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(12) United States Design Patent

Lichter

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(54) **AUTONOMOUS UNDERWATER VEHICLE**

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(73) Assignee: **Lockheed Martin Corporation**, Bethesda, MD (US)

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

(21) Appl. No.: **29/578,430**

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(51) **LOC (11) Cl.** **12-06**

(52) **U.S. Cl.**
USPC **D12/308**

(58) **Field of Classification Search**
USPC ..... D12/214, 308, 317, 318; 114/20.1, 244, 114/245, 312, 315, 316, 318, 319, 322, 114/324, 326, 327, 330–333, 337, 338; 440/49, 51, 53, 61 R, 61 T, 66, 76, 440/79–81, 89 R
CPC B63G 8/00; B63G 8/001; B63G 8/002; B63G 8/08; B63G 8/41; B63G 8/42; B63B 3/13; B63B 1/107; B63C 11/36; B63C 11/40; B63C 11/42
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,849,978	A *	9/1958	Durham	B63B 1/041	114/163
D189,008	S *	10/1960	Foster	43/43.13	
3,131,664	A *	5/1964	McInvale	B63C 11/46	114/315
D200,941	S *	4/1965	Fiedler	D12/308	
D205,812	S *	9/1966	Ulbrich	D12/308	
D217,744	S *	6/1970	Peterson	D12/308	
D219,182	S *	11/1970	Pontout	D12/308	
D259,553	S *	6/1981	Robinson	D12/308	
D284,074	S *	6/1986	Hooper	D12/308	
D418,804	S *	1/2000	Glasgow	D12/323	
D475,964	S *	6/2003	Sakas	B63B 3/13 D12/308	

OTHER PUBLICATIONS

T. Joung et al., "Verification of CFD analysis methods for predicting the drag force and thrust power of an underwater disk robot," Int. J. Nav. Archit. Ocean Eng., (2014) vol. 6, p. 269-281.

* cited by examiner

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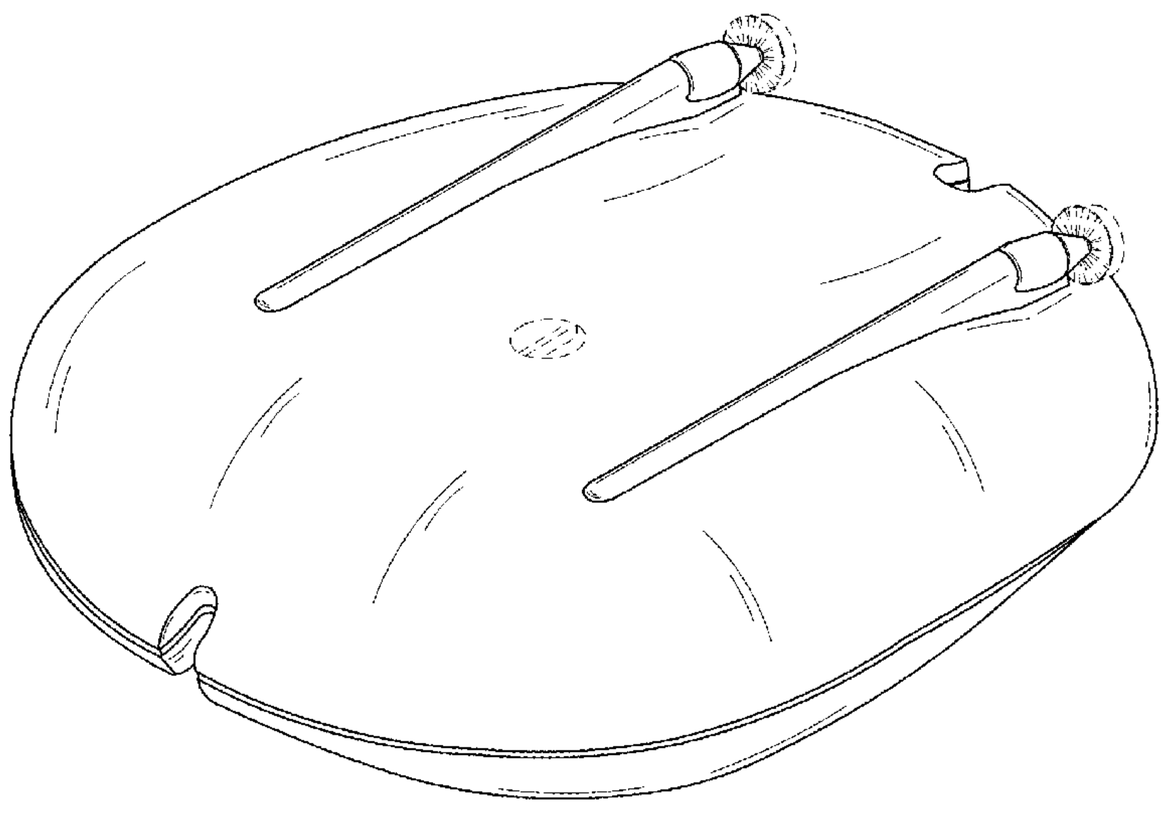
(57) **CLAIM**

The ornamental design for an autonomous underwater vehicle, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of the autonomous underwater vehicle.
FIG. **2** is a top plan view of FIG. **1**
FIG. **3** is a bottom plan view of FIG. **1**.
FIG. **4** is a front side elevation view of FIG. **1**.
FIG. **5** is a rear side elevation view of FIG. **1**.
FIG. **6** is a left side elevation view of FIG. **1**; and,
FIG. **7** is a right side elevation view of FIG. **1**.
The broken lines shown are included for the purpose of illustrating portions of the article which form no part of the claimed design.

1 Claim, 7 Drawing Sheets



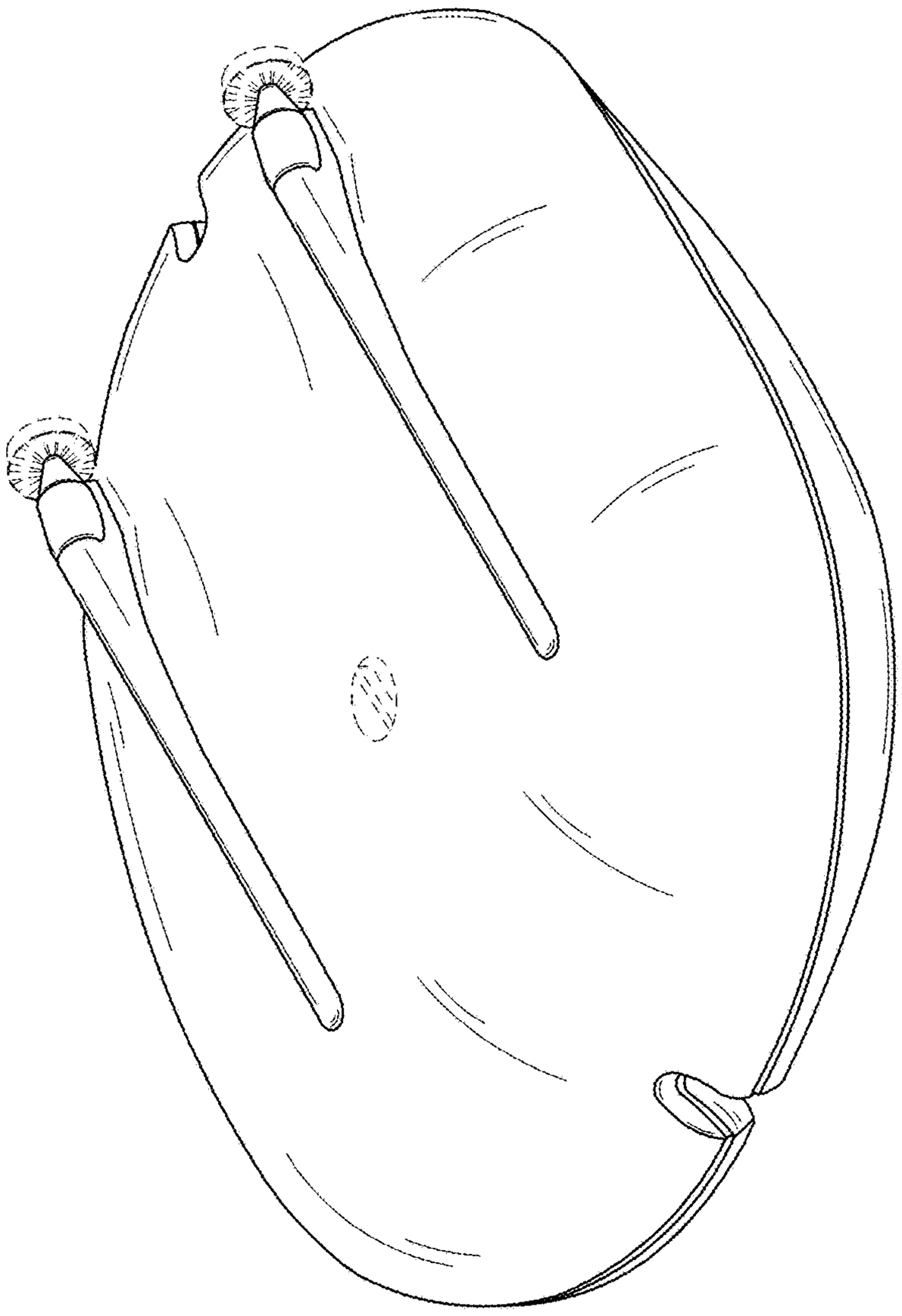


FIG. 1

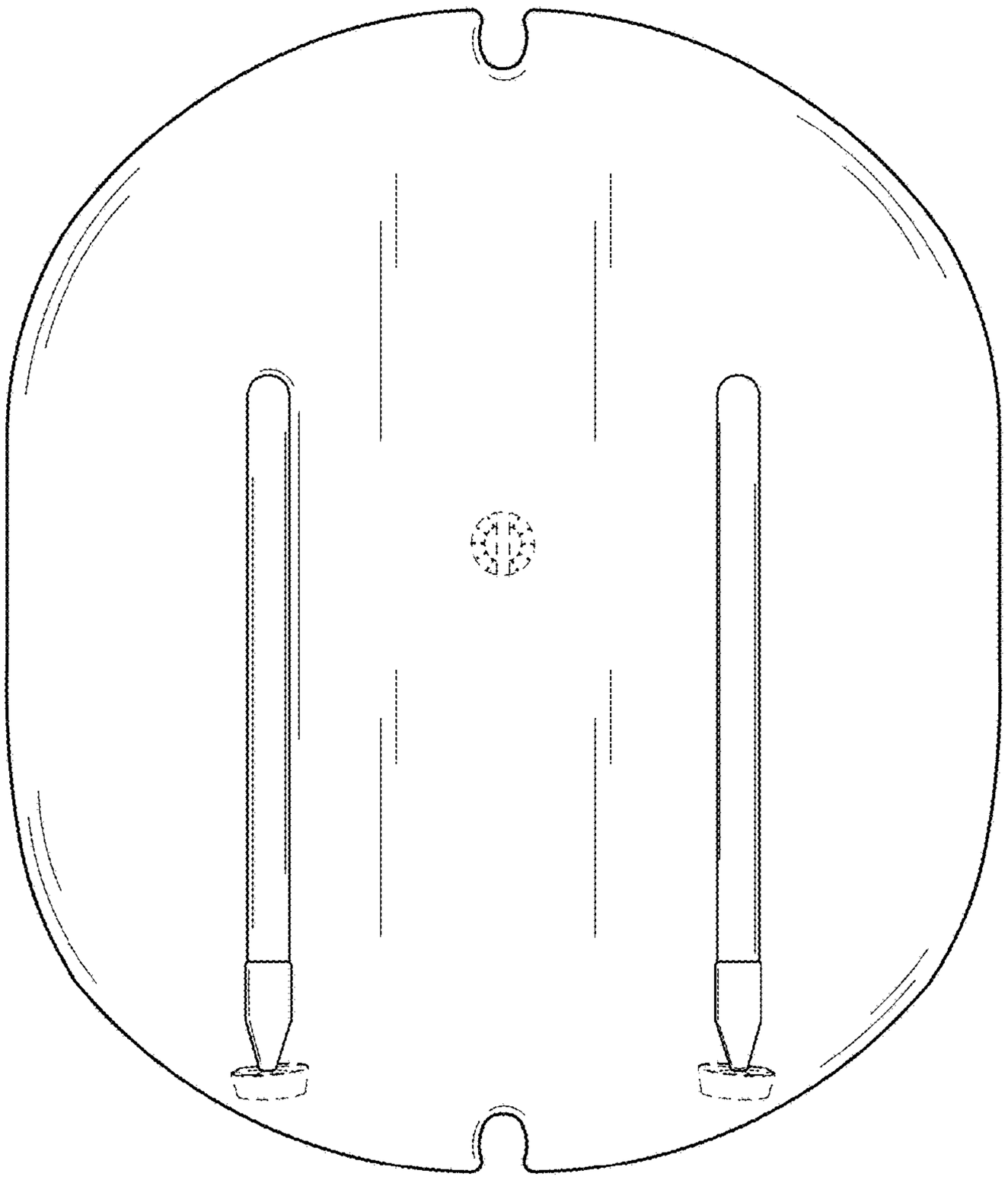


FIG. 2

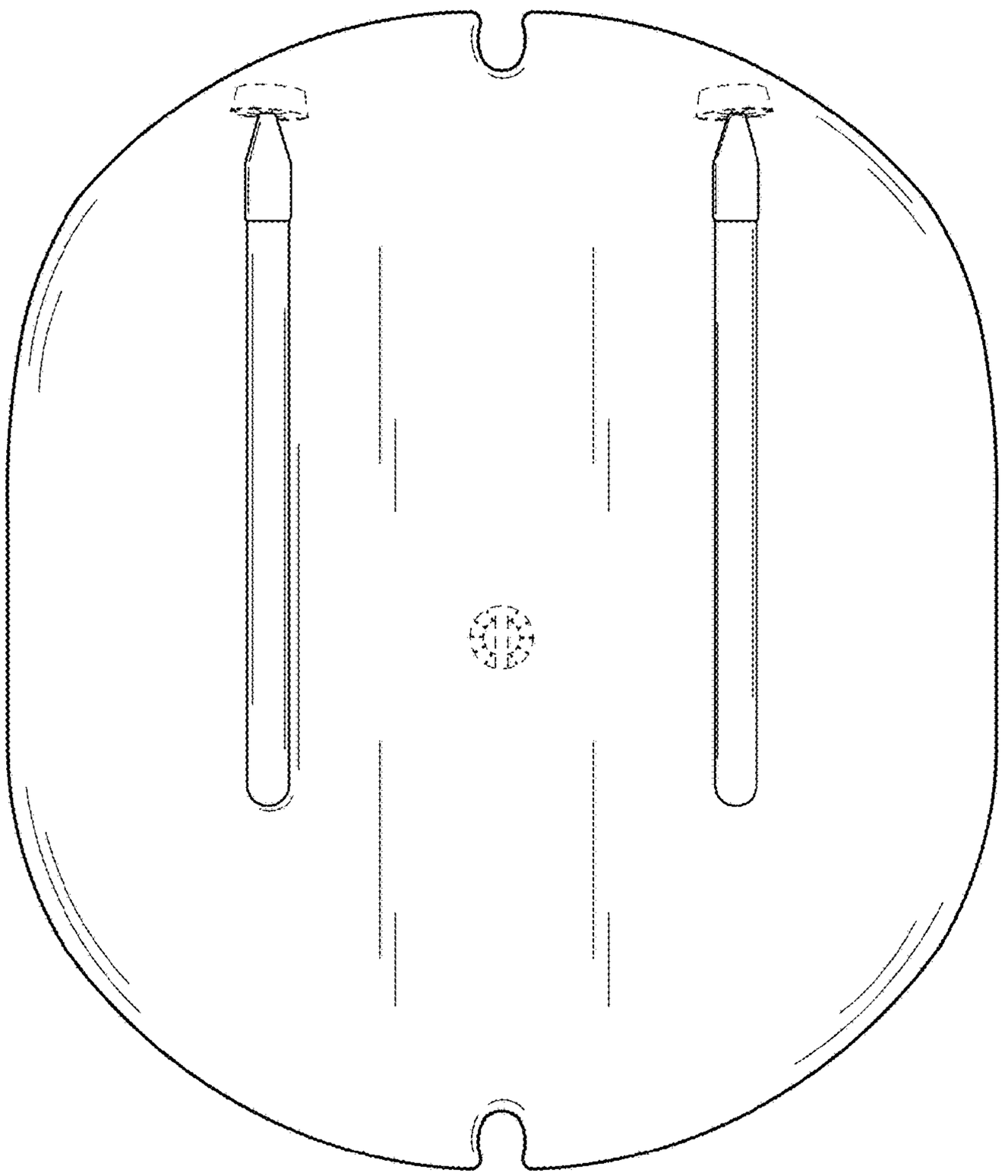


FIG. 3

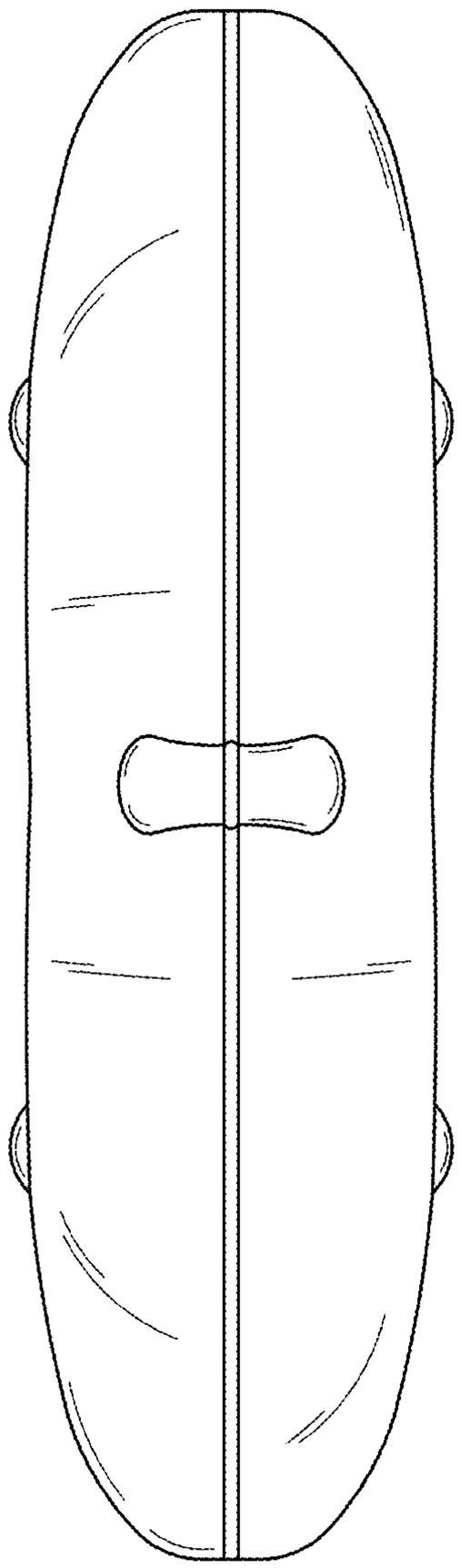


FIG. 4

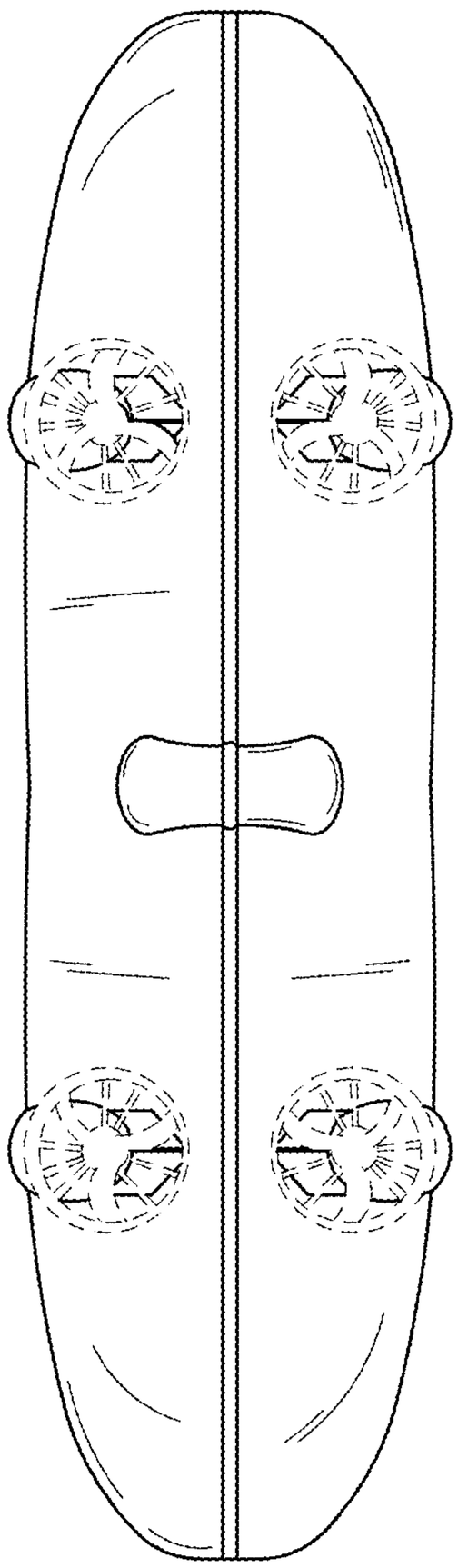


FIG. 5

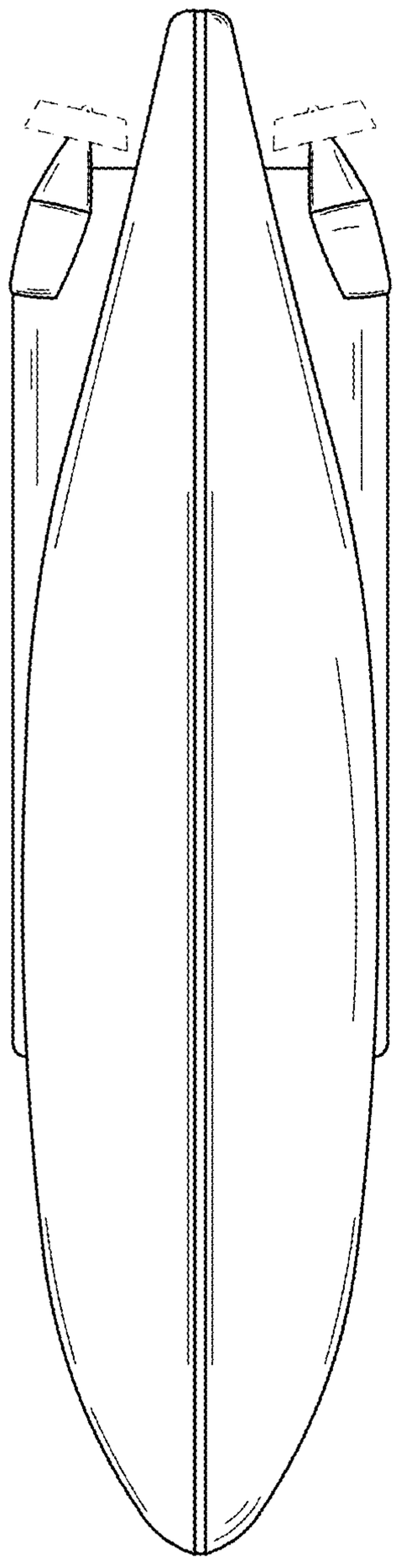


FIG. 6

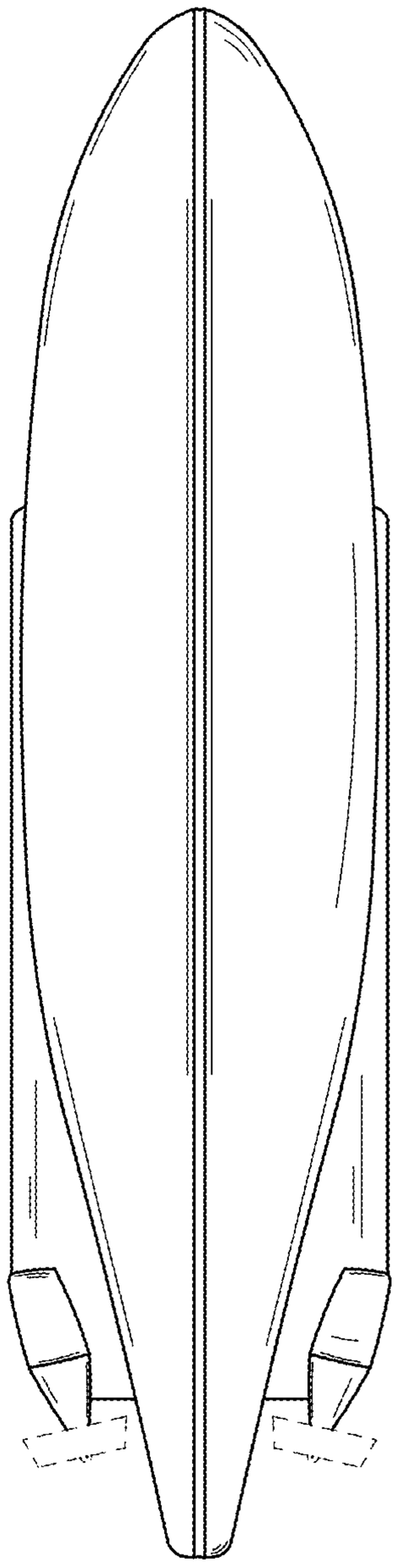


FIG. 7