



US00D992610S

(12) **United States Design Patent** (10) **Patent No.:** **US D992,610 S**  
**Penry et al.** (45) **Date of Patent:** **\*\* Jul. 18, 2023**

(54) **DOWNHOLE TOOL INCLUDING HINGES**

(74) *Attorney, Agent, or Firm* — MH2 Technology Law Group LLP

(71) Applicant: **INNOVEX DOWNHOLE SOLUTIONS, INC.**, Houston, TX (US)

(57) **CLAIM**

The ornamental design for a downhole tool including hinges, as shown and described.

(72) Inventors: **Christopher Penry**, Weatherford, TX (US); **Charles Carroll**, Millsap, TX (US); **Everette Johnston**, Perrin, TX (US); **Jesse L. Neel**, Willow Park, TX (US)

**DESCRIPTION**

(73) Assignee: **INNOVEX DOWNHOLE SOLUTIONS, INC.**, Houston, TX (US)

FIG. 1 is a perspective view of a first embodiment of a downhole tool including hinges.

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

FIG. 2 is an end view of the first embodiment of the downhole tool including hinges.

(21) Appl. No.: **29/782,818**

FIG. 3 is a first side view of the first embodiment of the downhole tool including hinges.

(22) Filed: **May 10, 2021**

FIG. 4 is a second side view of the first embodiment of the downhole tool including hinges. The second side view of FIG. 4 is rotated approximately 90 degrees from the first side view of FIG. 3.

(51) **LOC (14) Cl.** ..... **15-04**

FIG. 5 is a perspective view of a second embodiment of the downhole tool including hinges.

(52) **U.S. Cl.**

FIG. 6 is an end view of the second embodiment of the downhole tool including hinges.

USPC ..... **D15/21**

(58) **Field of Classification Search**

FIG. 7 is a first side view of the second embodiment of the downhole tool including hinges.

USPC ..... D15/21, 122, 123, 131, 132, 135, 136, D15/138; D22/134, 199; D7/300, 306, D7/311, 397, 601; D8/354, 349, 356  
(Continued)

FIG. 8 is a second side view of the second embodiment of the downhole tool including hinges. The second side view of FIG. 8 is rotated approximately 180 degrees from the first side view of FIG. 7.

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FIG. 9 is a perspective view of a third embodiment of the downhole tool including hinges.

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FIG. 10 is an end view of the third embodiment of the downhole tool including hinges.

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Author Unknown, Frank's International Direct, vol. 1, Issue 2, 2001, pp. 9-10.

FIG. 11 is a first side view of the third embodiment of the downhole tool including hinges.

*Primary Examiner* — Michael C Stout  
*Assistant Examiner* — Fitzgerald L Butac

FIG. 12 is a second side view of the third embodiment of the downhole tool including hinges. The second side view of FIG. 12 is rotated approximately 90 degrees from the first side view of FIG. 11.

FIG. 13 is a perspective view of fourth embodiment of the downhole tool including hinges.

FIG. 14 is an end view of the fourth embodiment of the downhole tool including hinges.

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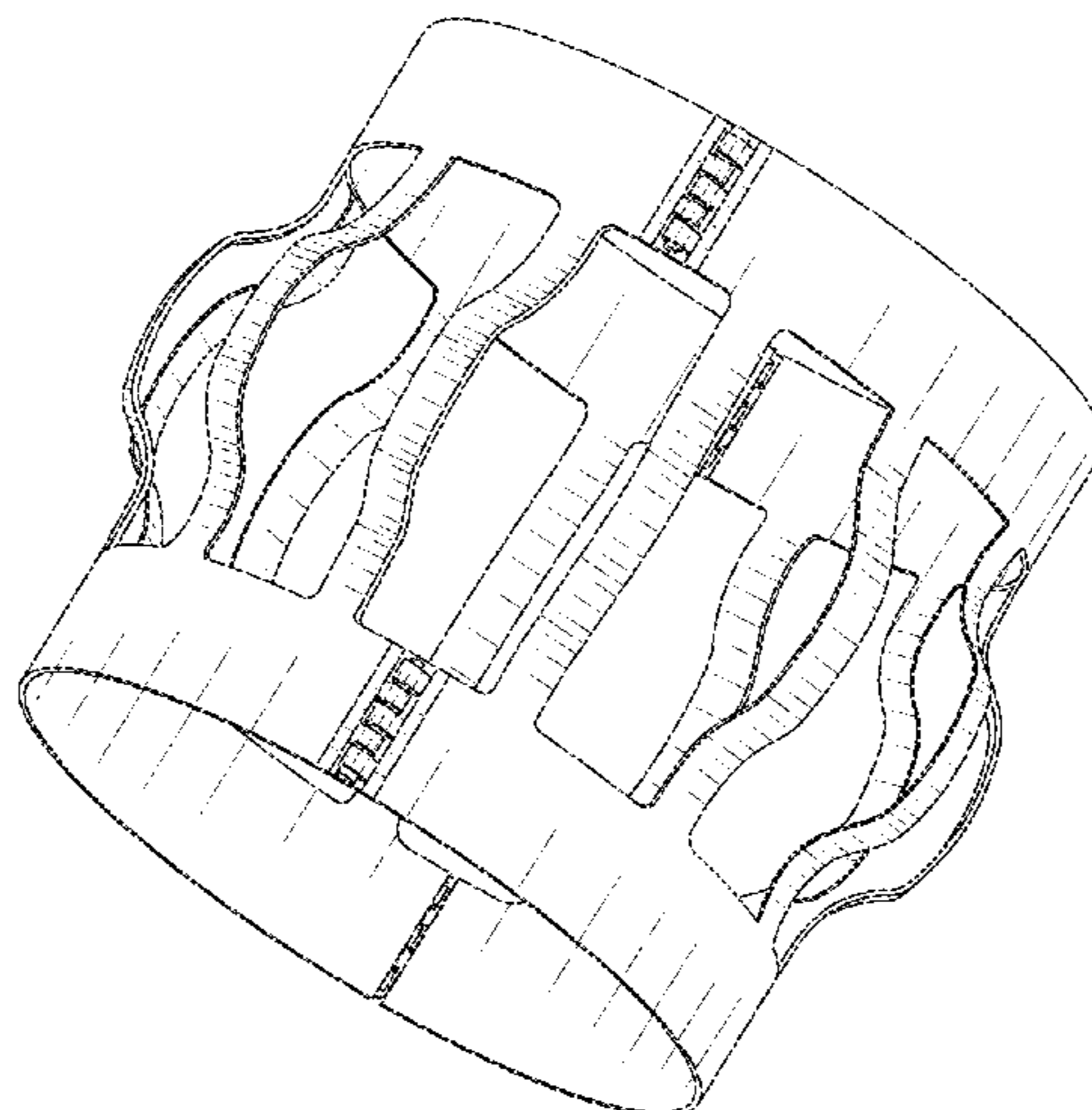


FIG. 15 is a first side view of the fourth embodiment of the downhole tool including hinges; and, FIG. 16 is a second side view of the fourth embodiment of the downhole tool including hinges. The second side view of FIG. 16 is rotated approximately 180 degrees from the first side view of FIG. 15.

**1 Claim, 14 Drawing Sheets**

(58) **Field of Classification Search**

CPC ..... E21B 17/1078; E21B 17/1035; E21B 17/1064; E21B 17/1057

See application file for complete search history.

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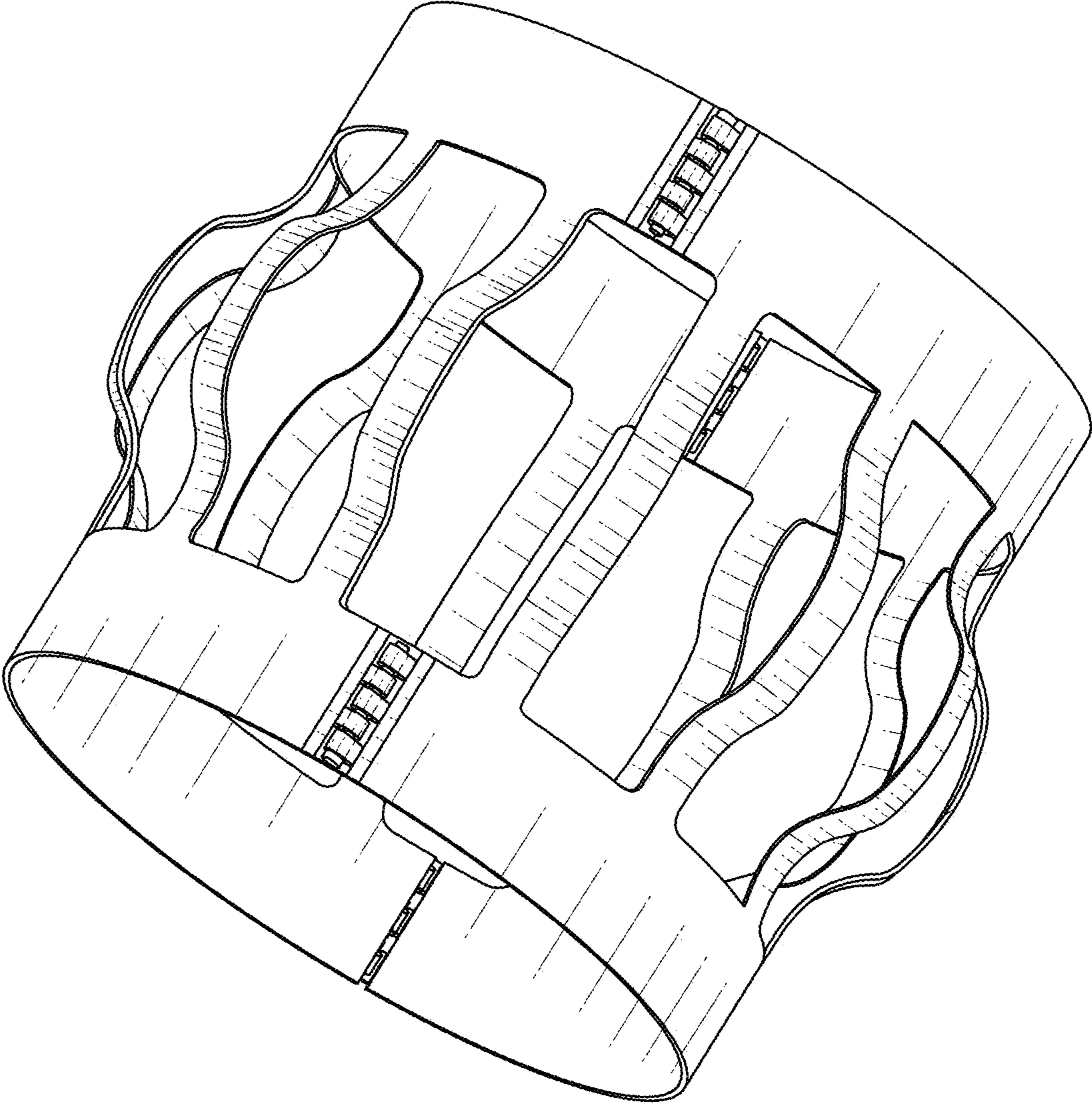


FIG. 1

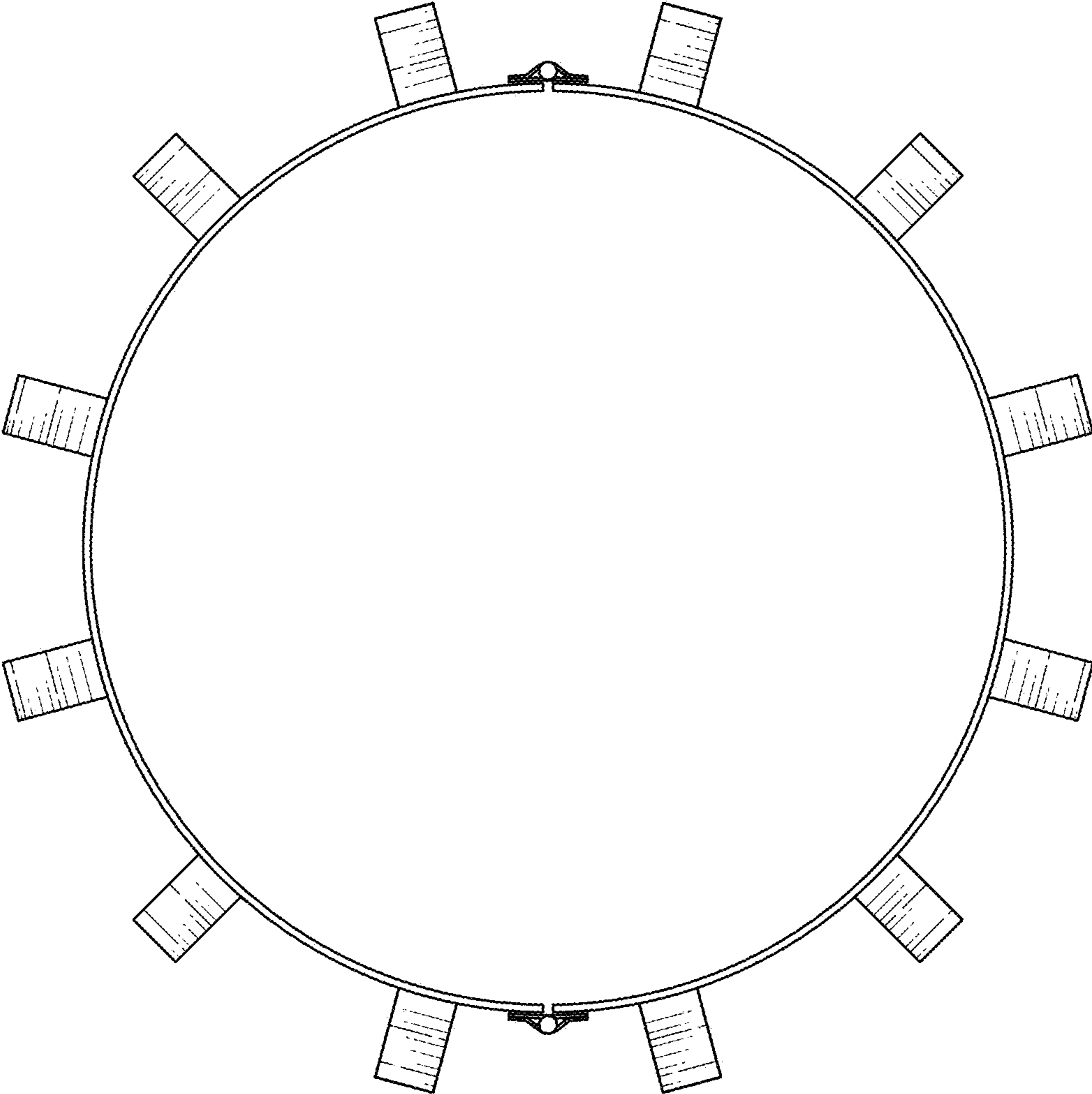


FIG. 2

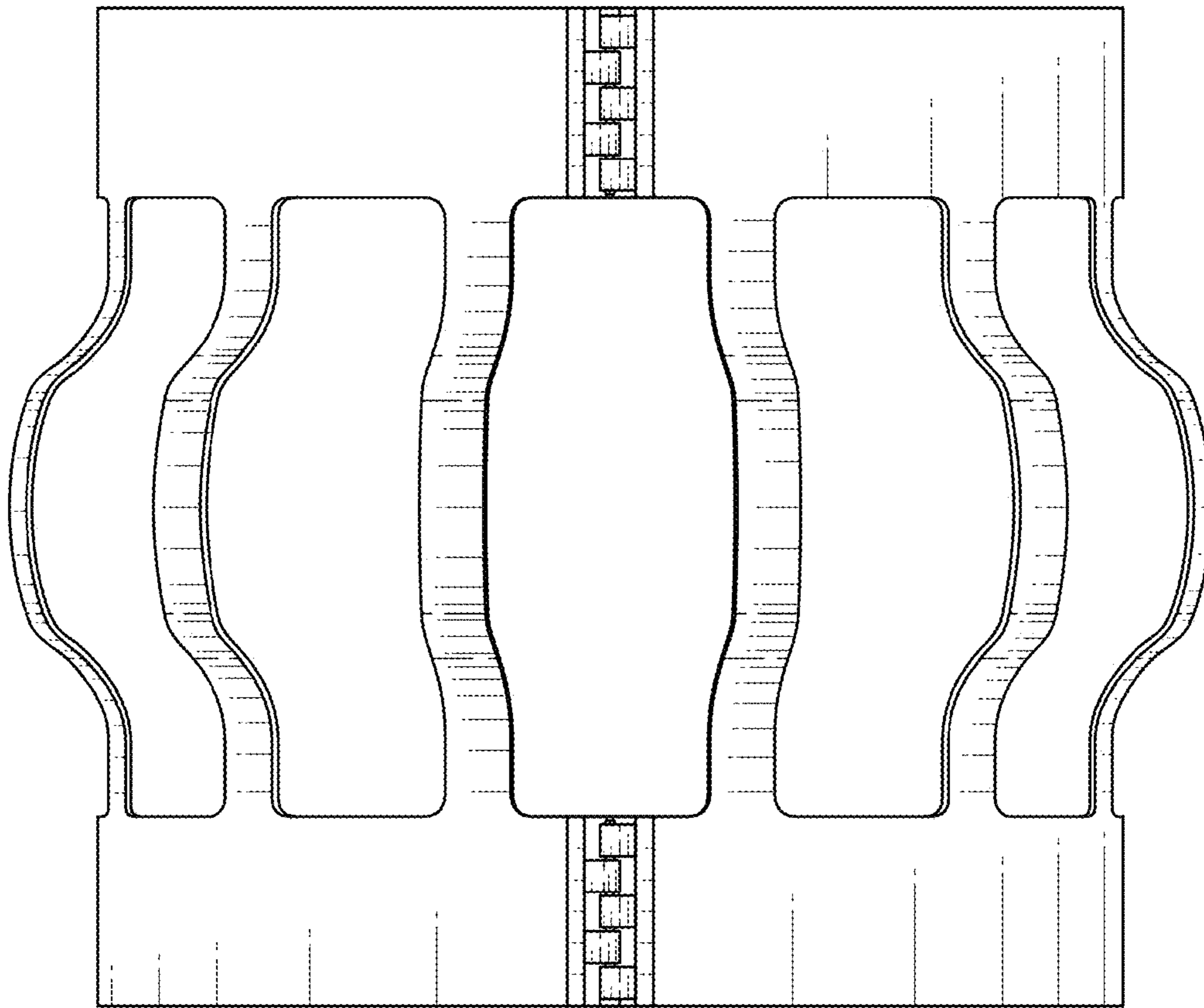


FIG. 3

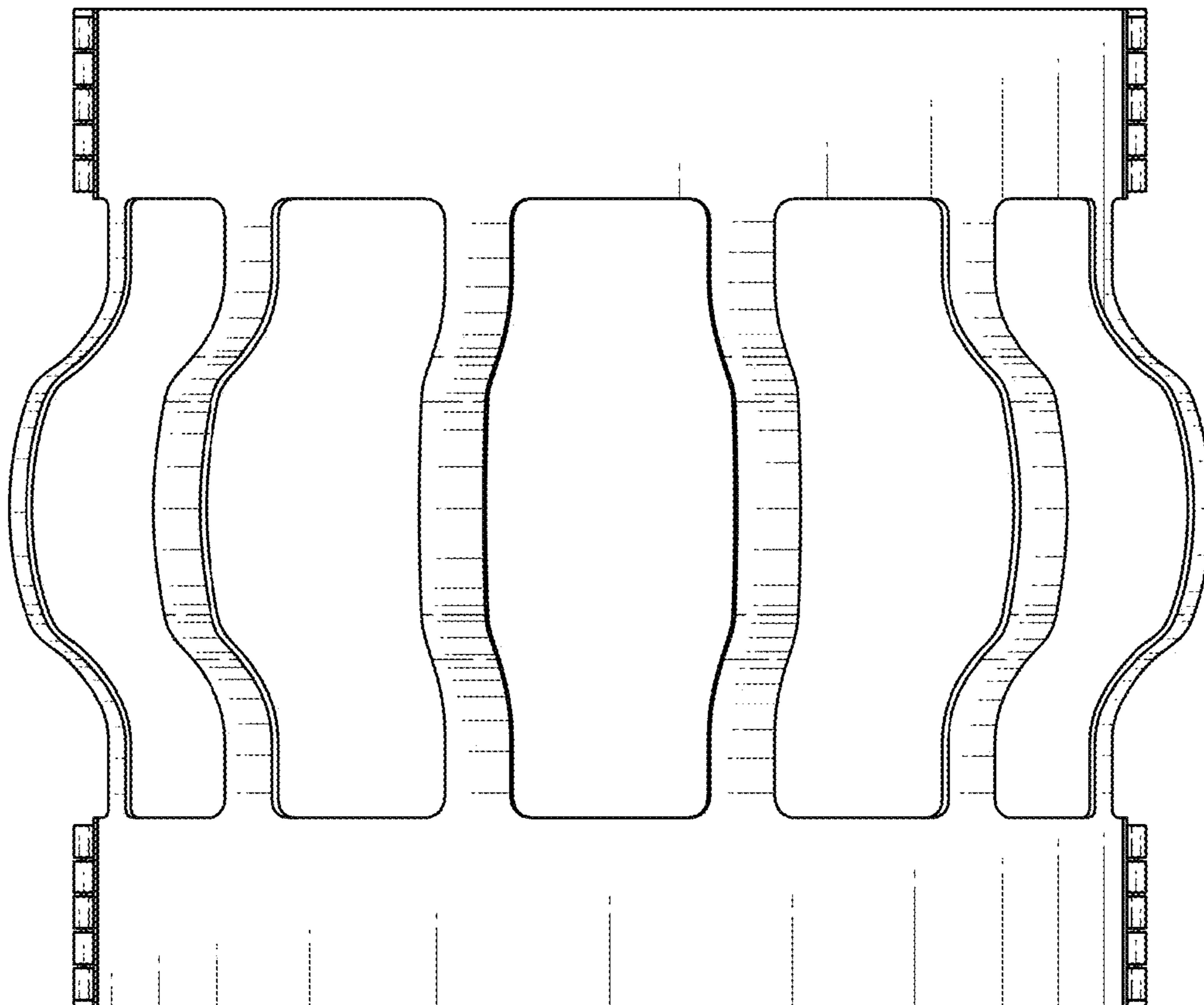


FIG. 4

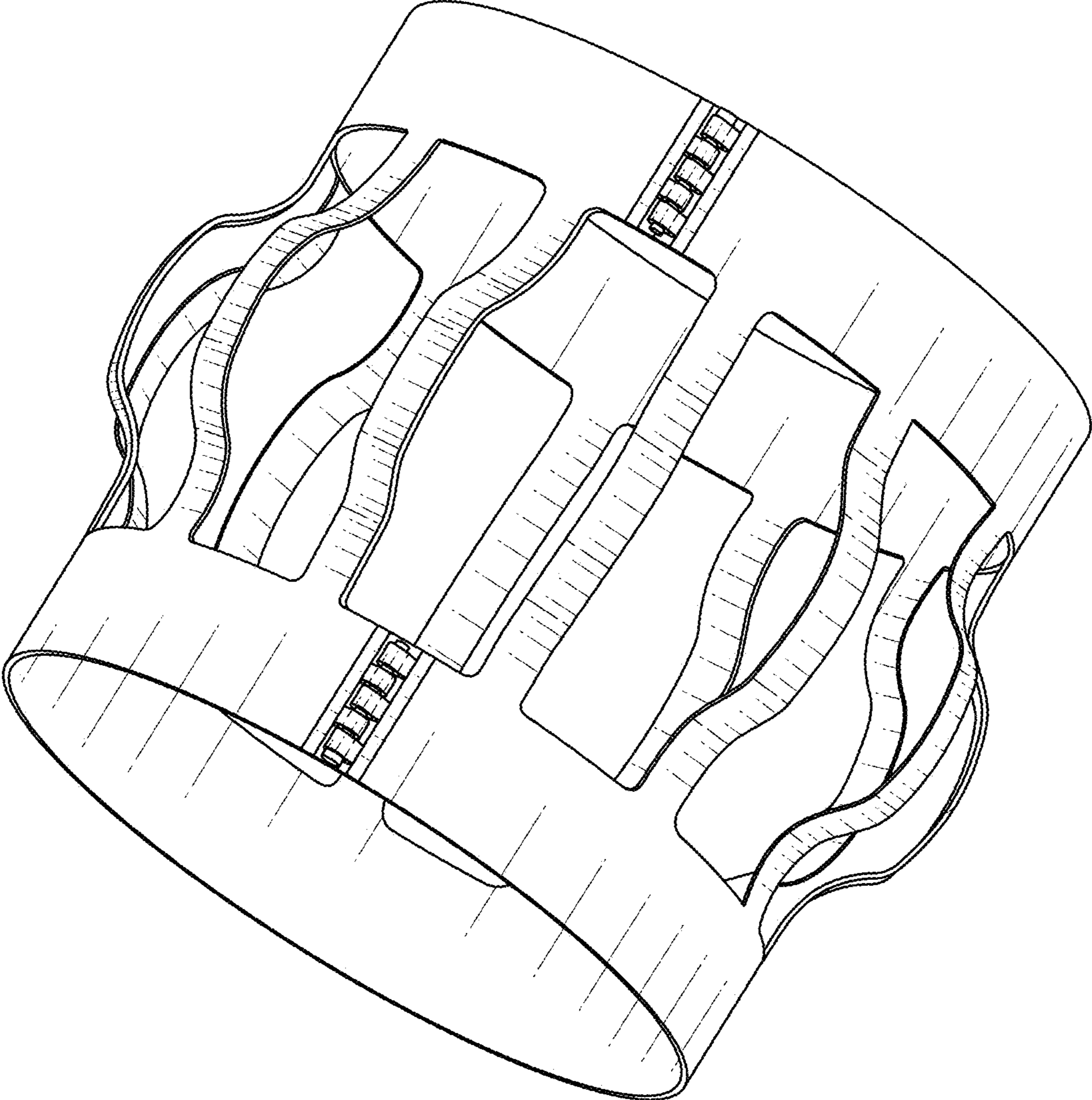


FIG. 5

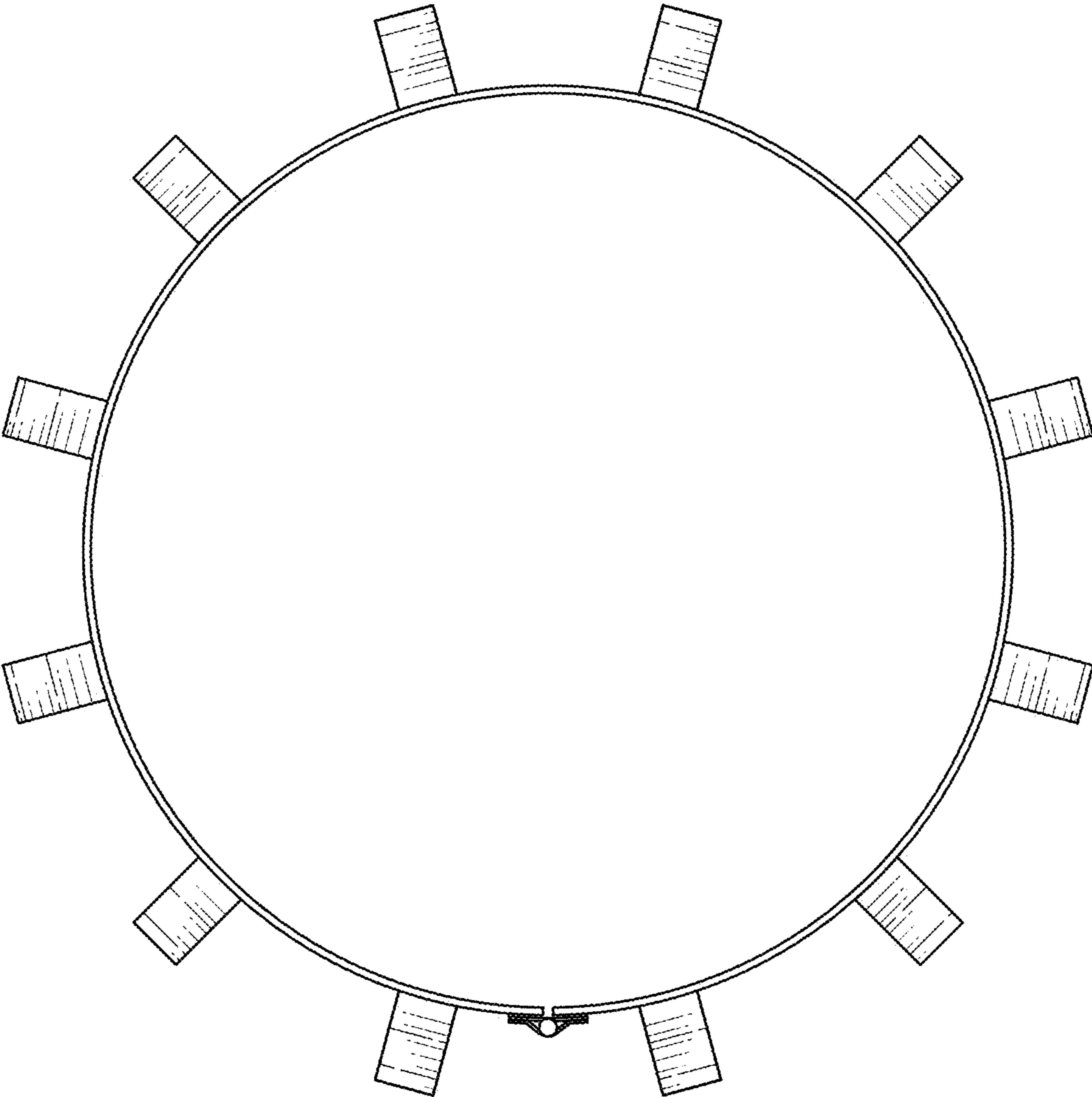


FIG. 6

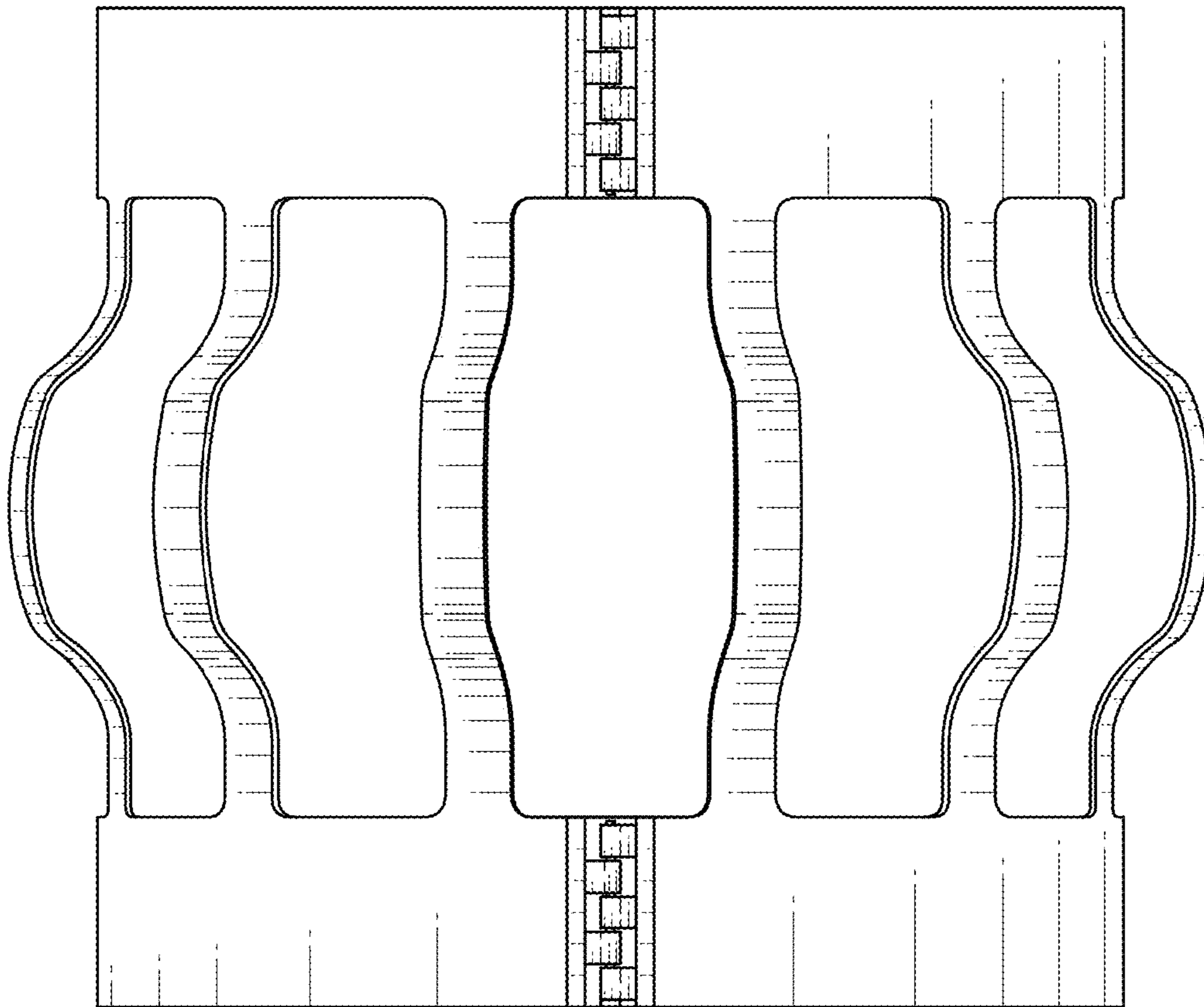


FIG. 7

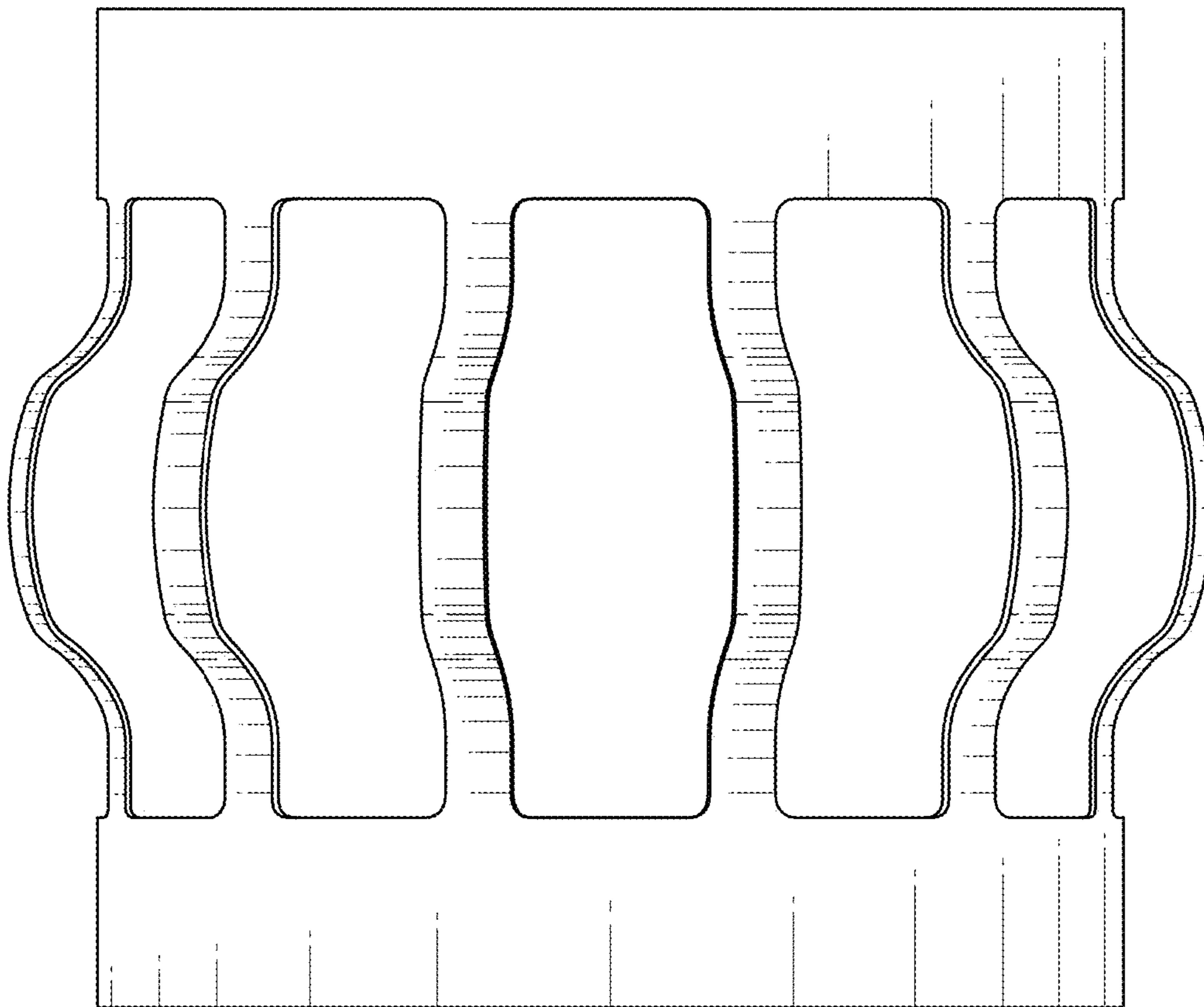


FIG. 8



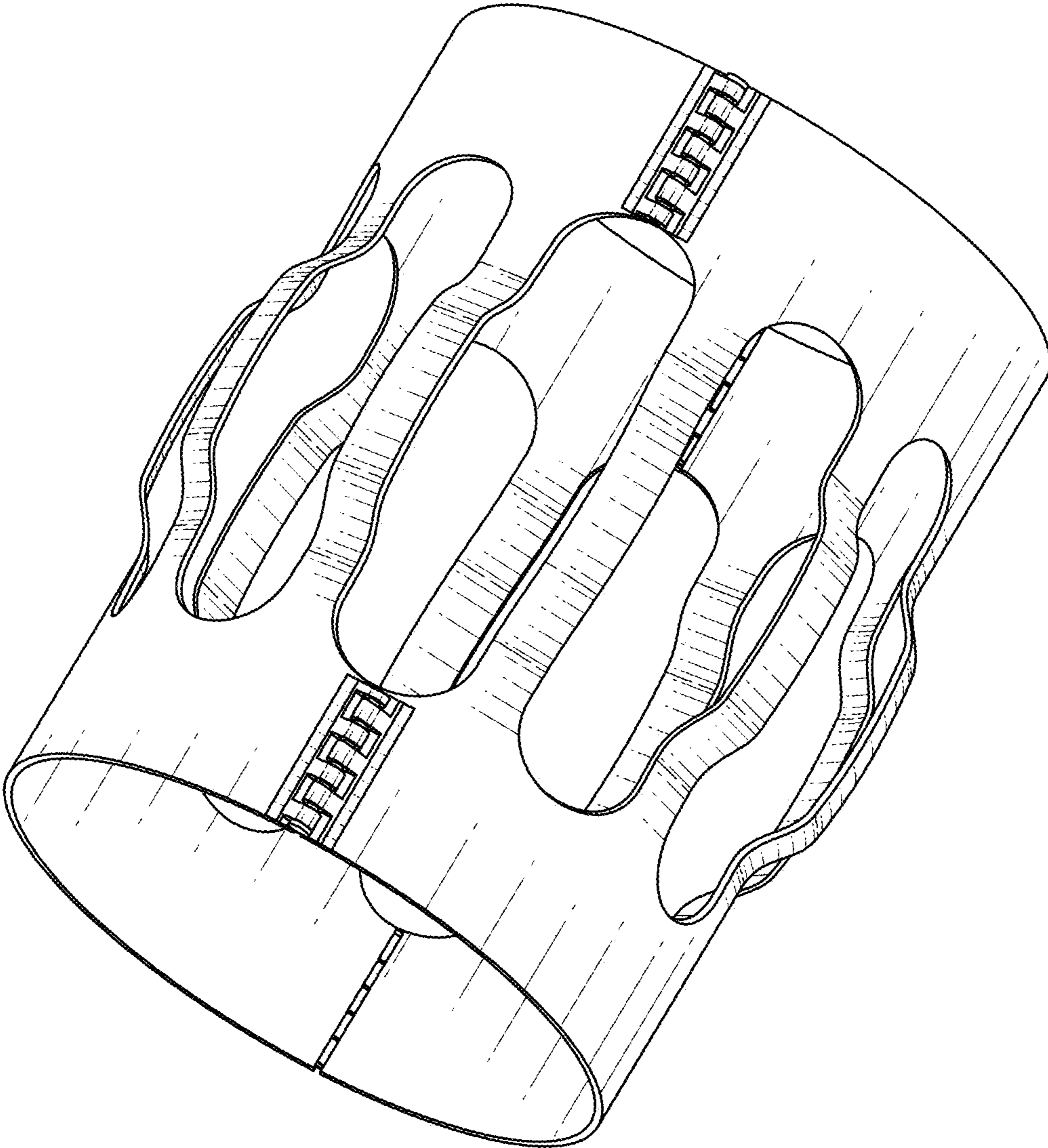


FIG. 9

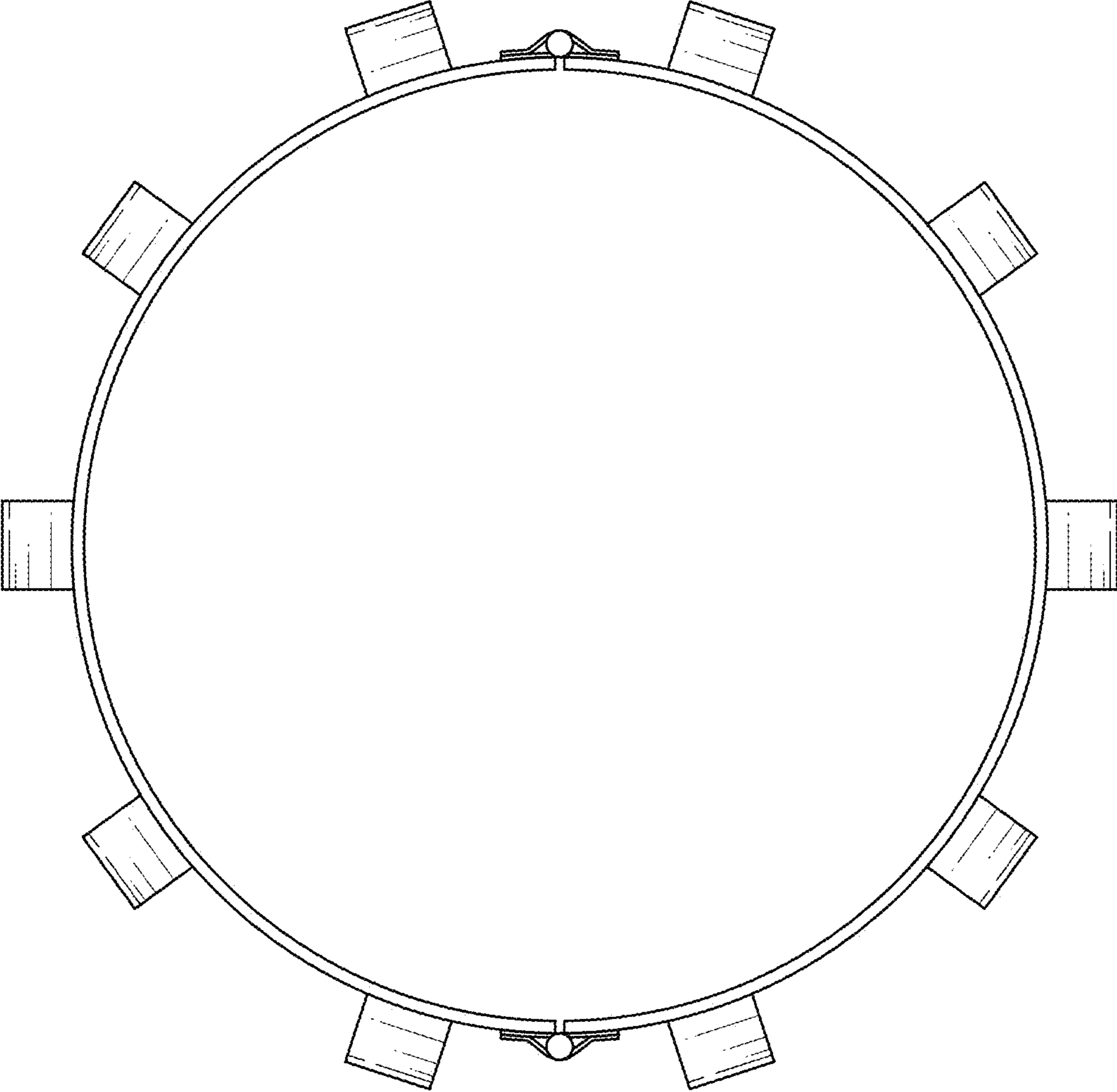


FIG. 10

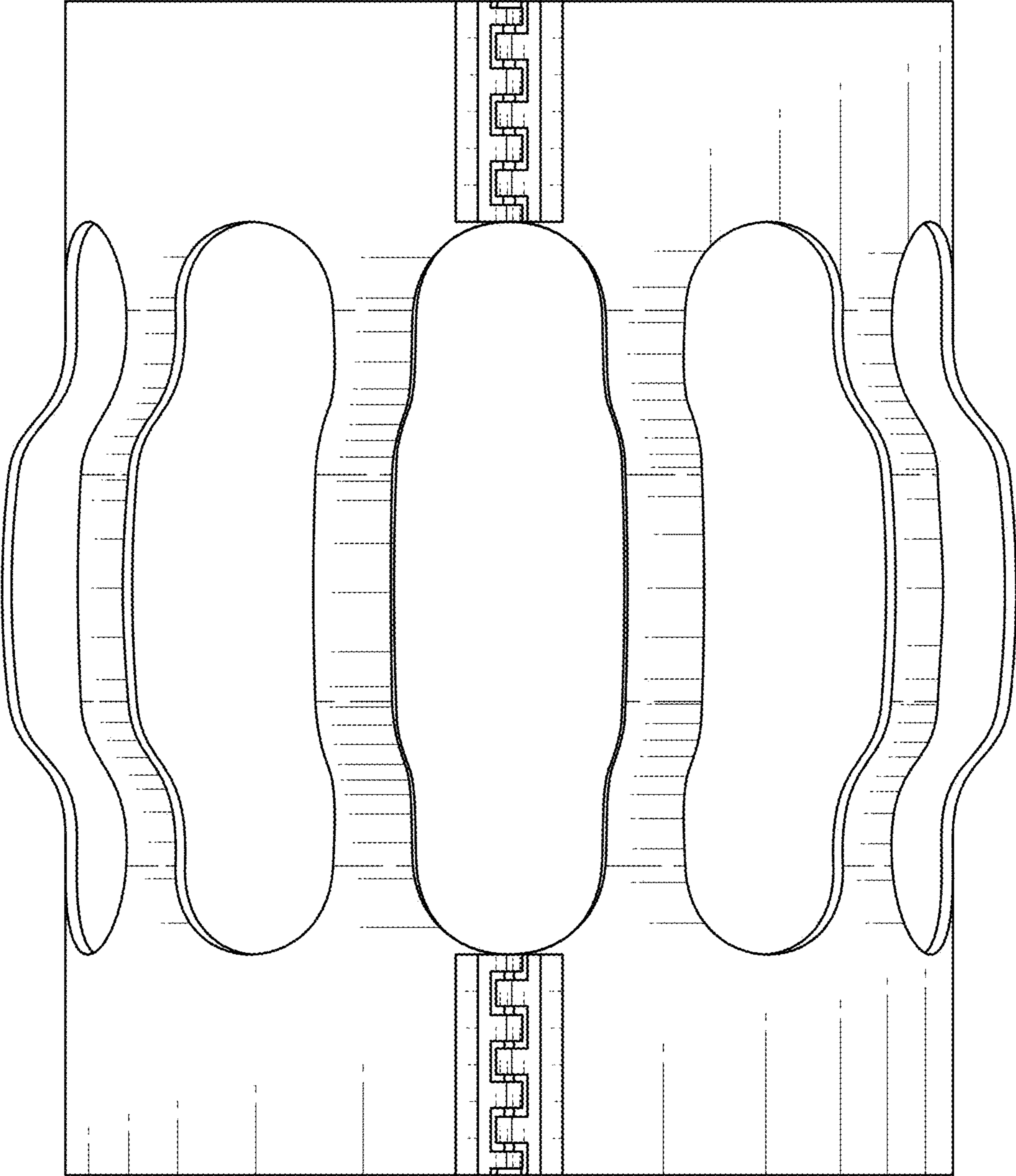


FIG. 11

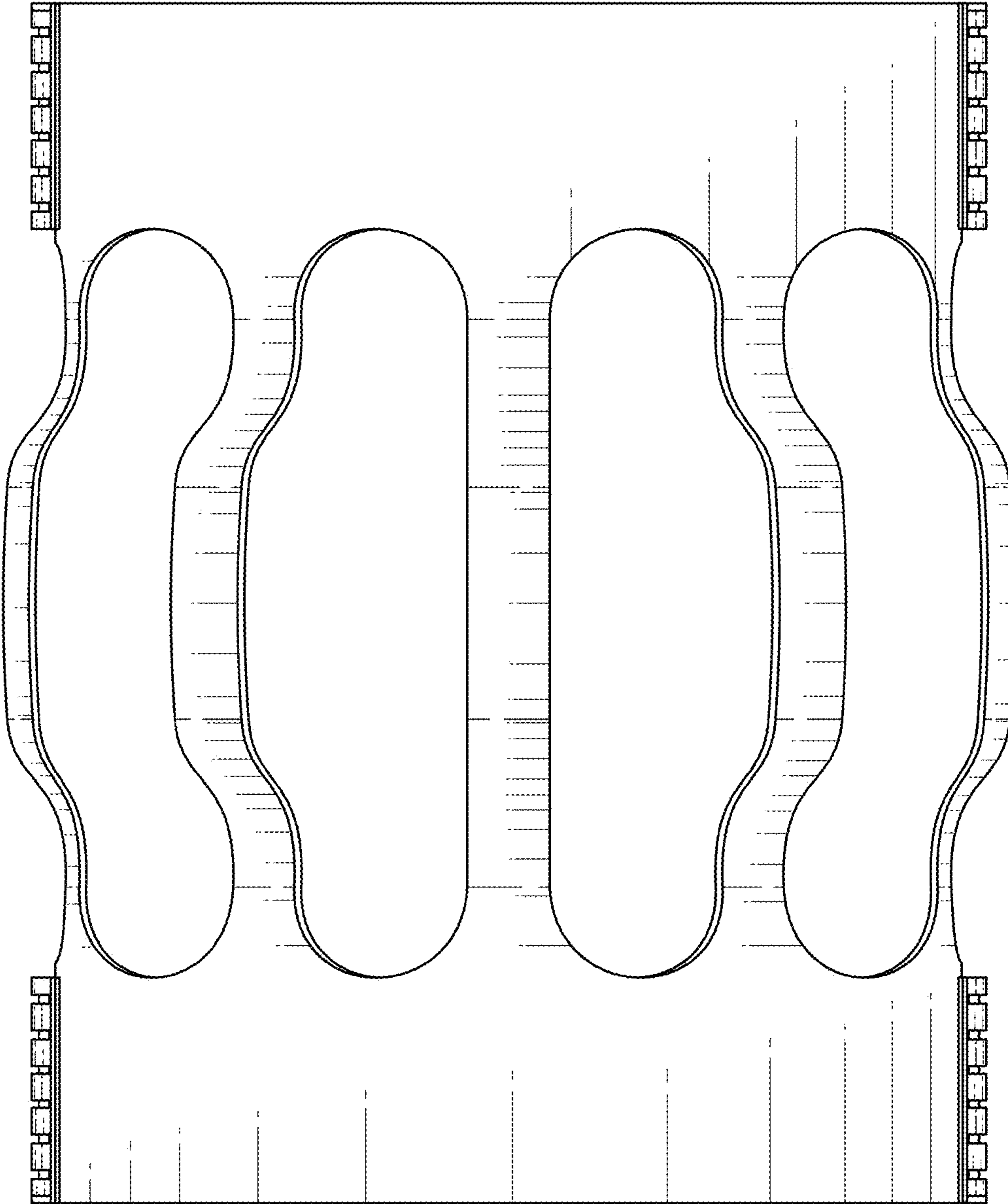


FIG. 12

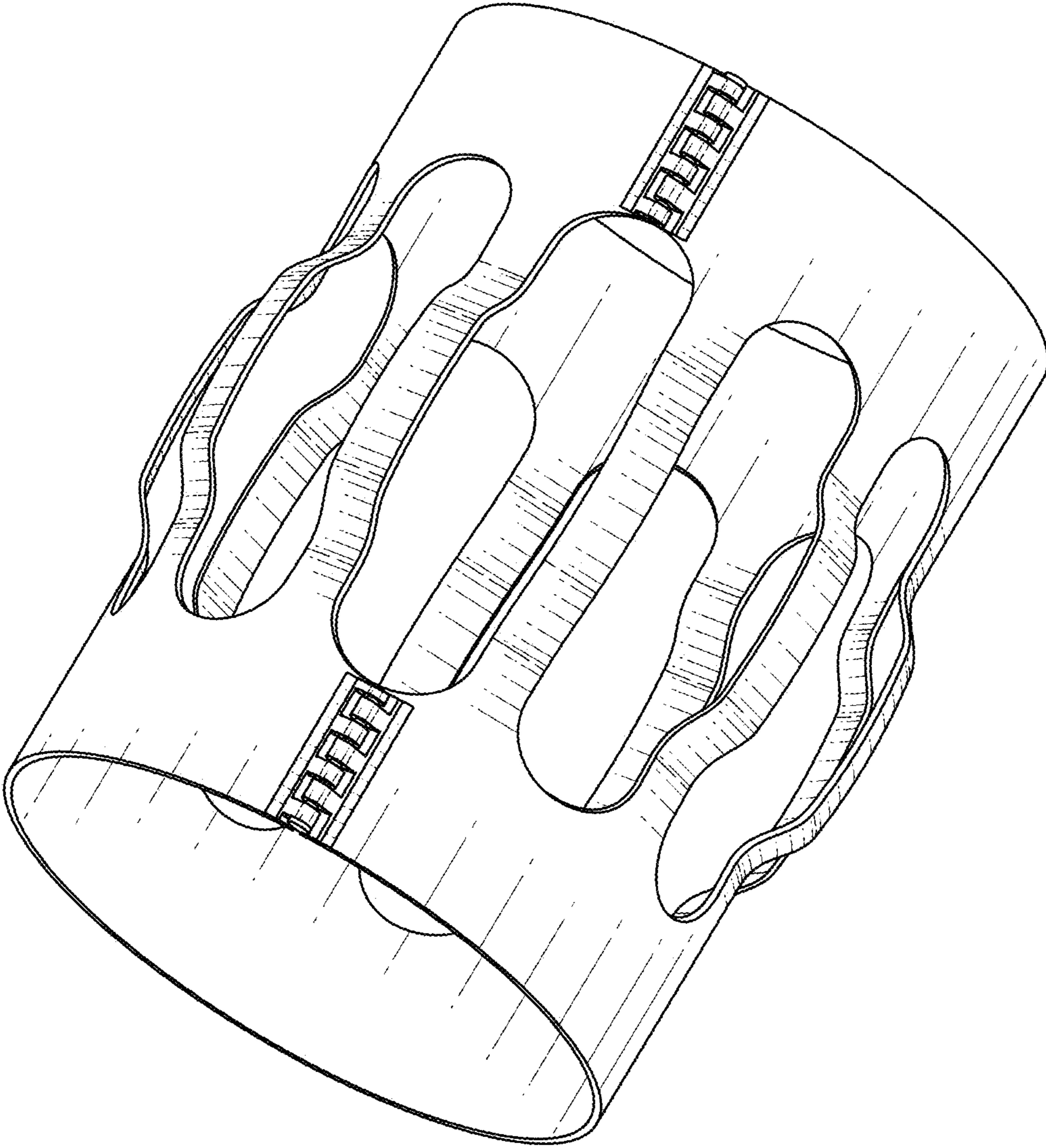


FIG. 13

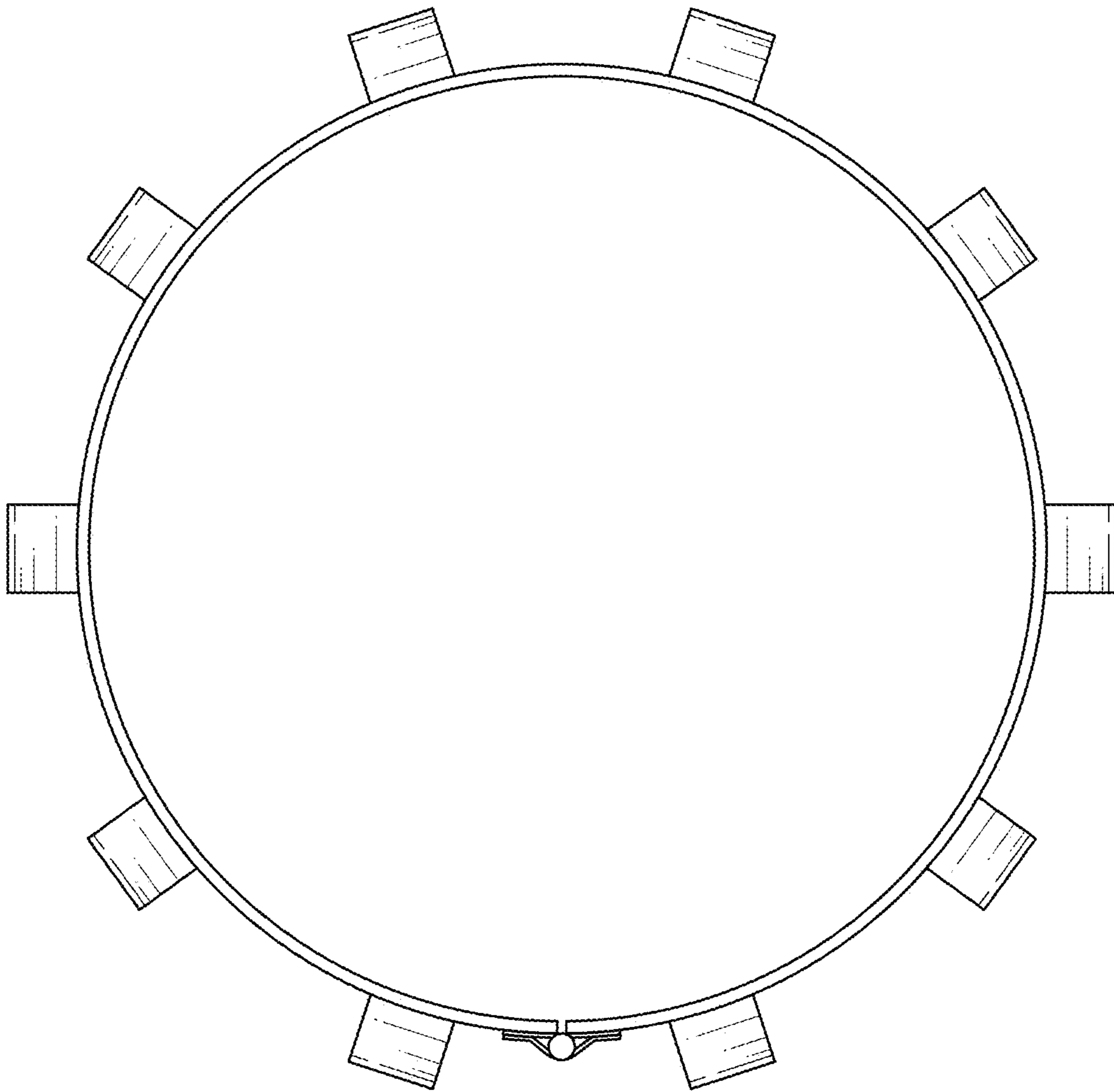


FIG. 14

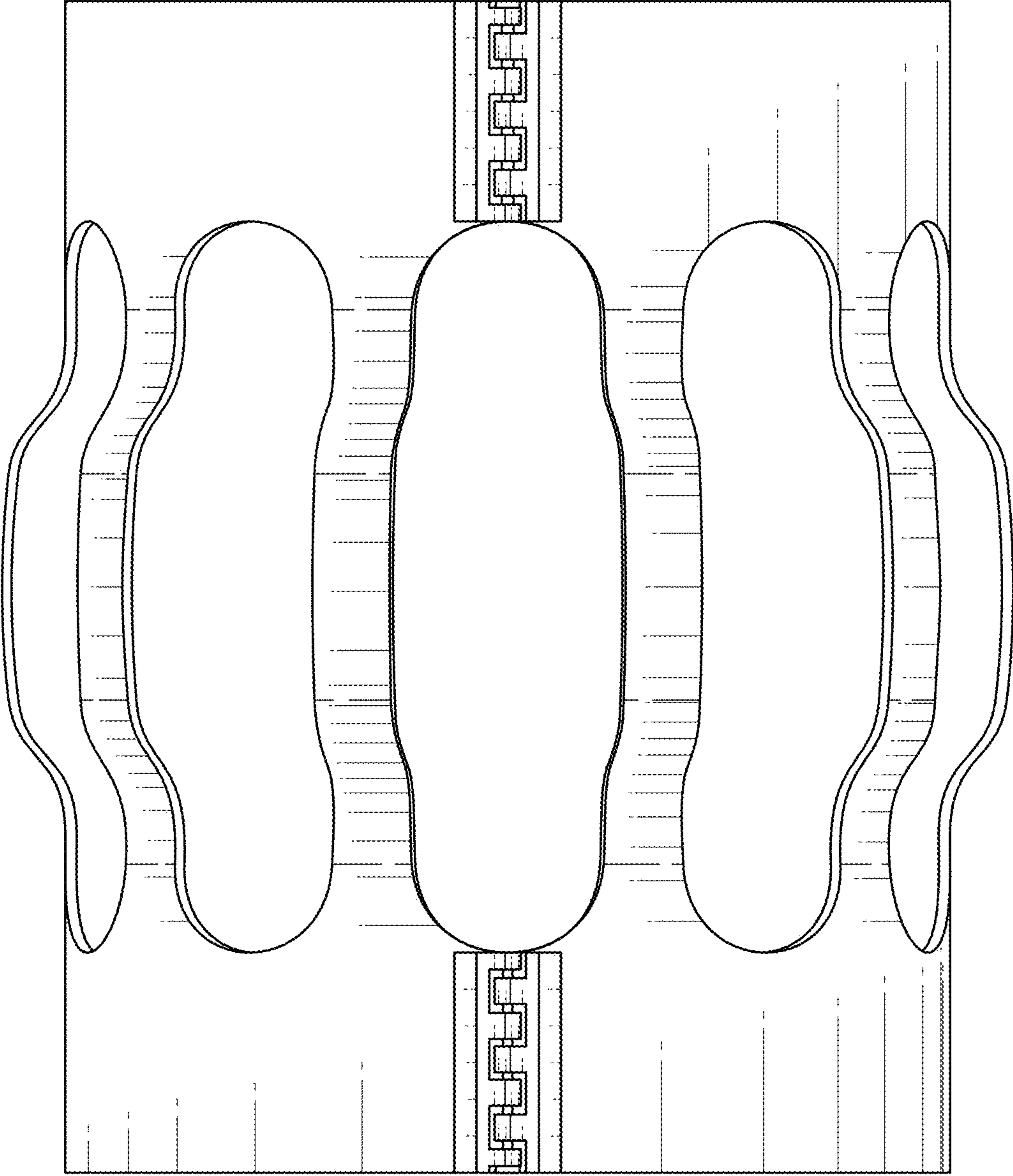


FIG. 15

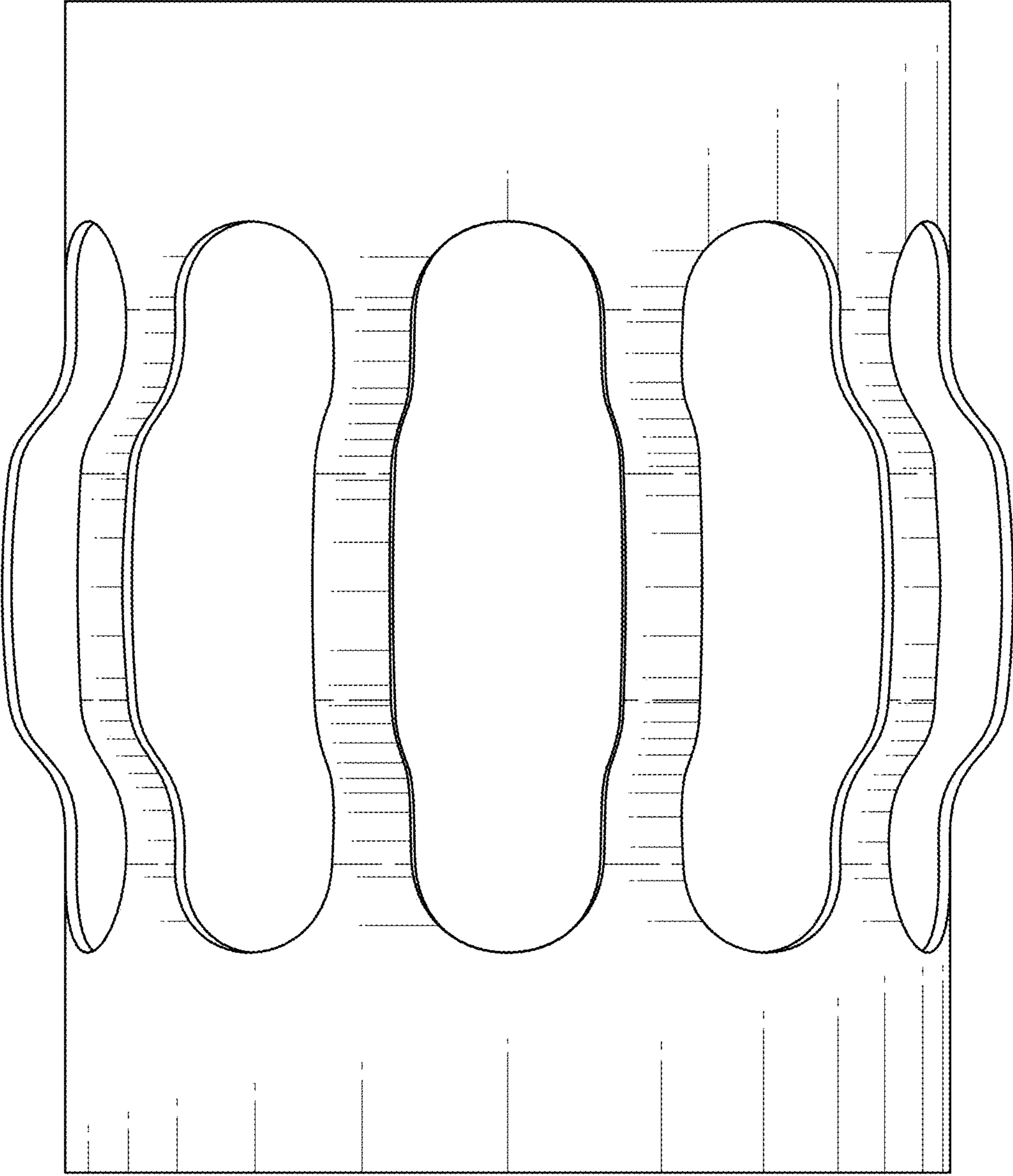


FIG. 16