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(12) **United States Design Patent**
Dyer

(10) **Patent No.:** **US D980,429 S**
(45) **Date of Patent:** **** Mar. 7, 2023**

(54) **ORTHODONTIC ELASTOMERIC LIGATURE TIE**

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(73) Assignee: **Message Ties, LLC**, Birmingham, AL (US)

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

(21) Appl. No.: **29/839,819**

(22) Filed: **May 24, 2022**

(51) **LOC (14) Cl.** **24-03**

(52) **U.S. Cl.**
USPC **D24/180; D5/30**

(58) **Field of Classification Search**
USPC D6/575, 580, 582, 583, 588, 592, 601, D6/602, 604, 605, 608, 610, 611, 613, D6/617; D5/7, 37, 55, 56, 57, 58, 59, 60, D5/61, 62, 99; D25/128; D24/176, 180
CPC A47C 31/11; A47C 27/08; A47C 27/14; A47G 27/00; A47G 27/02; A47G 27/04; A63B 37/0023; B60N 2/60; B44F 7/00; B44F 5/00; B44F 3/00; D03D 15/65; D03D

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D290,040 S * 5/1987 Kelly D24/180
D302,588 S * 8/1989 Jones D24/180
D304,077 S * 10/1989 Pospisil D24/180

(Continued)

FOREIGN PATENT DOCUMENTS

CN 304902246 11/2018
CN 305776870 5/2020

(Continued)

Primary Examiner — Karen S Acker

(74) *Attorney, Agent, or Firm* — Meunier Carlin & Curfman LLC

(57) **CLAIM**

The ornamental design for an orthodontic elastomeric ligature tie, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a first embodiment of an orthodontic elastomeric ligature tie showing my new design. FIG. 2 is a front view thereof.

FIG. 3 is a rear view thereof.

FIG. 4 is a right-side view thereof.

FIG. 5 is a left-side view thereof.

FIG. 6 is a top view thereof.

FIG. 7 is a bottom view thereof.

FIG. 8 is a perspective view of the orthodontic elastomeric ligature tie of FIG. 1 shown in a position of use.

FIG. 9 is a perspective view of a second embodiment of an orthodontic elastomeric ligature tie.

FIG. 10 is a front view thereof.

FIG. 11 is a rear view thereof.

FIG. 12 is a right-side view thereof.

FIG. 13 is a left-side view thereof.

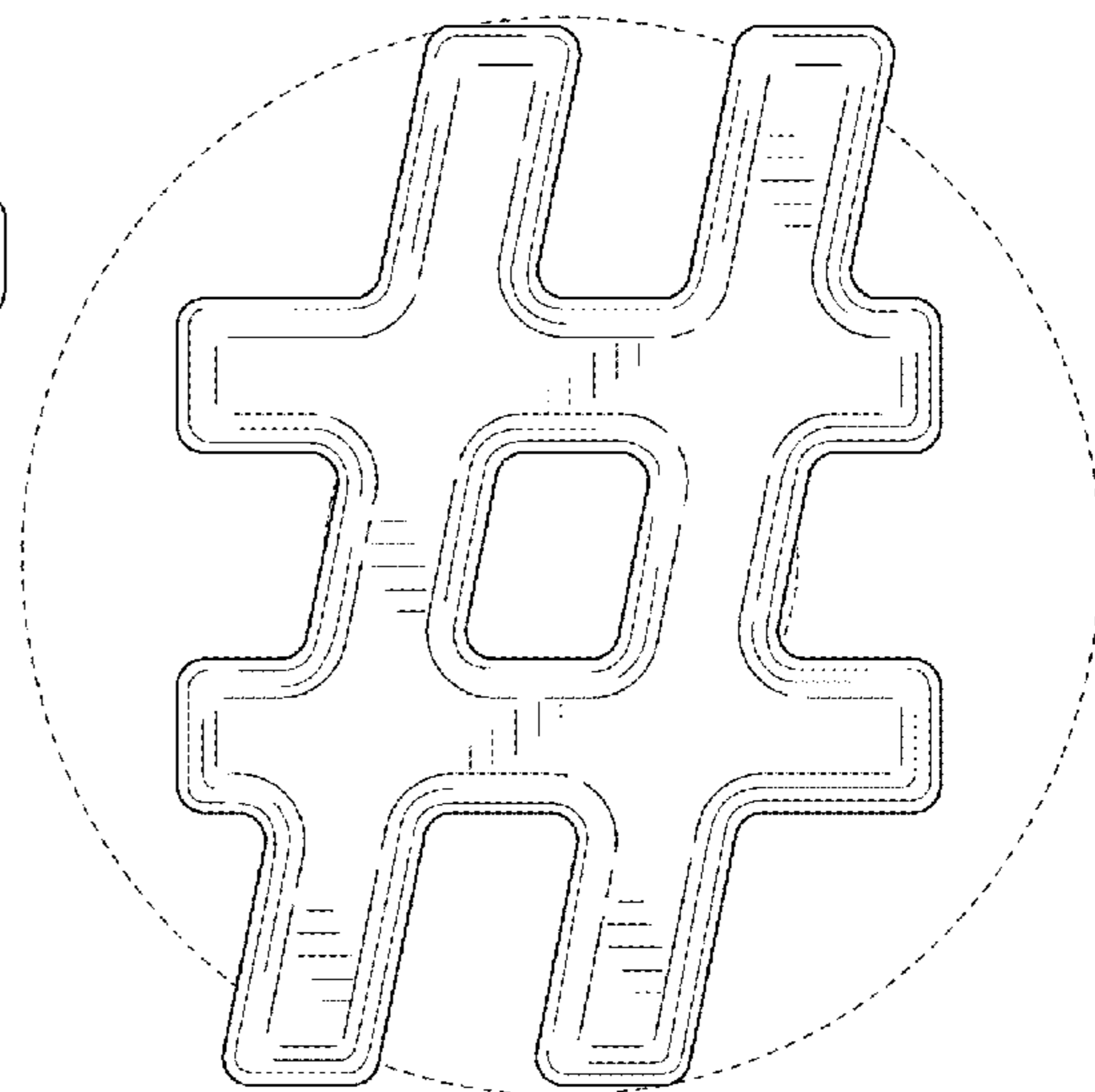
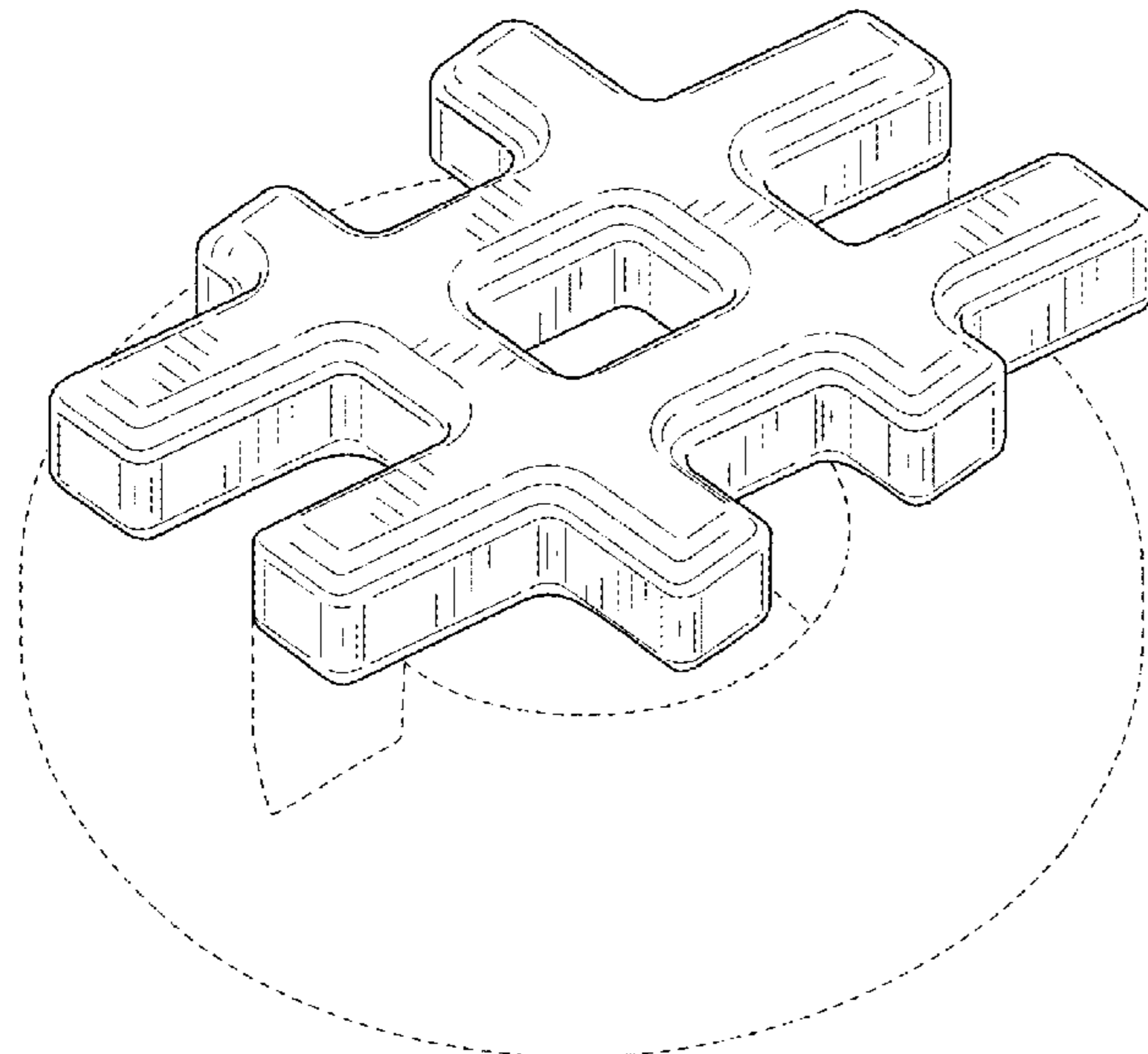
FIG. 14 is a top view thereof.

FIG. 15 is a bottom view thereof; and,

FIG. 16 is a perspective view of the orthodontic elastomeric ligature tie of FIG. 9 shown in a position of use.

The broken lines in FIGS. 8 and 16 depict environmental subject matter included to show the article in a state of use and form no part of the claimed design. All other broken lines in the drawings depict portions of the orthodontic elastomeric ligature tie that form no part of the claimed design.

1 Claim, 10 Drawing Sheets



US D980,429 S

Page 2

(58) **Field of Classification Search**

CPC 1/02; D03D 1/06; D03D 3/005; D03D
3/0082; D03D 27/02; D03D 15/46
See application file for complete search history.

D970,731 S * 11/2022 Dyer D24/180
2017/0000587 A1* 1/2017 Wigal A44C 15/007
D24/180
2018/0214251 A1* 8/2018 Aronen A61C 7/28

(56)

References Cited

U.S. PATENT DOCUMENTS

D315,957 S * 4/1991 Kelly D24/180
D340,523 S * 10/1993 Barngrover D24/180
D383,844 S * 9/1997 Kelly D24/180
D412,363 S * 7/1999 Stevens D24/180
D412,579 S * 8/1999 Stevens D24/180
D412,988 S * 8/1999 Stevens D24/180
D532,036 S * 11/2006 Munch D18/24
D606,658 S * 12/2009 Blanco-Acevedo D24/180
D648,030 S * 11/2011 Bryant D24/180
D660,435 S * 5/2012 Smith D24/180
D660,436 S * 5/2012 Dupray D24/180
D660,968 S * 5/2012 Smith D24/180
D687,554 S * 8/2013 Kooiman D24/180
D725,279 S * 3/2015 Markova D24/180
D747,808 S * 1/2016 Ji D24/180
D766,444 S * 9/2016 Stevens D24/180
D804,037 S * 11/2017 Payne D24/180
D809,145 S * 1/2018 Wigal D24/180
D820,457 S * 6/2018 Sommer D24/180
10,028,806 B2* 7/2018 Wigal A44C 15/007
10,034,724 B2* 7/2018 Wigal A61C 7/306
D832,446 S * 10/2018 Wigal D24/180
D833,020 S * 11/2018 Wigal D24/180
D938,596 S * 12/2021 Hung D24/180
D969,324 S * 11/2022 Dyer A44C 15/007
D24/180

FOREIGN PATENT DOCUMENTS

CN 306323446 2/2021
CN 306384995 3/2021
CN 306393386 3/2021
CN 306605471 6/2021
CN 306909376 10/2021
CN 307005501 12/2021
EM 002594721 2/2015
JP D1461486 2/2013
JP D1517556 2/2015
KR 300460480 8/2007
KR 300473576 12/2007
KR 300586799 6/2009
KR 300769077 11/2014
KR 300833892 1/2016
KR 300838680 2/2016
KR 300913073 7/2017
KR 300913074 7/2017
KR 300946505 3/2018
KR 300952334 4/2018
KR 300985552 12/2018
KR 301026023 10/2019
KR 301057290 5/2020
KR 301071763 8/2020
KR 301071764 8/2020
KR 301084385 11/2020
KR 301112771 6/2021
KR 301131062 10/2021

* cited by examiner

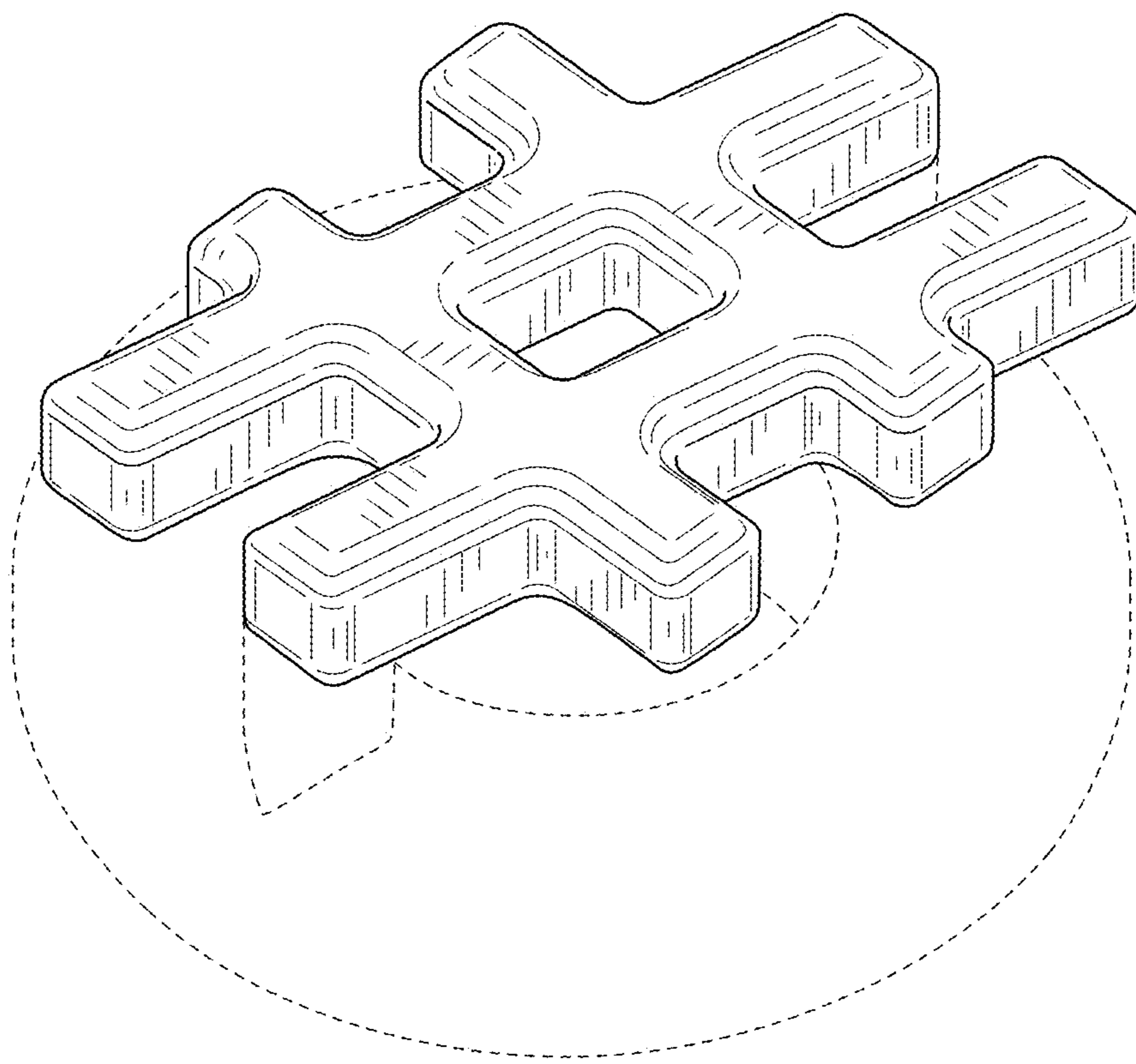


FIG. 1

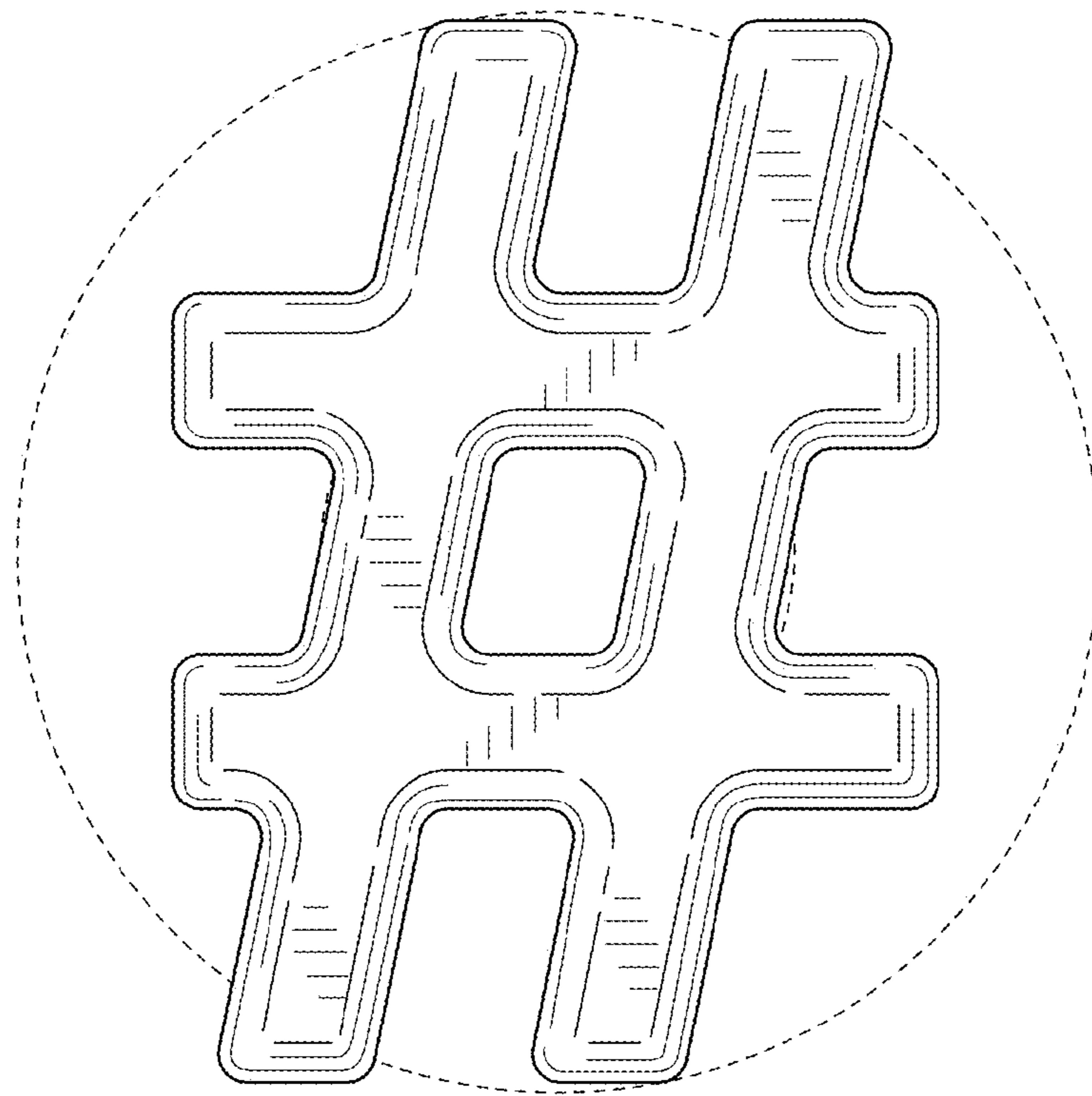


FIG. 2

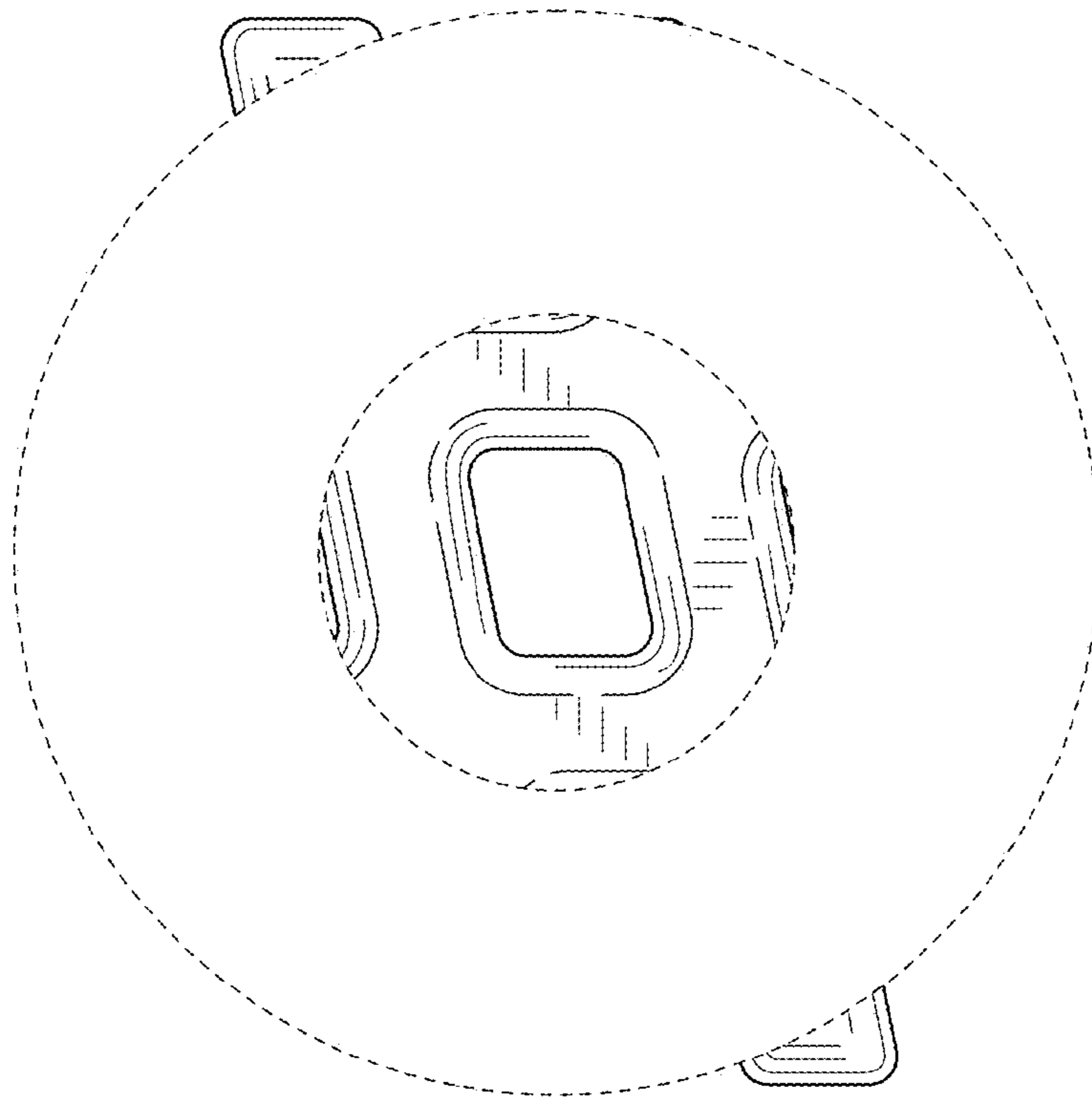


FIG. 3

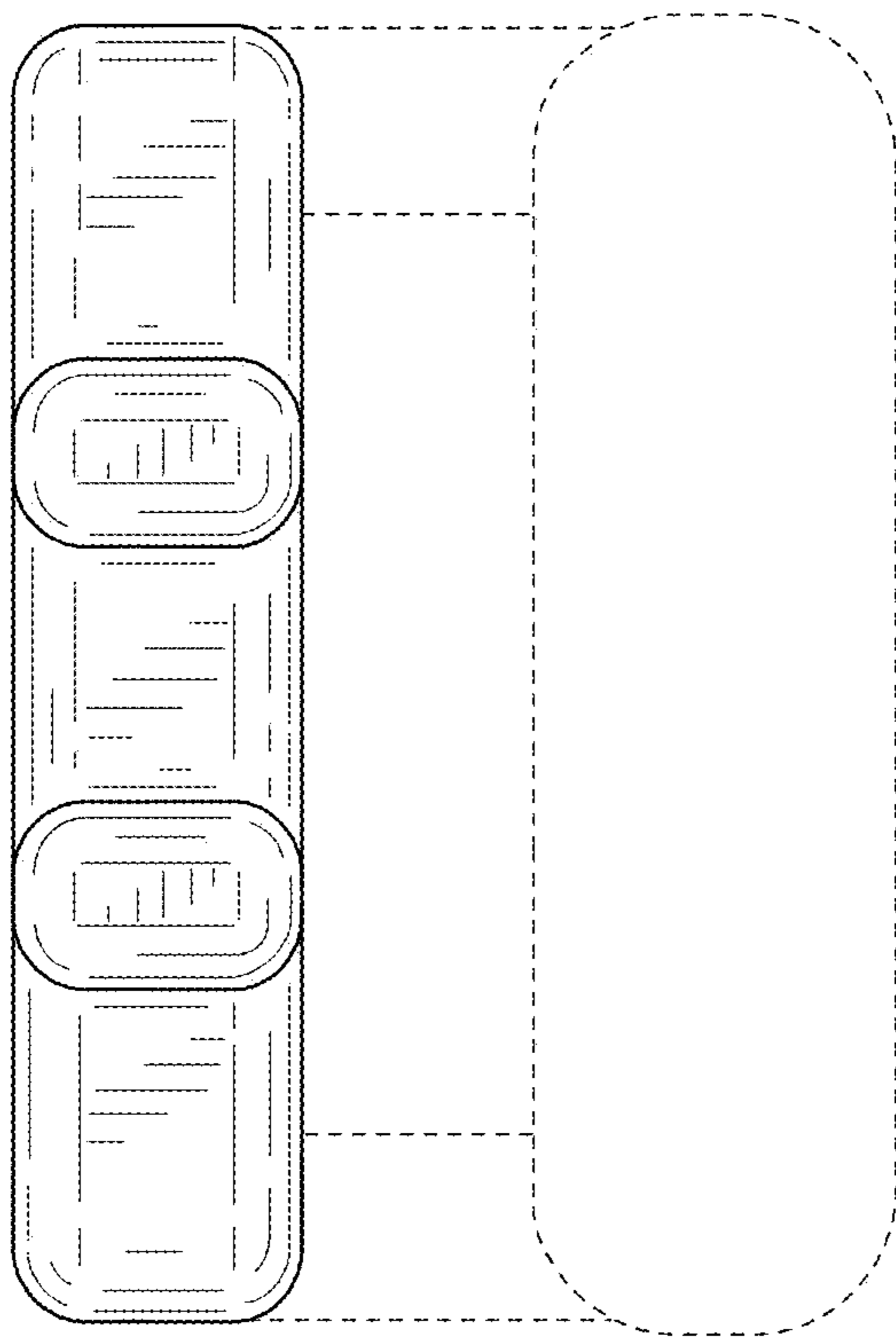


FIG. 4

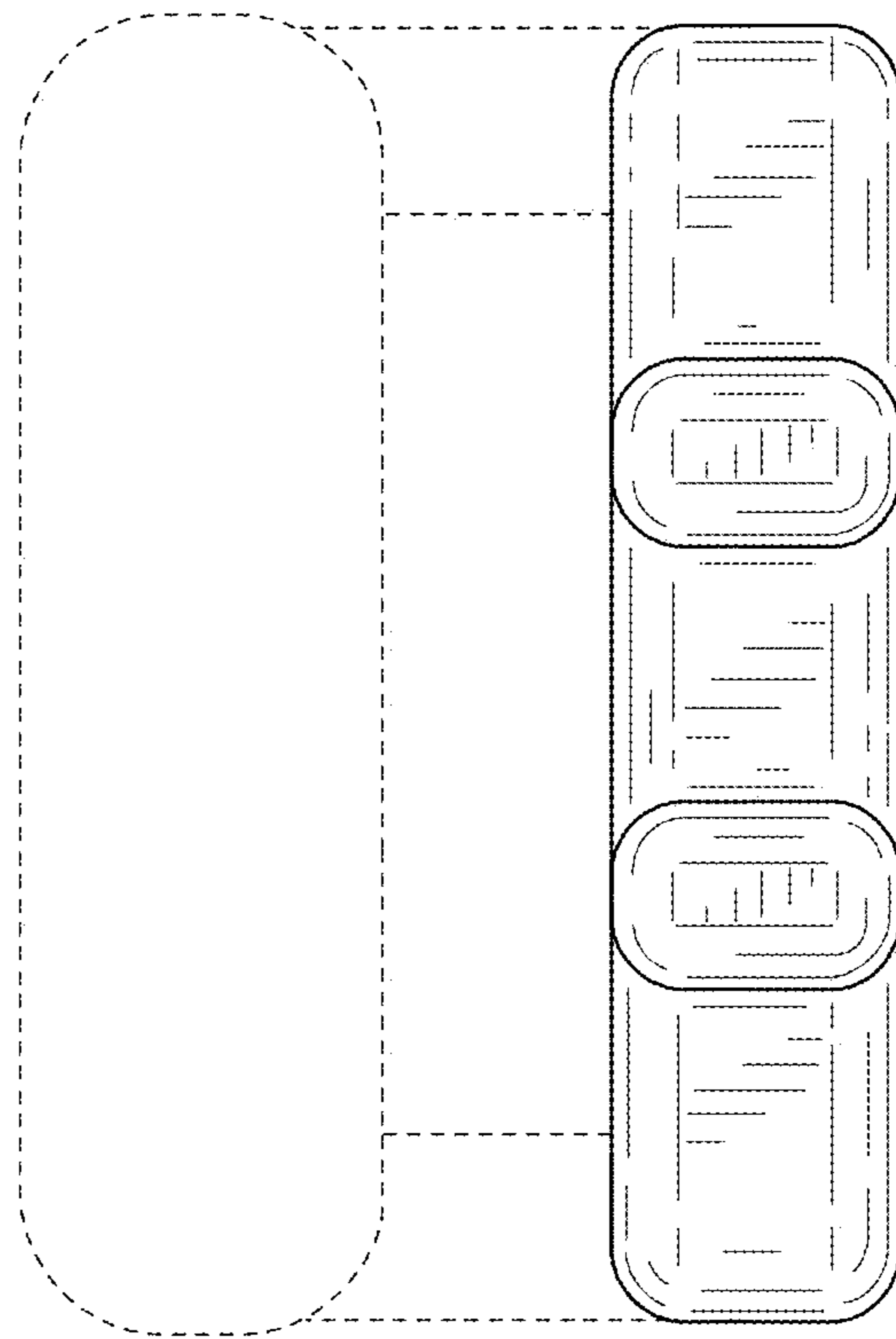


FIG. 5

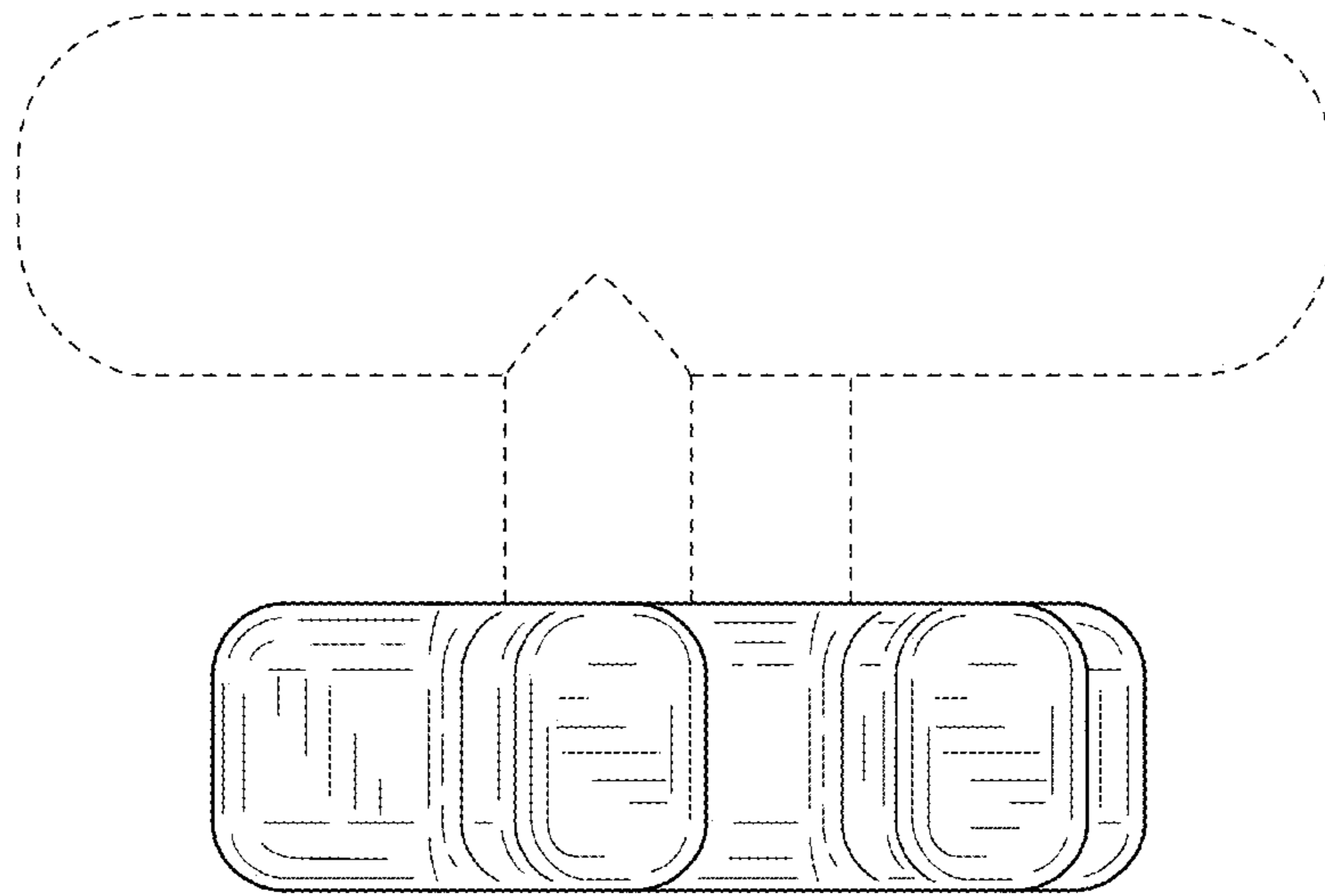


FIG. 6

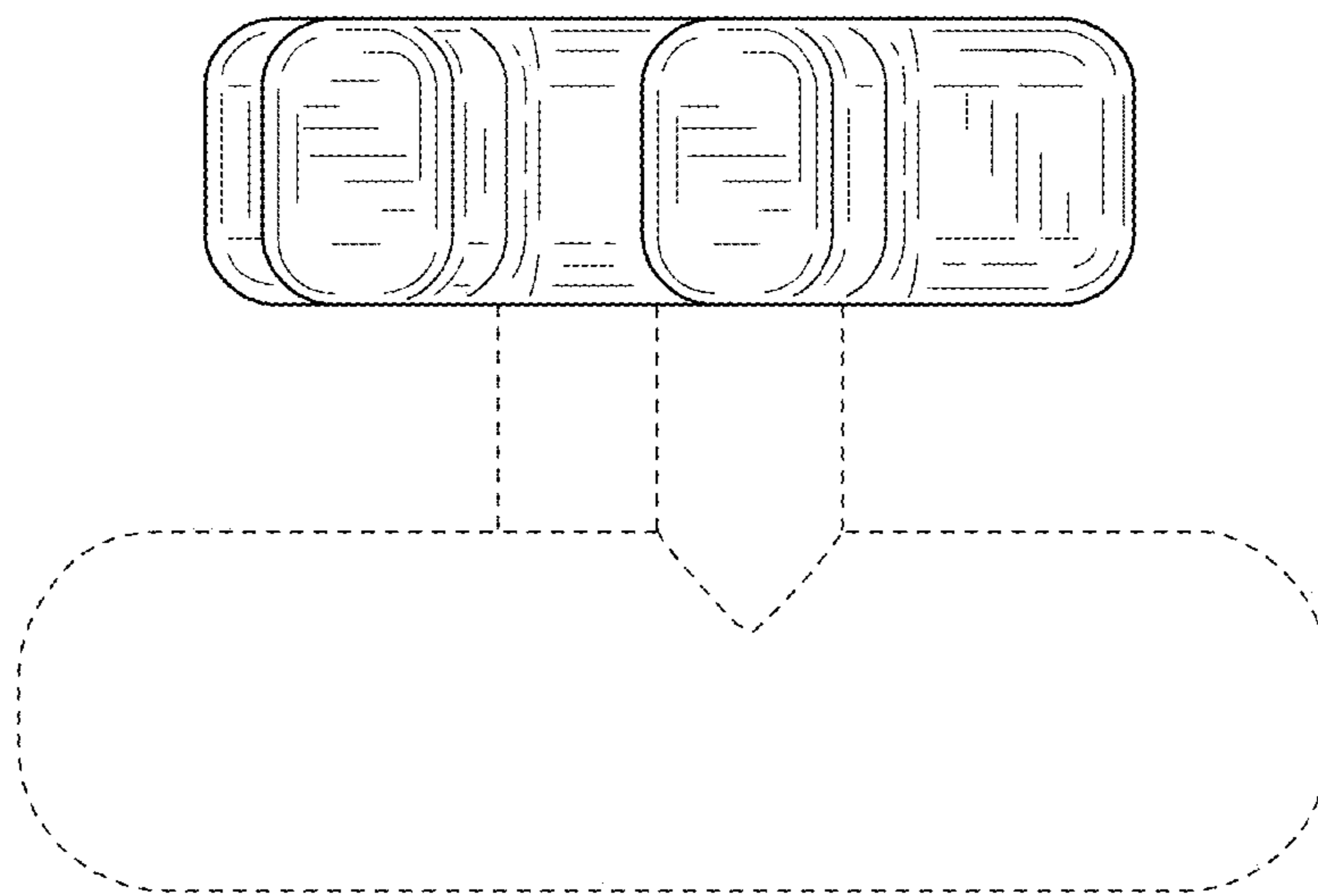


FIG. 7

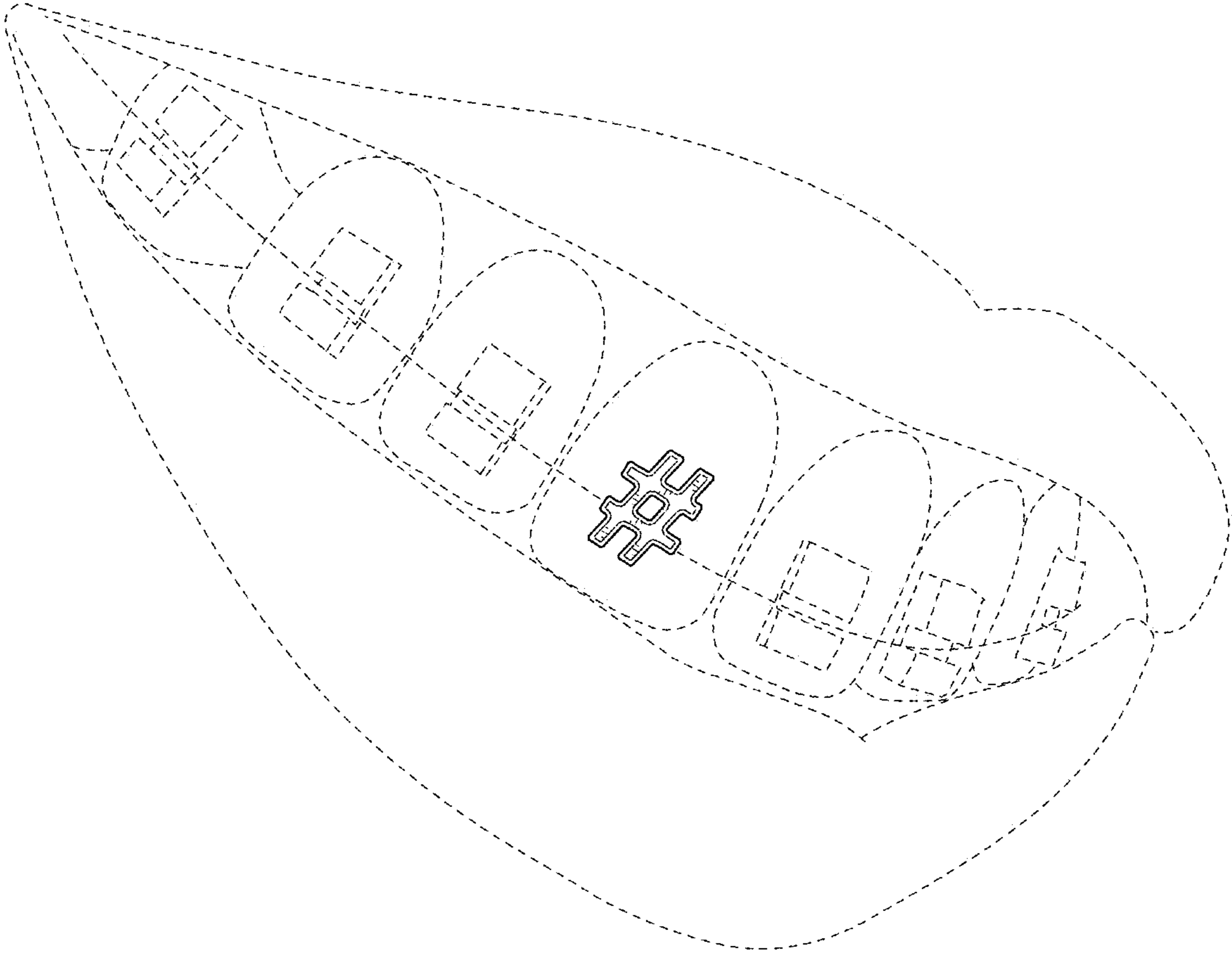


FIG. 8

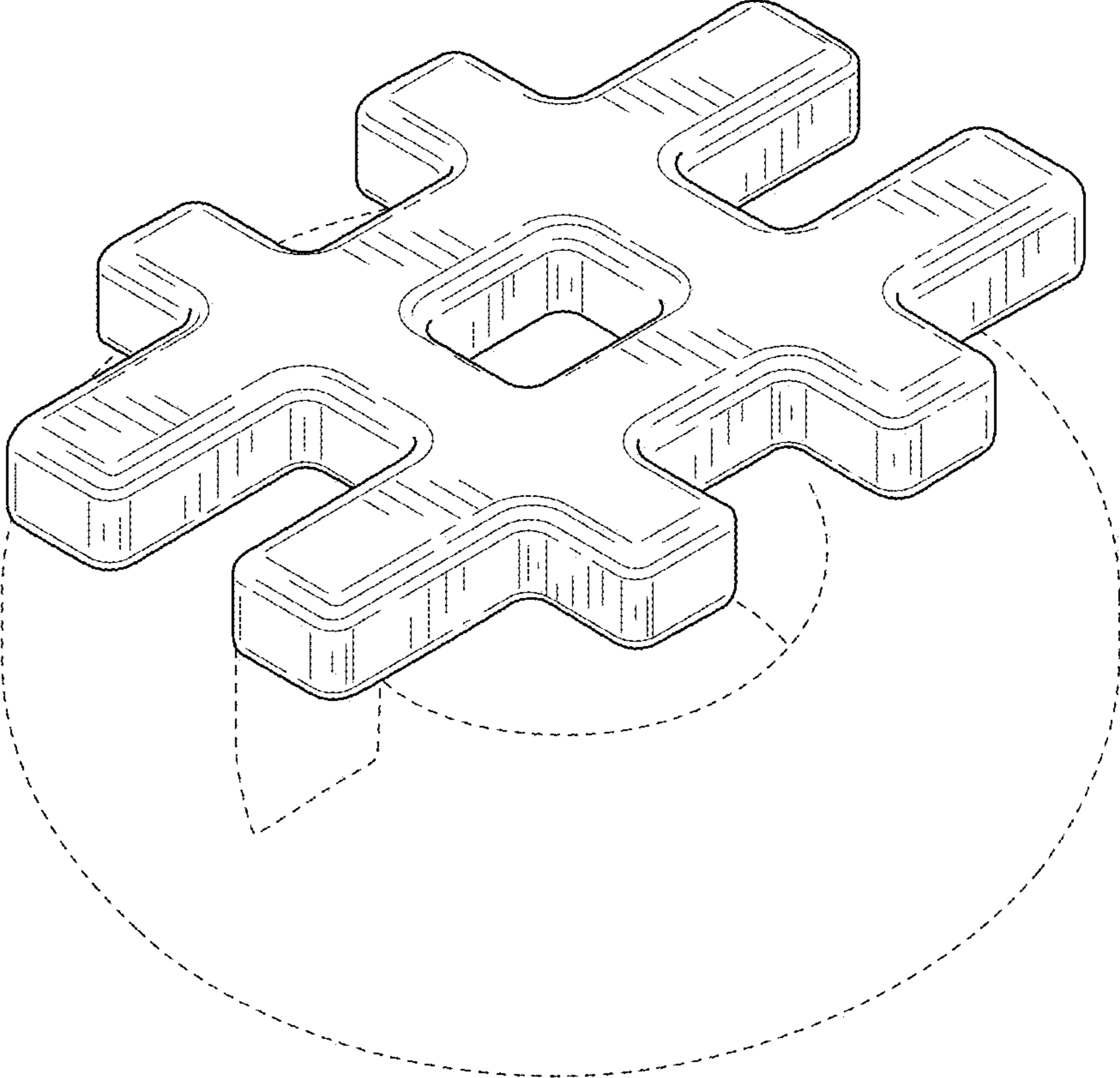


FIG. 9

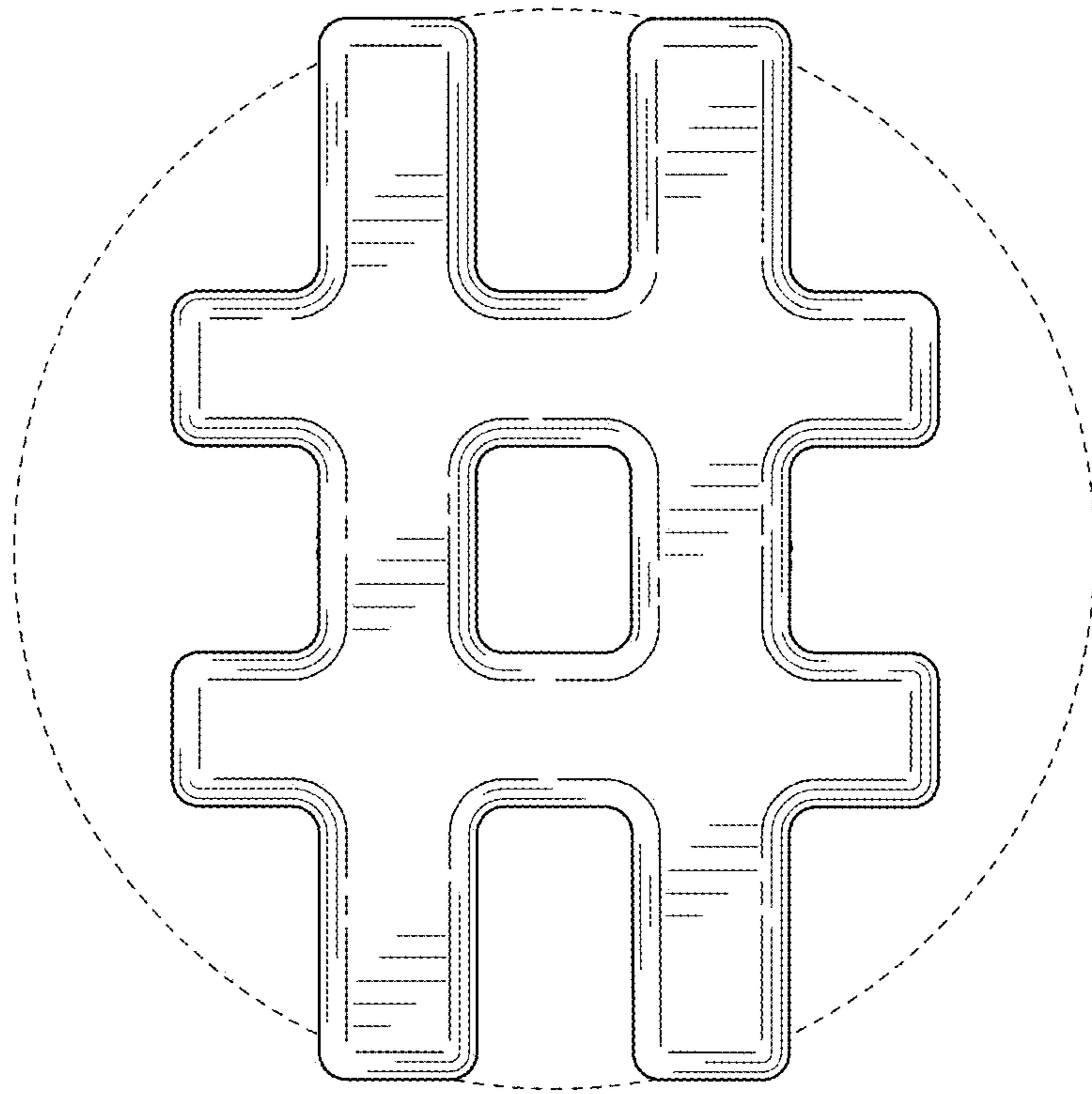


FIG. 10

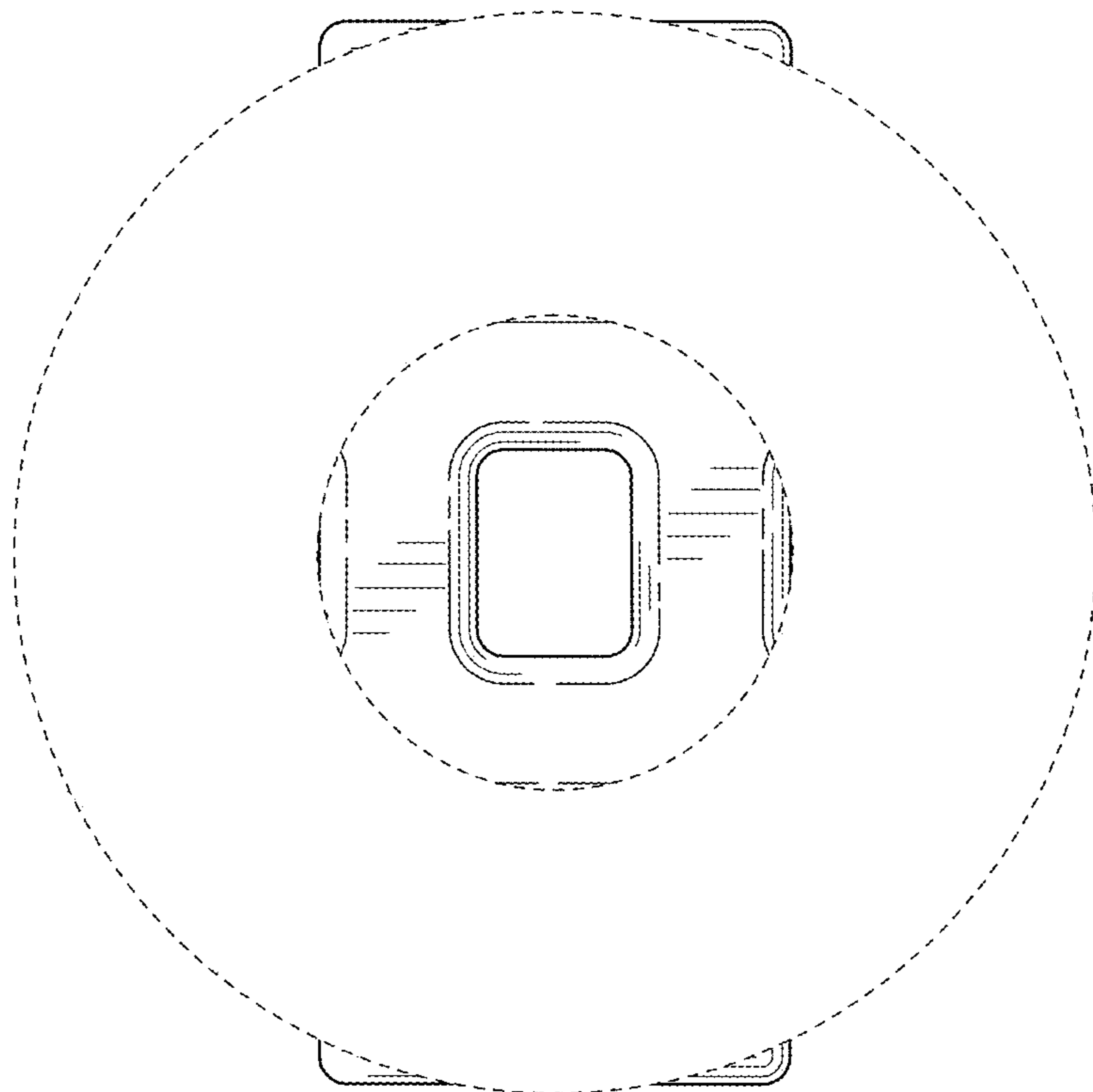


FIG. 11

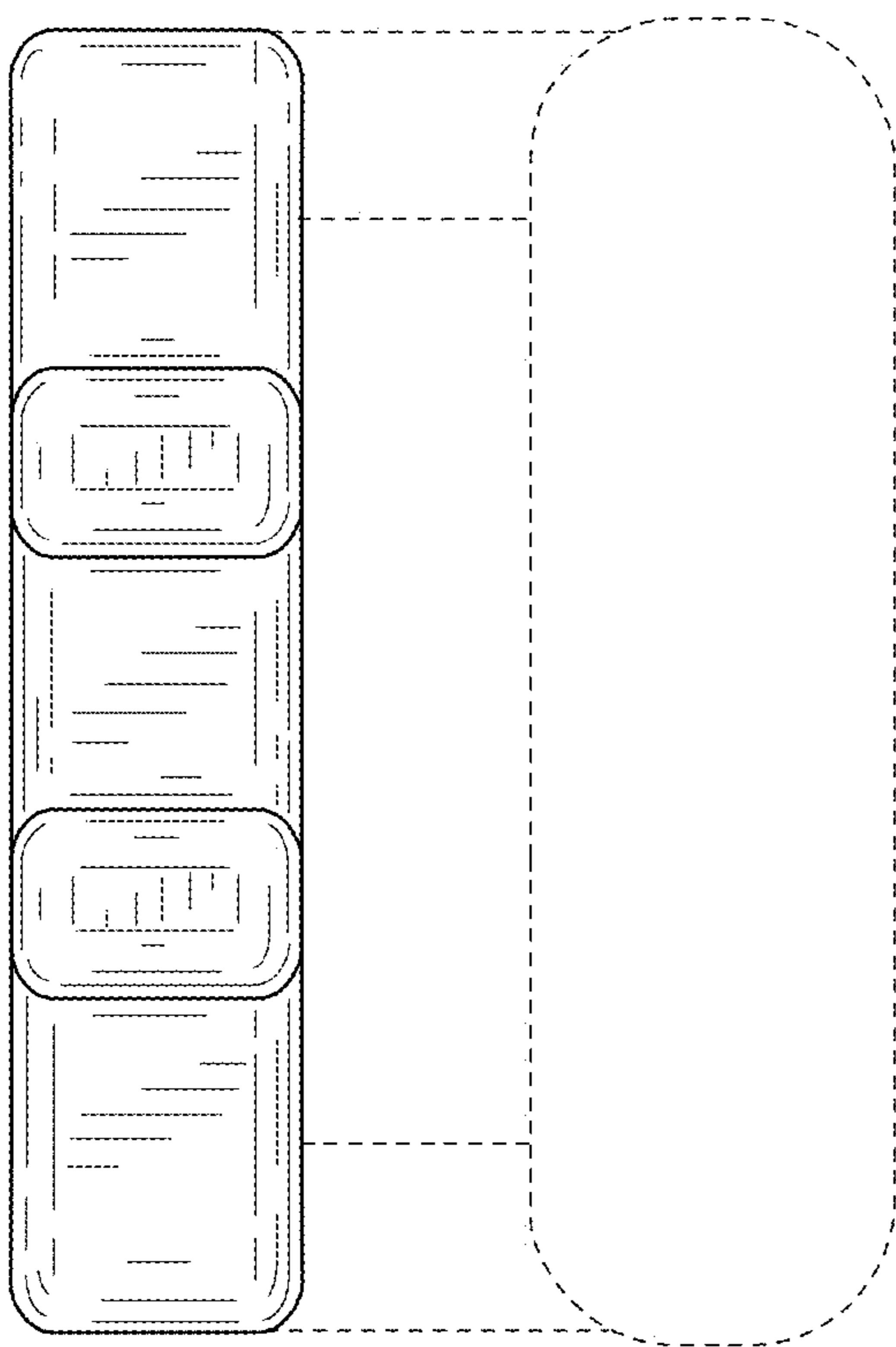


FIG. 12

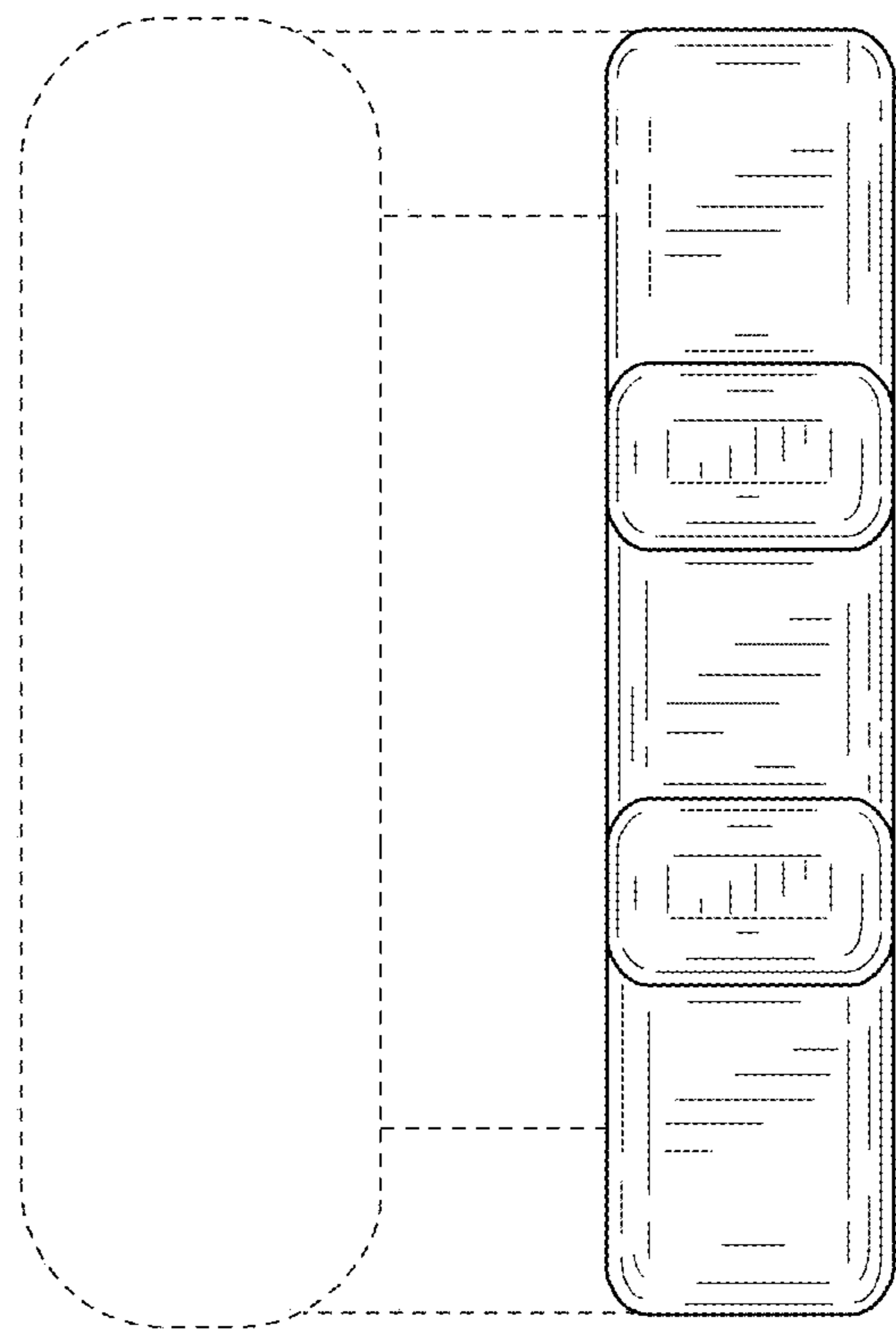


FIG. 13

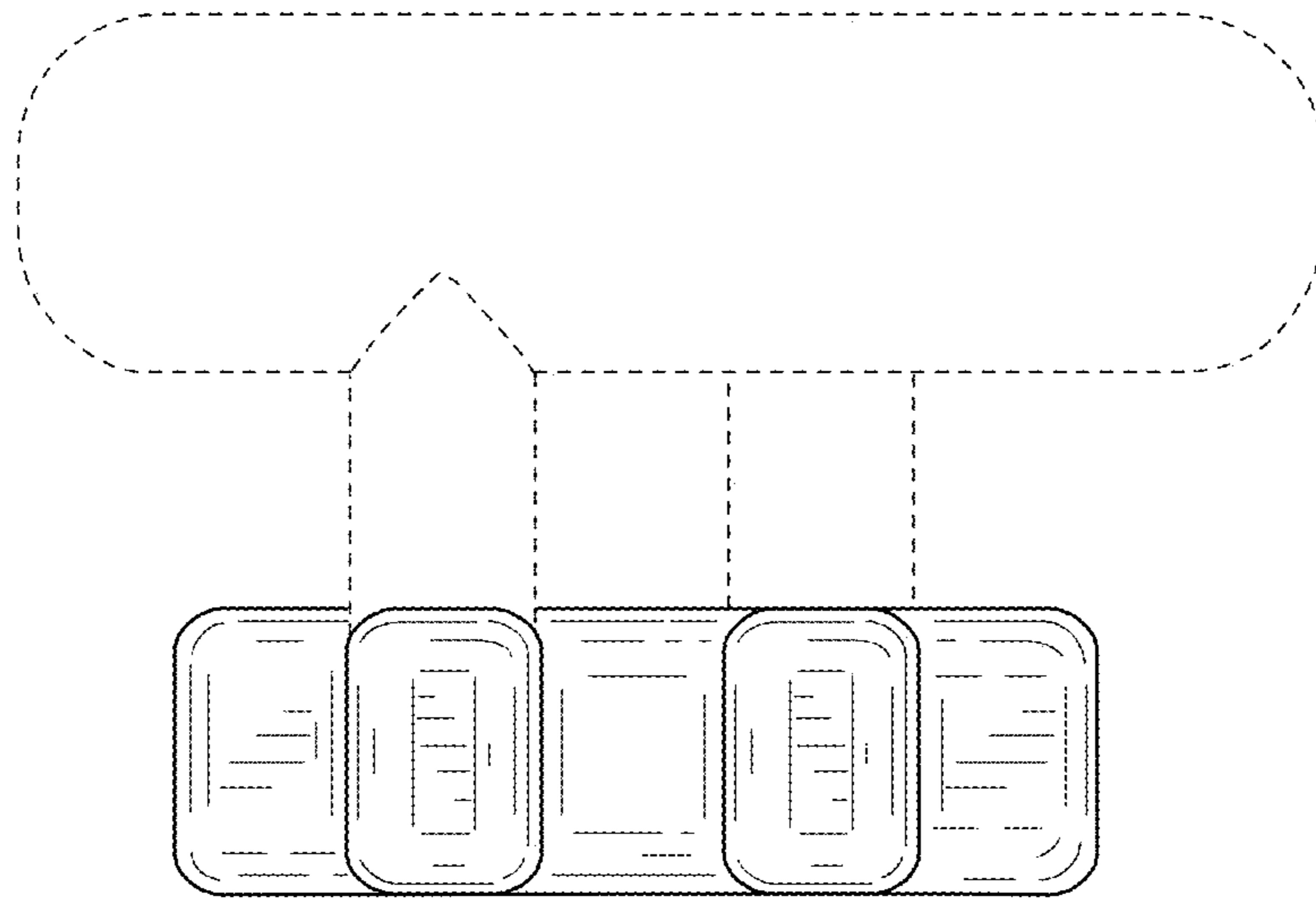


FIG. 14

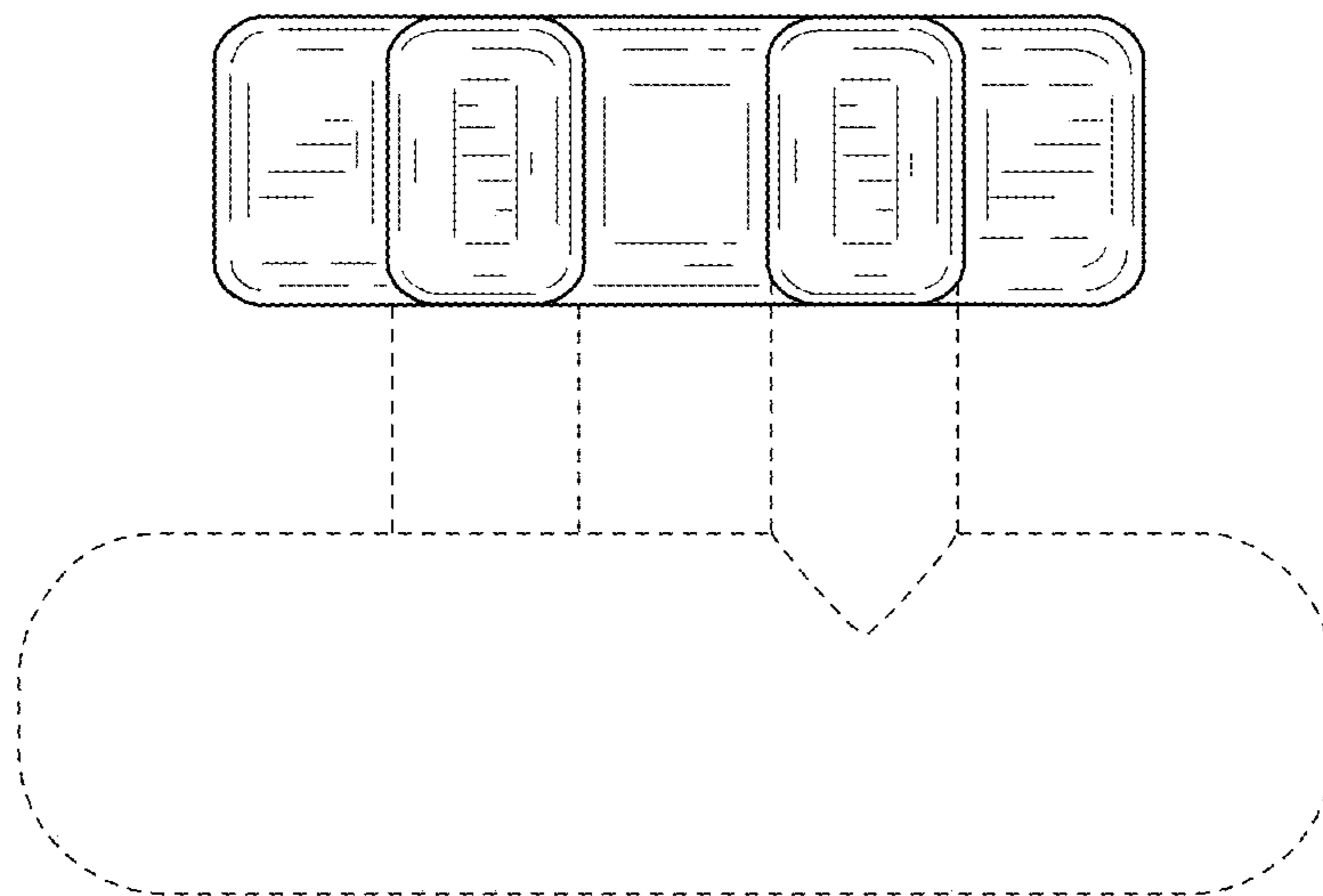


FIG. 15

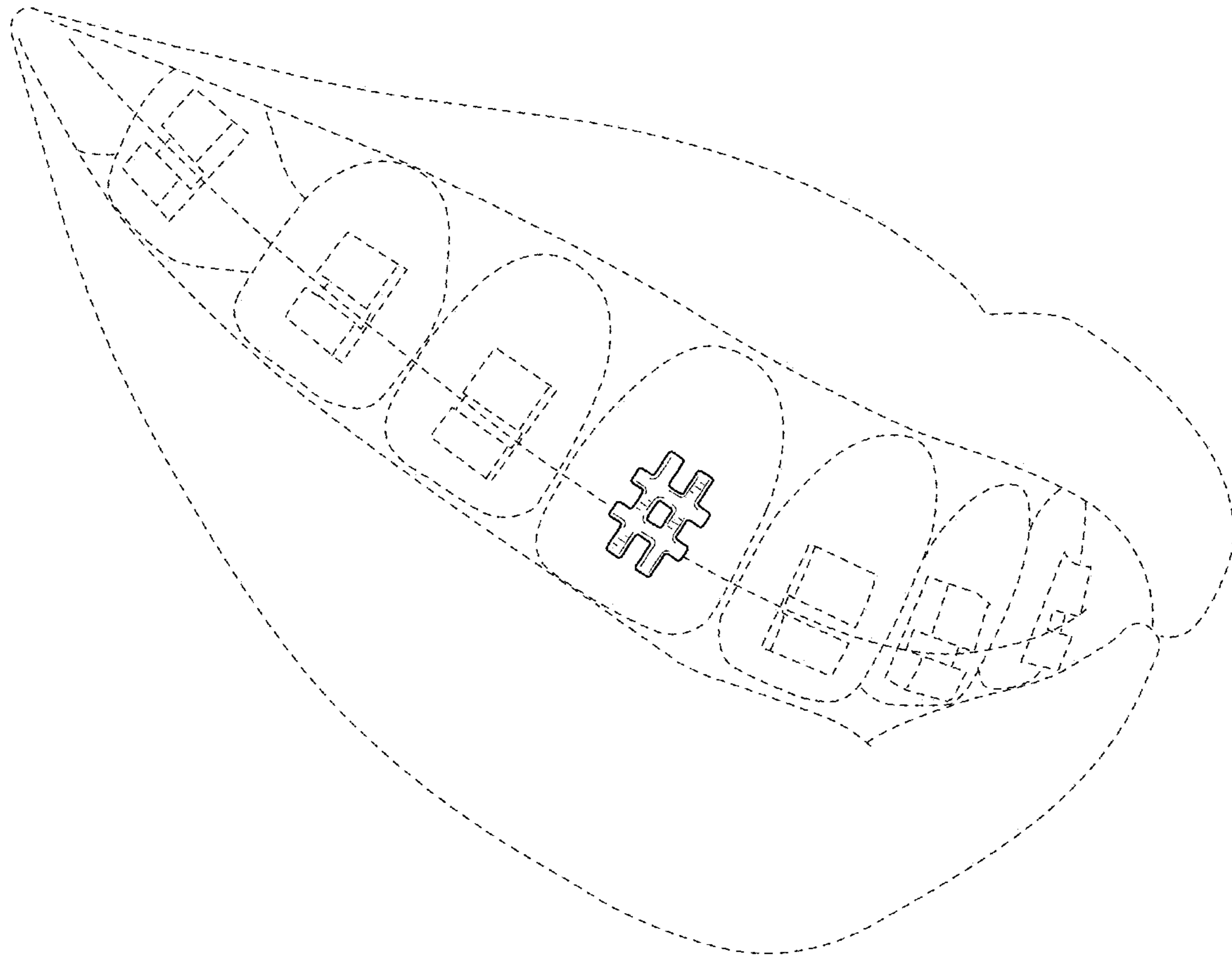


FIG. 16