



US00D818137S

(12) **United States Design Patent** (10) **Patent No.:** **US D818,137 S**  
**Kawamura** (45) **Date of Patent:** **\*\* May 15, 2018**

(54) **TRAY FOR STERILIZATION AND FREEZE-DRYING OF VIALS**

**DESCRIPTION**

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(72) Inventor: **Hideaki Kawamura**, Tokyo (JP)

(73) Assignee: **DAIKYO SEIKO, LTD.**, Tokyo (JP)

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

(21) Appl. No.: **29/592,938**

(22) Filed: **Feb. 3, 2017**

(30) **Foreign Application Priority Data**

Aug. 31, 2016 (JP) ..... 2016-018691

(51) **LOC (11) Cl.** ..... **24-01**

(52) **U.S. Cl.**  
USPC ..... **D24/203**

(58) **Field of Classification Search**  
USPC ..... D24/107, 216, 224-232

(Continued)

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*Assistant Examiner* — Mary Shannon Malley

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(57) **CLAIM**

The ornamental design for a tray for sterilization and freeze-drying of vials, as shown and described.

FIG. 1 is a front elevational view of a tray for sterilization and freeze-drying of vials showing my new design;  
FIG. 2 is a rear elevational view thereof;  
FIG. 3 is a top plan view thereof;  
FIG. 4 is a bottom plan view thereof;  
FIG. 5 is a right side elevational view thereof;  
FIG. 6 is a left side elevational view thereof;  
FIG. 7 is a front perspective view thereof;  
FIG. 8 is a rear perspective view thereof;  
FIG. 9 is a partially enlarged front elevational view thereof taken along lines 9-9 and 9'-9' shown in FIG. 1  
FIG. 10 is a partially enlarged rear elevational view thereof taken along lines 9-9 and 9'-9' shown in FIG. 1;  
FIG. 11 is a partially enlarged cross sectional view thereof taken along the line 11-11 shown in FIG. 9;  
FIG. 12 is a partially enlarged cross sectional view thereof taken along the line 12-12 shown in FIG. 9;  
FIG. 13 is a partially enlarged front perspective view thereof taken along lines 9-9 and 9'-9' shown in FIG. 1  
FIG. 14 is a partially enlarged rear perspective view thereof taken along lines 9-9 and 9'-9' shown in FIG. 1  
FIG. 15 is a partially enlarged front elevational view thereof taken along lines 9-9 and 15-15 shown in FIG. 1  
FIG. 16 is a partially enlarged rear elevational view thereof taken along lines 9-9 and 15-15 shown in FIG. 1  
FIG. 17 is a partially enlarged cross sectional view thereof taken along the line 17-17 shown in FIG. 15;  
FIG. 18 is a partially enlarged cross sectional view thereof taken along the line 18-18 shown in FIG. 15;  
FIG. 19 is a partially enlarged front elevational view thereof taken along lines 9-9 and 15-15 shown in FIG. 1;  
FIG. 20 is a partially enlarged rear perspective view thereof taken along lines 9-9 and 15-15 shown in FIG. 1;  
FIG. 21 is a partially enlarged front elevational view thereof taken along lines 21-21 and 21'-21' shown in FIG. 1  
FIG. 22 is a partially enlarged rear elevational view thereof taken along lines 21-21 and 21'-21' shown in FIG. 1  
FIG. 23 is a partially enlarged cross sectional view thereof taken along the line 23-23 shown in FIG. 21;  
FIG. 24 is a partially enlarged cross sectional view thereof taken along the line 24-24 shown in FIG. 21;

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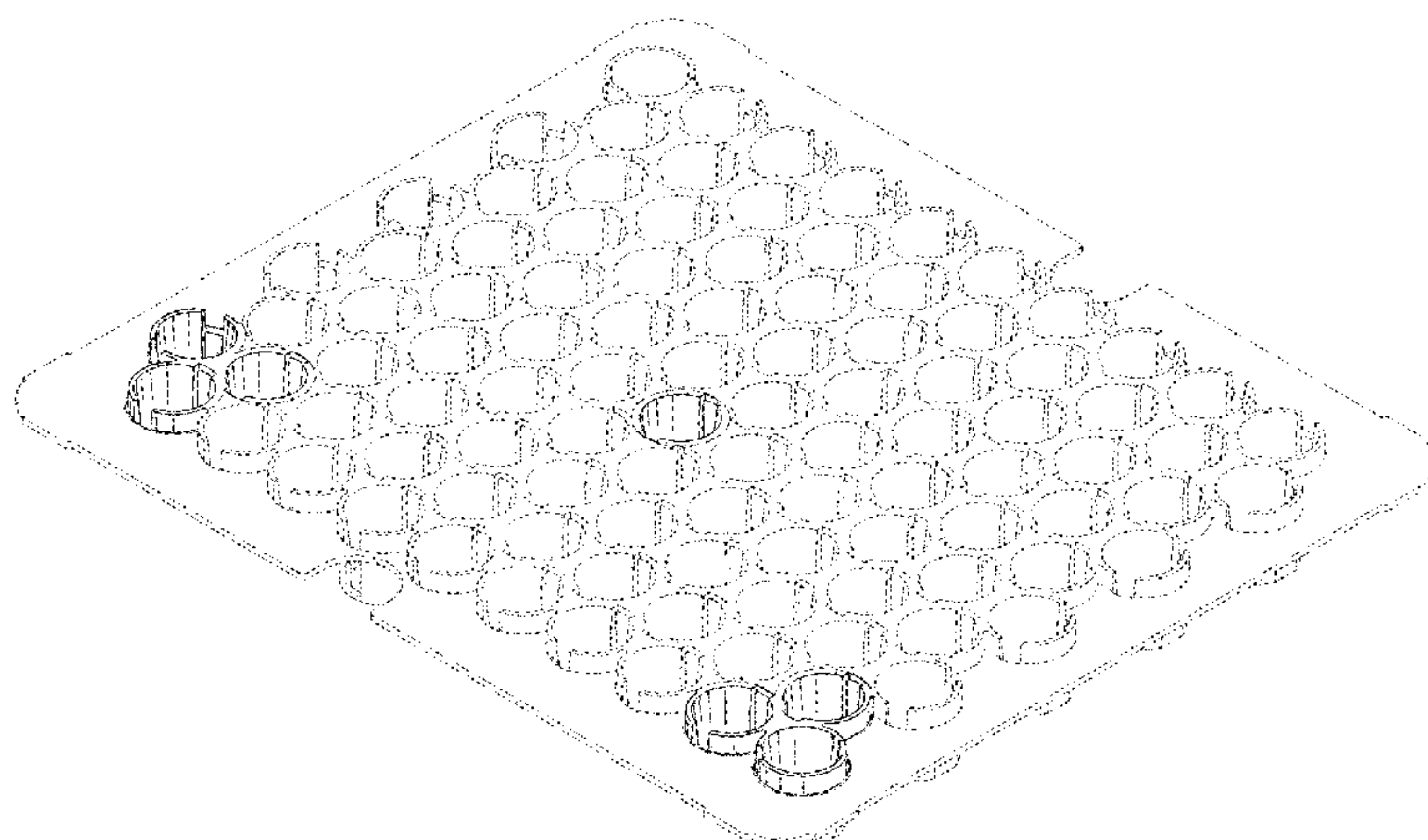


FIG. 25 is a partially enlarged front perspective view thereof taken along lines 21-21 and 21'-21' shown in FIG. 1

FIG. 26 is a partially enlarged rear perspective view thereof taken along lines 21-21 and 21'-21' shown in FIG. 1

FIG. 27 is a partially enlarged cross sectional view thereof taken along line 12-12 shown in FIG. 9, showing one state of use; and,

FIG. 28 is a referential perspective view thereof, showing another state of use.

The broken lines showing vials and a tray case in FIGS. 27 and 28 represent environment that forms no part of the claimed design. all other broken lines show portions of the tray for sterilization and freeze-drying of vials that form no part of the claimed design.

The dash-dot line represents the boundary of the claimed design.

**1 Claim, 28 Drawing Sheets**

**(58) Field of Classification Search**

CPC .. B01L 9/54; B01L 9/523; B01L 9/527; B01L

9/543; B01L 9/547; B01L 3/5085; B01L 3/5027; G01N 35/1002; G01N 35/02

See application file for complete search history.

(56)

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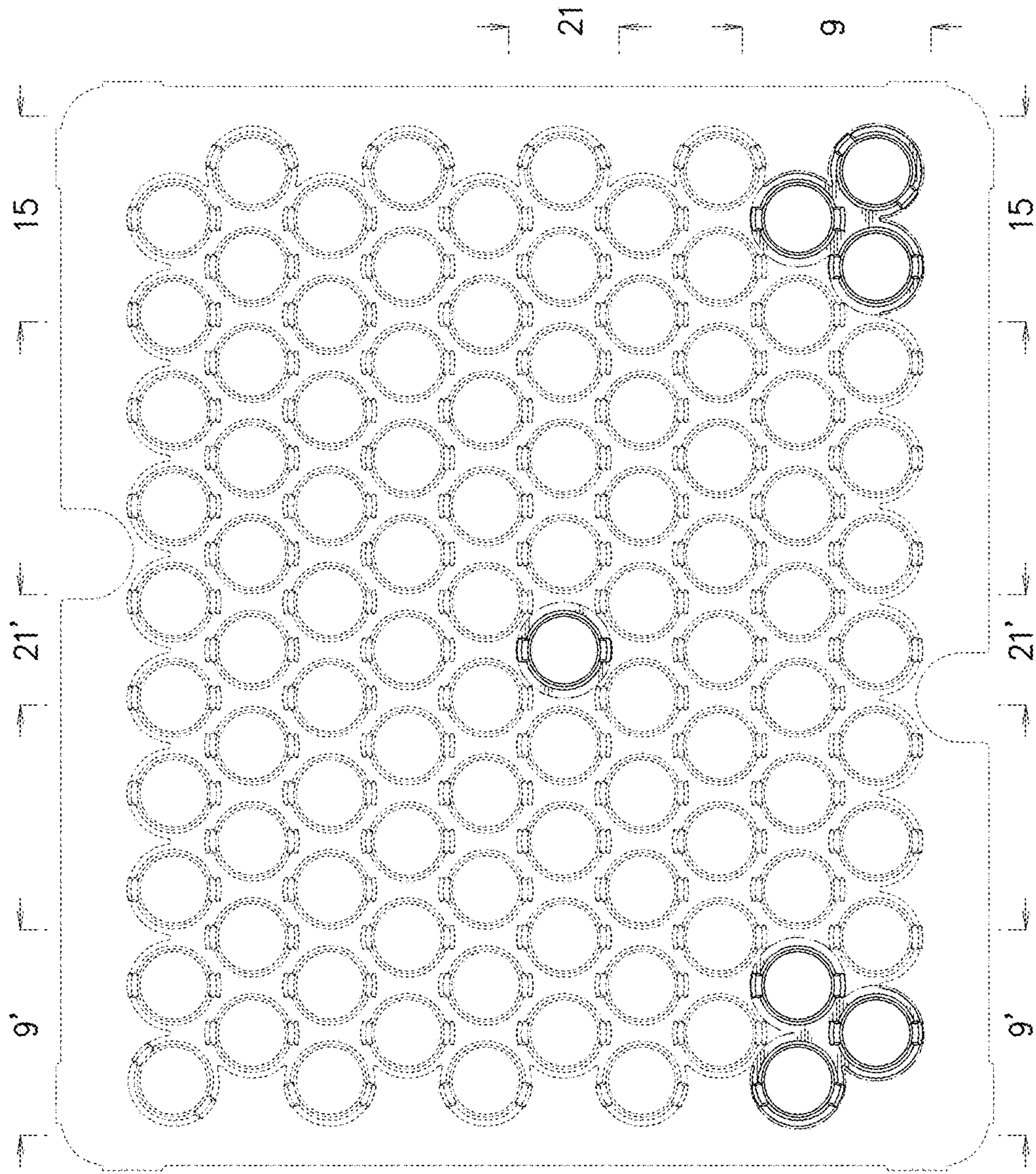


FIG. 1

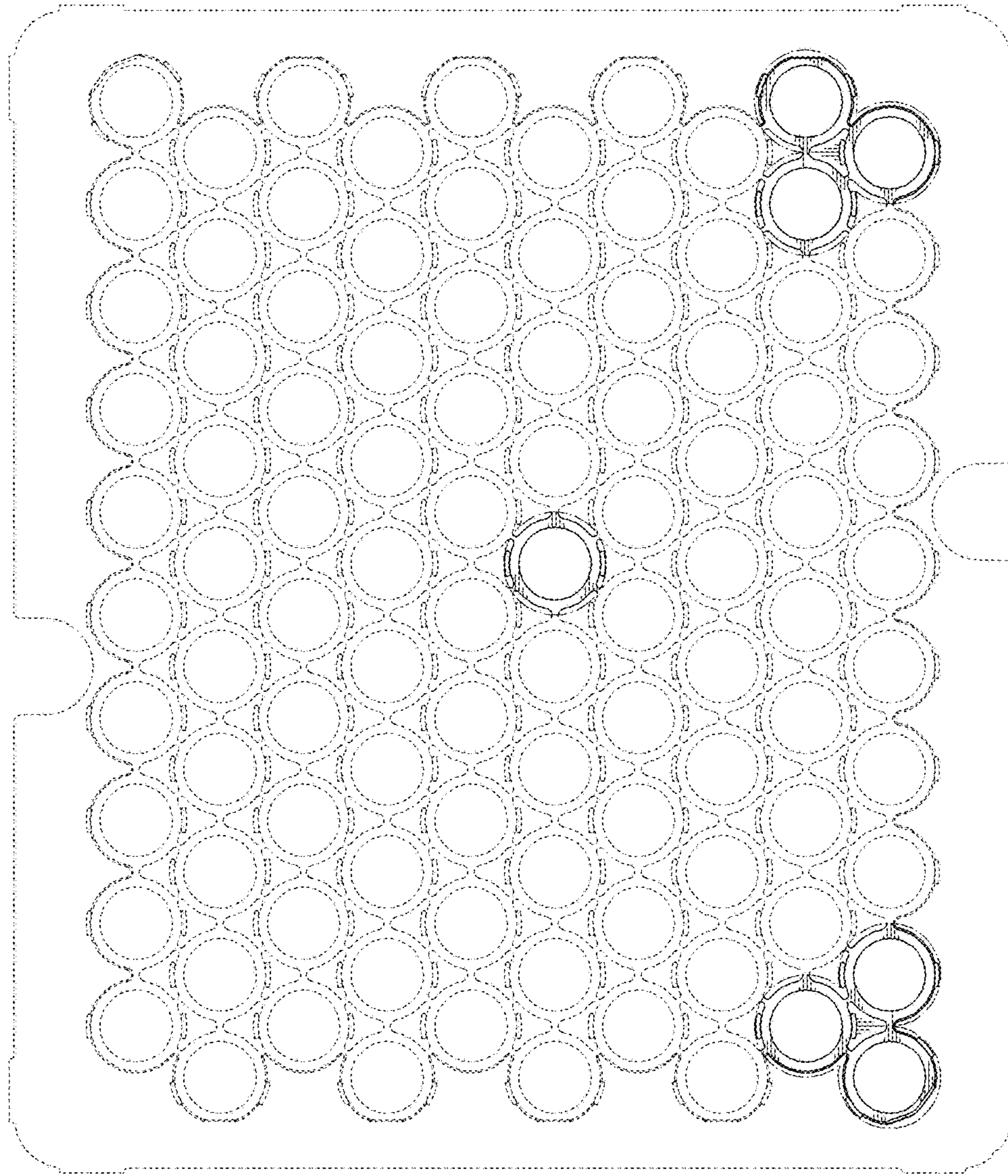


FIG. 2

FIG. 3

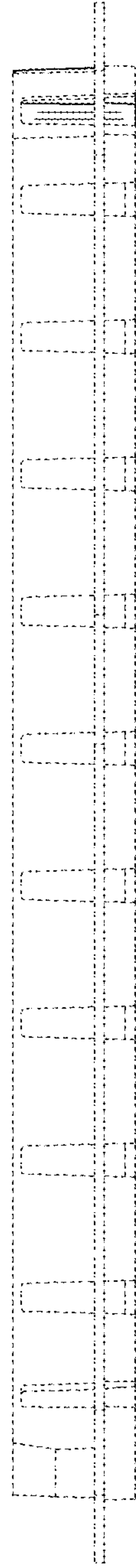
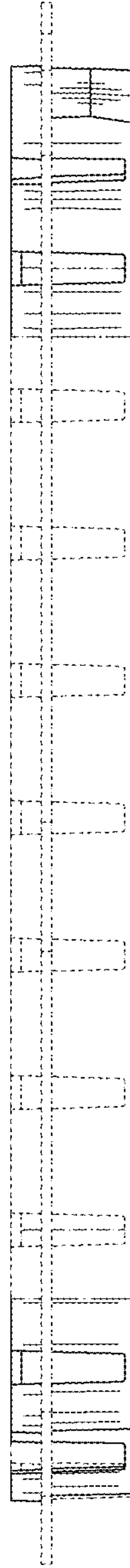


FIG. 4





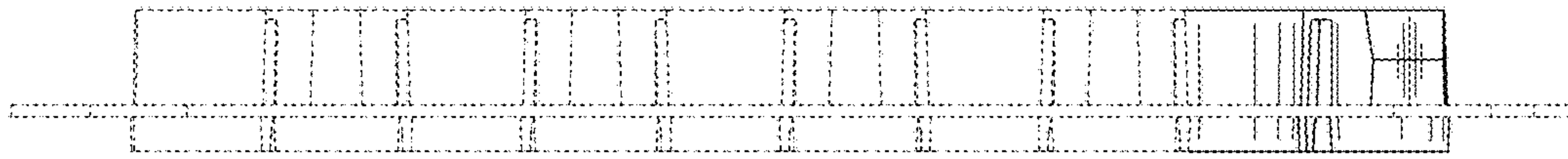


FIG. 5

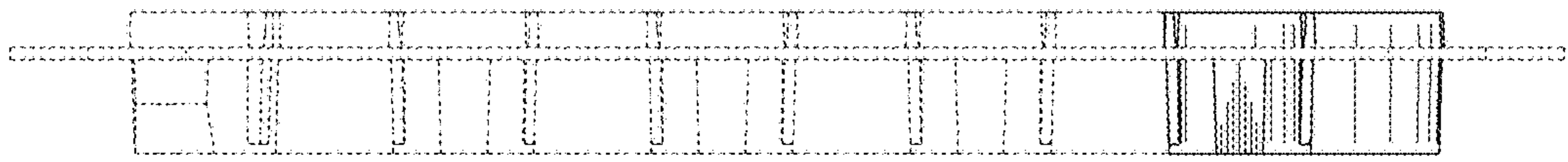


FIG. 6



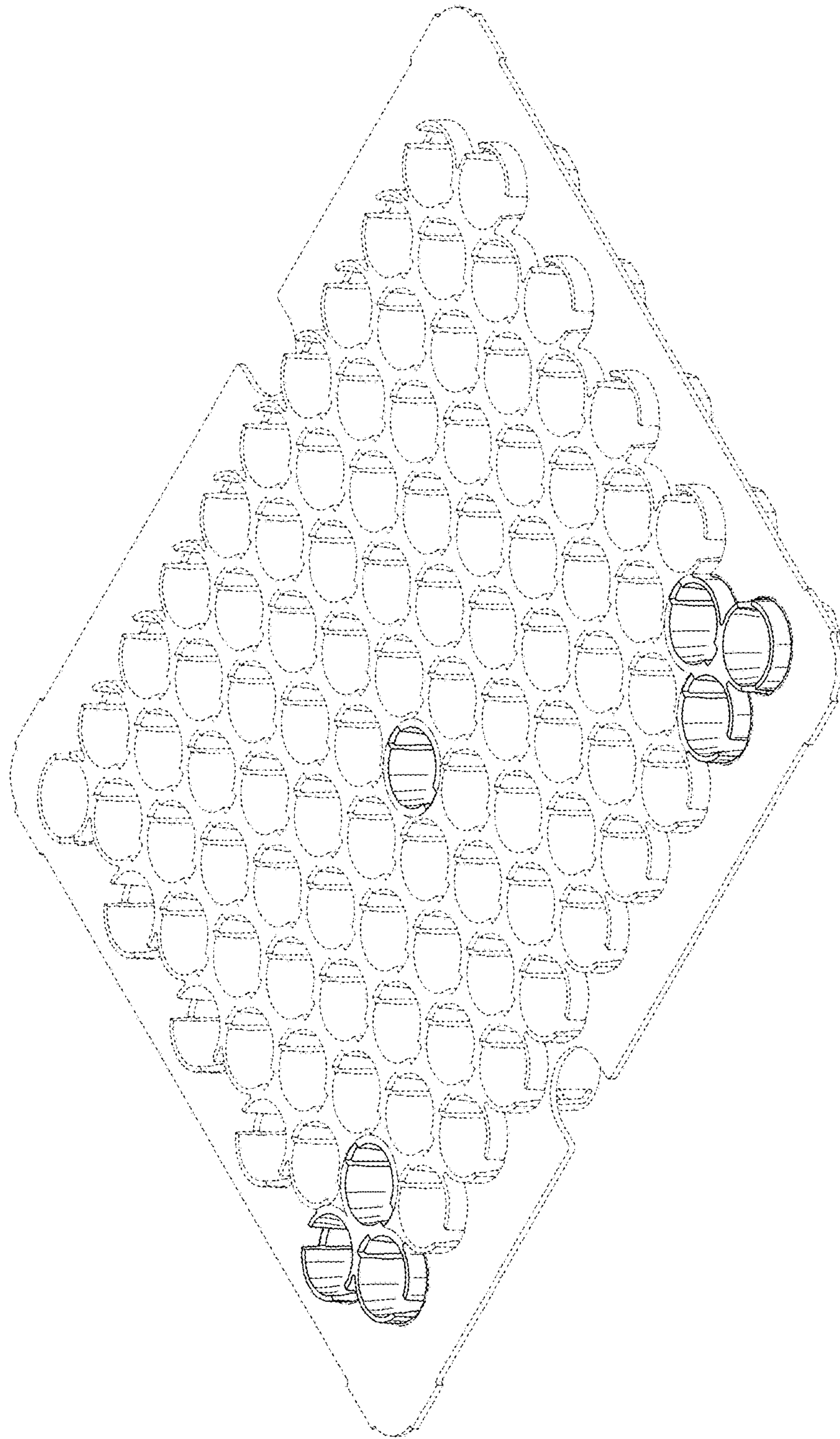


FIG. 7

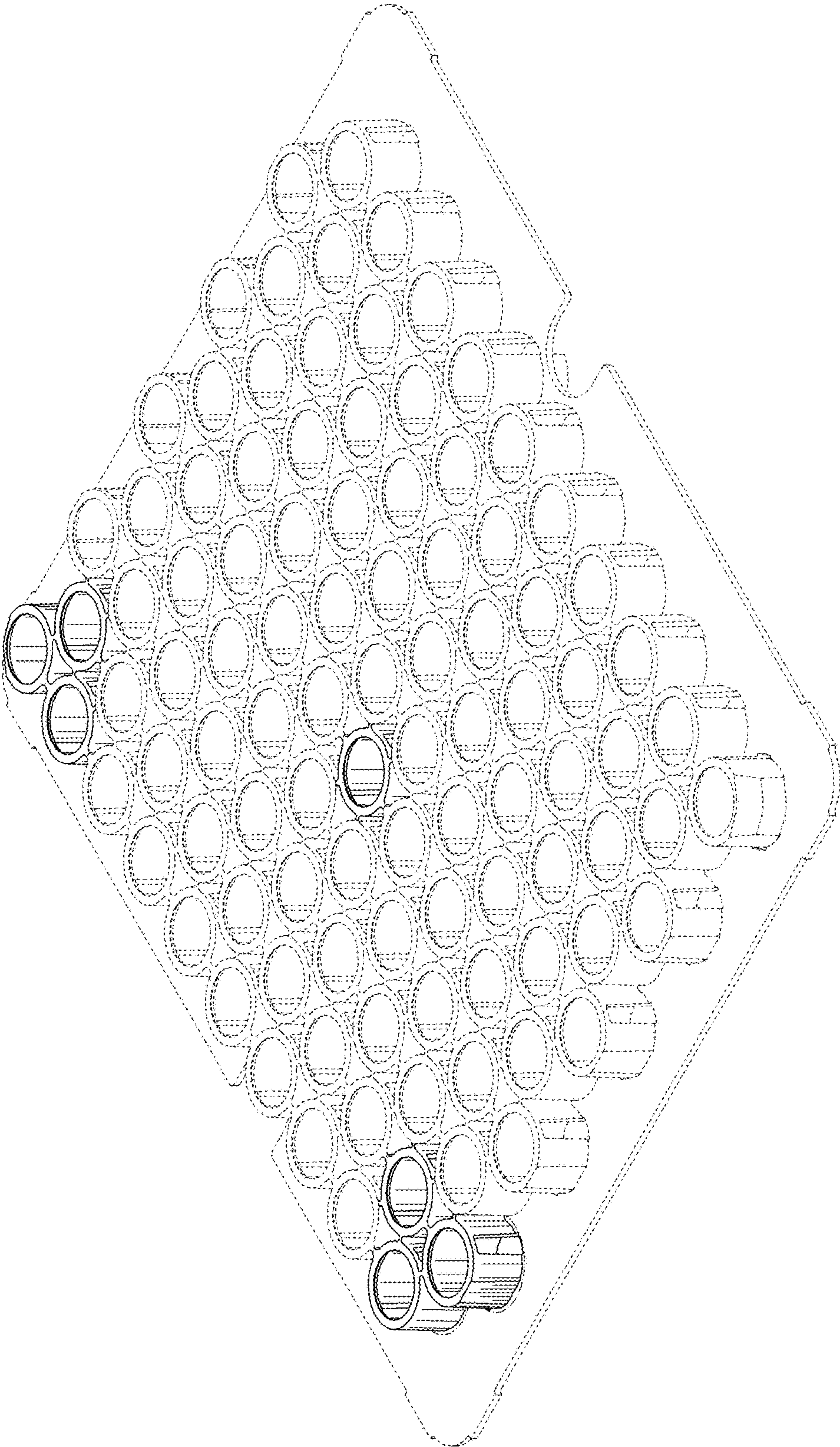


FIG. 8

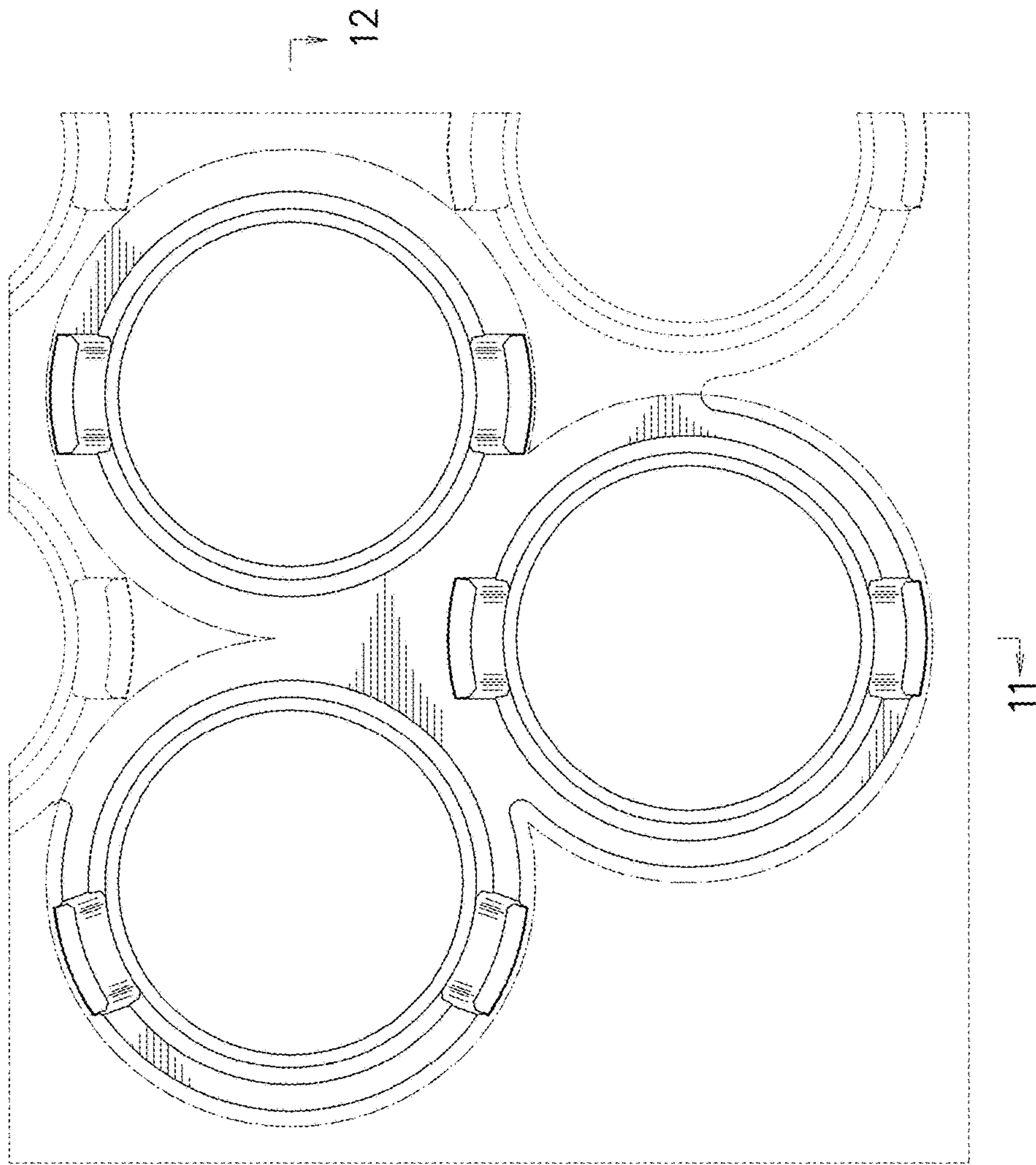


FIG. 9



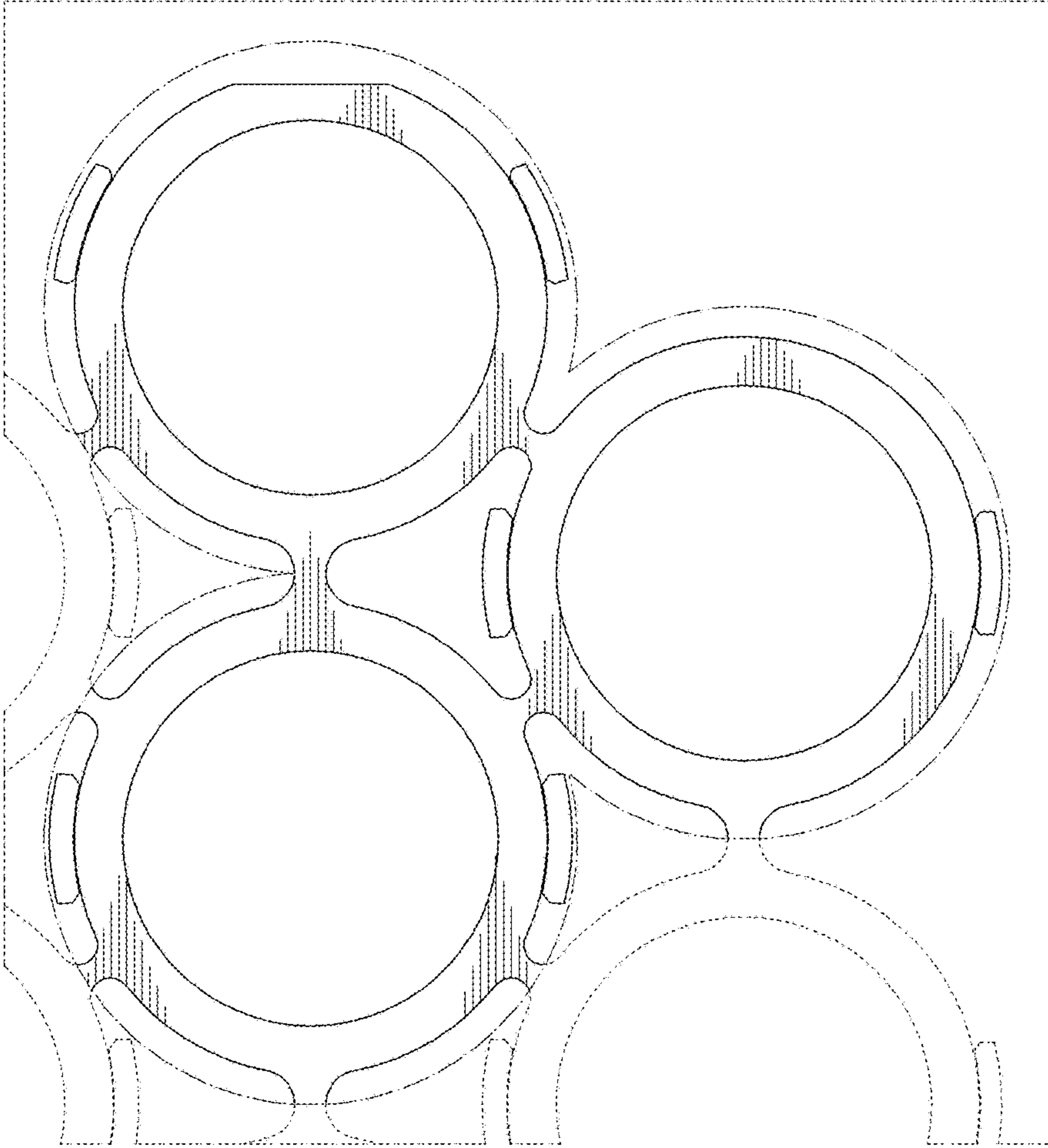


FIG. 10



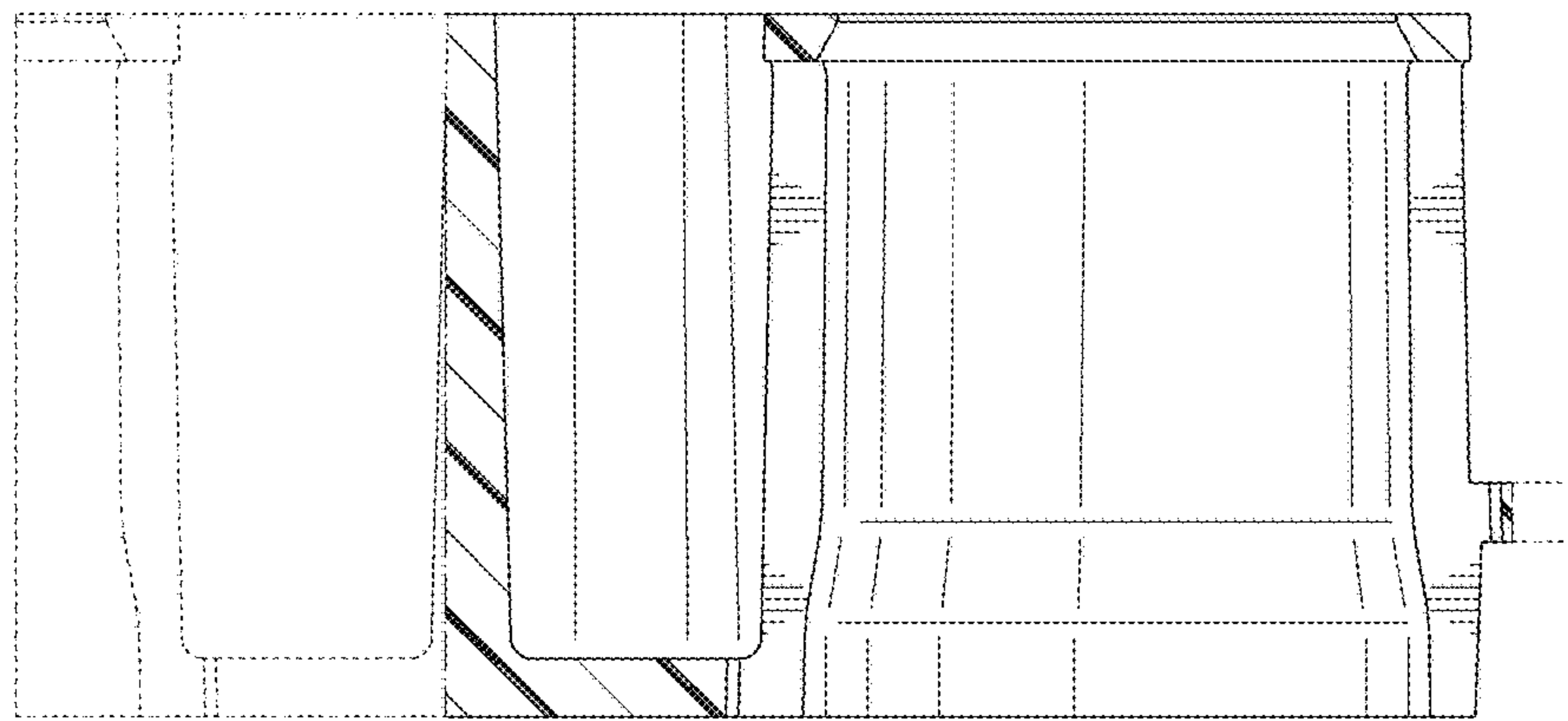


FIG. 11

FIG. 12

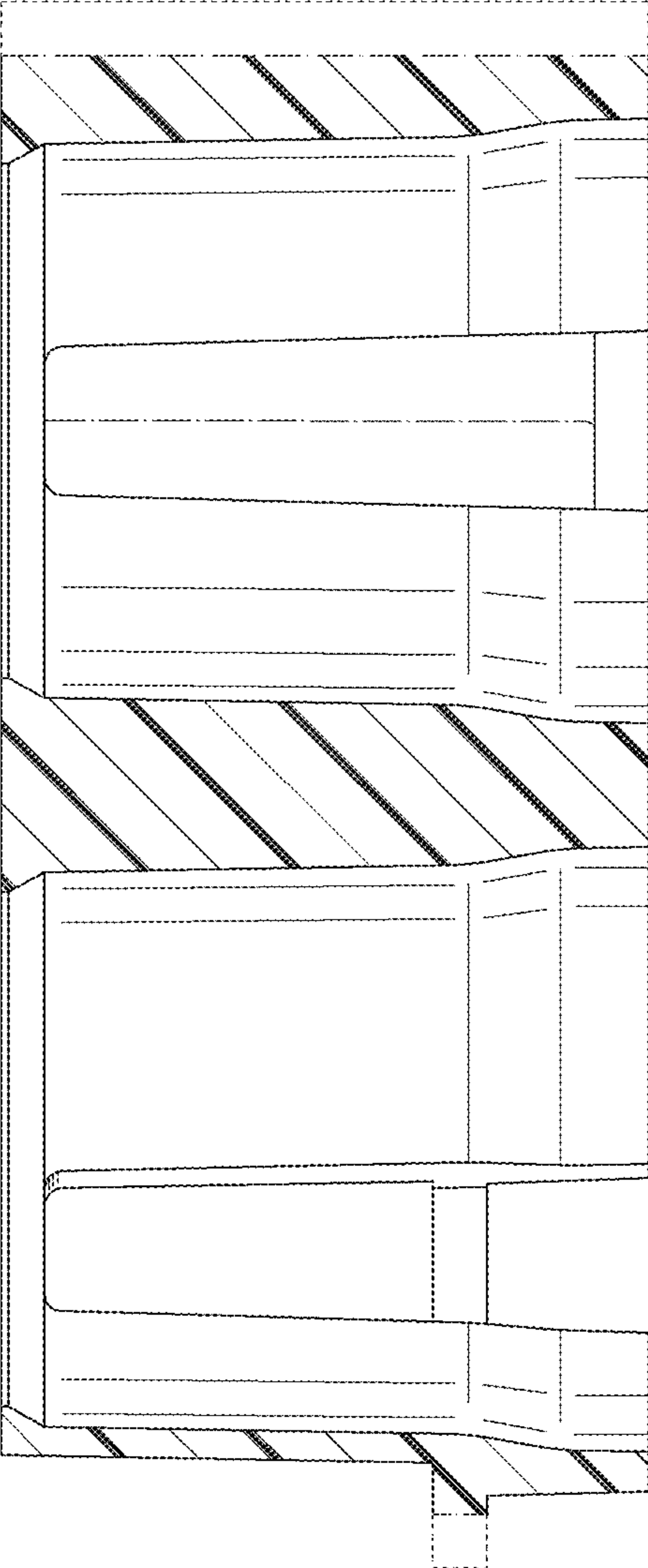
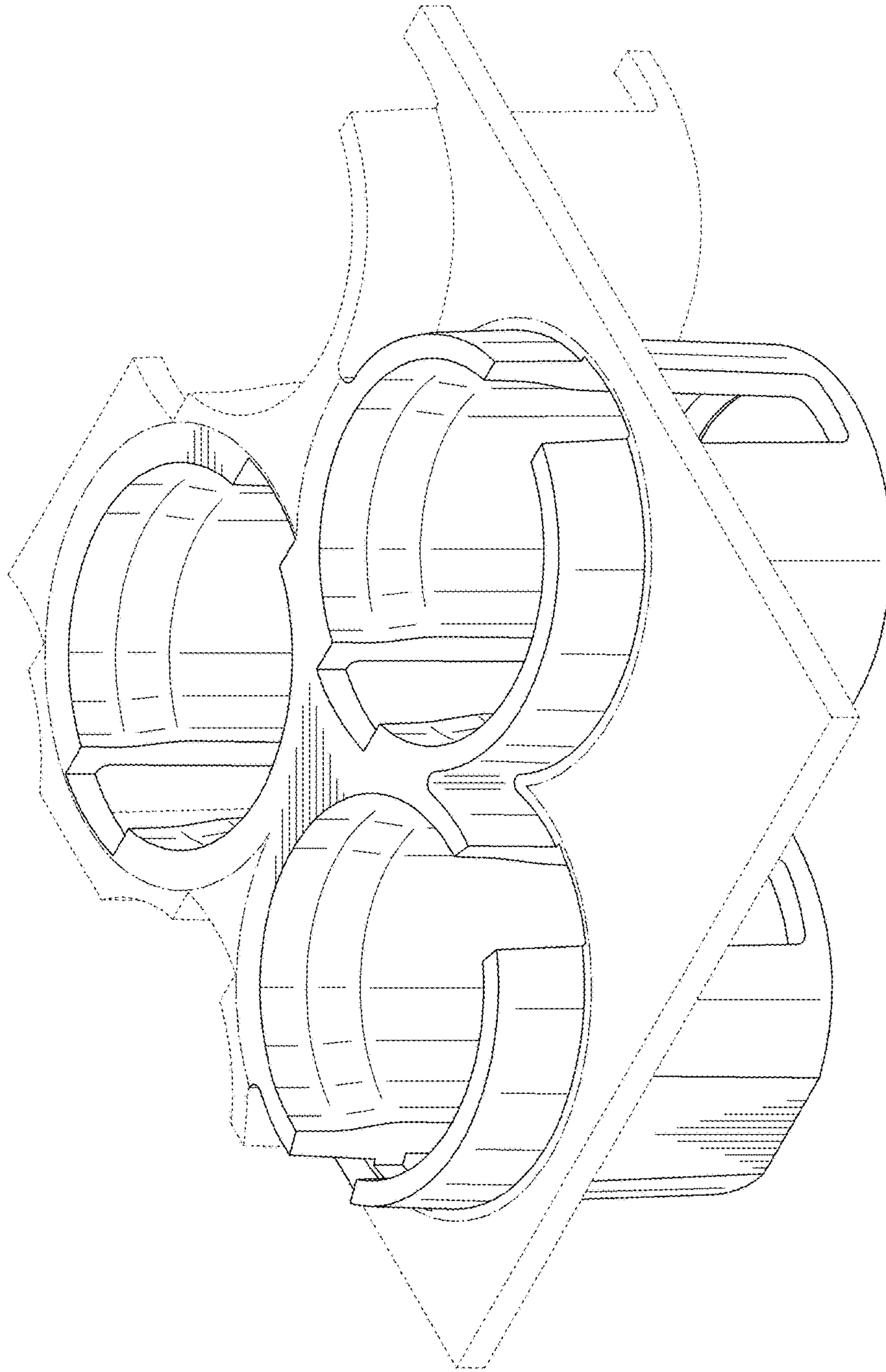


FIG. 13



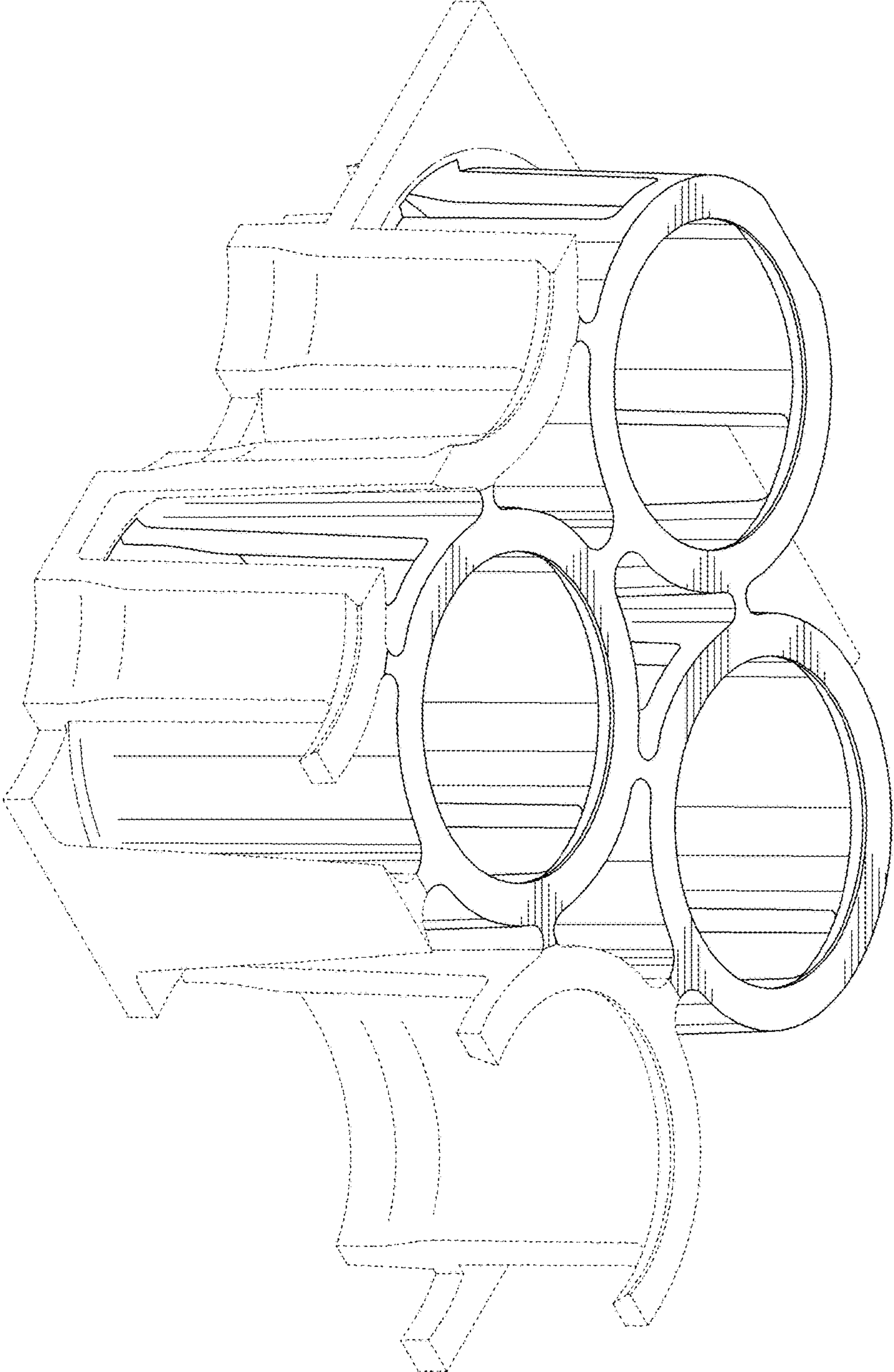
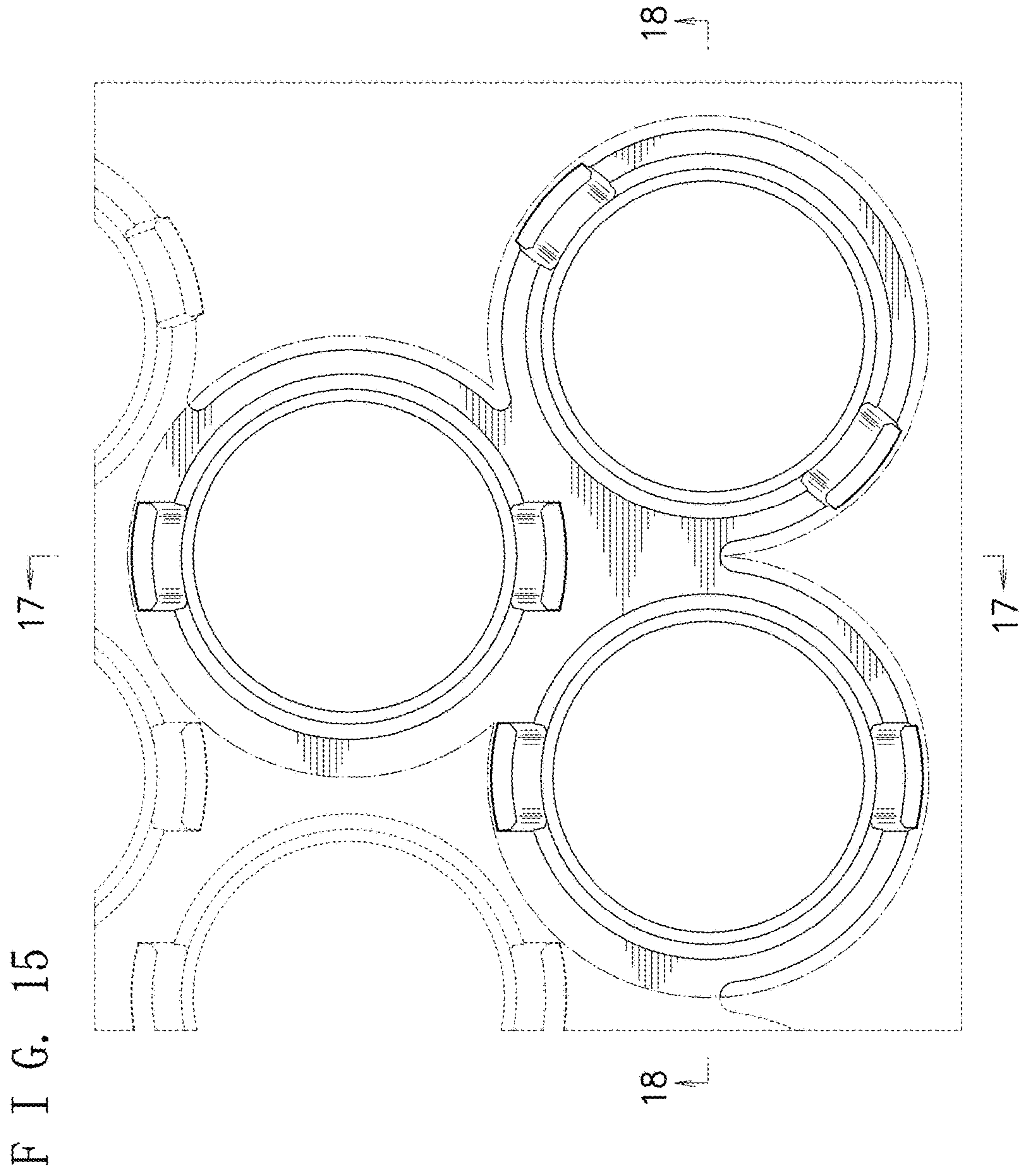


FIG. 14





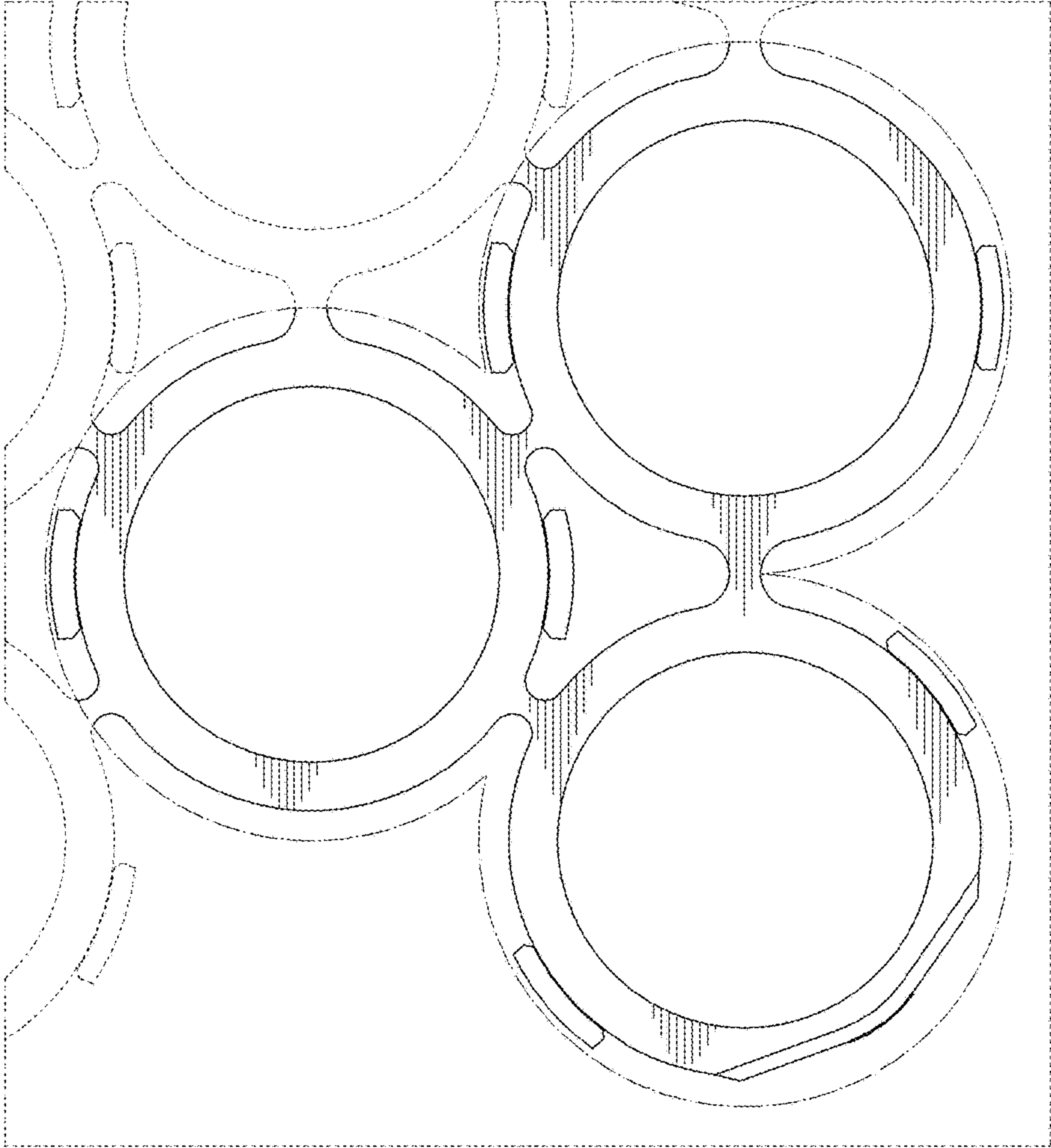


FIG. 16

FIG. 17

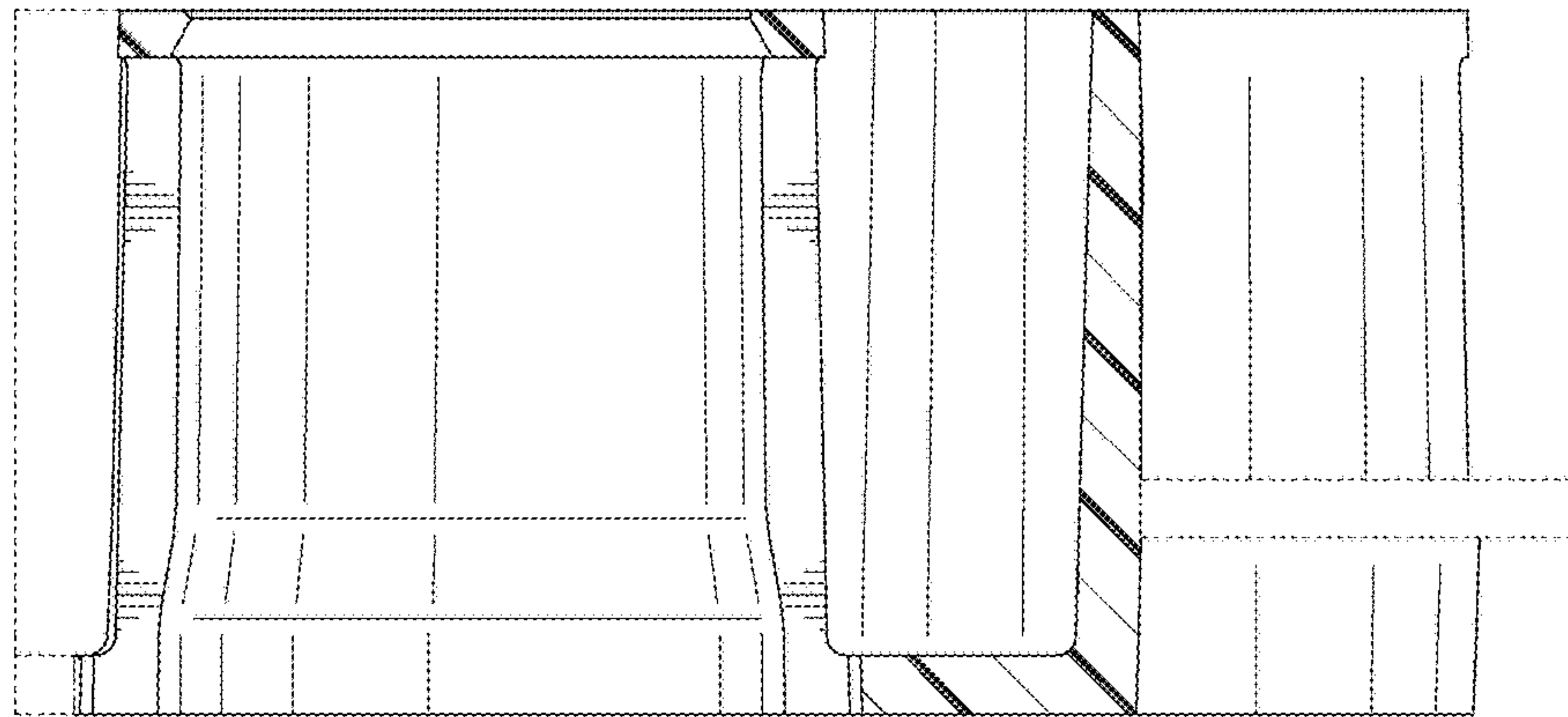
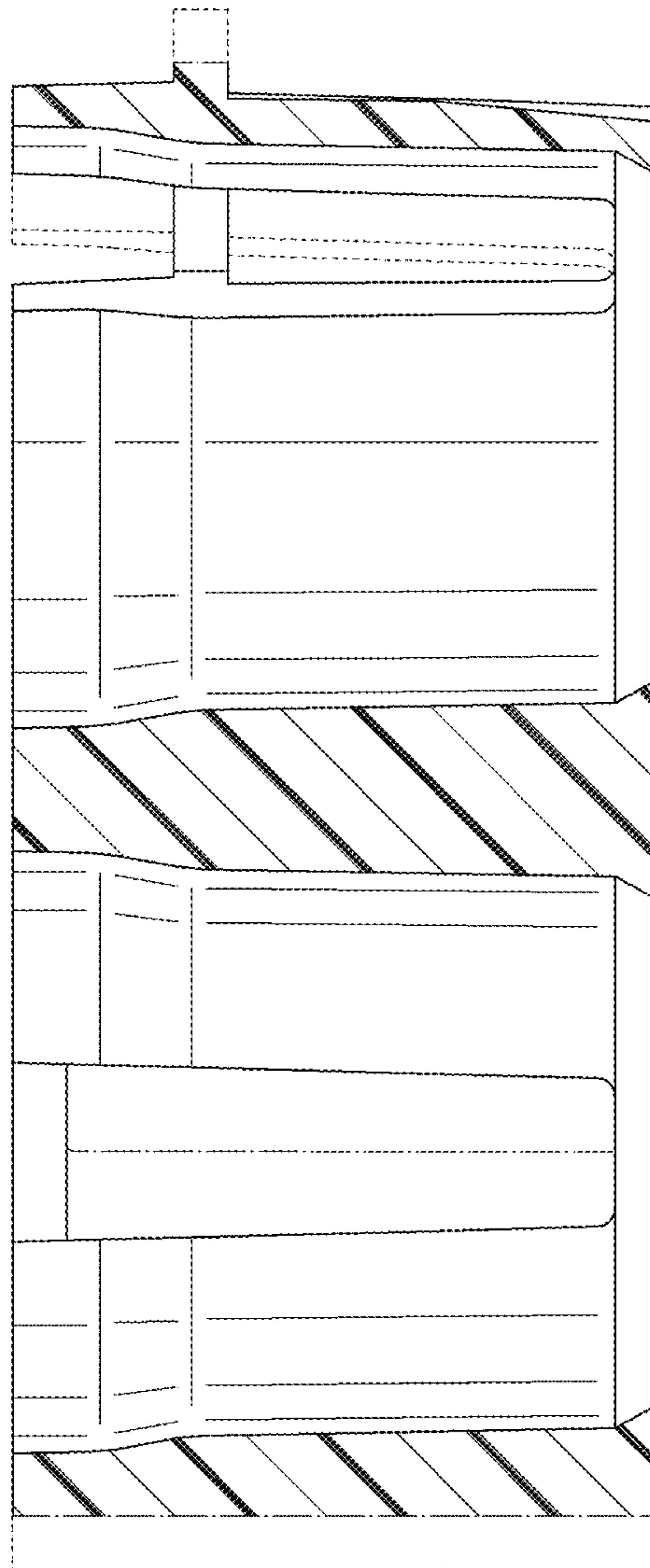


FIG. 18





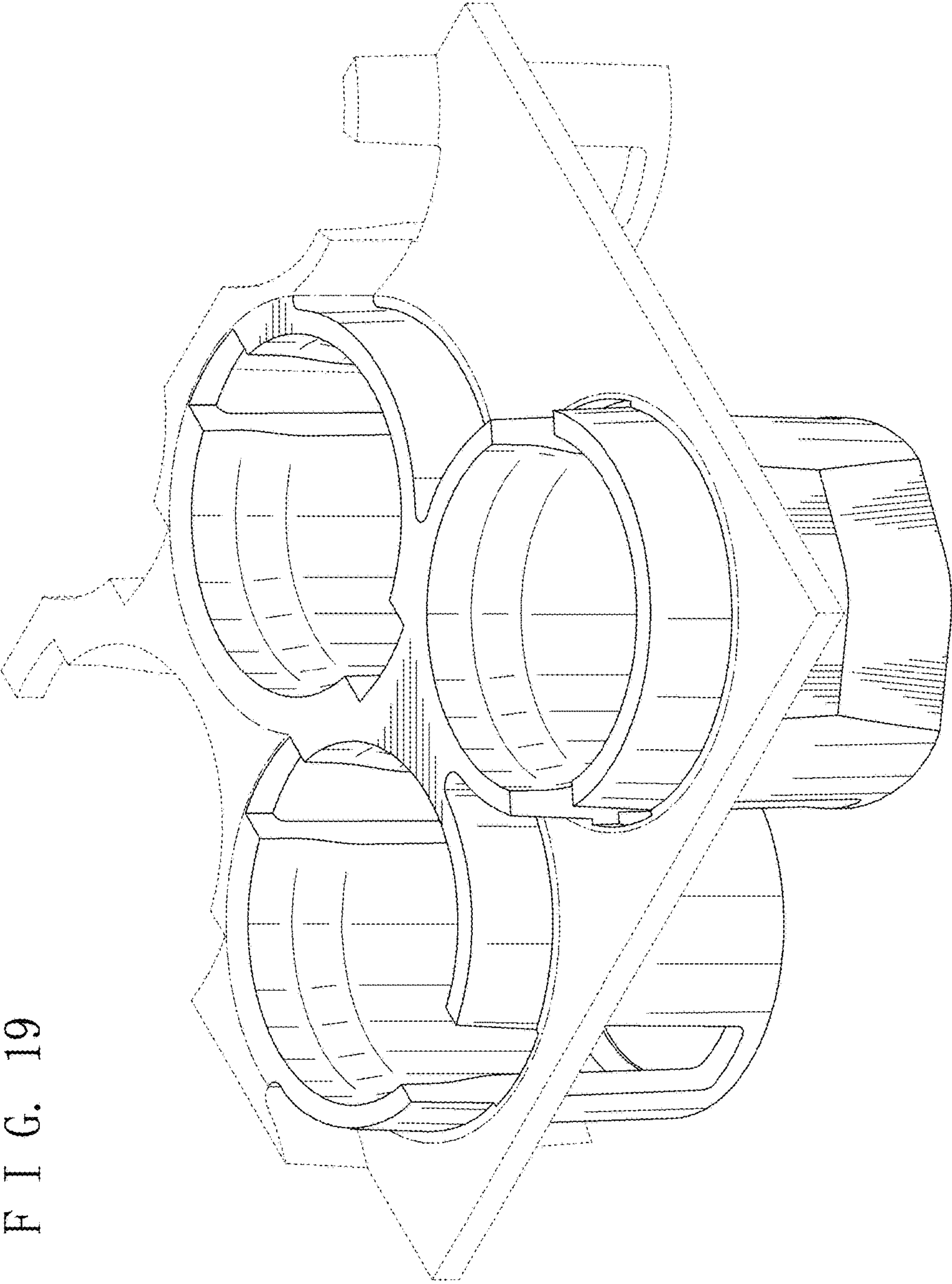


FIG. 19

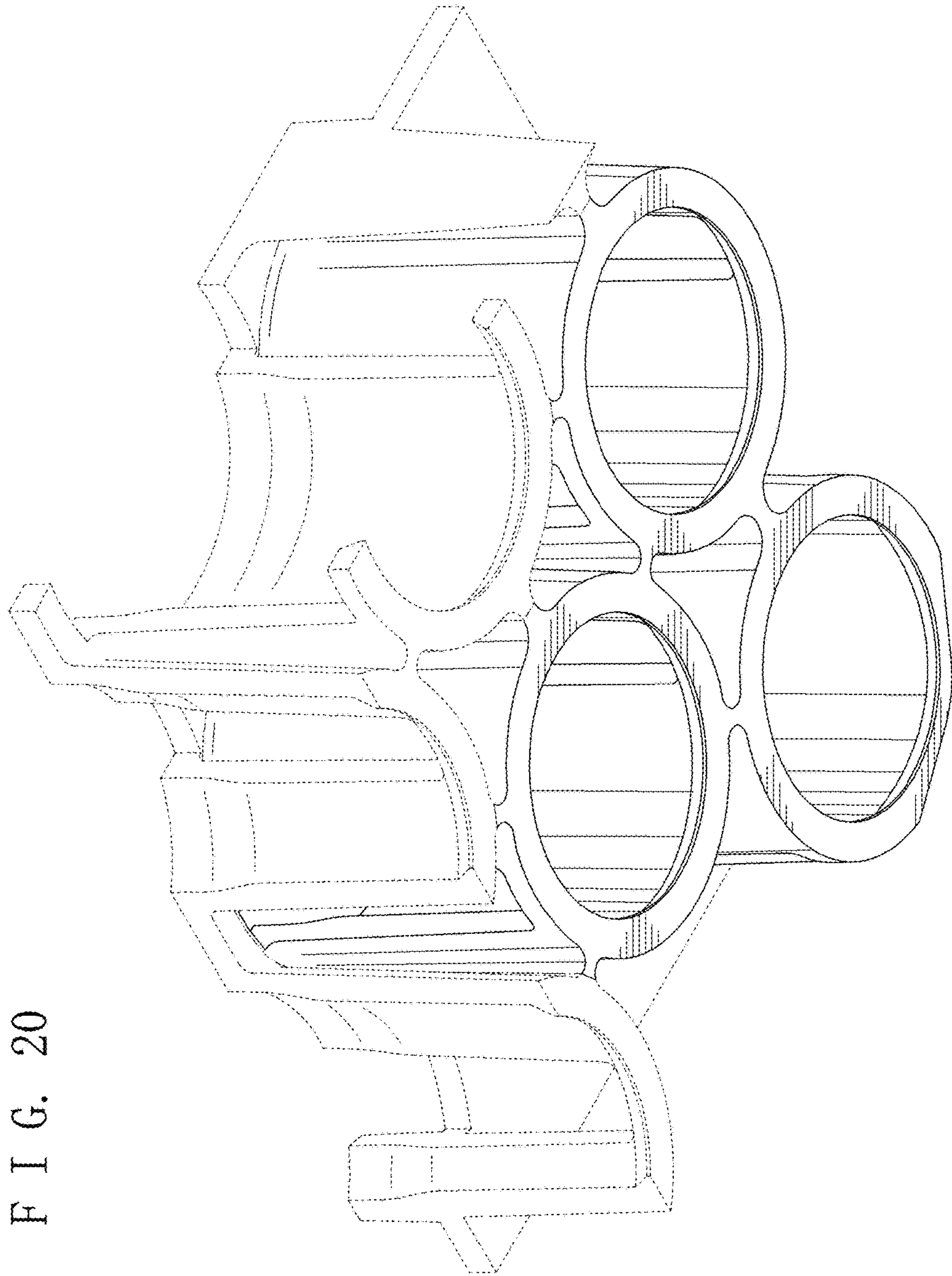


FIG. 20

FIG. 21

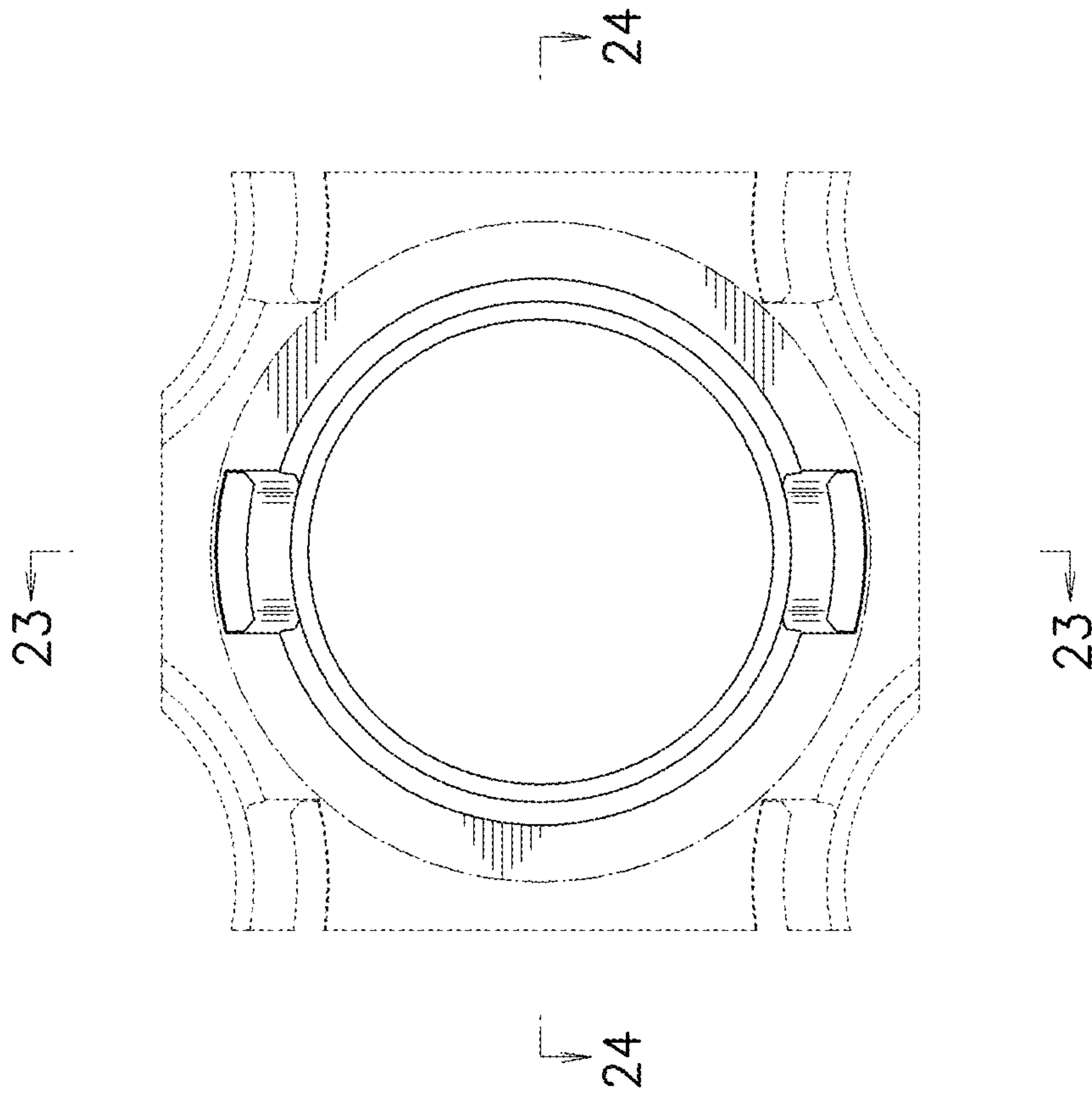


FIG. 22

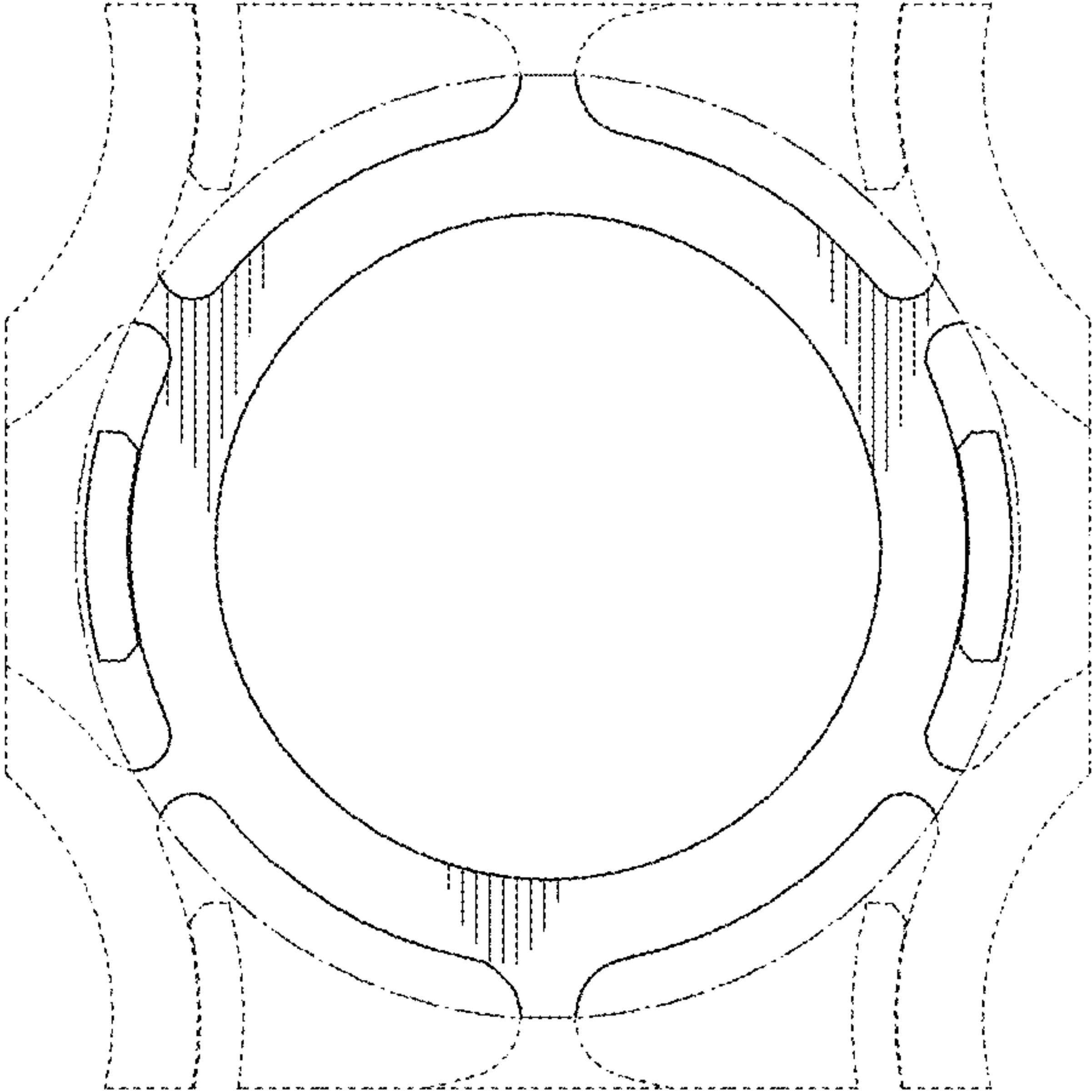




FIG. 23

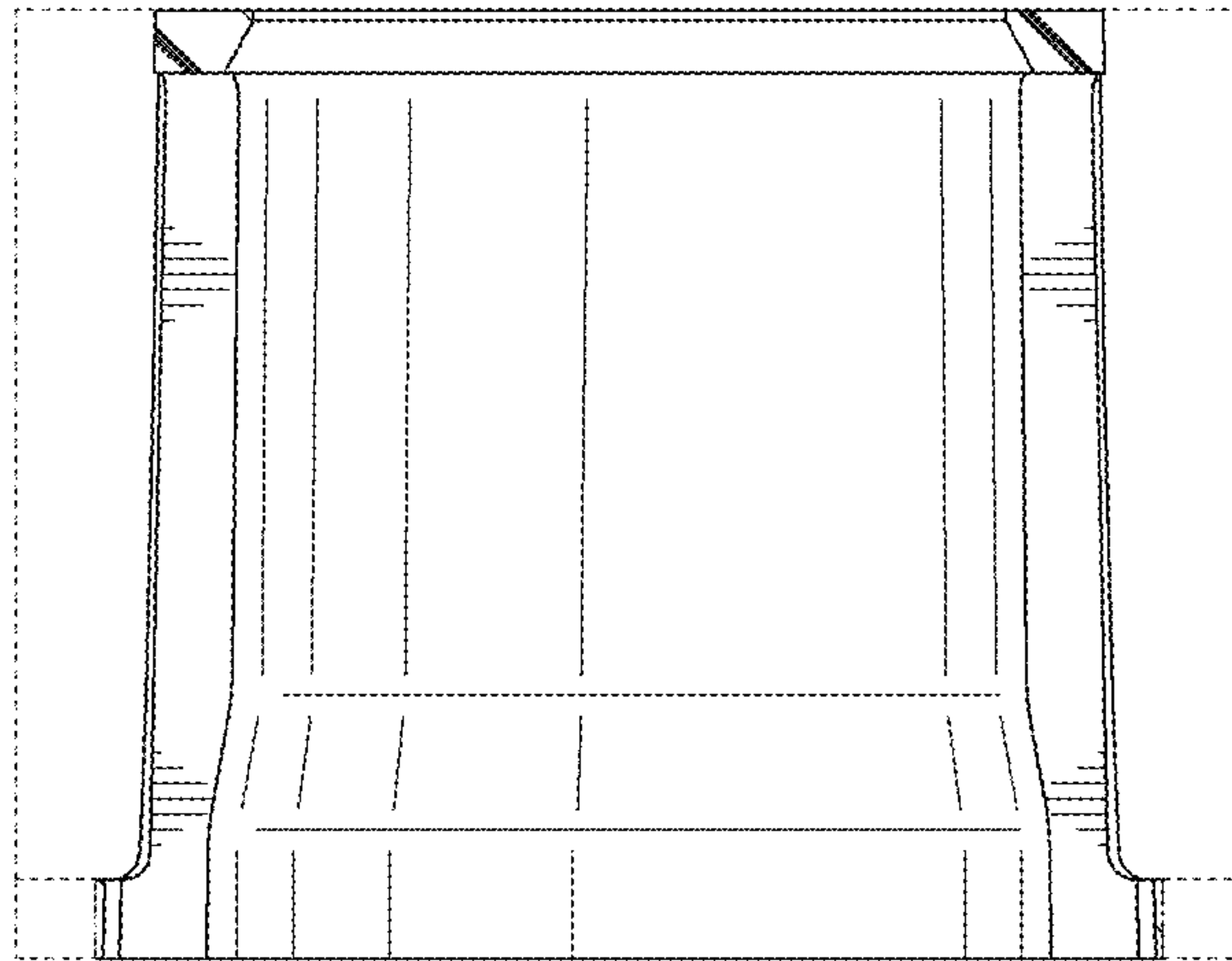


FIG. 24

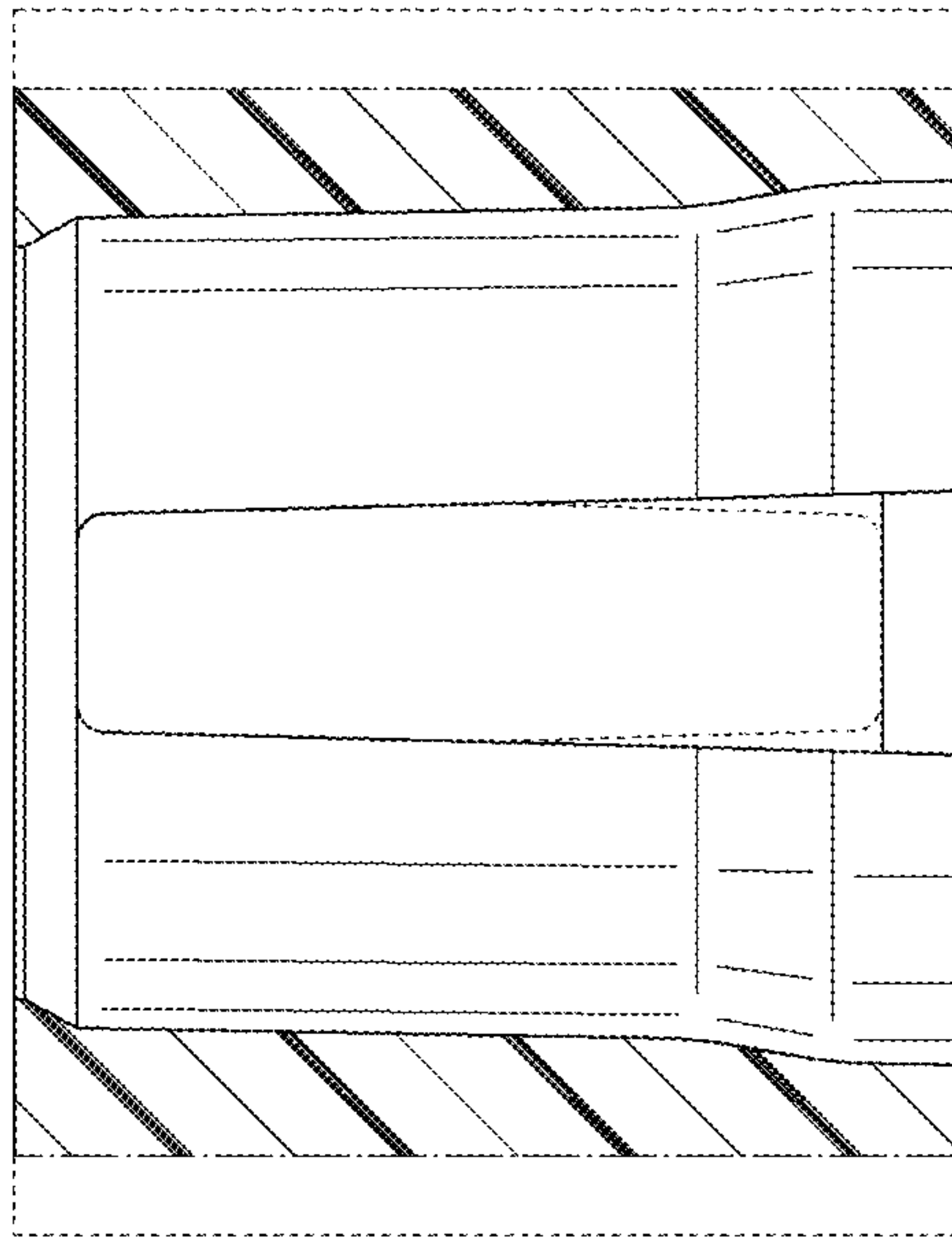


FIG. 25

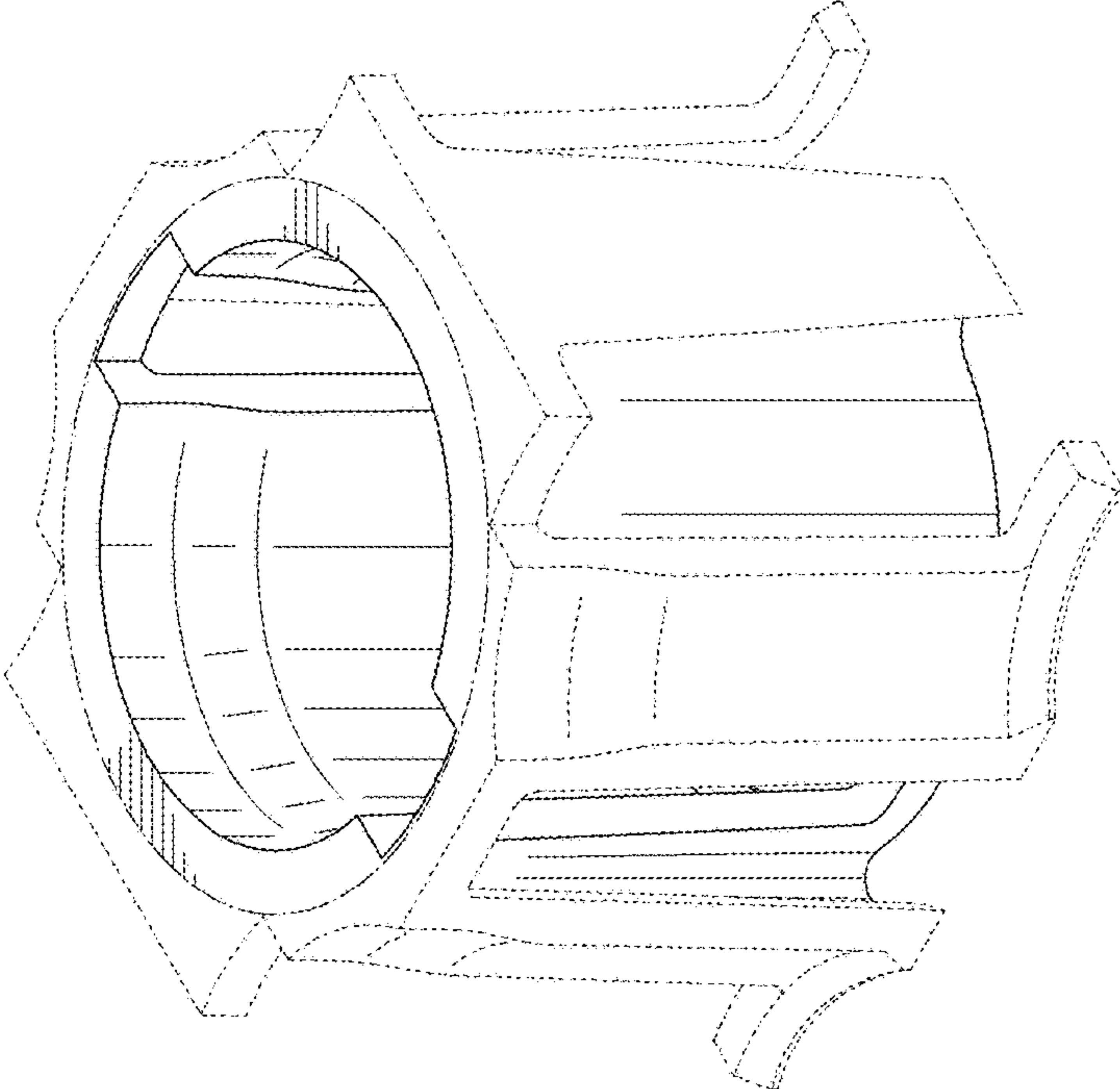


FIG. 26

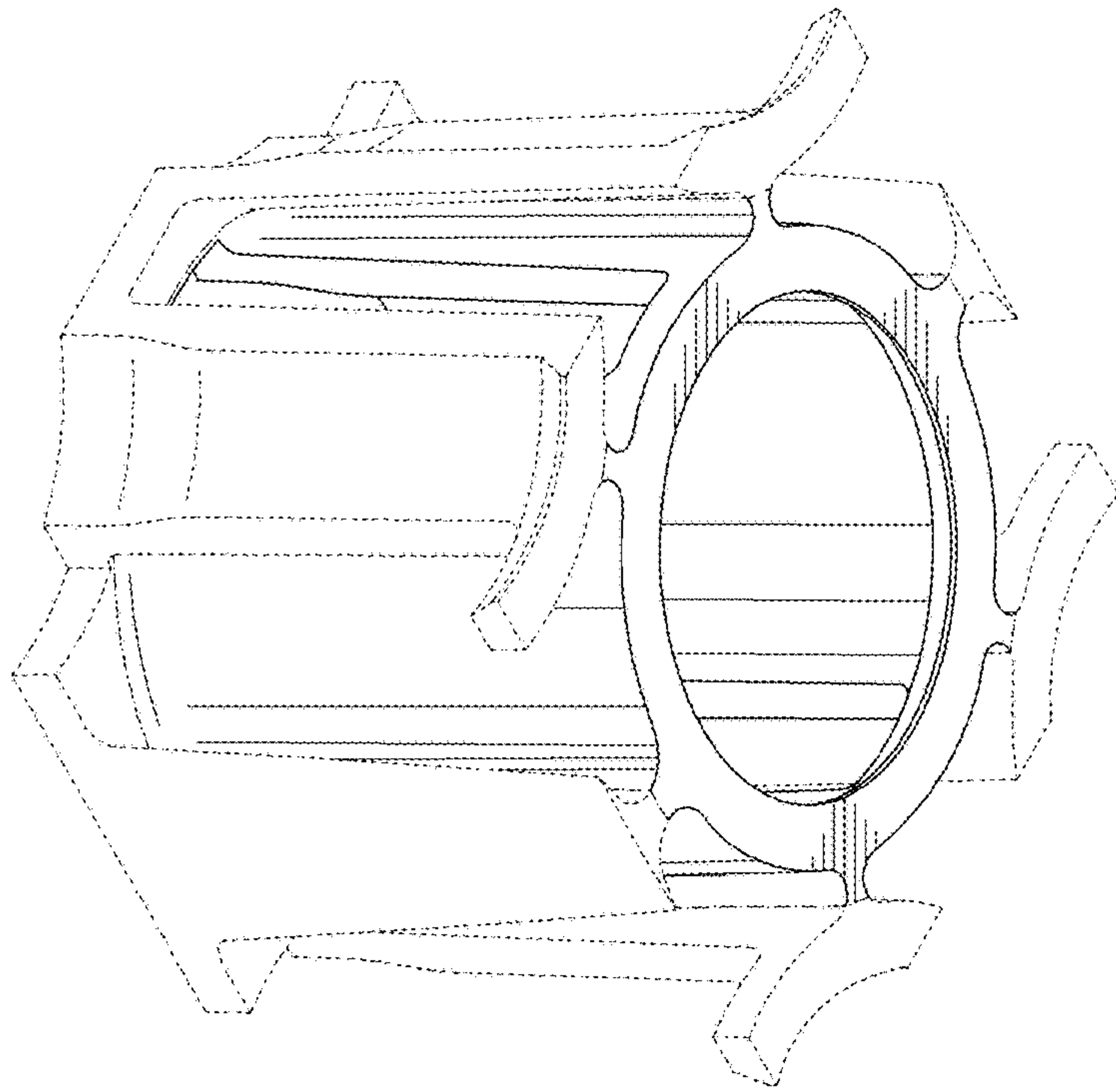


FIG. 27

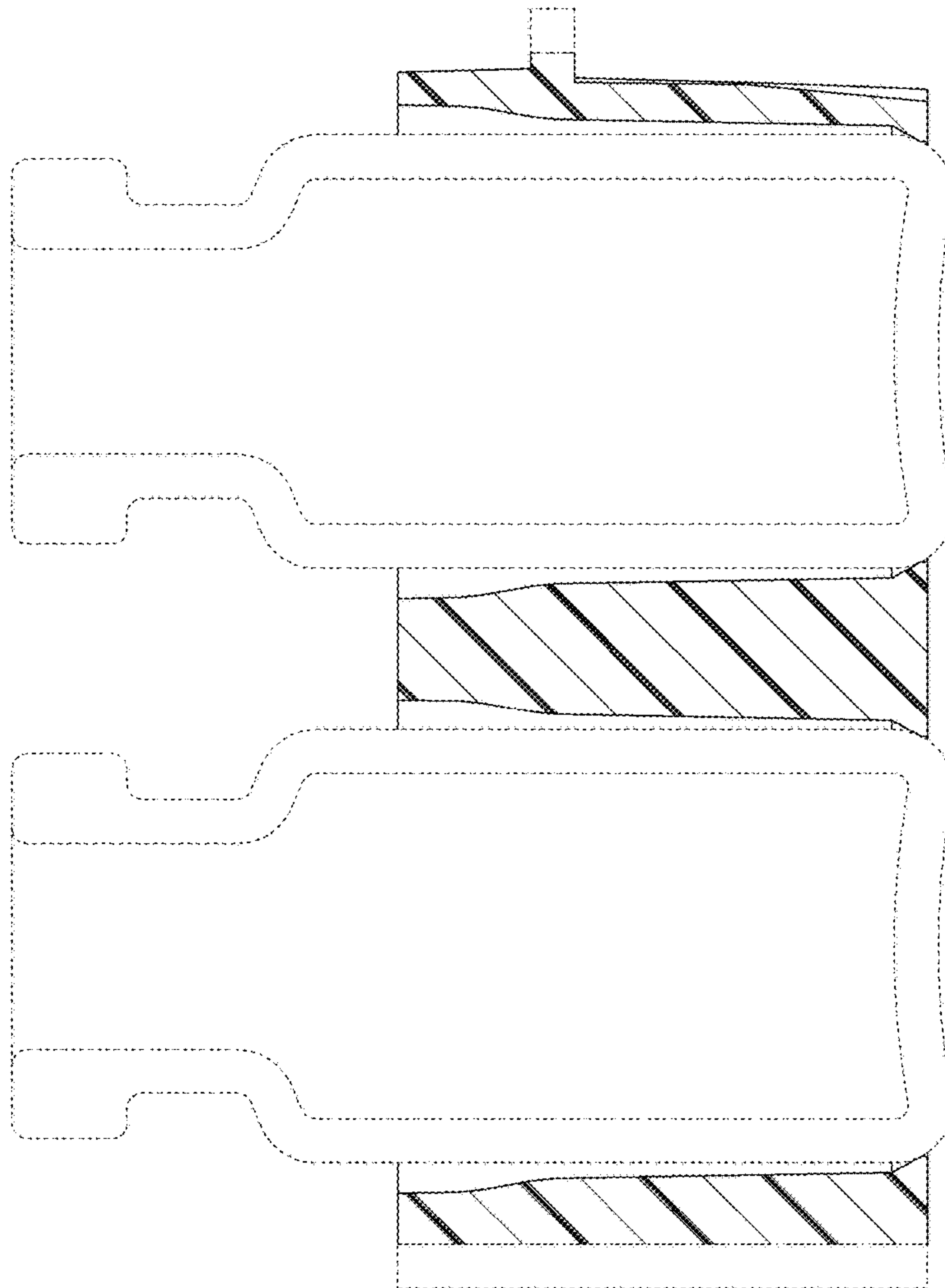




FIG. 28

