



US00D862716S

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

(10) **Patent No.:** **US D862,716 S**
(45) **Date of Patent:** **** Oct. 8, 2019**

(54) **TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) DEVICE**

(71) Applicant: **Neurometrix, Inc.**, Waltham, MA (US)

(72) Inventors: **Marc Cryan**, Maynard, MA (US); **Bonniejean Boettcher**, Maynard, MA (US); **Elizabeth P. Goodrich**, Roslindale, MA (US); **Evan Williams**, Boston, MA (US); **Gregory Scott Torrisi**, Midlothian, VA (US); **Martin Jacob**, Belmont, CA (US)

(73) Assignee: **Neurometrix, Inc.**, Waltham, MA (US)

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

(21) Appl. No.: **29/641,722**

(22) Filed: **Mar. 23, 2018**

(51) **LOC (12) Cl.** **28-03**

(52) **U.S. Cl.**
USPC **D24/200**

(58) **Field of Classification Search**
USPC D24/200, 214–215, 185–186, 165
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,989,605 A * 2/1991 Rossen A61N 1/36021
128/907
- 5,048,523 A * 9/1991 Yamasawa A61N 1/36021
607/66

(Continued)

Primary Examiner — Wan Laymon

(74) *Attorney, Agent, or Firm* — Pandiscio & Pandiscio

(57) **CLAIM**

The ornamental design for a transcutaneous electrical nerve stimulation (TENS) device, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a first embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 2 is a rear perspective view of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 3 is a front view of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 4 is a rear view of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 5 is a side view, in elevation, of the right side of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 6 is a side view, in elevation, of the left side of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 7 is an end view, in elevation, of the top end of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 8 is an end view, in elevation, of the bottom end of the first embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 1;

FIG. 9 is a front perspective view of a second embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 10 is a rear perspective view of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 11 is a front view of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

FIG. 12 is a rear view of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

FIG. 13 is a side view, in elevation, of the right side of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

(Continued)

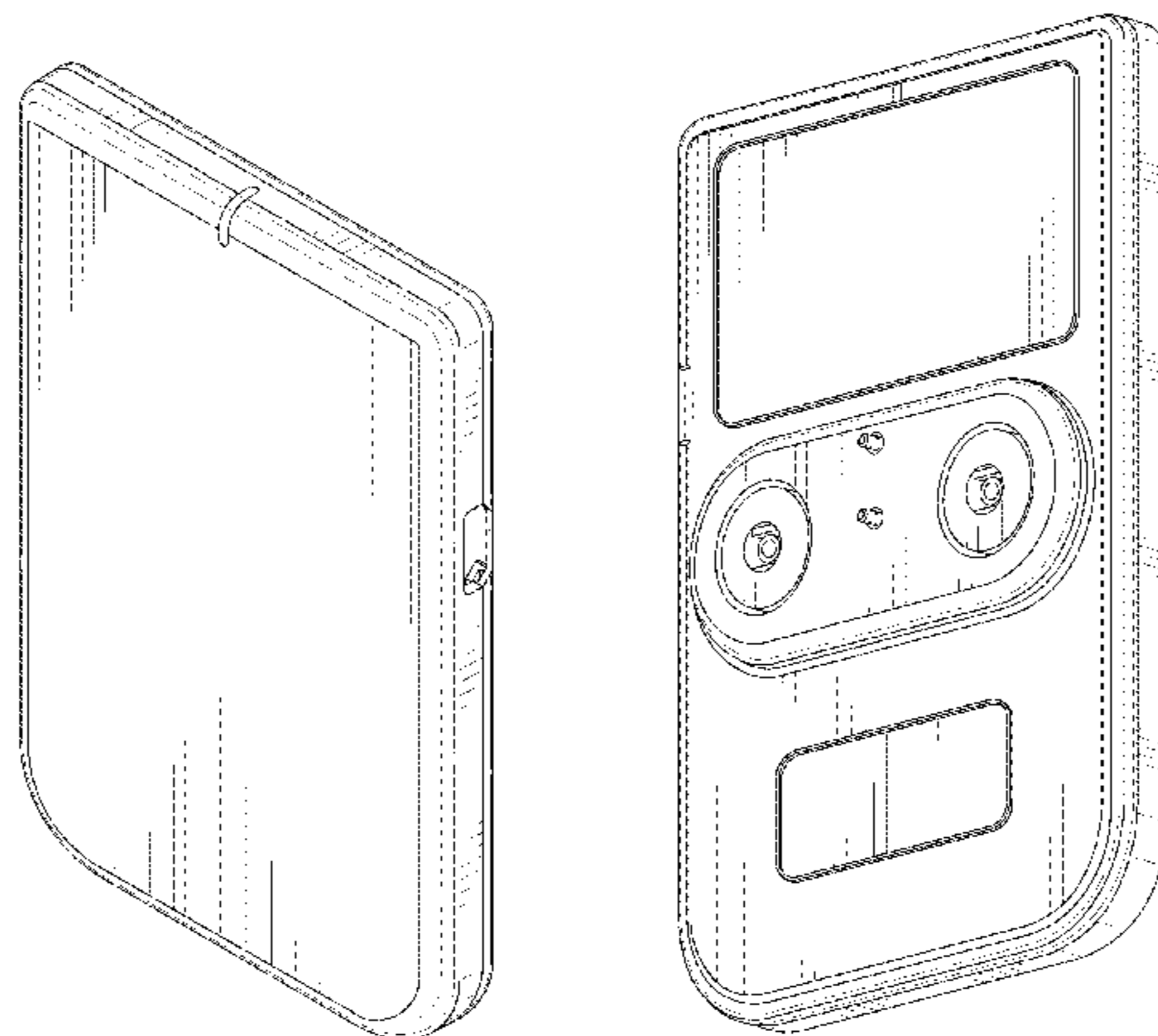


FIG. 14 is a side view, in elevation, of the left side of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

FIG. 15 is an end view, in elevation, of the top end of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

FIG. 16 is an end view, in elevation, of the bottom end of the second embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 9;

FIG. 17 is a front perspective view of a third embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 18 is a rear perspective view of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device;

FIG. 19 is a front view of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17;

FIG. 20 is a rear view of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17;

FIG. 21 is a side view, in elevation, of the right side of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17;

FIG. 22 is a side view, in elevation, of the left side of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17;

FIG. 23 is an end view, in elevation, of the top end of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17; and,

FIG. 24 is an end view, in elevation, of the bottom end of the third embodiment of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. 17.

The broken lines are included for the purpose of illustrating unclaimed portions of the transcutaneous electrical nerve stimulation (TENS) device and form no part of the claimed design.

1 Claim, 24 Drawing Sheets

(58) **Field of Classification Search**

CPC A61N 1/36003; A61N 1/36014; A61N 1/36017; A61N 1/36021; A61N 1/36; A61N 1/0456

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D778,453	S	*	2/2017	Knaus	.....	D24/200
D813,405	S	*	3/2018	Ho	.....	D24/200
D813,407	S	*	3/2018	Chen	.....	D24/215
D830,565	S	*	10/2018	Xu	.....	D24/200
D836,788	S	*	12/2018	Peng	.....	D24/200
2006/0089683	A1	*	4/2006	Hagglof	.....	A61N 1/36021 607/48

* cited by examiner

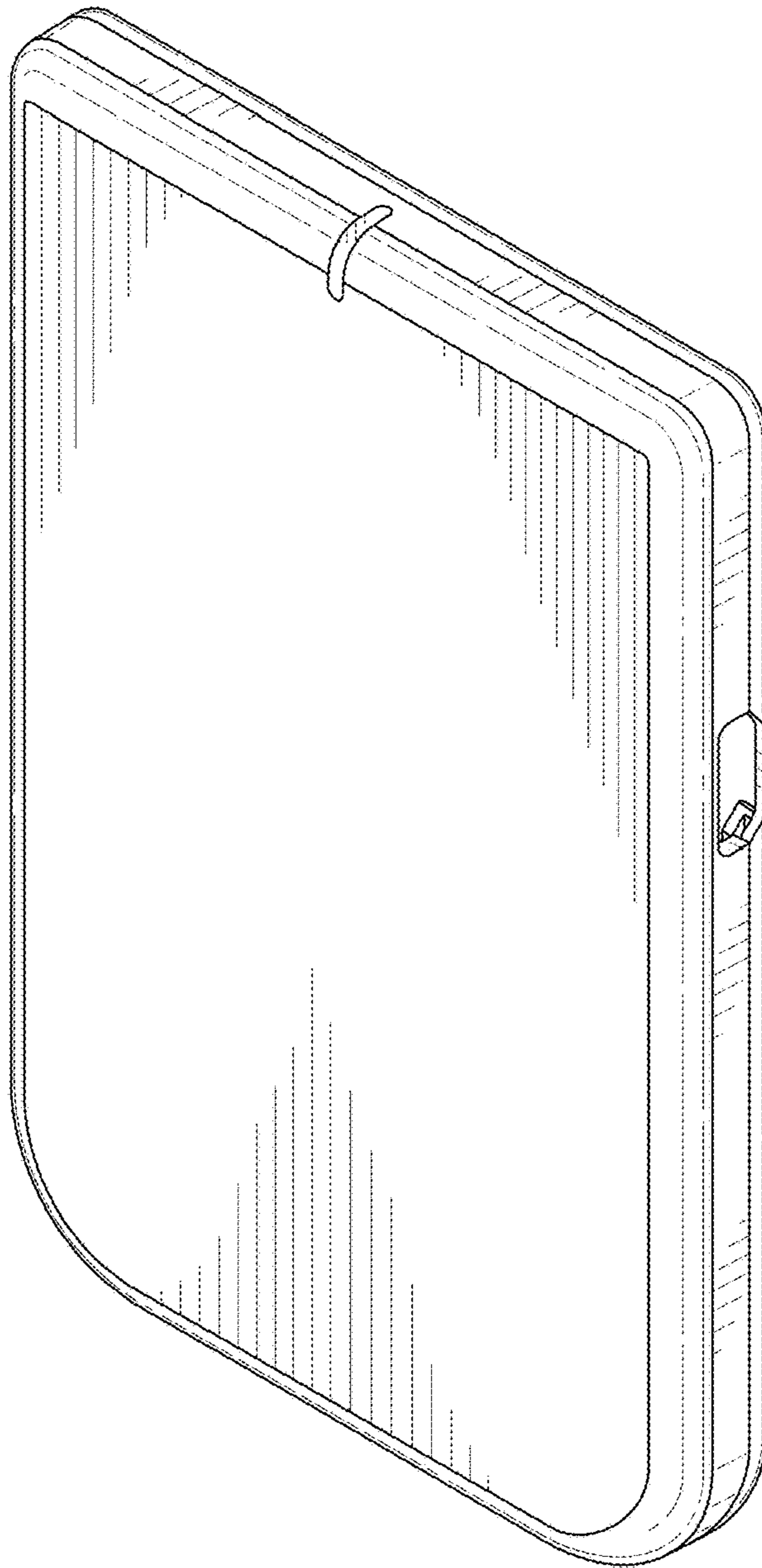


FIG. 1

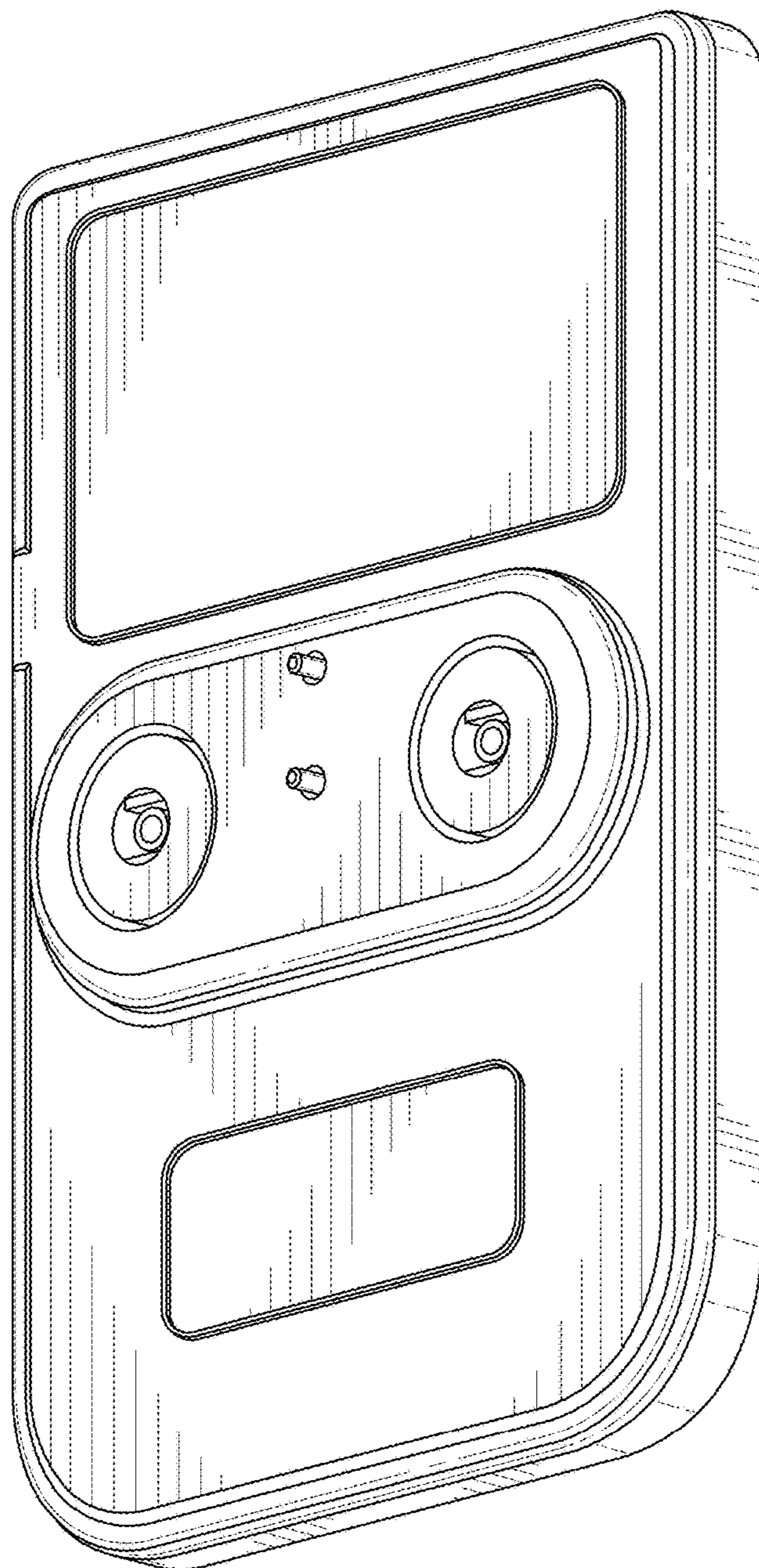


FIG. 2

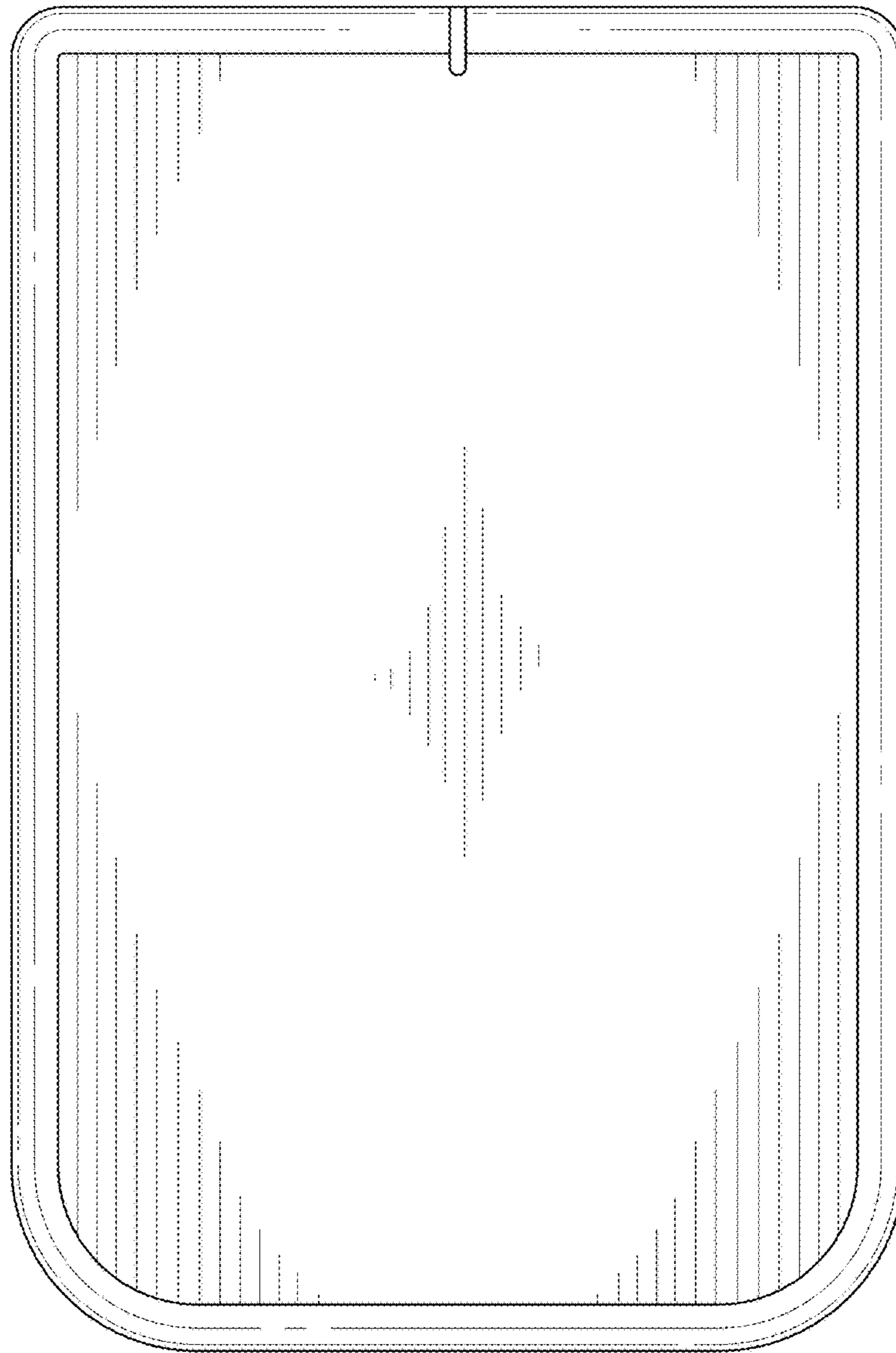


FIG. 3

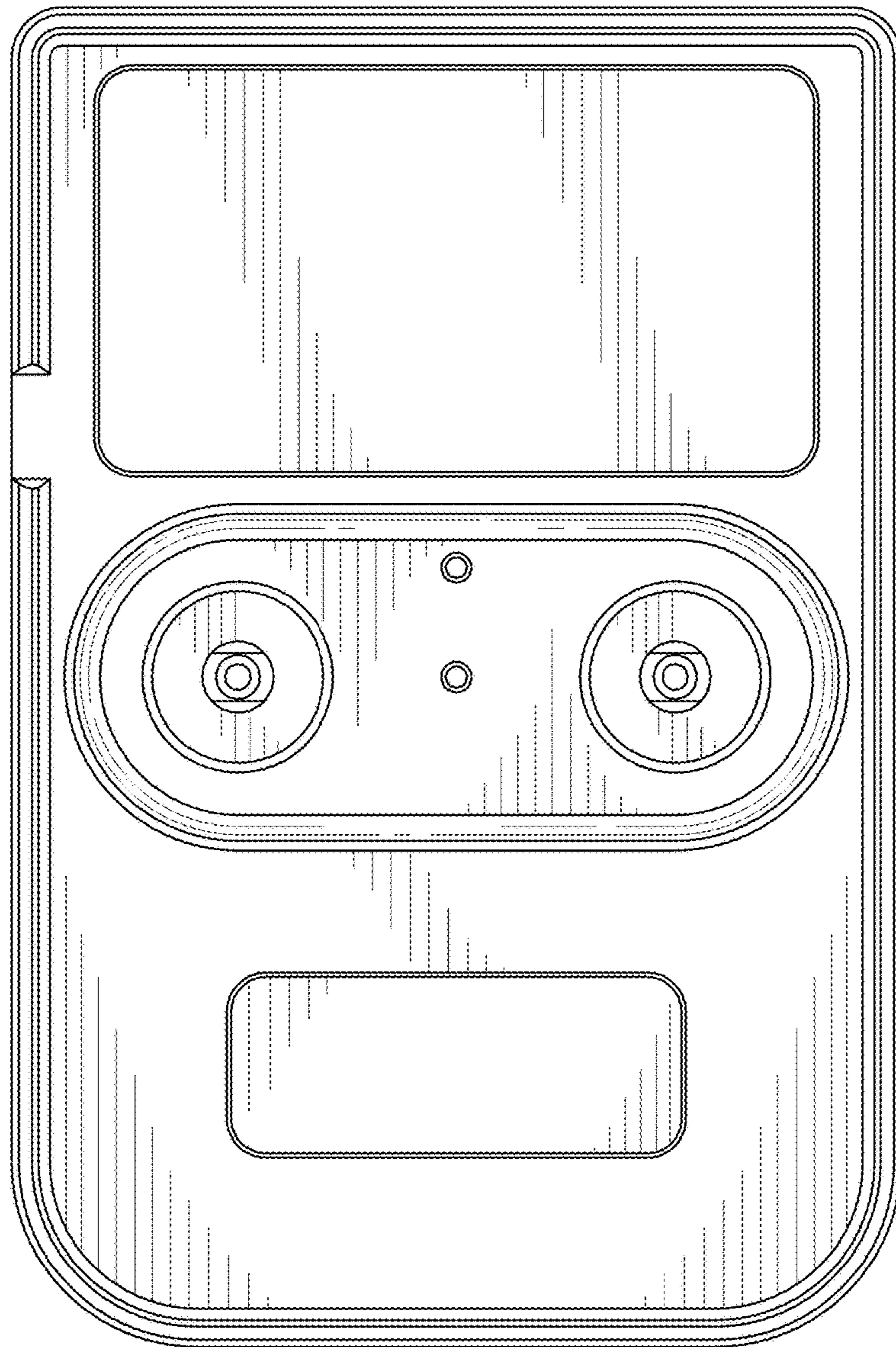


FIG. 4

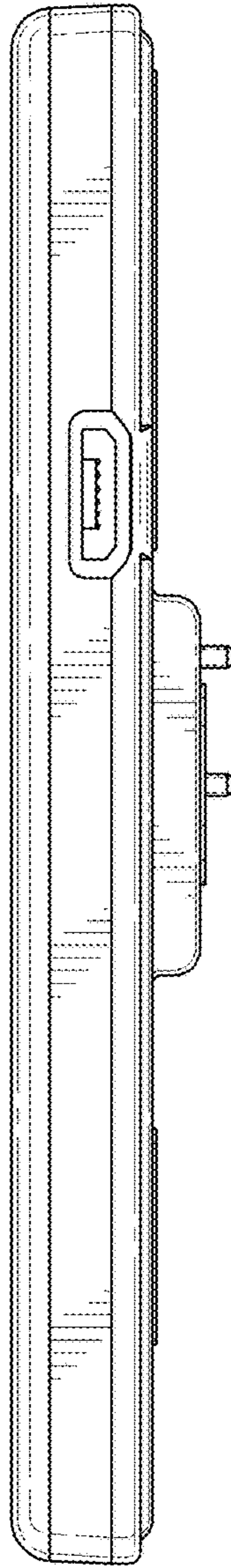


FIG. 5

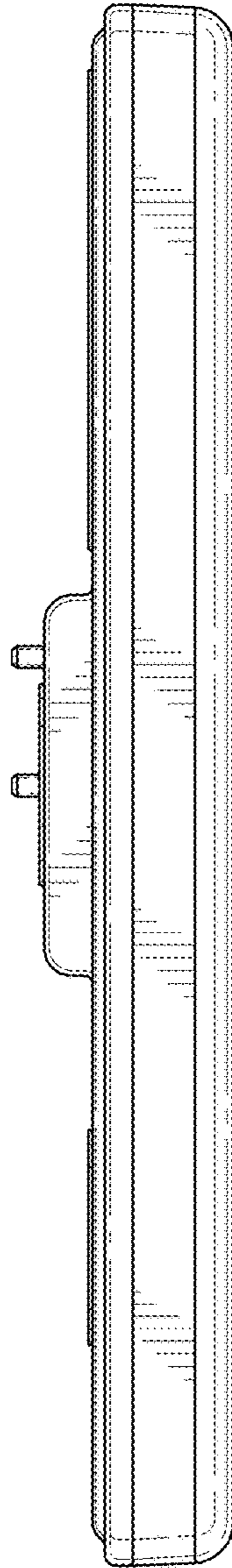


FIG. 6

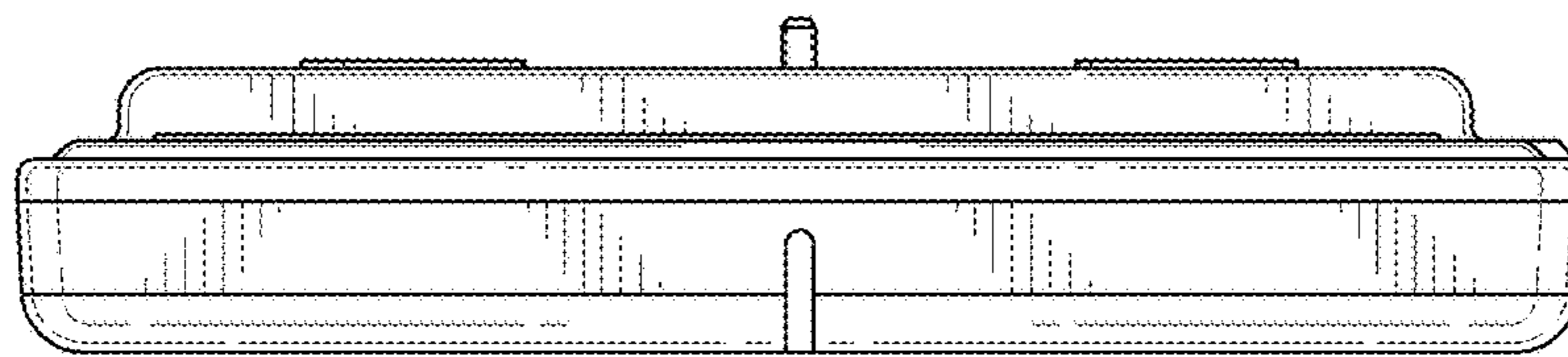


FIG. 7

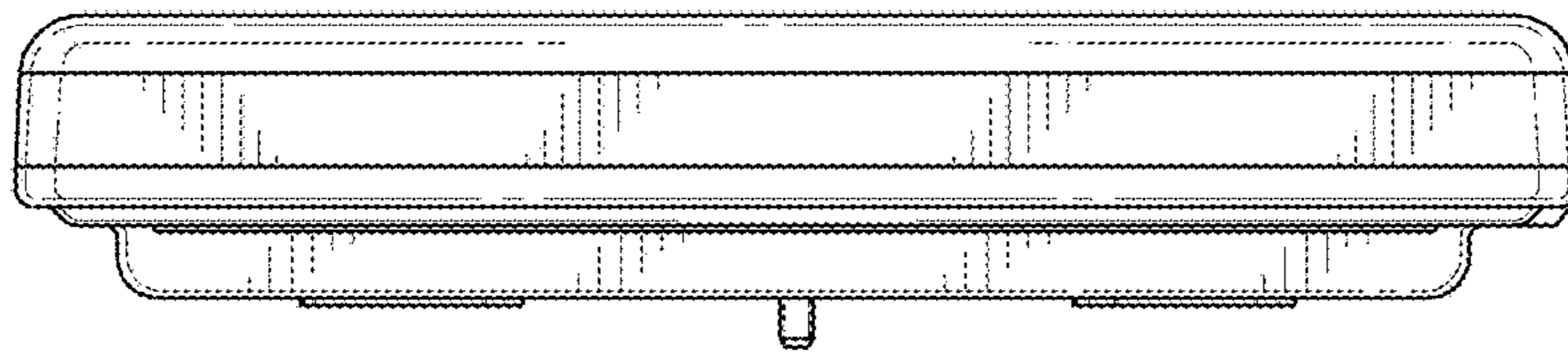


FIG. 8

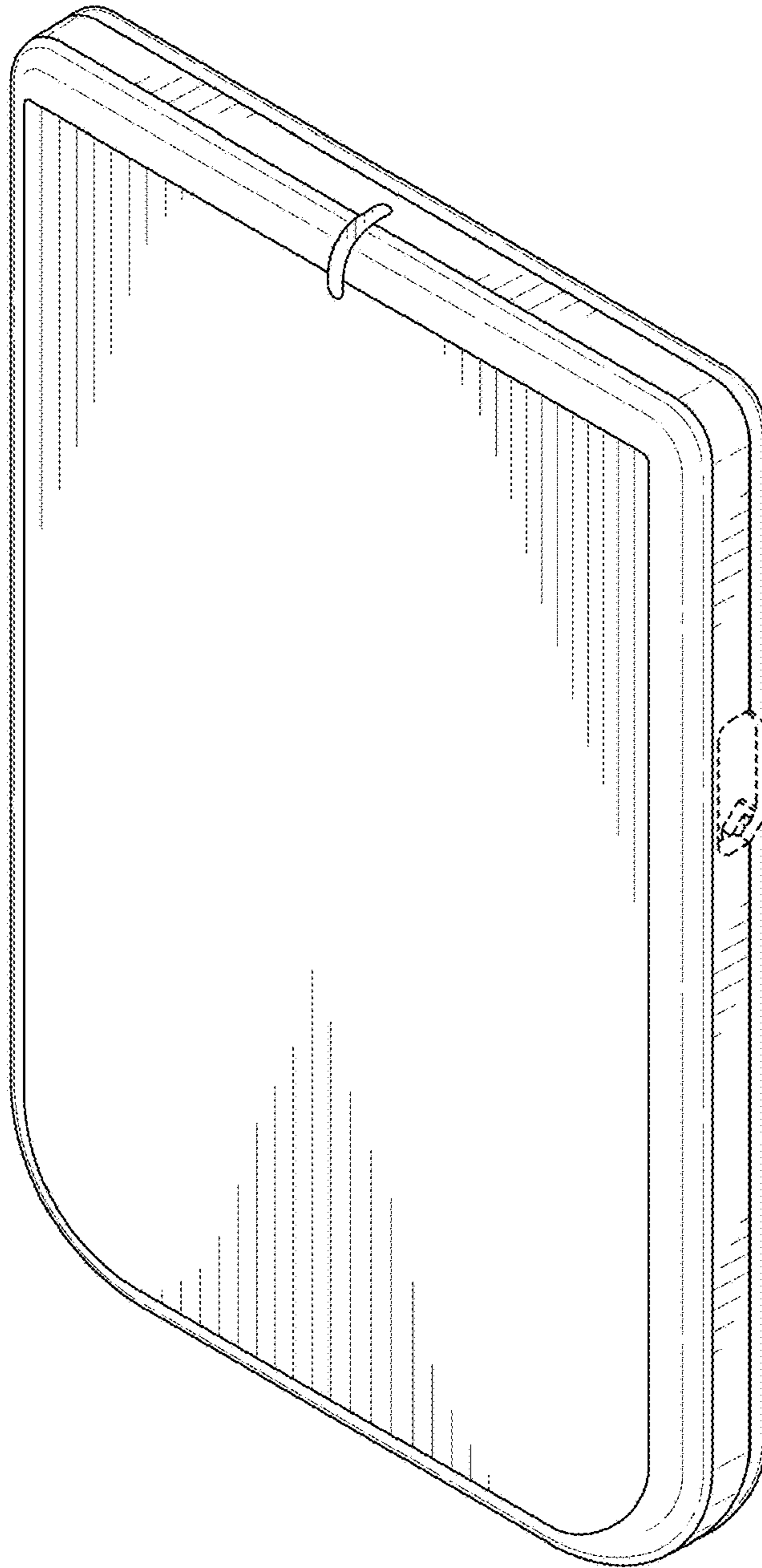


FIG. 9

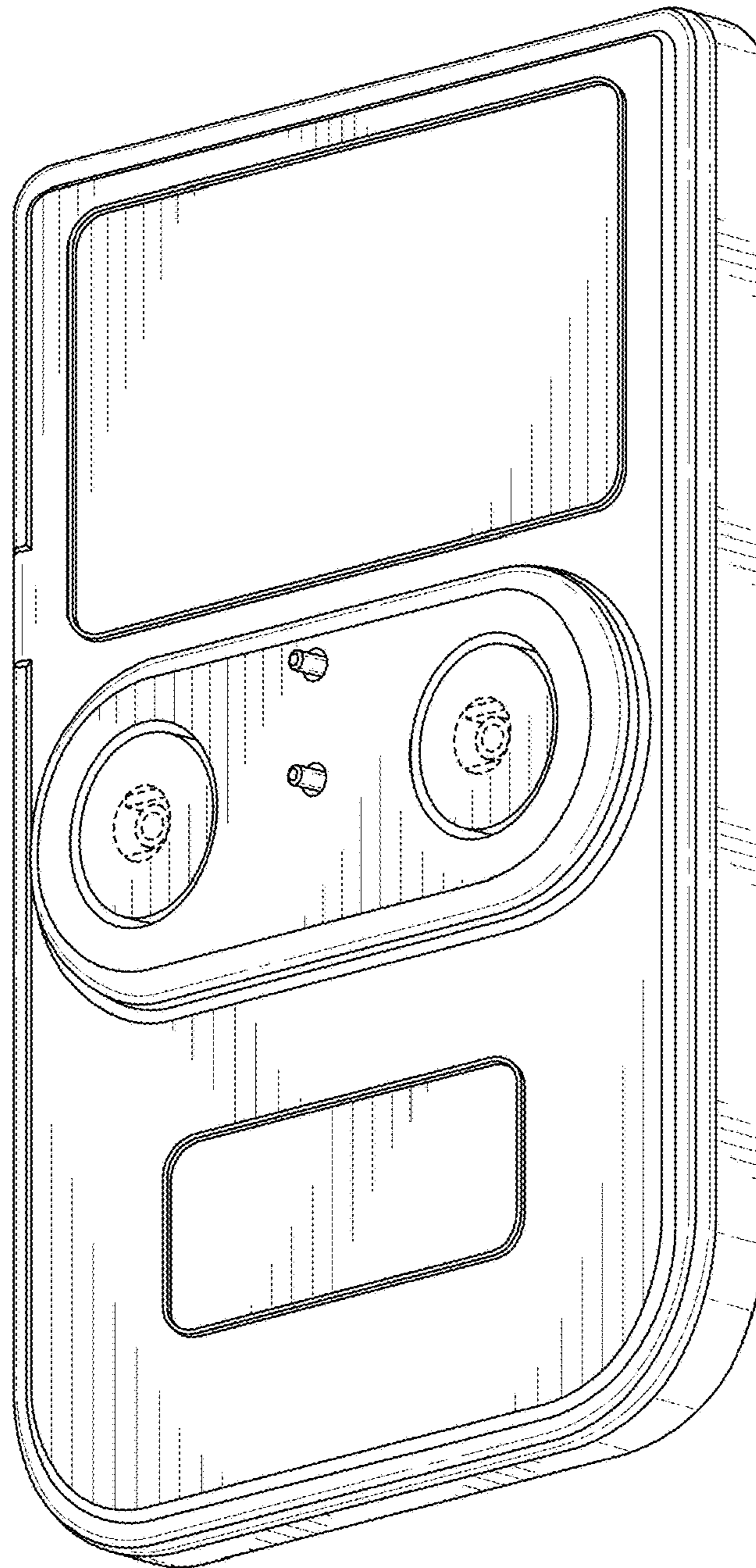


FIG. 10

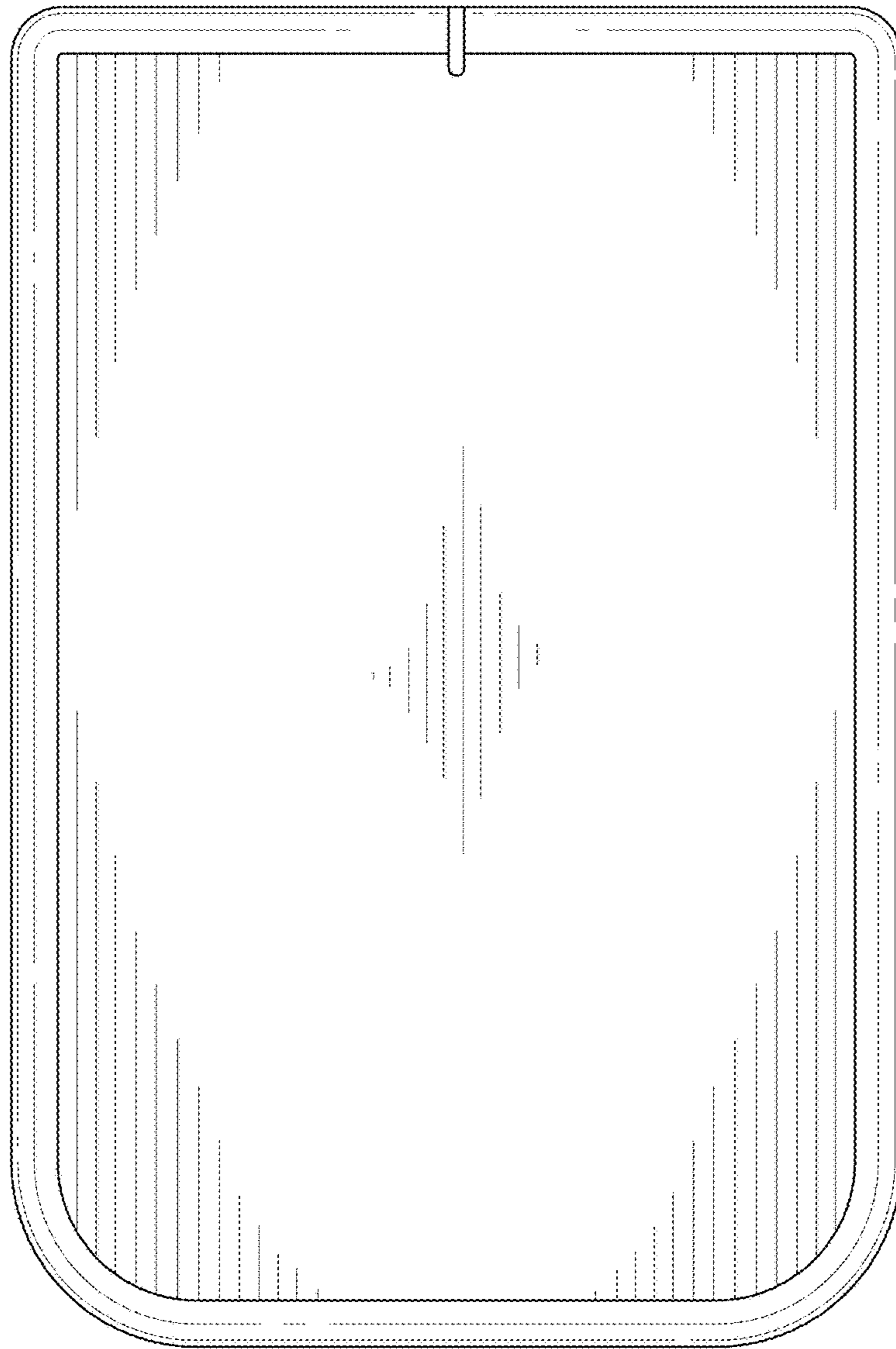


FIG. 11

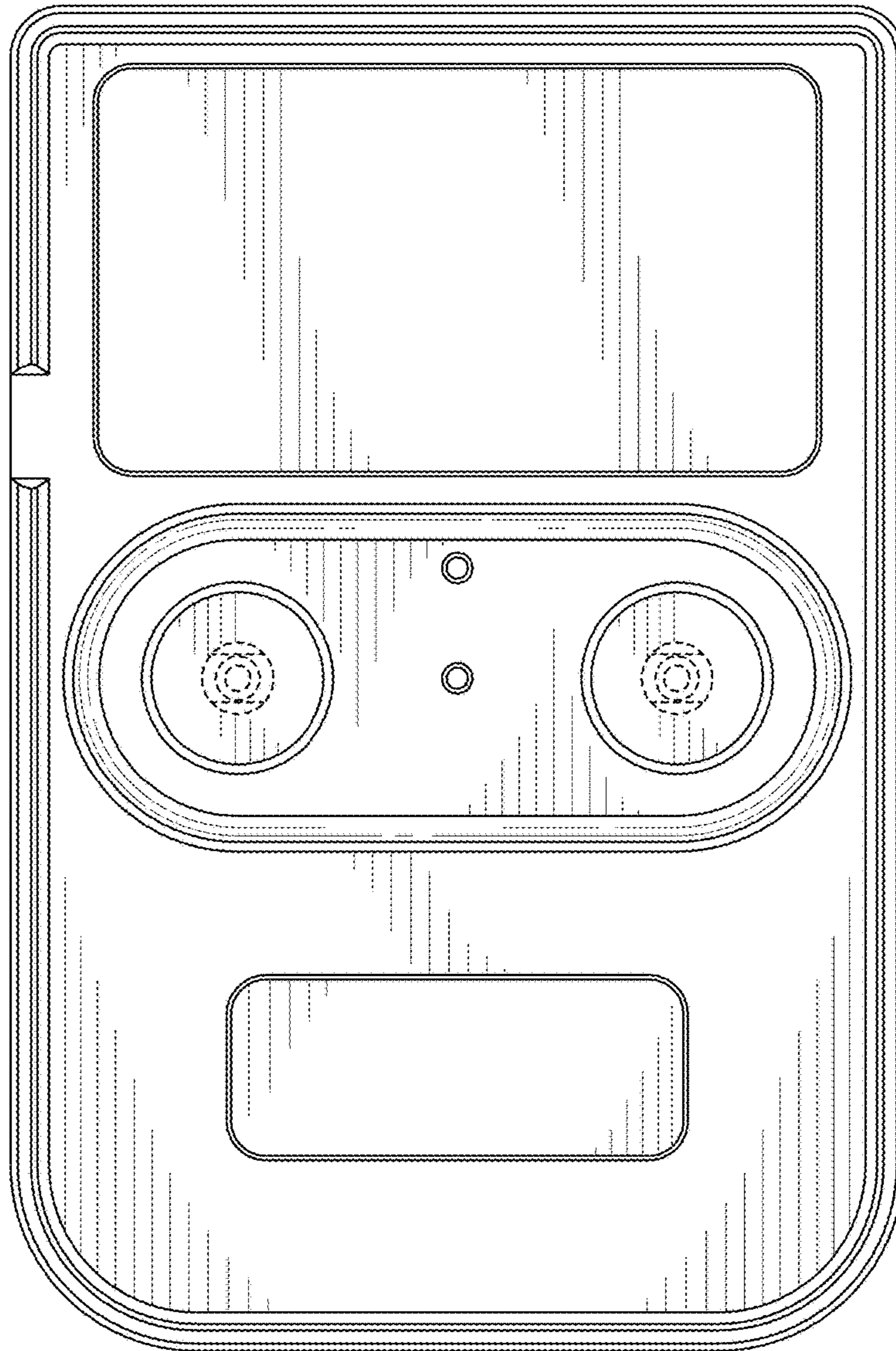


FIG. 12

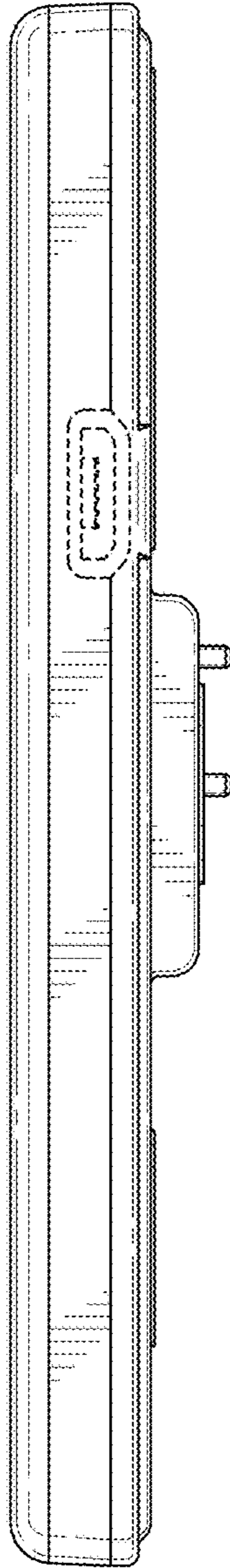


FIG. 13

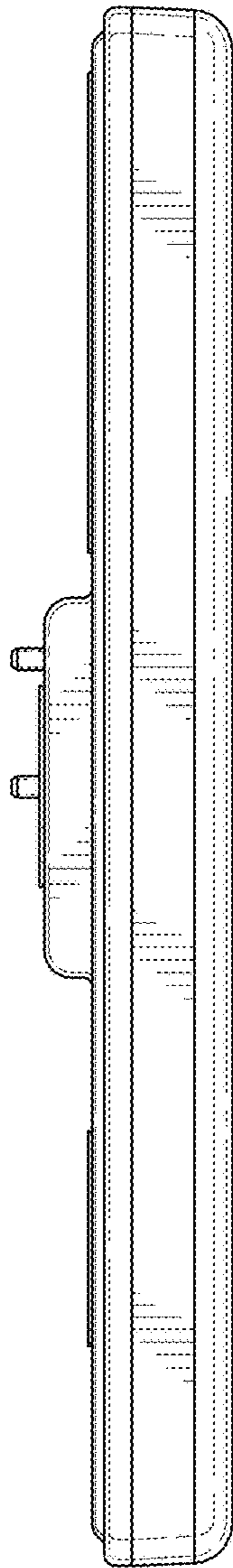


FIG. 14

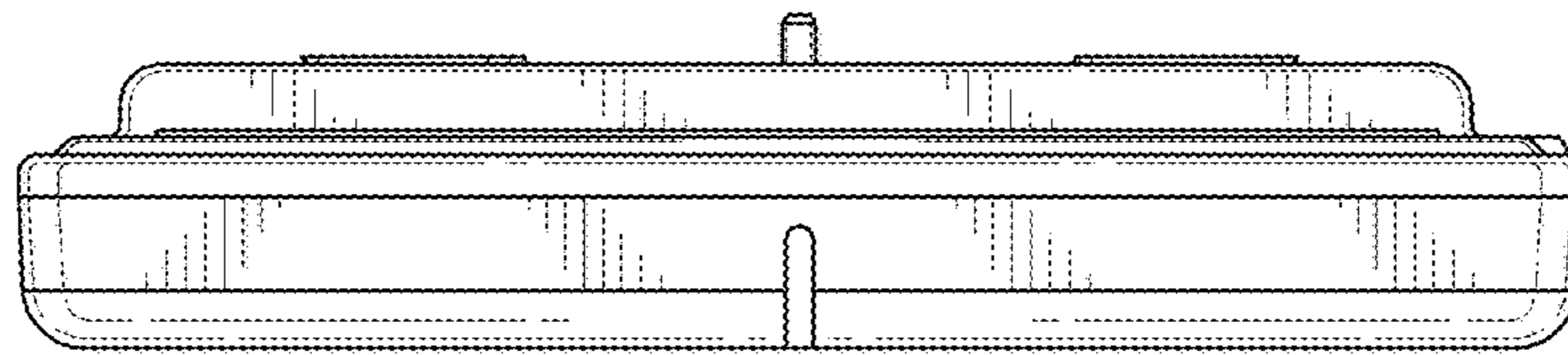


FIG. 15

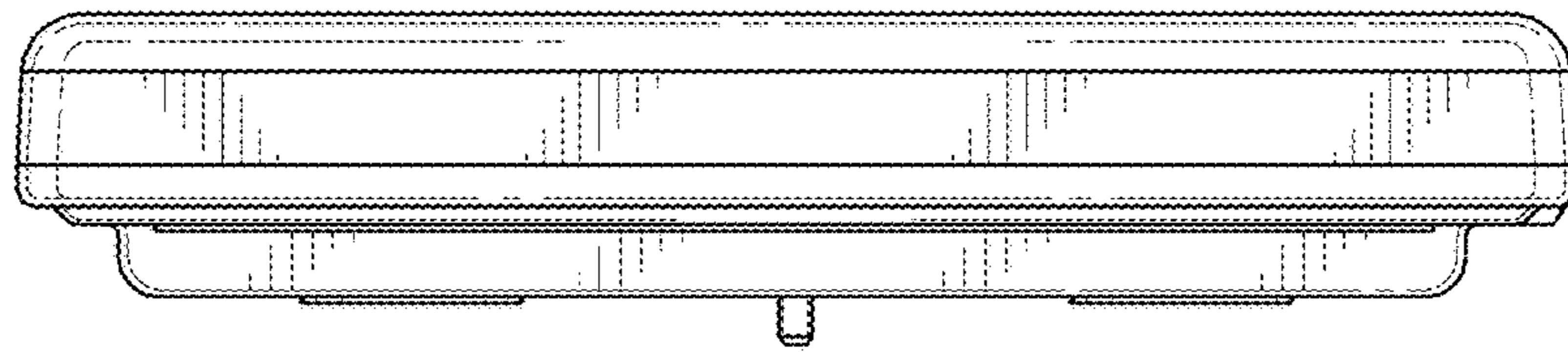


FIG. 16

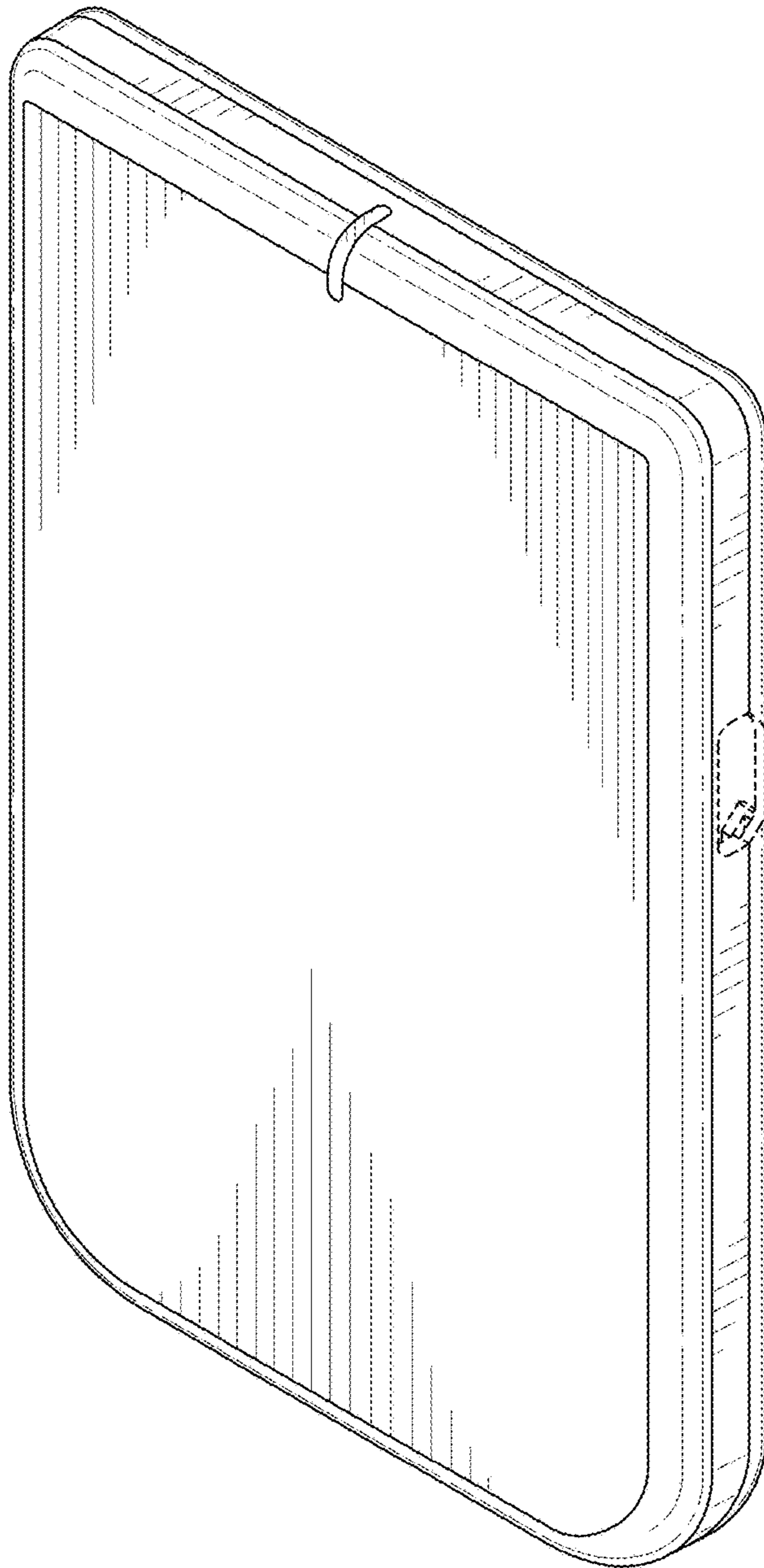


FIG. 17

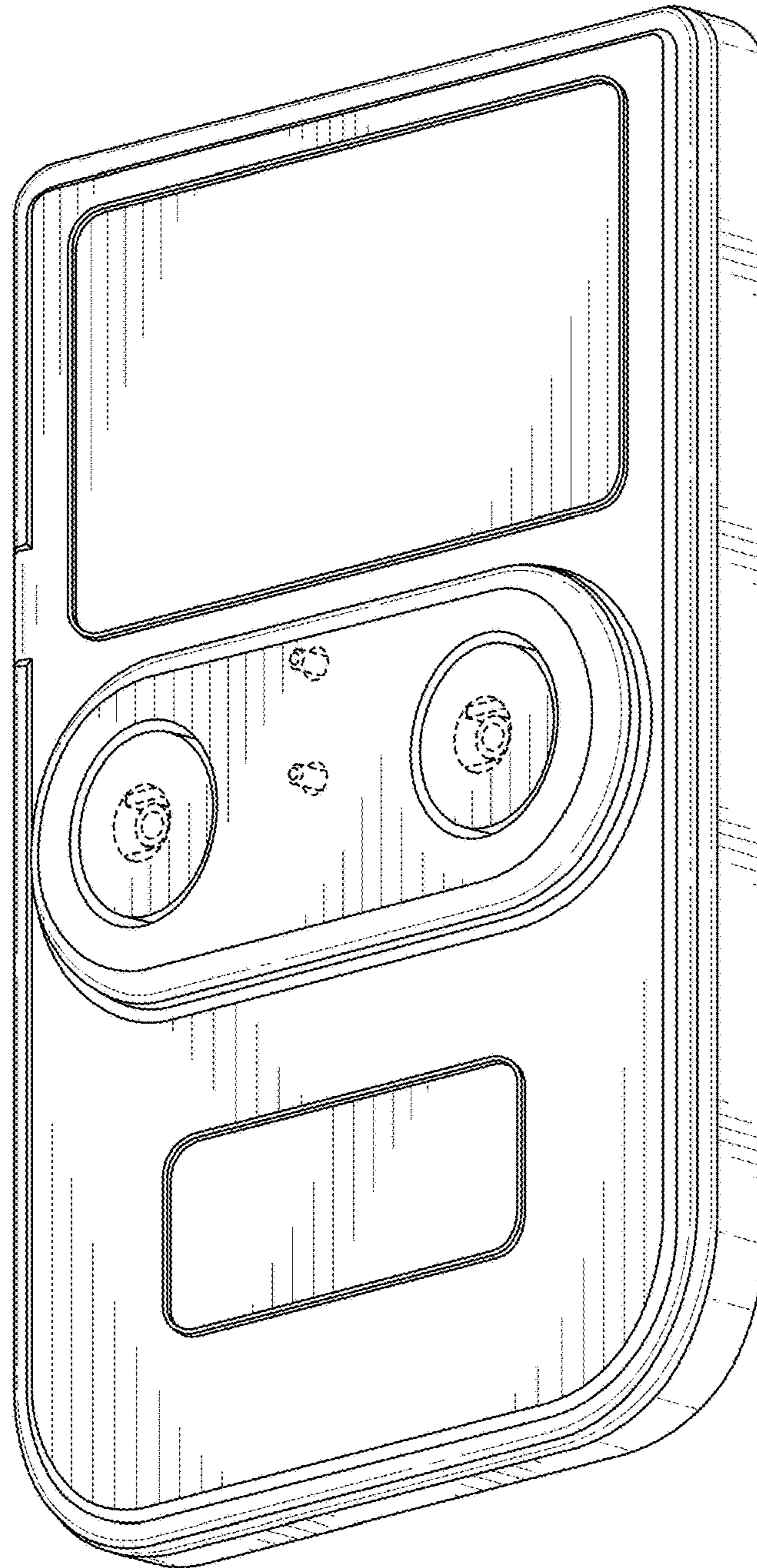


FIG. 18

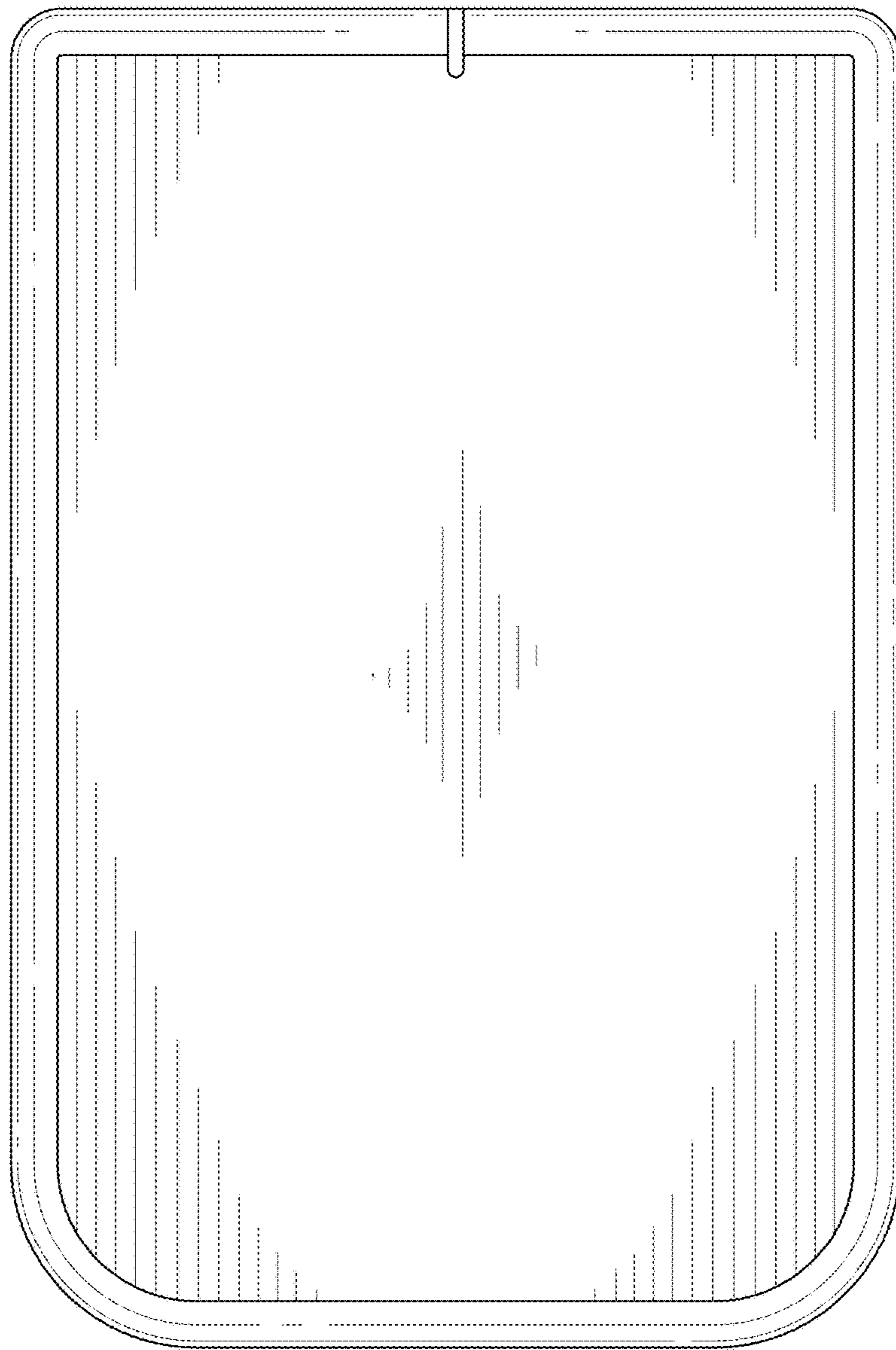


FIG. 19

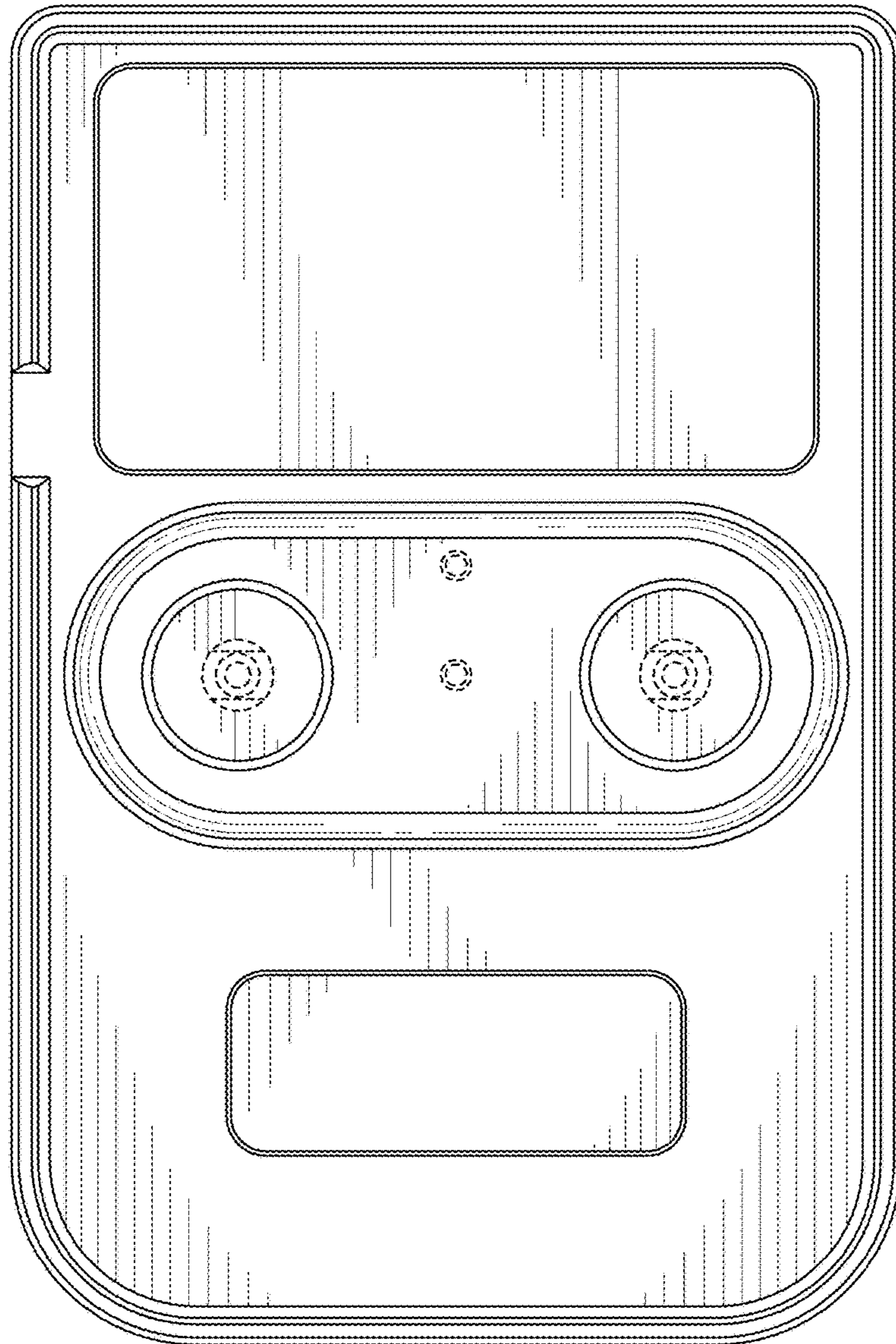


FIG. 20

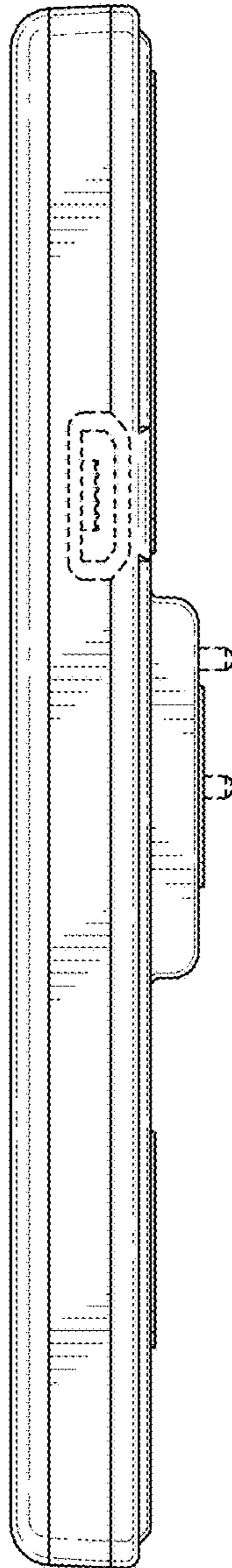


FIG. 21

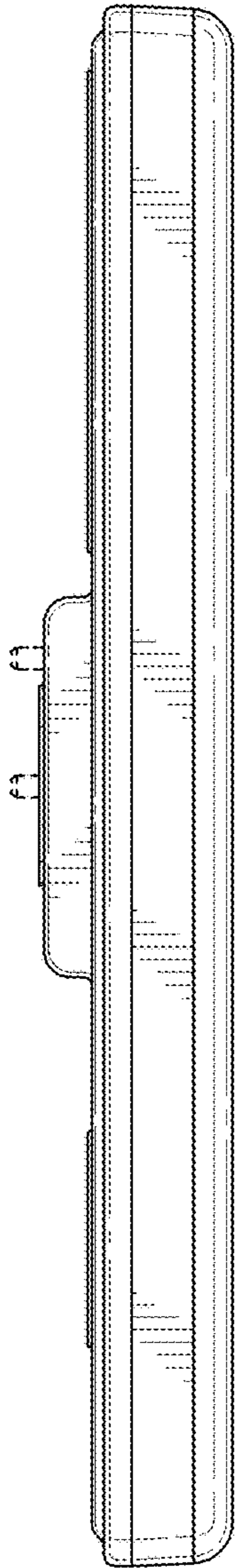


FIG. 22

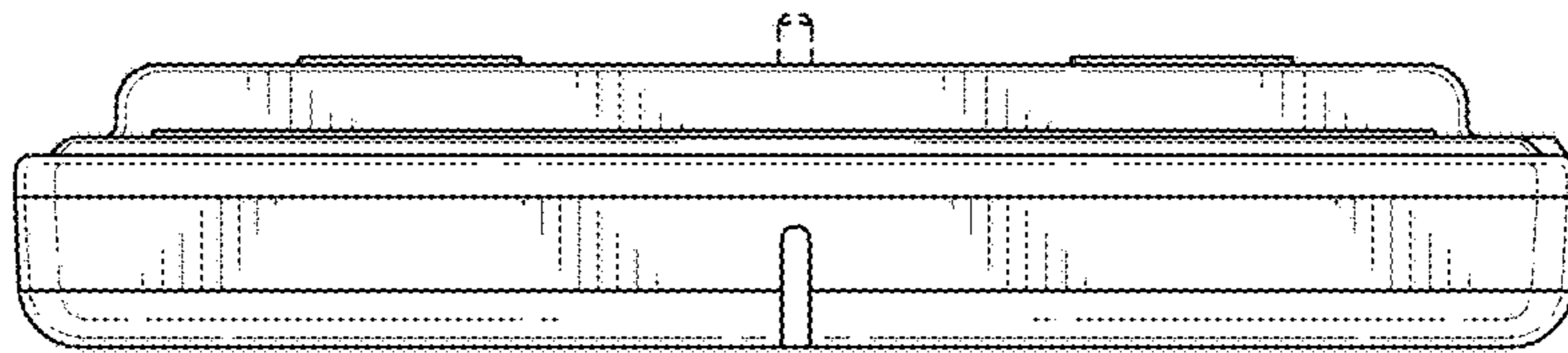


FIG. 23

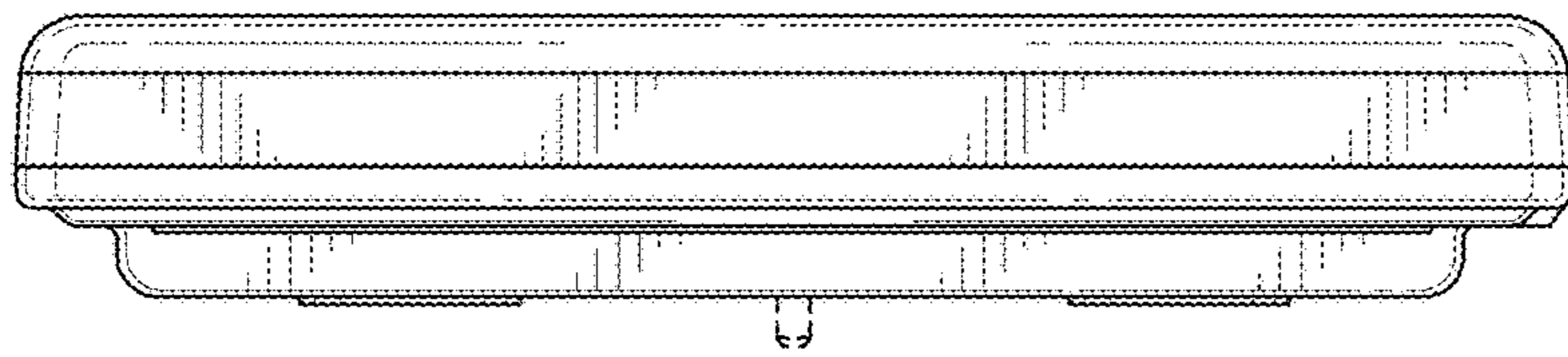


FIG. 24