



US00D957470S

(12) **United States Design Patent** (10) **Patent No.:** **US D957,470 S**  
**Kirk et al.** (45) **Date of Patent:** **\*\* Jul. 12, 2022**

(54) **CENTRALIZER FOR CENTRALIZING TUBING IN A WELLBORE**

CPC .. E21B 17/10; E21B 17/1042; E21B 17/1078; E21B 17/1064; E21B 17/1028

See application file for complete search history.

(71) Applicant: **VULCAN COMPLETION PRODUCTS UK LIMITED**, Aberdeen (GB)

(56) **References Cited**

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(72) Inventors: **Ian Kirk**, Aberdeenshire (GB); **Nathan Kirk**, Aberdeen (GB)

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(73) Assignee: **VULCAN COMPLETION PRODUCTS UK LIMITED**, Aberdeen (GB)

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

(21) Appl. No.: **29/805,531**

(22) Filed: **Aug. 27, 2021**

**Related U.S. Application Data**

(62) Division of application No. 29/637,795, filed on Feb. 22, 2018, now Pat. No. Des. 930,046.

(30) **Foreign Application Priority Data**

Aug. 22, 2017	(EM)	004158376-0001
Aug. 22, 2017	(EM)	004158376-0002
Aug. 22, 2017	(EM)	004158376-0003
Aug. 22, 2017	(EM)	004158376-0004
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Aug. 22, 2017	(EM)	004158376-0008
Aug. 22, 2017	(EM)	004158376-0009
Aug. 22, 2017	(EM)	004158376-0010

(51) **LOC (13) Cl.** ..... **15-03**

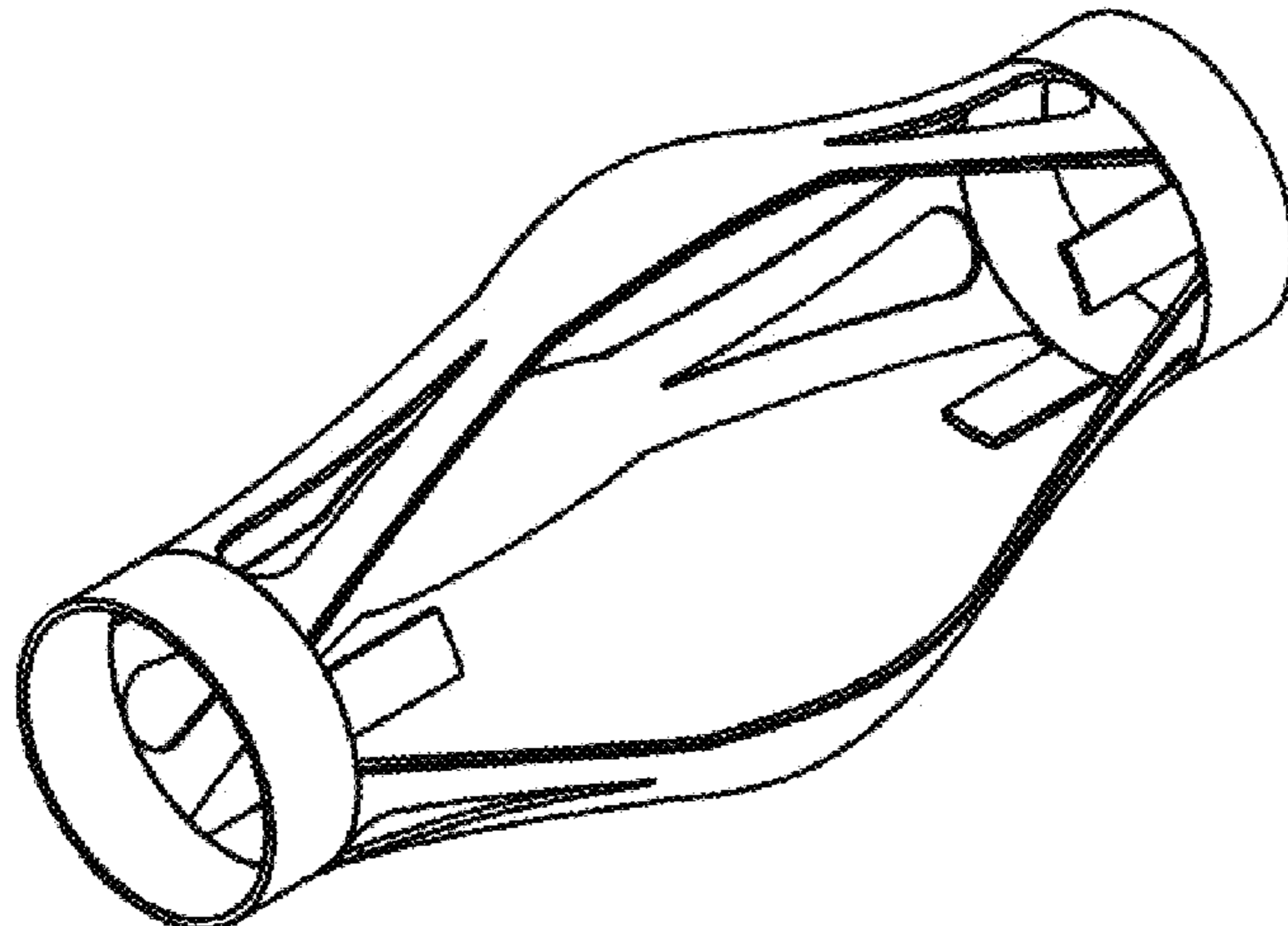
(52) **U.S. Cl.**  
USPC ..... **D15/21**

(58) **Field of Classification Search**  
USPC ..... D15/10, 21, 123, 138, 139, 140, 141, D15/142, 143, 144, 144.1, 144.2

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*Primary Examiner* — Mark A Goodwin

(74) *Attorney, Agent, or Firm* — Carlson, Gaskey & Olds, P.C.



(57)

**CLAIM**

The ornamental design for a centralizer for centralizing tubing in a wellbore, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a centralizer for centralizing tubing in a wellbore showing our new design.

FIG. 2 is first end view of the centralizer shown in FIG. 1.

FIG. 3 is second end view of the centralizer shown in FIG. 1.

FIG. 4 is first side view of the centralizer shown in FIG. 1.

FIG. 5 is second side view of the centralizer shown in FIG. 1.

FIG. 6 is third side view of the centralizer shown in FIG. 1.

FIG. 7 is fourth side view of the centralizer shown in FIG. 1.

FIG. 8 is perspective view of a second embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 9 is first end view of the centralizer shown in FIG. 8.

FIG. 10 is a second end view of the centralizer shown in FIG. 8.

FIG. 11 is a first side view of the centralizer shown in FIG. 8.

FIG. 12 is a second side view of the centralizer shown in FIG. 8.

FIG. 13 is a third side view of the centralizer shown in FIG. 8.

FIG. 14 is a fourth side view of the centralizer shown in FIG. 8.

FIG. 15 is a perspective view of a third embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 16 is first end view of the centralizer shown in FIG. 15.

FIG. 17 is a second end view of the centralizer shown in FIG. 15.

FIG. 18 is a first side view of the centralizer shown in FIG. 15.

FIG. 19 is a second side view of the centralizer shown in FIG. 15.

FIG. 20 is a third side view of the centralizer shown in FIG. 15.

FIG. 21 is a fourth side view of the centralizer shown in FIG. 15.

FIG. 22 is a perspective view of a fourth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 23 is a first end view of the centralizer shown in FIG. 22.

FIG. 24 is a second end view of the centralizer shown in FIG. 22.

FIG. 25 is a first side view of the centralizer shown in FIG. 22.

FIG. 26 is a second side view of the centralizer shown in FIG. 22.

FIG. 27 is a third side view of the centralizer shown in FIG. 22.

FIG. 28 is a fourth side view of the centralizer shown in FIG. 22.

FIG. 29 is a perspective view of a fifth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 30 is a first end view of the centralizer shown in FIG. 29.

FIG. 31 is a second end view of the centralizer shown in FIG. 29.

FIG. 32 is a first side view of the centralizer shown in FIG. 29.

FIG. 33 is a second side view of the centralizer shown in FIG. 29.

FIG. 34 is a third side view of the centralizer shown in FIG. 29.

FIG. 35 is a fourth side view of the centralizer shown in FIG. 29.

FIG. 36 is a perspective view of a sixth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 37 is a first end view of the centralizer shown in FIG. 36.

FIG. 38 is a second end view of the centralizer shown in FIG. 36.

FIG. 39 is a first side view of the centralizer shown in FIG. 36.

FIG. 40 is a second side view of the centralizer shown in FIG. 36.

FIG. 41 is a third side view of the centralizer shown in FIG. 36.

FIG. 42 is a fourth side view of the centralizer shown in FIG. 36.

FIG. 43 is a perspective view of a seventh embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 44 is a first end view of the centralizer shown in FIG. 43.

FIG. 45 is a second end view of the centralizer shown in FIG. 43.

FIG. 46 is a first side view of the centralizer shown in FIG. 43.

FIG. 47 is a second side view of the centralizer shown in FIG. 43.

FIG. 48 is a third side view of the centralizer shown in FIG. 43.

FIG. 49 is a fourth side view of the centralizer shown in FIG. 43.

FIG. 50 is a perspective view of an eighth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 51 is a first end view of the centralizer shown in FIG. 50.

FIG. 52 is a second end view of the centralizer shown in FIG. 50.

FIG. 53 is a first side view of the centralizer shown in FIG. 50.

FIG. 54 is a second side view of the centralizer shown in FIG. 50.

FIG. 55 is a third side view of the centralizer shown in FIG. 50.

FIG. 56 is a fourth side view of the centralizer shown in FIG. 50.

FIG. 57 is a perspective view of a ninth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. 58 is a first end view of the centralizer shown in FIG. 57.

FIG. 59 is a second end view of the centralizer shown in FIG. 57.

FIG. 60 is a first side view of the centralizer shown in FIG. 57.

FIG. 61 is a second side view of the centralizer shown in FIG. 57.

FIG. 62 is a third side view of the centralizer shown in FIG. 57.

FIG. 63 is a fourth side view of the centralizer shown in FIG. 57.

FIG. 64 is a perspective view of a tenth embodiment of a centralizer for centralizing tubing in a wellbore.

FIG. **65** is a first end view of the centralizer shown in FIG. **64**.

FIG. **66** is a second end view of the centralizer shown in FIG. **64**.

FIG. **67** is a first side view of the centralizer shown in FIG. **64**.

FIG. **68** is a second side view of the centralizer shown in FIG. **64**.

FIG. **69** is a third side view of the centralizer shown in FIG. **64**; and,

FIG. **70** is a fourth side view of the centralizer shown in FIG. **64**.

The broken lines illustrate portions of the centralizer that form no part of the claimed design.

**1 Claim, 45 Drawing Sheets**

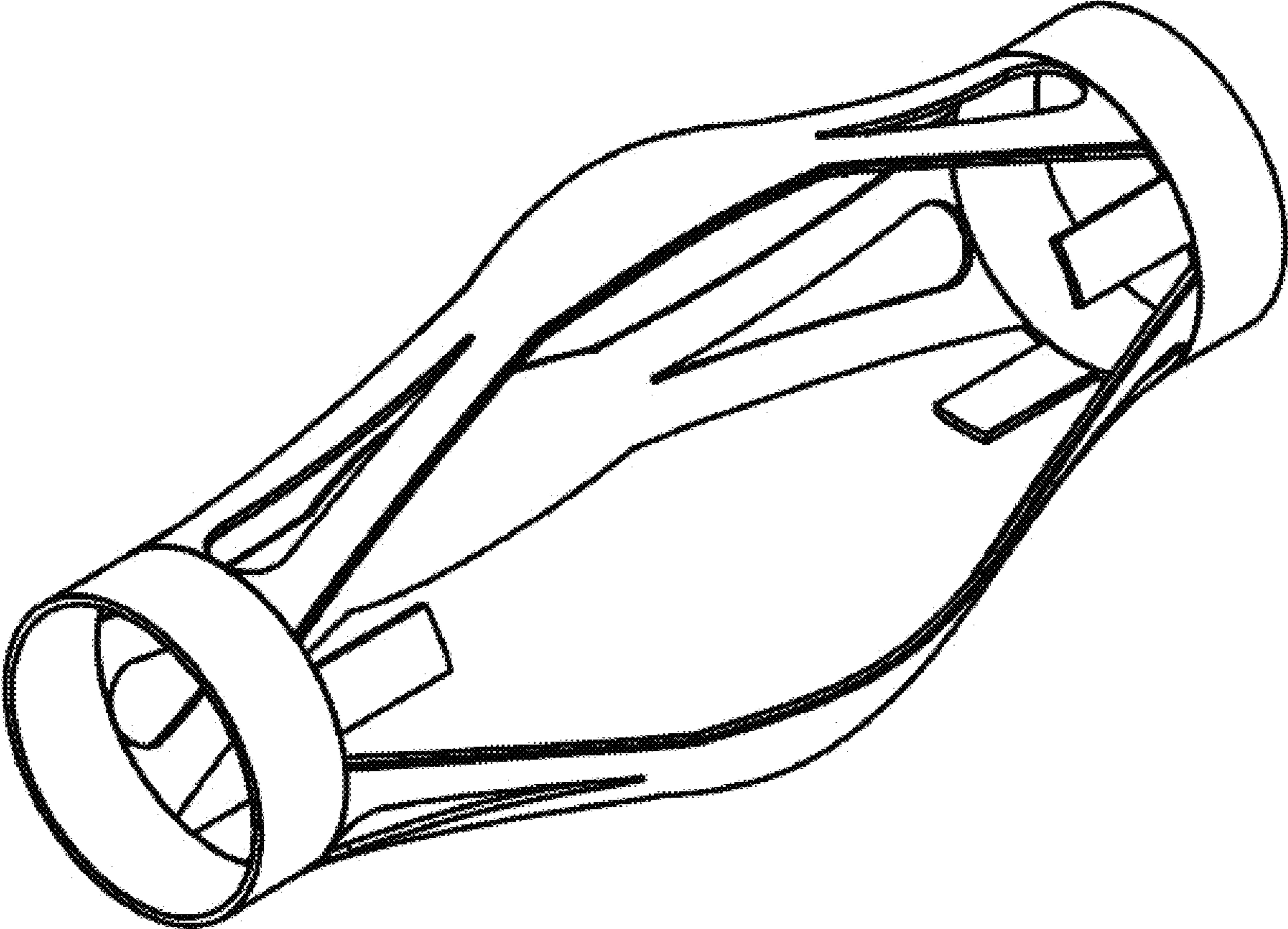


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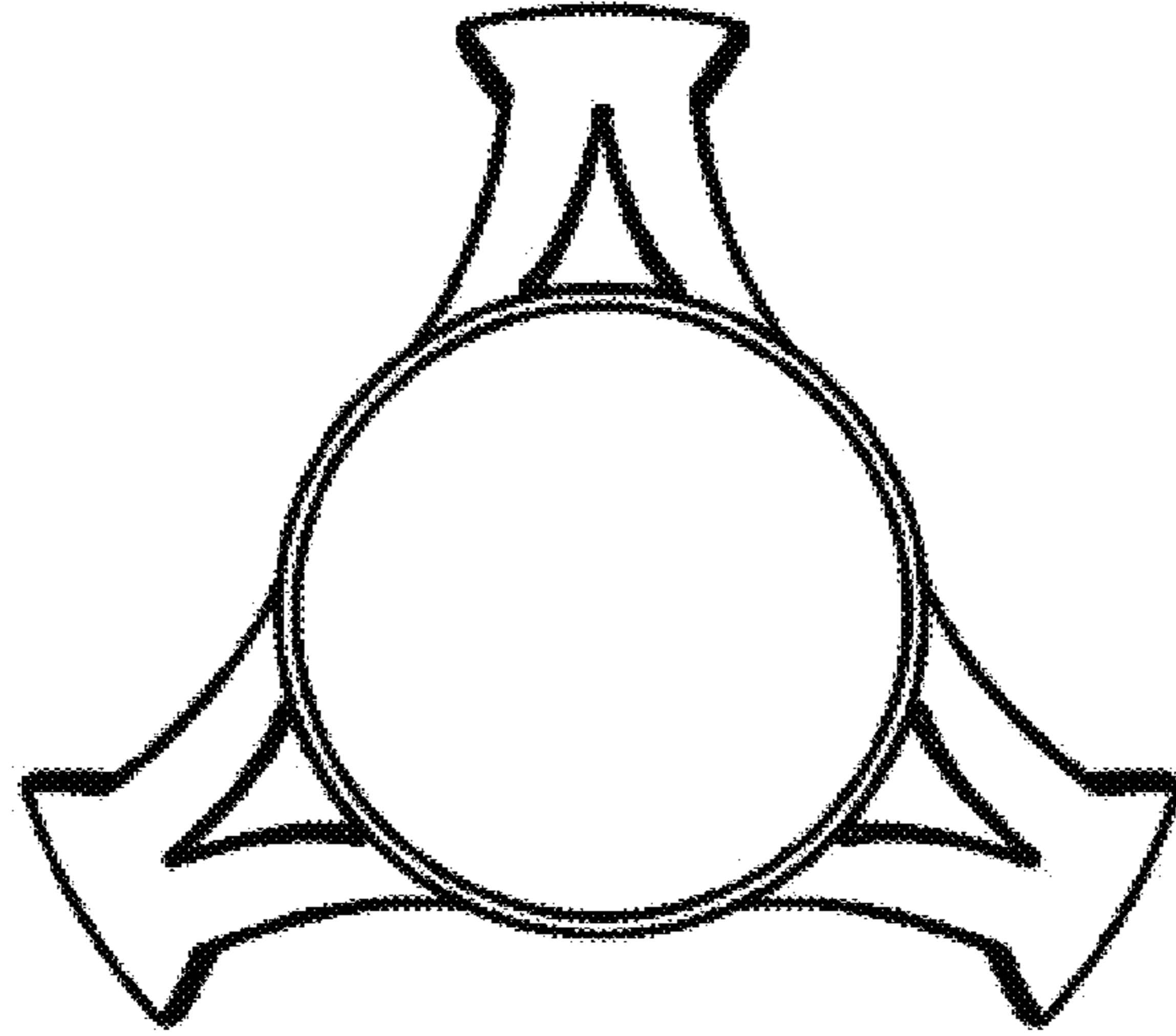


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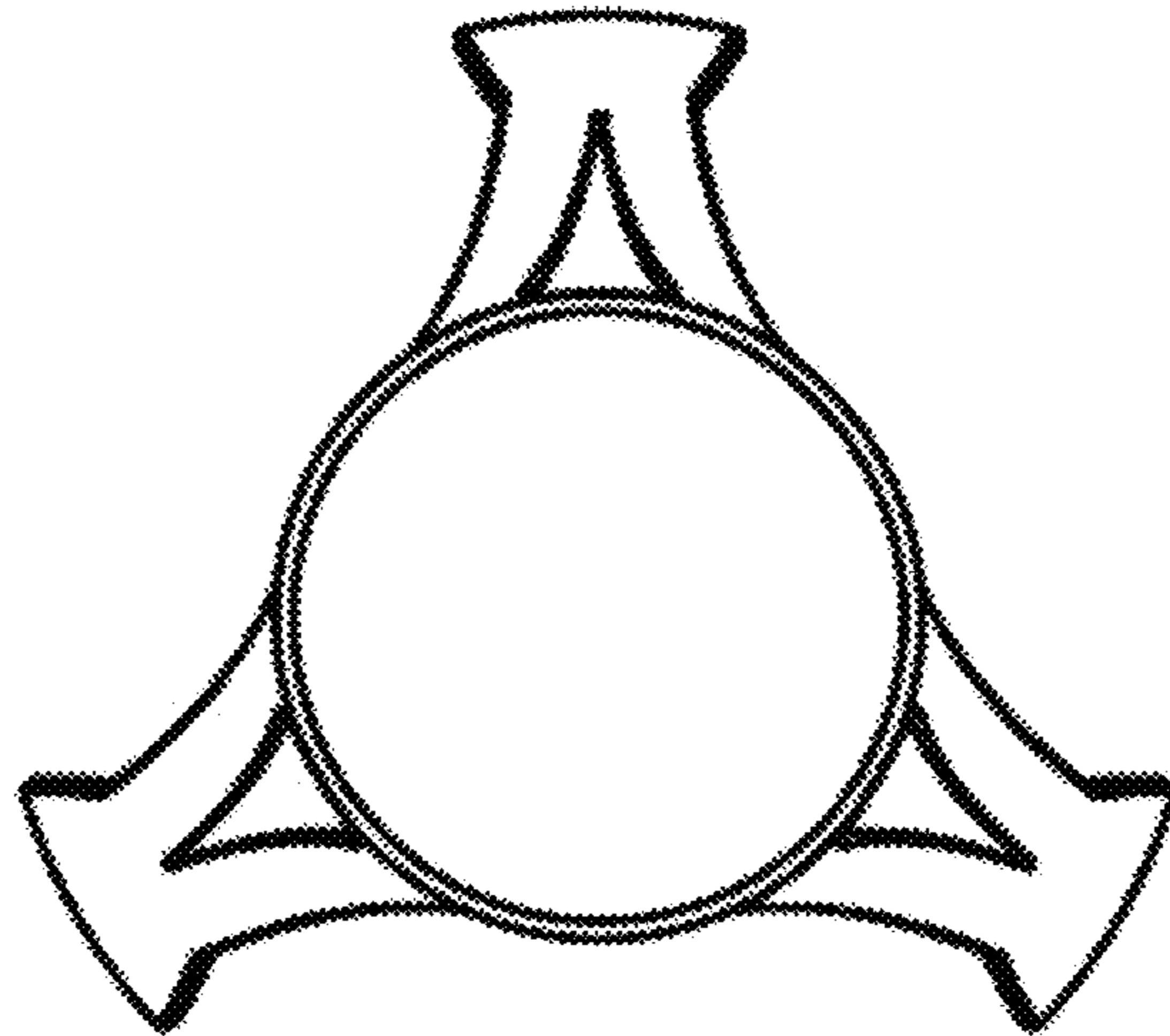


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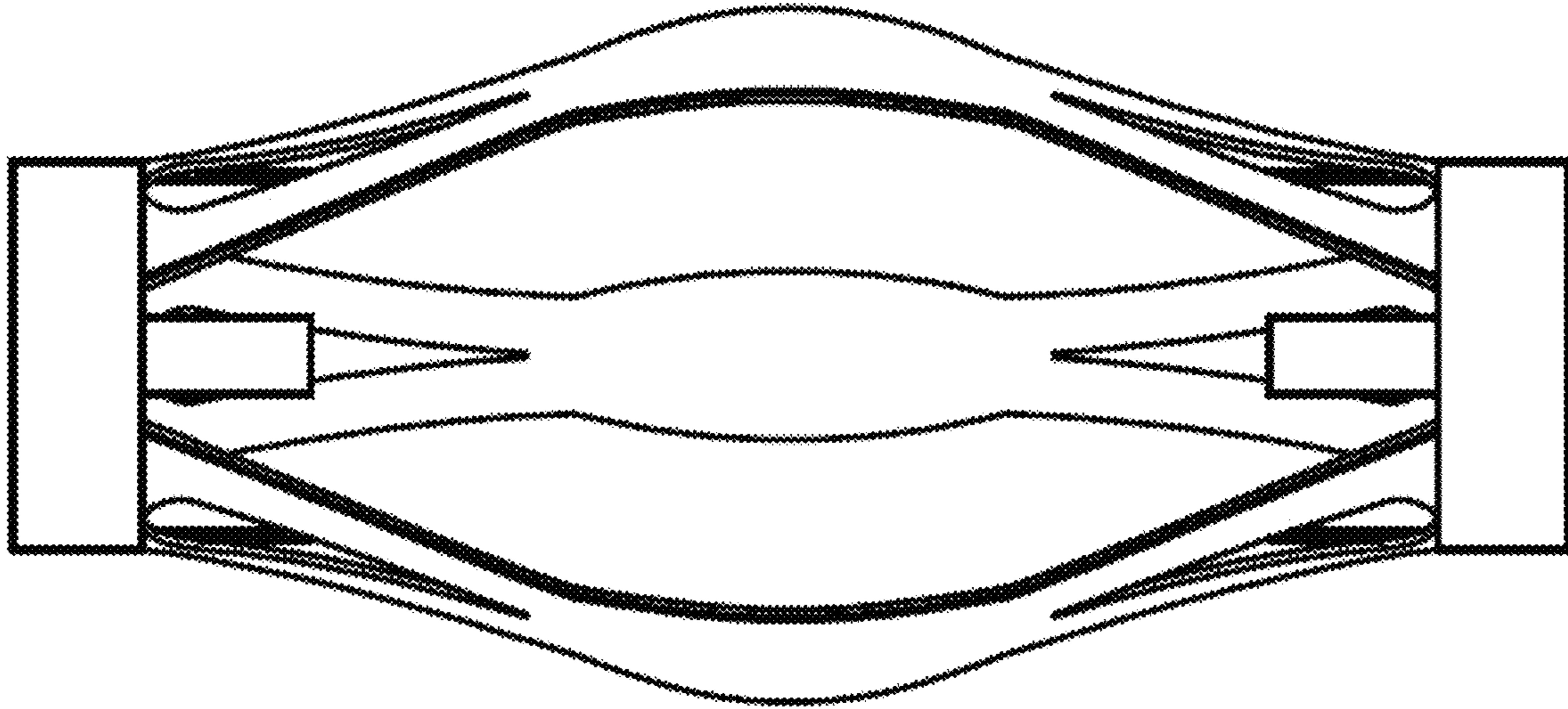


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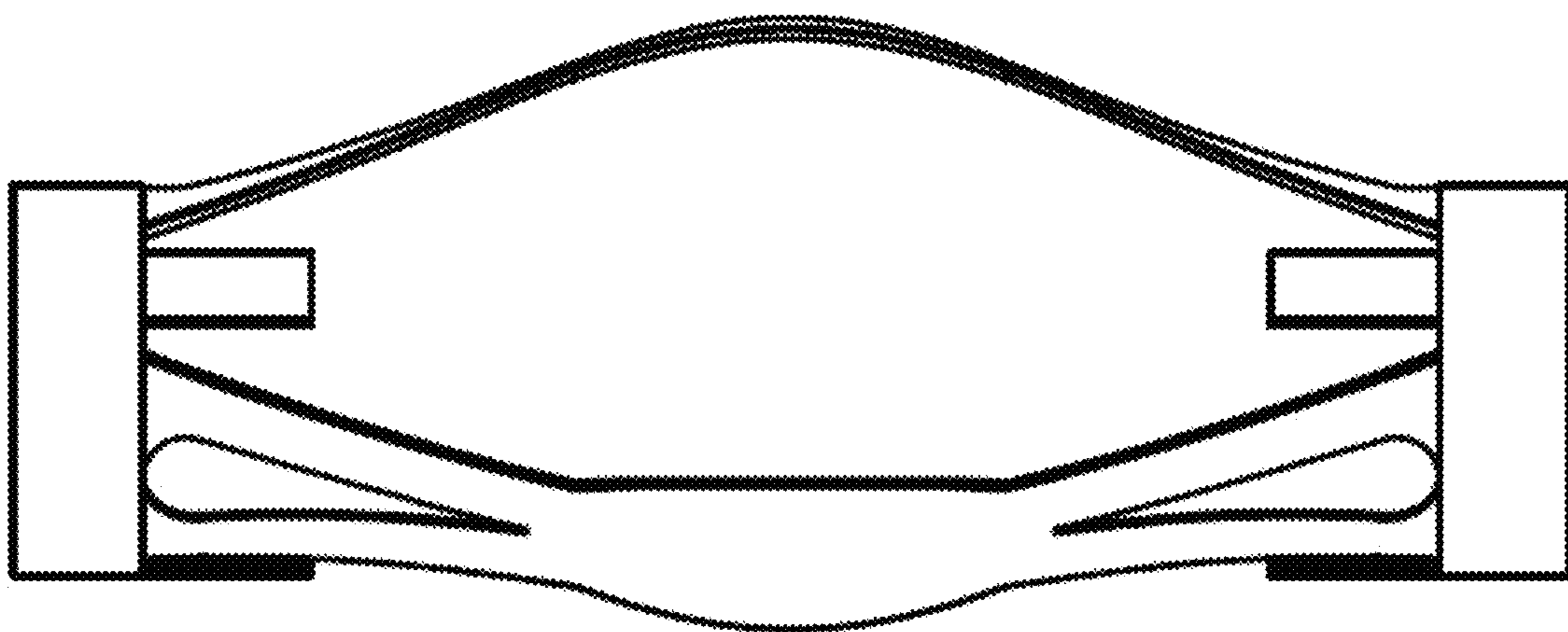


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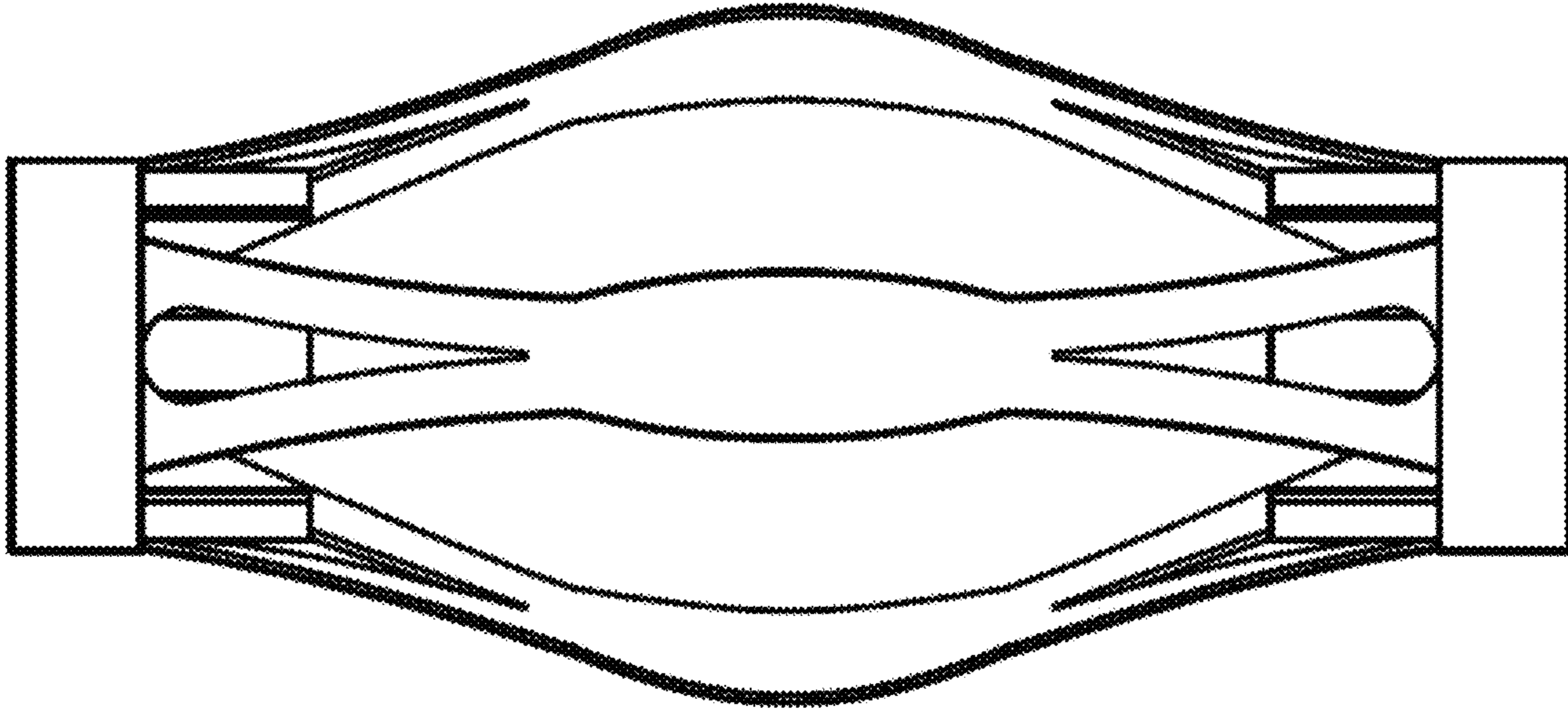


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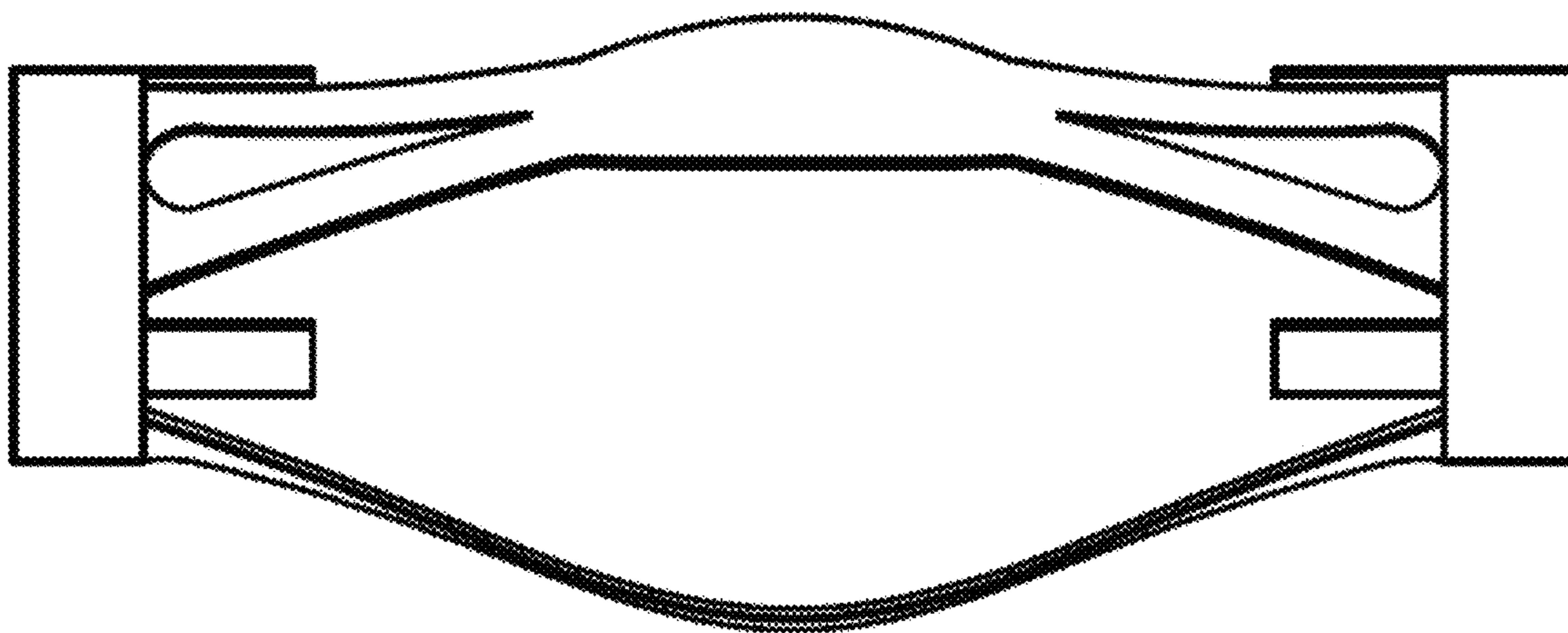


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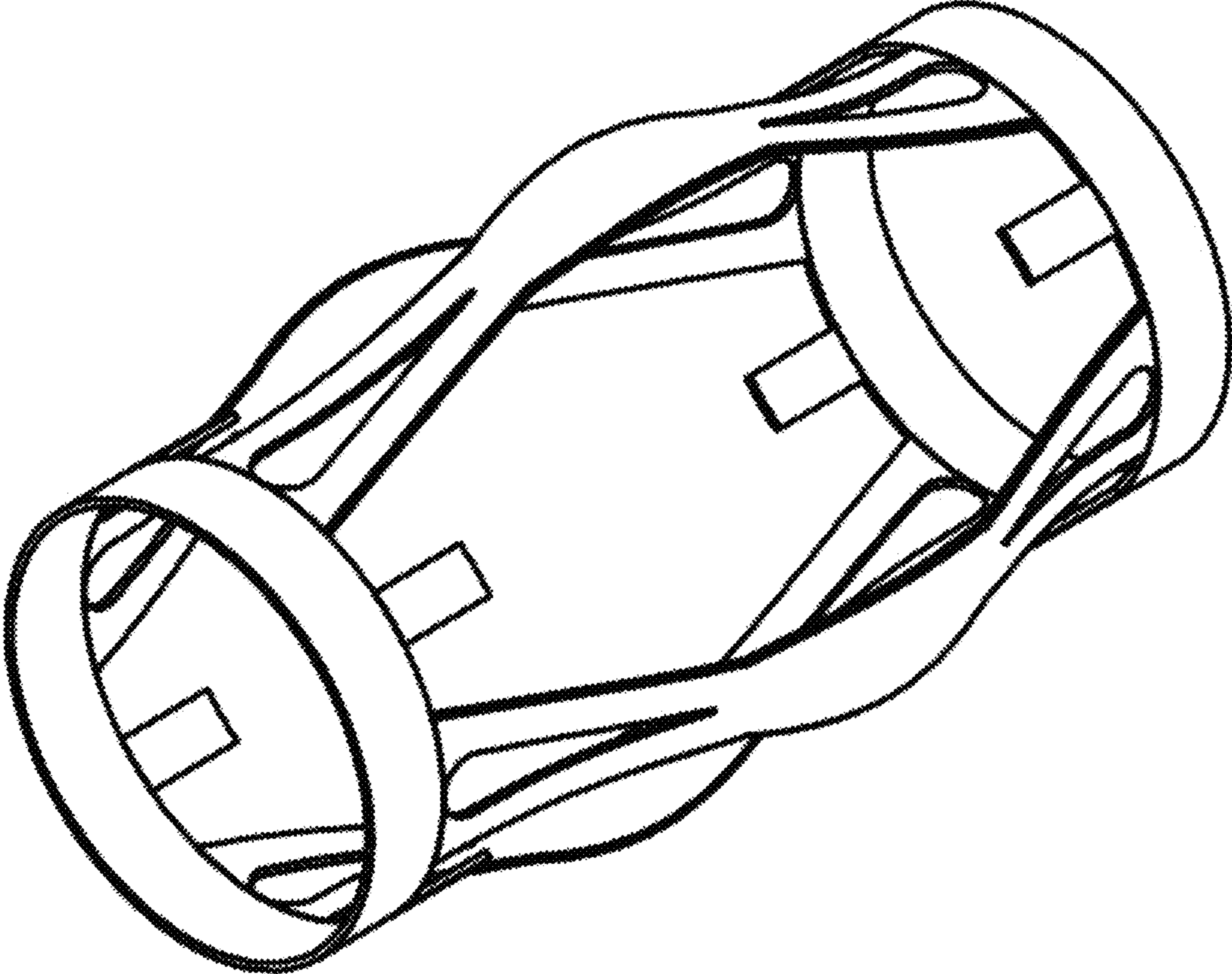


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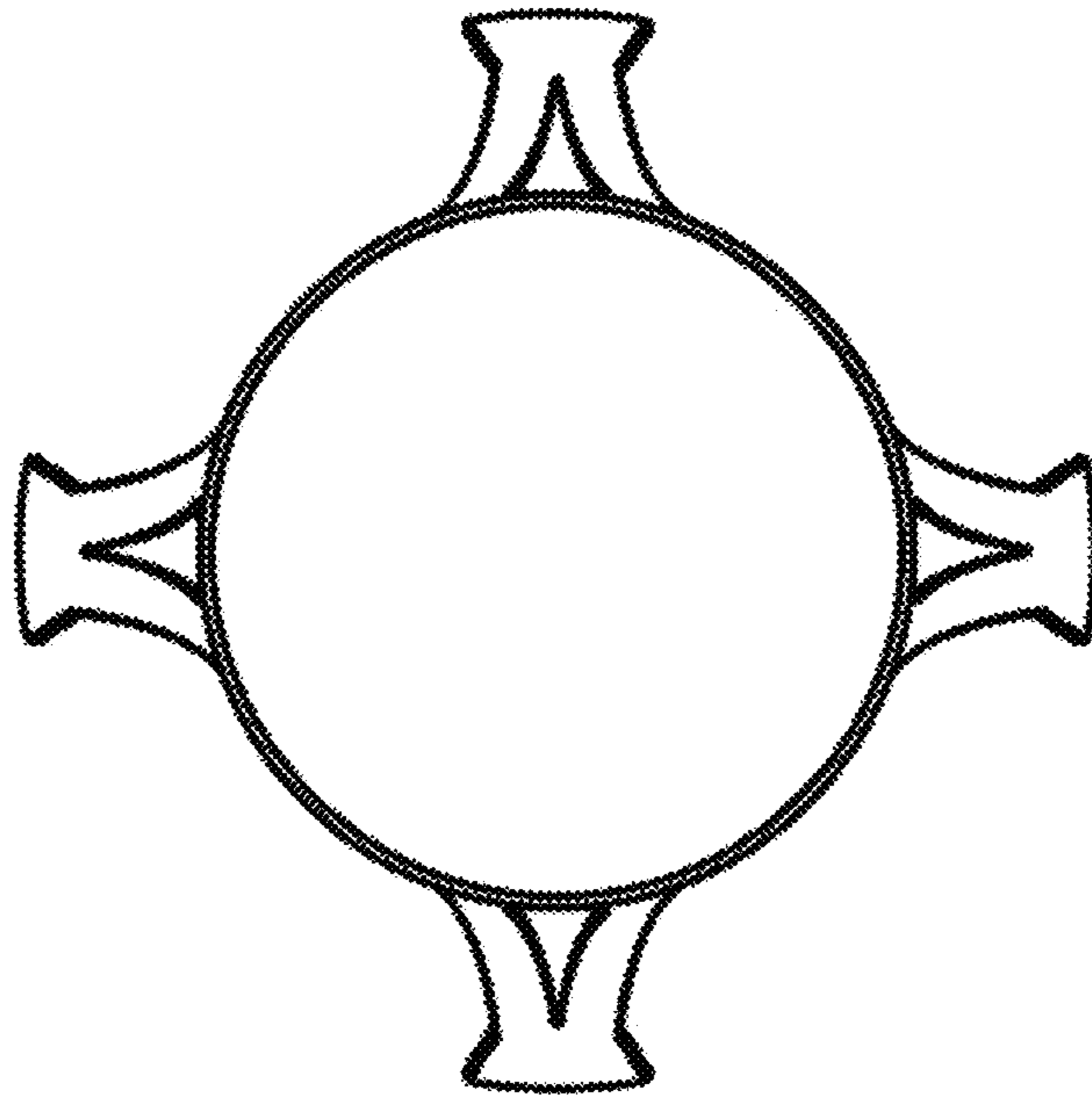


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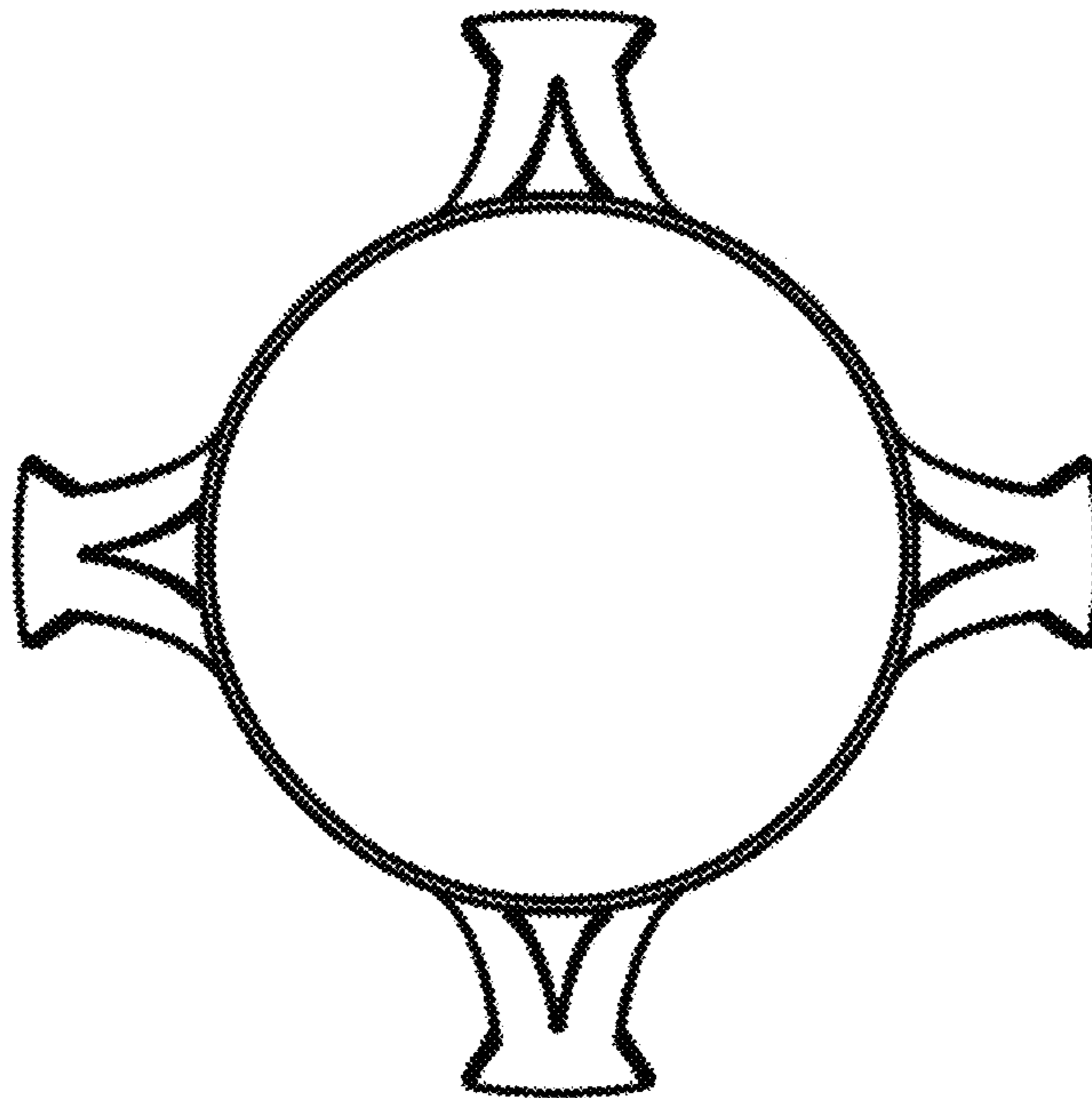


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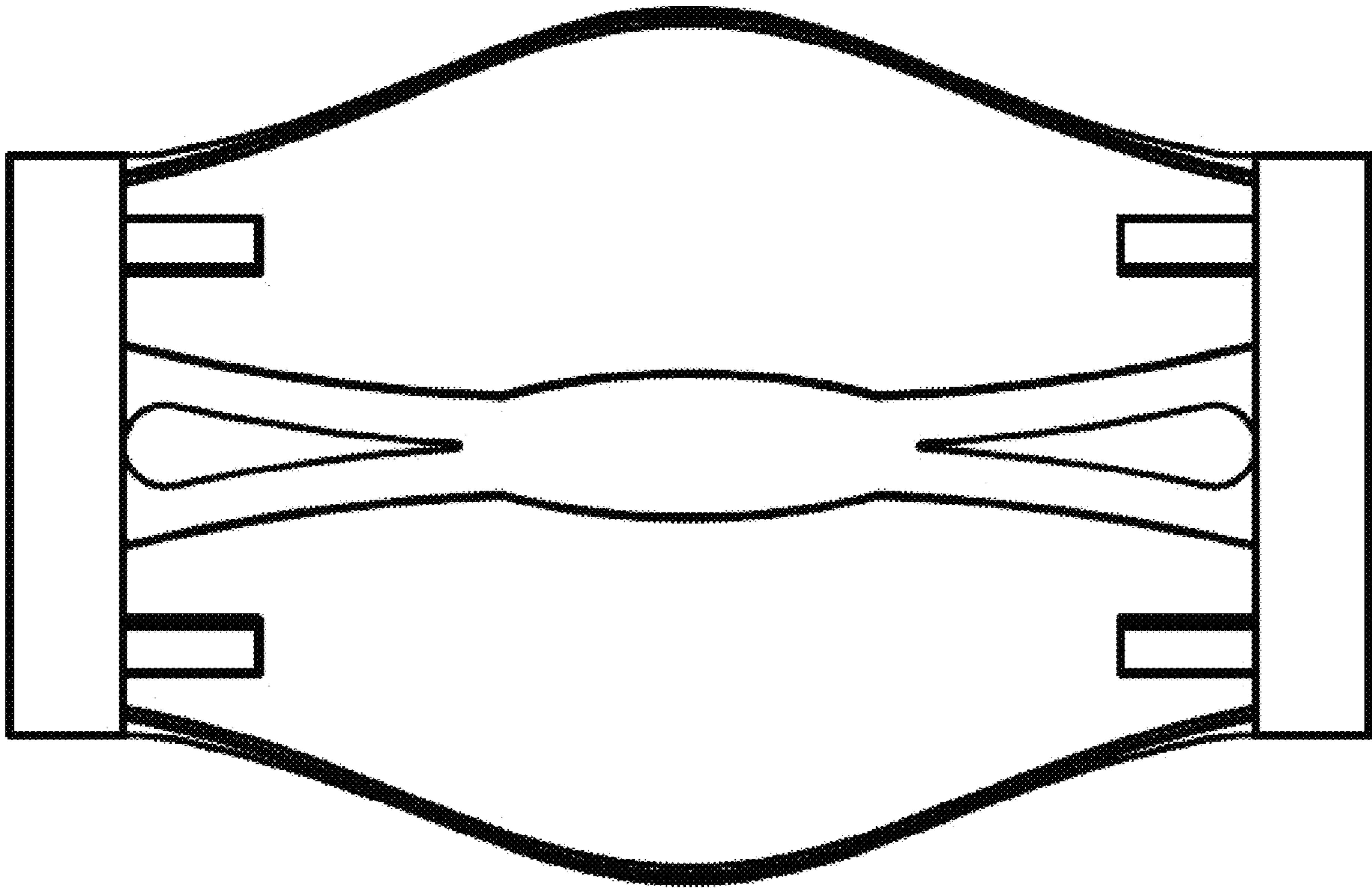


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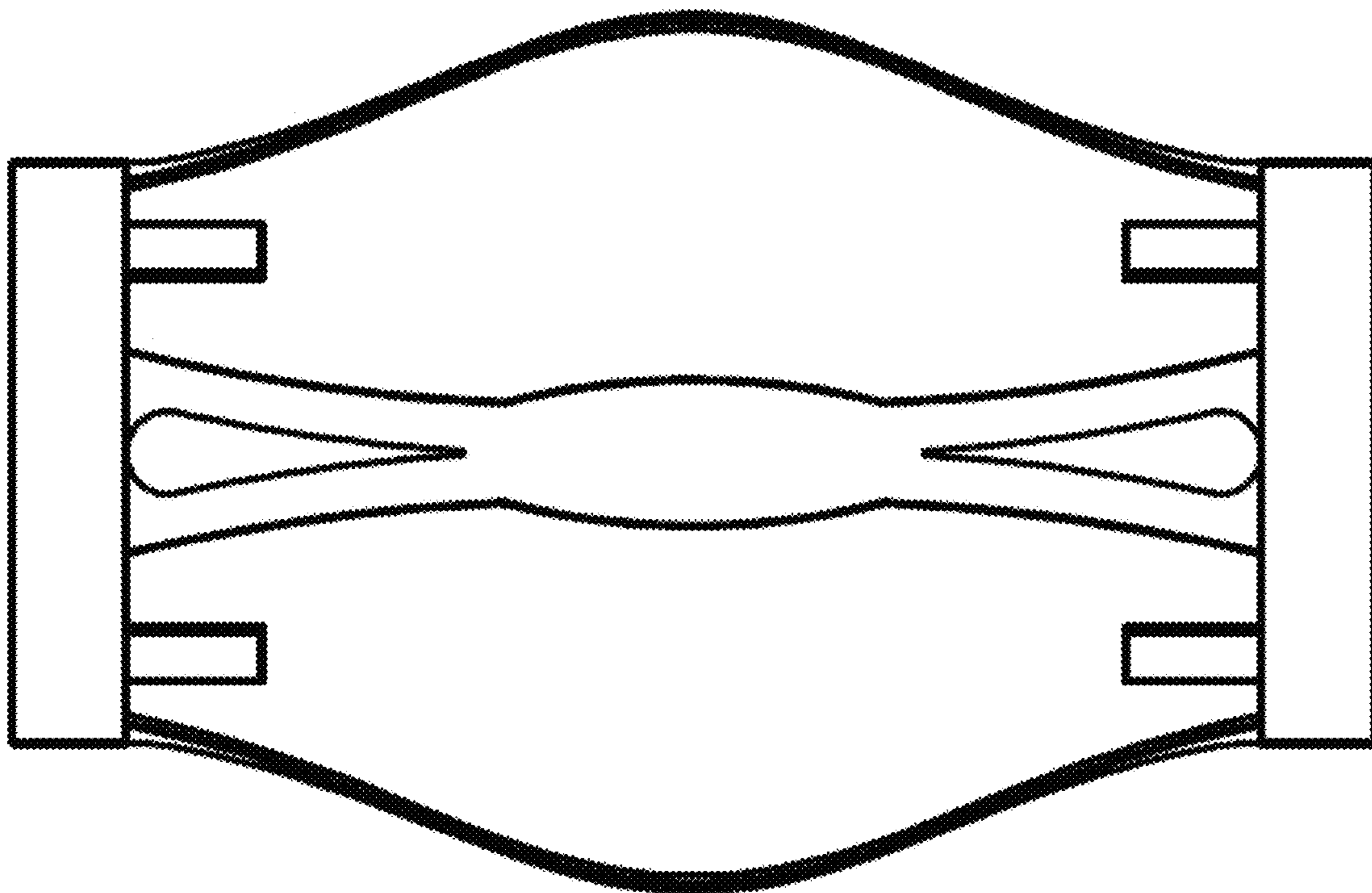


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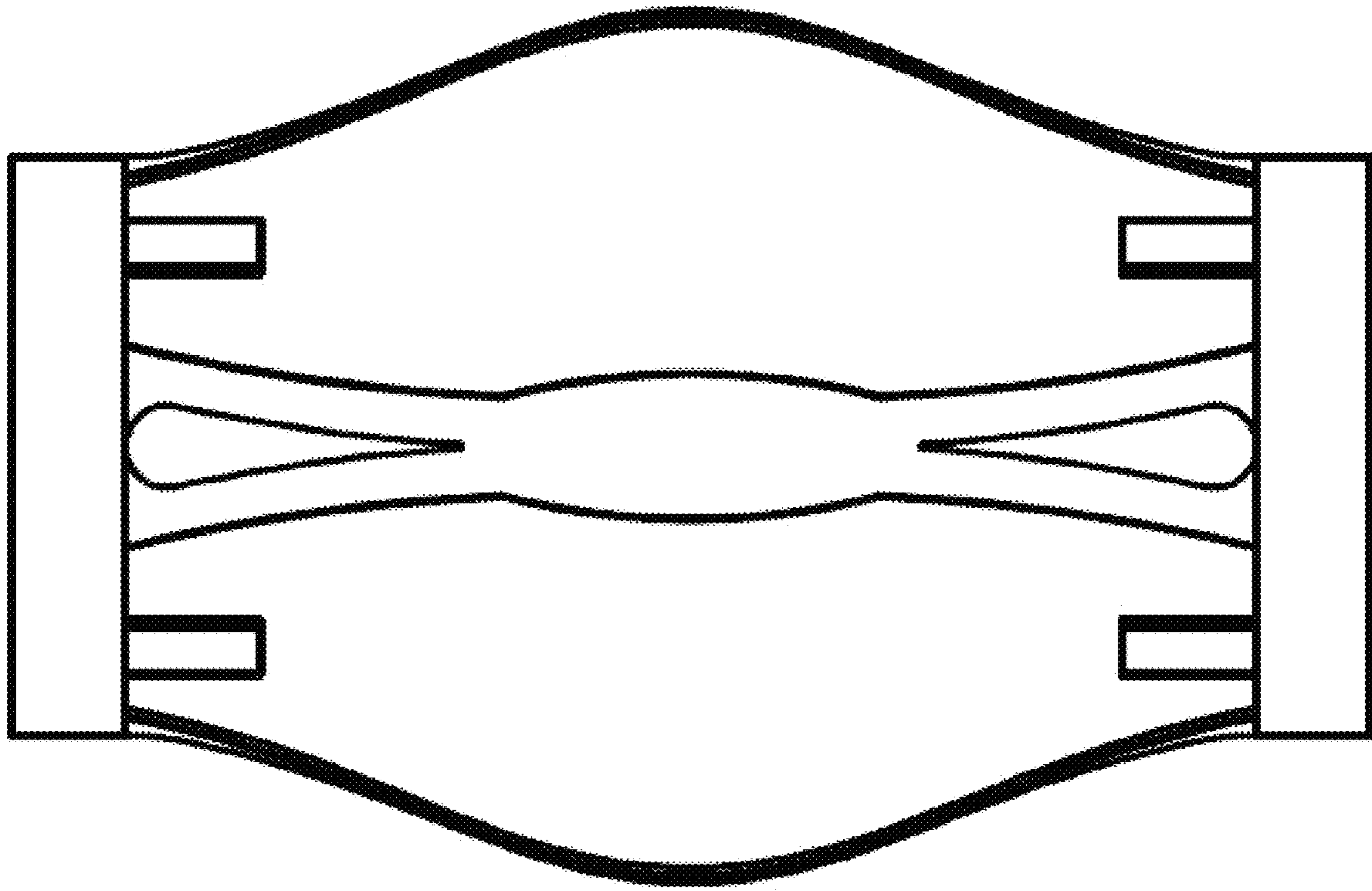


Figure 13

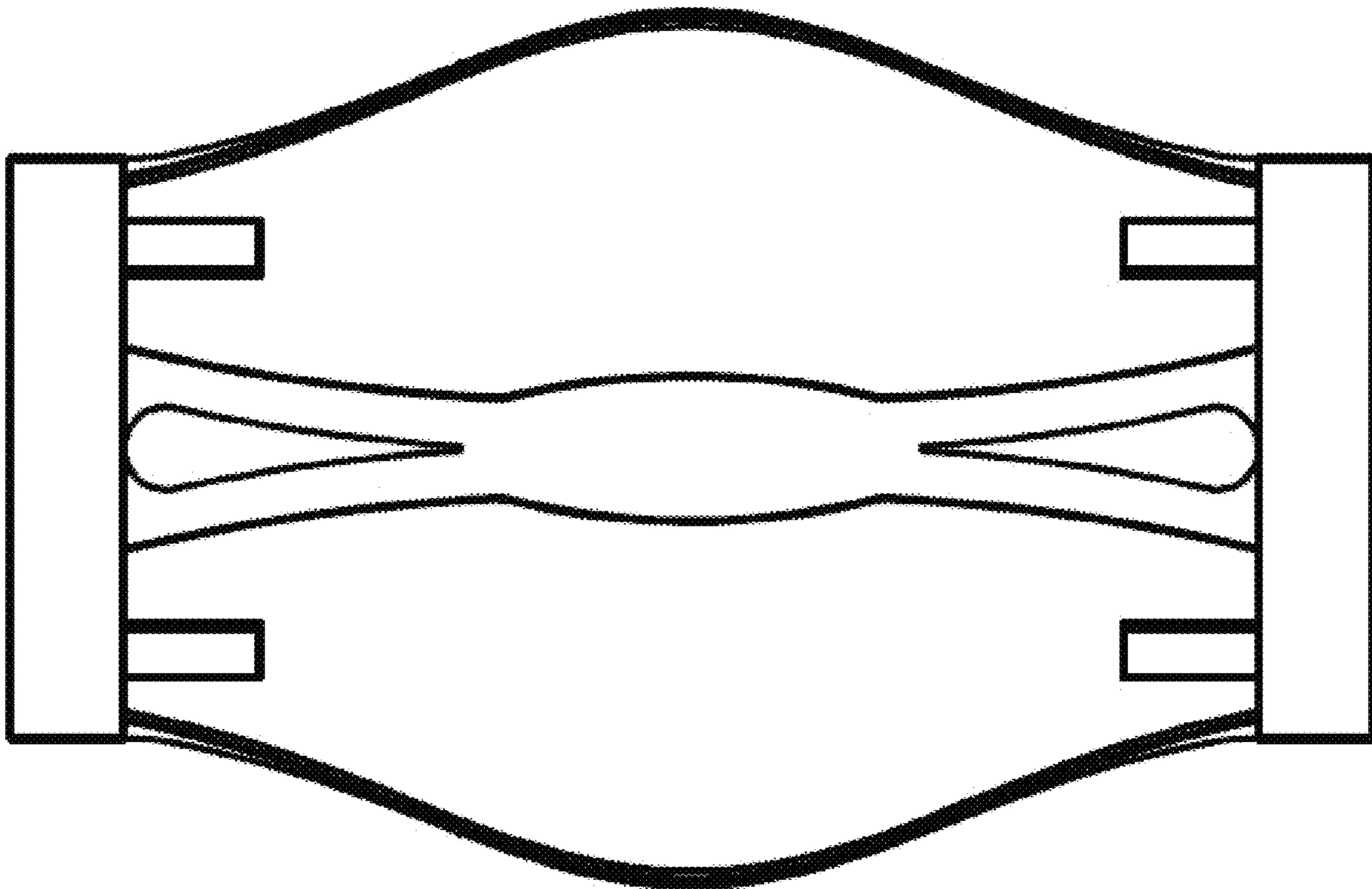


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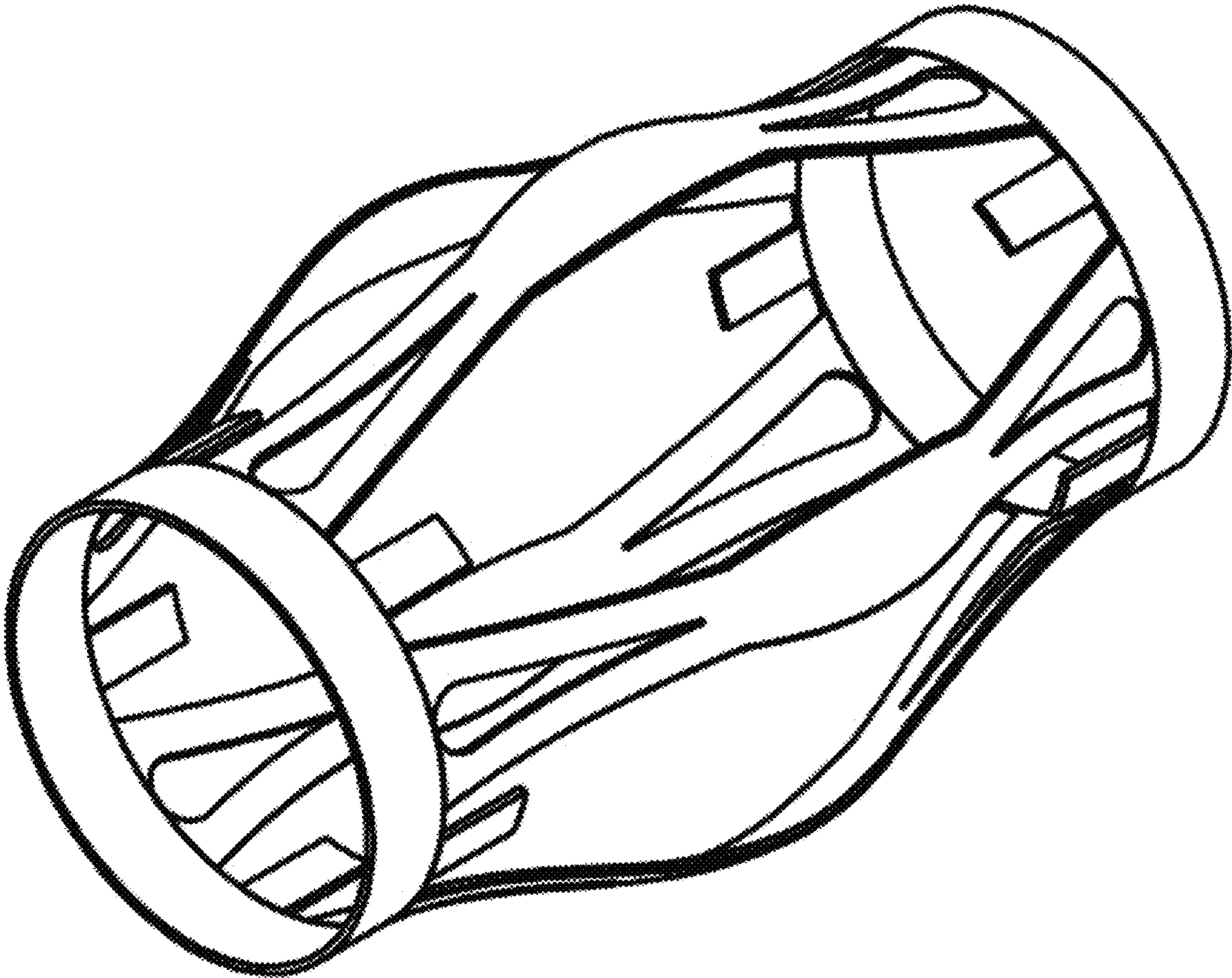


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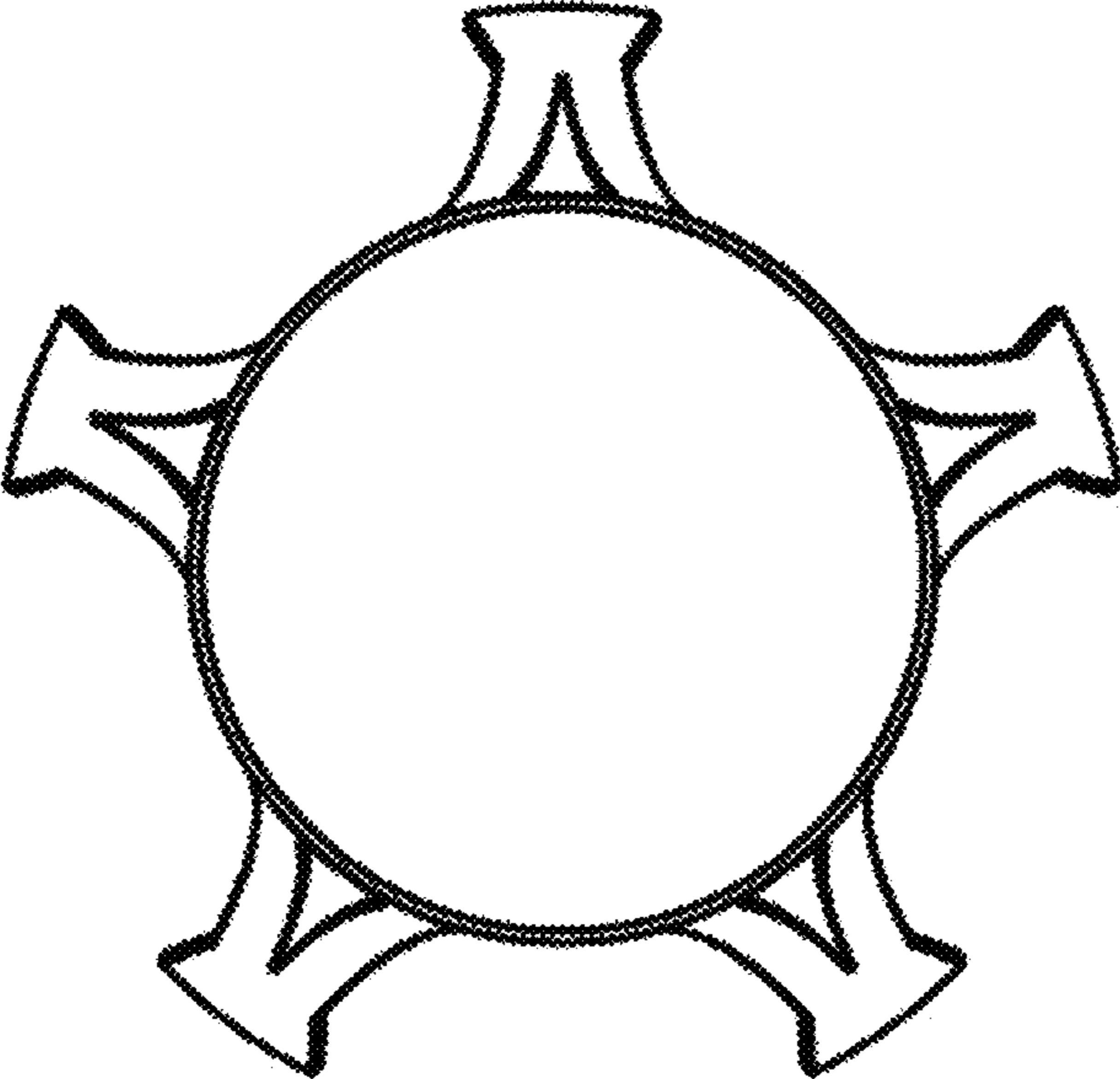


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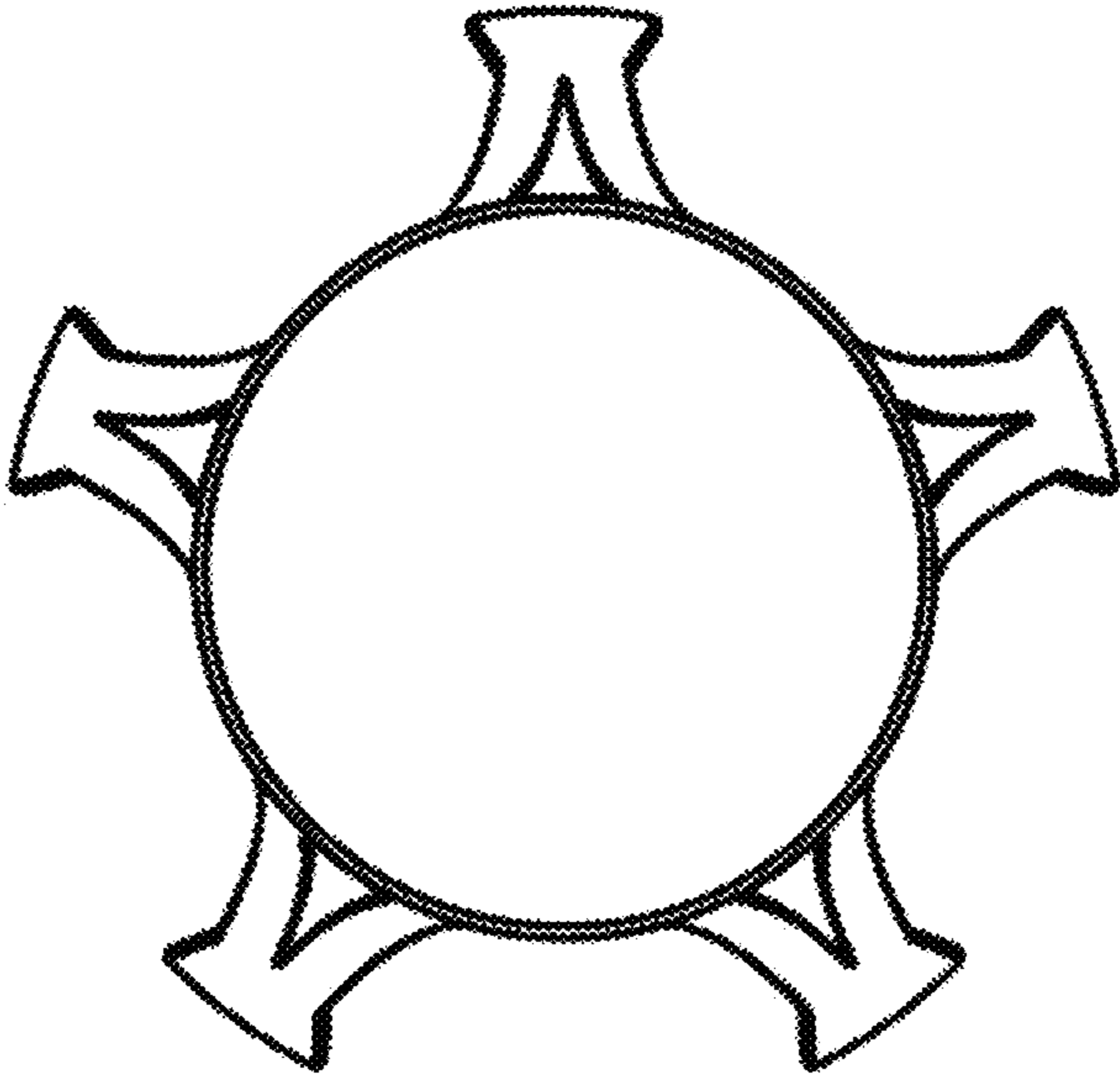


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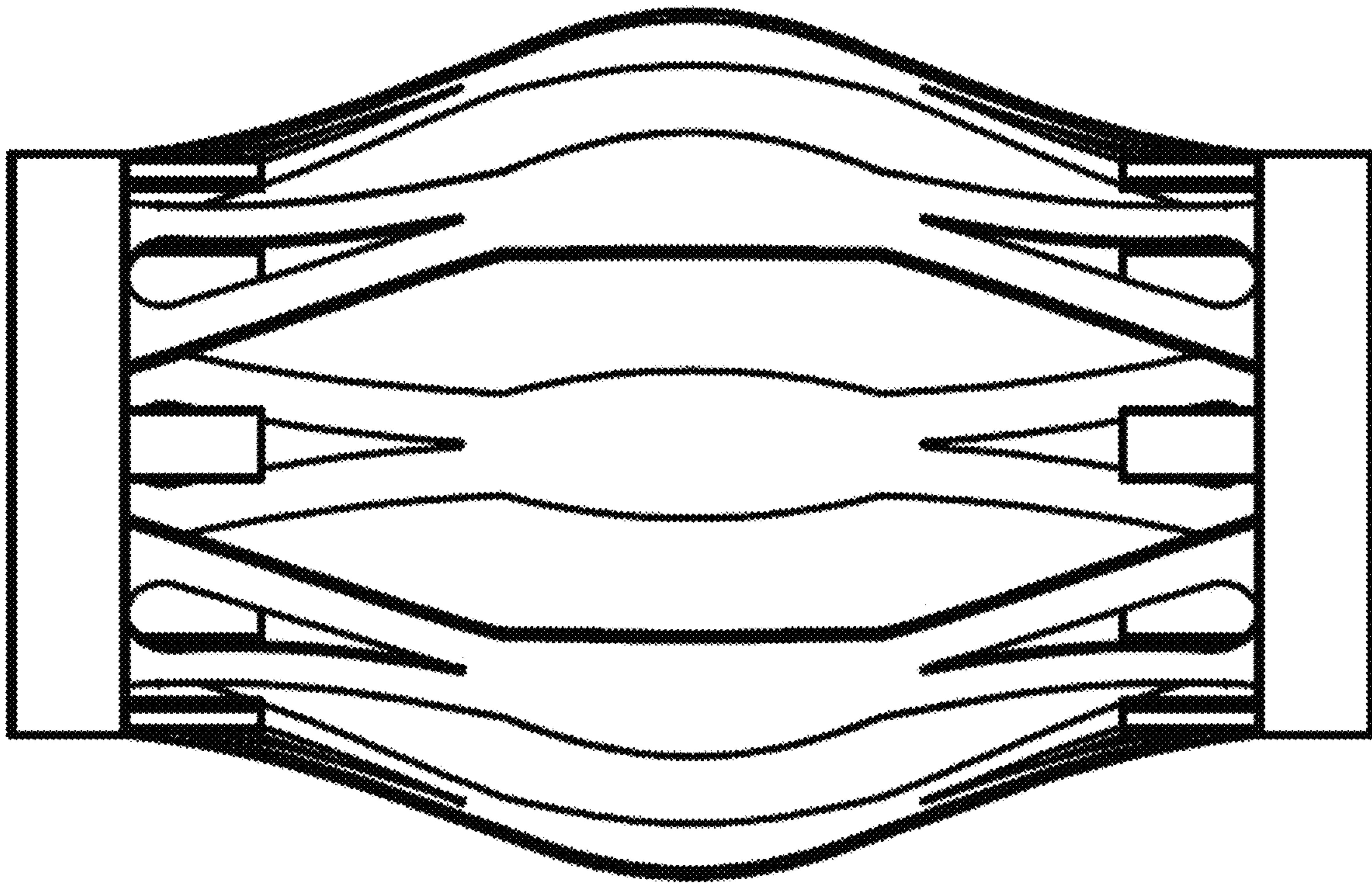


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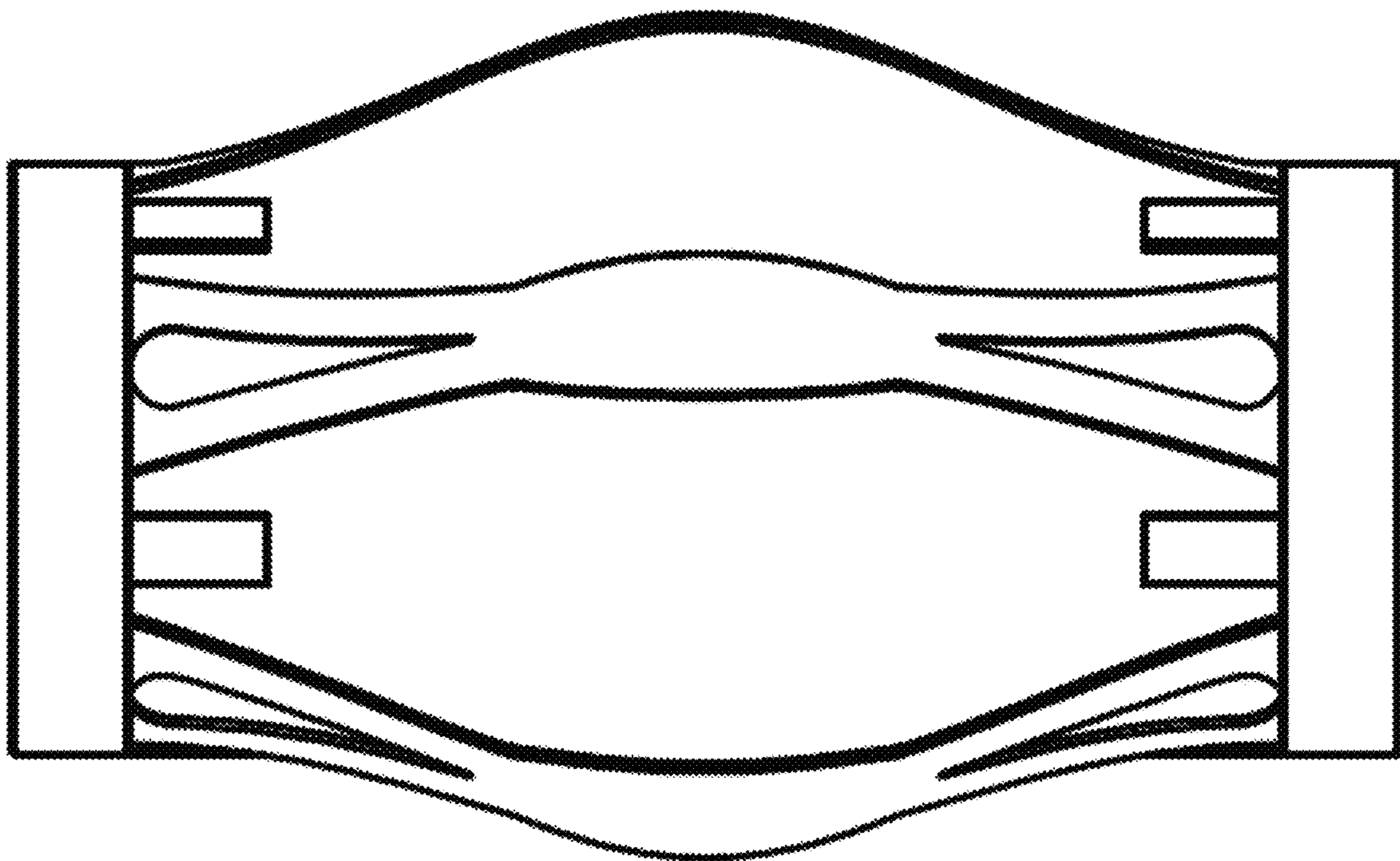


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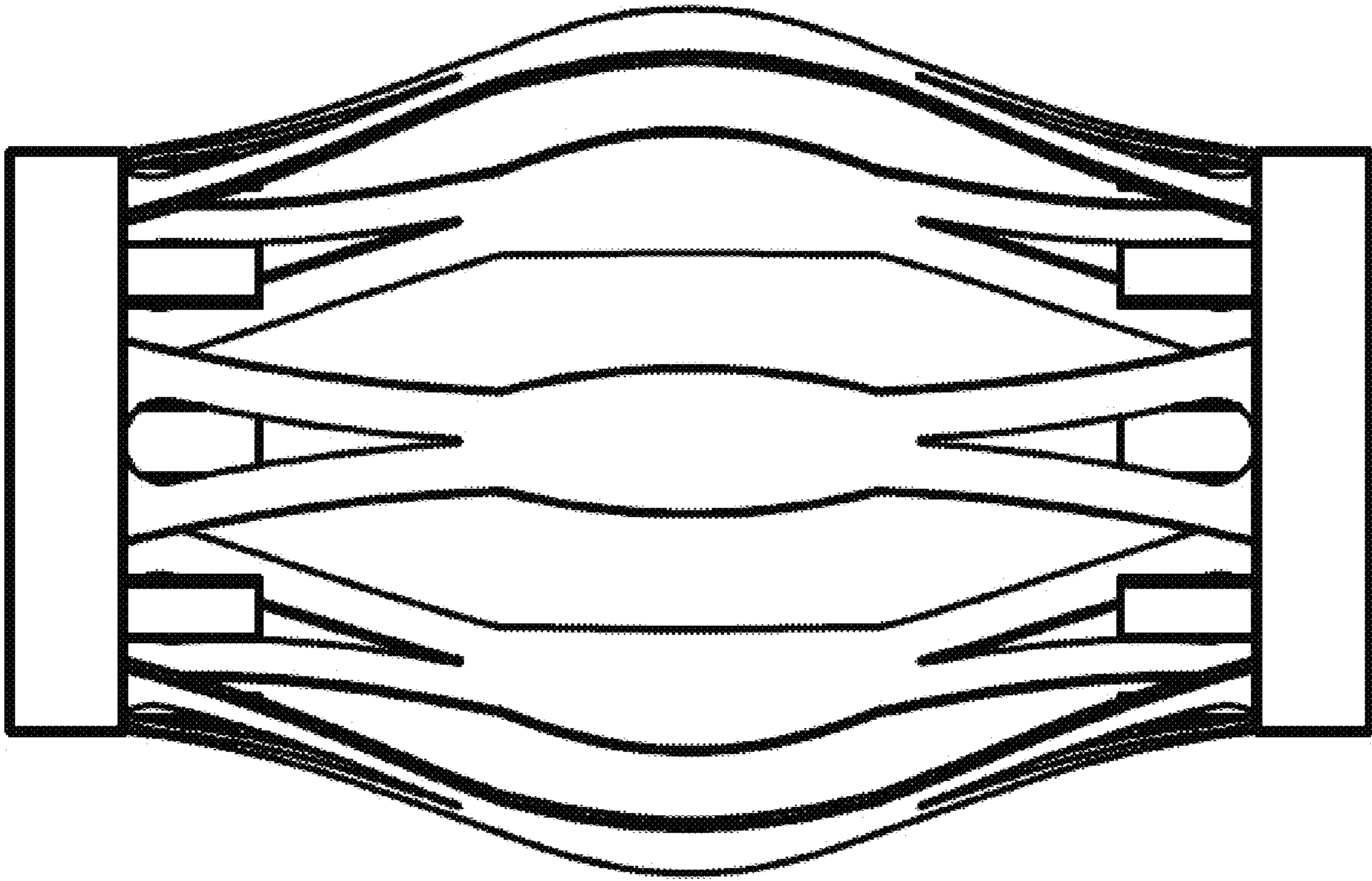


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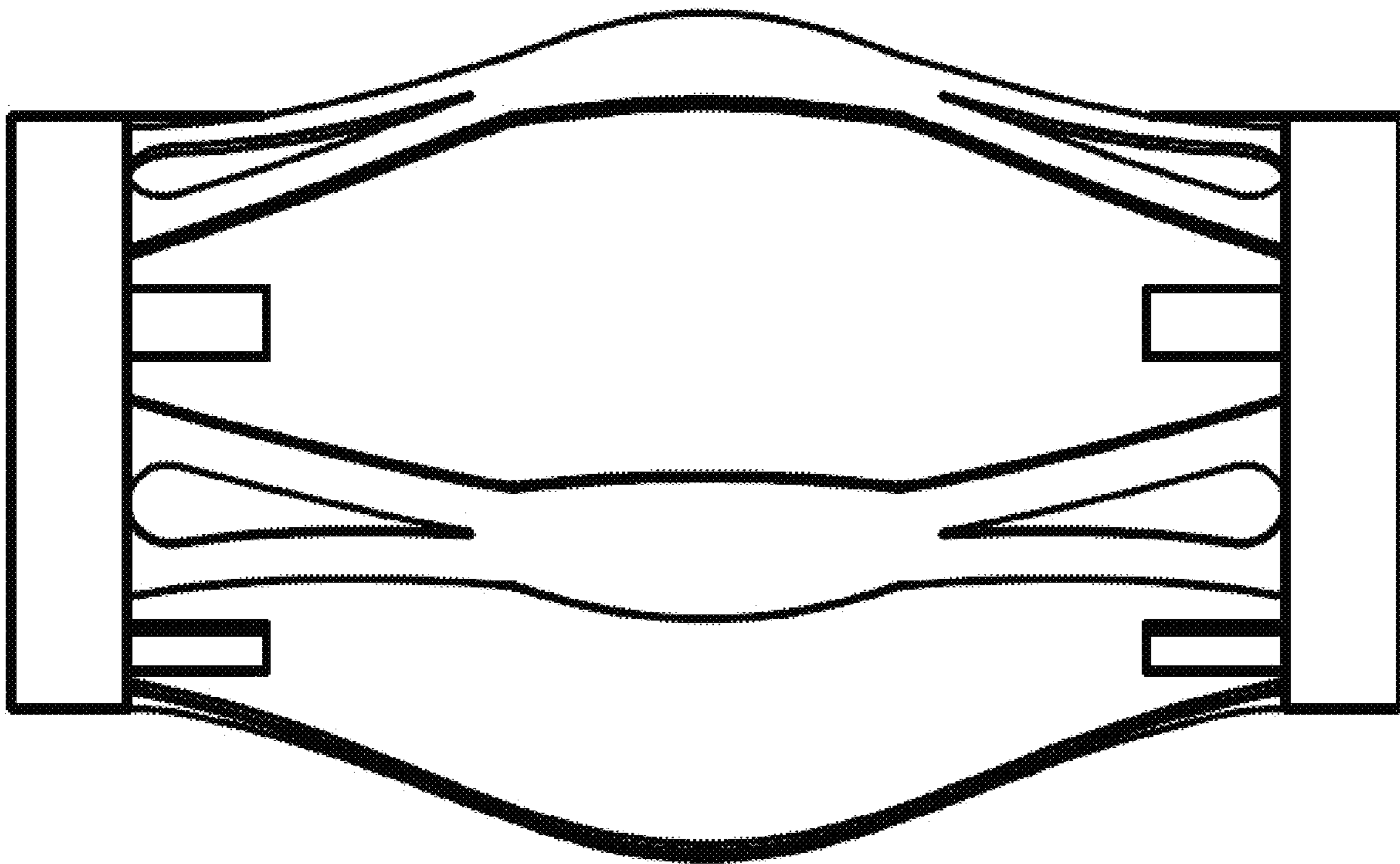


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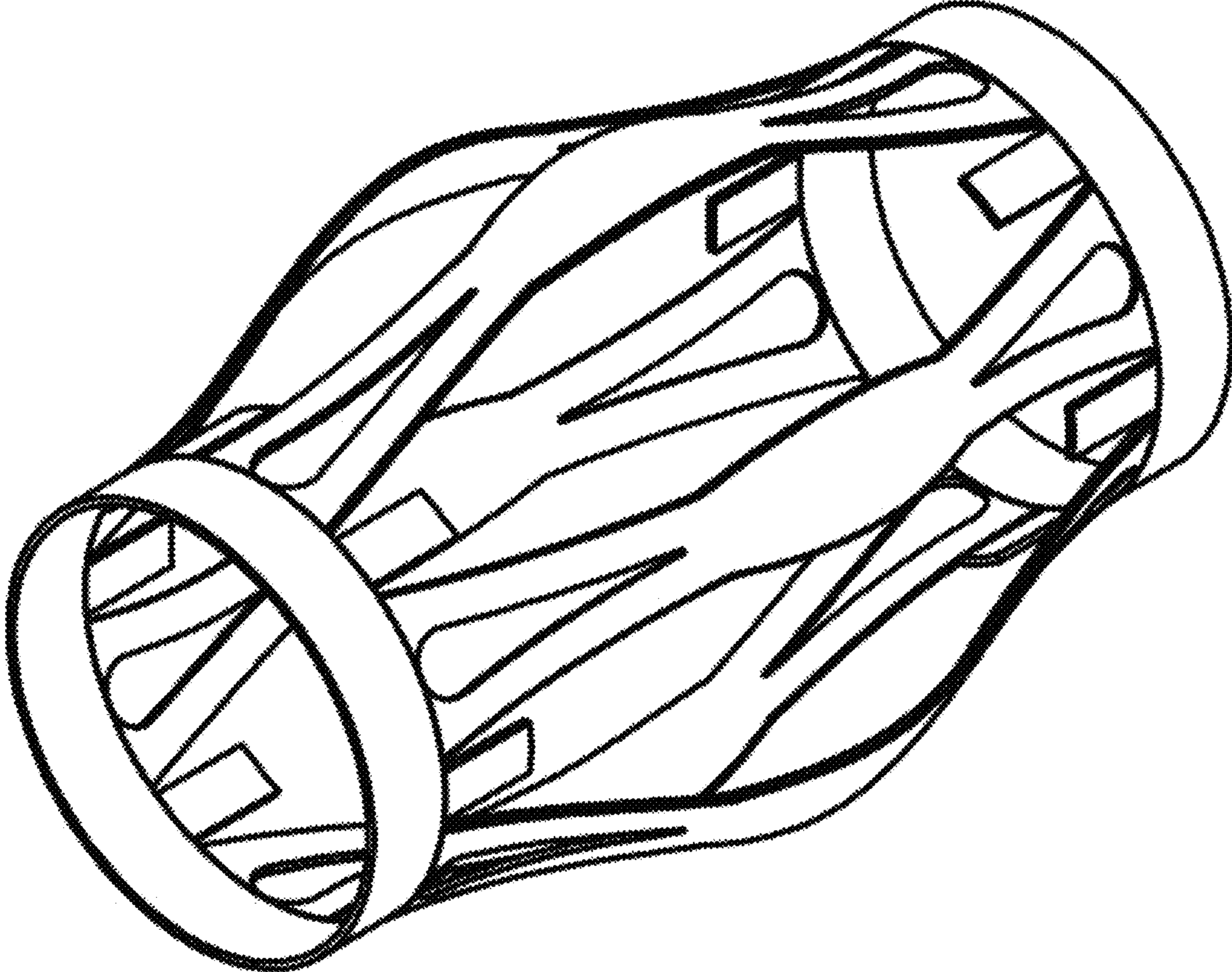


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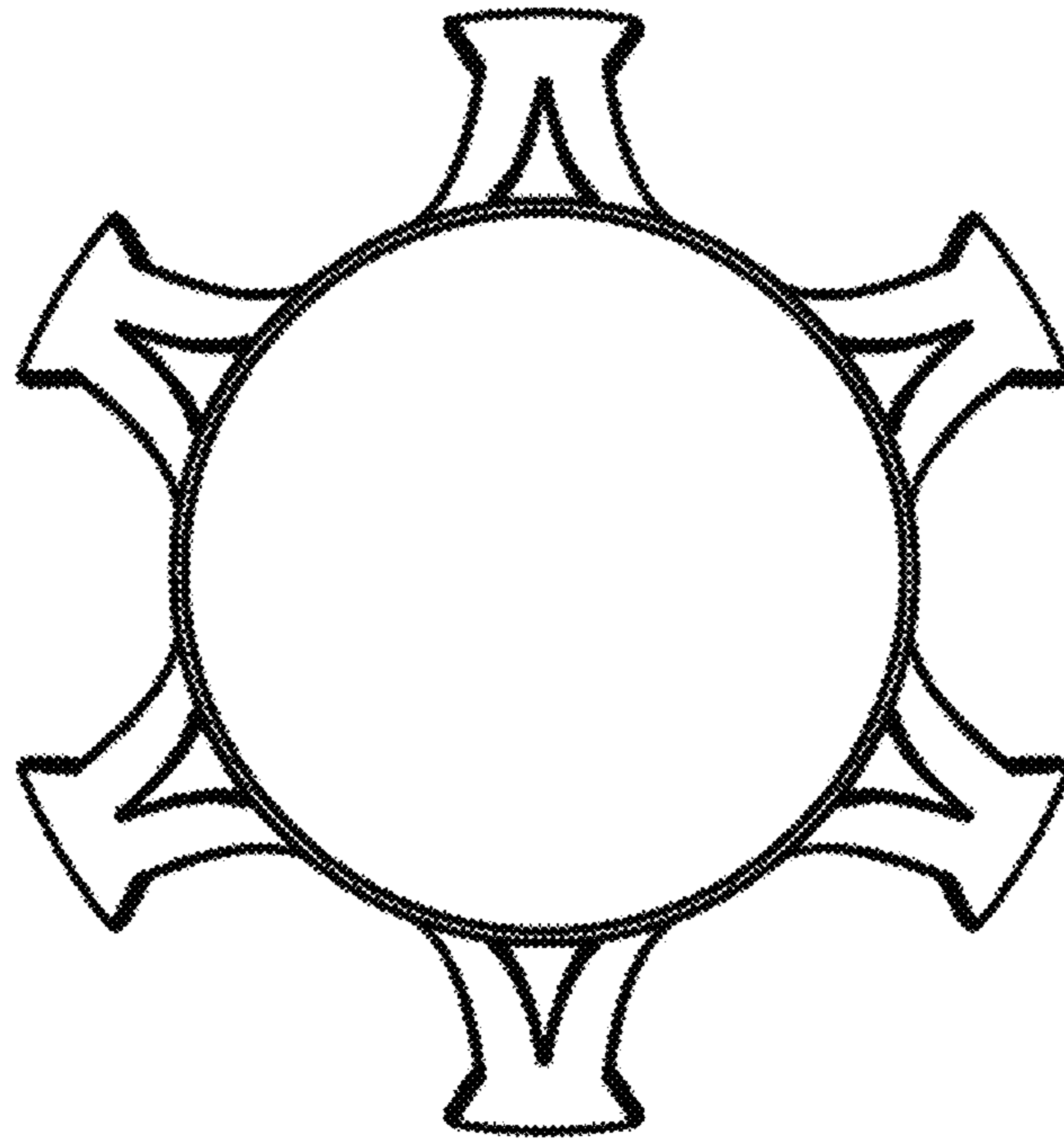


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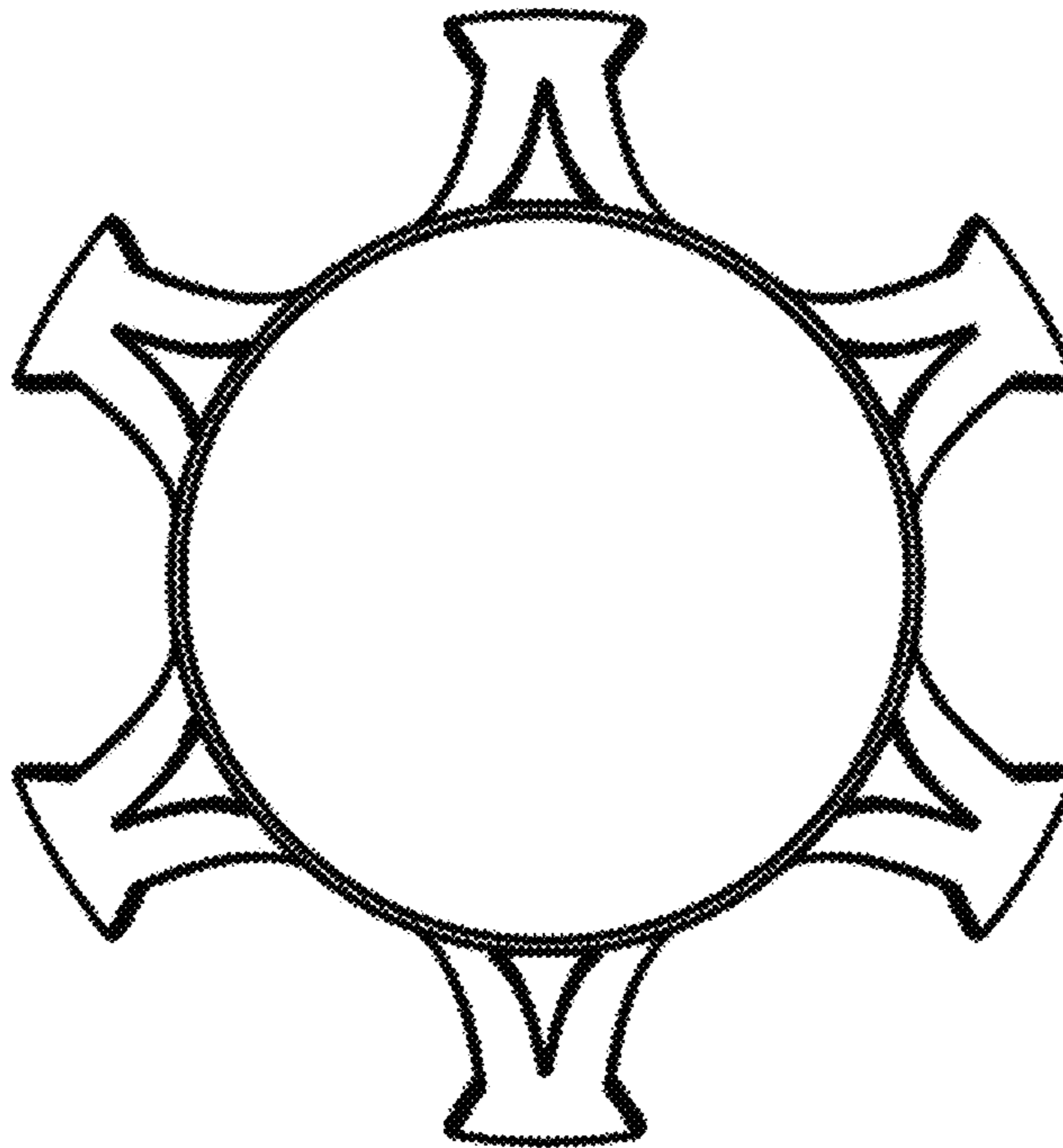


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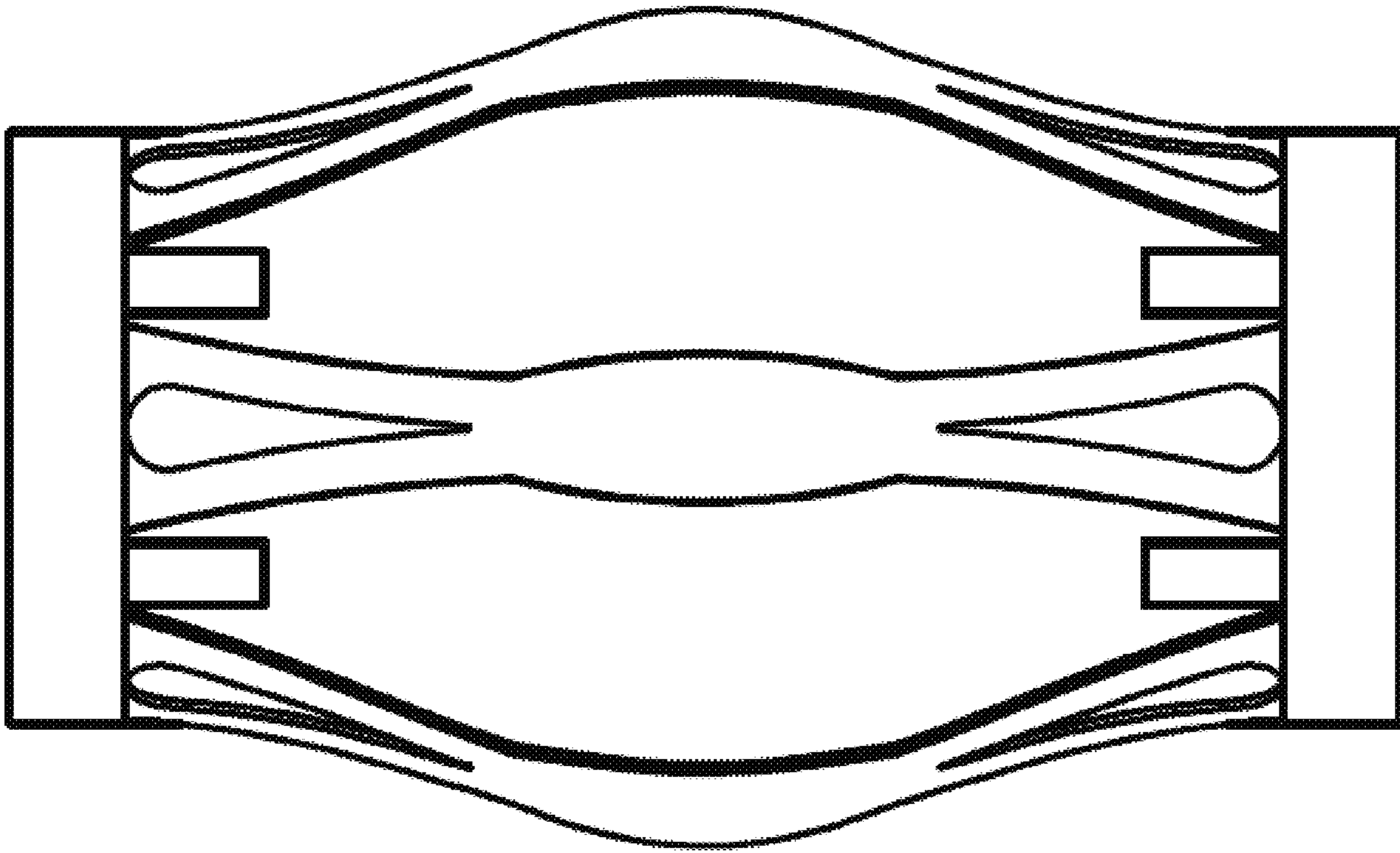


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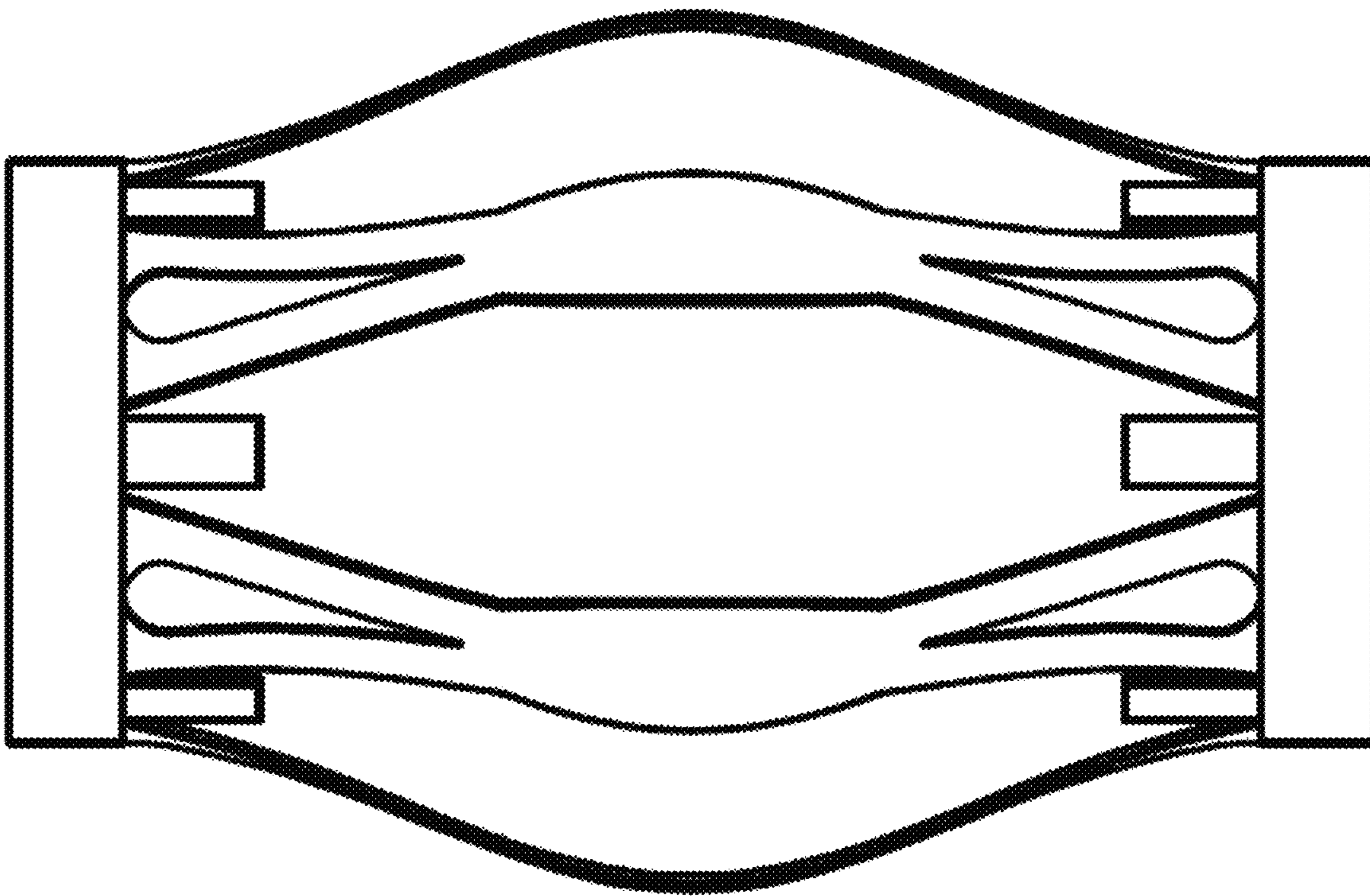


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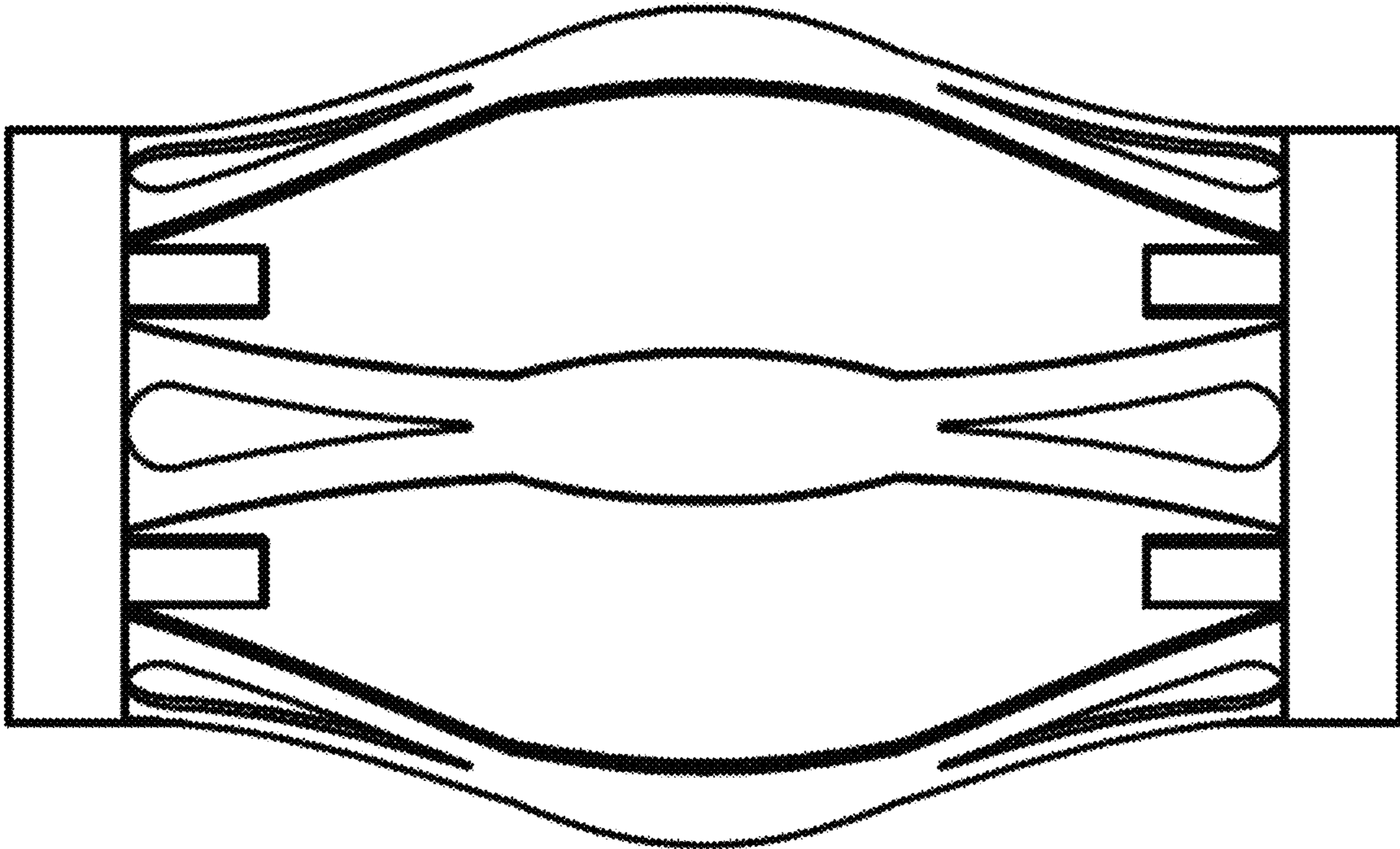


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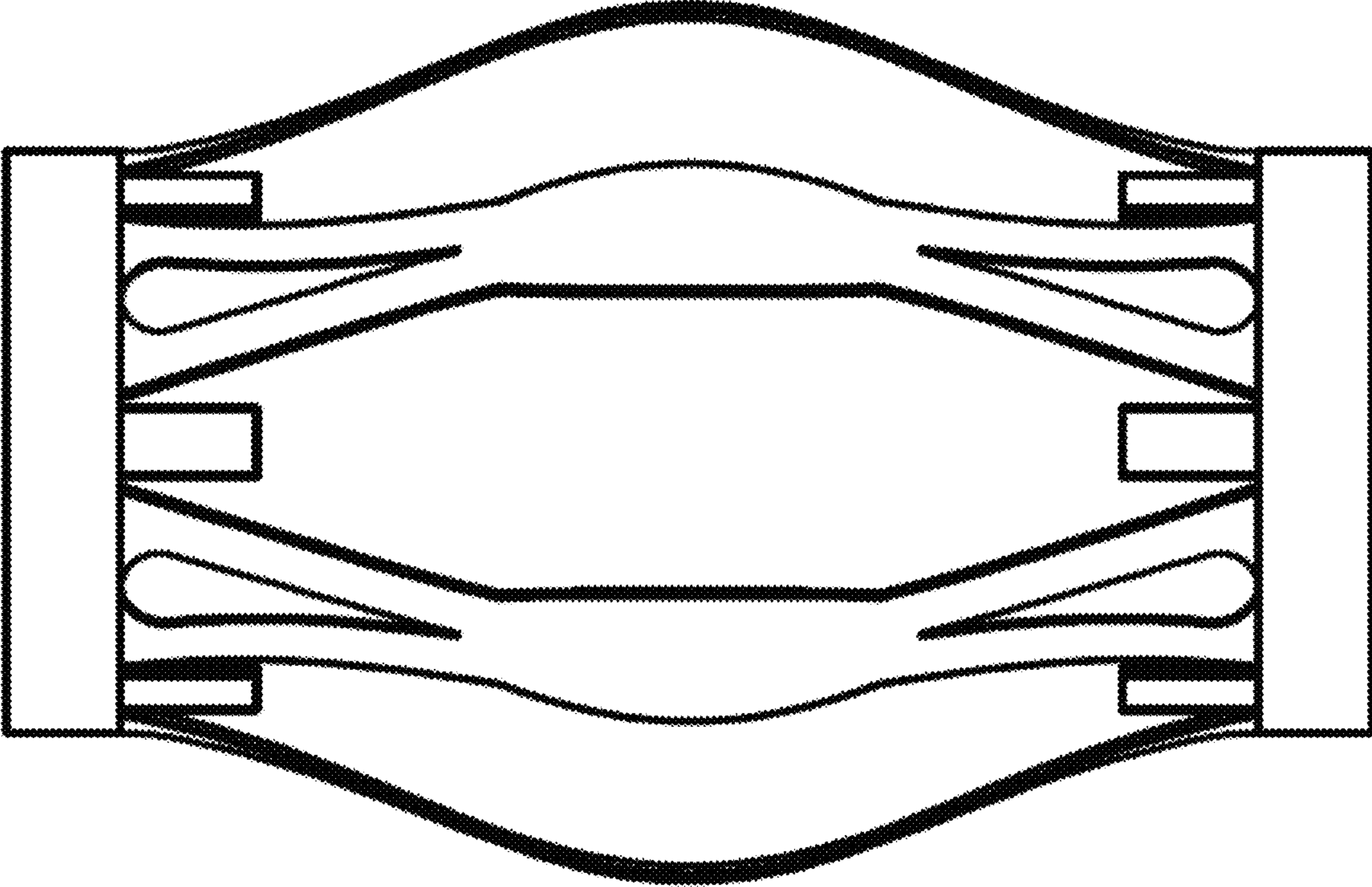


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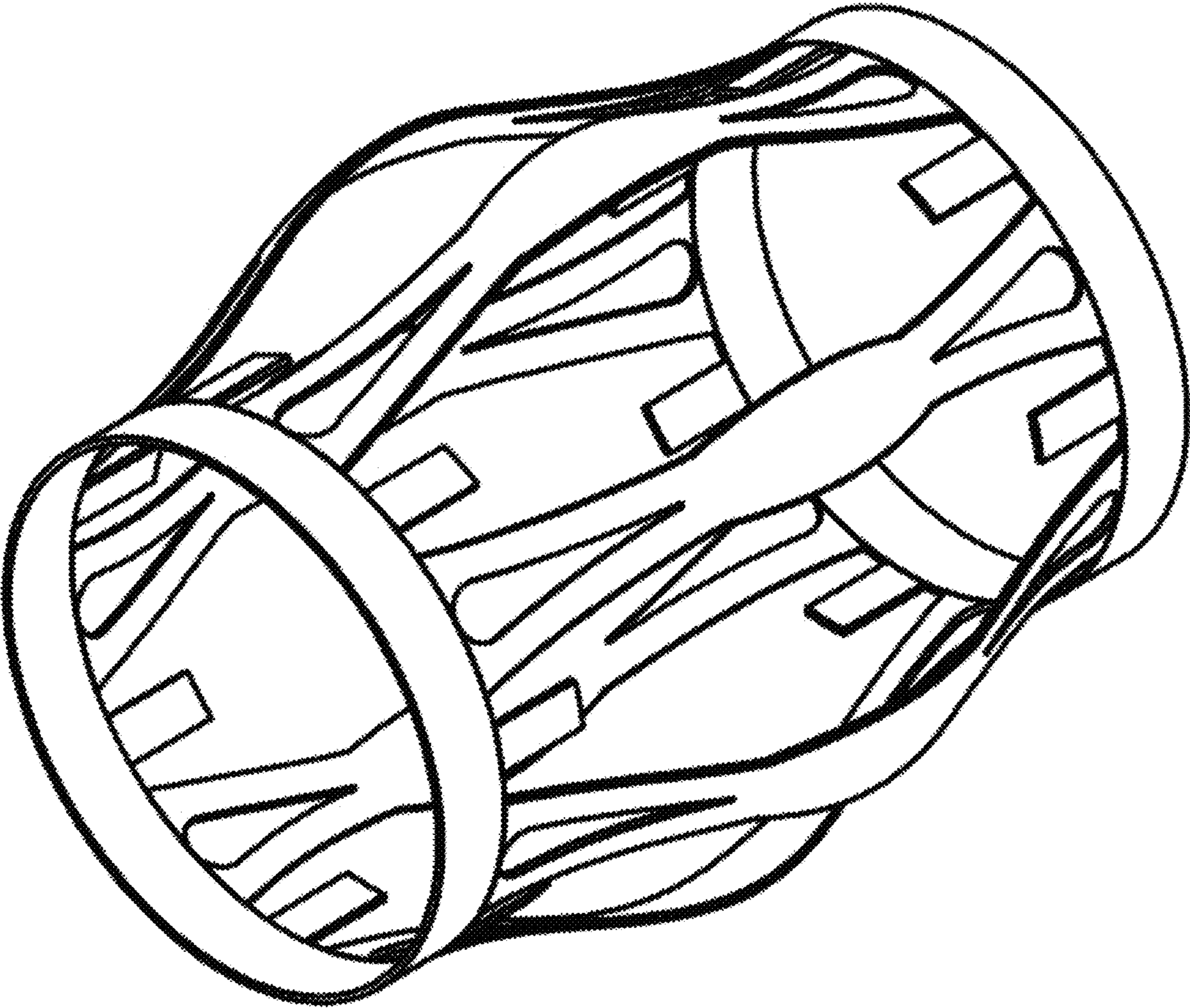


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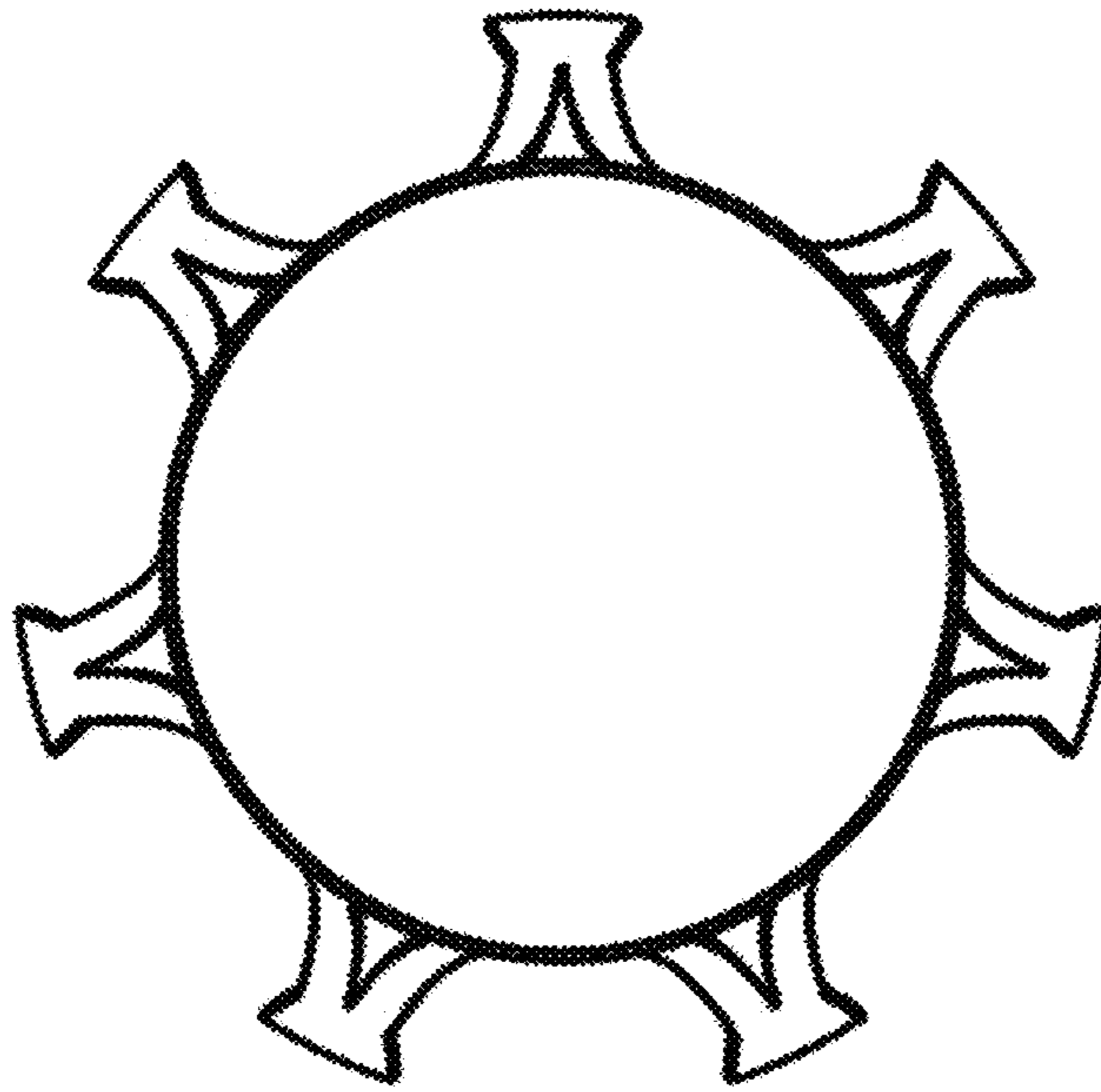


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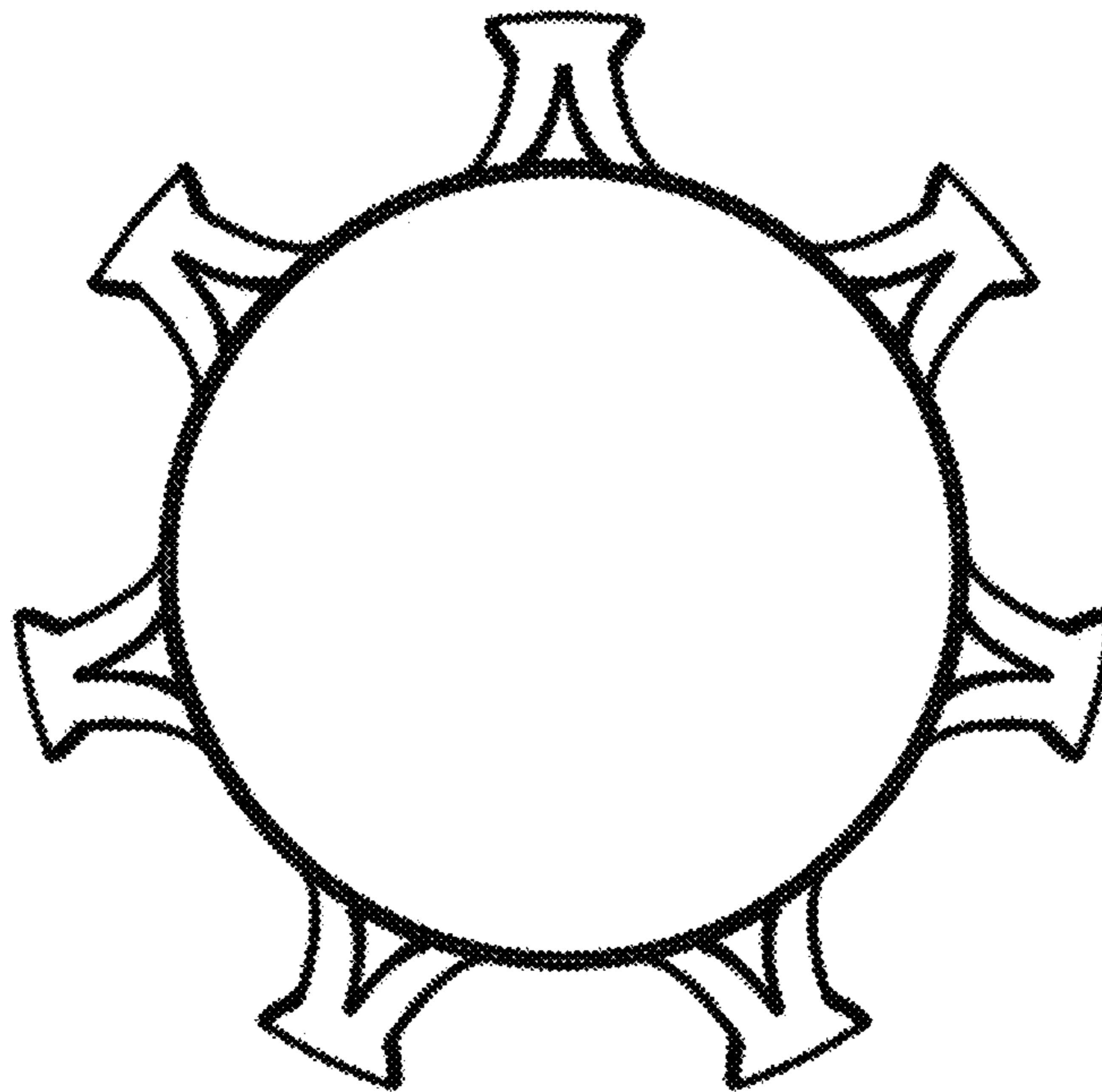


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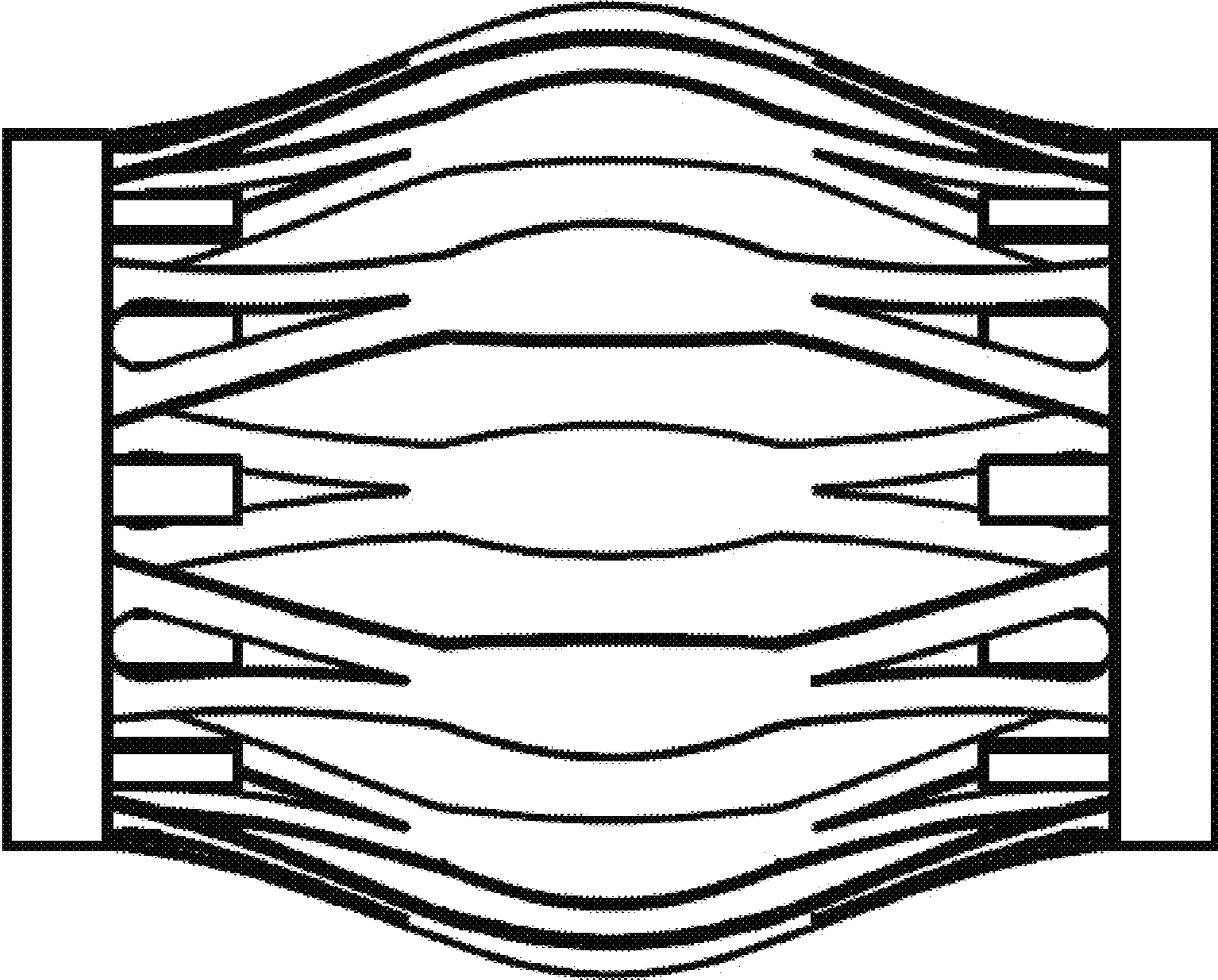


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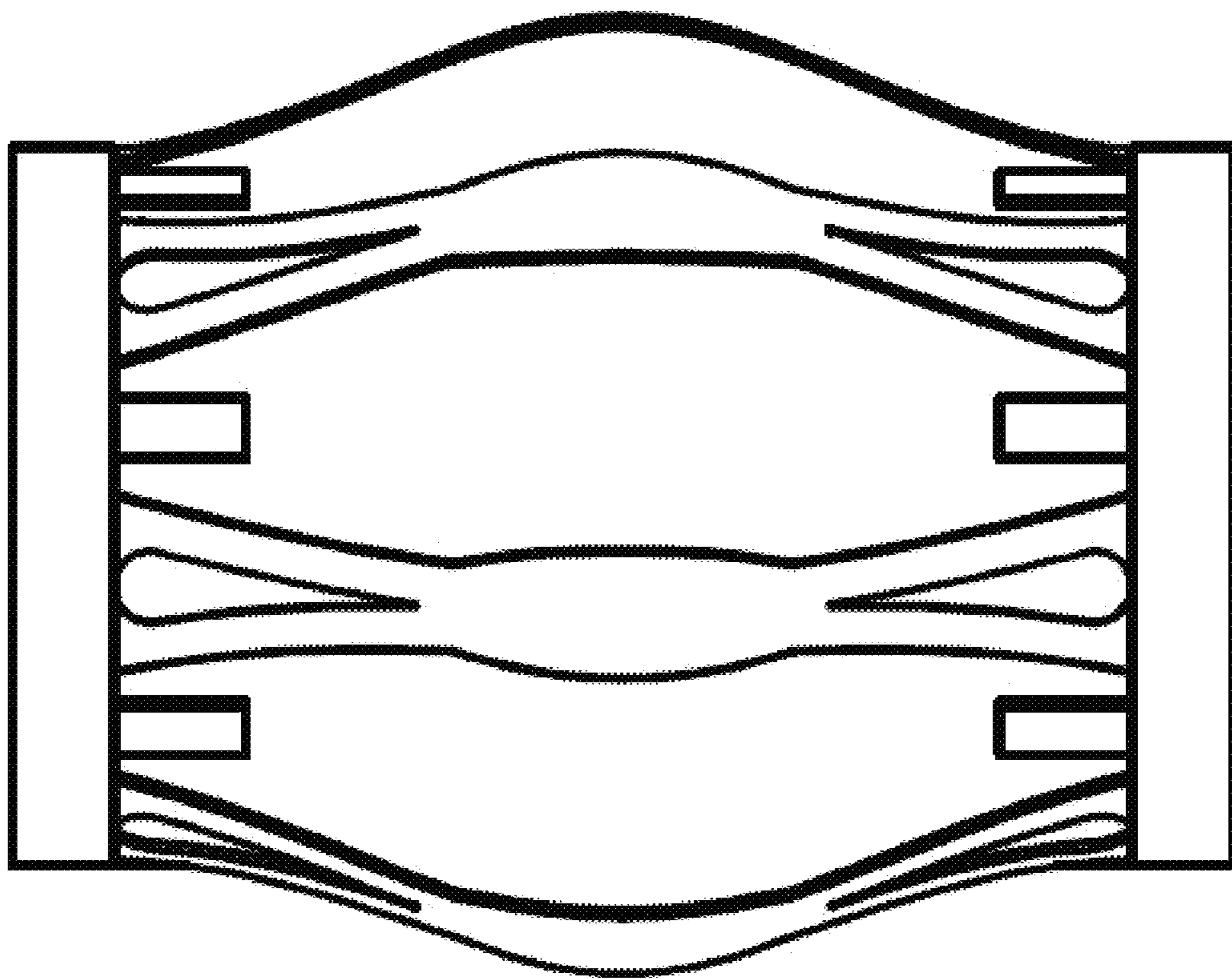


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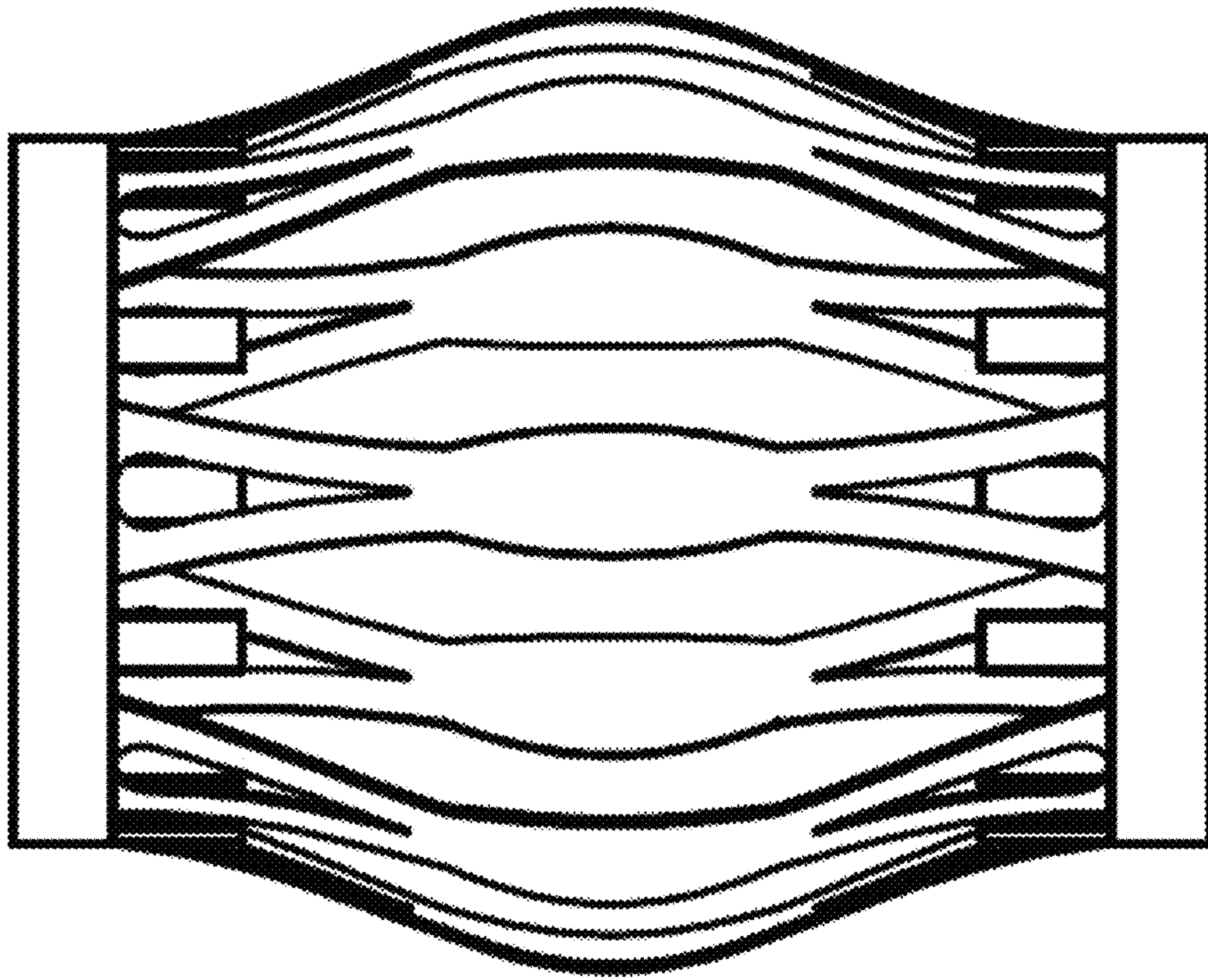


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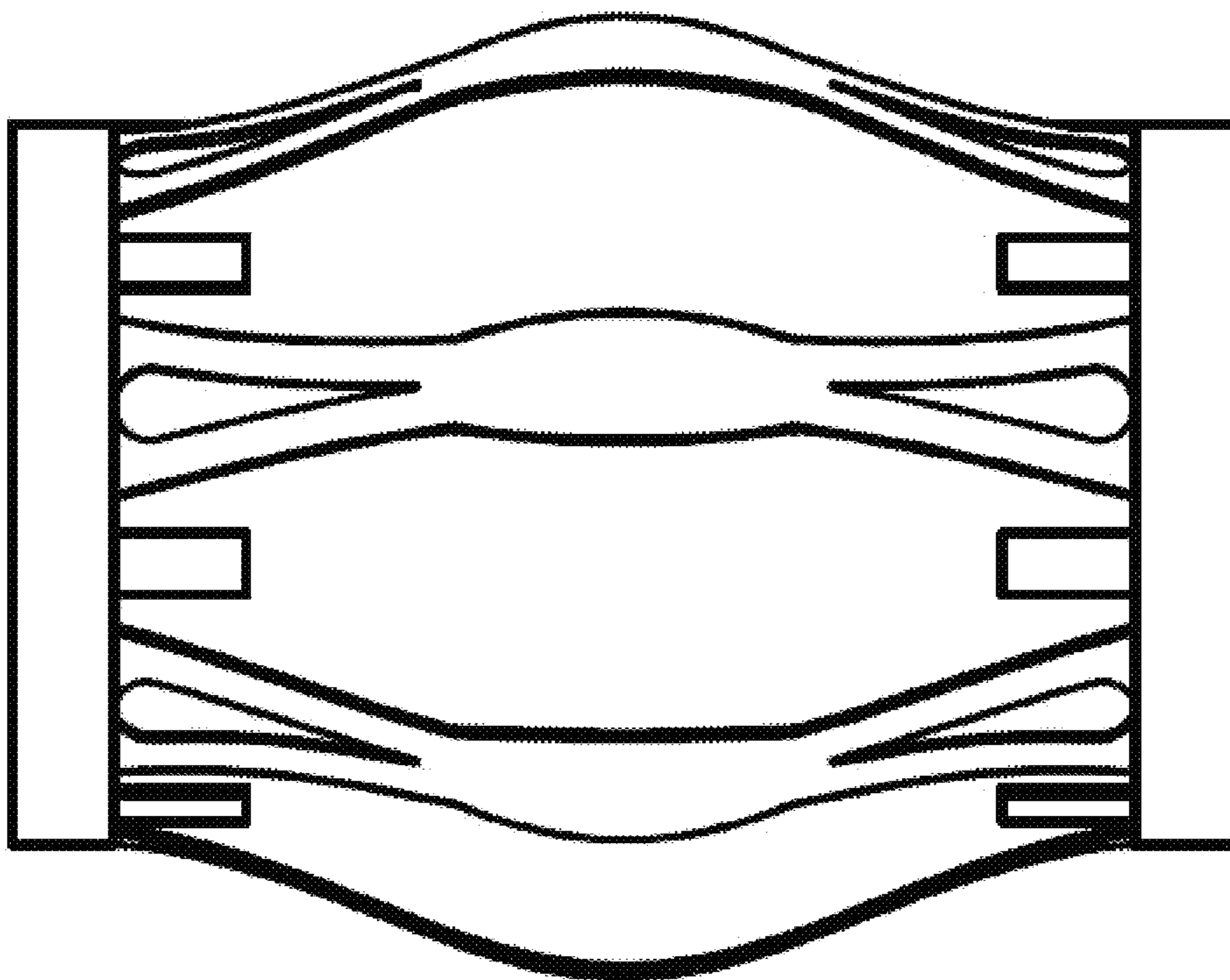


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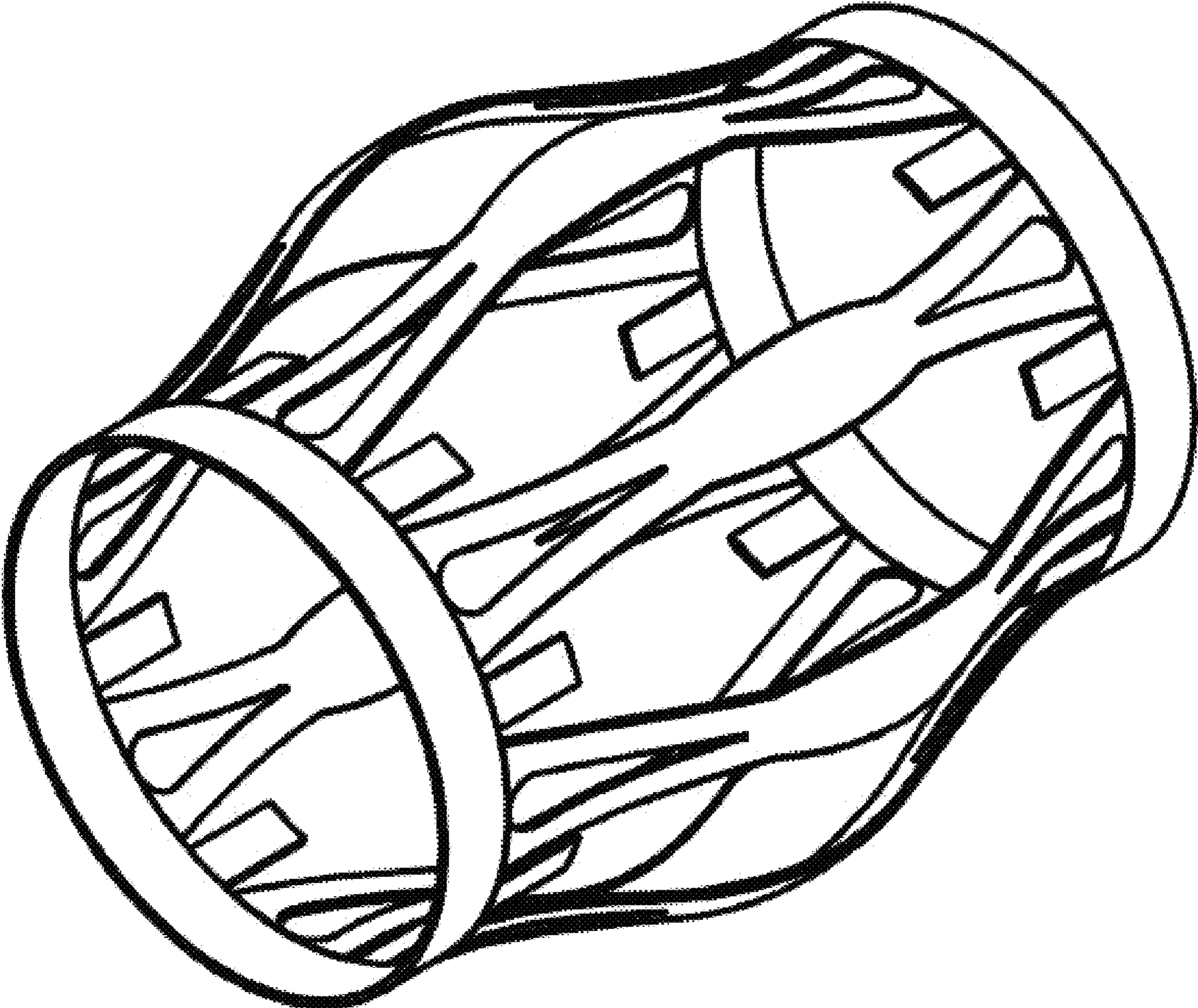


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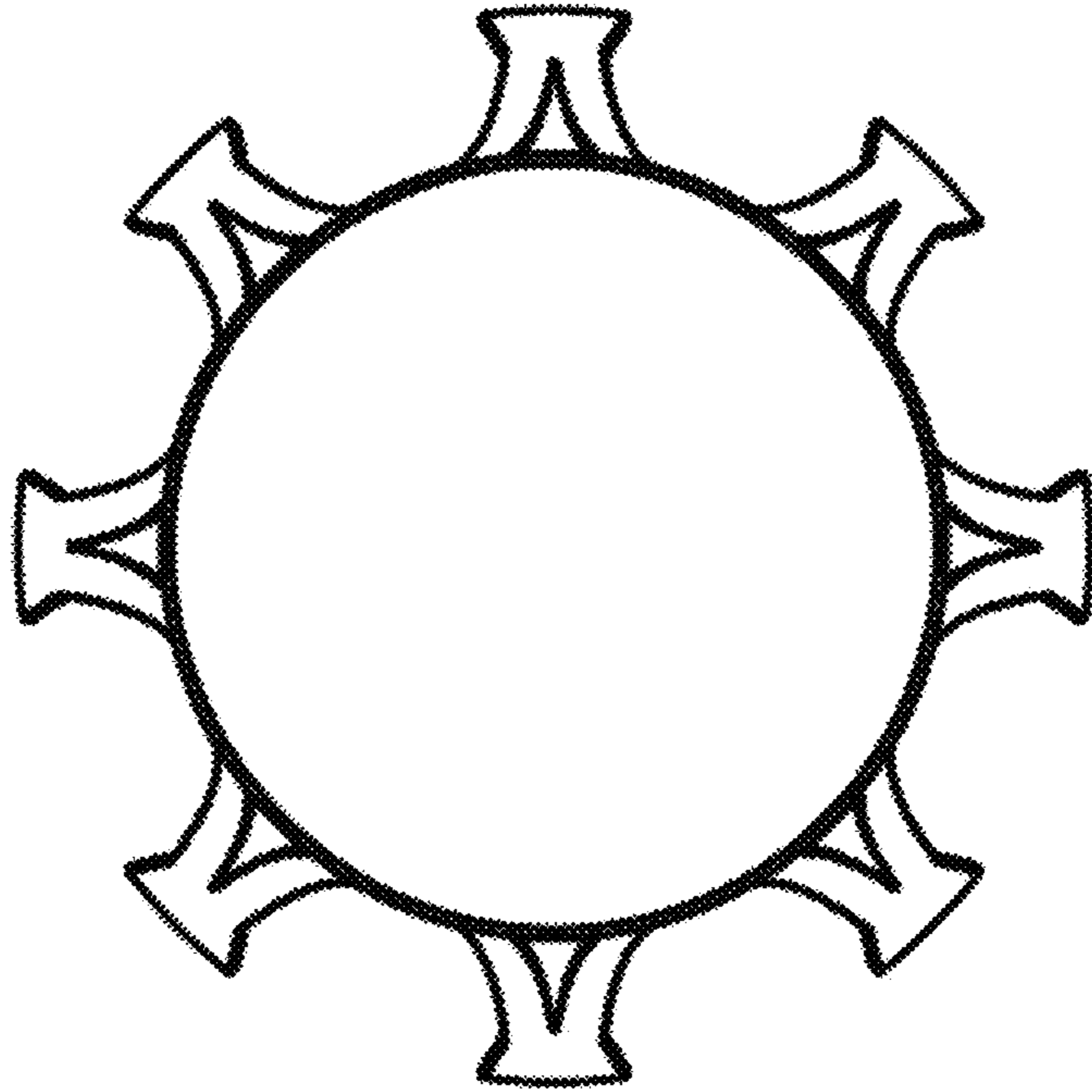


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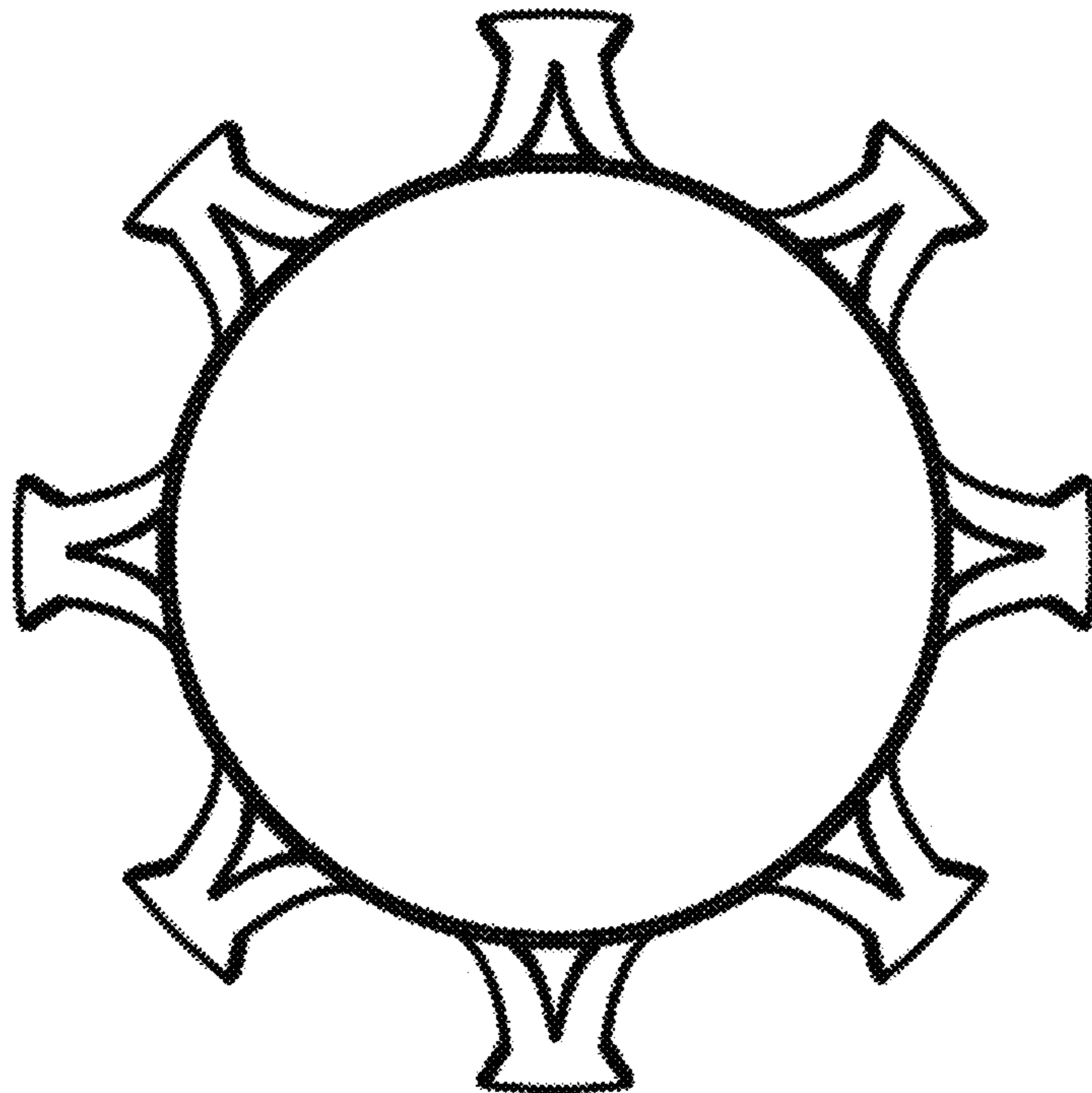


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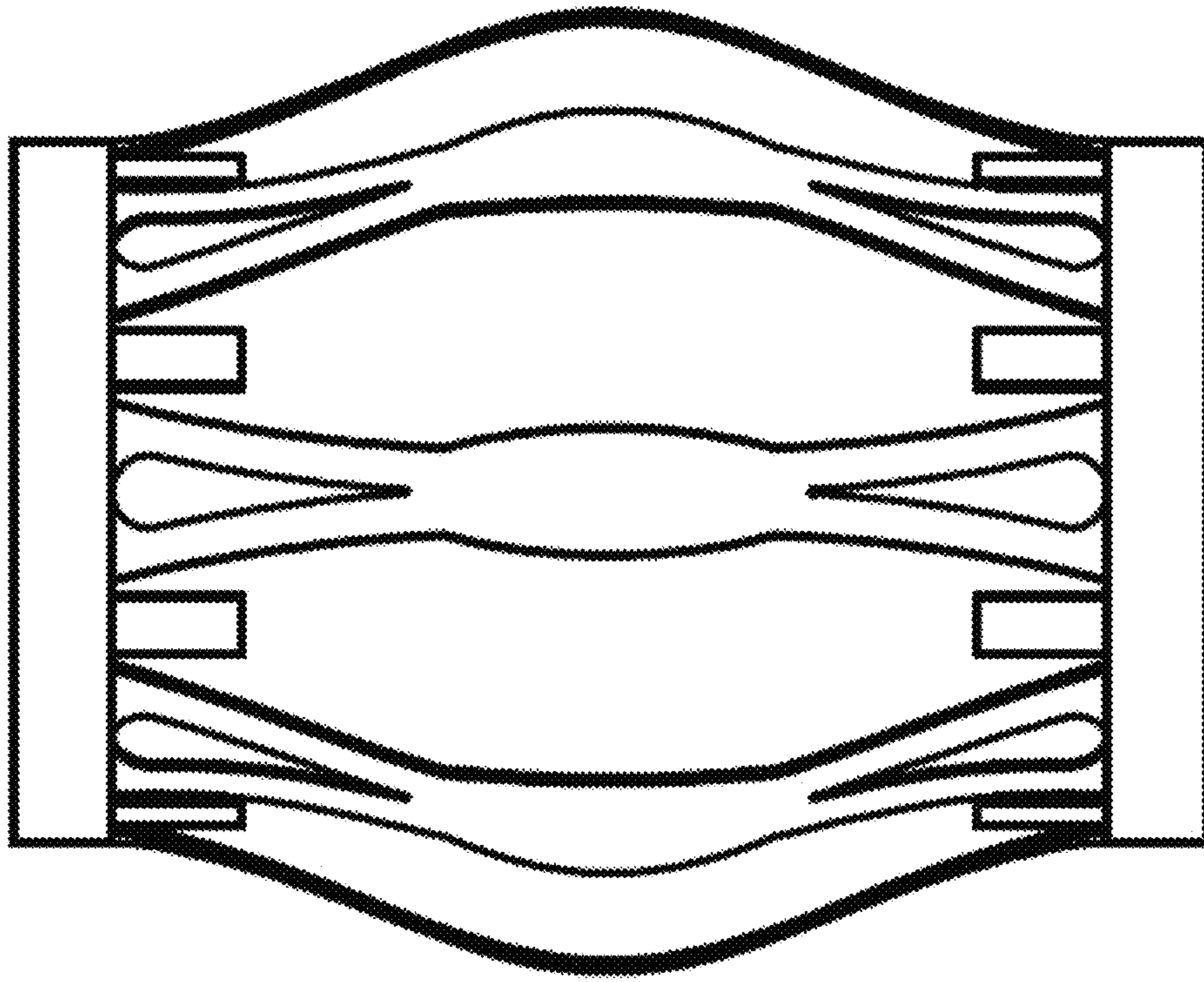


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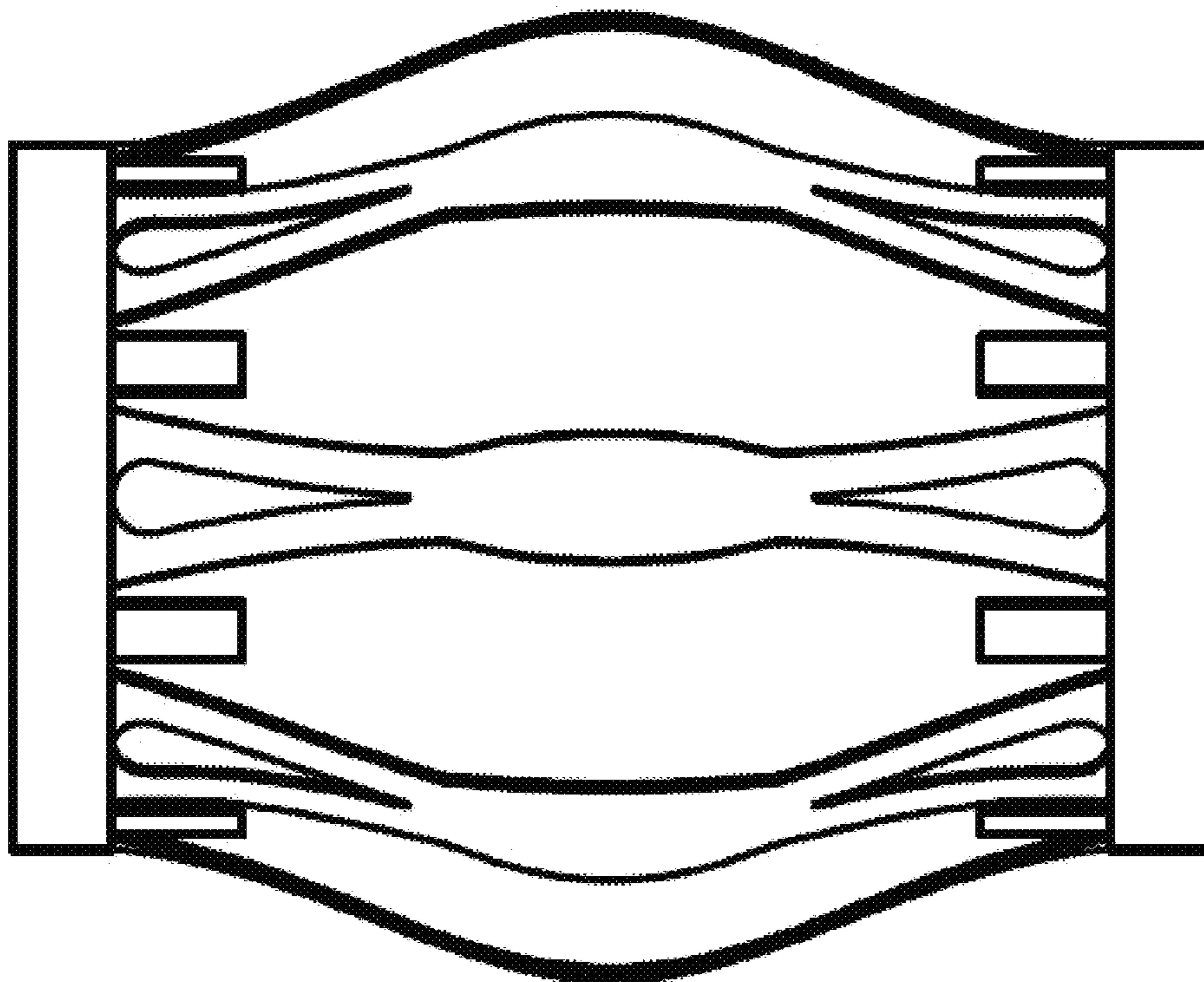


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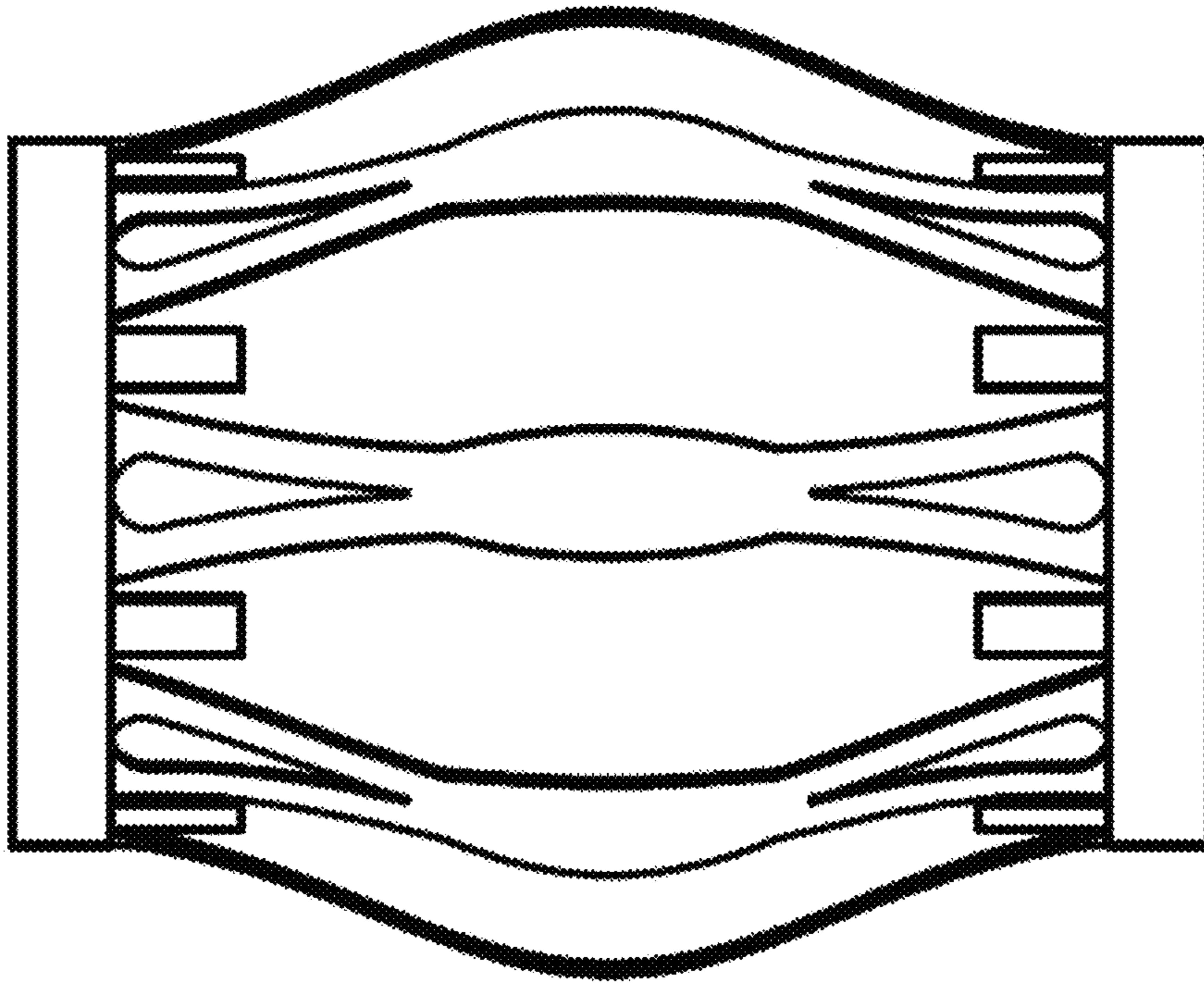


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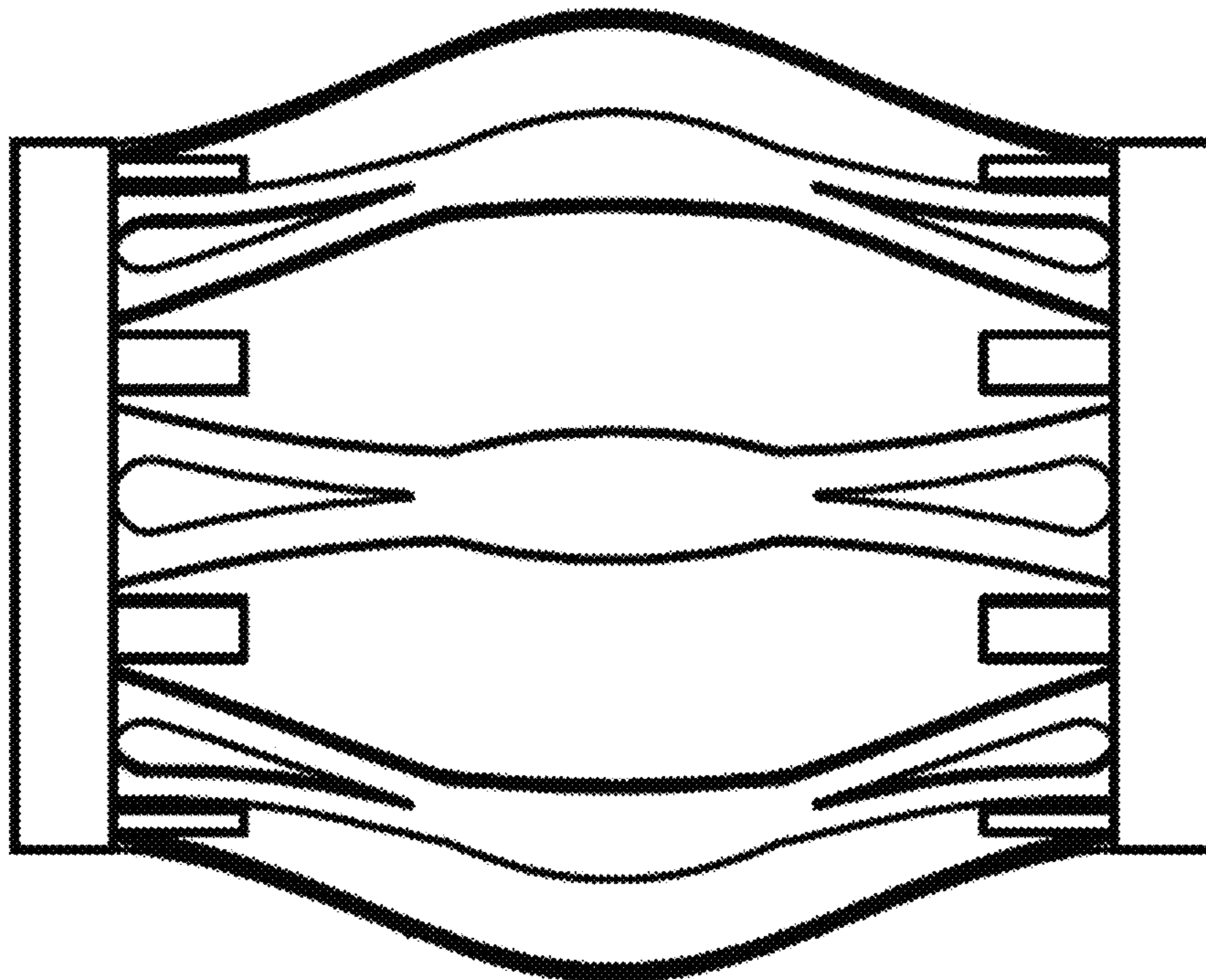


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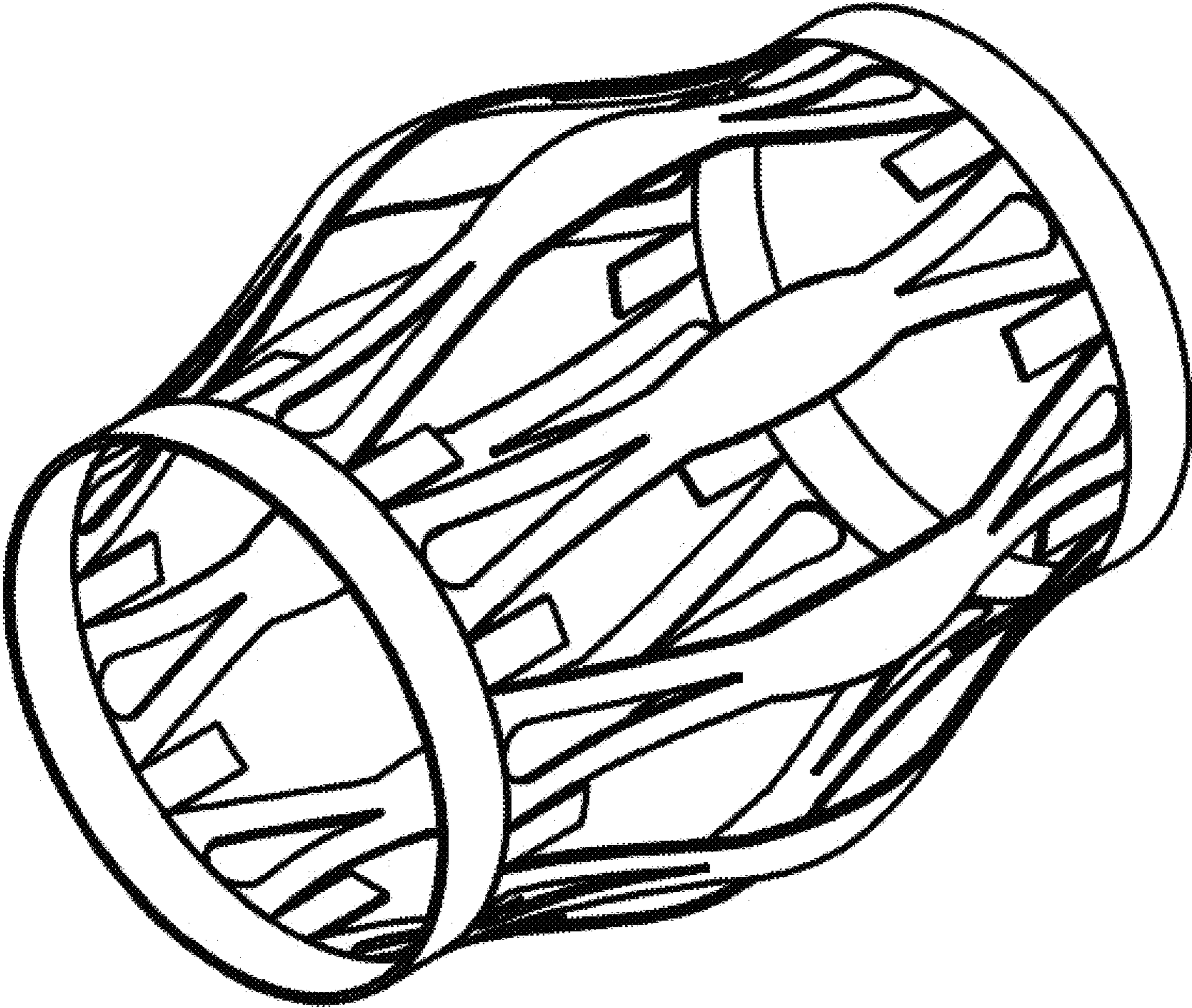


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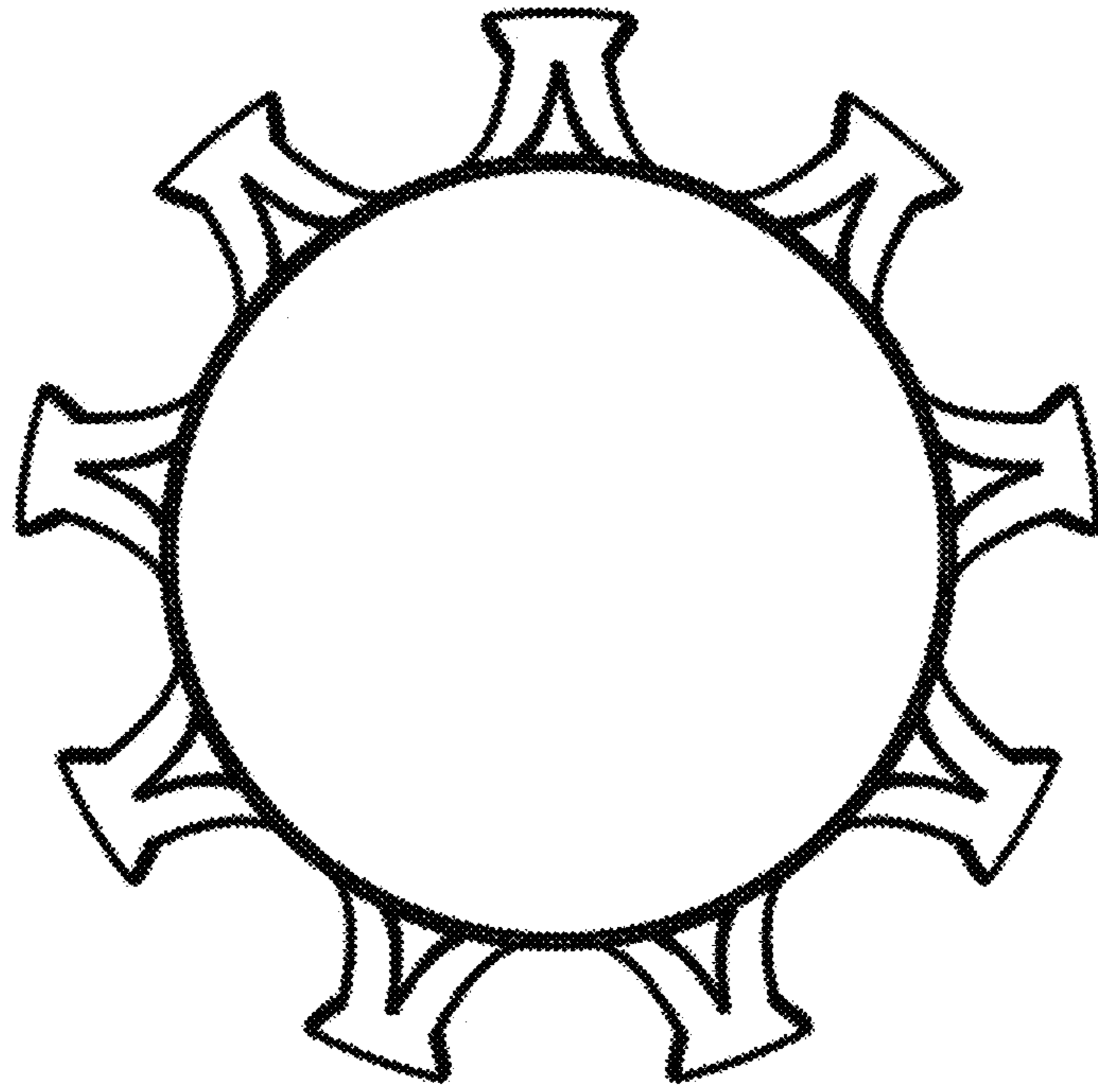


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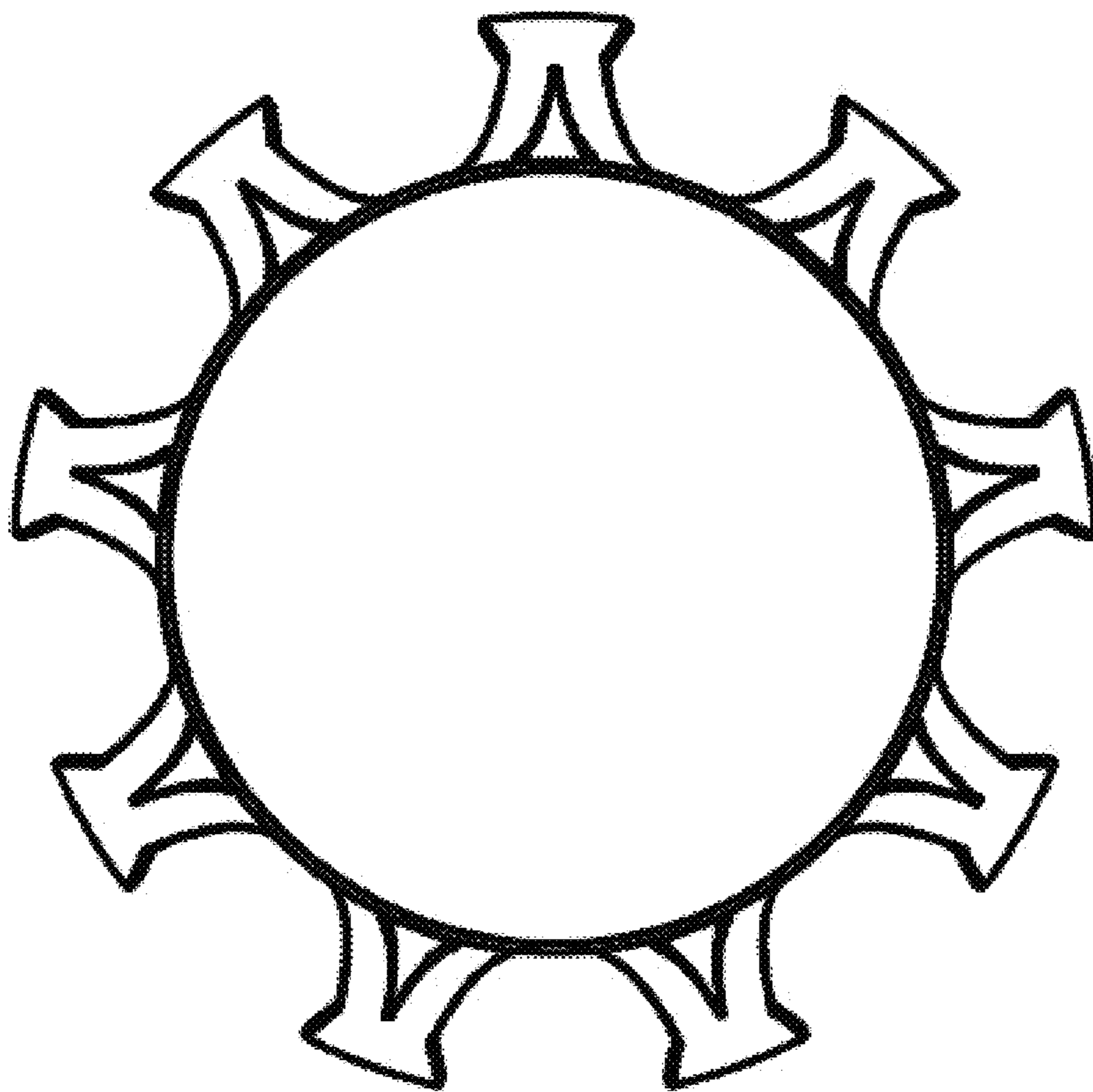


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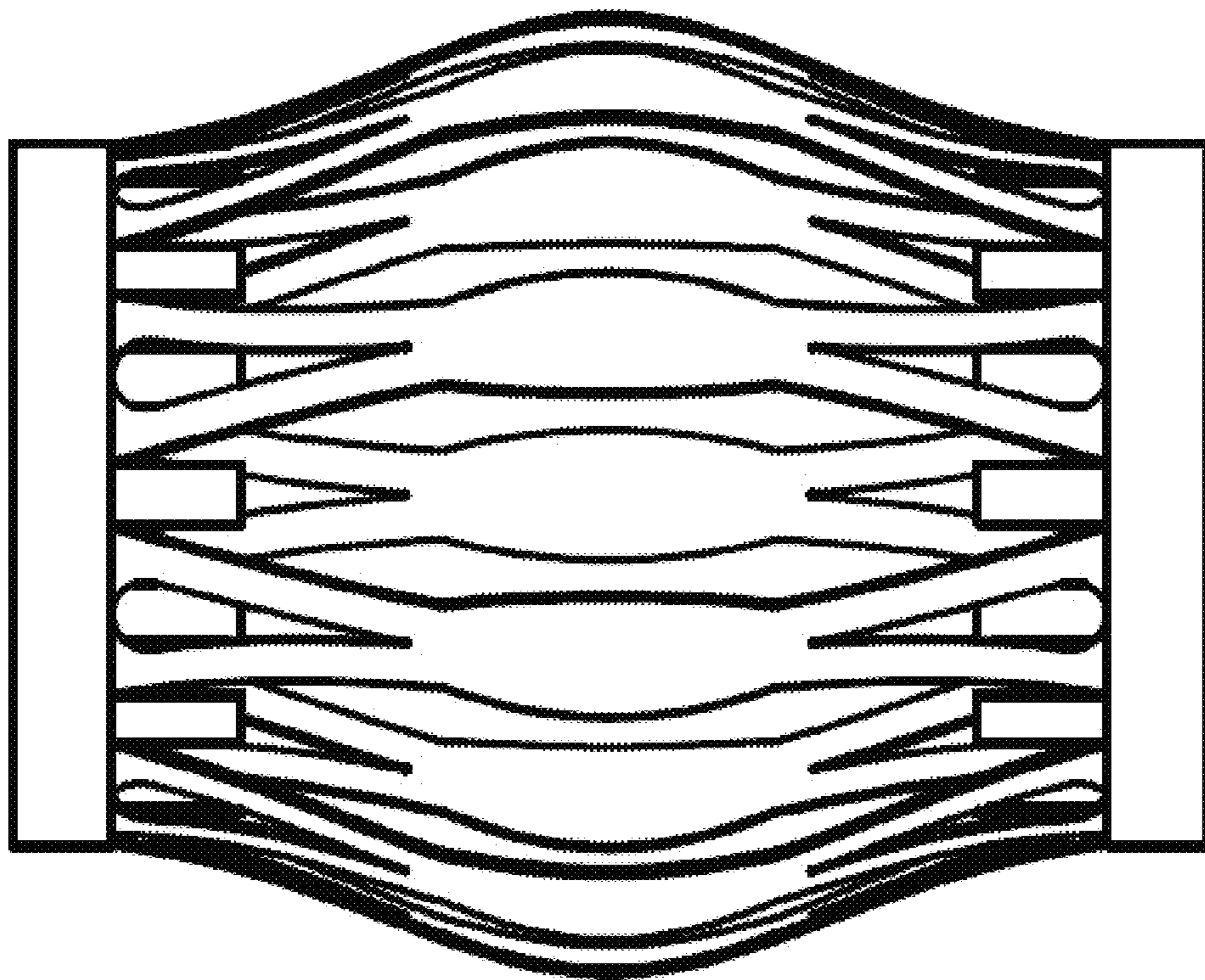


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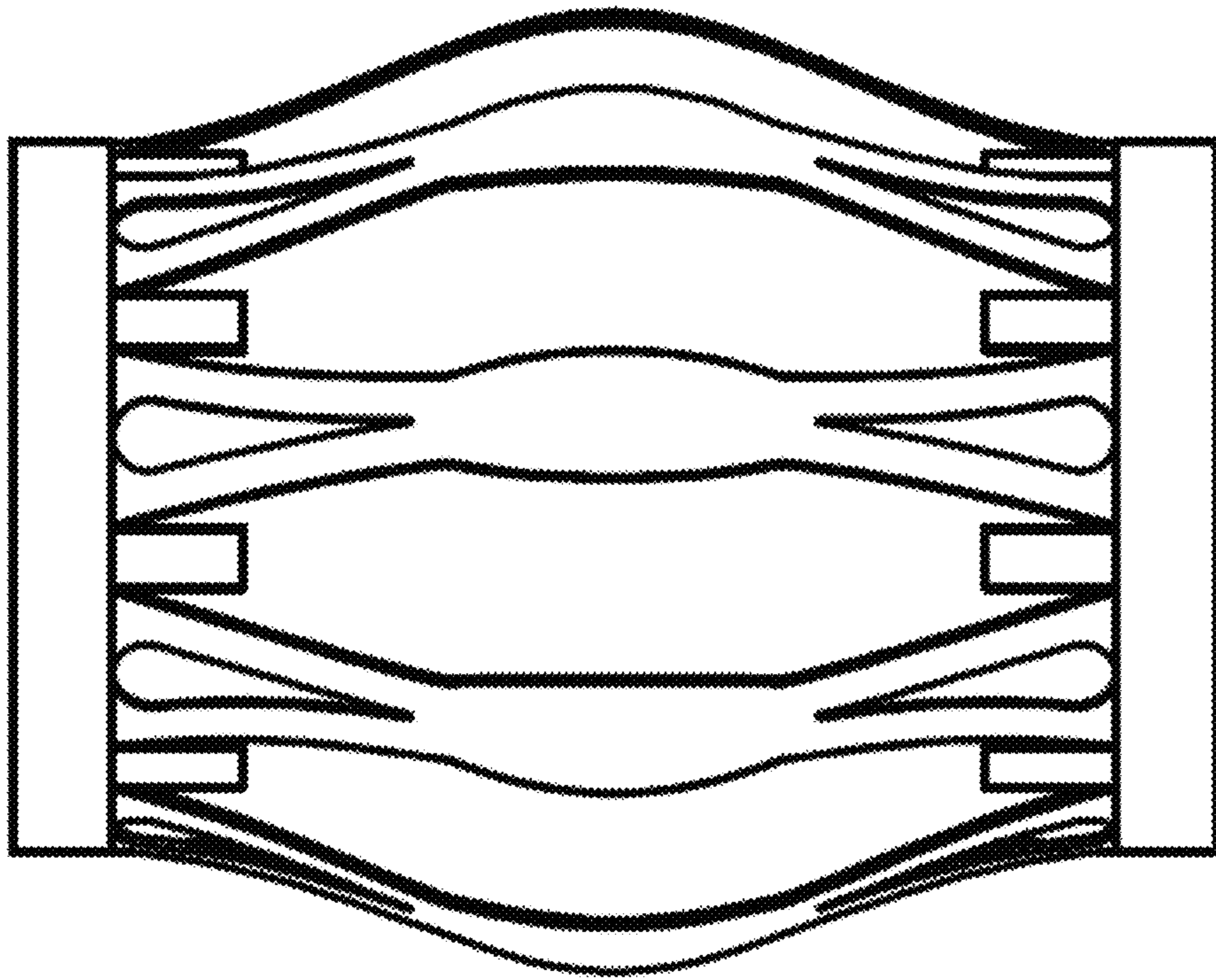


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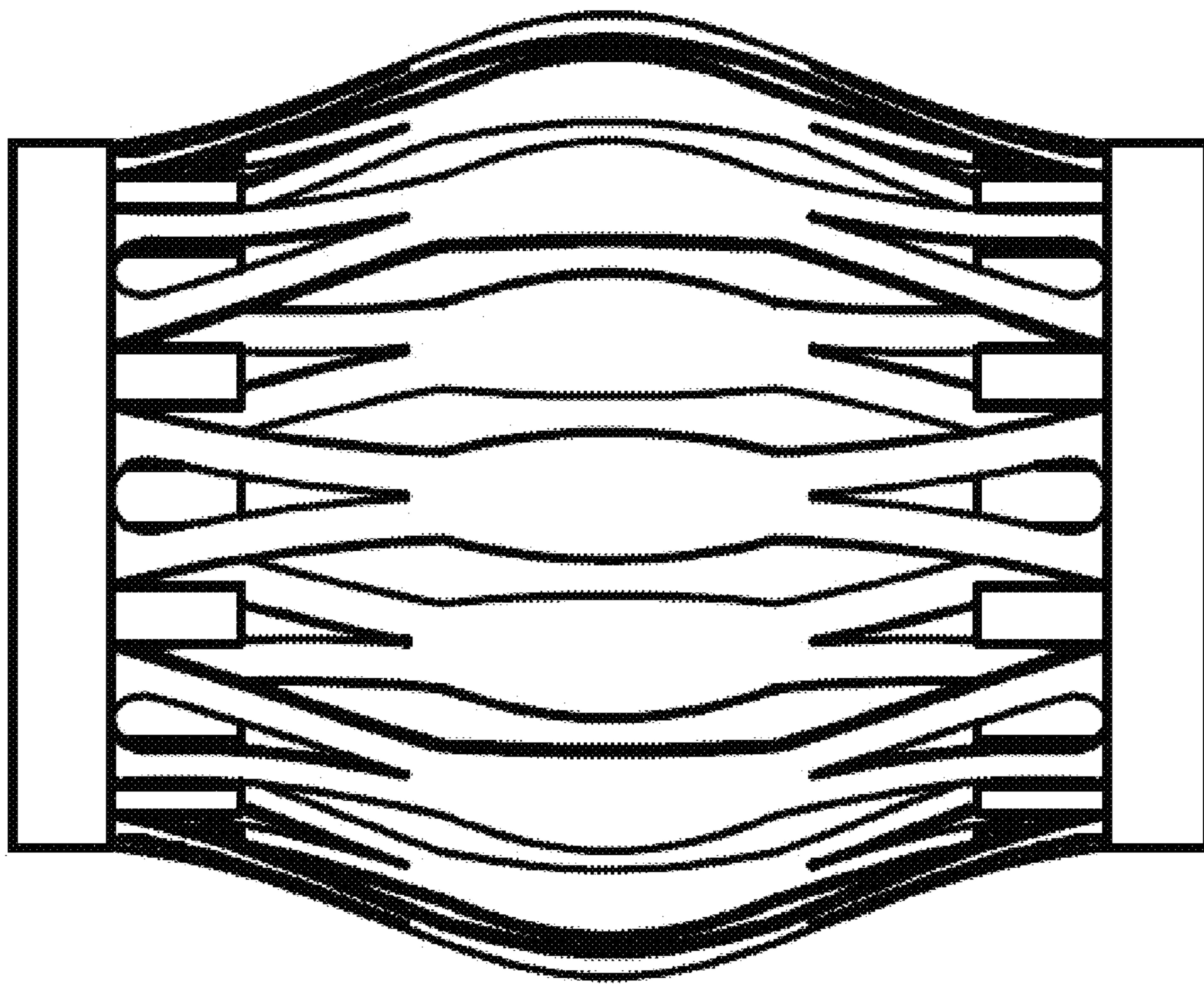


Figure 48



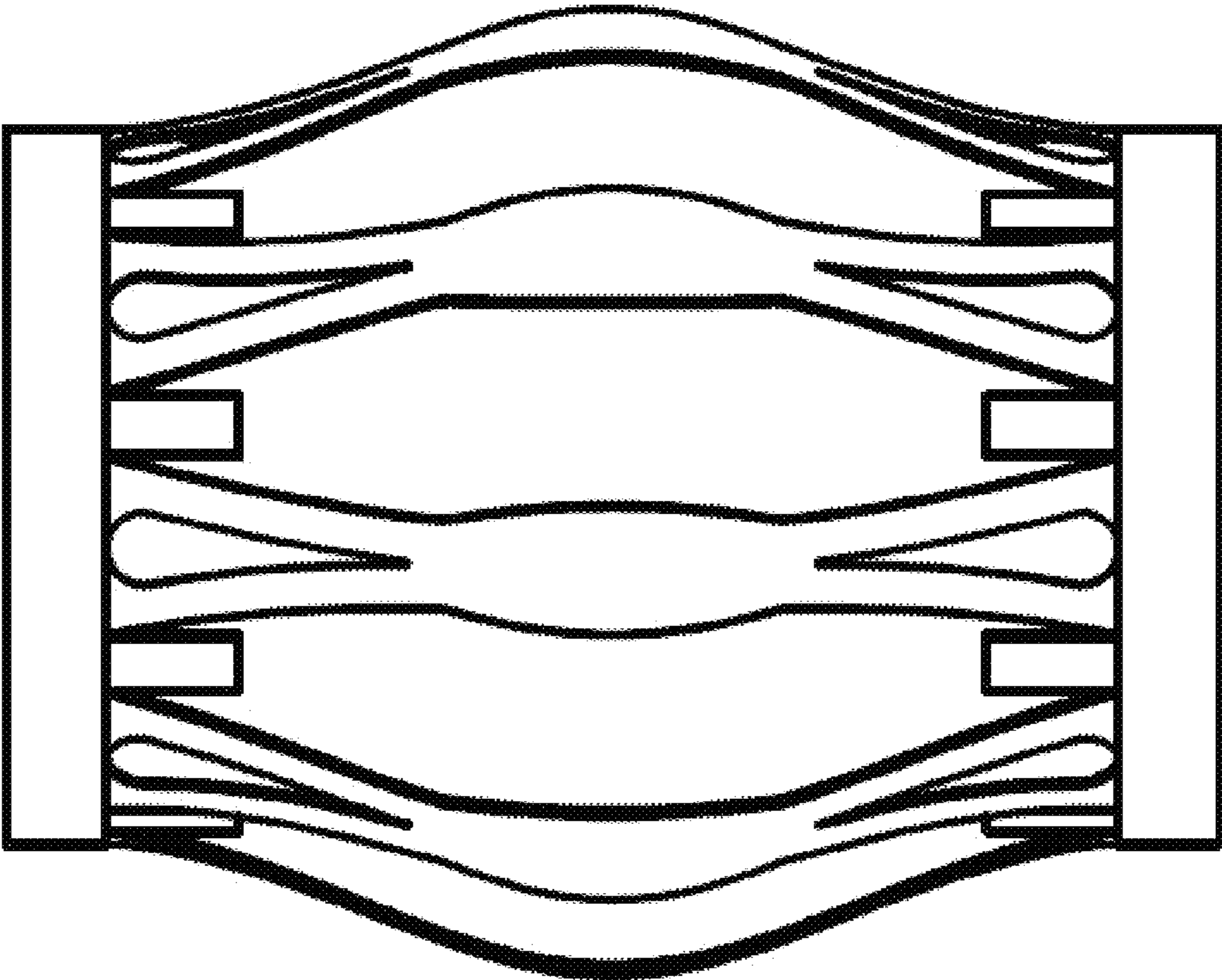


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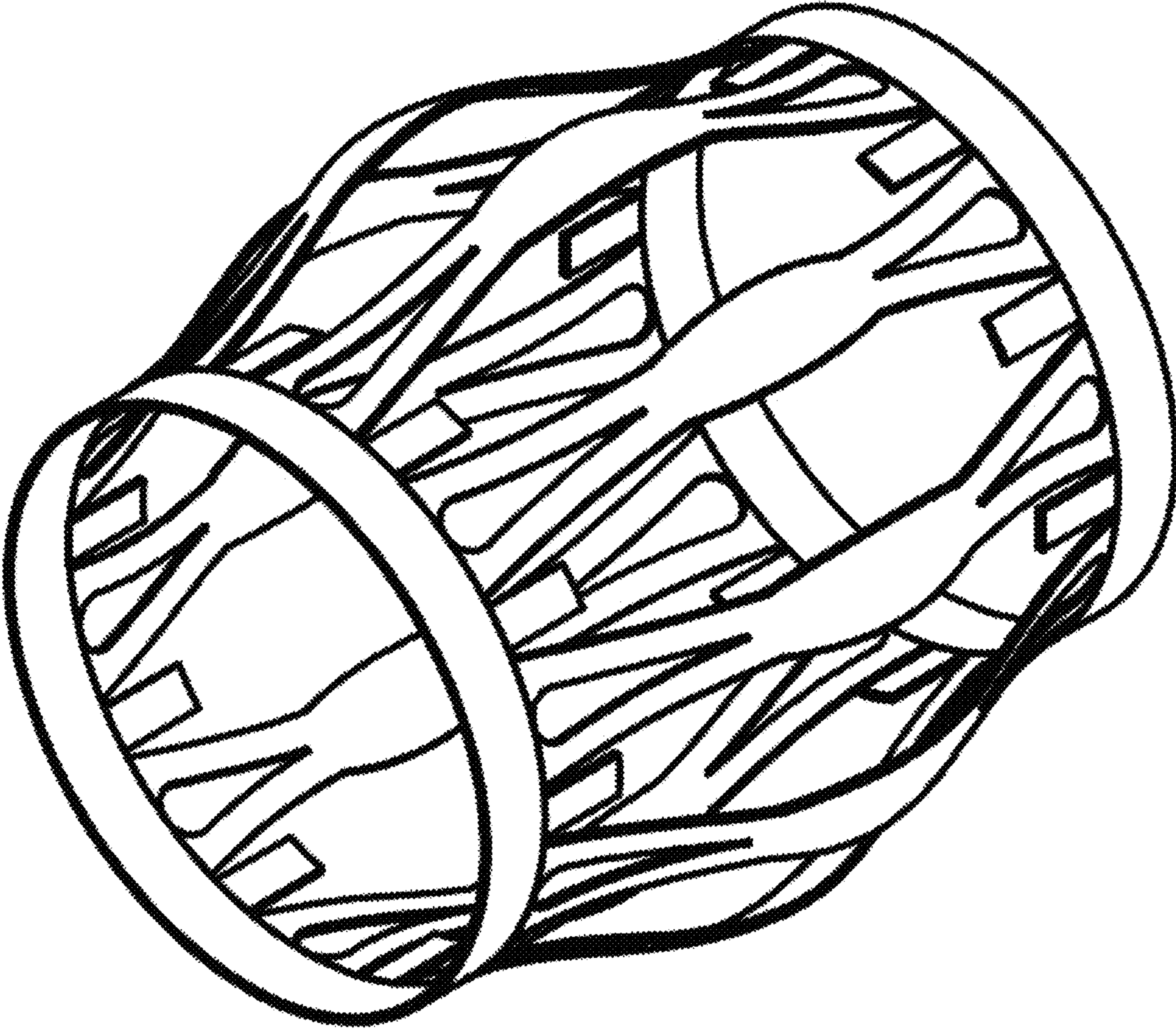


Figure 50

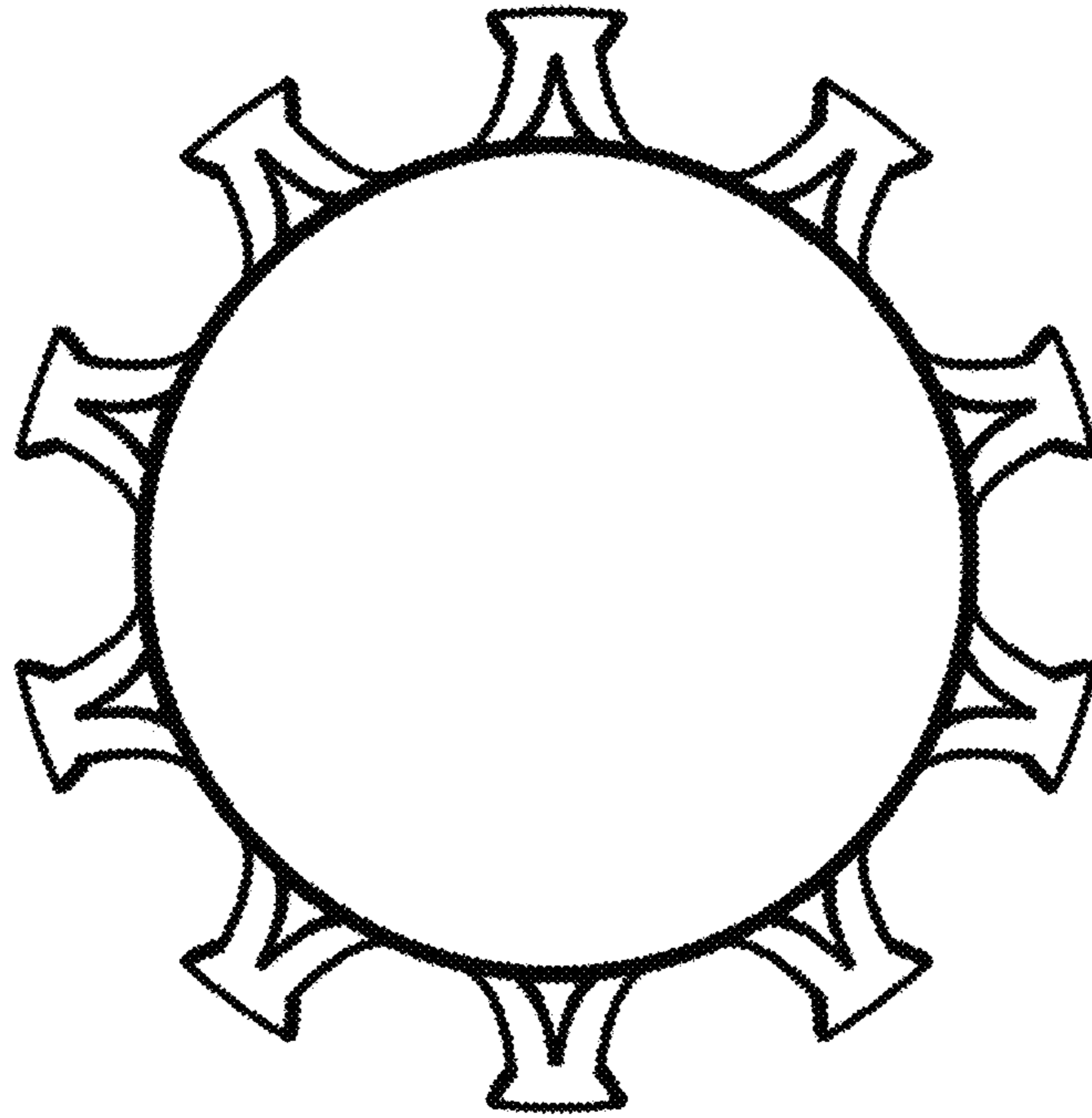


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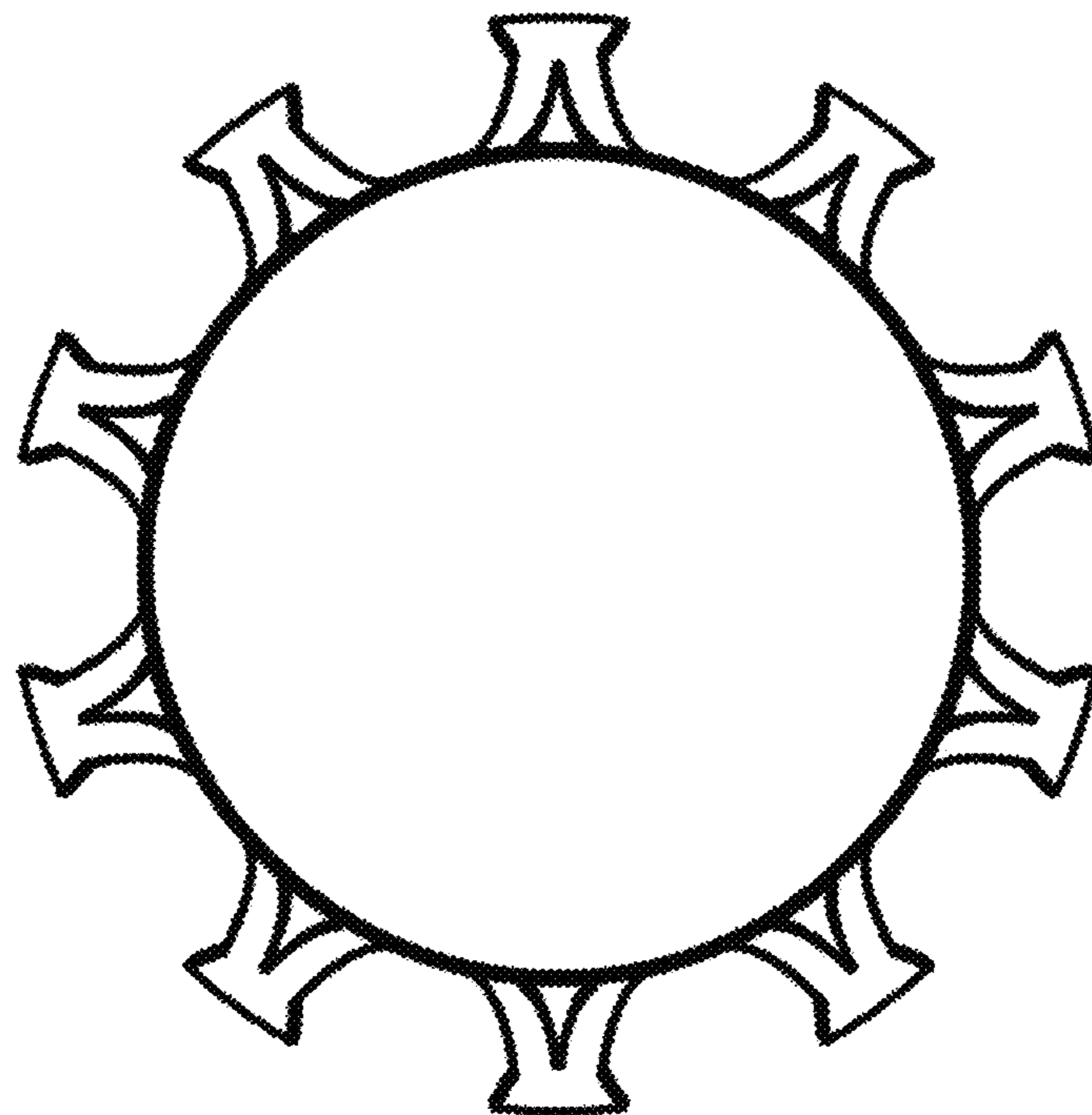


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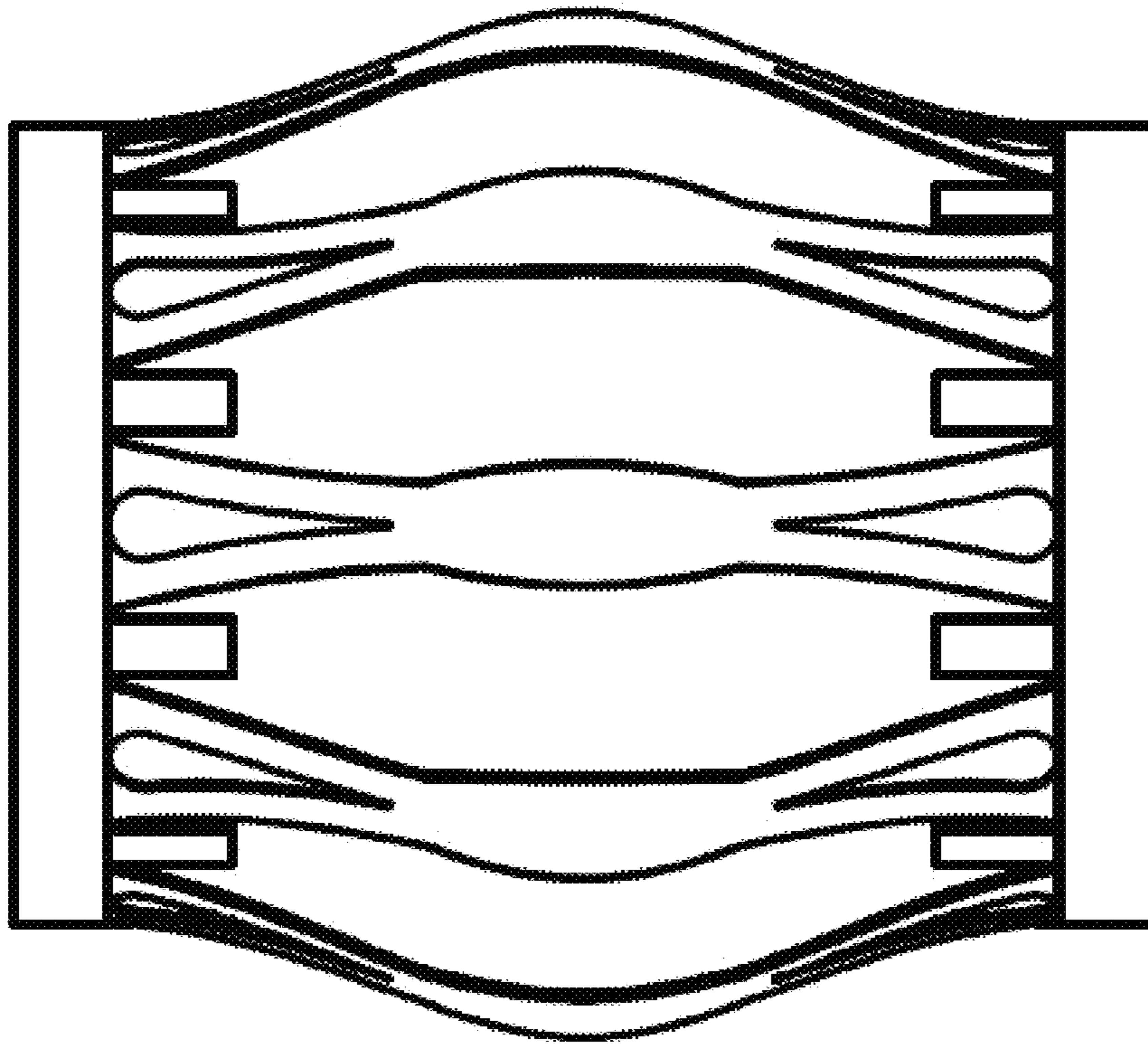


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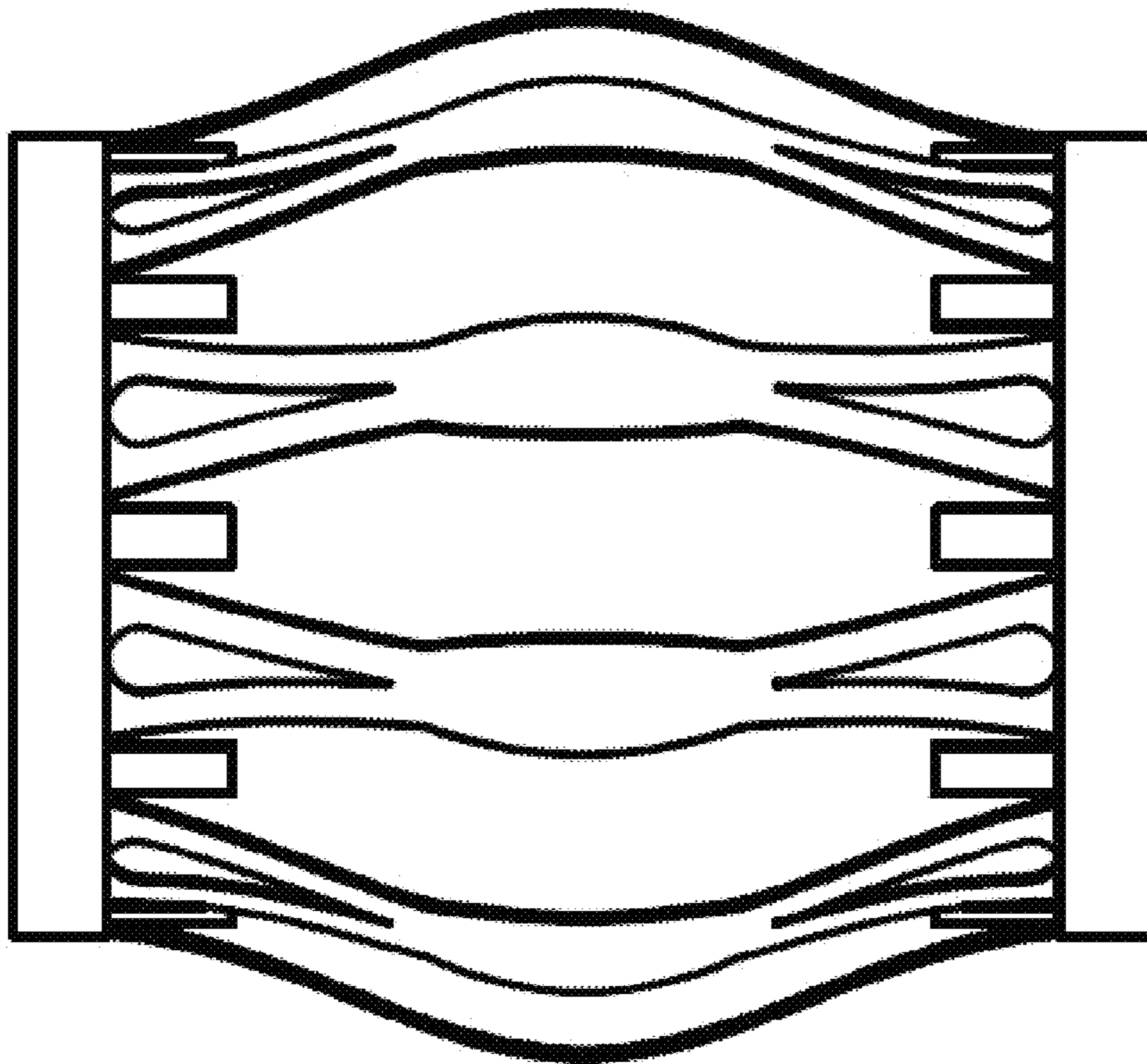


Figure 54

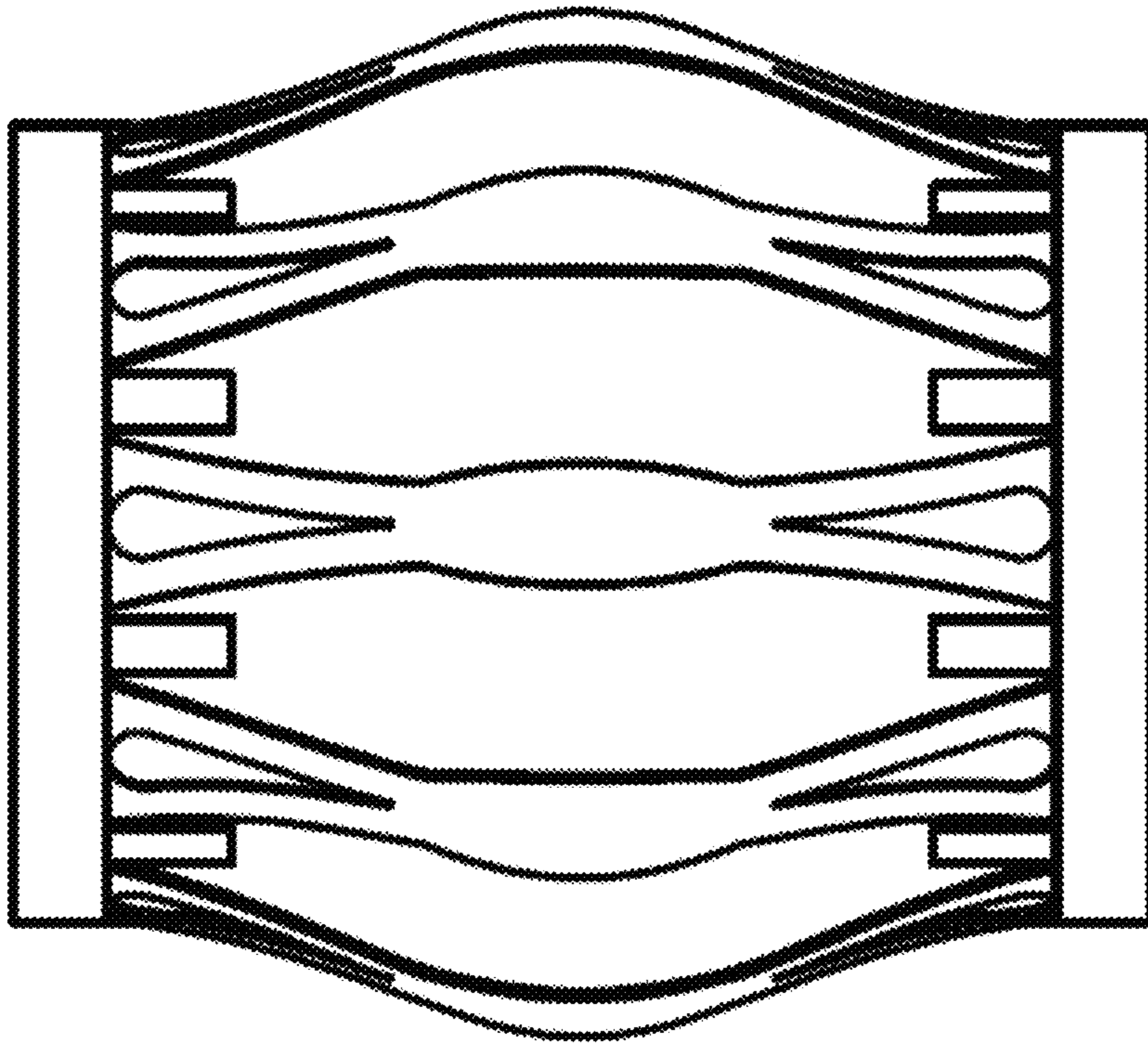


Figure 55

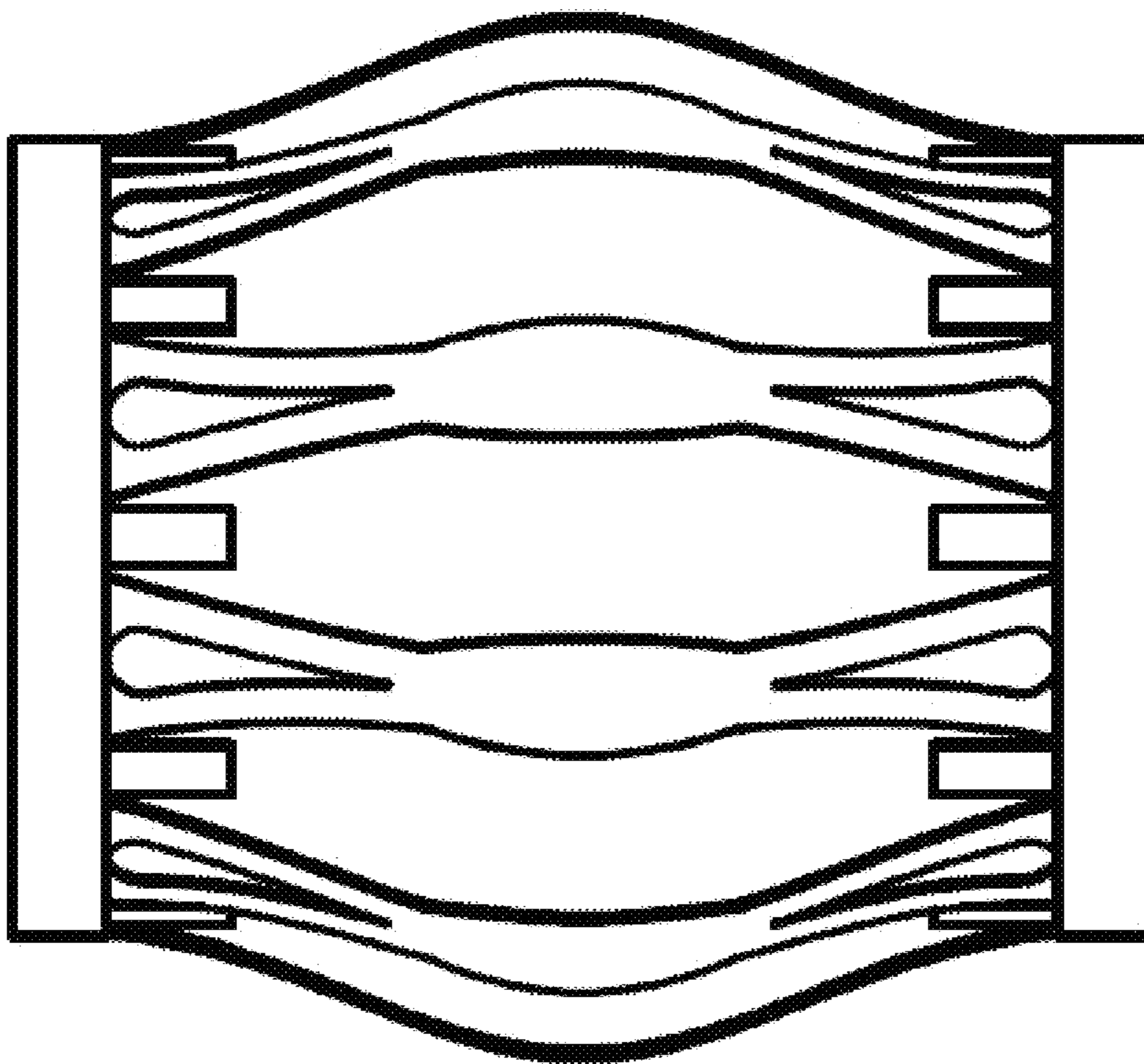


Figure 56

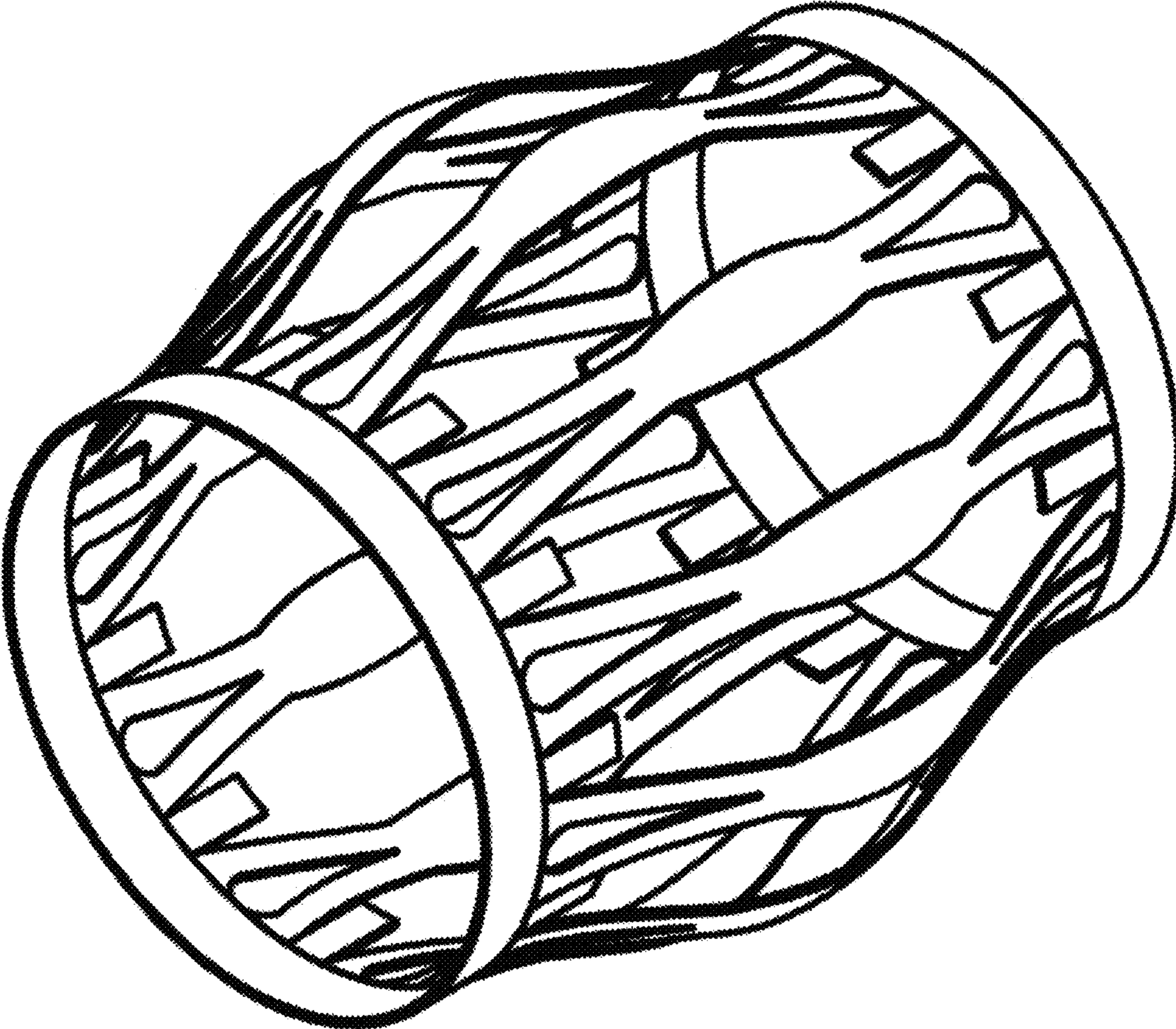


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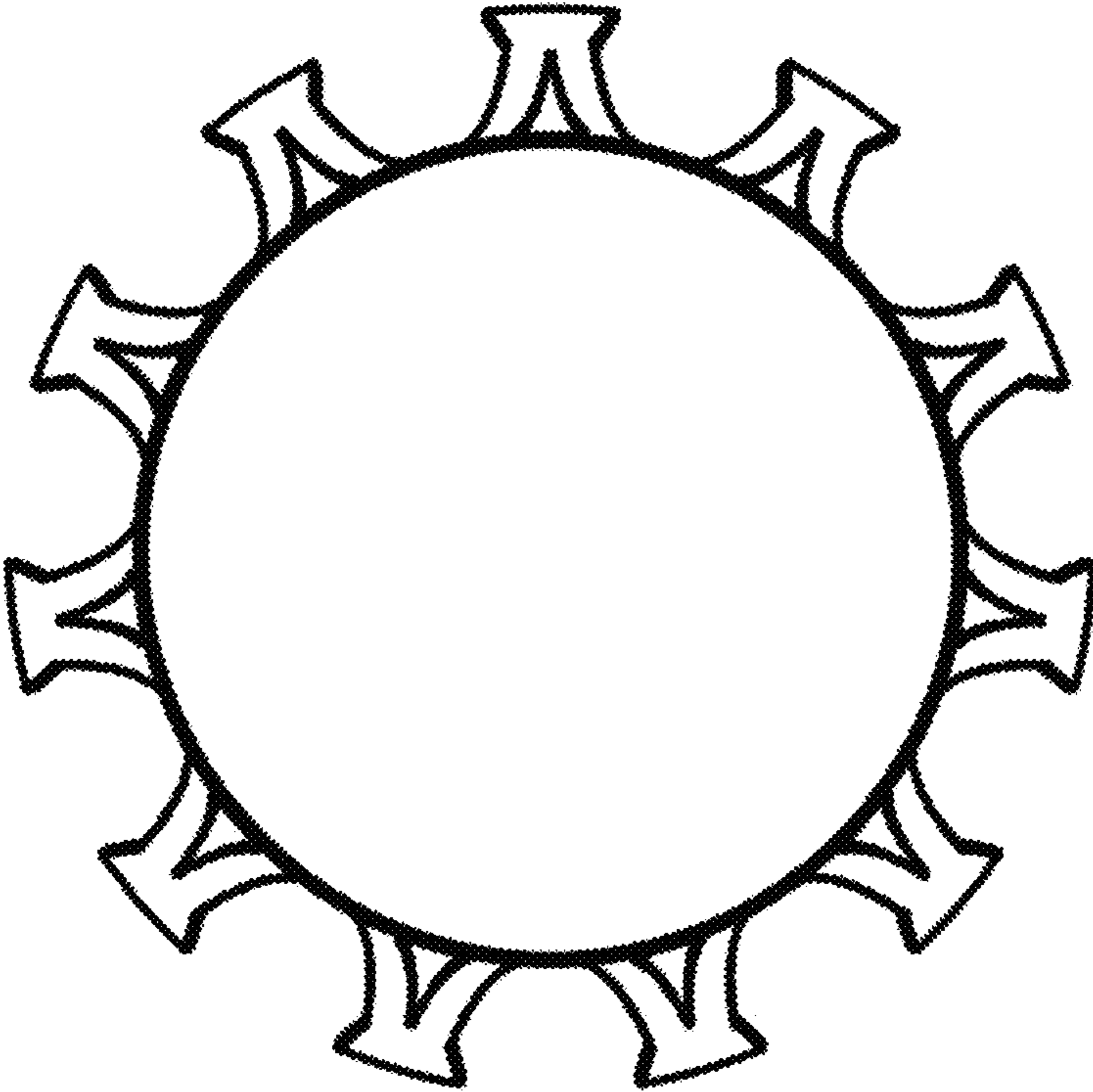


Figure 58

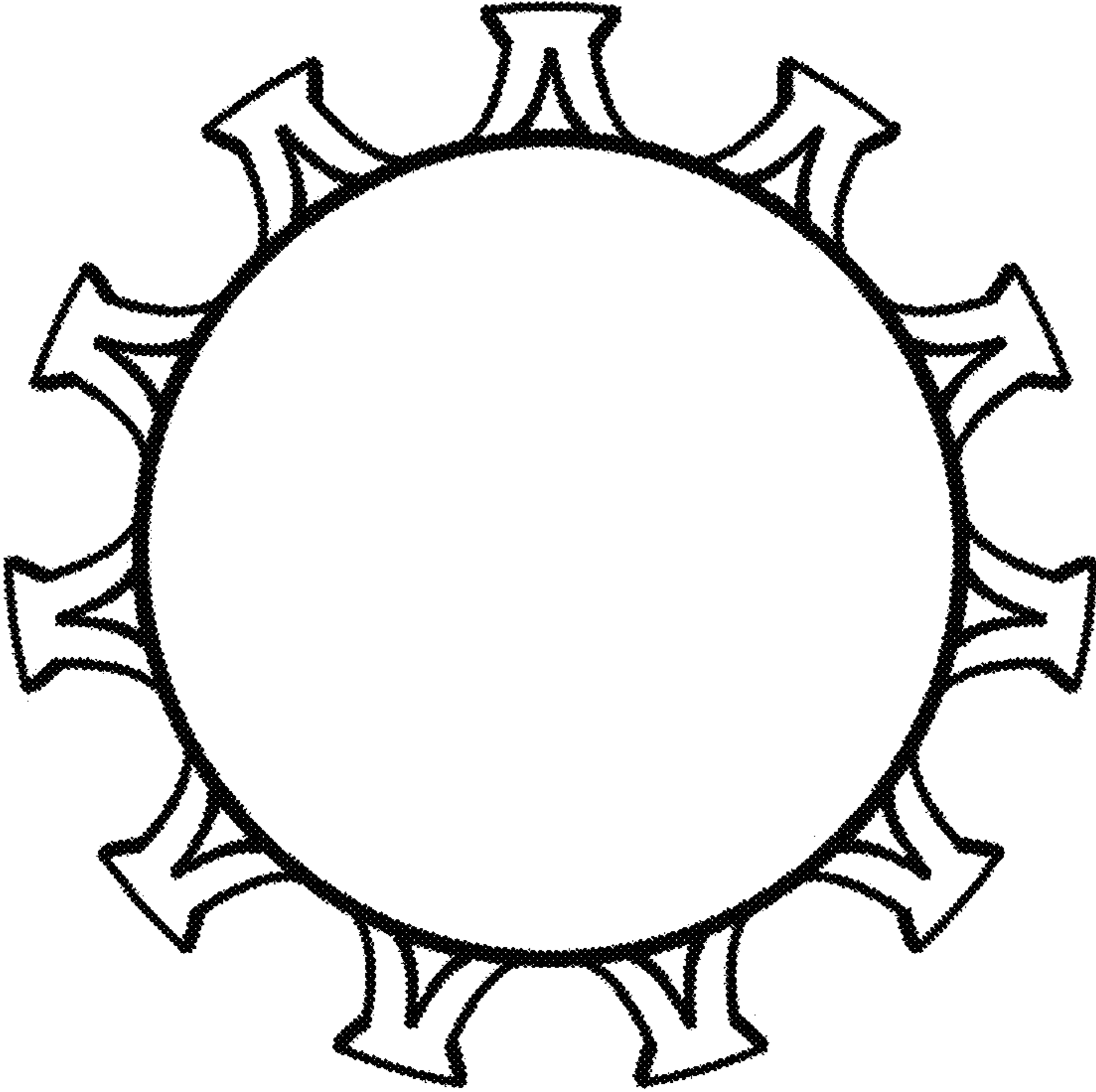


Figure 59



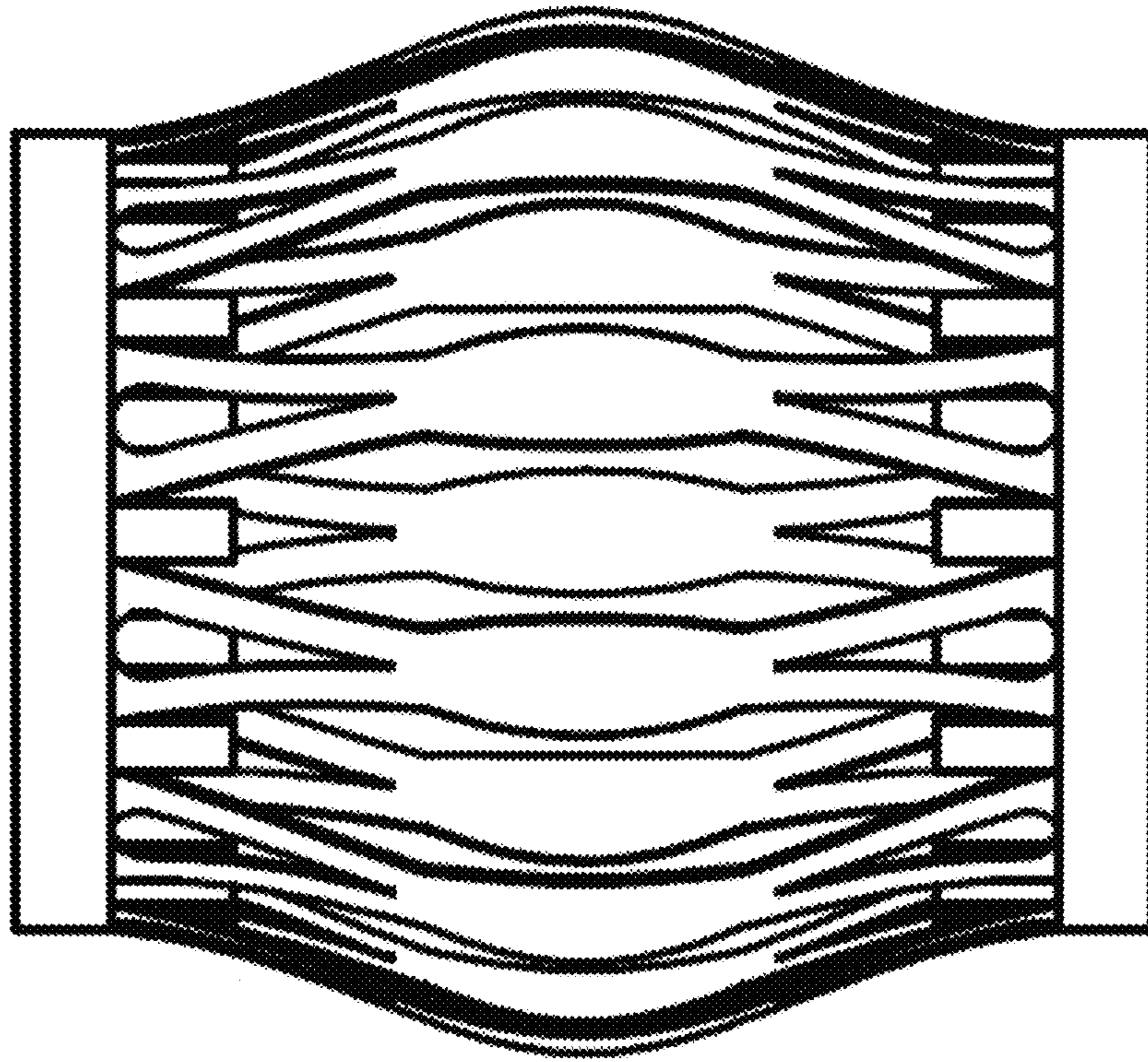


Figure 60

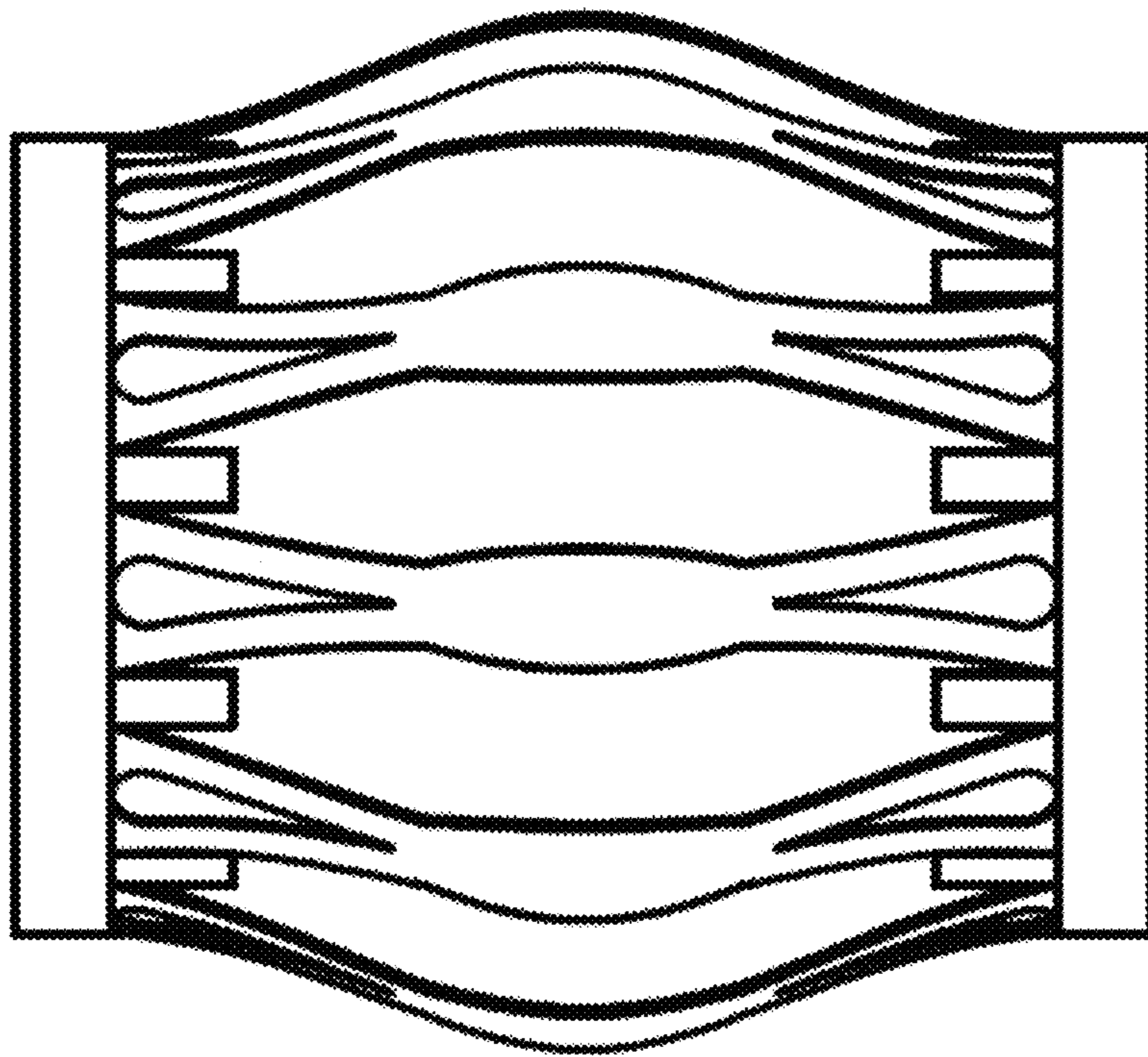


Figure 61

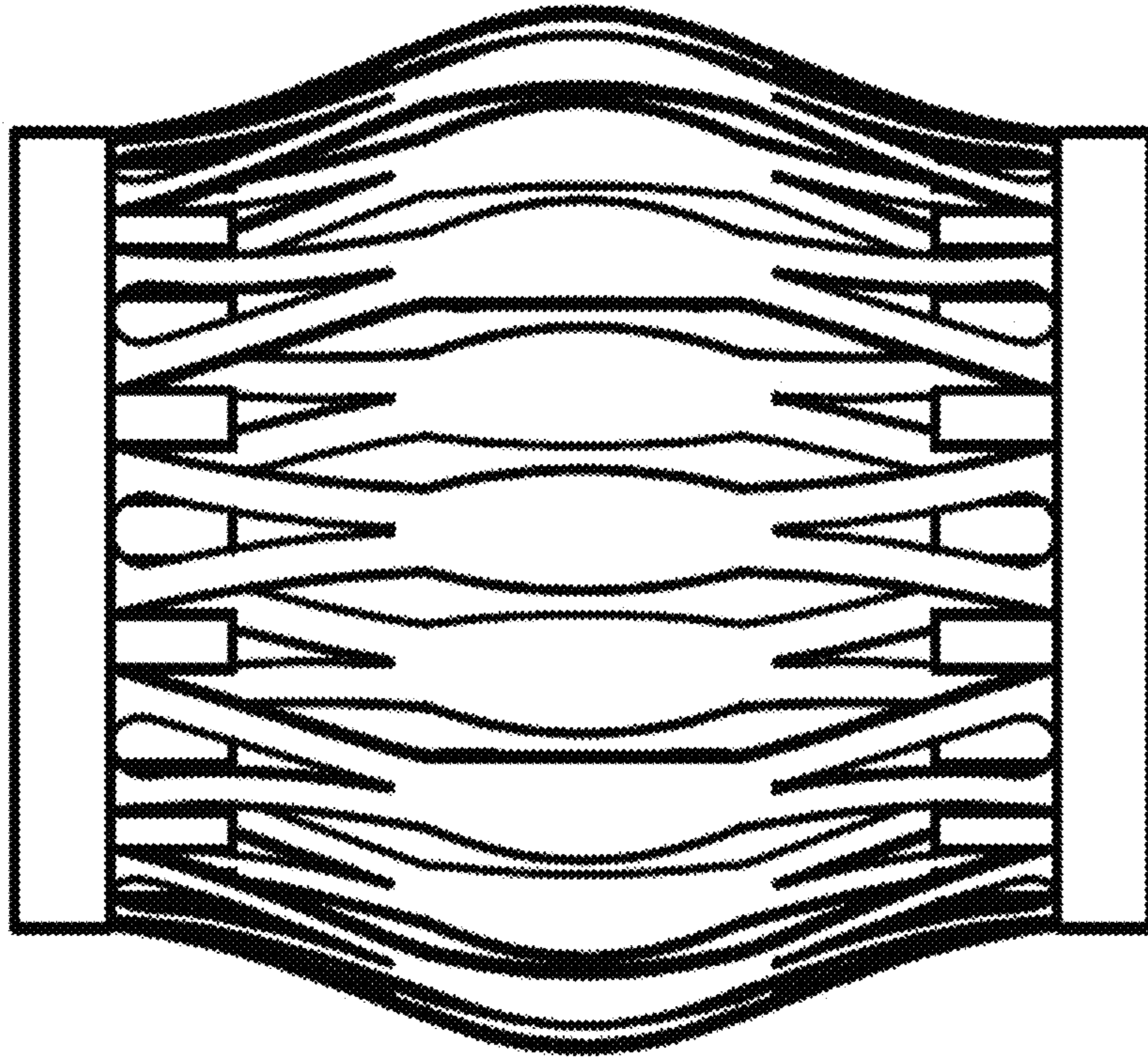


Figure 62

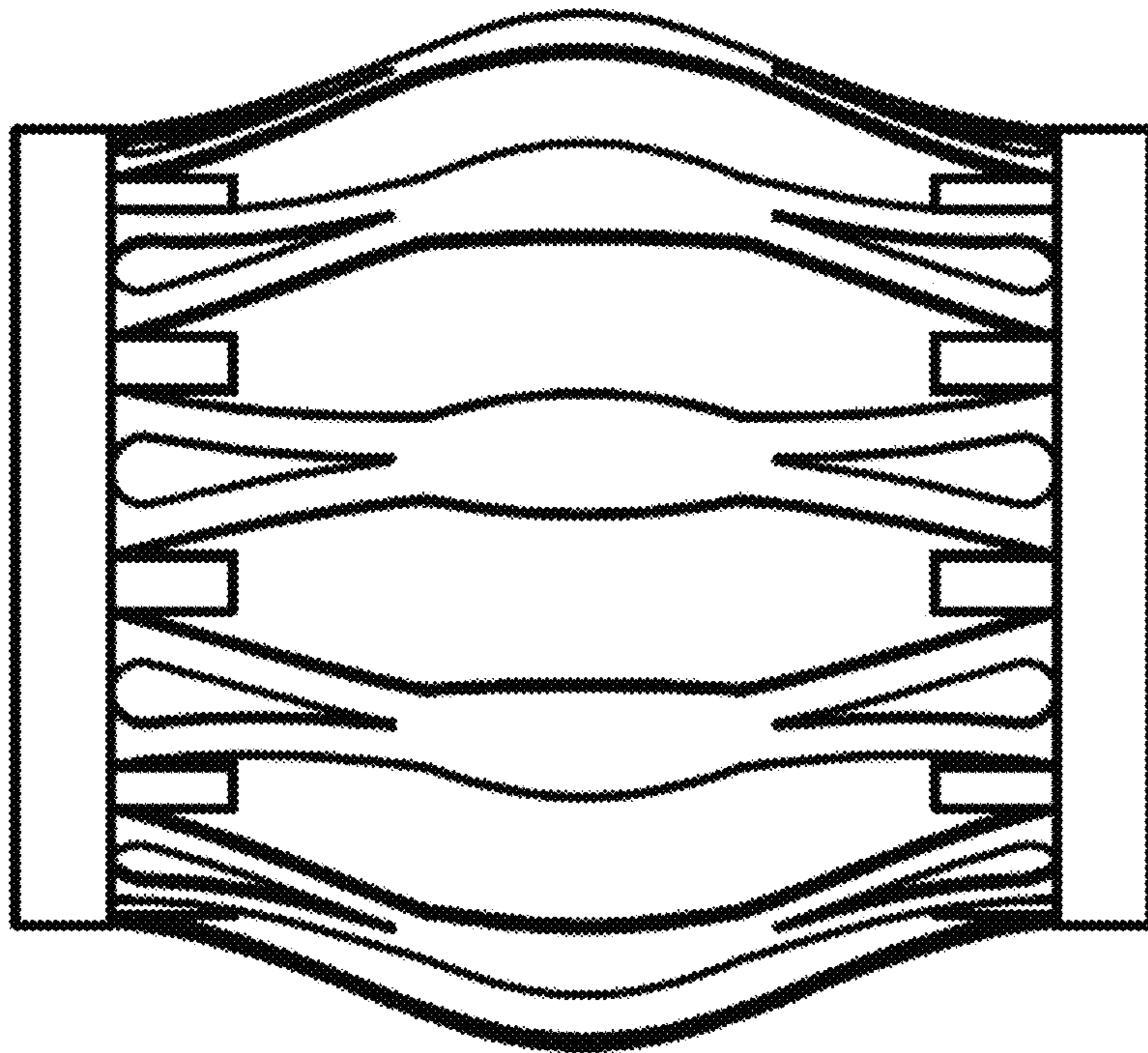


Figure 63

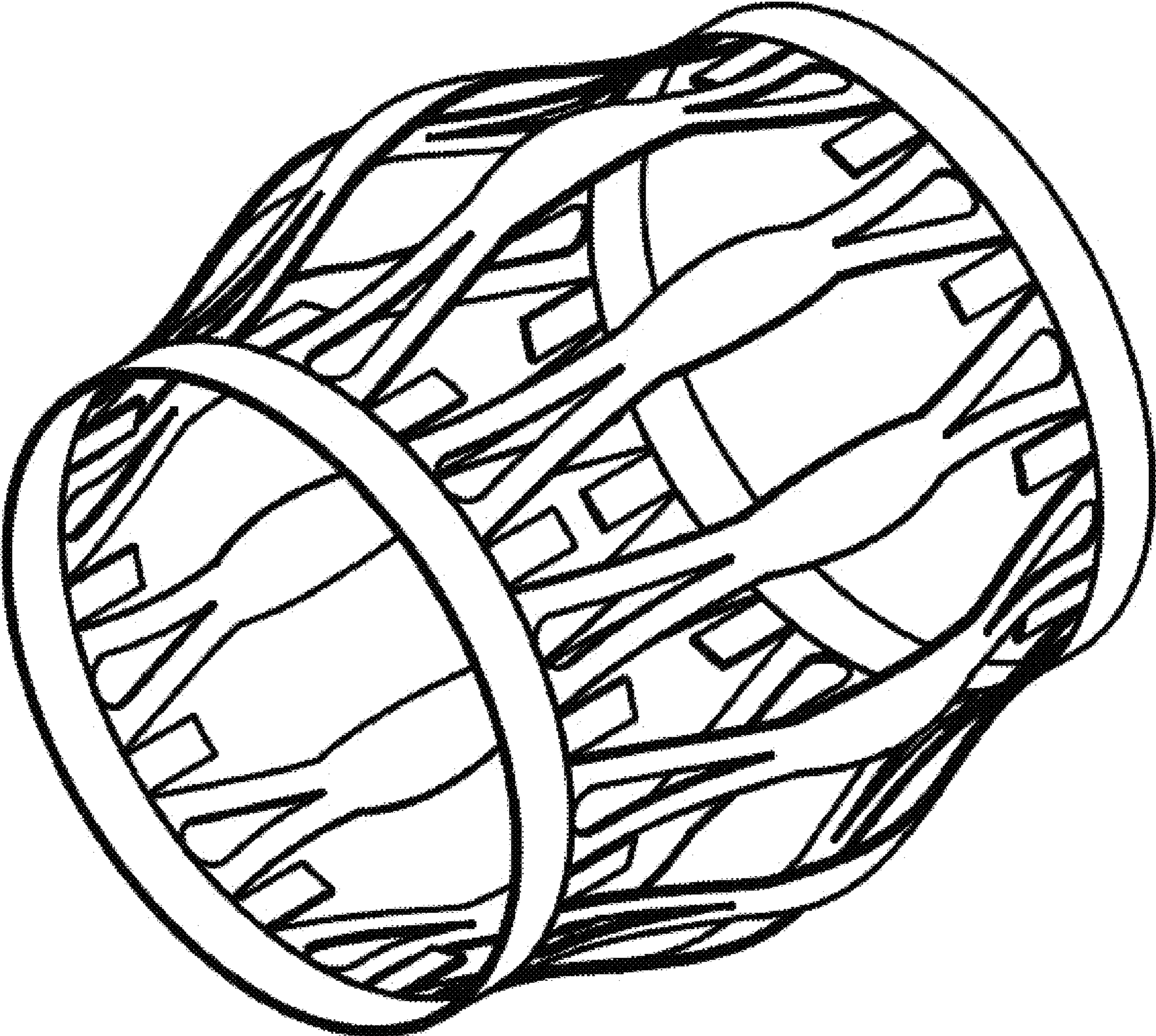


Figure 64

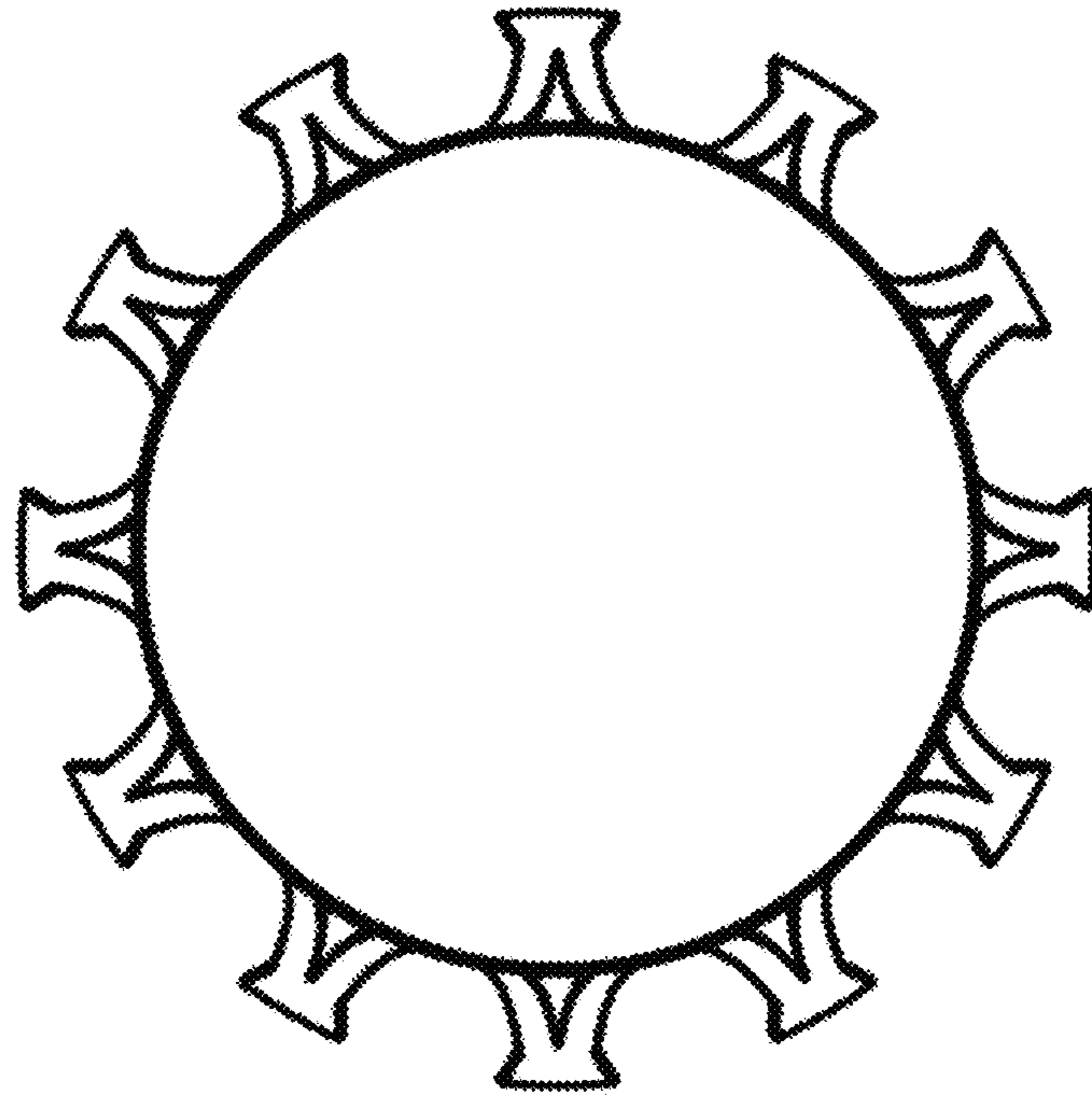


Figure 65

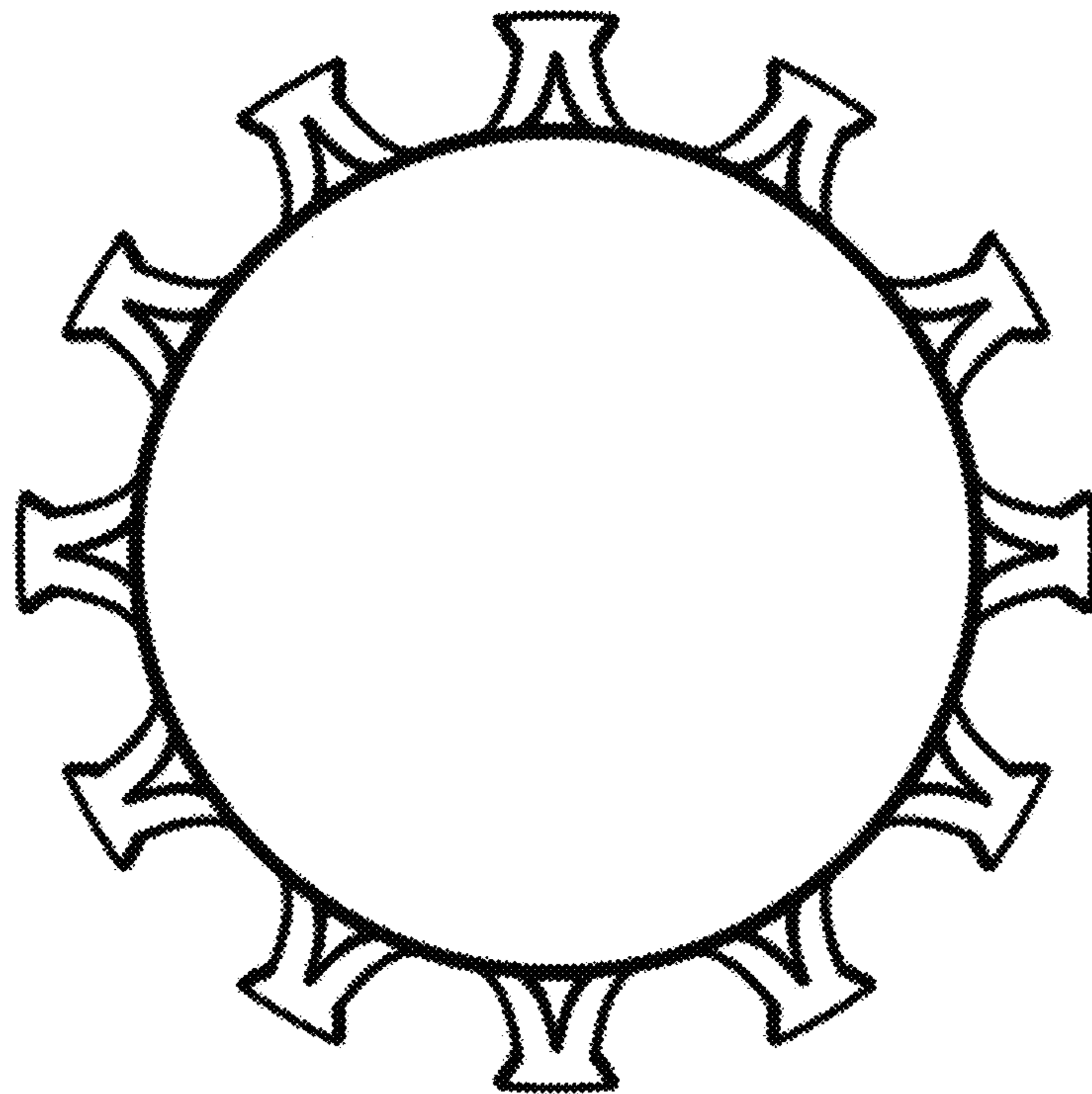


Figure 66

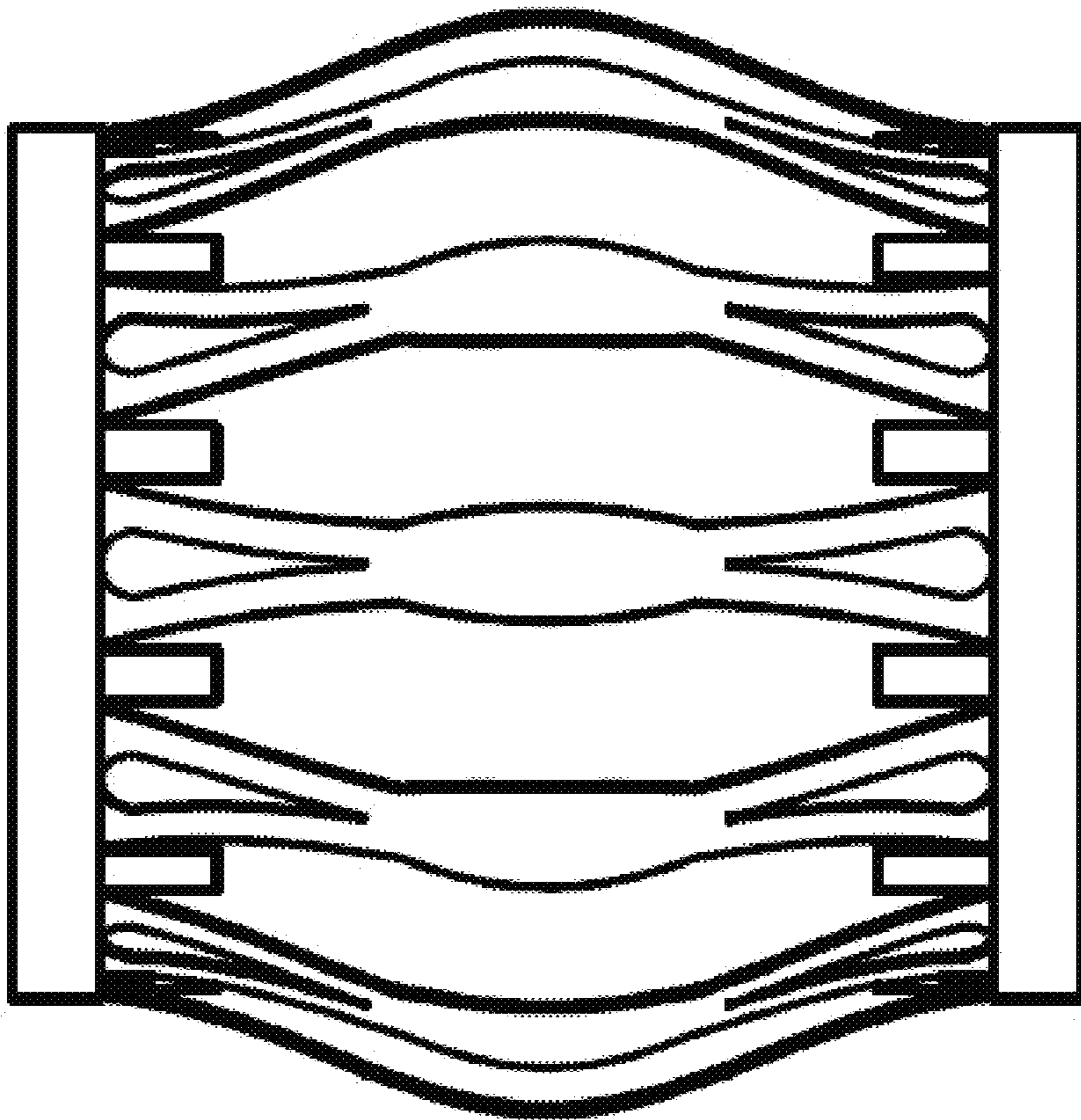


Figure 67

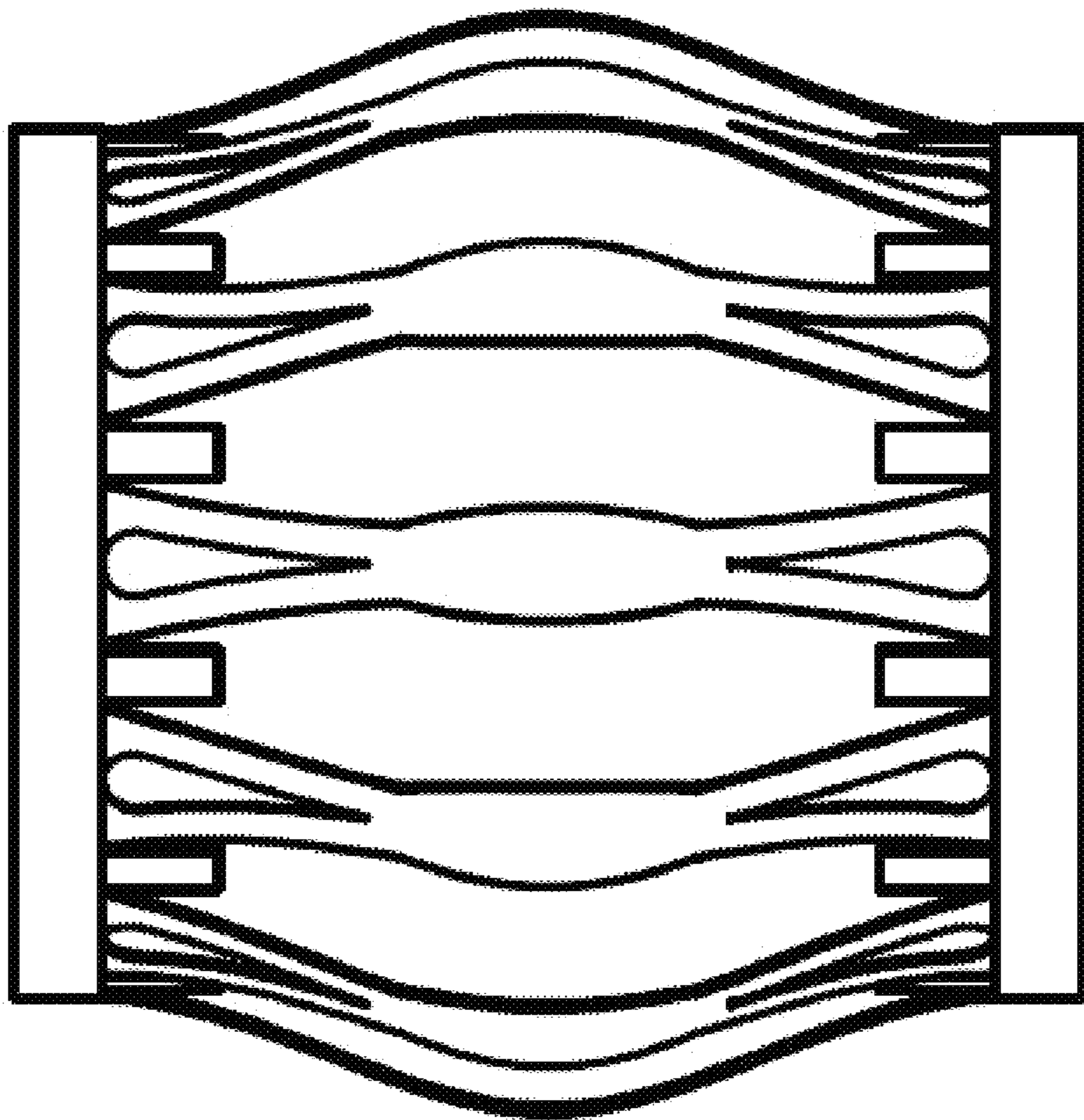


Figure 68

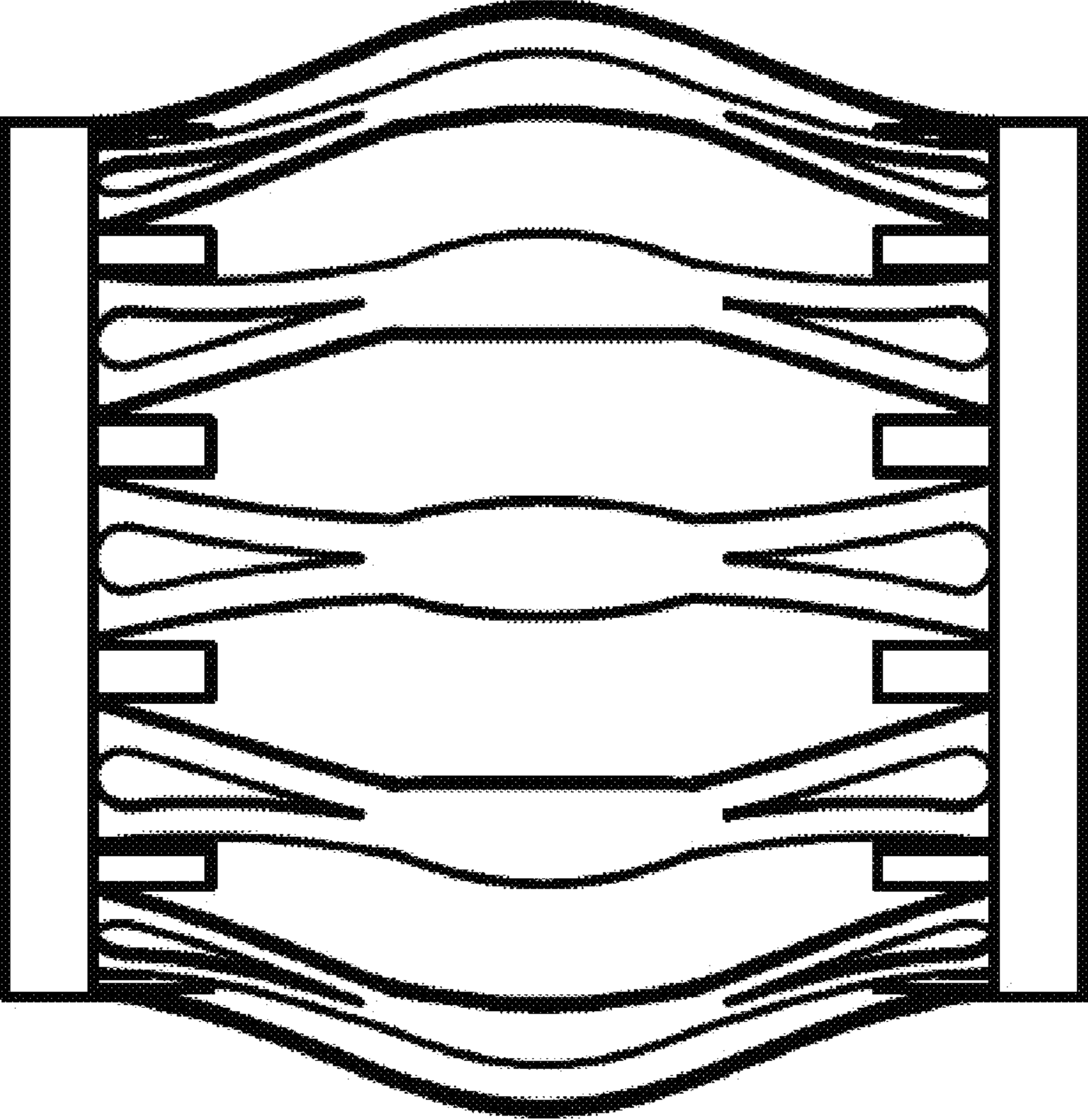


Figure 69

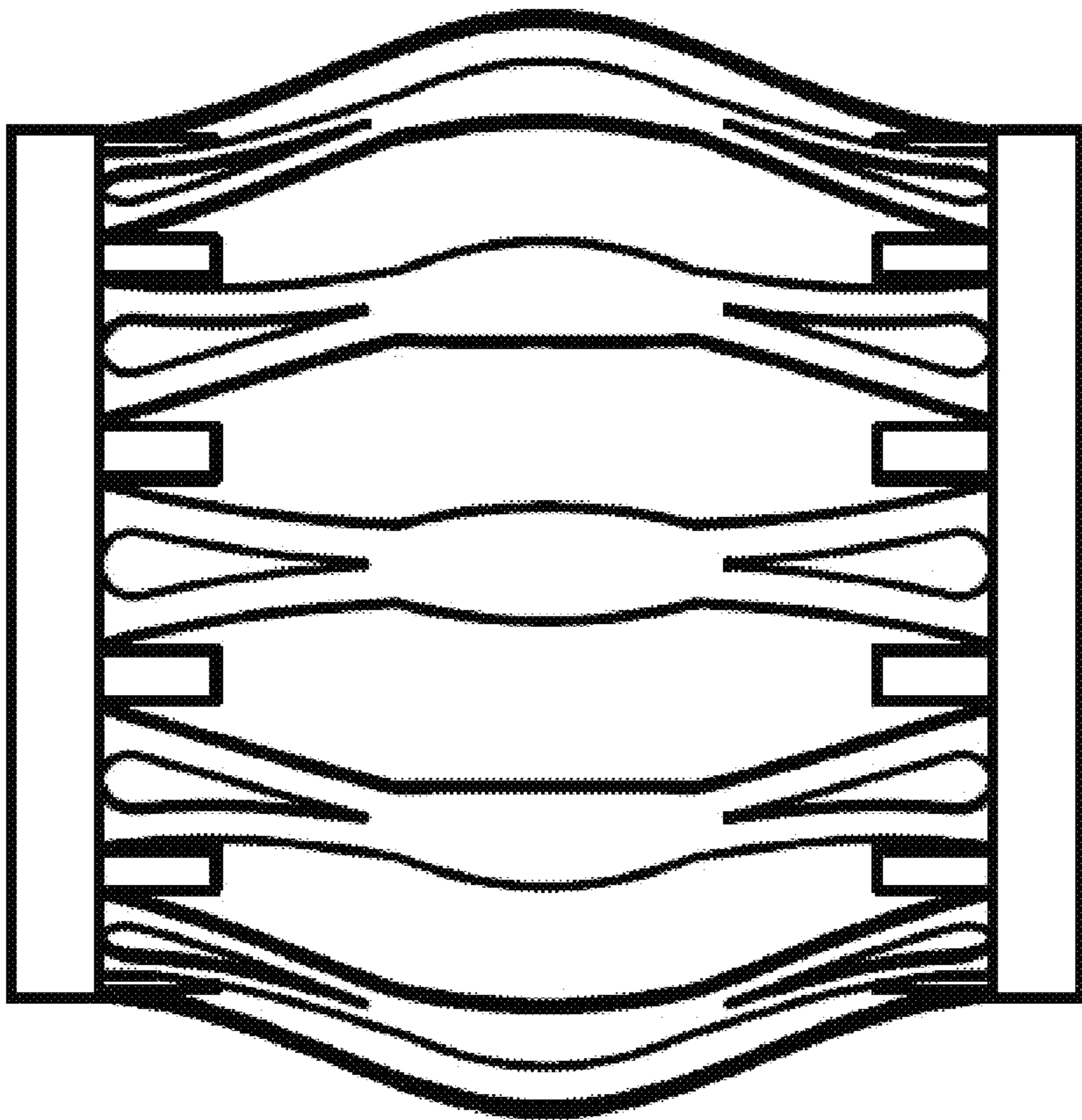


Figure 70