



US00D828419S

(12) **United States Design Patent** (10) **Patent No.:** **US D828,419 S**  
**de Lore** (45) **Date of Patent:** **\*\* Sep. 11, 2018**

(54) **IDLER ROLLER**  
(71) Applicant: **Joy MM Delaware, Inc.**, Wilmington, DE (US)  
(72) Inventor: **Andrew P. de Lore**, Yattalunga (AU)  
(73) Assignee: **Joy Global Underground Mining LLC**, Warrendale, PA (US)  
(\*\*) Term: **15 Years**  
(21) Appl. No.: **29/555,599**  
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(51) **LOC (11) Cl.** ..... **15-09**  
(52) **U.S. Cl.**  
USPC ..... **D15/143**  
(58) **Field of Classification Search**  
USPC ..... D15/143, 199  
(Continued)

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*Primary Examiner* — Patricia A Palasik  
(74) *Attorney, Agent, or Firm* — Michael Best & Friedrich LLP

(57) **CLAIM**  
The ornamental design for an idler roller, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of an idler roller showing our new design.

FIG. 2 is a cross-section view of the idler roller shown in FIG. 1.  
FIG. 3 is a side view of the idler roller shown in FIG. 1.  
FIG. 4 is an end view of the idler roller shown in FIG. 1.  
FIG. 5 is a perspective view of an idler roller showing our new design.  
FIG. 6 is a cross-section view of the idler roller shown in FIG. 5.  
FIG. 7 is a side view of the idler roller shown in FIG. 5.  
FIG. 8 is an end view of the idler roller shown in FIG. 5.  
FIG. 9 is a perspective view of an idler roller showing our new design.  
FIG. 10 is a cross-section view of the idler roller shown in FIG. 9.  
FIG. 11 is a side view of the idler roller shown in FIG. 9.  
FIG. 12 is an end view of the idler roller shown in FIG. 9.  
FIG. 13 is a perspective view of an idler roller showing our new design.  
FIG. 14 is a cross-section view of the idler roller shown in FIG. 13.  
FIG. 15 is a side view of the idler roller shown in FIG. 13.  
FIG. 16 is an end view of the idler roller shown in FIG. 13.  
FIG. 17 is a perspective view of an idler roller showing our new design.  
FIG. 18 is a cross-section view of the idler roller shown in FIG. 17.  
FIG. 19 is a side view of the idler roller shown in FIG. 17.  
FIG. 20 is an end view of the idler roller shown in FIG. 17.  
FIG. 21 is a perspective view of an idler roller showing our new design.  
FIG. 22 is a cross-section view of the idler roller shown in FIG. 21.  
FIG. 23 is a side view of the idler roller shown in FIG. 21.  
FIG. 24 is an end view of the idler roller shown in FIG. 21.  
FIG. 25 is a perspective view of an idler roller showing our new design.  
FIG. 26 is a cross-section view of the idler roller shown in FIG. 25.  
FIG. 27 is a side view of the idler roller shown in FIG. 25.  
FIG. 28 is an end view of the idler roller shown in FIG. 25.  
FIG. 29 is a perspective view of an idler roller showing our new design.  
FIG. 30 is a cross-section view of the idler roller shown in FIG. 29.

(Continued)

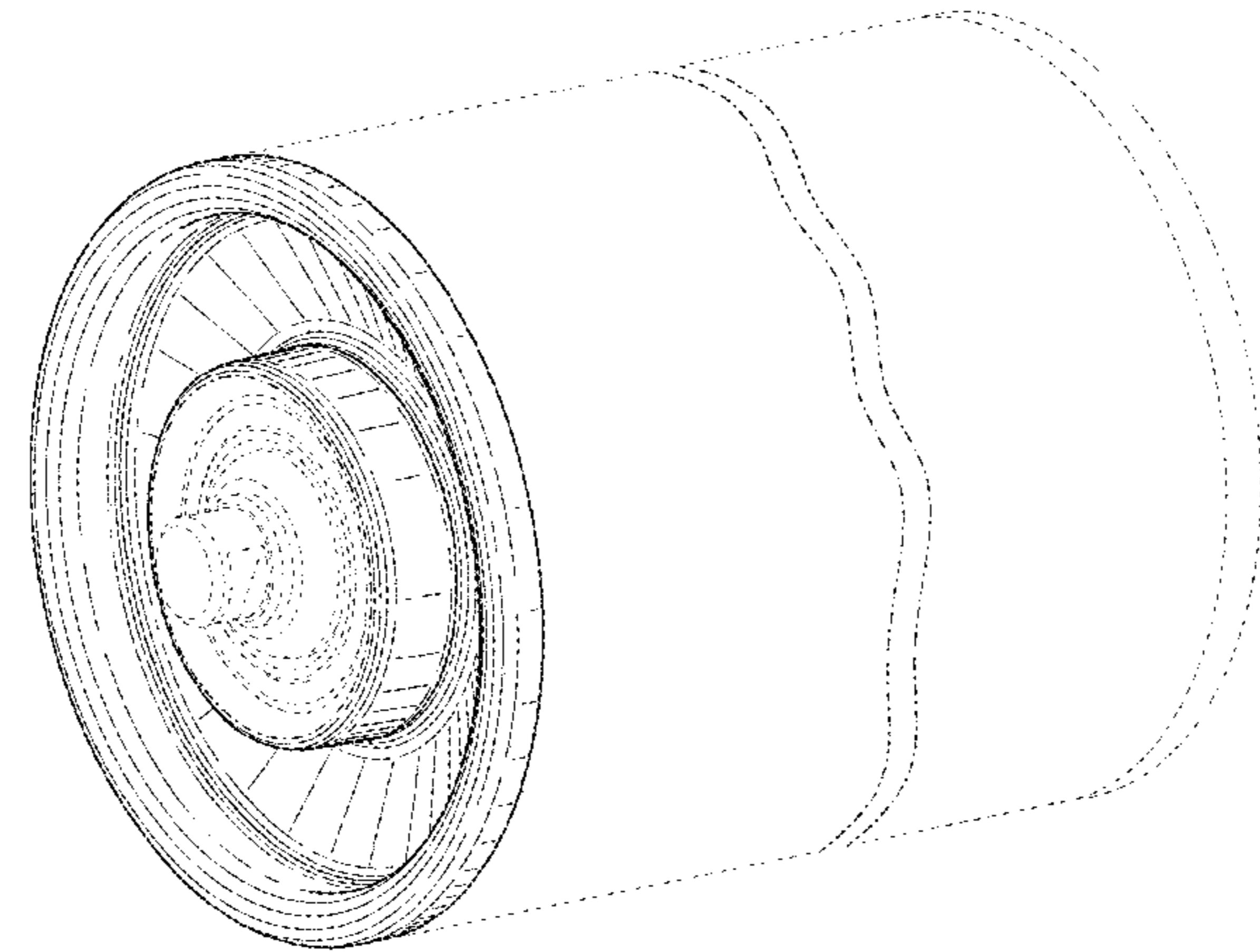


FIG. 31 is a side view of the idler roller shown in FIG. 29; and, FIG. 32 is an end view of the idler roller shown in FIG. 29. The broken lines in the drawings depict unclaimed environmental subject matter.

**1 Claim, 32 Drawing Sheets**

(58) **Field of Classification Search**

CPC ..... F16C 19/30; F16C 19/305; F16C 33/37;  
F16C 33/51; F16C 33/49; F16C 33/50;  
F16C 33/541; F16C 33/543; F16C  
33/546; F16C 33/565; F16C 33/4676;  
F16C 33/4682; F16C 33/6696

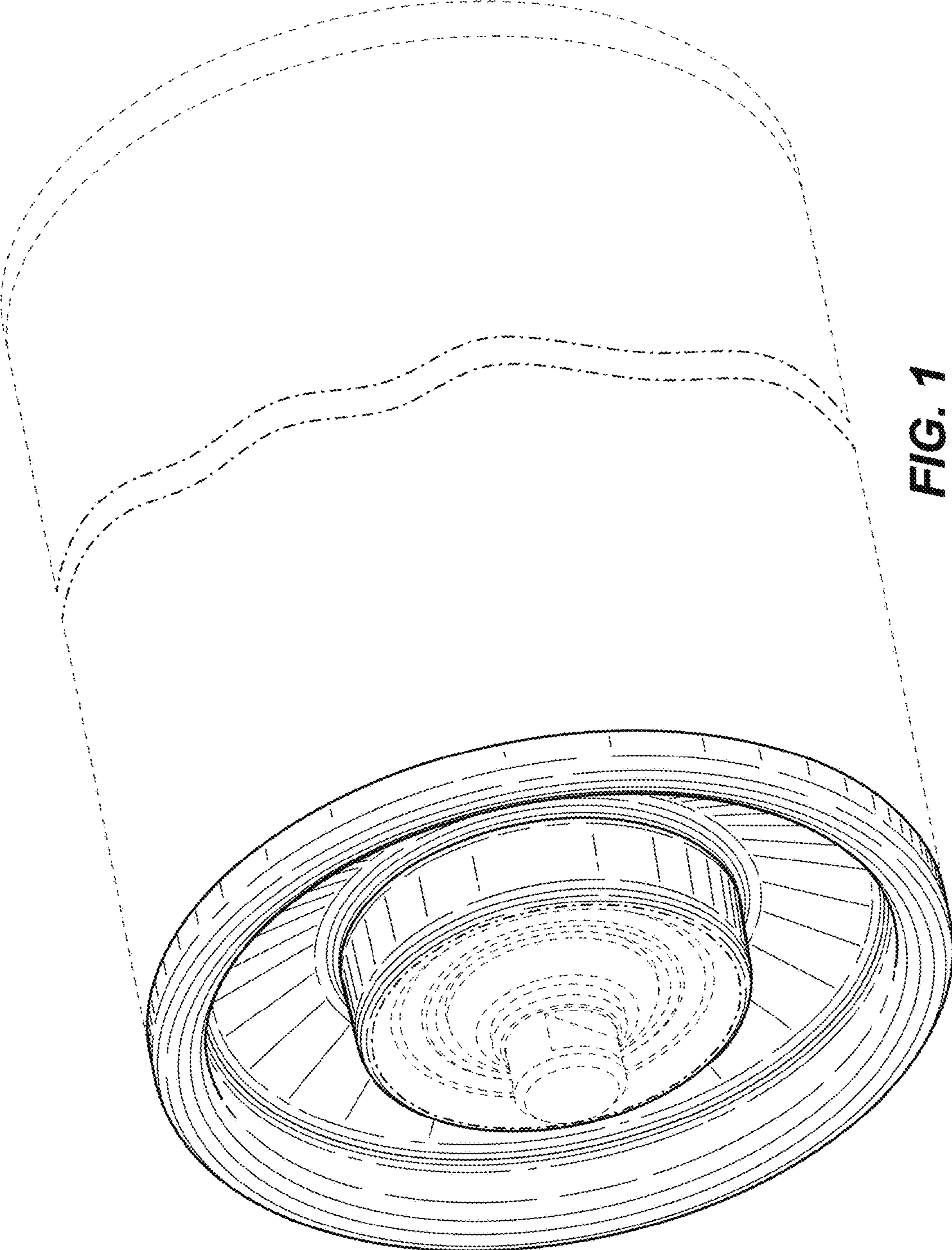
See application file for complete search history.

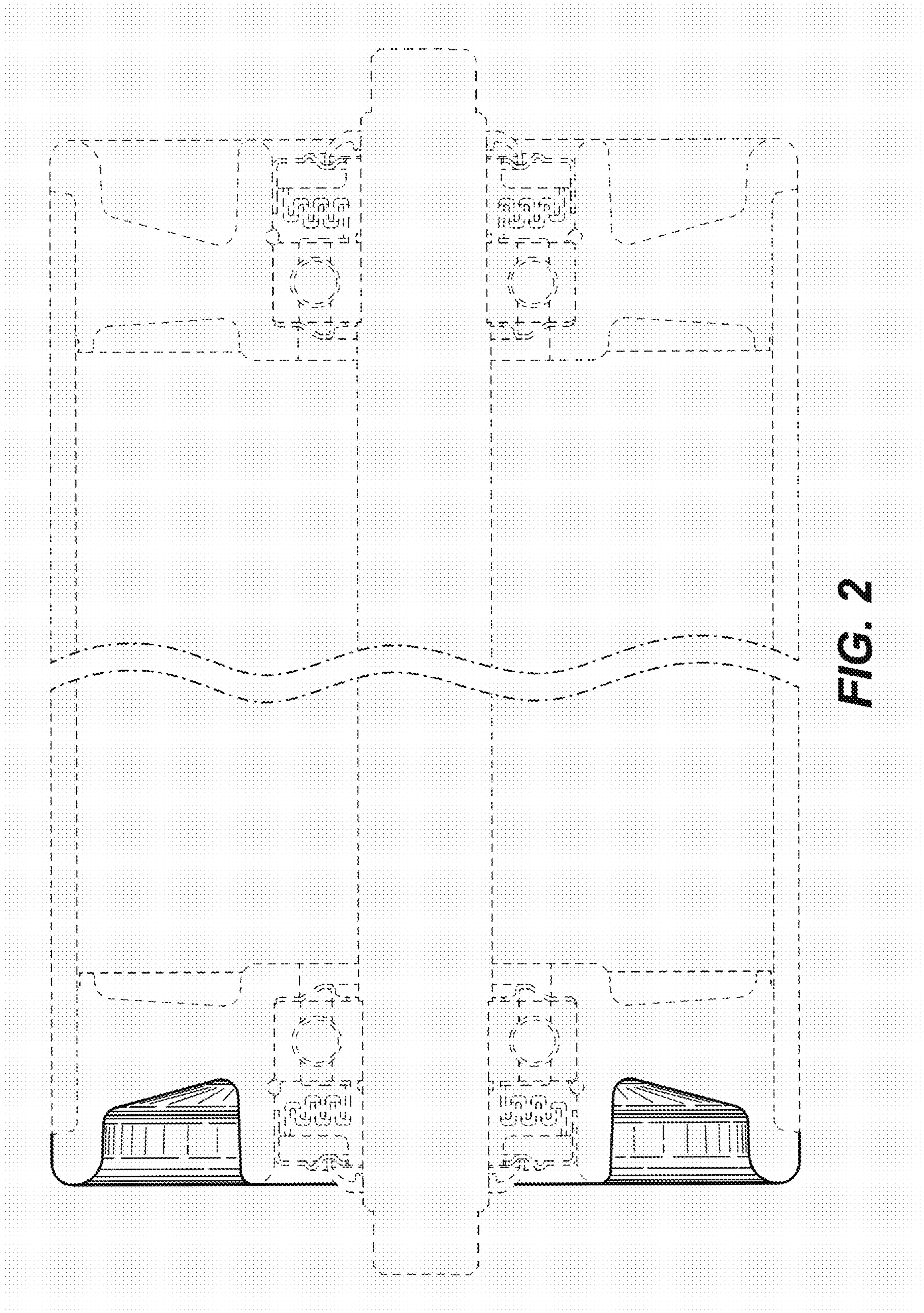
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**FIG. 2**

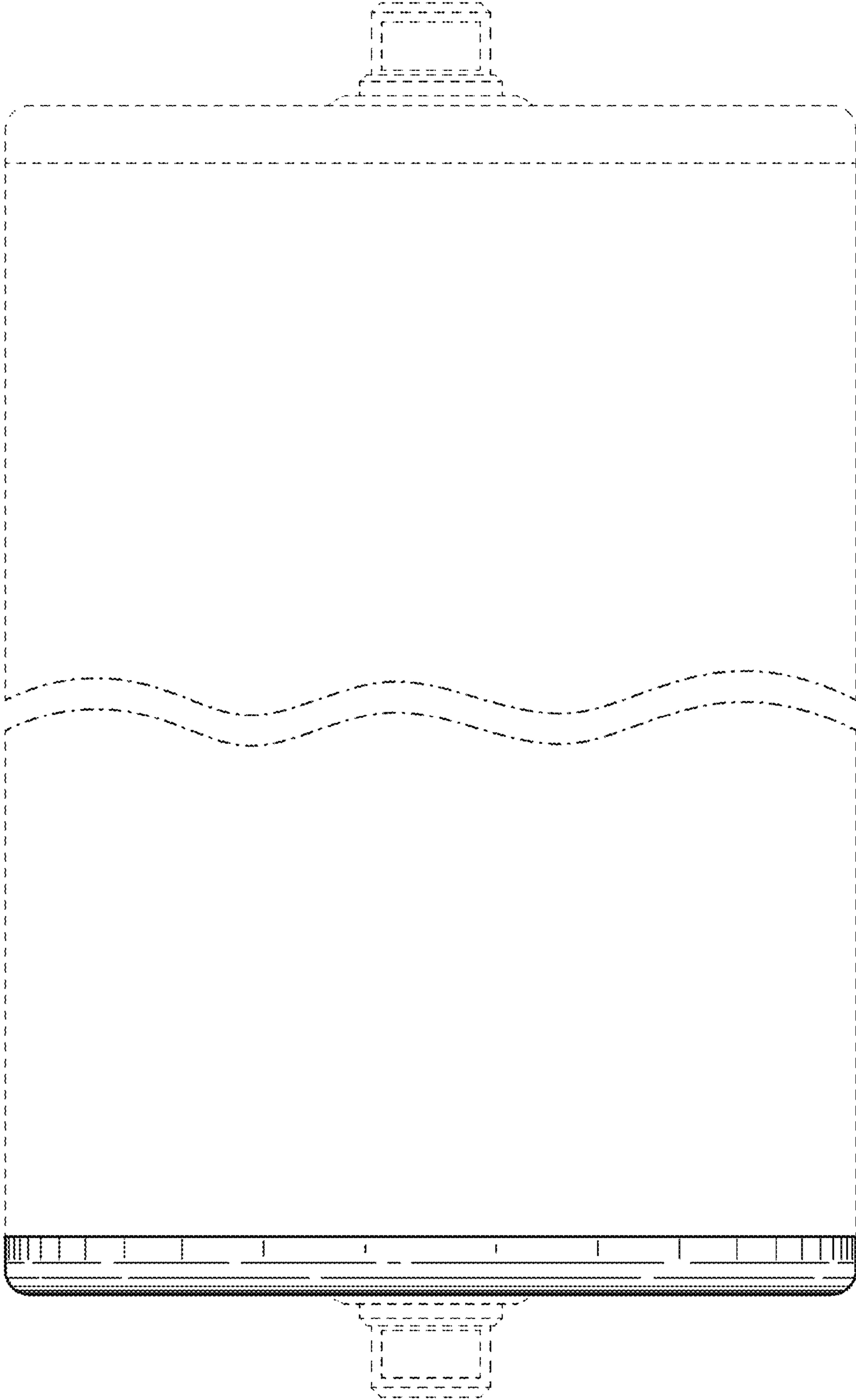
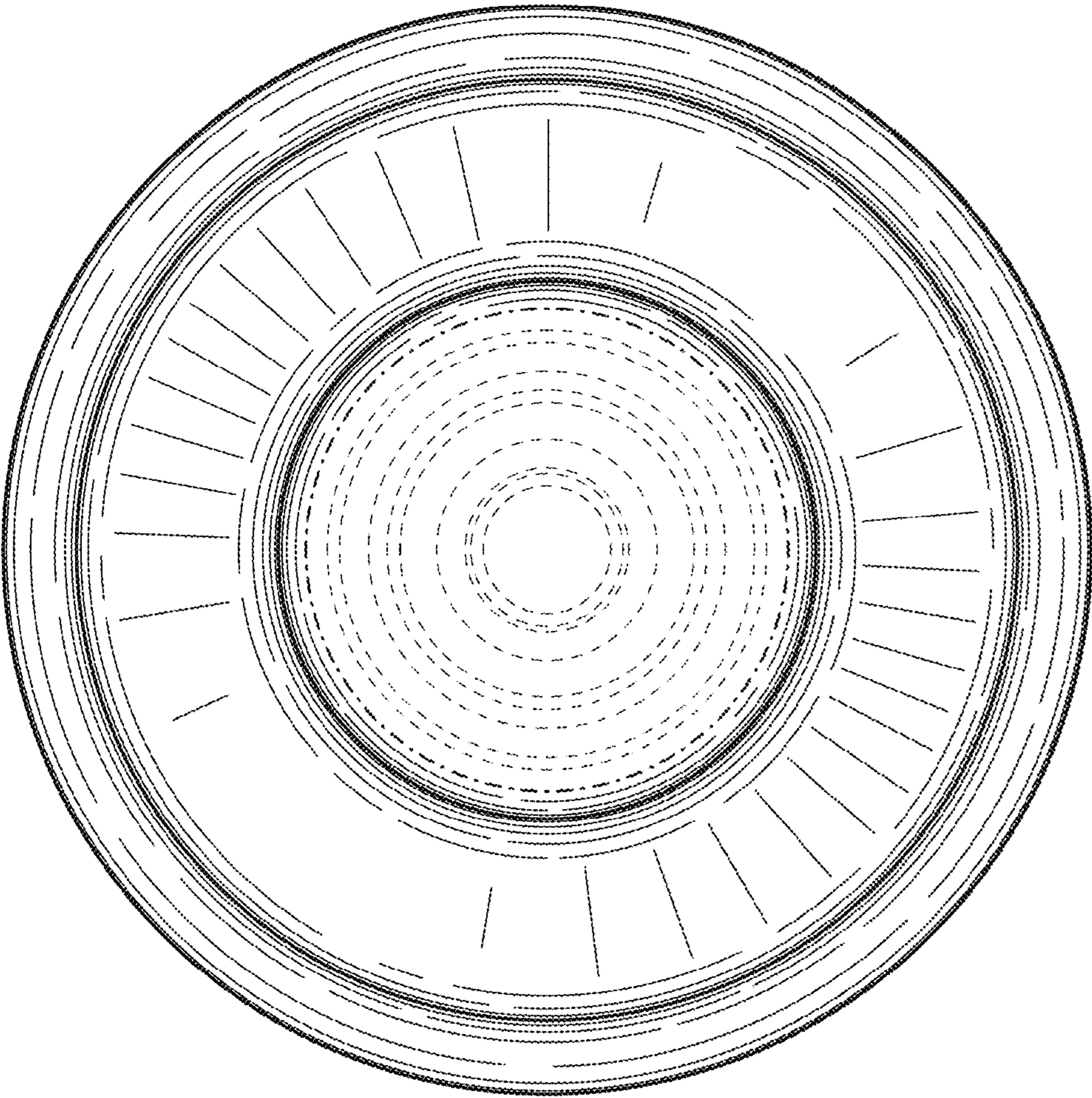


FIG. 3



**FIG. 4**

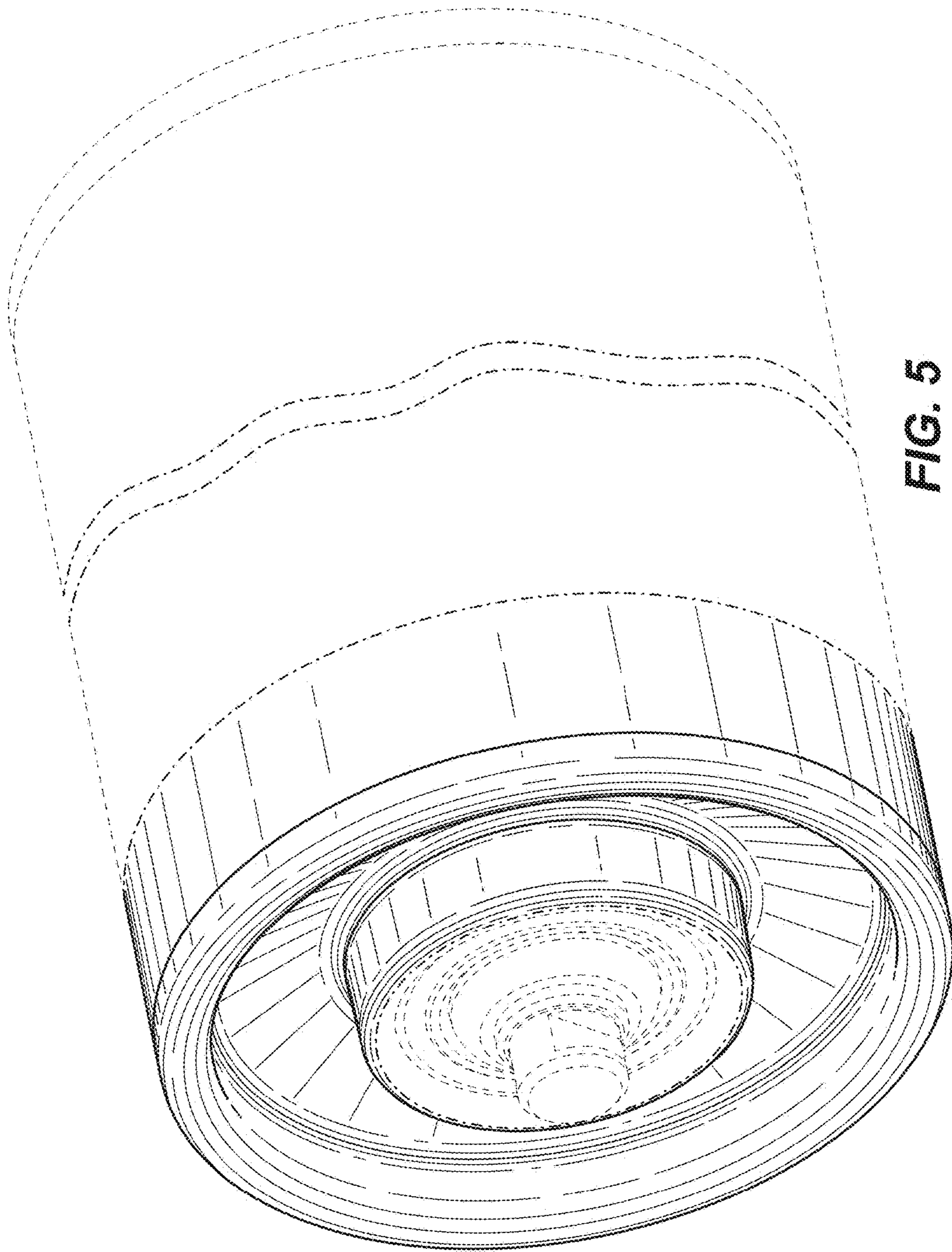


FIG. 5

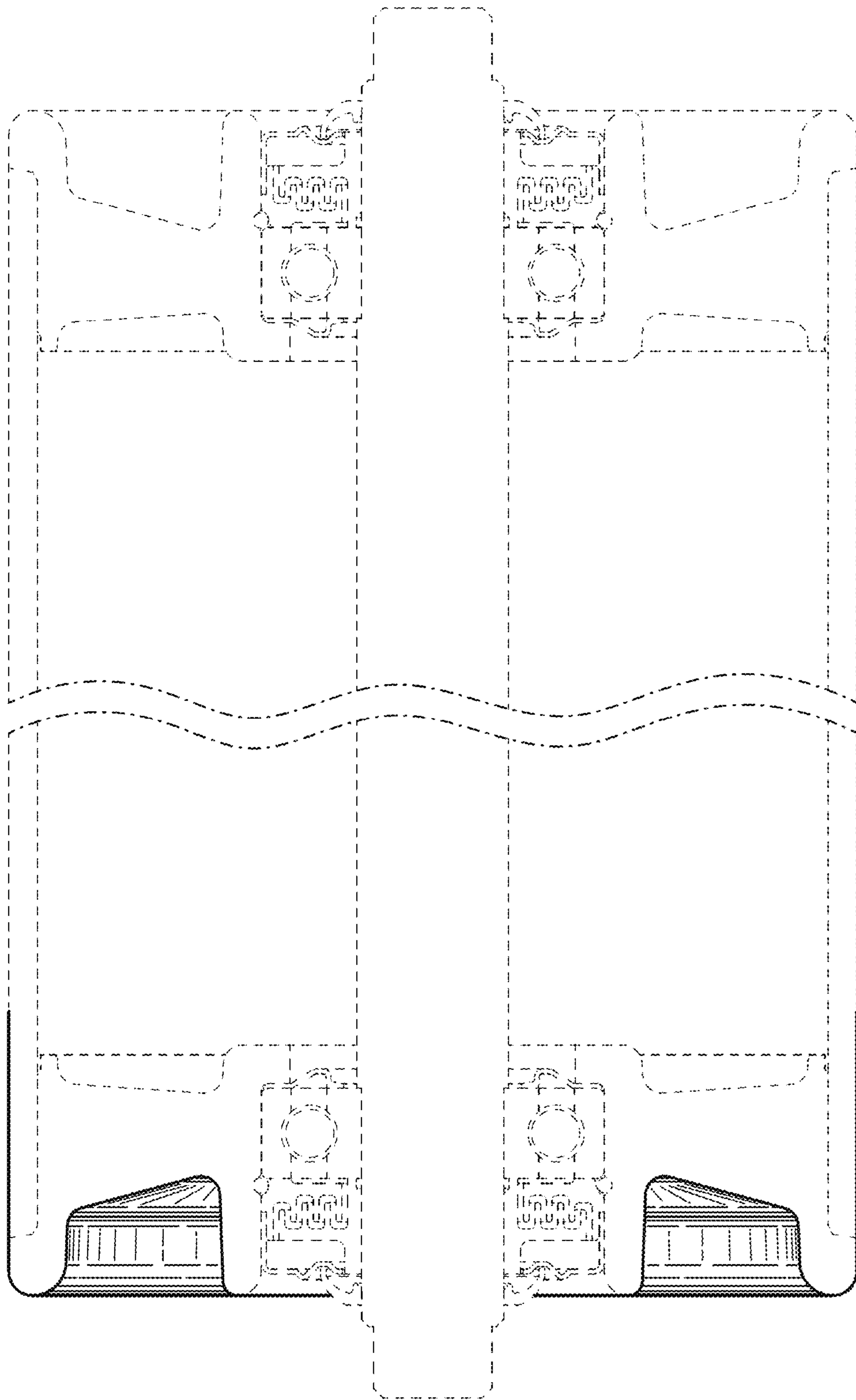


FIG. 6



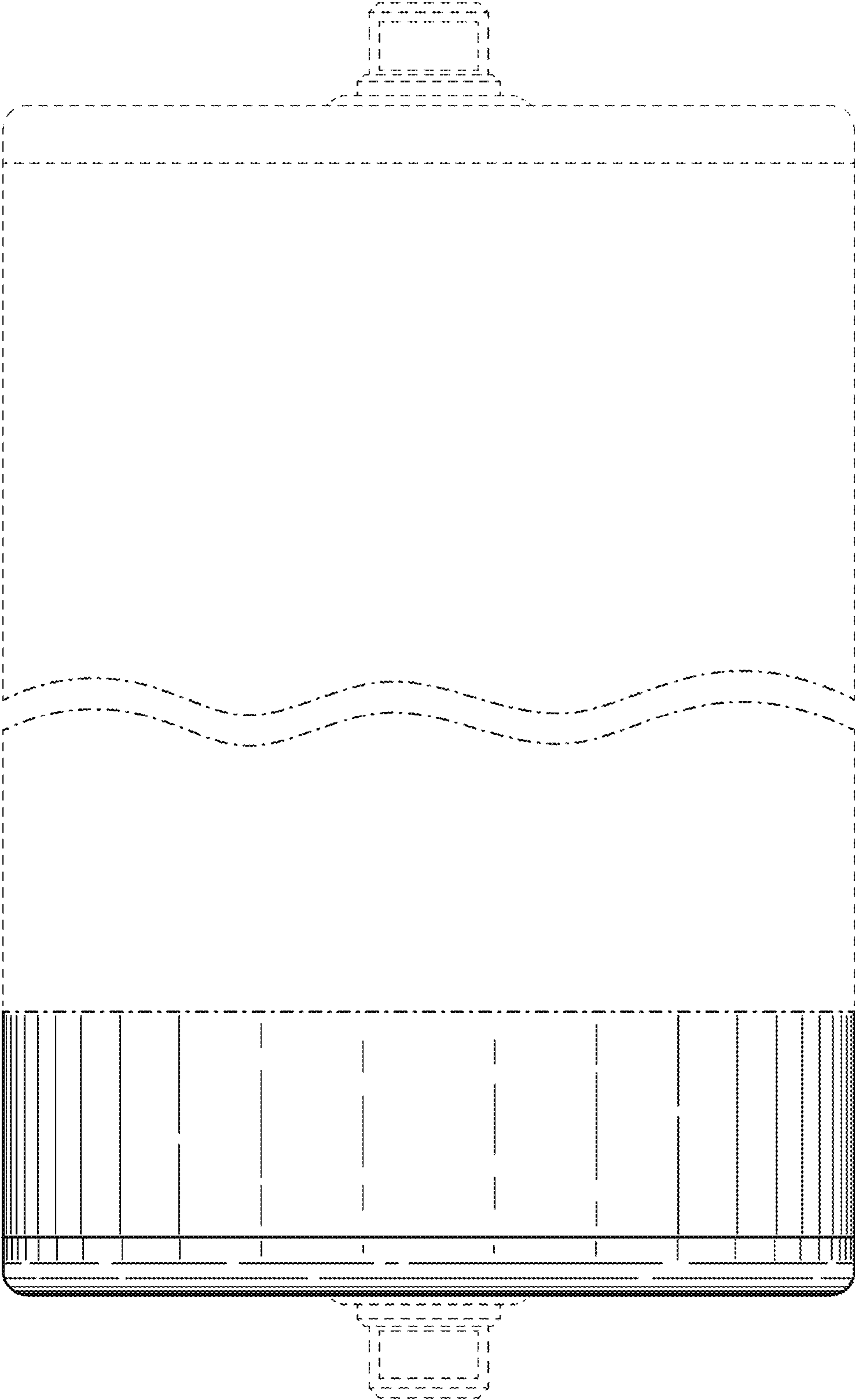
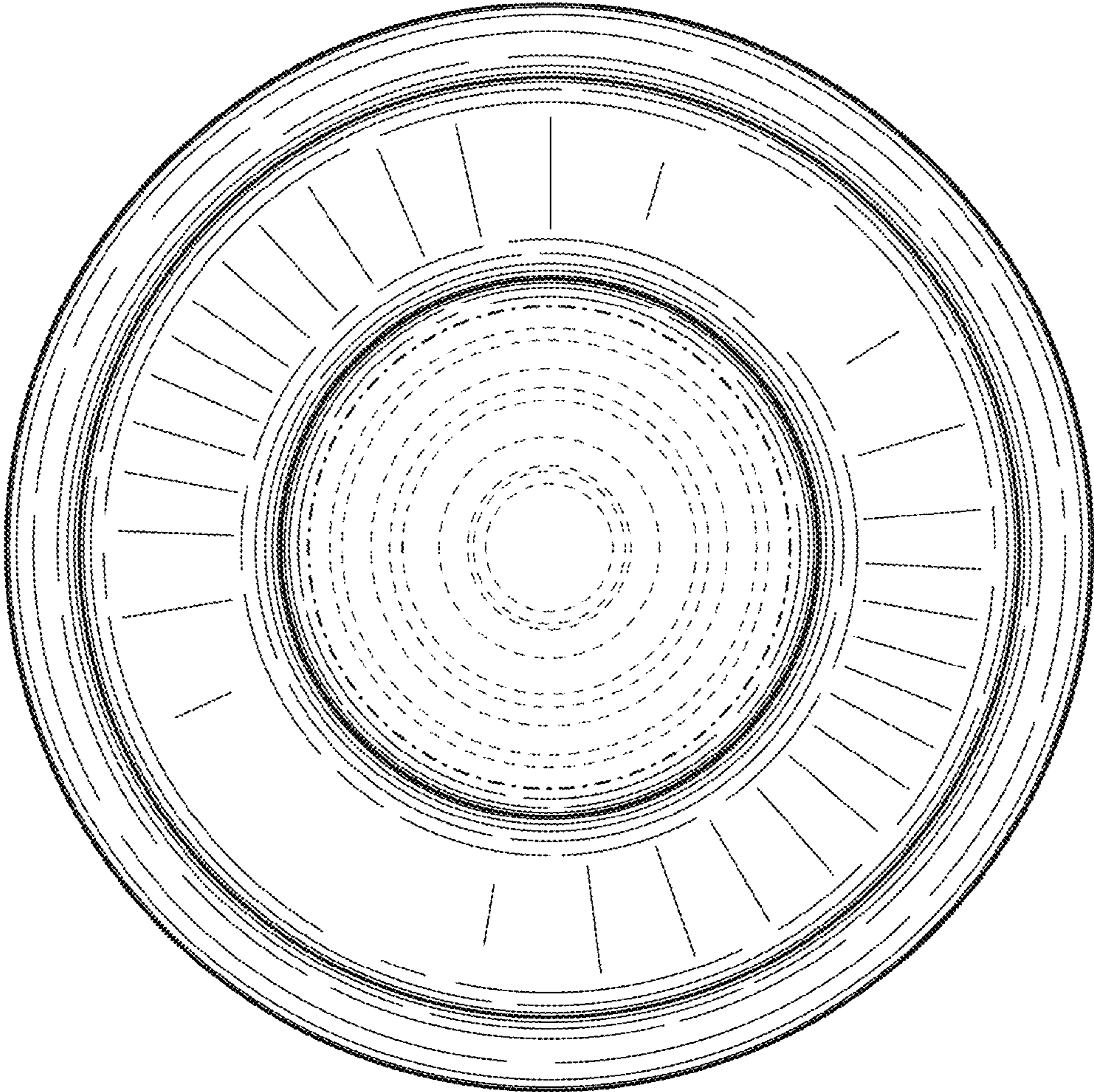


FIG. 7



**FIG. 8**

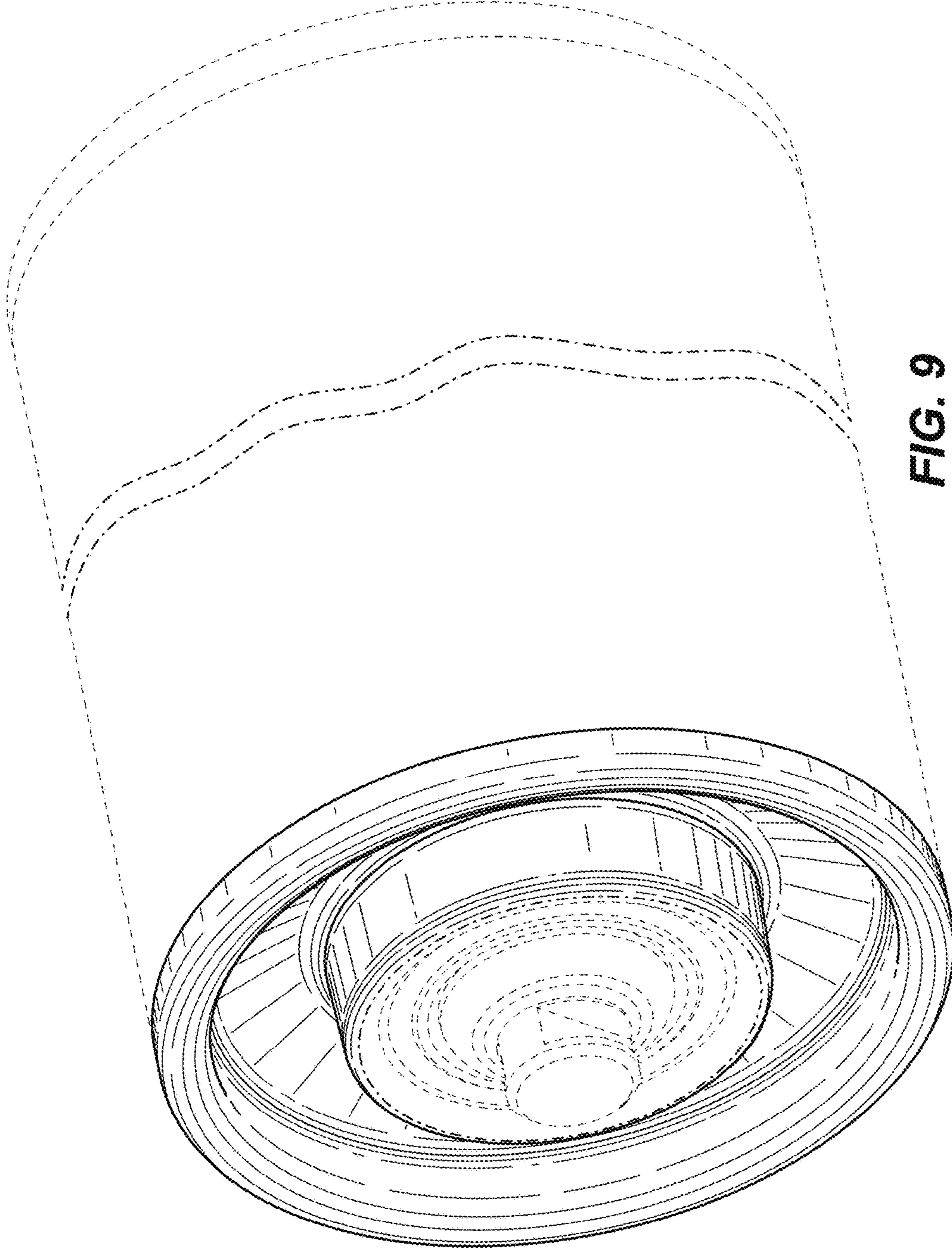
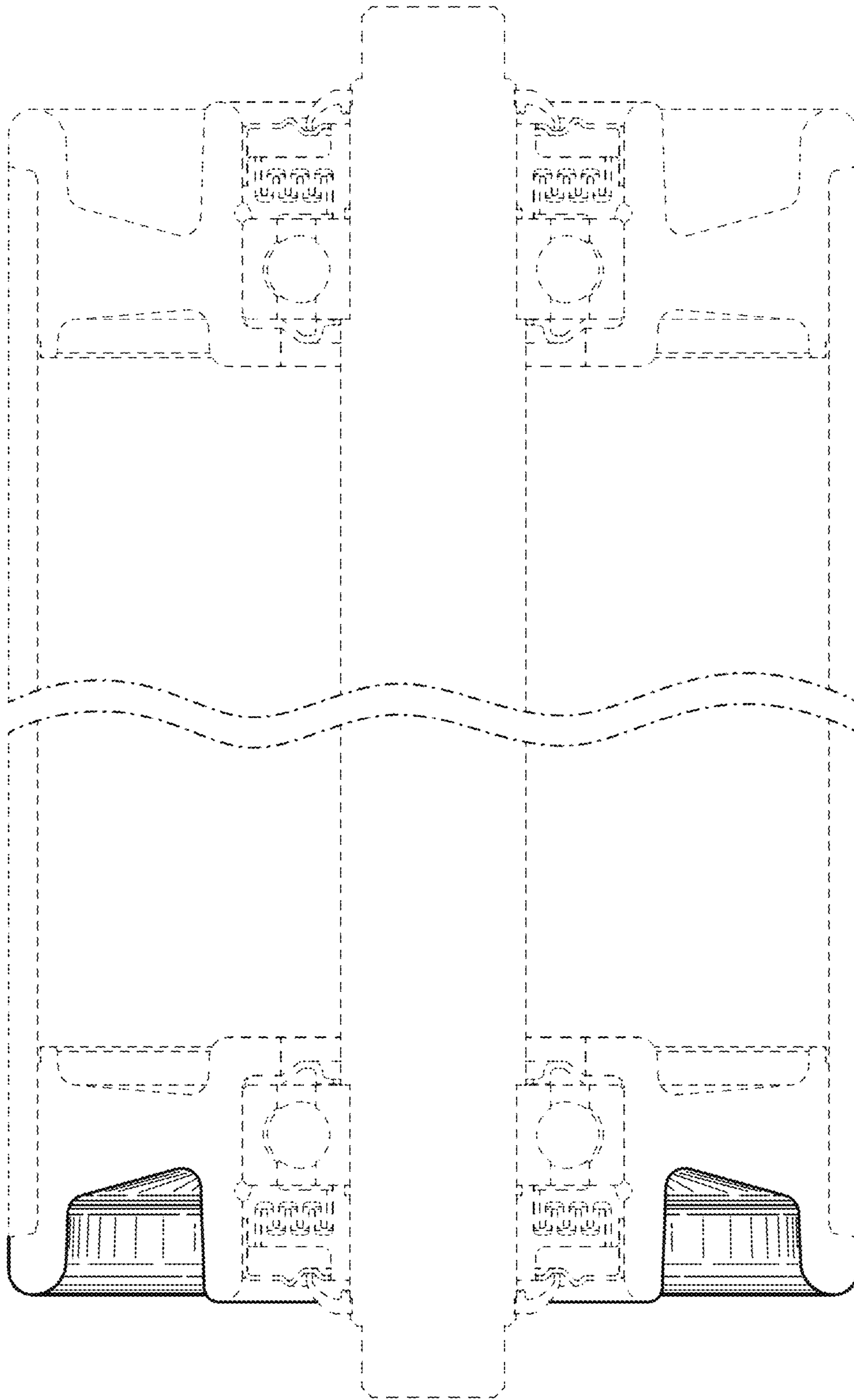
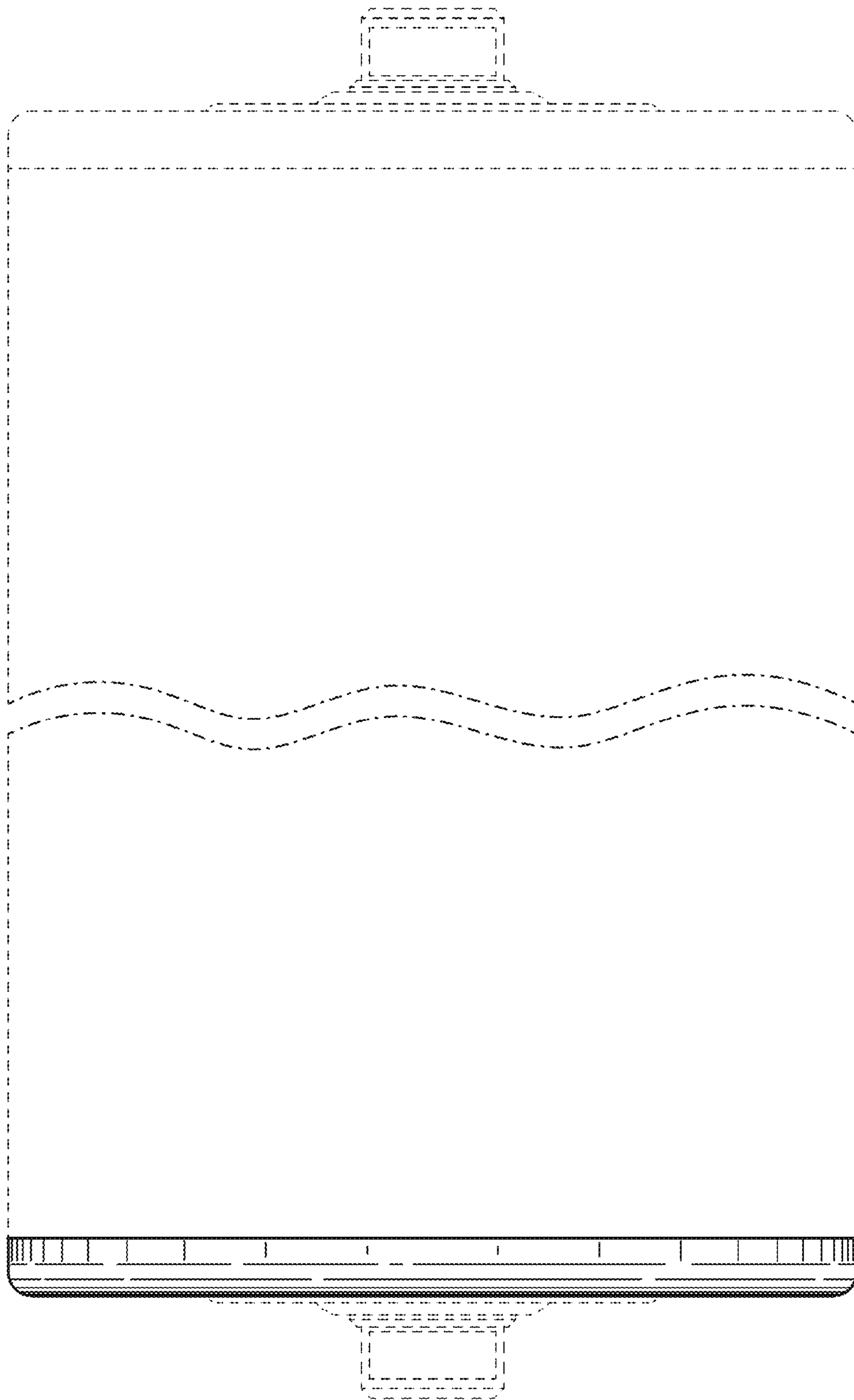


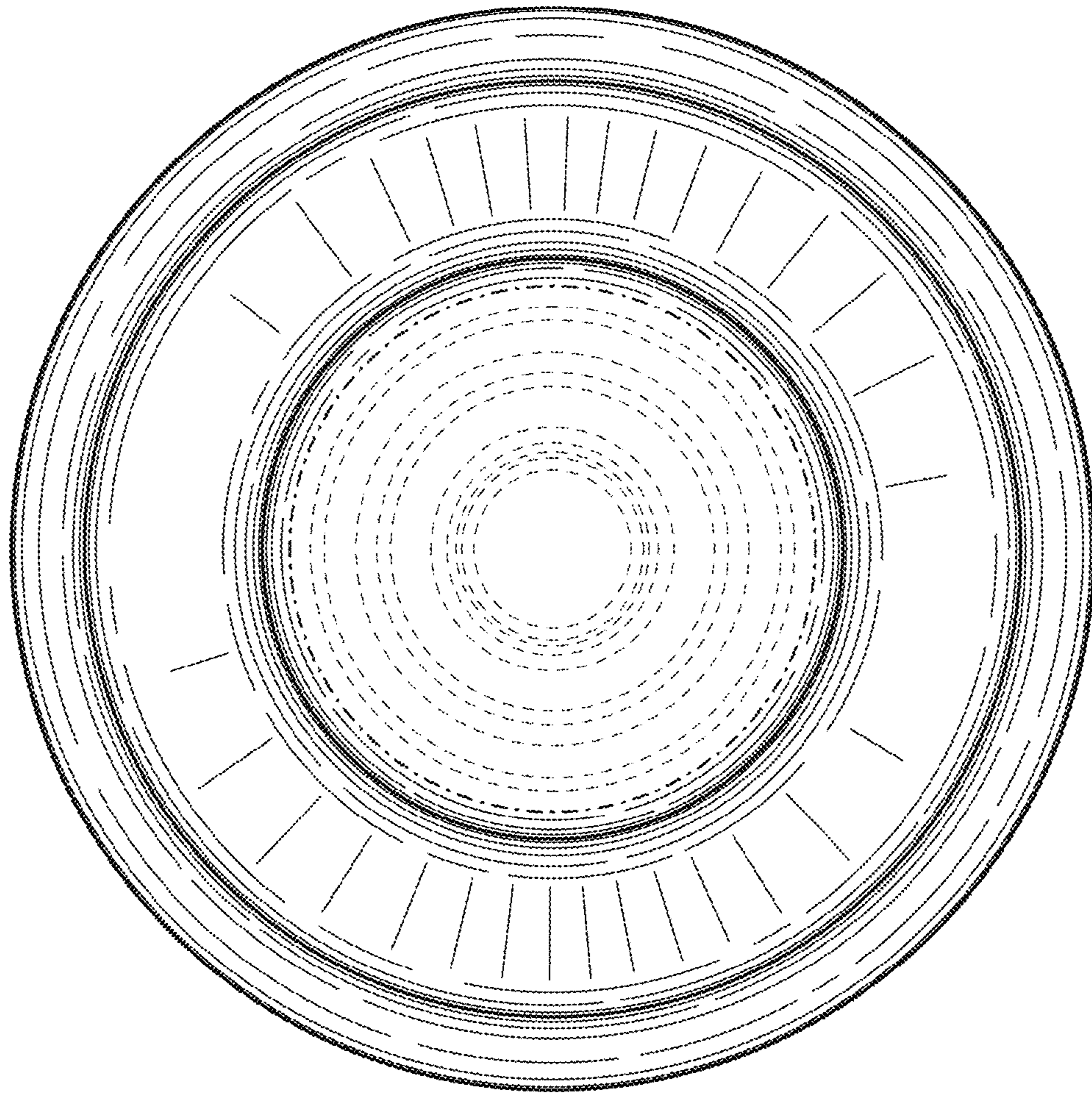
FIG. 9



**FIG. 10**



**FIG. 11**



**FIG. 12**

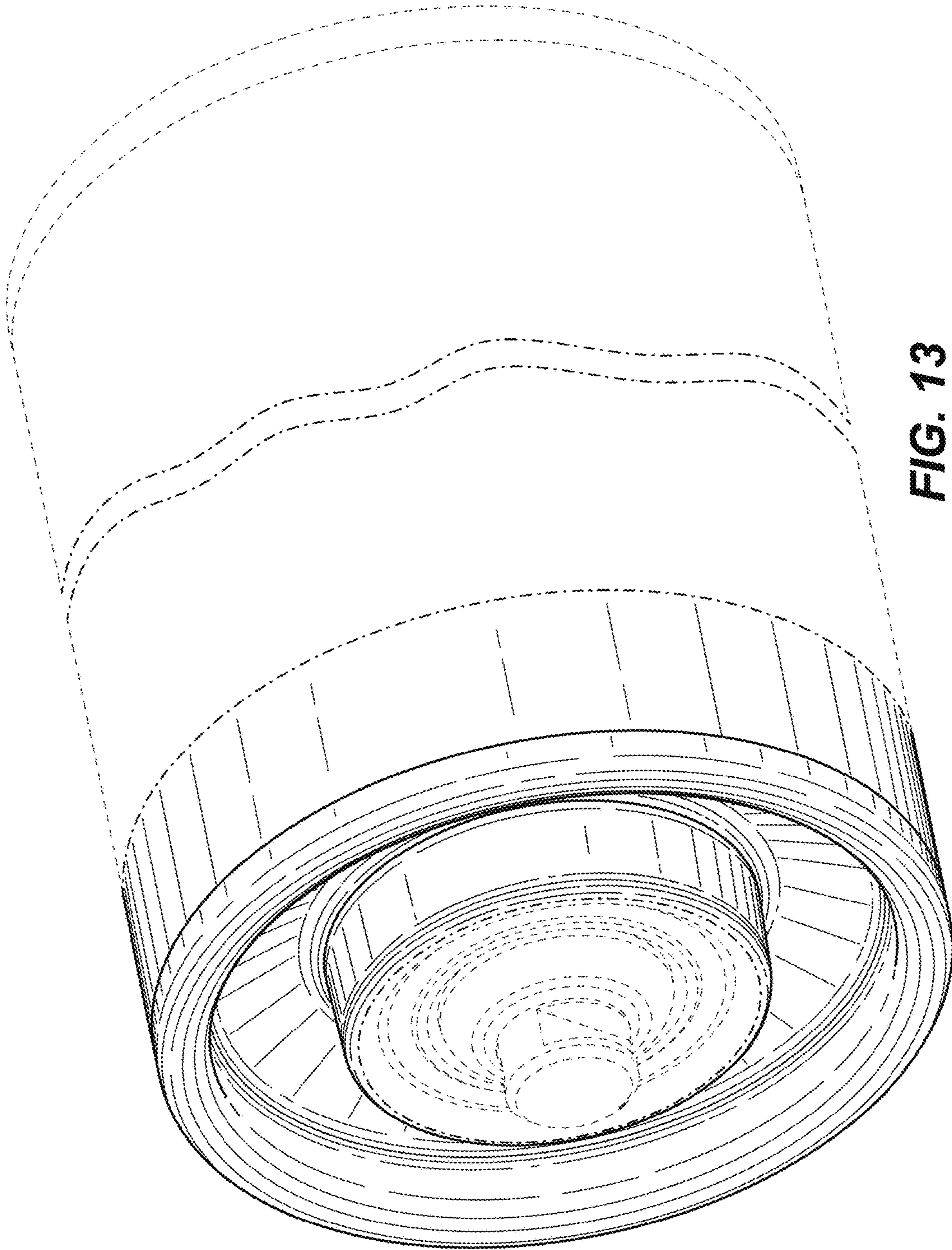
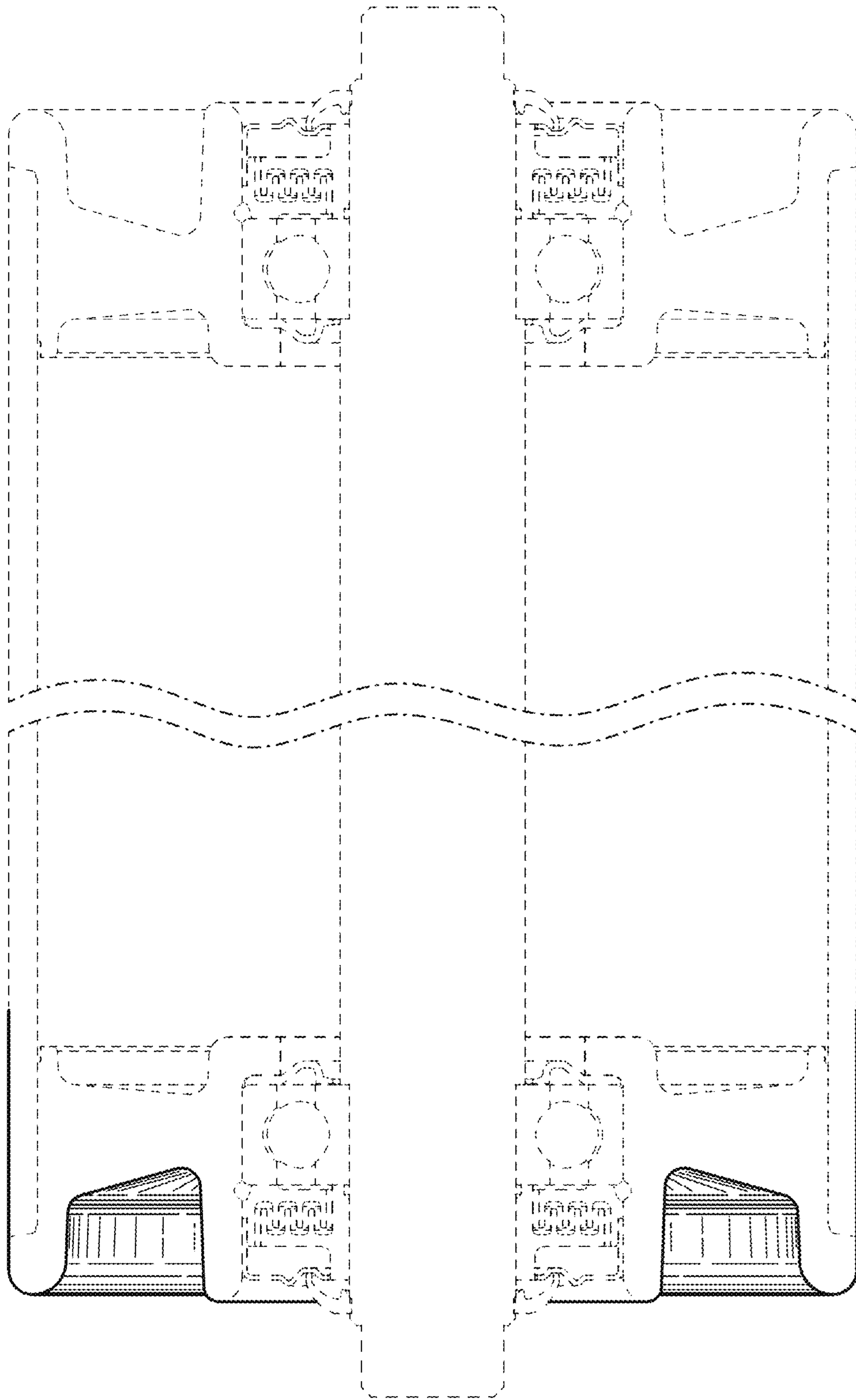


FIG. 13



**FIG. 14**



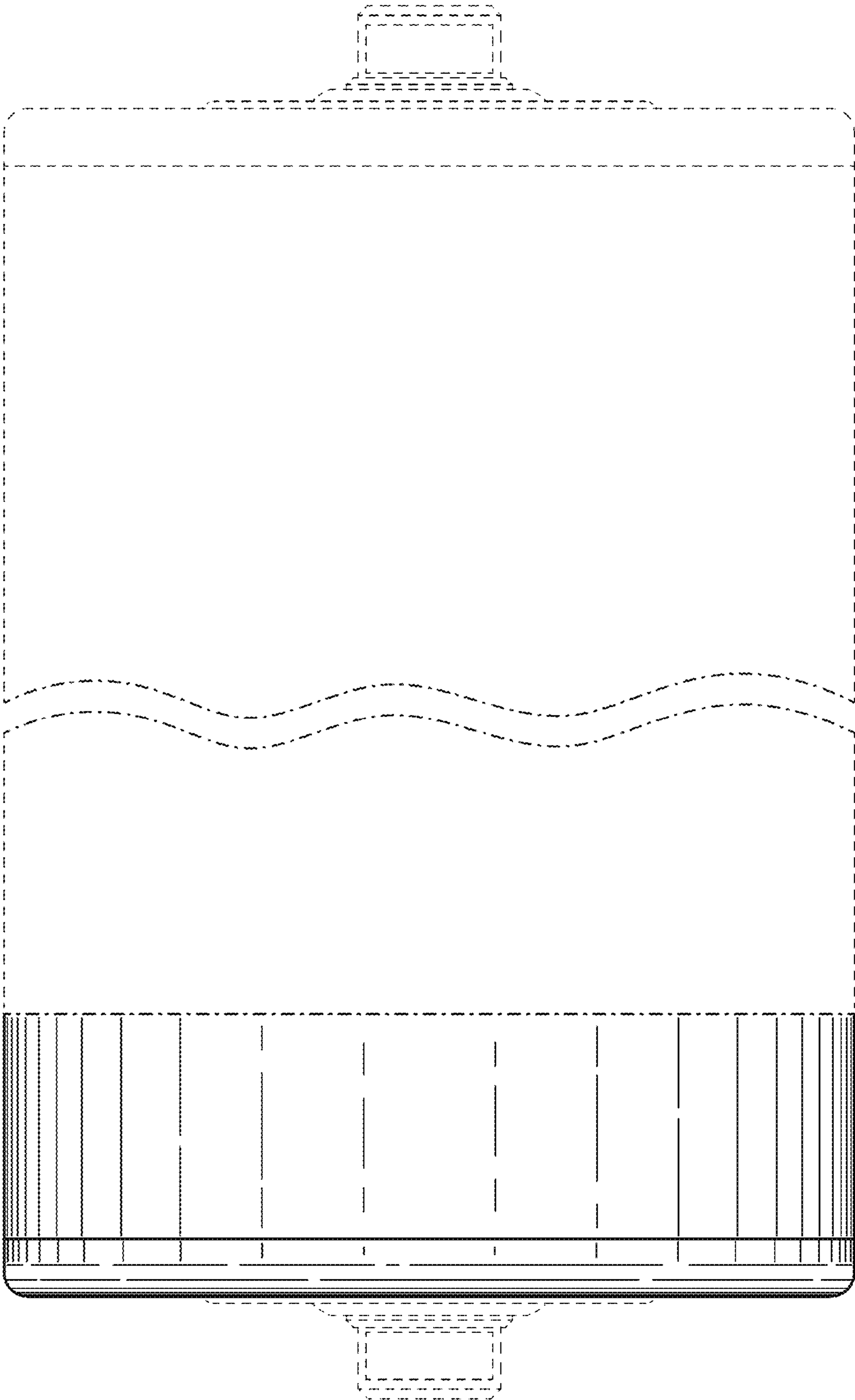
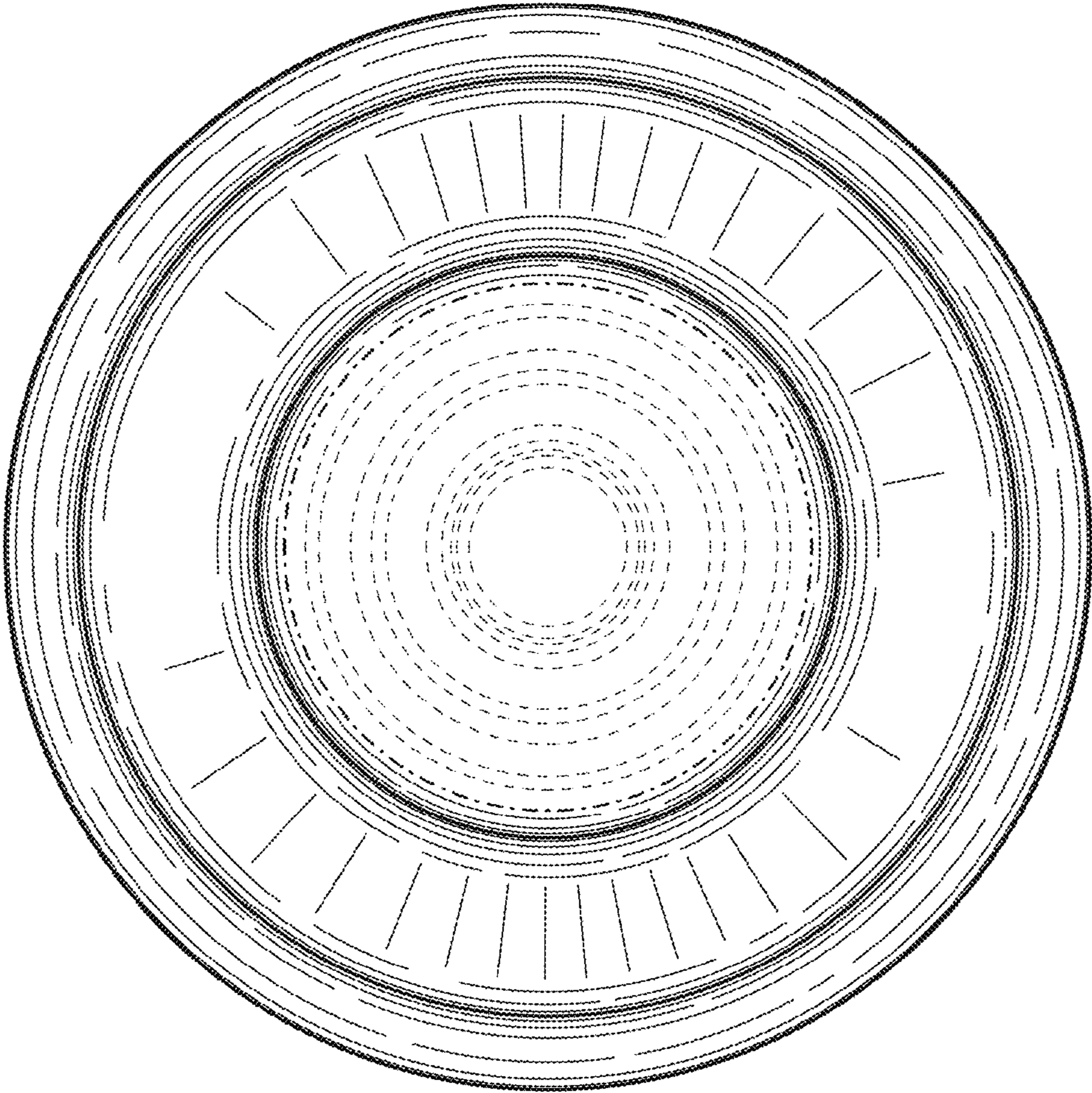


FIG. 15



**FIG. 16**

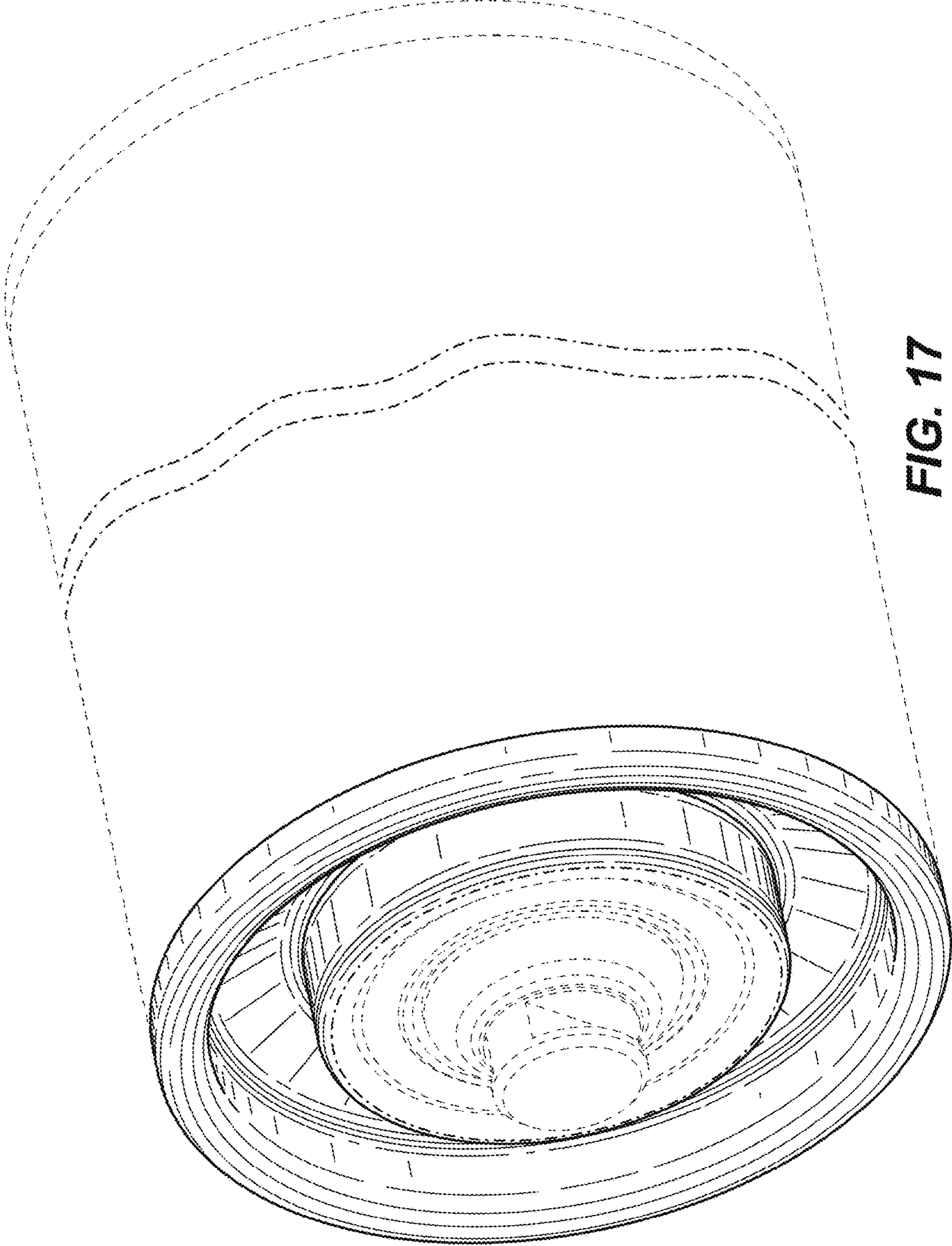
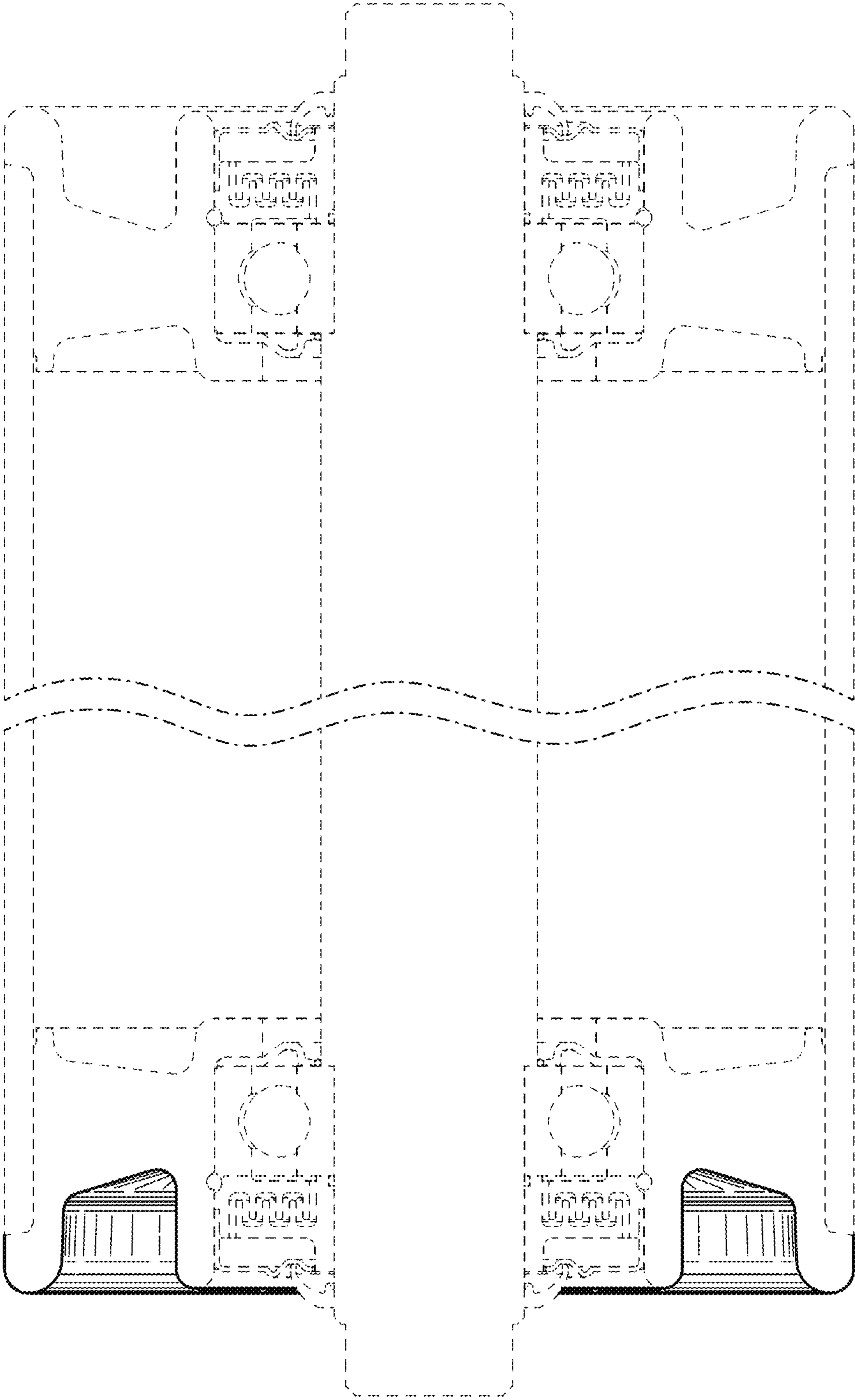
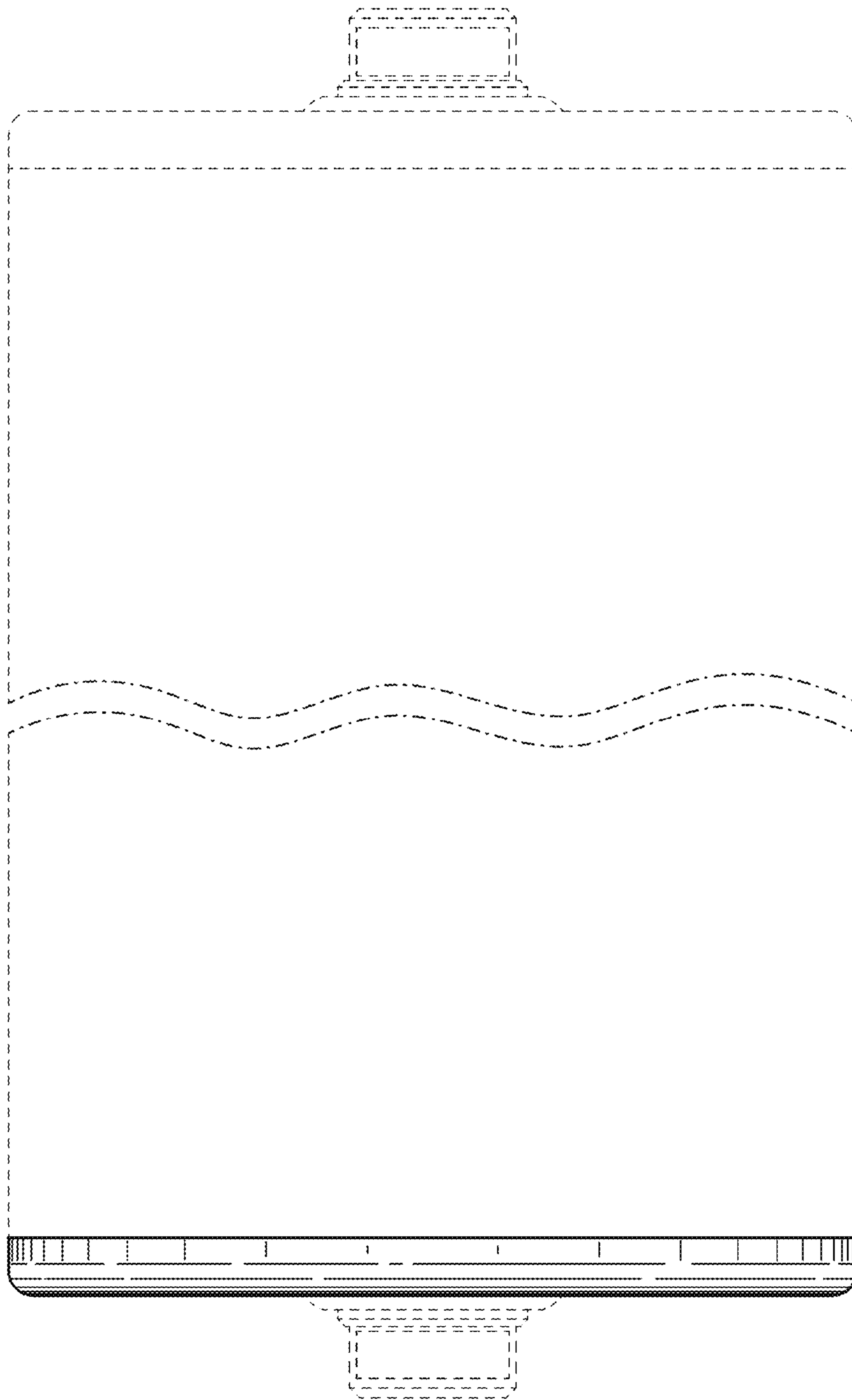


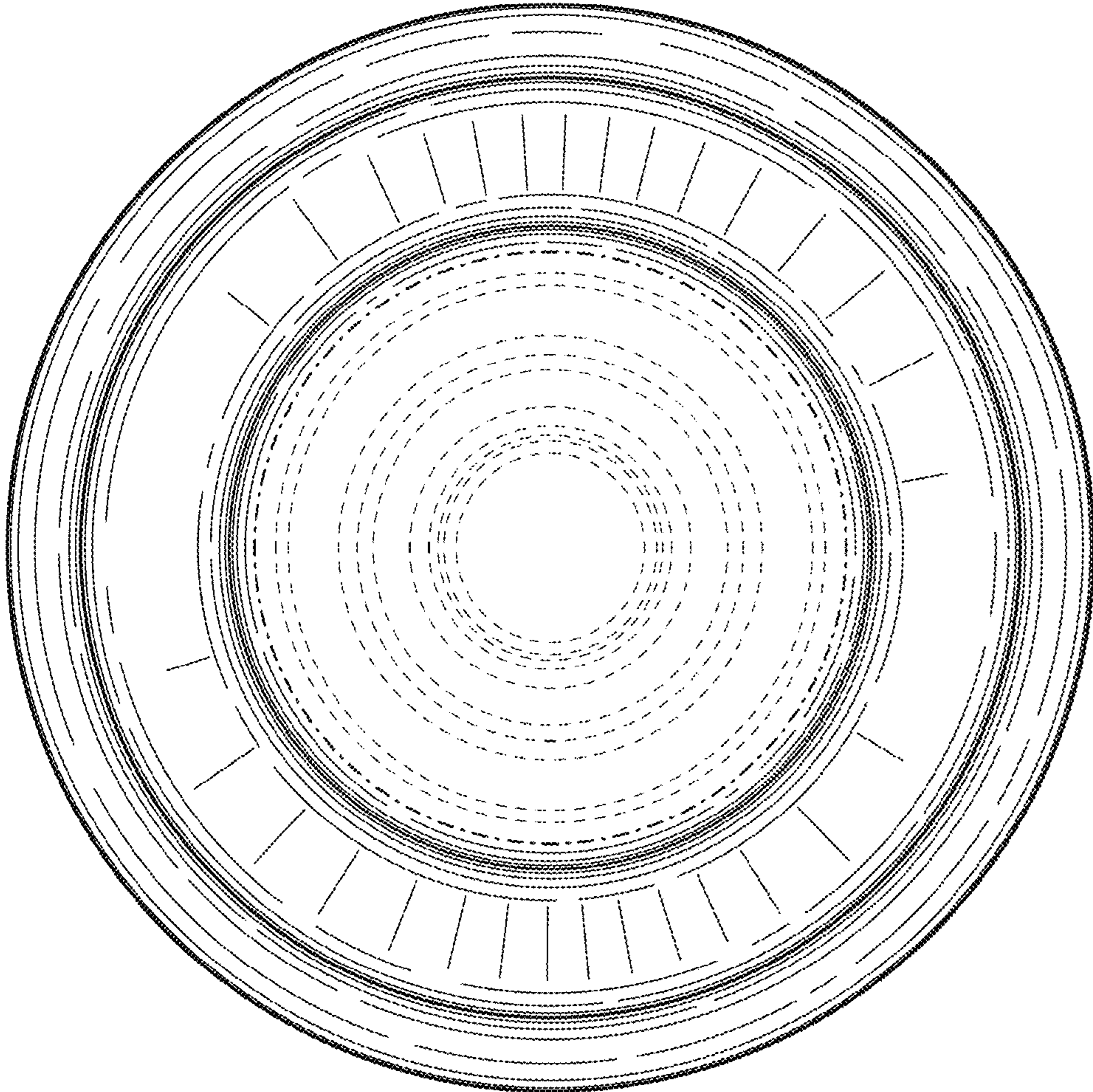
FIG. 17



**FIG. 18**



**FIG. 19**



**FIG. 20**

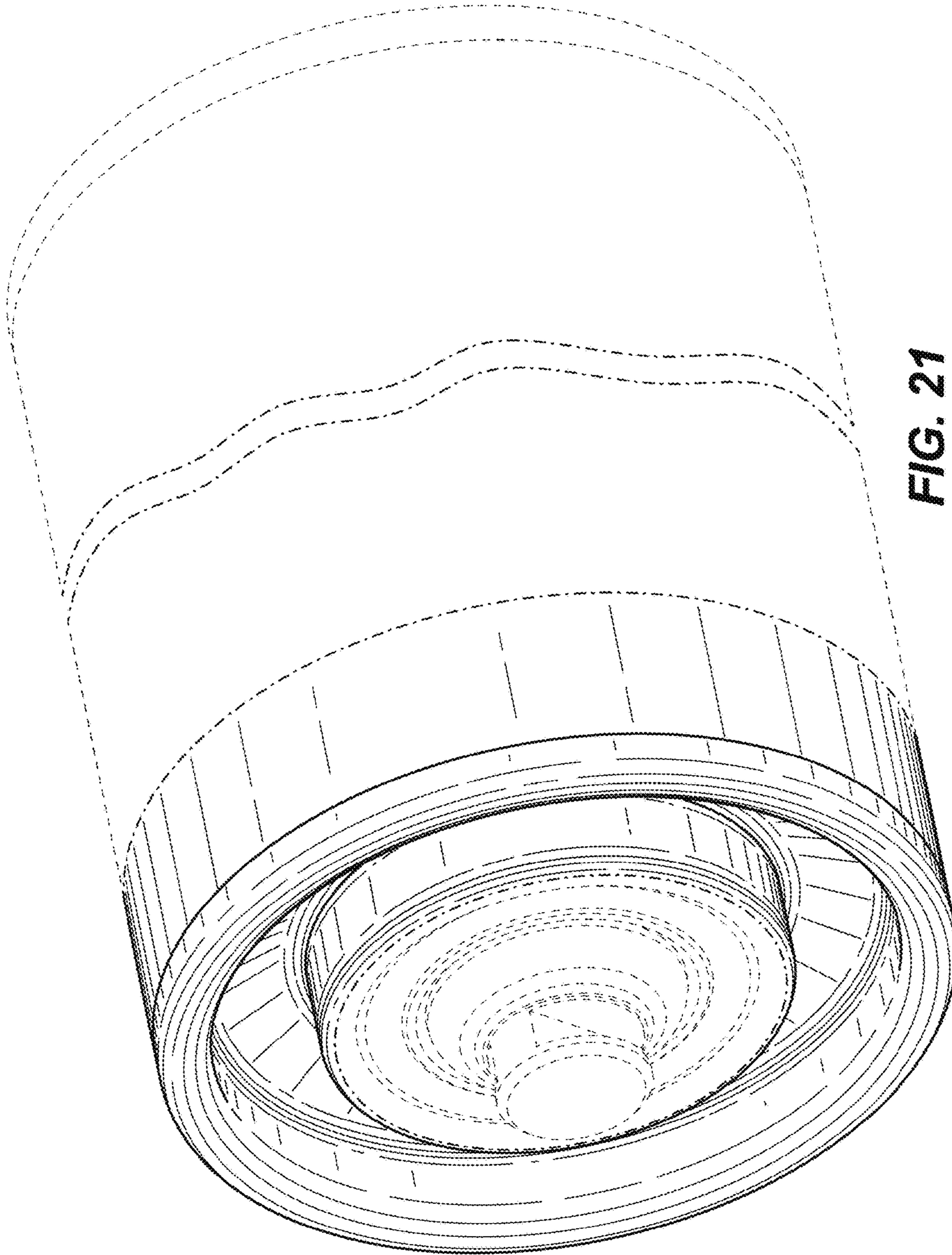


FIG. 21

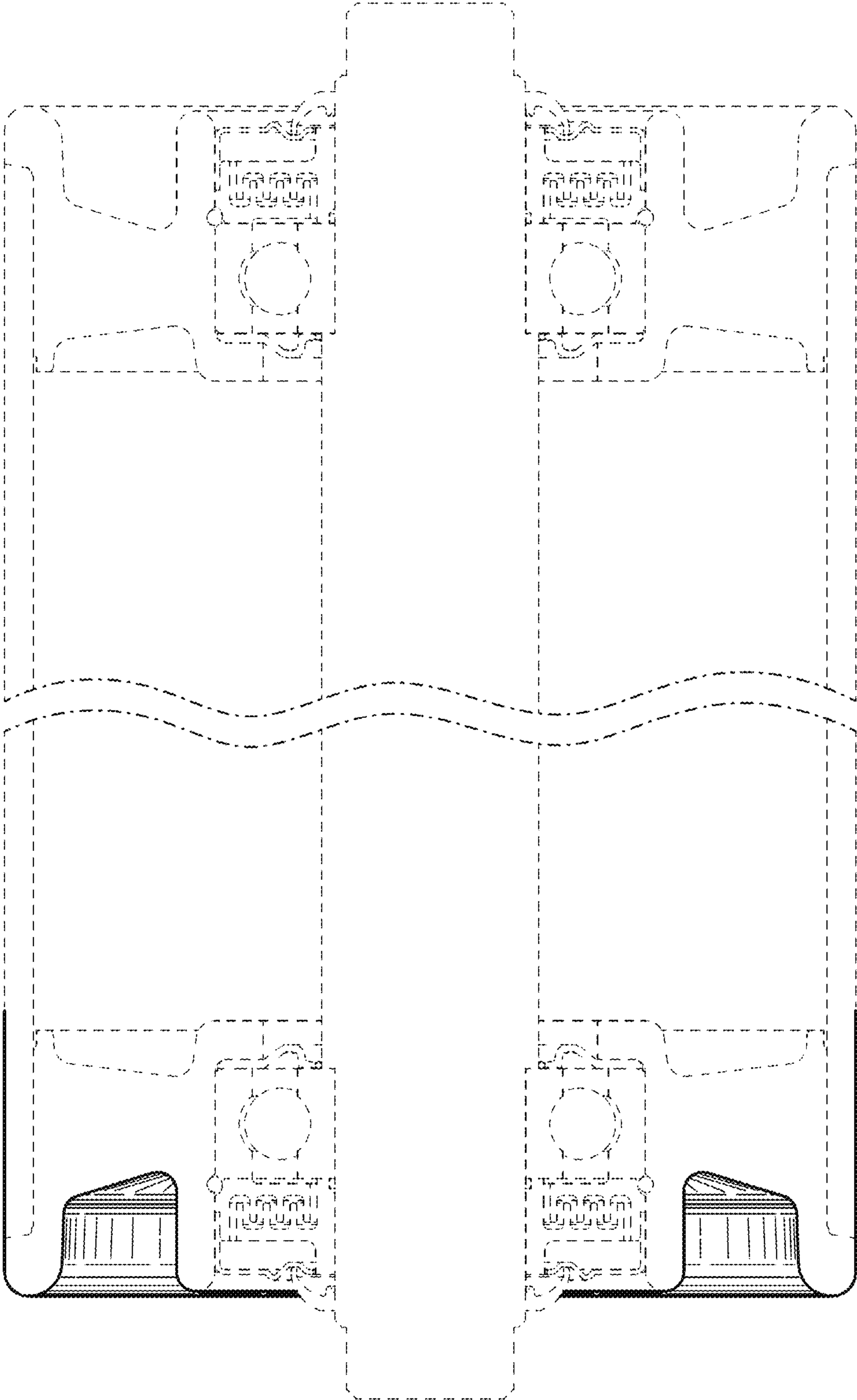
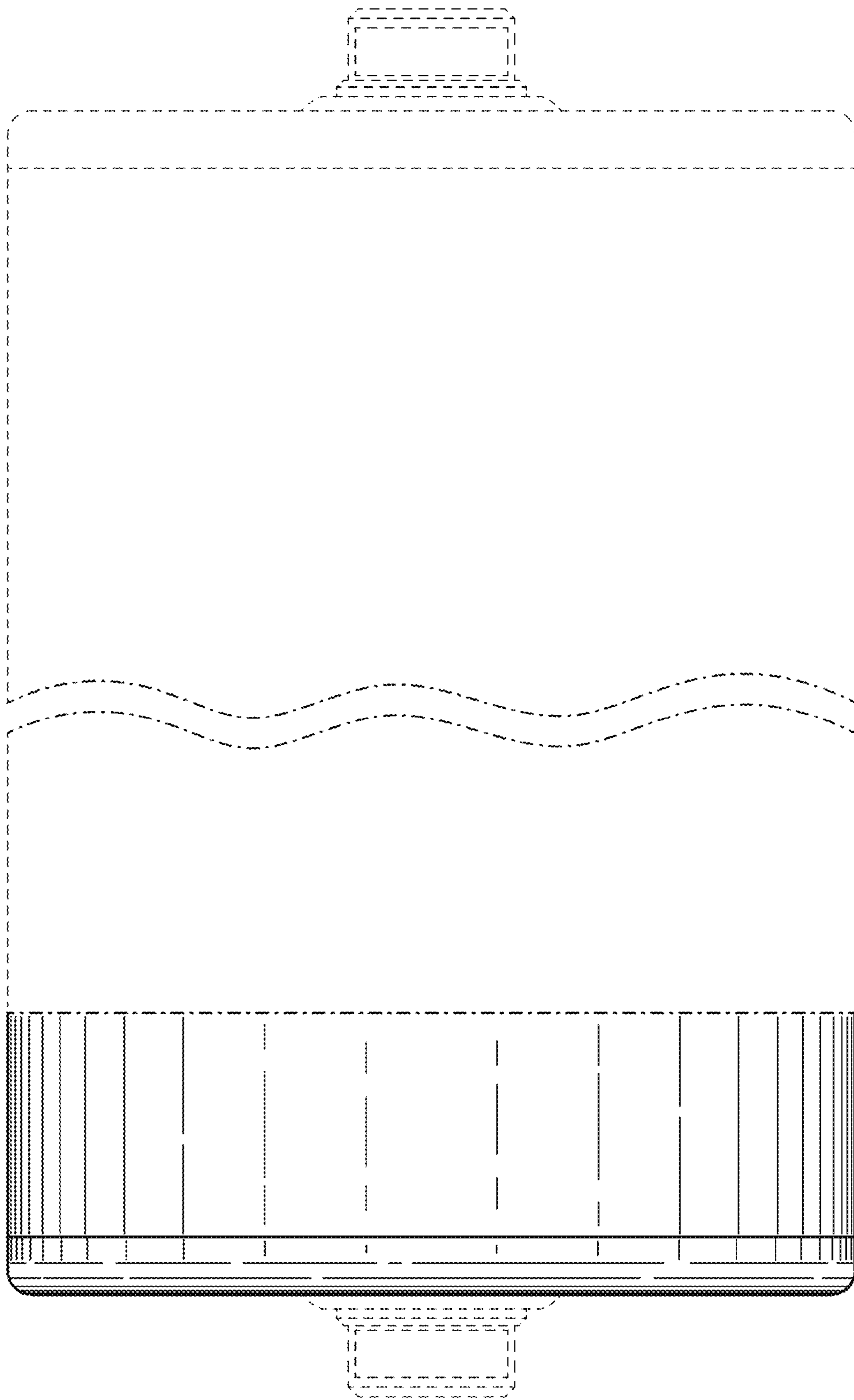
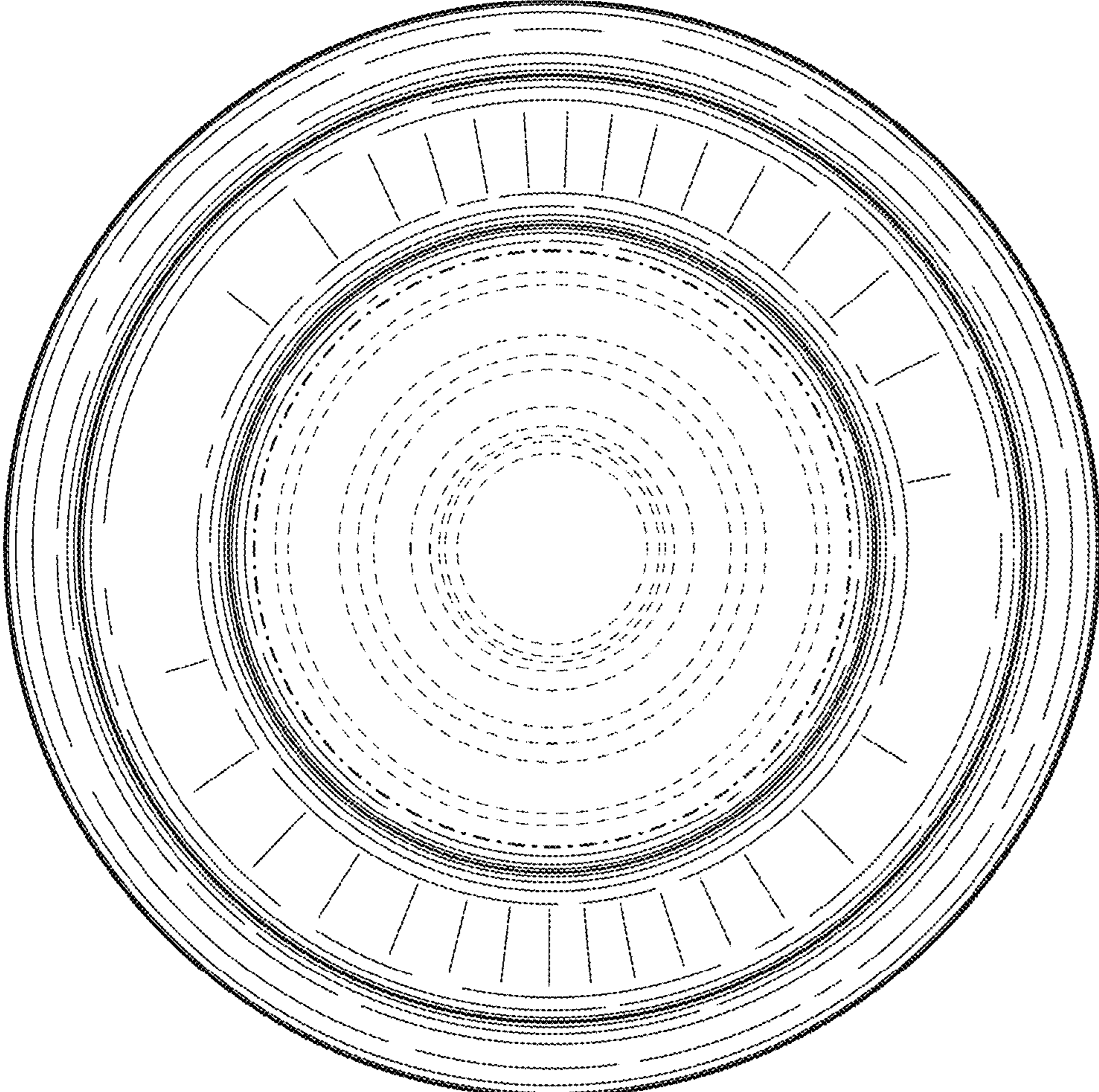


FIG. 22





**FIG. 23**



**FIG. 24**

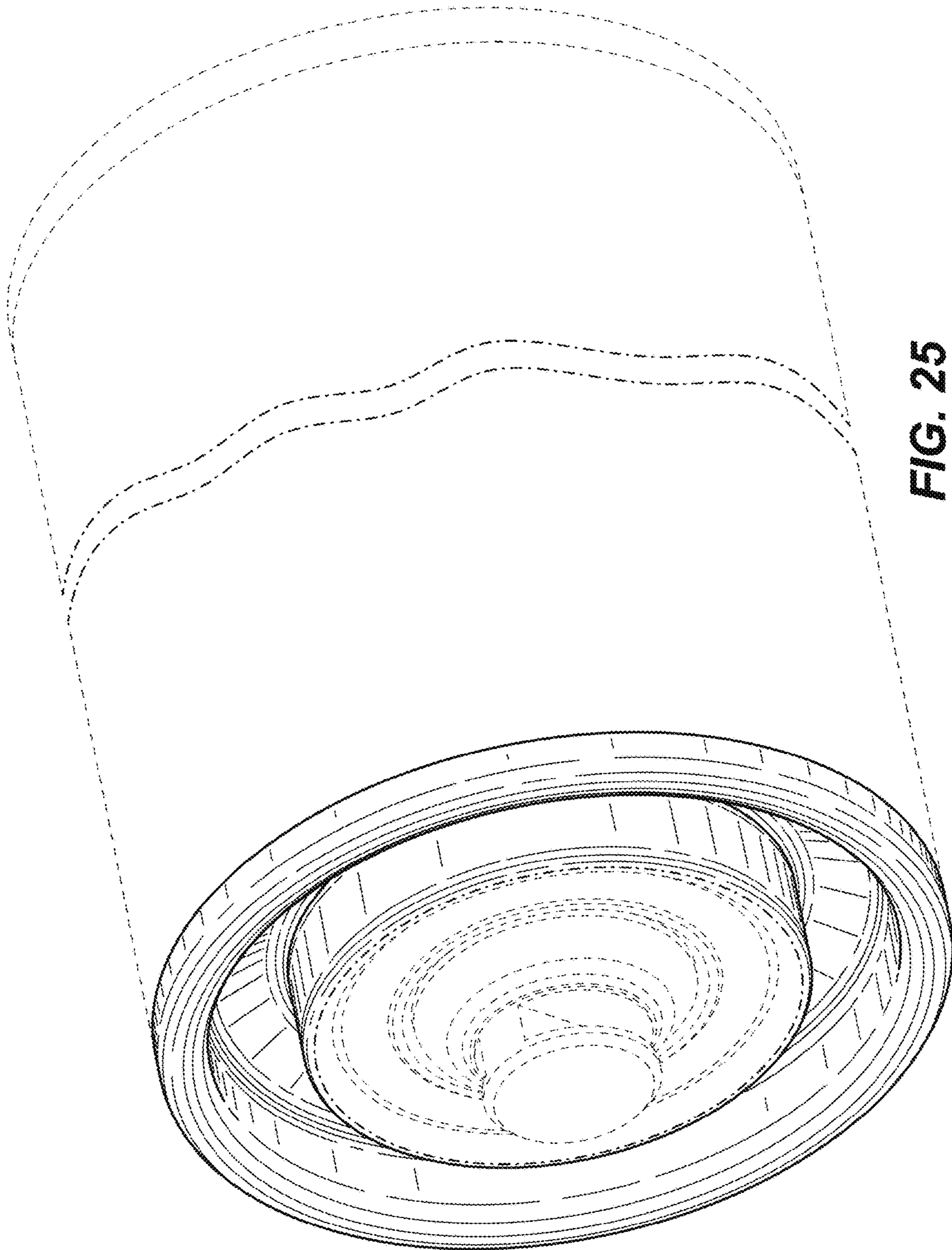


FIG. 25

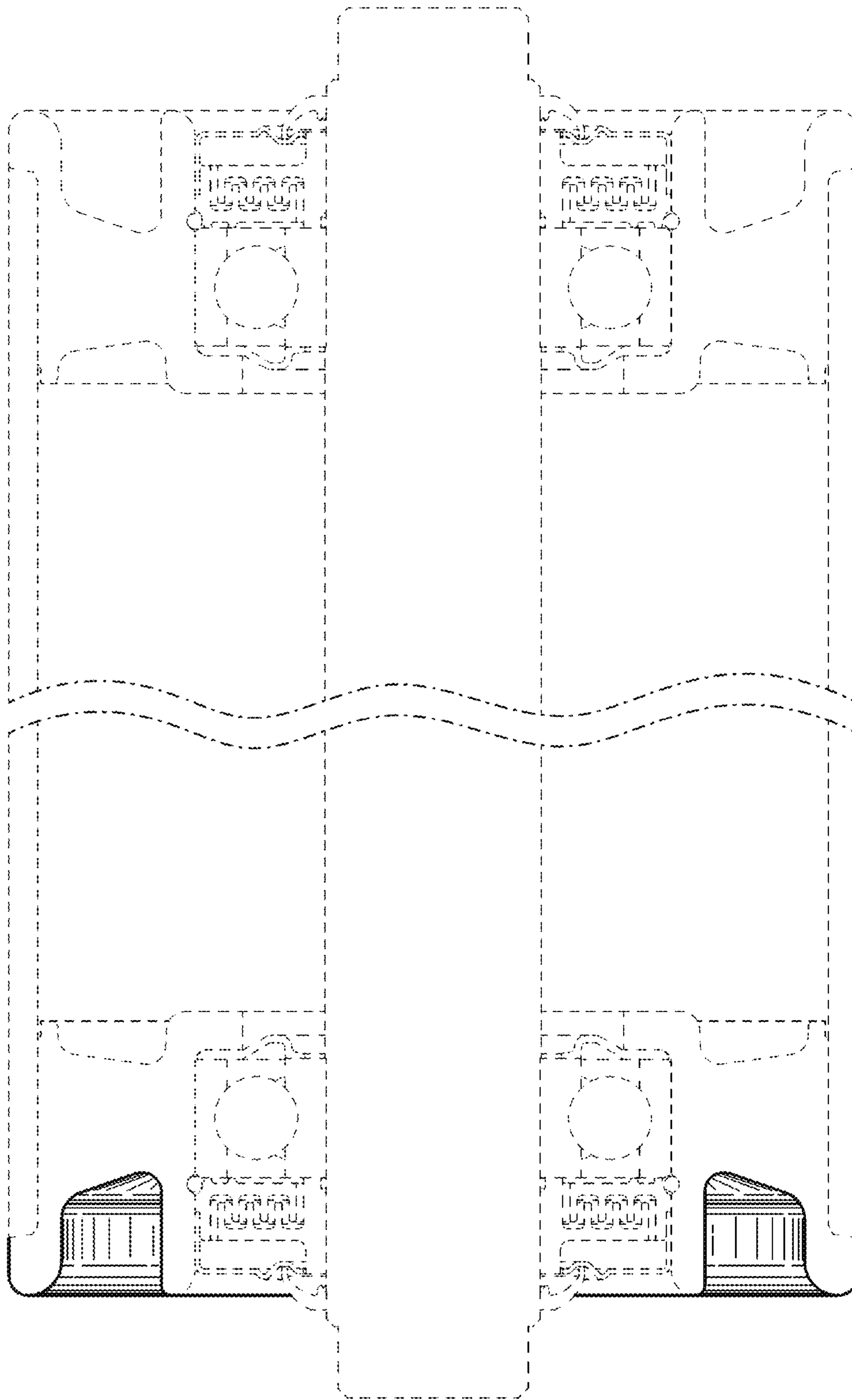


FIG. 26

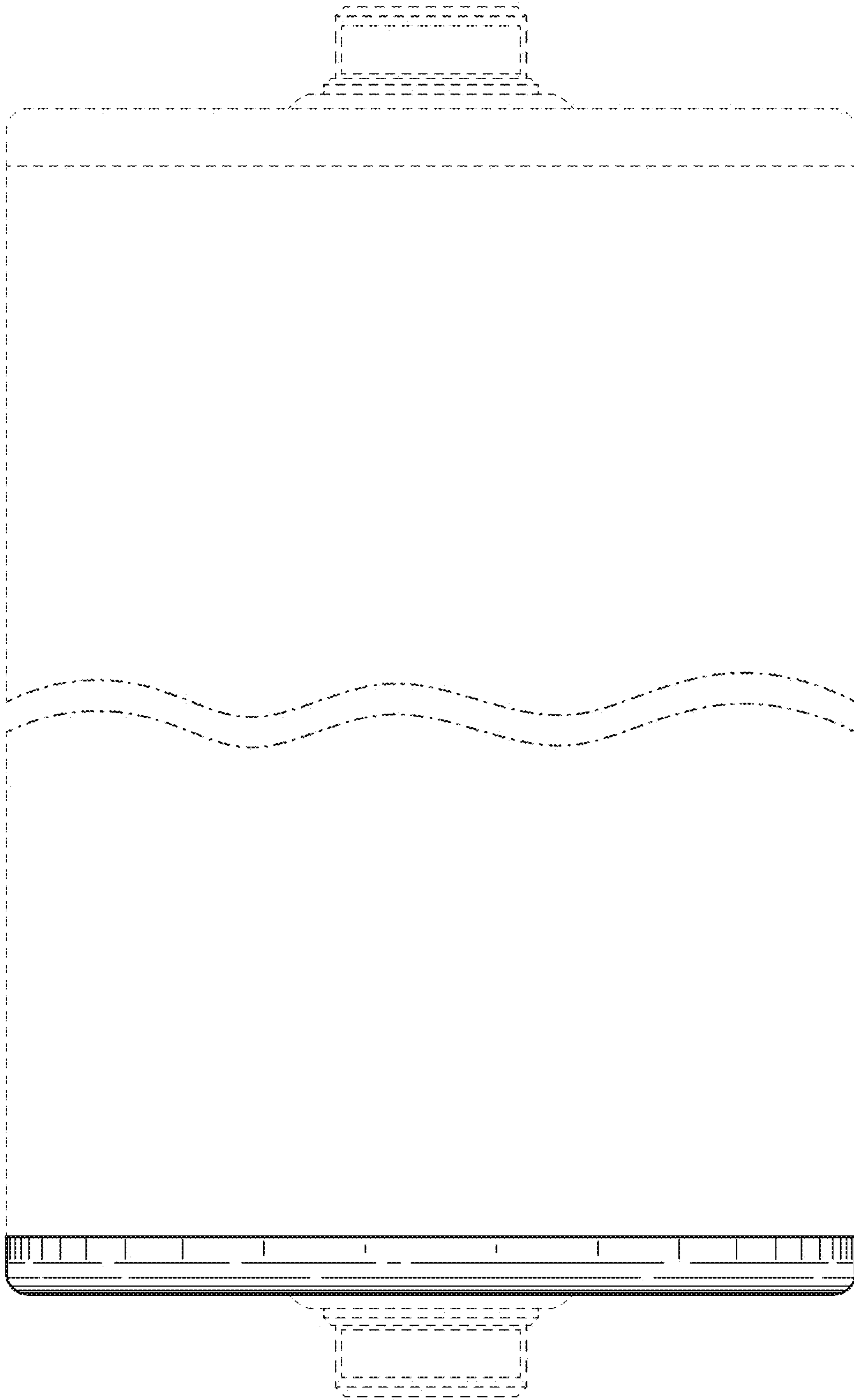
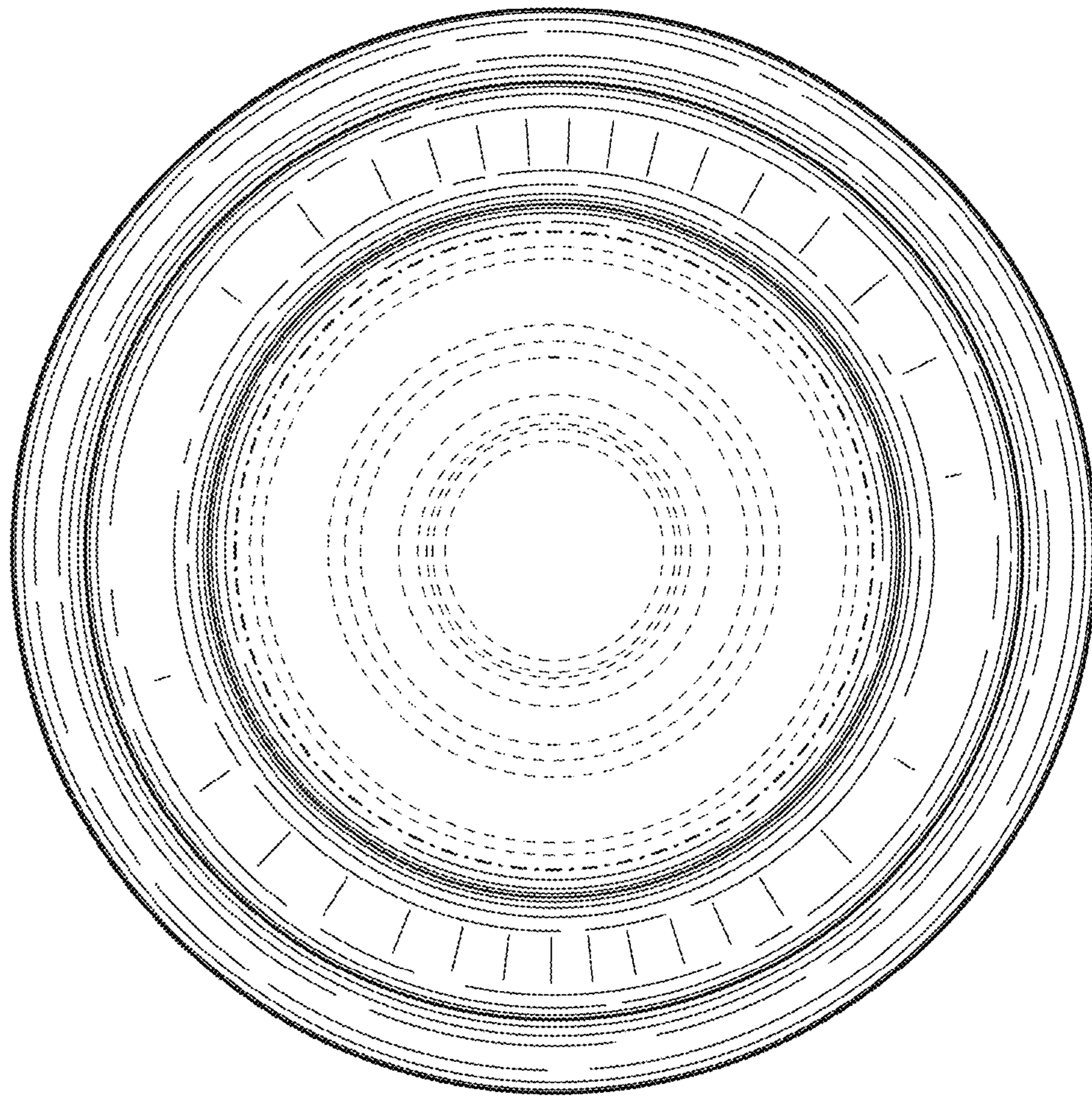


FIG. 27



**FIG. 28**

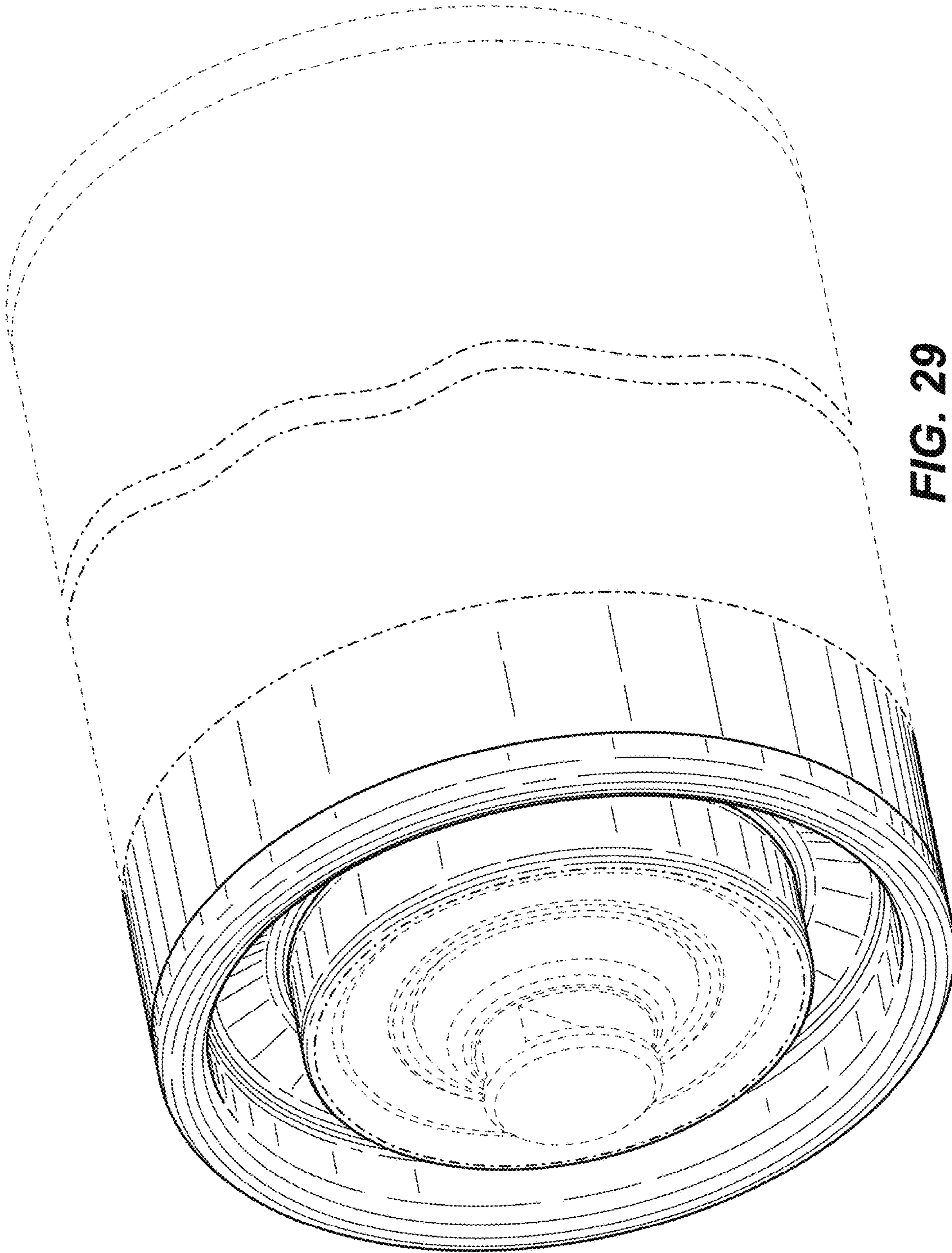


FIG. 29

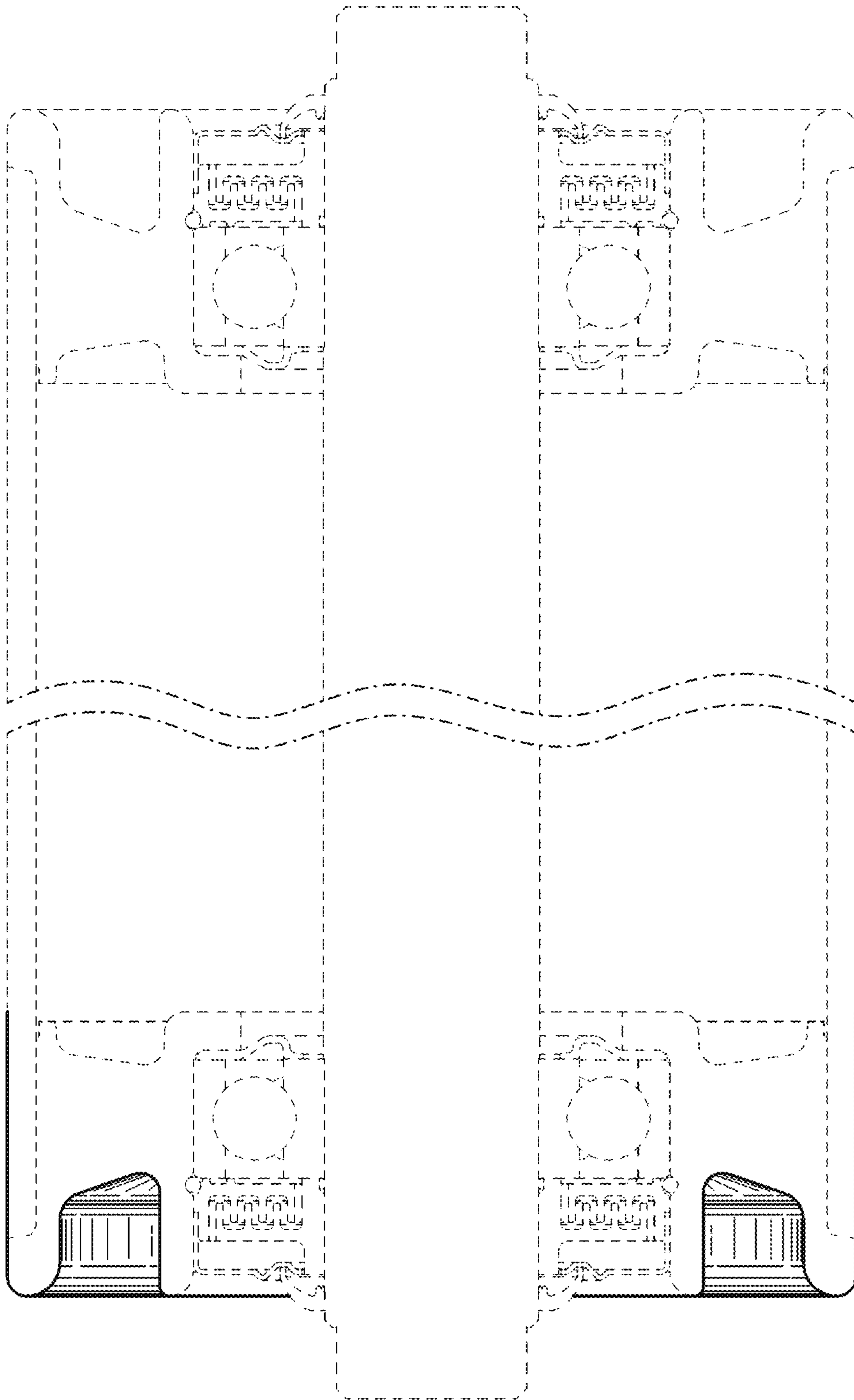
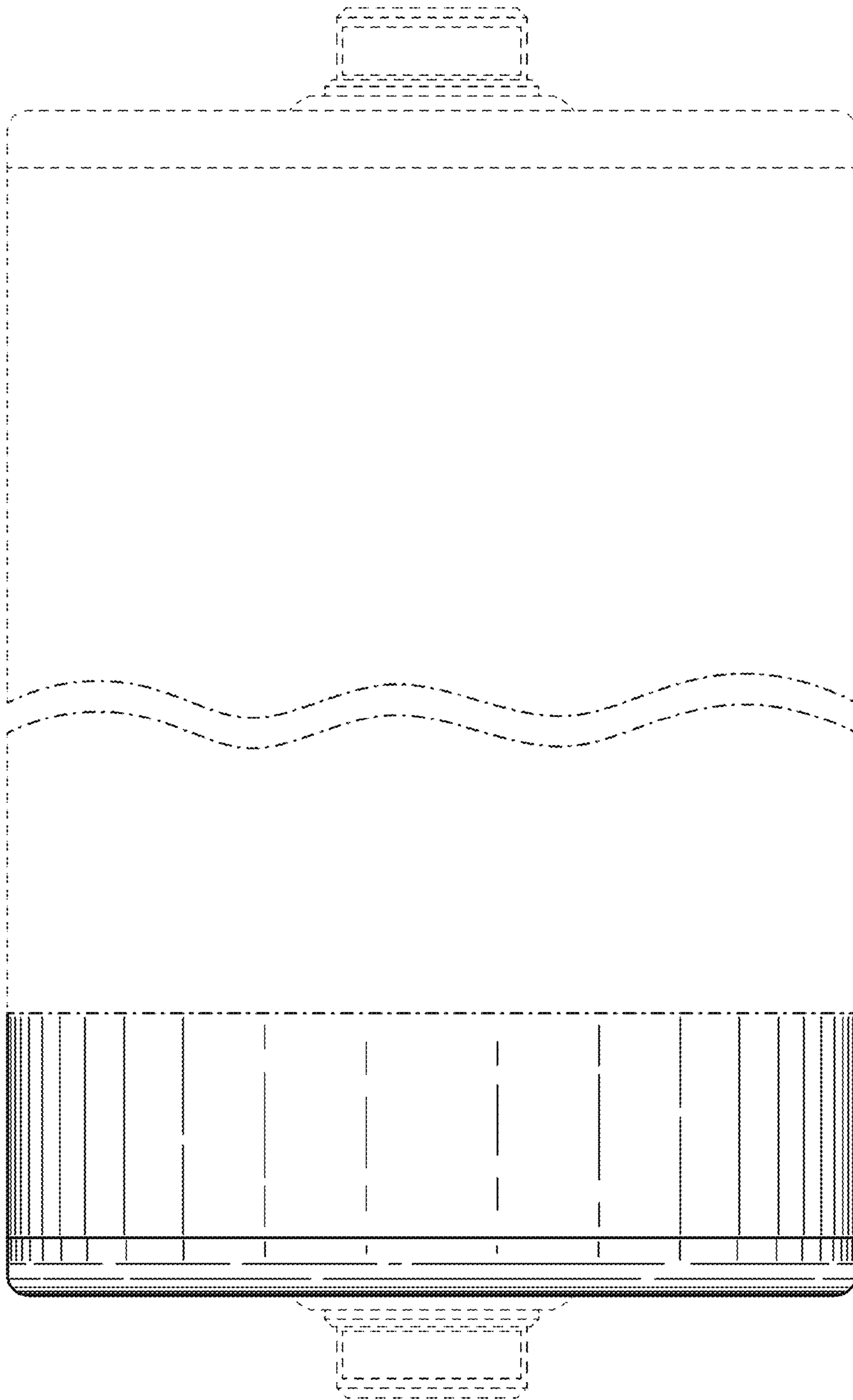
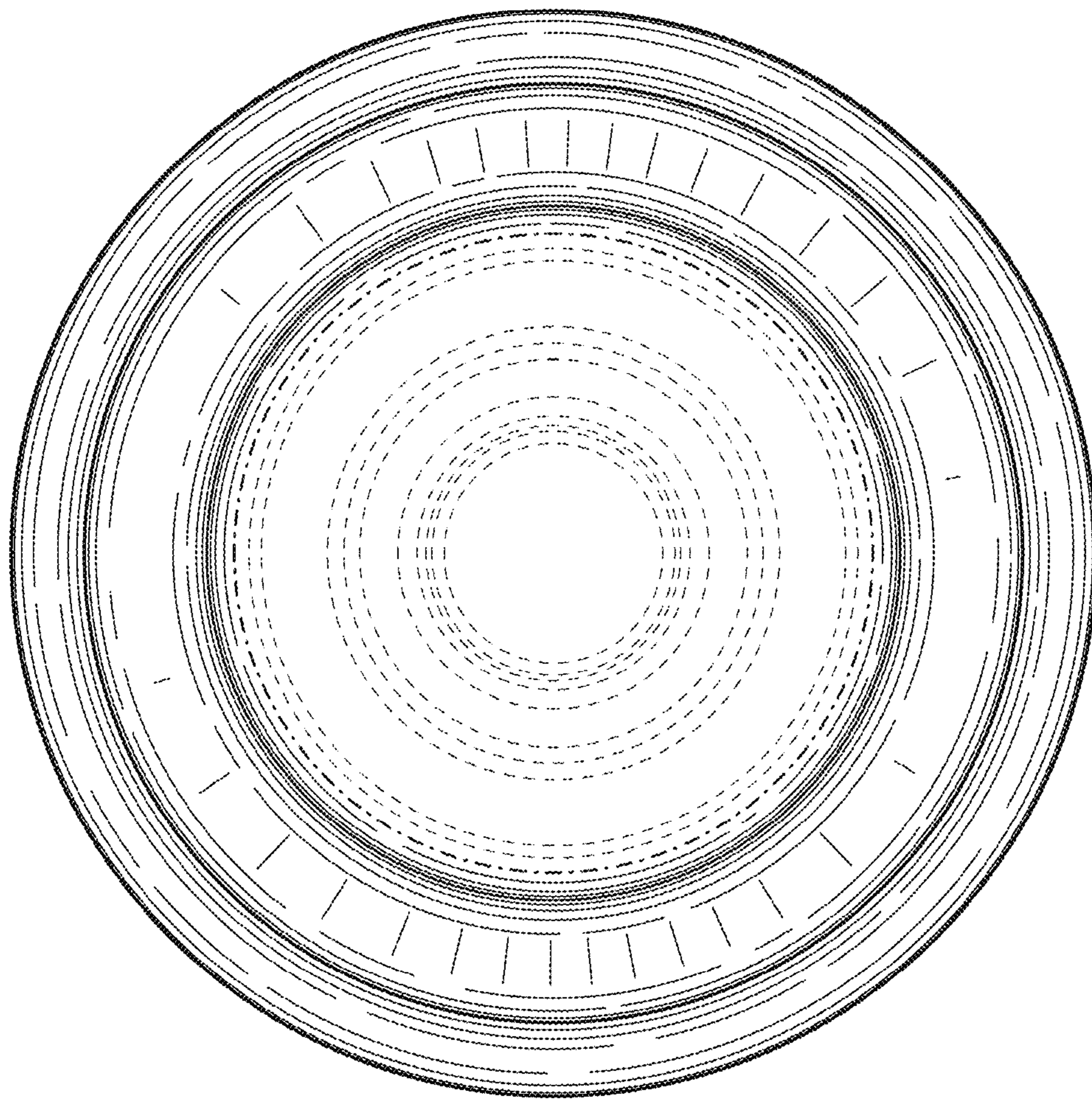


FIG. 30





**FIG. 31**



**FIG. 32**