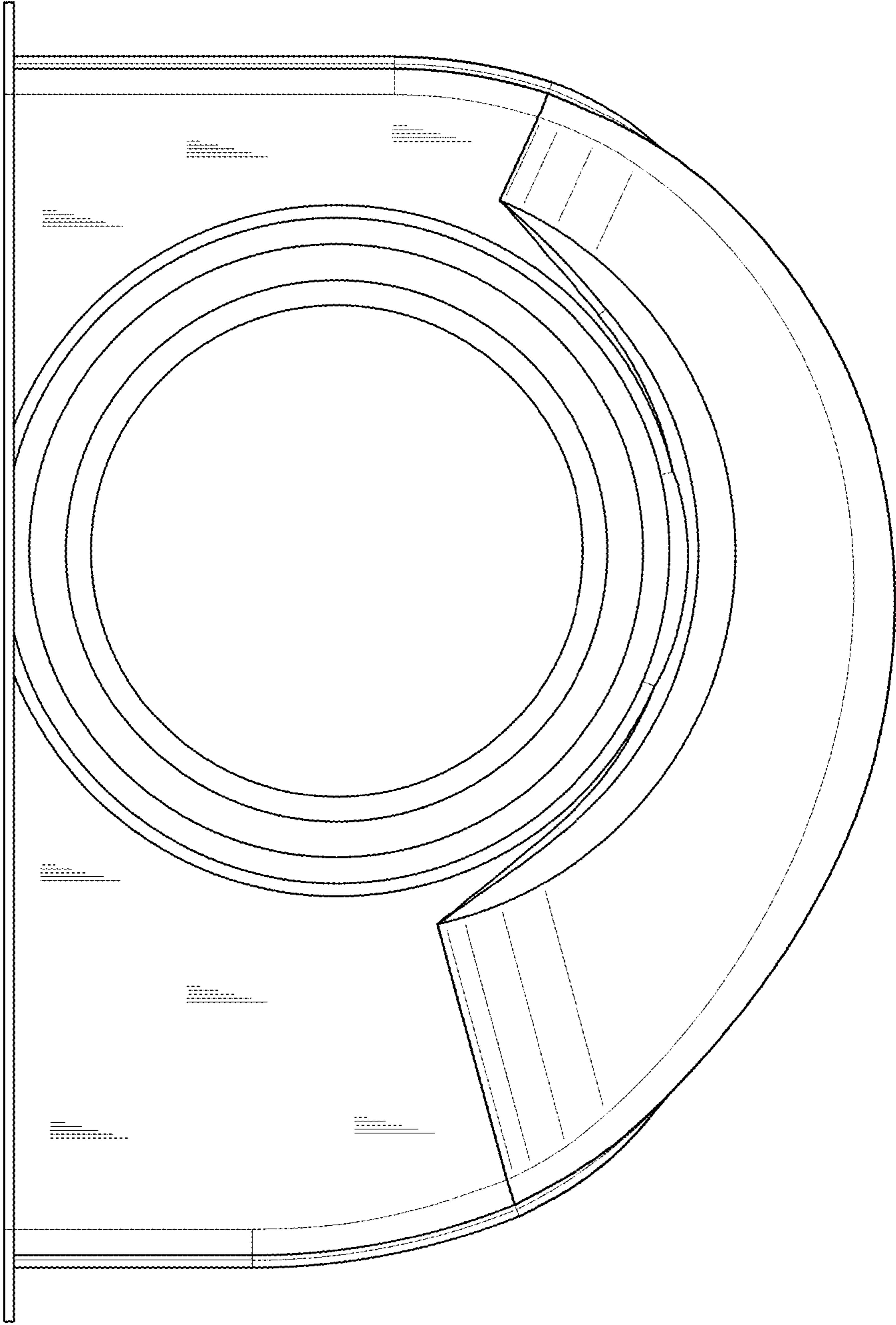


FIG. 2

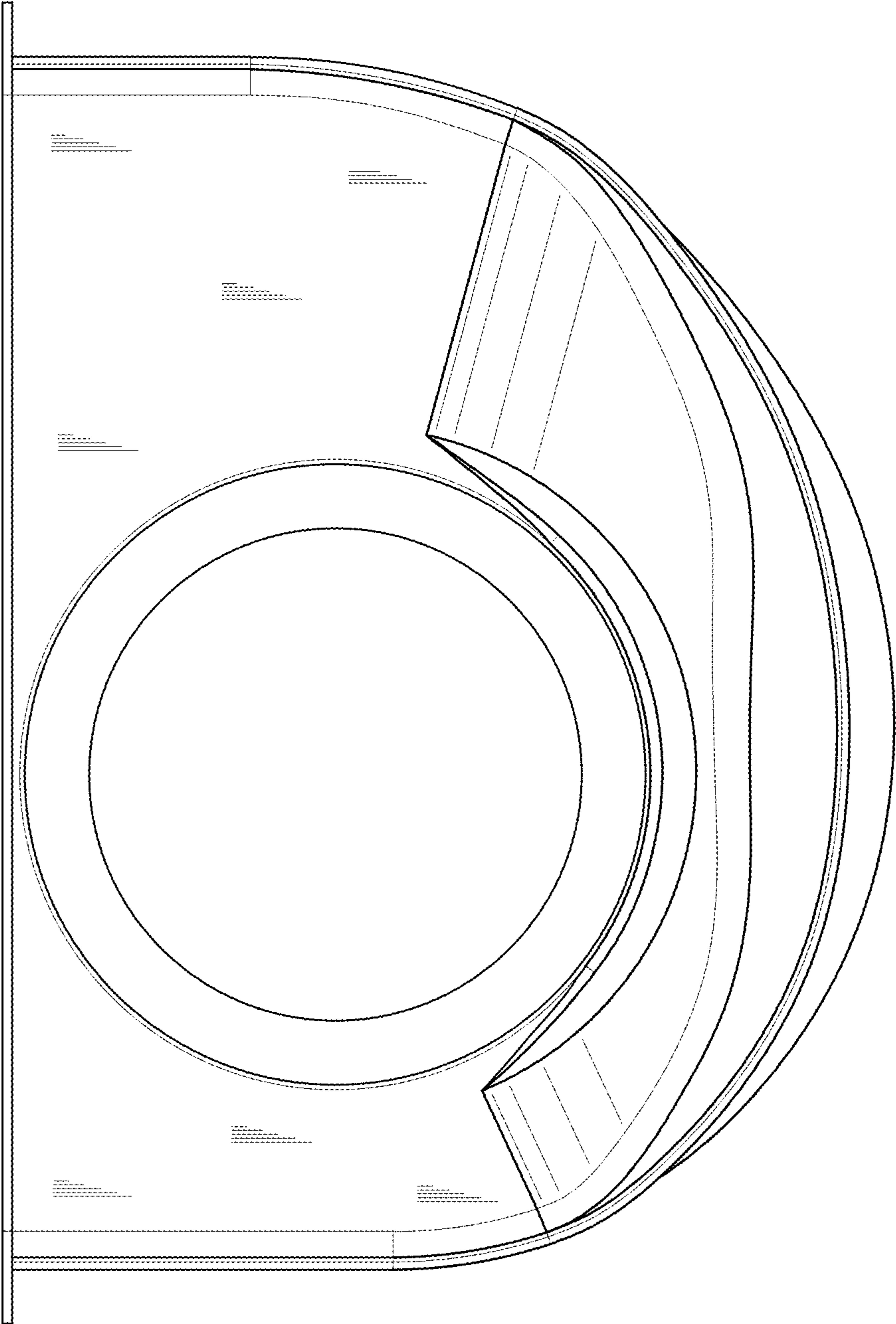


FIG. 3

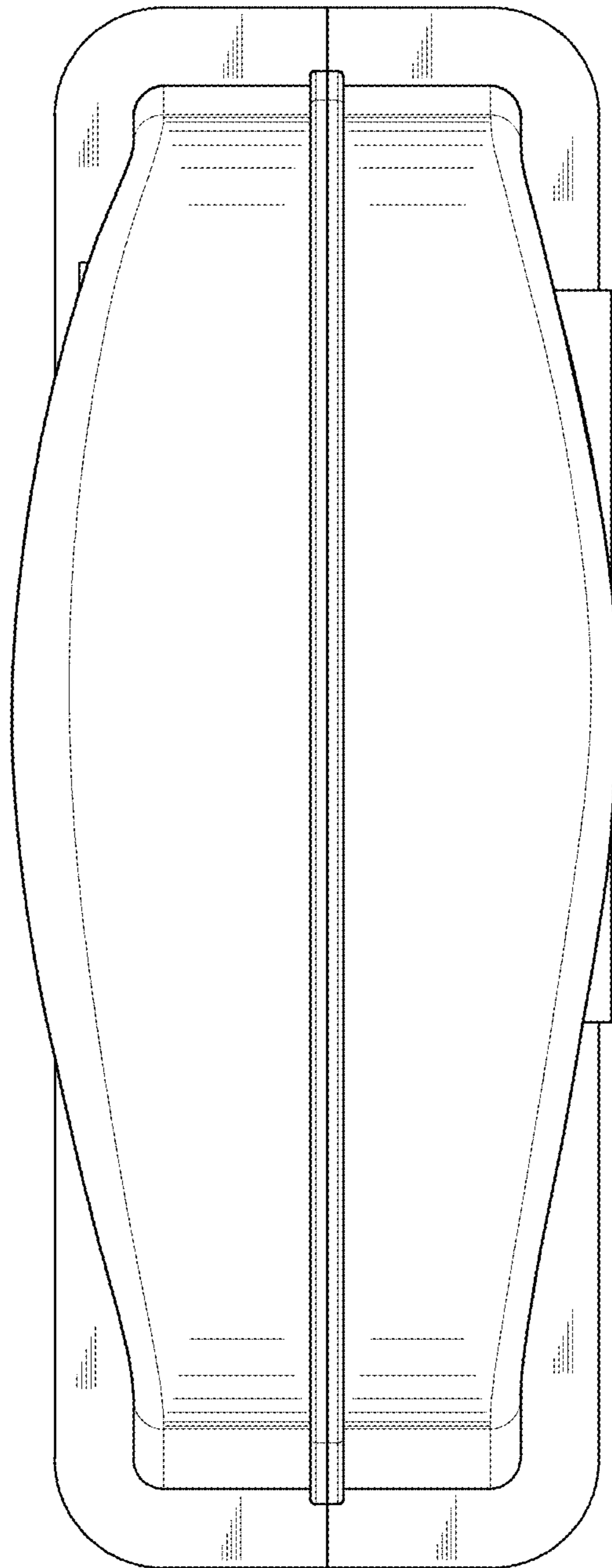


FIG. 4

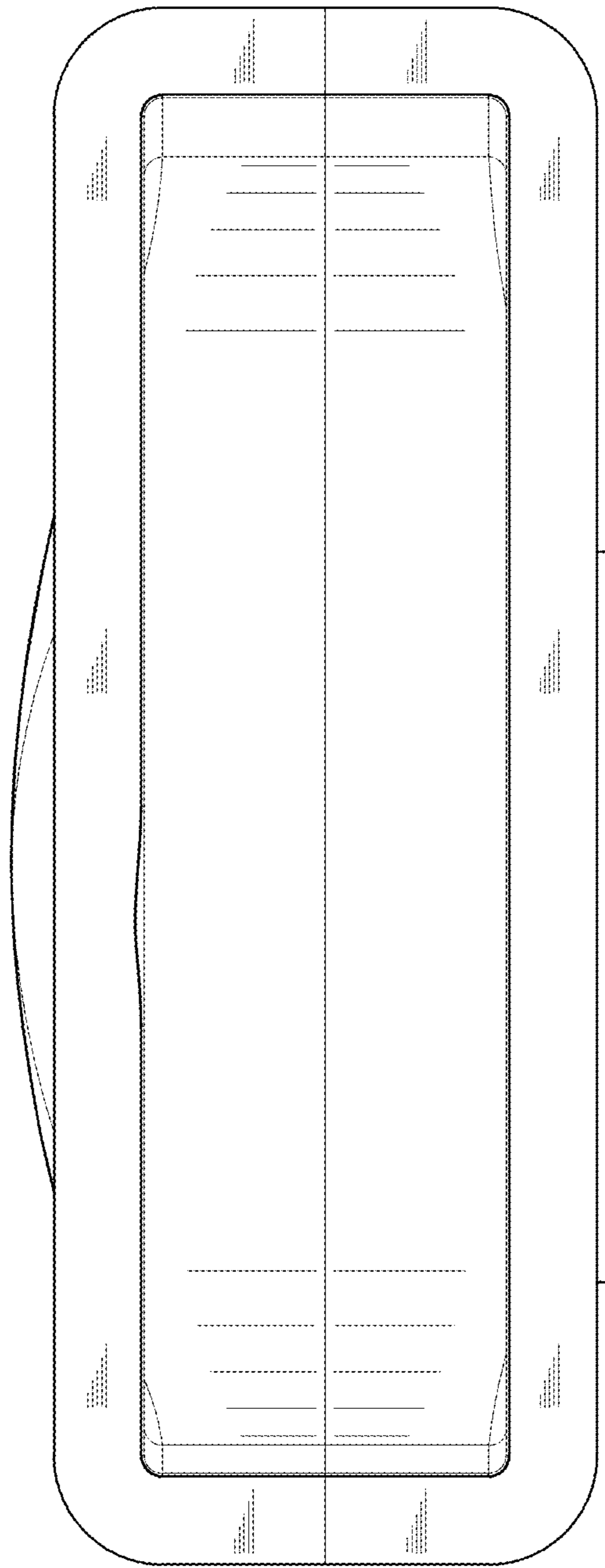


FIG. 5

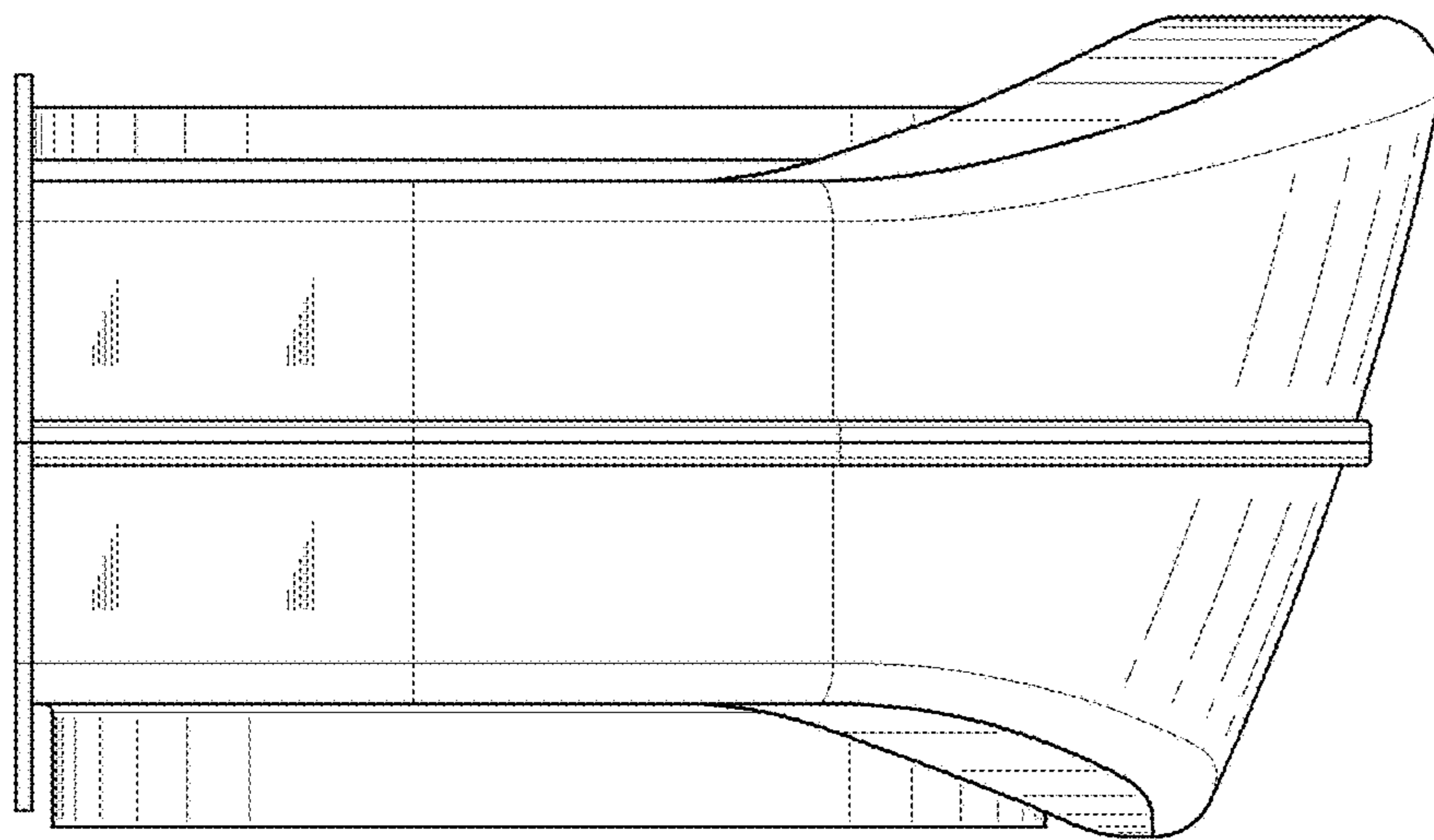


FIG. 6

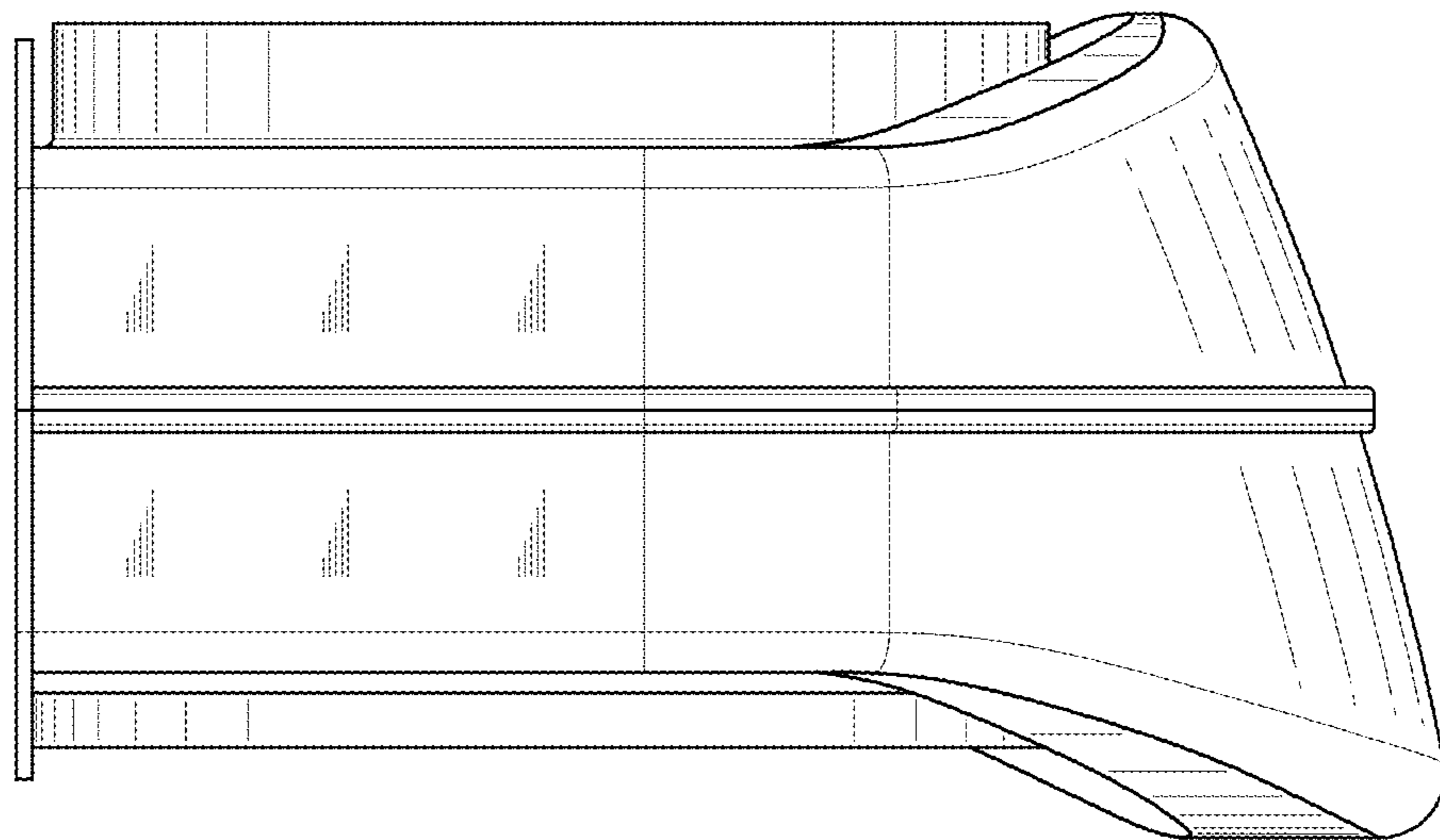


FIG. 7