



US00D777321S

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

(10) **Patent No.:** **US D777,321 S**
(45) **Date of Patent:** **** Jan. 24, 2017**

(54) **LIQUID MEDICINE INJECTION DEVICE**

(71) Applicant: **NIPRO CORPORATION**, Osaka-shi,
Osaka (JP)

(72) Inventors: **Hiroyuki Nakagami**, Osaka (JP);
Masayuki Uenishi, Osaka (JP); **Naoki Nakagawa**, Osaka (JP); **Shingo Sakamoto**, Osaka (JP); **Ryuhei Koinuma**, Osaka (JP)

(73) Assignee: **Nipro Corporation**, Osaka-shi (JP)

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

(21) Appl. No.: **29/531,443**

(22) Filed: **Jun. 25, 2015**

(30) **Foreign Application Priority Data**

Dec. 26, 2014 (JP) 2014-029281

(51) **LOC (10) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/112**

(58) **Field of Classification Search**
USPC D24/112-114, 108, 133, 130, 127, 186;
606/181, 185; 604/264, 272, 187, 181,
604/184, 227
CPC A61M 5/178; A61M 3/00; A61M 5/20;
A61M 5/31; A61M 5/3146; A61M
5/3129; A61M 5/3148; A61M 5/315
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,951,582 A * 9/1999 Thorne A61B 5/1411
606/167
D477,664 S * 7/2003 Wong D24/108
D479,324 S * 9/2003 Greaney D24/111

D589,650 S * 3/2009 Adriaenssen D24/133
7,986,342 B2 * 7/2011 Yogesan A61B 1/00105
348/207.99
D664,295 S * 7/2012 Grabes D24/133
D665,128 S * 8/2012 Kling D24/133
D667,557 S * 9/2012 Boudier D24/186
D681,195 S * 4/2013 Skulley D24/113
D681,828 S * 5/2013 Shinohara D24/186
D739,932 S * 9/2015 Ratjen D24/113
D746,976 S * 1/2016 Chen D24/112
D759,243 S * 6/2016 Molenschot D24/114

FOREIGN PATENT DOCUMENTS

JP 1272594 S 6/2006
JP 1273063 S 6/2006

* cited by examiner

Primary Examiner — David Muller

(74) *Attorney, Agent, or Firm* — Birch, Stewart, Kolasch & Birch, LLP

(57) **CLAIM**

The ornamental design for a liquid medicine injection device, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a liquid medicine injection device;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

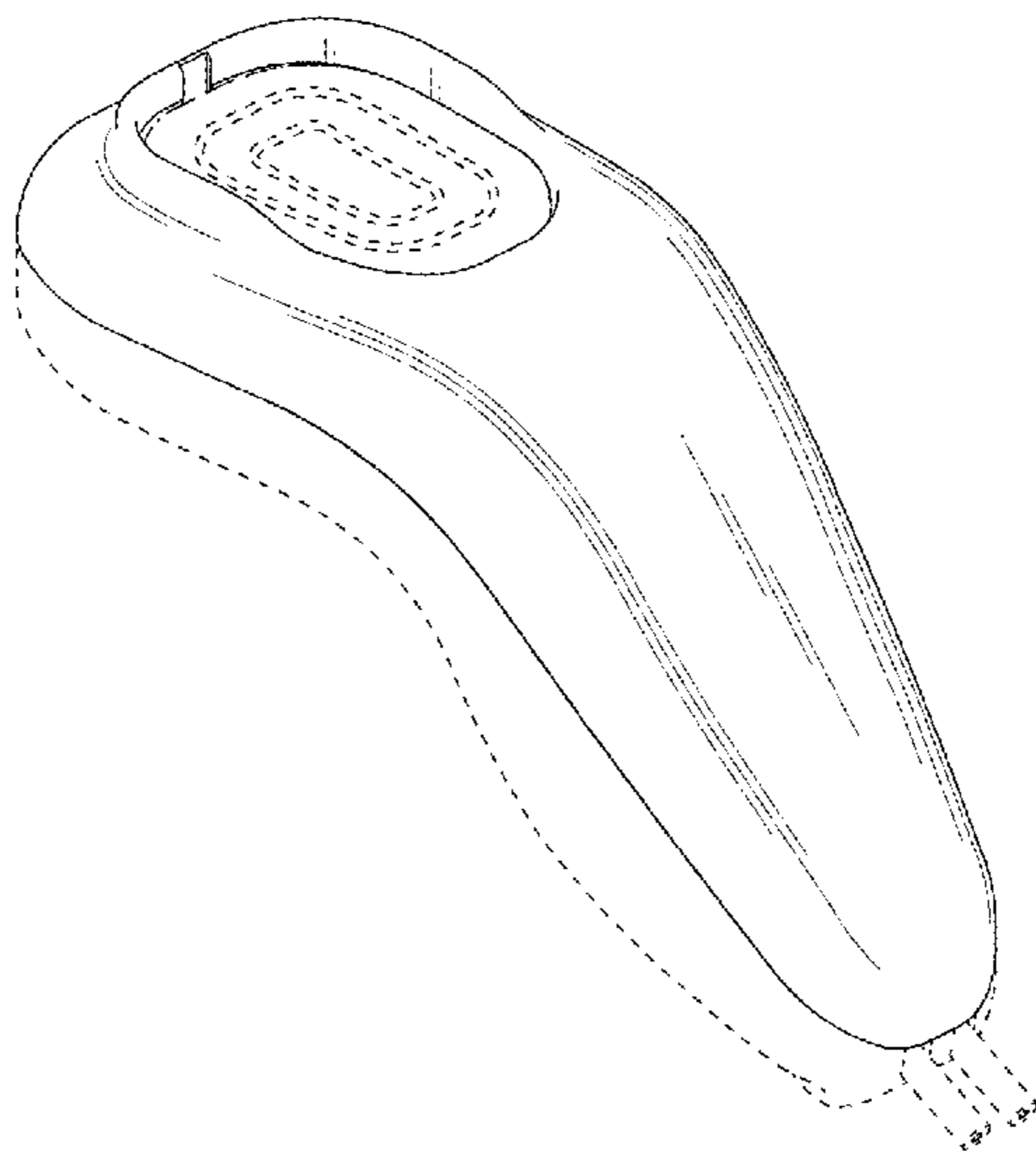
FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof; and,

FIG. 6 is a top view thereof, the opposite side being a mirror image of the side shown herein.

The dash dot lines immediately adjacent to the claimed areas in the views represent the boundaries of the claimed design. The dashed lines in the figures illustrate the portions of the design that form no part of the claimed design. None of the broken lines form any part of the claimed design.

1 Claim, 4 Drawing Sheets



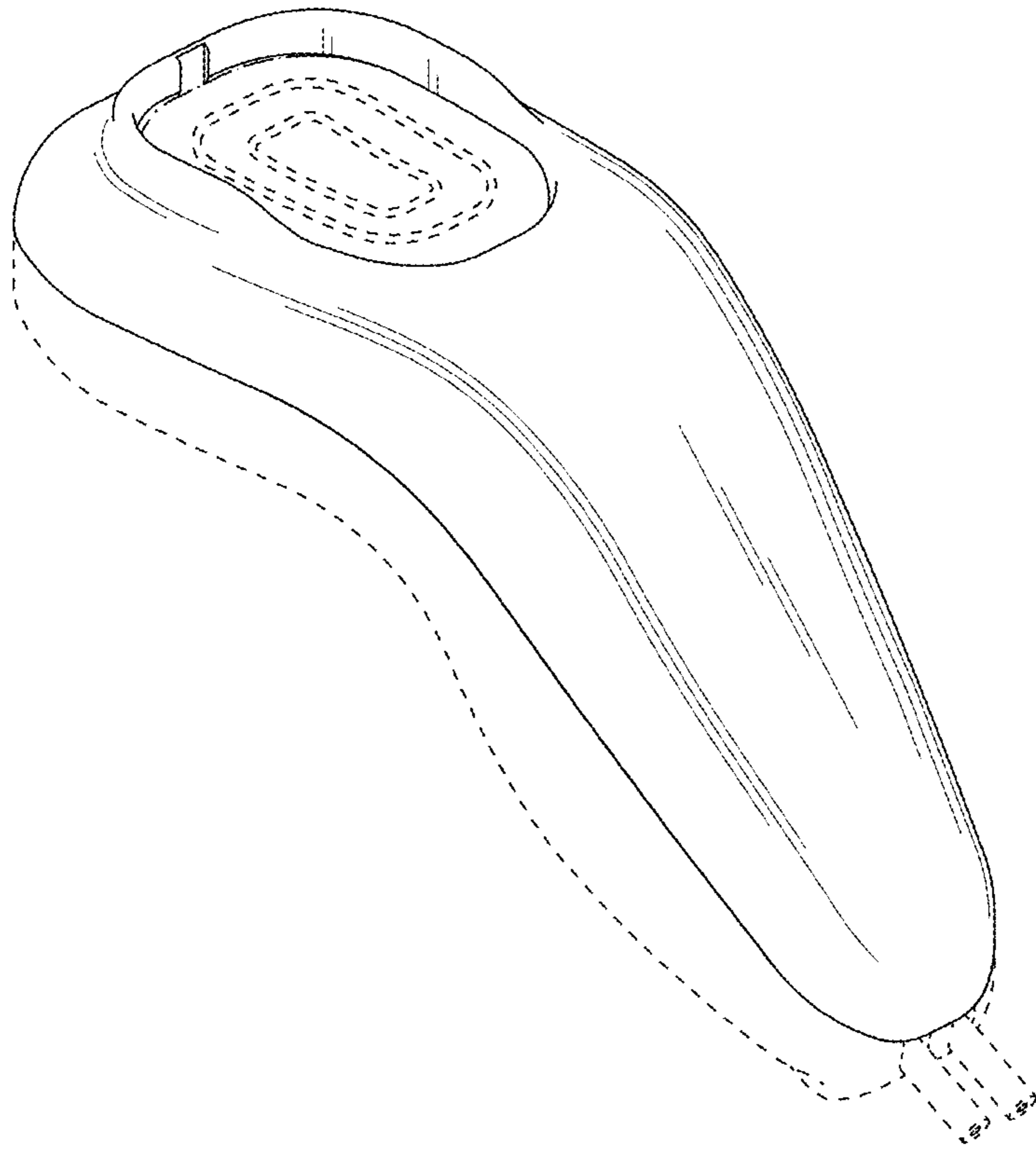


FIG. 1

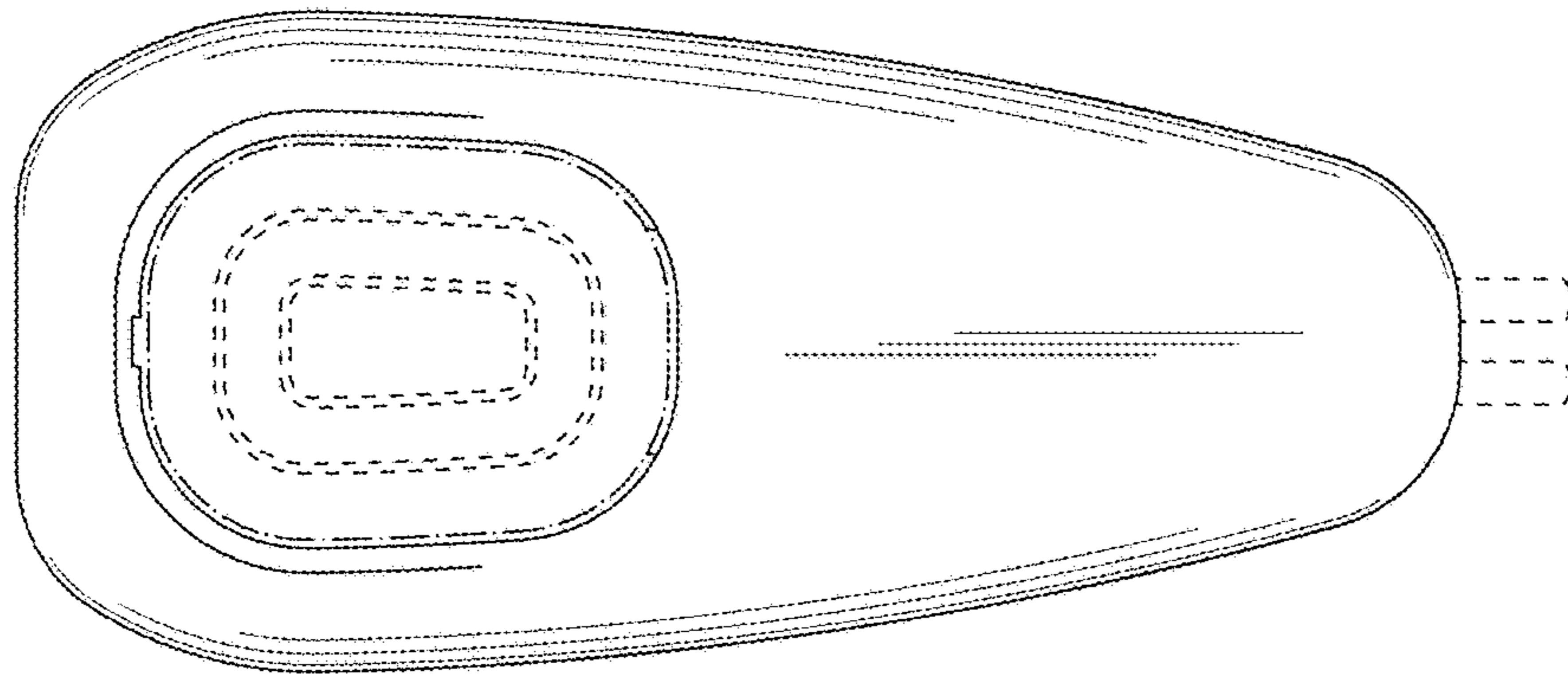


FIG. 2

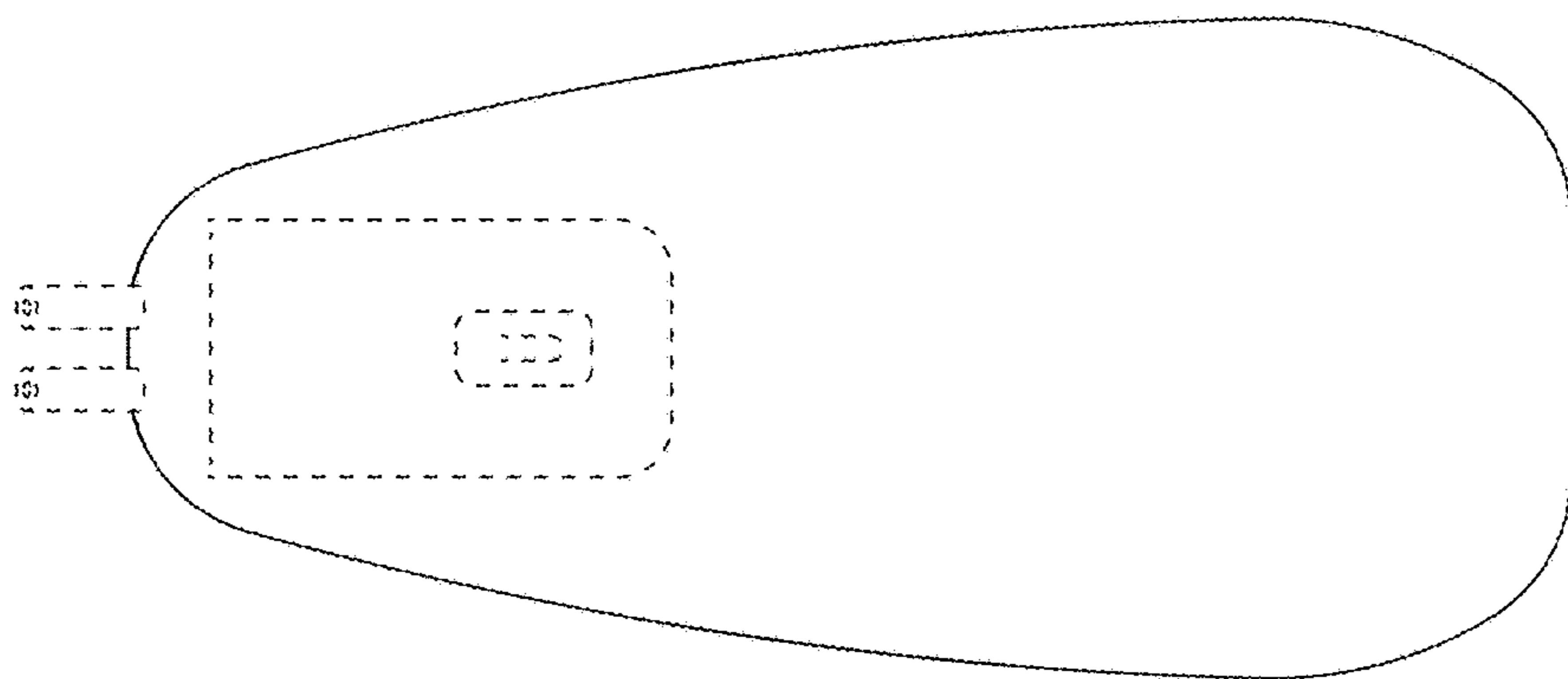


FIG. 3

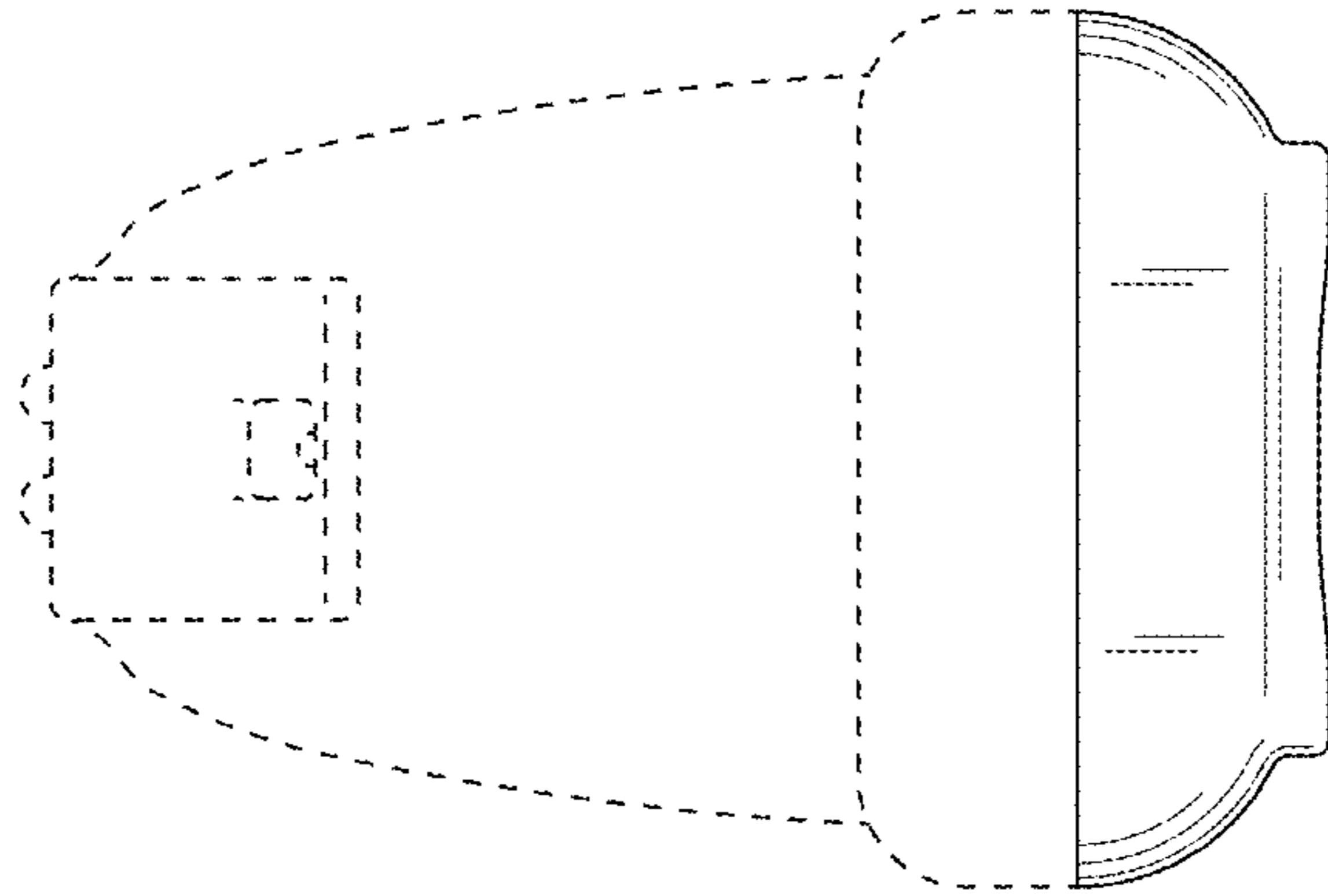


FIG. 4

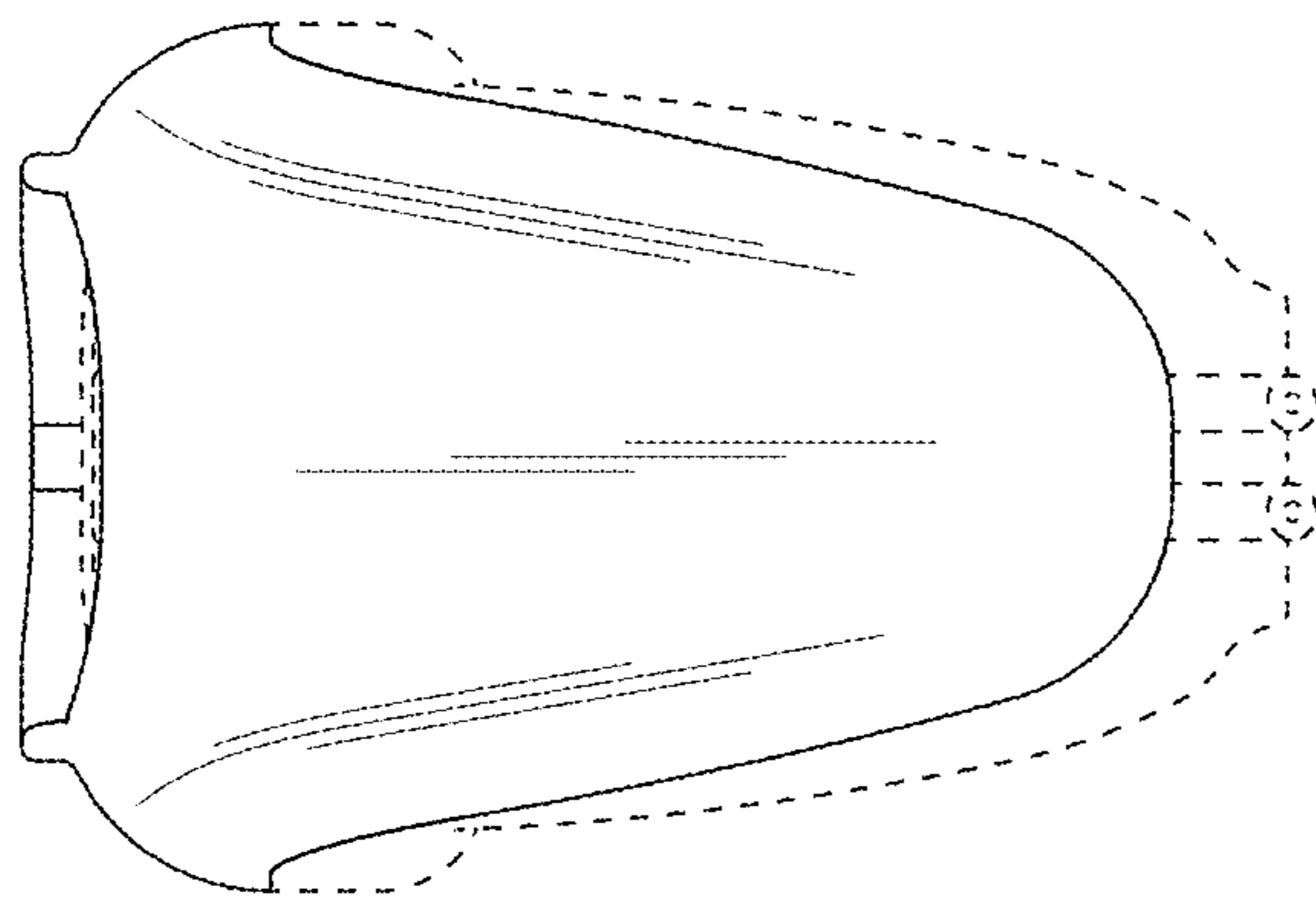


FIG. 5

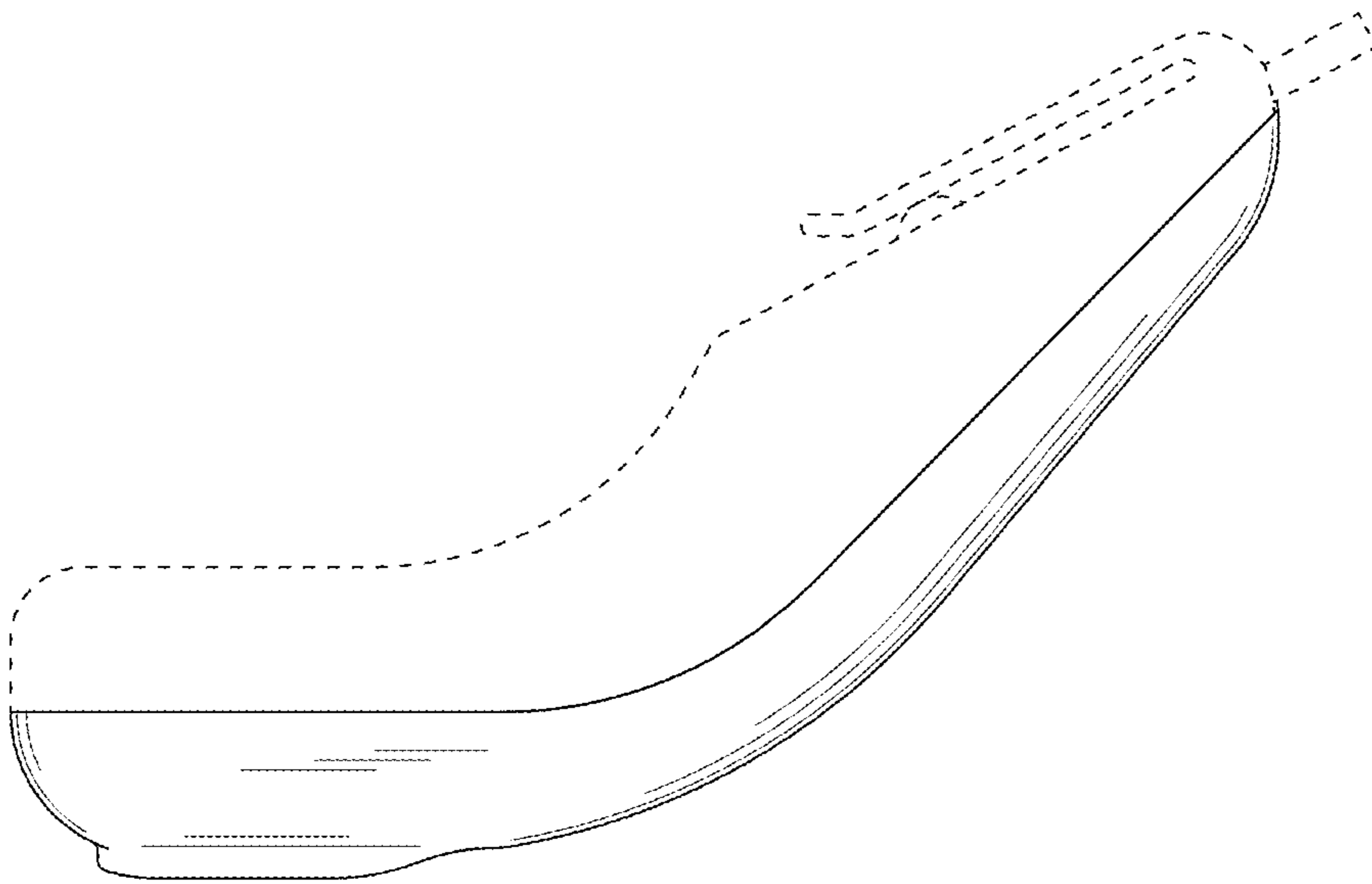


FIG. 6