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

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(45) **Date of Patent:** **** Jan. 19, 2021**

(54) **TRANSCUTANEOUS NEUROMODULATION DEVICE**

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

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(51) **LOC (13) Cl.** **28-03**

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

(58) **Field of Classification Search**
USPC D24/200, 185–187, 214, 107
See application file for complete search history.

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(57) **CLAIM**

The ornamental design for a transcutaneous neuromodulation device, substantially as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a transcutaneous neuromodulation device in accordance with our new design, where the device generally a headband component for engaging a wearer's head and connecting to two user interface components generally aligned with the wearer's mastoid region; FIG. 2 is a perspective view of the transcutaneous neuromodulation device of FIG. 1, rotated 180 degrees; FIG. 3 is a perspective view of the transcutaneous neuromodulation device of FIG. 1, rotated to show an underside of the device.

FIG. 4 is a front view of the transcutaneous neuromodulation device of FIG. 1

FIG. 5 is a rear view of the transcutaneous neuromodulation device of FIG. 1;

FIG. 6 is a right side view of the transcutaneous neuromodulation device of FIG. 1;

FIG. 7 is a left side view of the transcutaneous neuromodulation device of FIG. 1;

FIG. 8 is a top view of the transcutaneous neuromodulation device of FIG. 1;

FIG. 9 is a bottom view of the transcutaneous neuromodulation device of FIG. 1;

FIG. 10 is an enlarged right side view of the distal ends of the transcutaneous neuromodulation device of FIG. 1 depicting an inner surface of a left interface component that engages with the wearer's mastoid region (far view) and an outer surface of a right interface component (near view) where any controls, indicators, sensors, or other interactive components may be located;

FIG. 11 is an enlarged left side view of a distal end of the transcutaneous neuromodulation device of FIG. 1 depicting the outer surface of the left interface component where any controls, indicators, sensors, or other interactive devices may be located;

FIG. 12 is a right side view of the distal end of the transcutaneous neuromodulation device of FIG. 3, rotated 90 degrees to depict the right interface component coupled to the headband component and to further depict any interactive devices may be located on the interface component;

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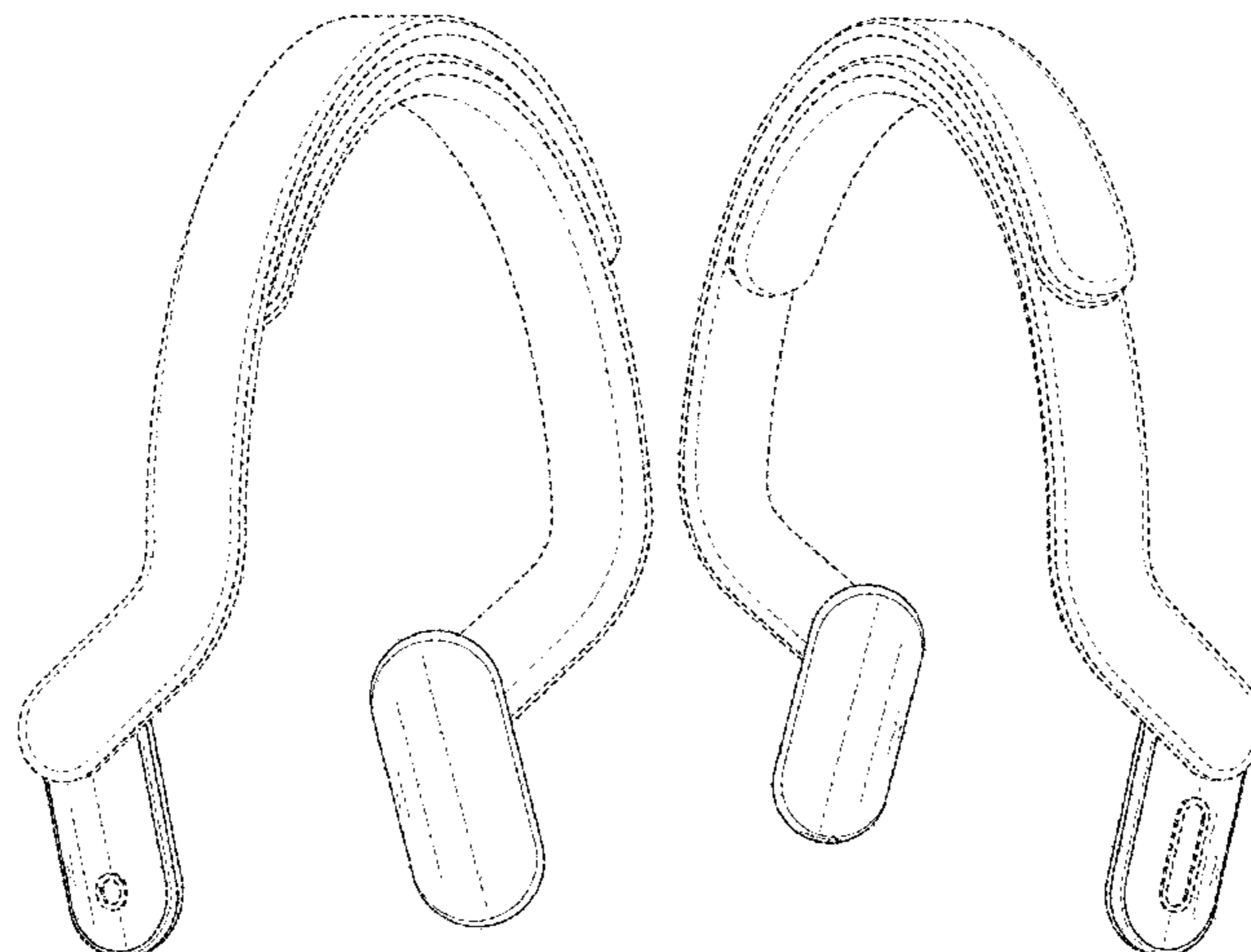


FIG. 13 is a rear perspective view of the transcutaneous neuromodulation device of FIG. 1 disposed on a wearer's head; and,

FIG. 14 is a left side view of the transcutaneous neuromodulation device of FIG. 1 disposed on the wearer's head.

The features shown in broken lines in various figures are for illustrating environmental structure and form no part of the claimed design.

The device or any portion thereof is not limited to the scale shown herein.

The invention can be any part, portion, element, or combination of elements of the depicted design.

Omitted views of the device of our new design are clearly understood and fully disclosed in the perspective views shown in the figures.

1 Claim, 11 Drawing Sheets

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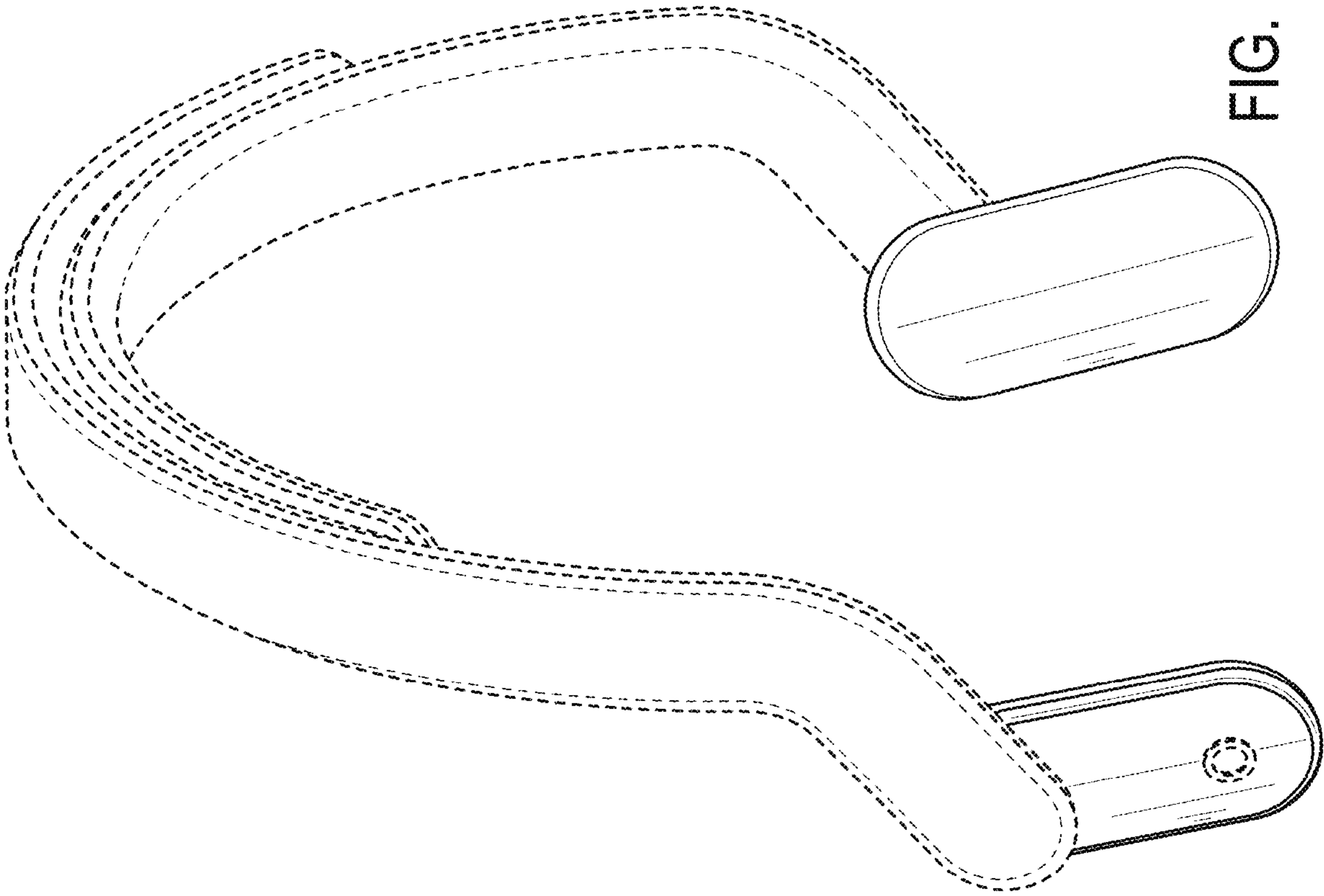


FIG. 1

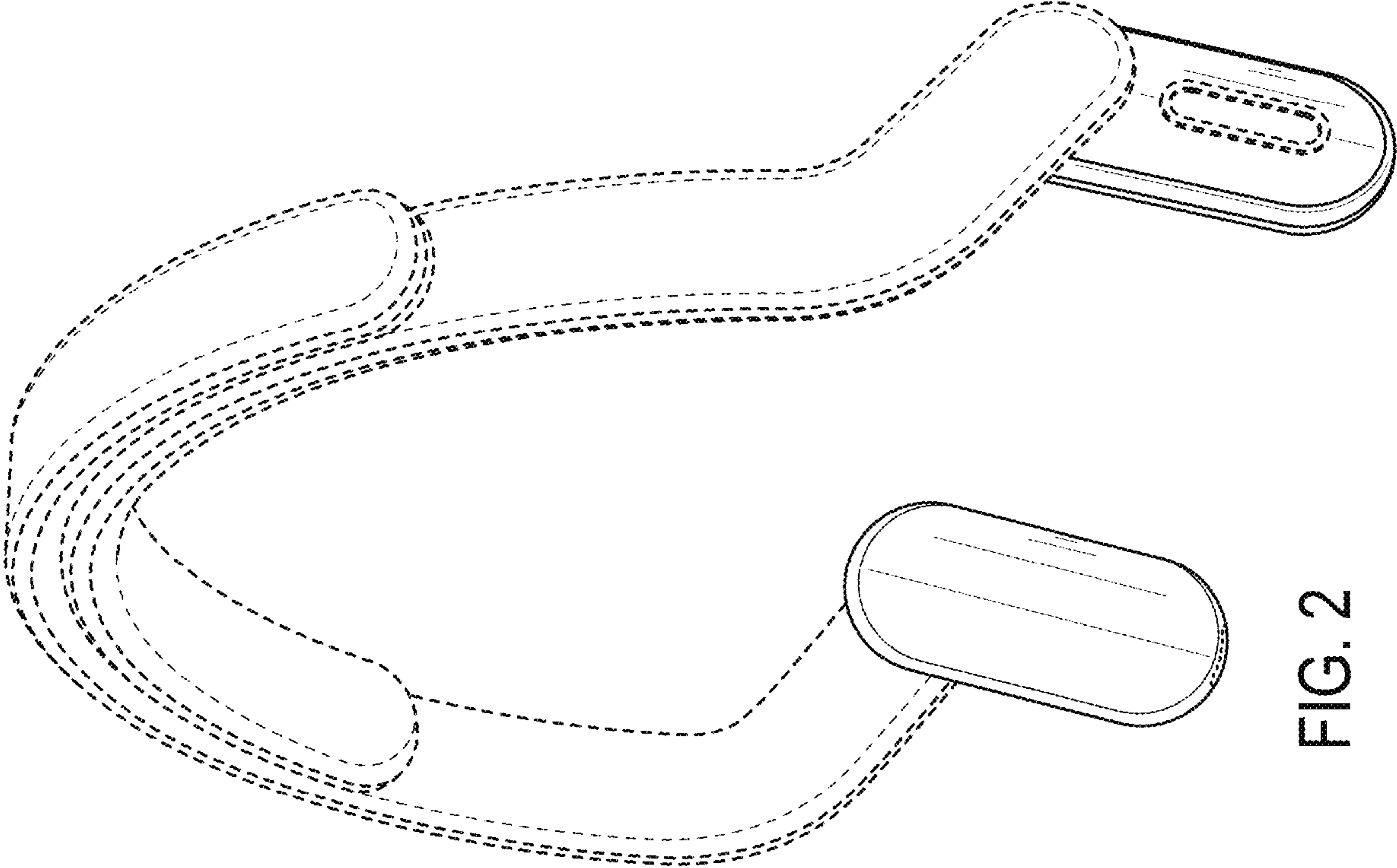


FIG. 2

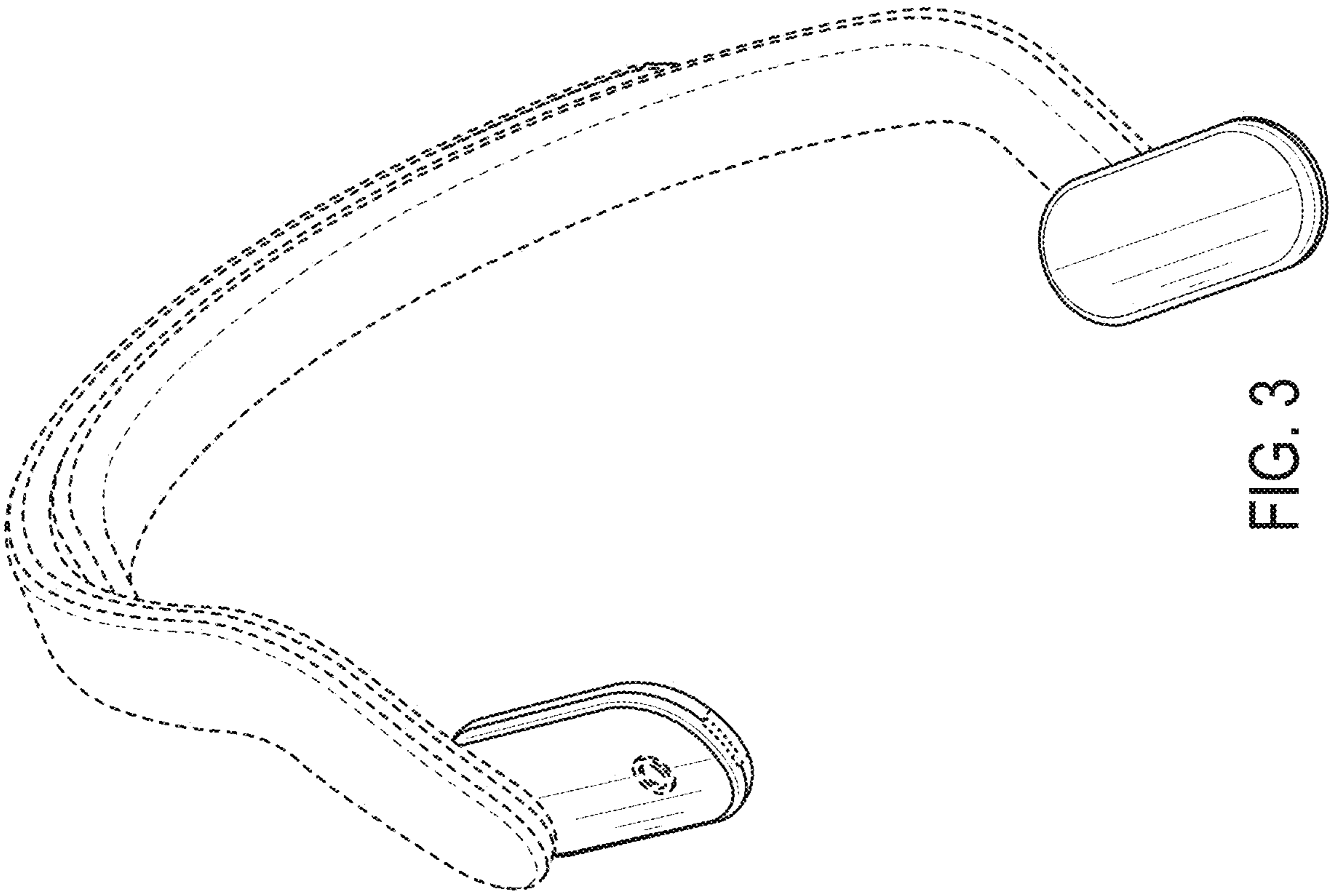


FIG. 3

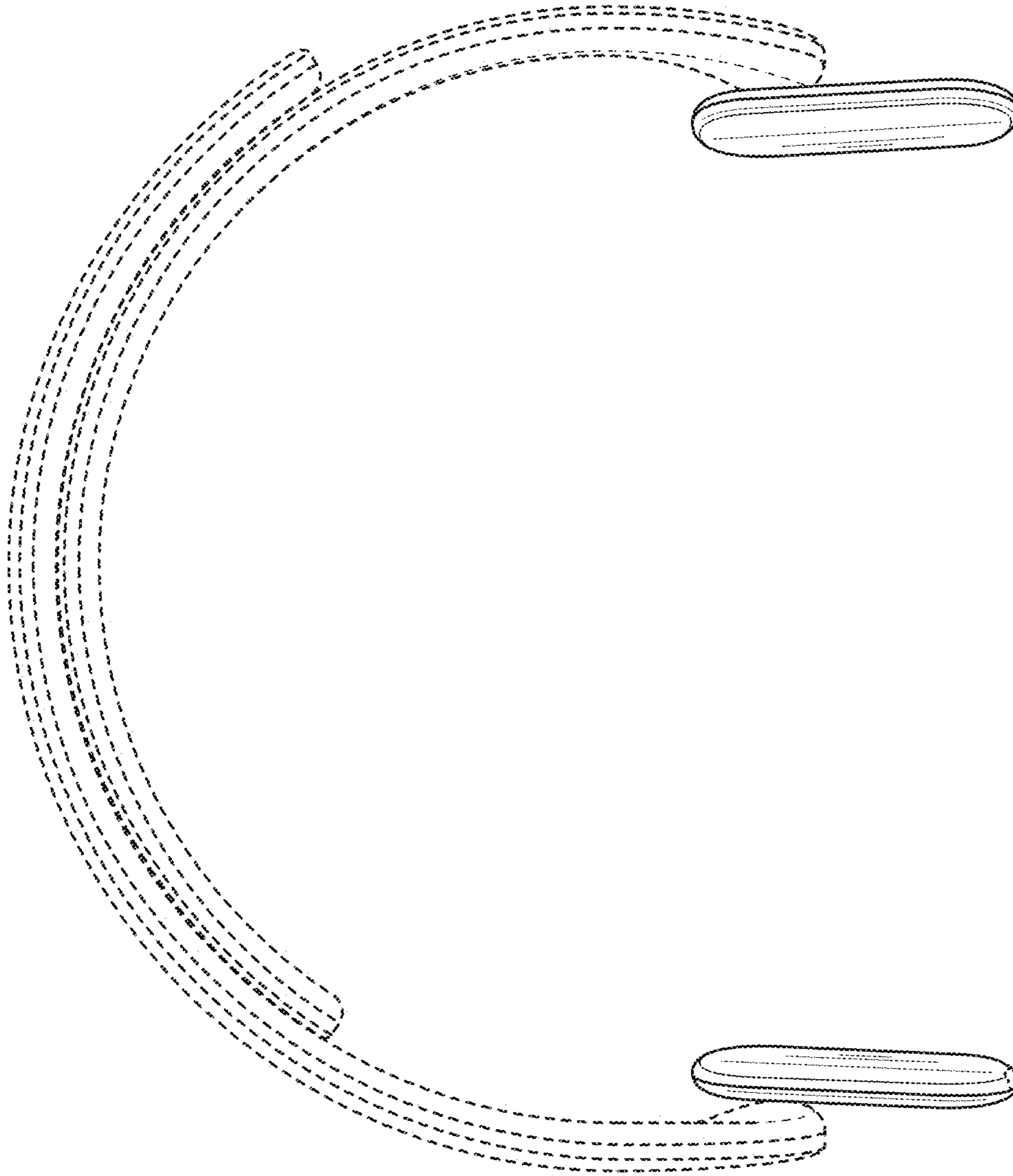


FIG. 4

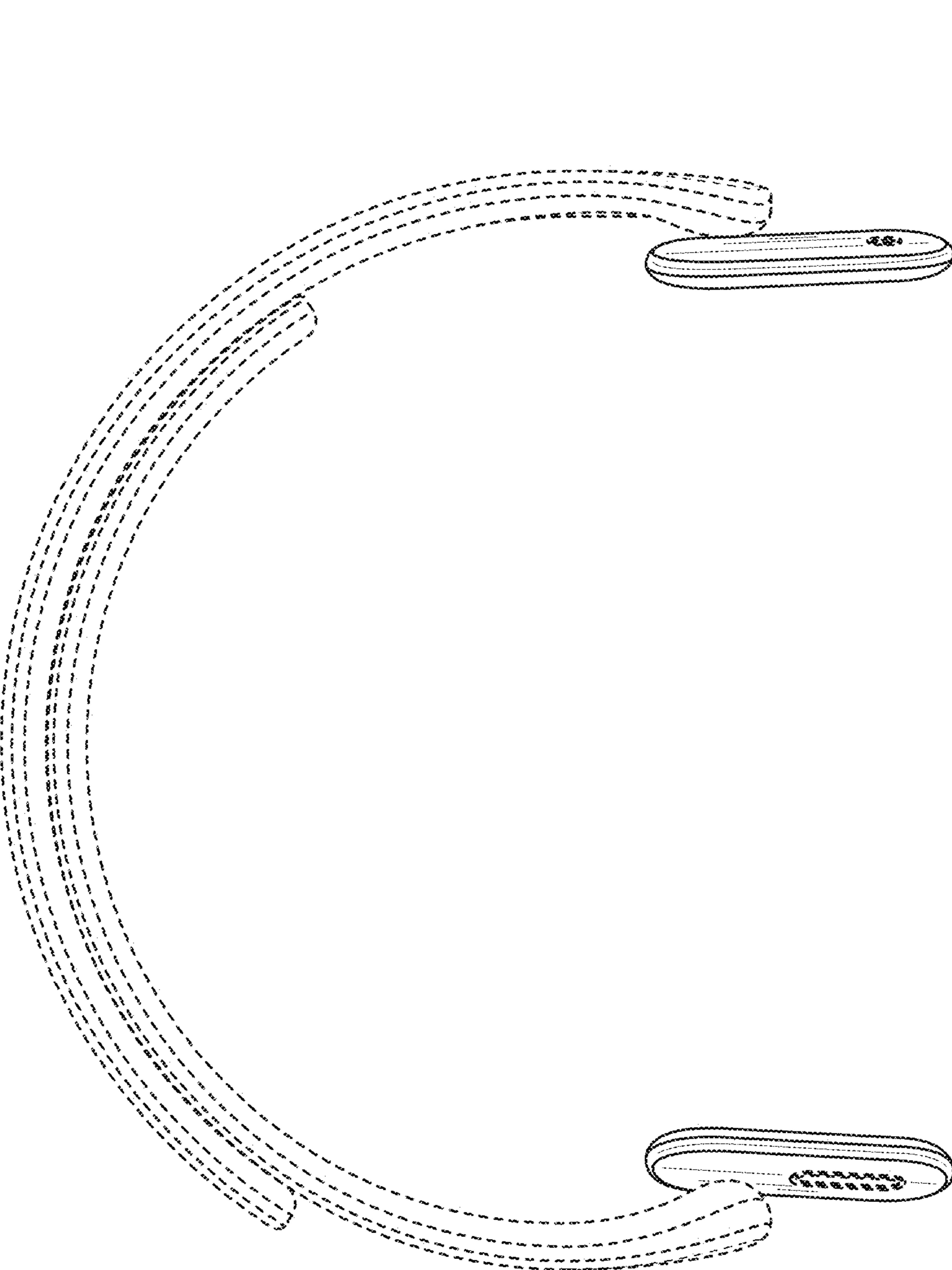


FIG. 5

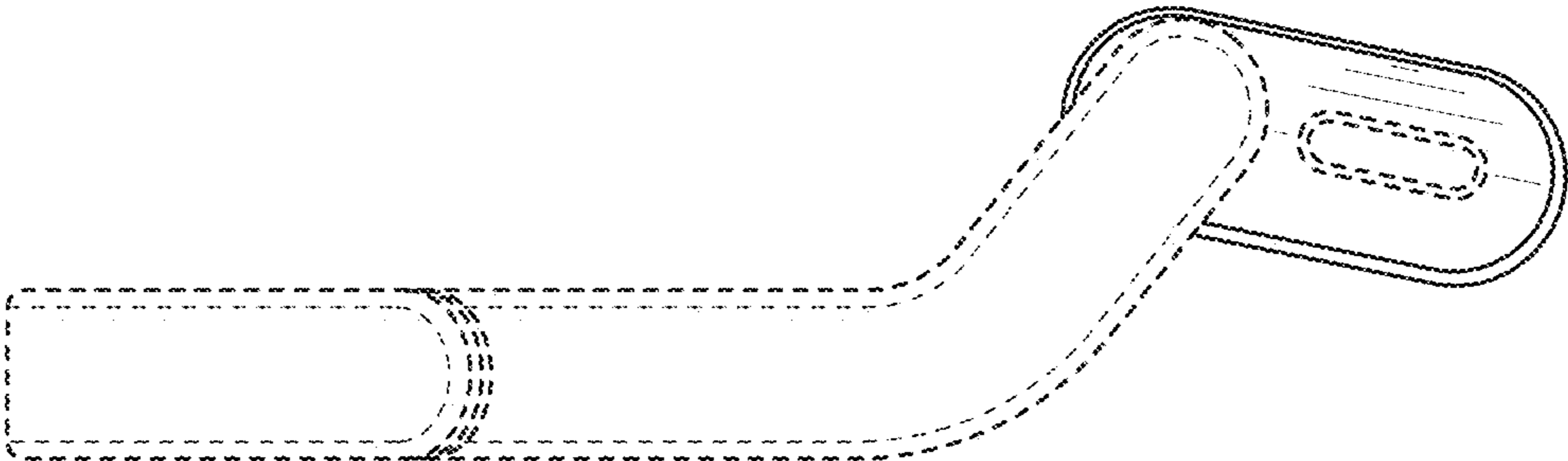


FIG. 7

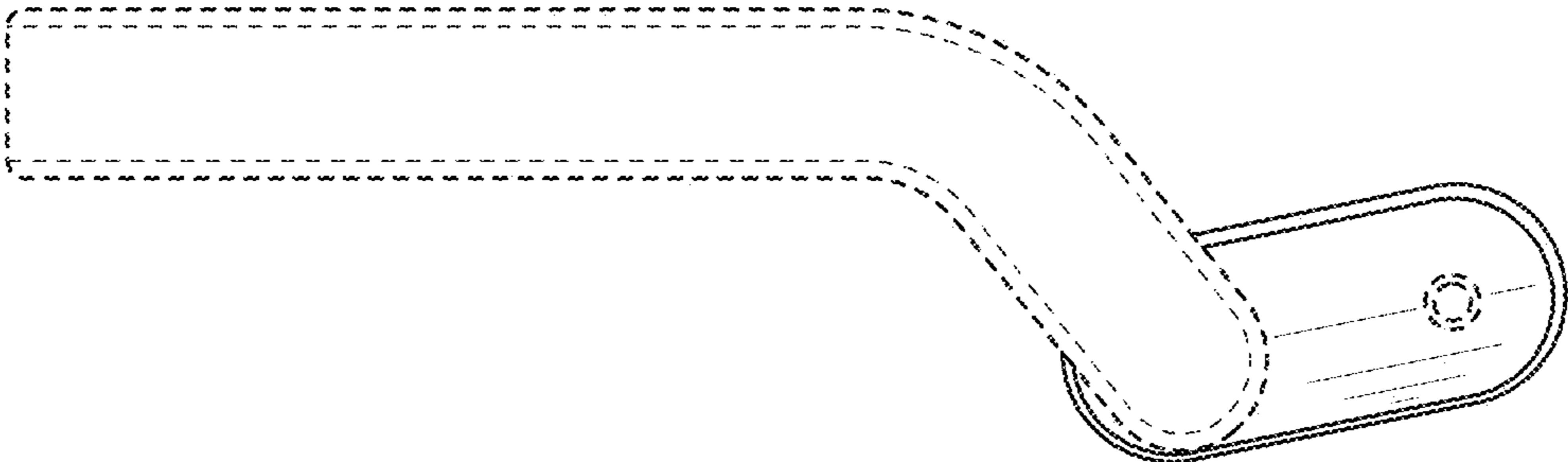


FIG. 6

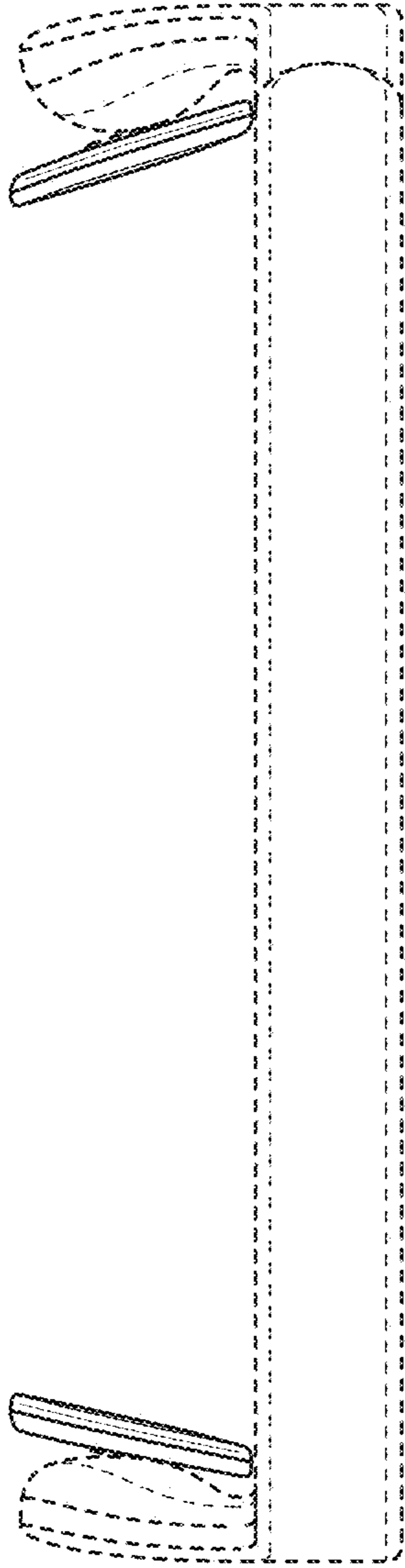


FIG. 8

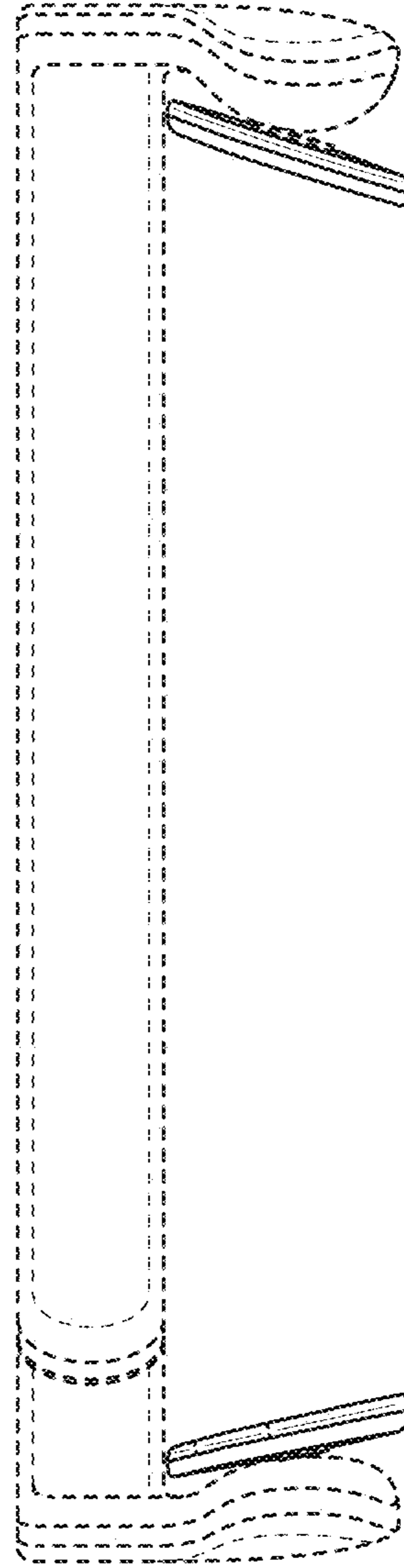


FIG. 9

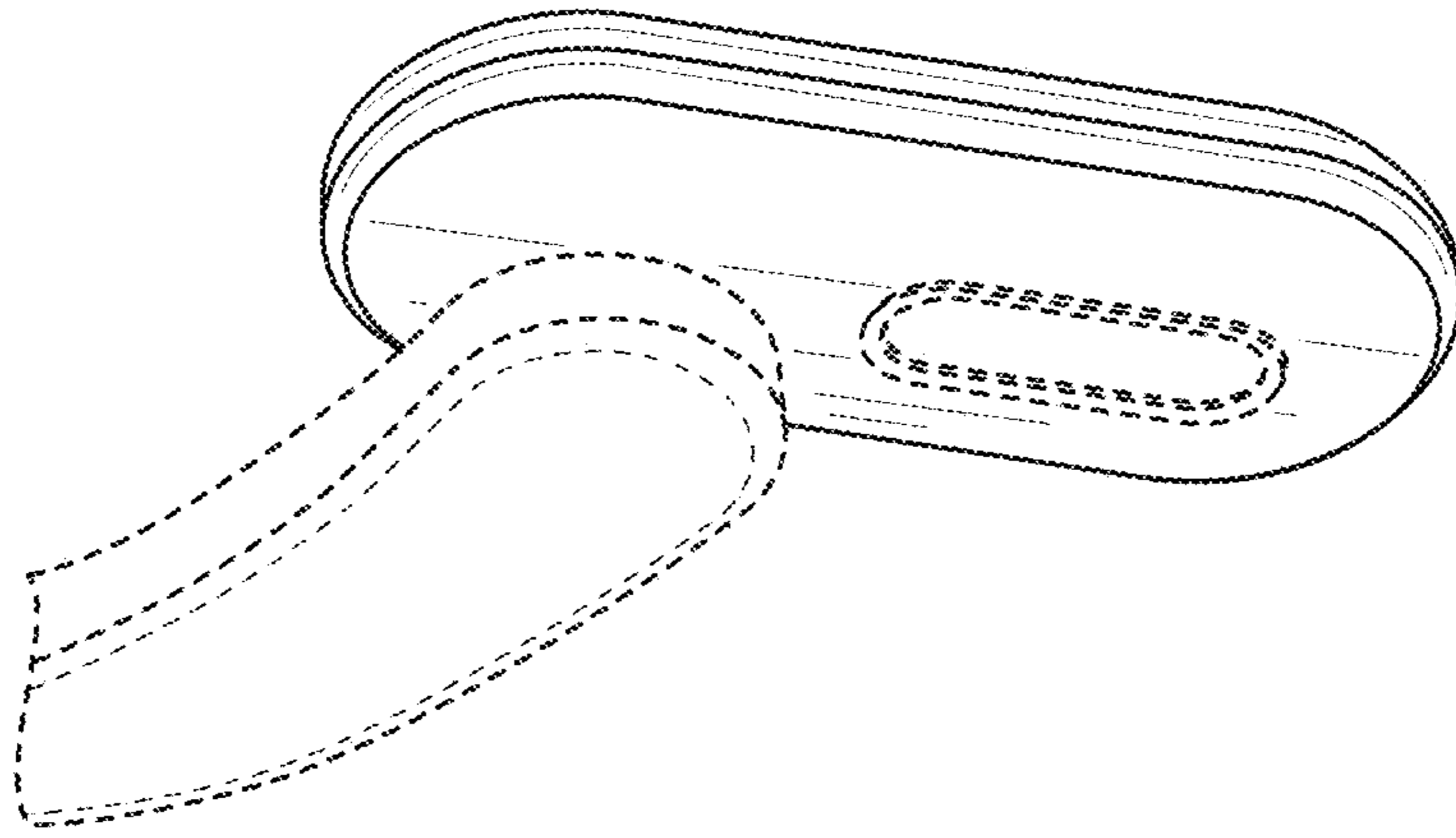


FIG. 11

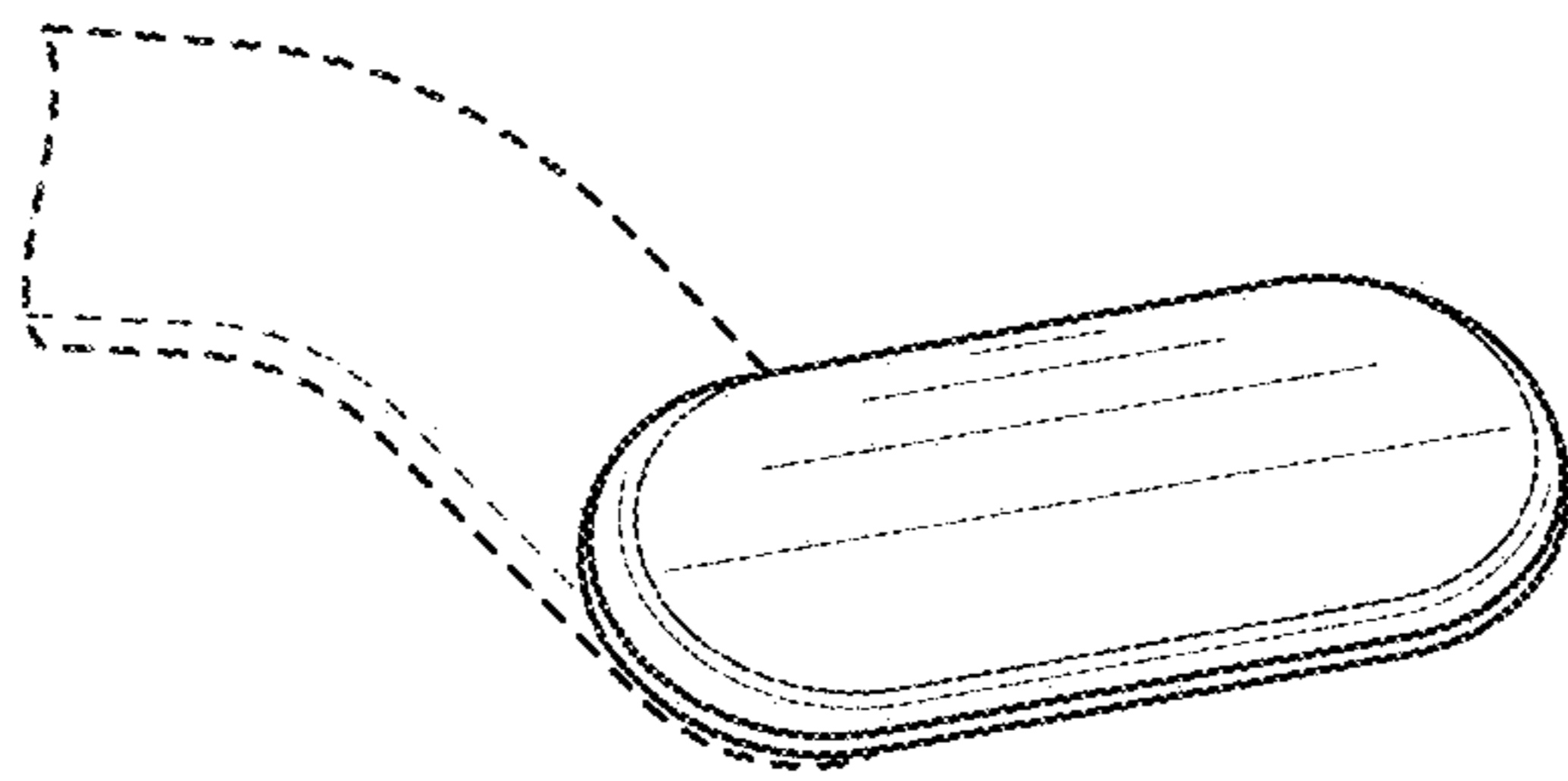
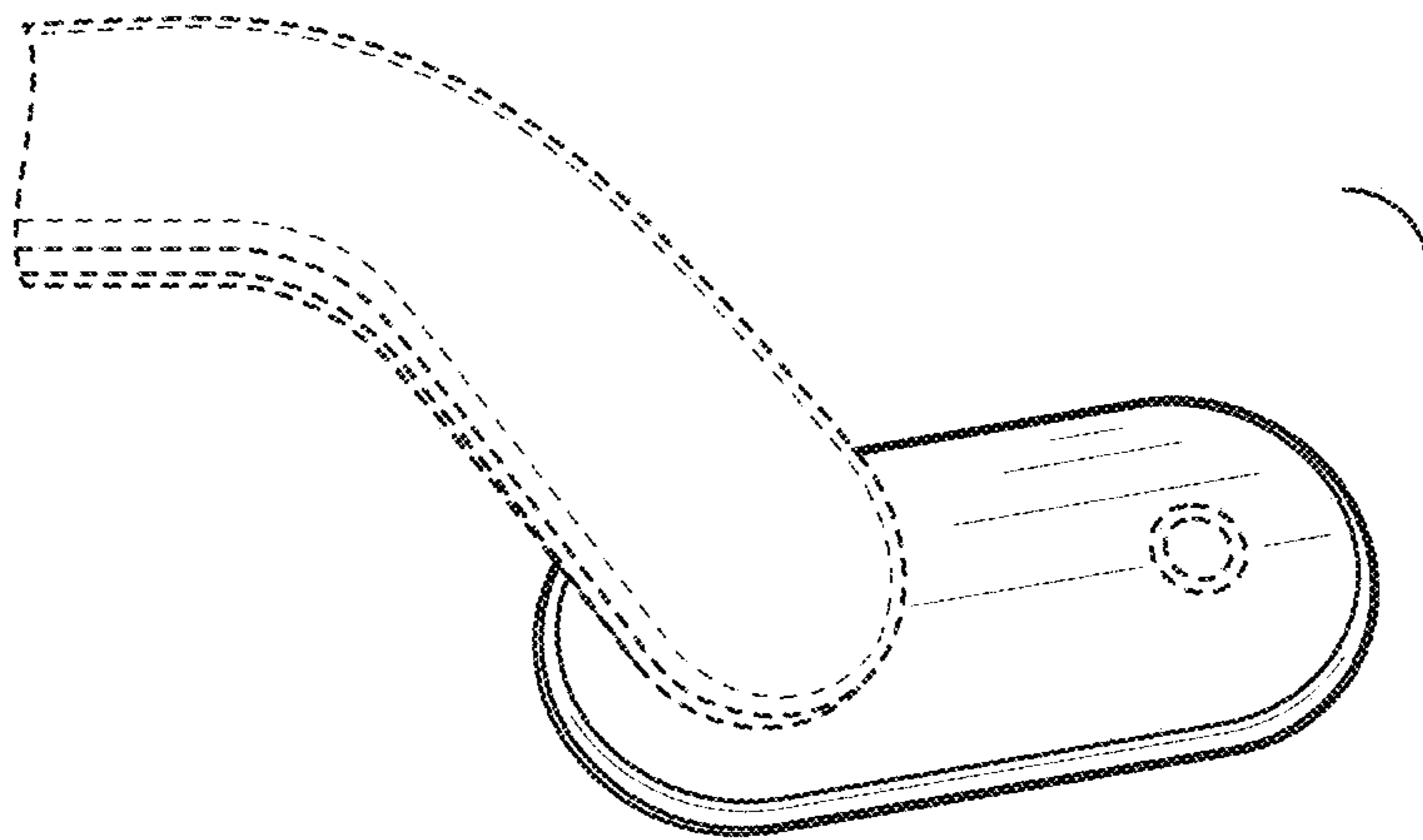


FIG. 10

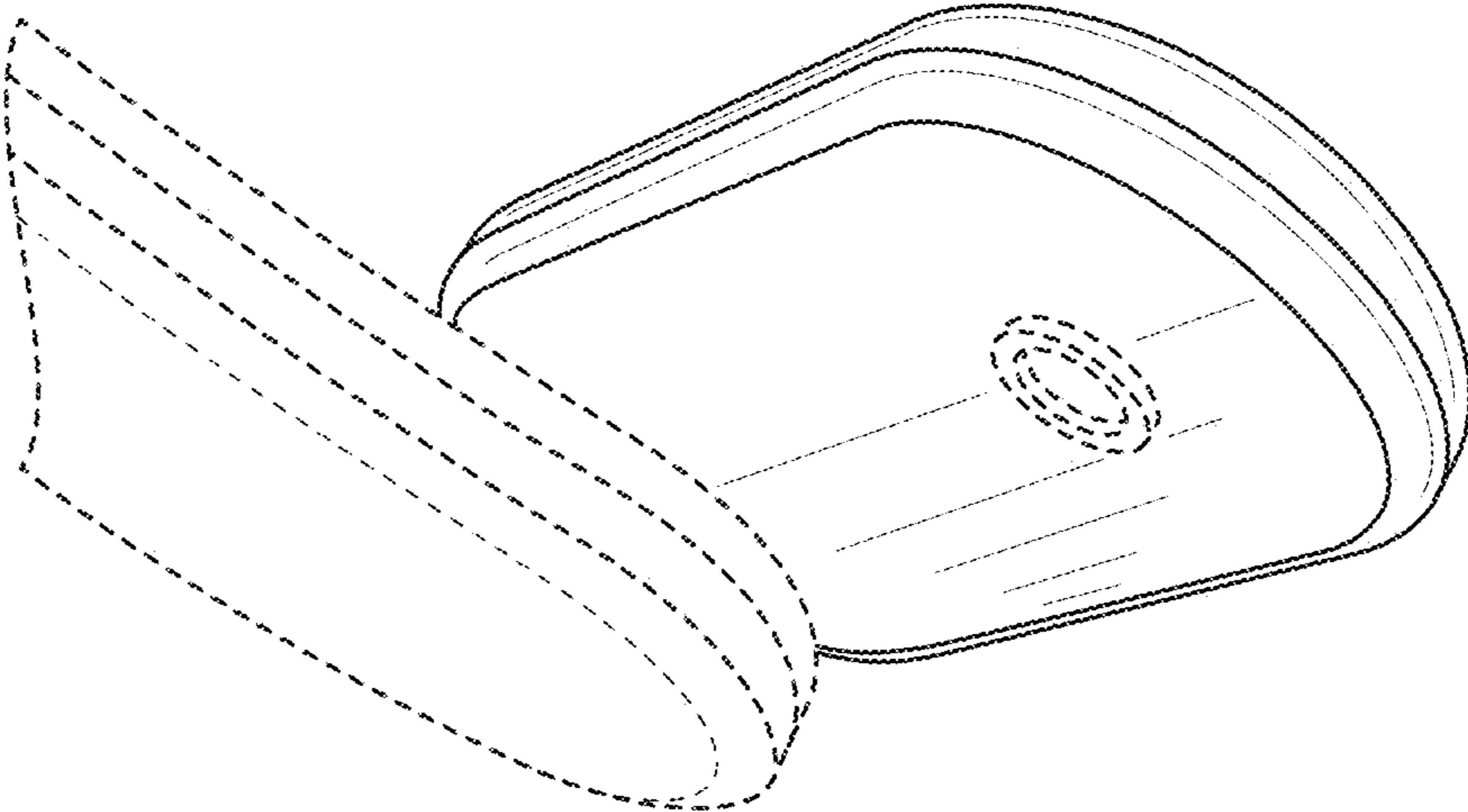


FIG. 12

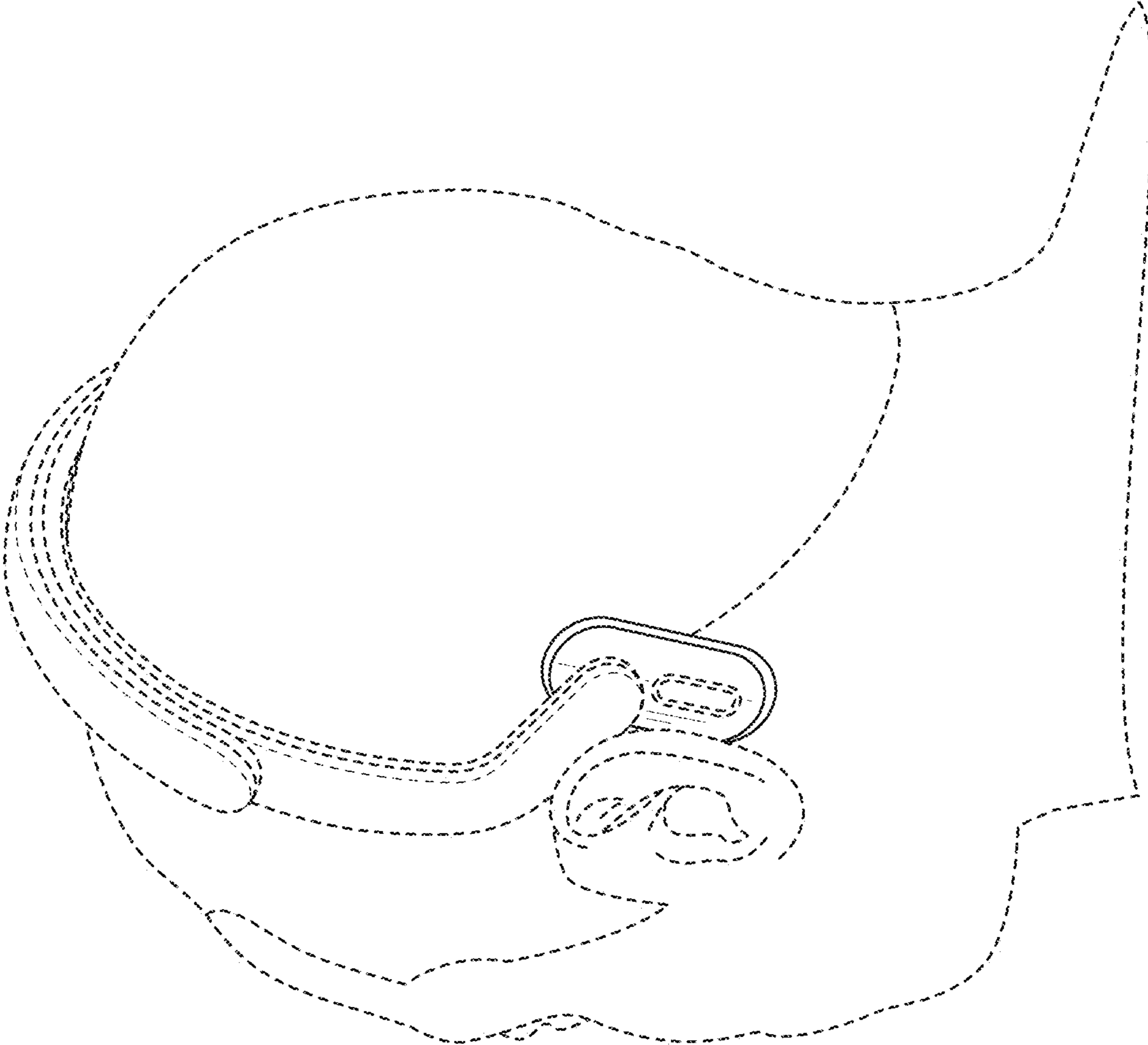


FIG. 13

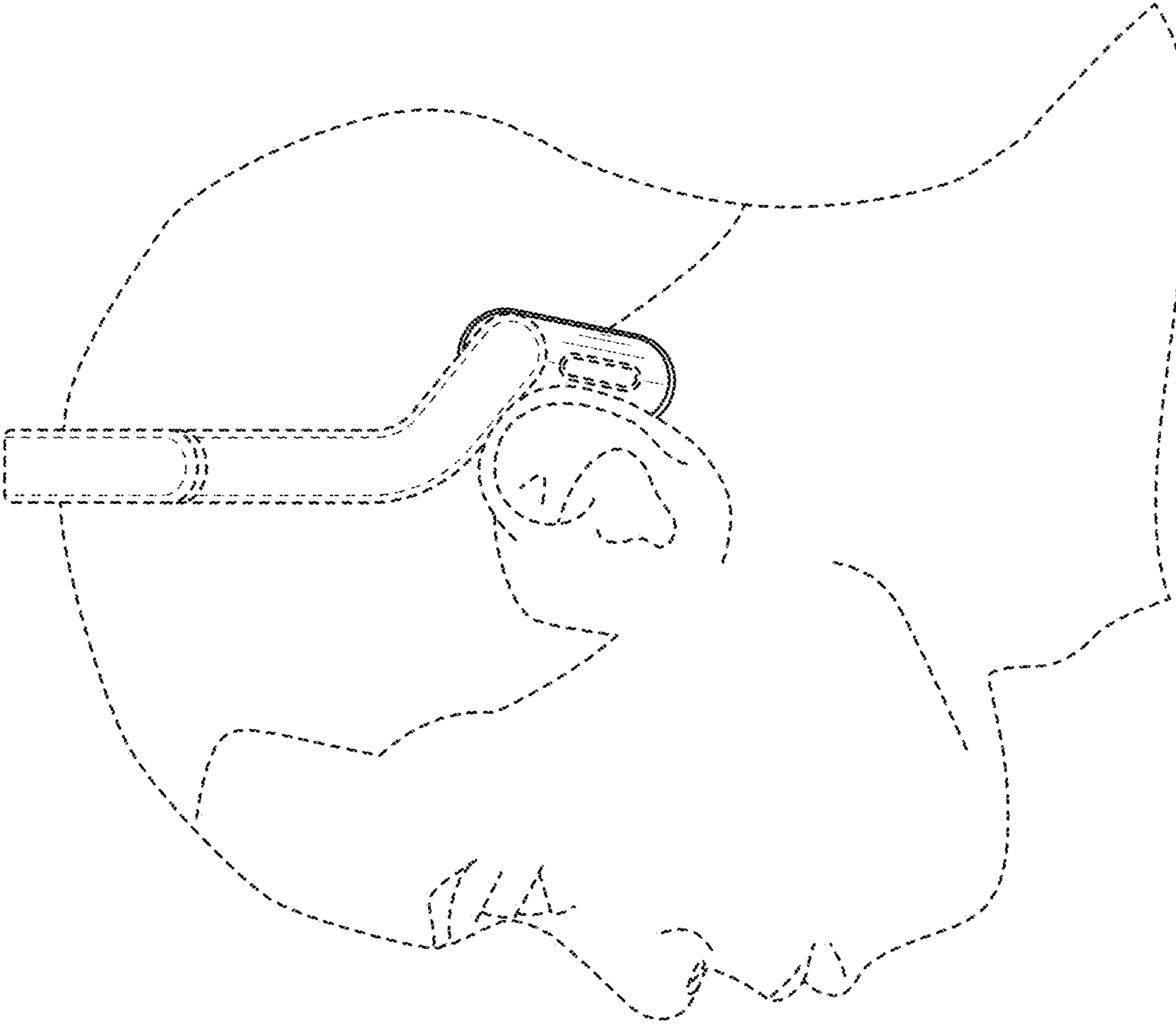


FIG. 14