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# (12) United States Design Patent

Kirk et al.

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

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

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**Related U.S. Application Data**

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Aug. 22, 2017 (EM) ..... 004158376-0002
Aug. 22, 2017 (EM) ..... 004158376-0003
Aug. 22, 2017 (EM) ..... 004158376-0004
Aug. 22, 2017 (EM) ..... 004158376-0005
Aug. 22, 2017 (EM) ..... 004158376-0006
Aug. 22, 2017 (EM) ..... 004158376-0007
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
CPC .. E21B 17/10; E21B 17/1042; E21B 17/1078; E21B 17/1064; E21B 17/1028
See application file for complete search history.

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*Primary Examiner* — Mark A Goodwin

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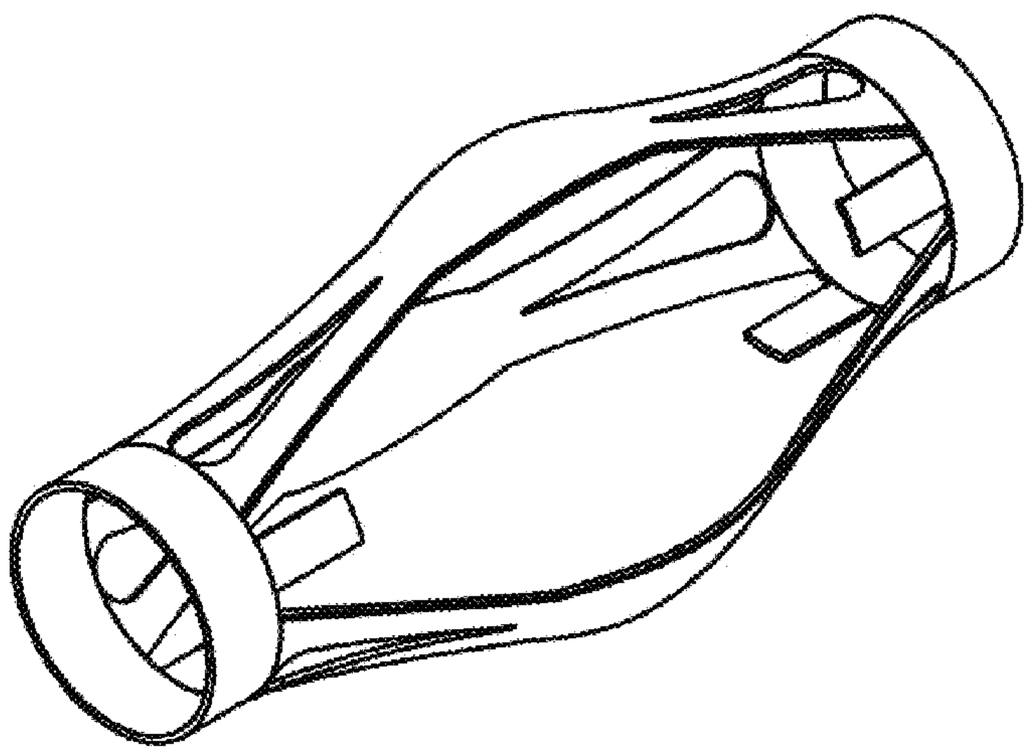


(57) **CLAIM**

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**

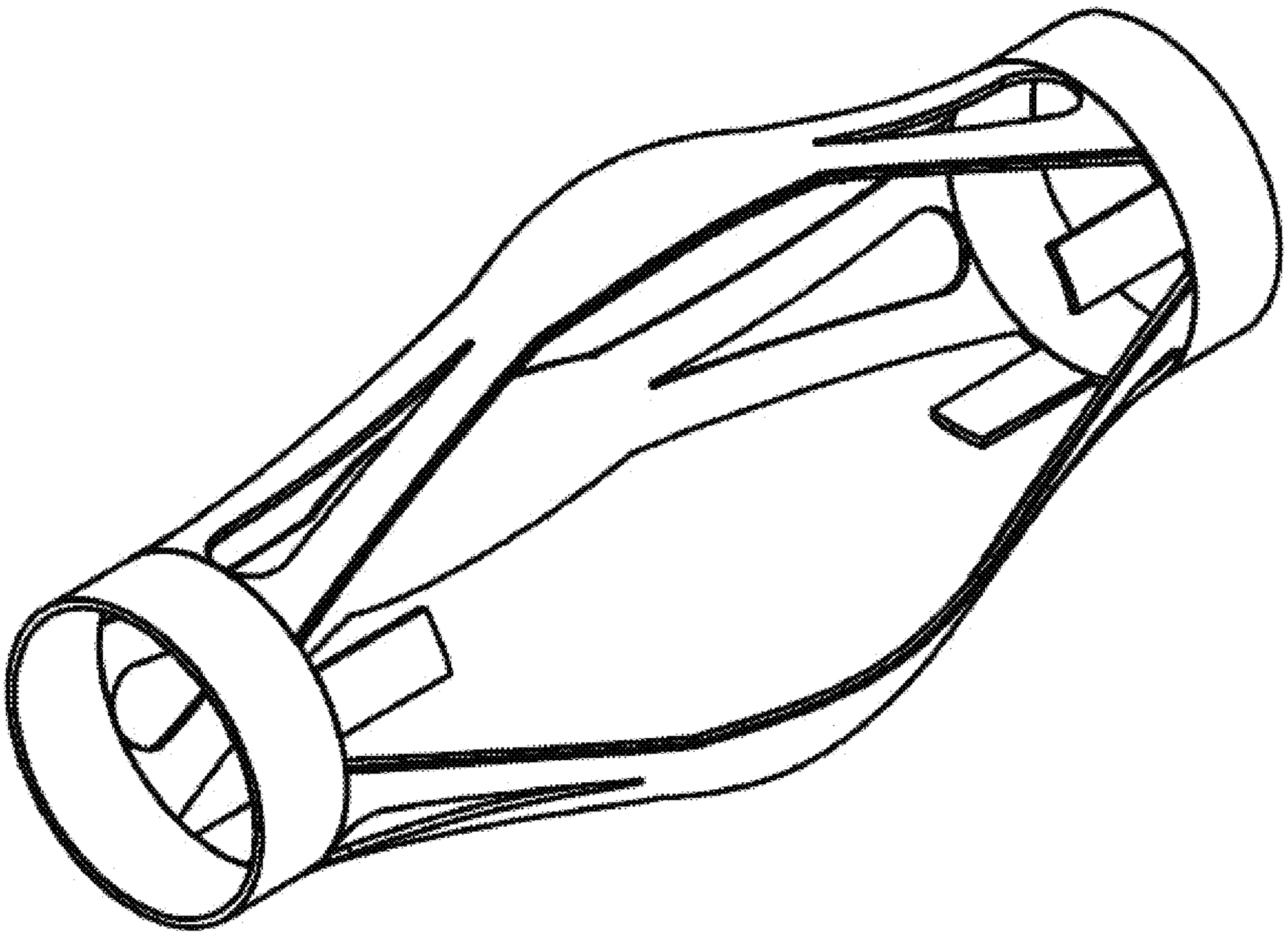
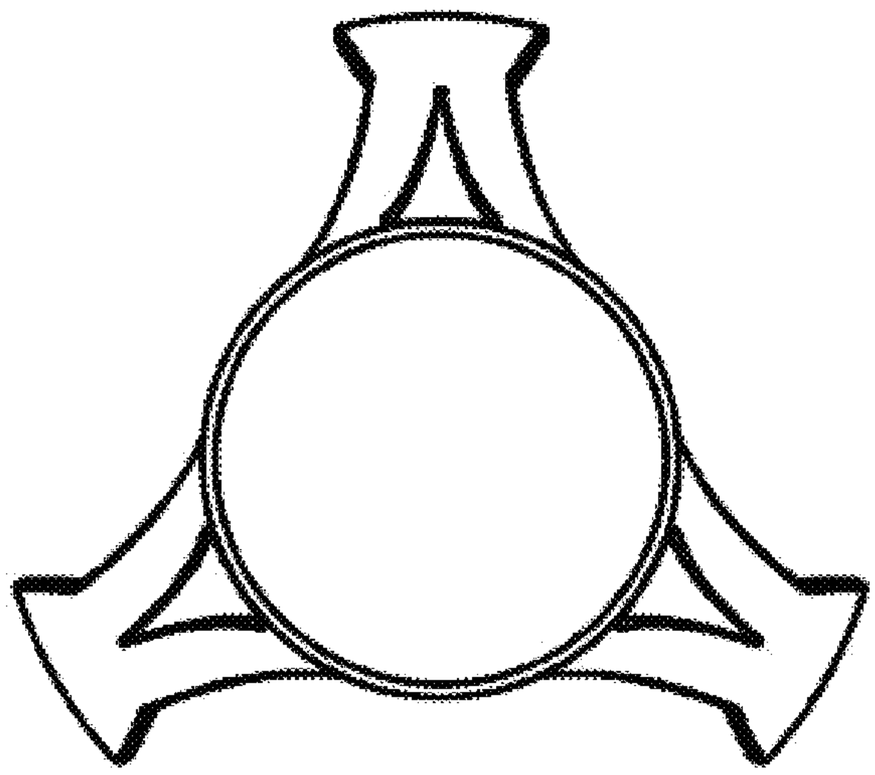


Figure 1



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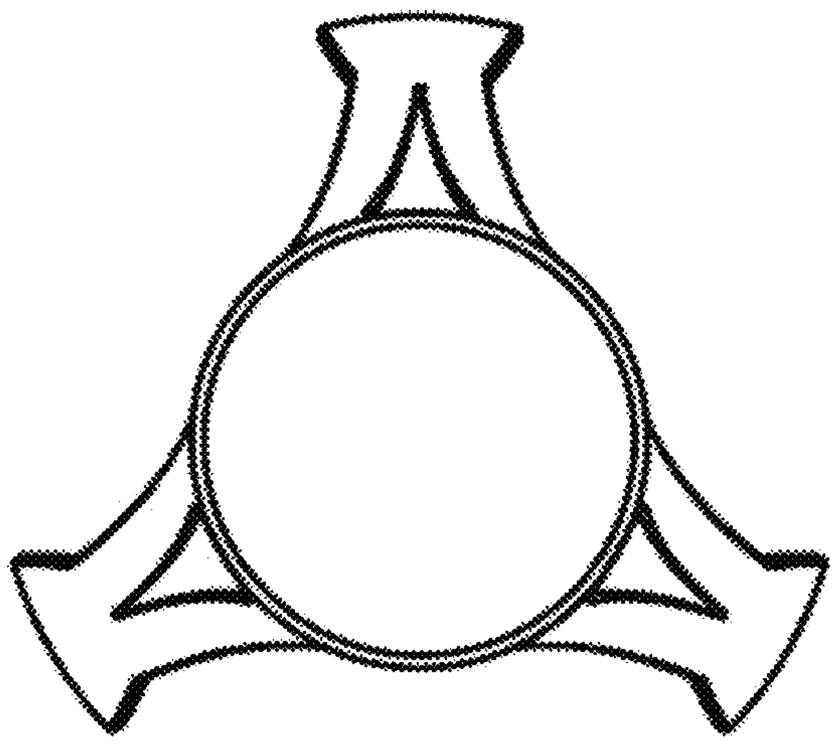

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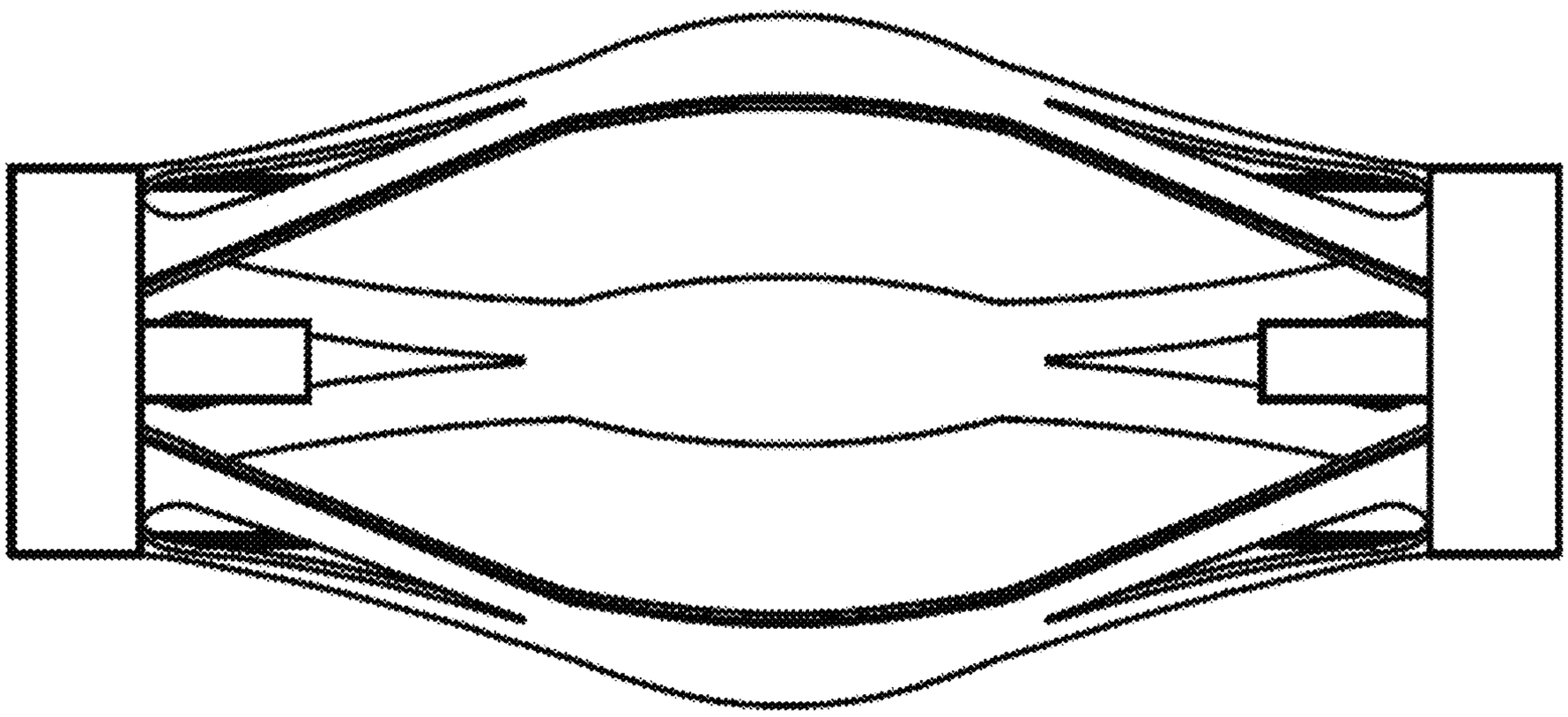

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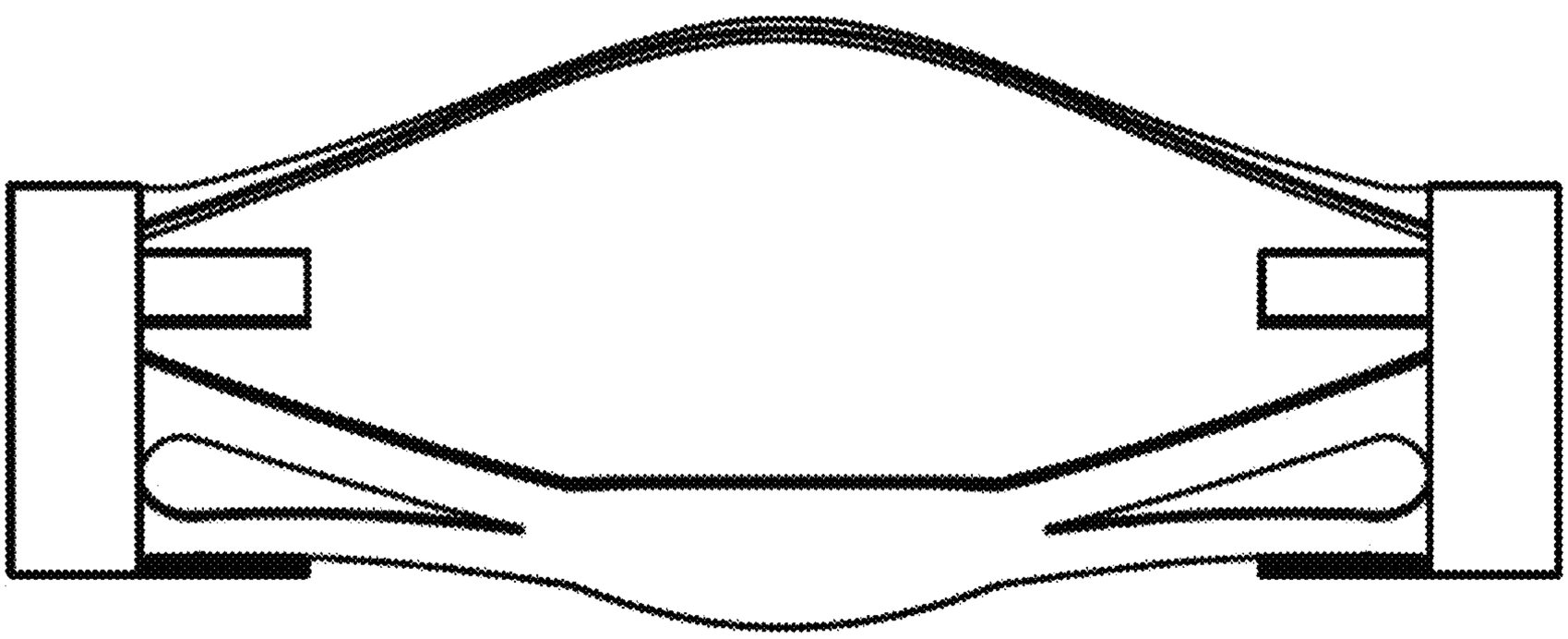
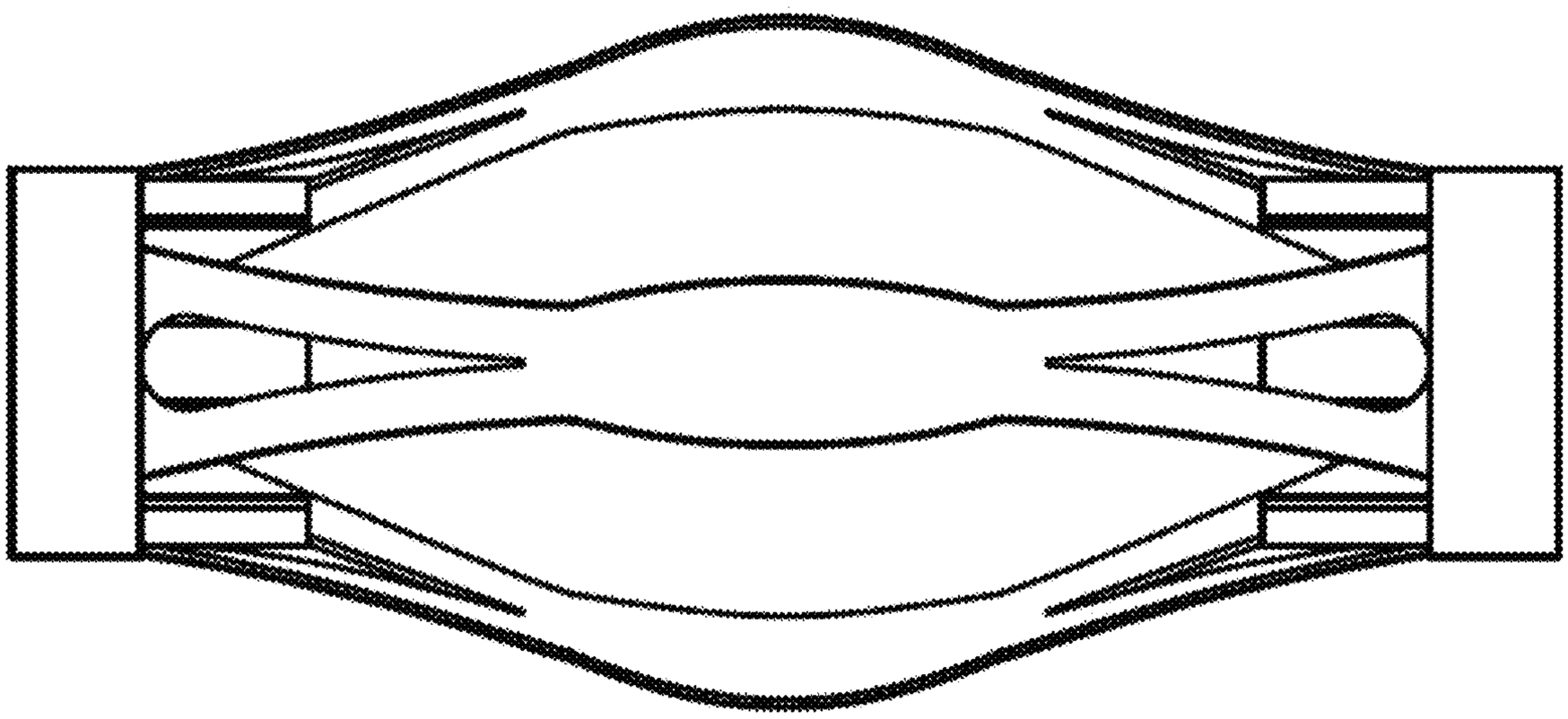


Figure 5



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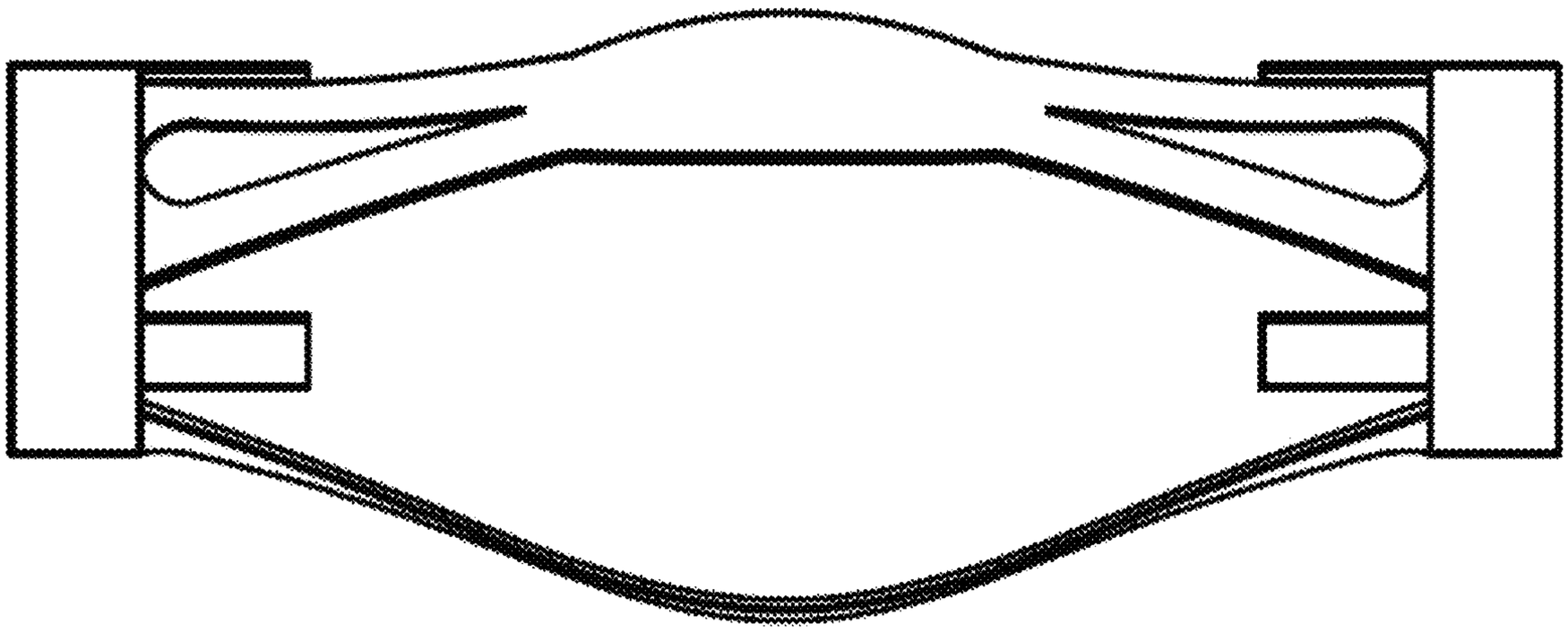

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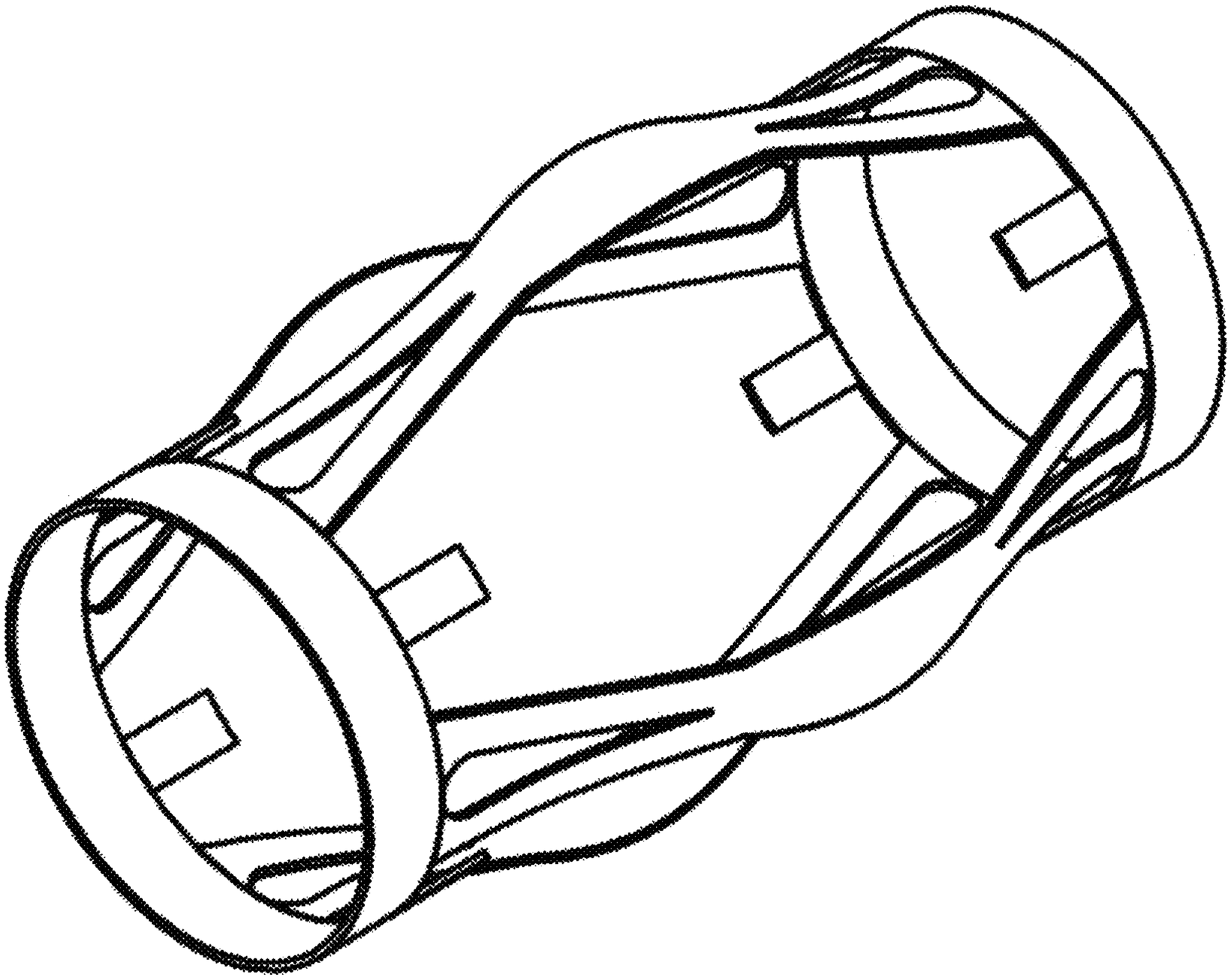

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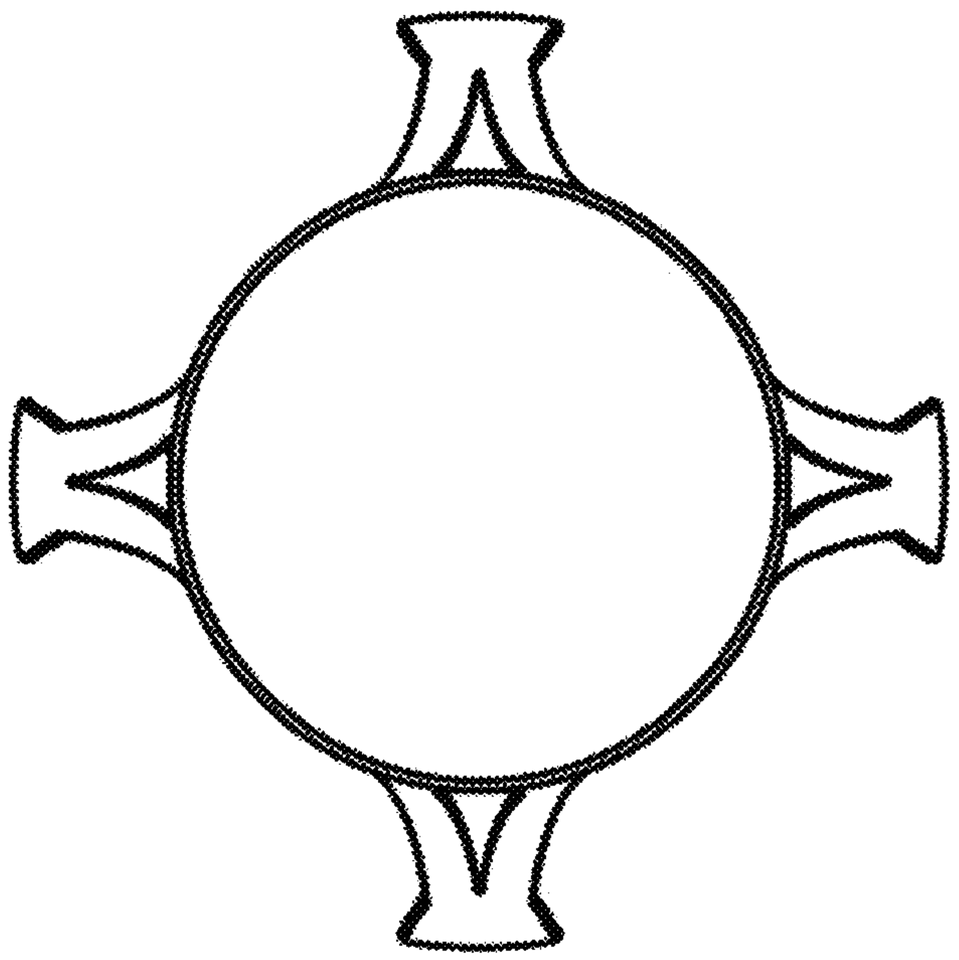

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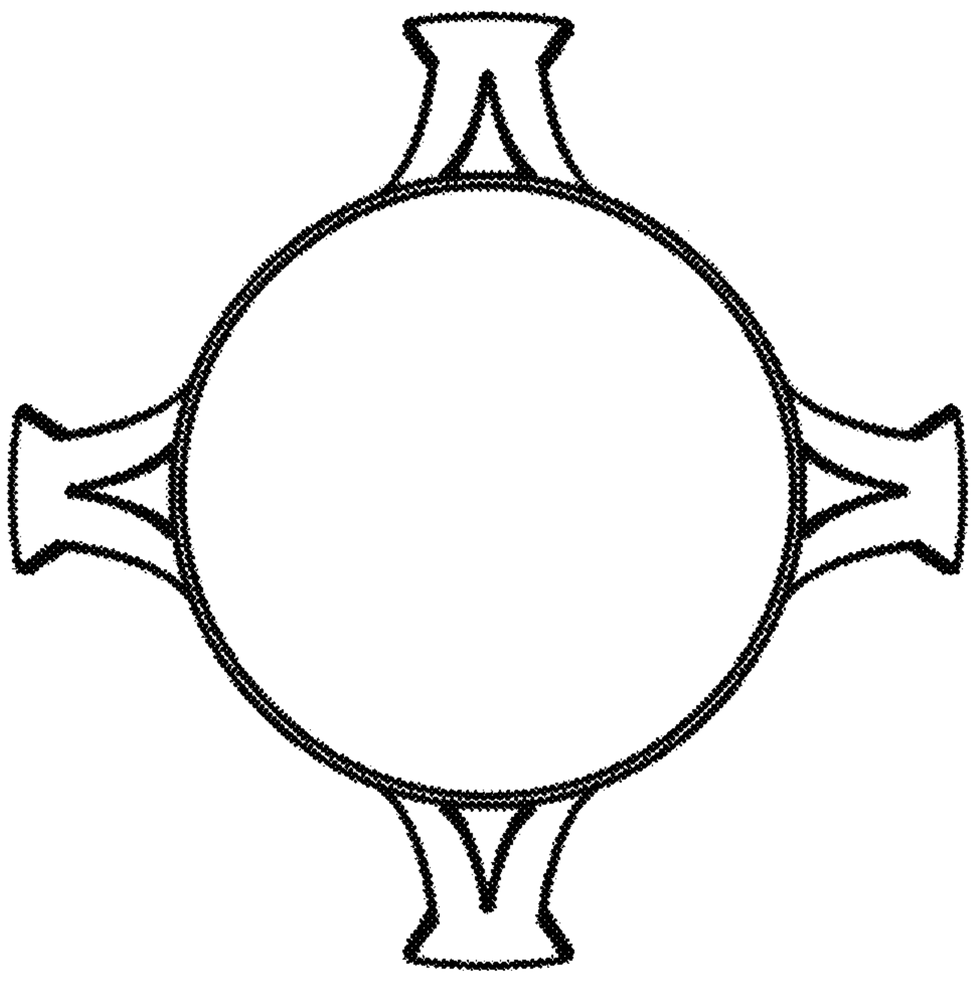

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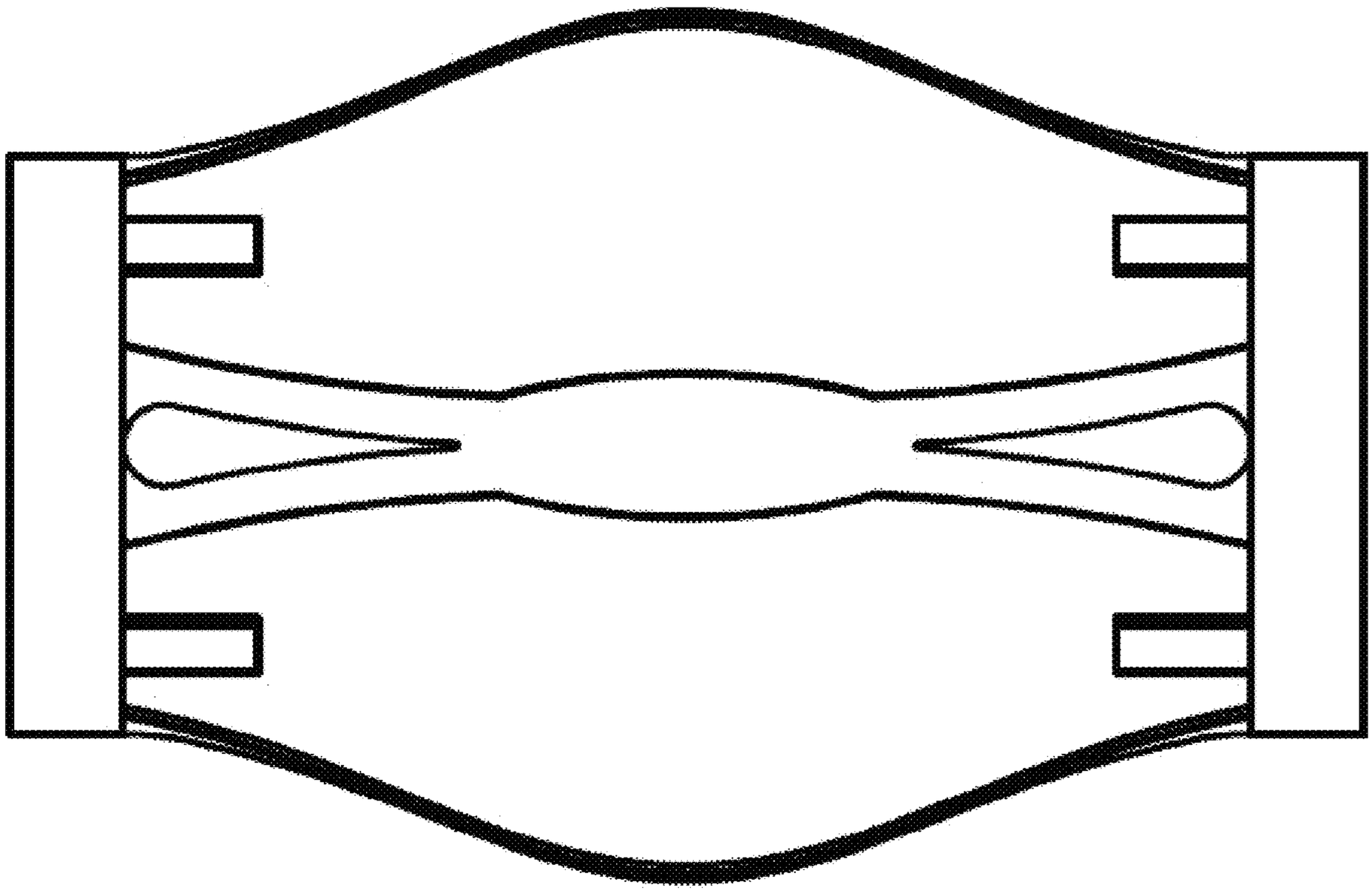

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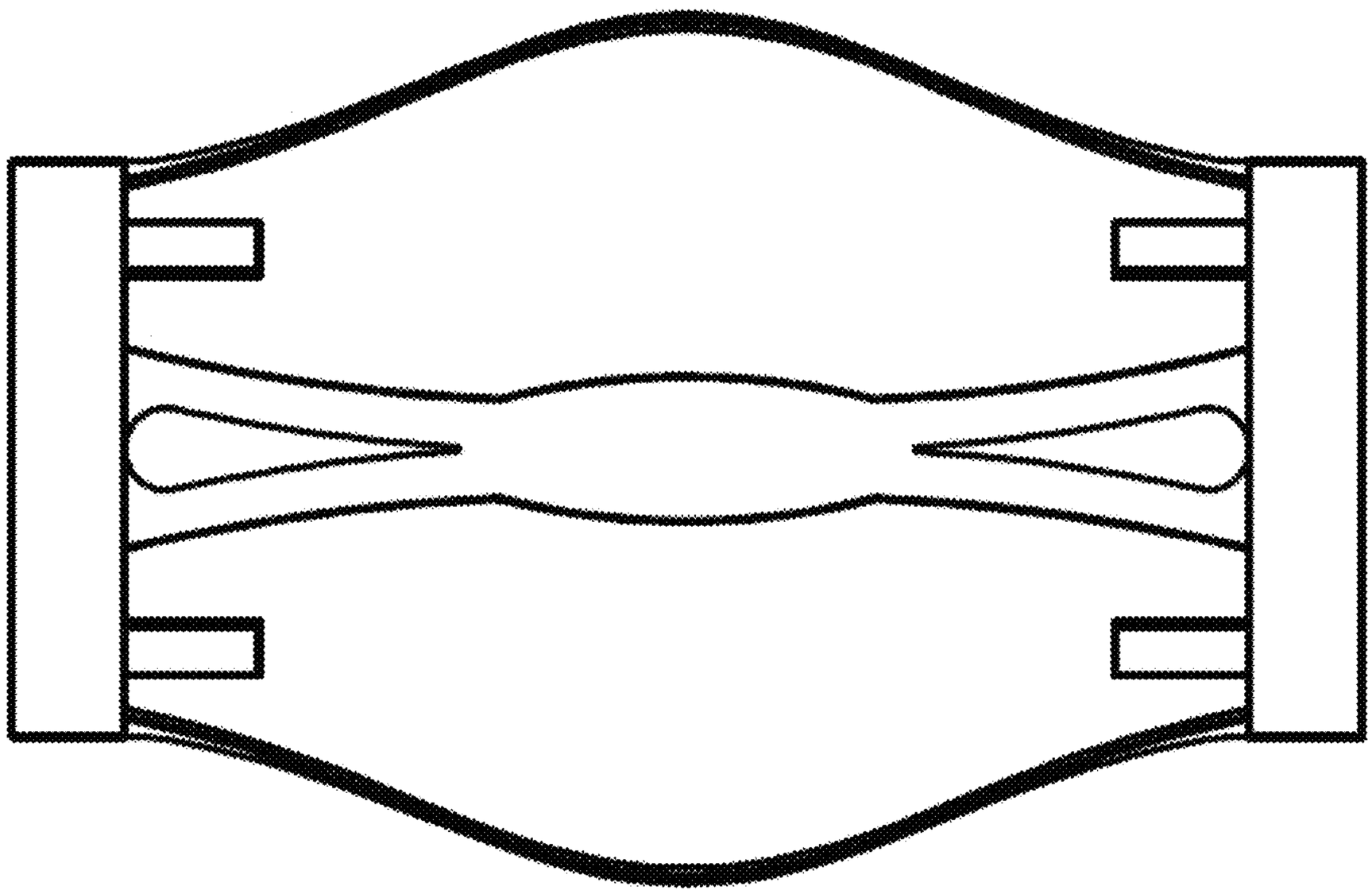

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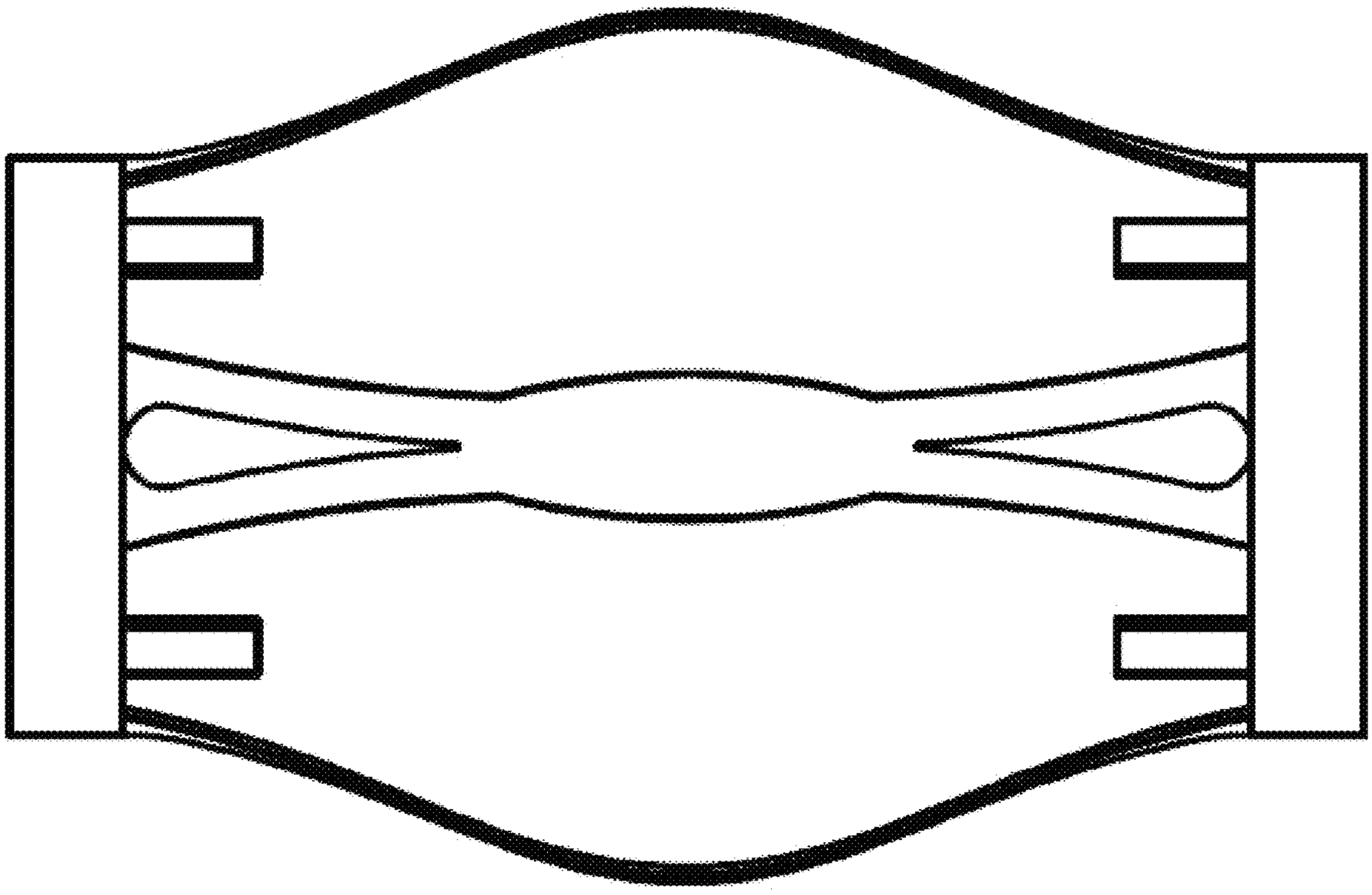

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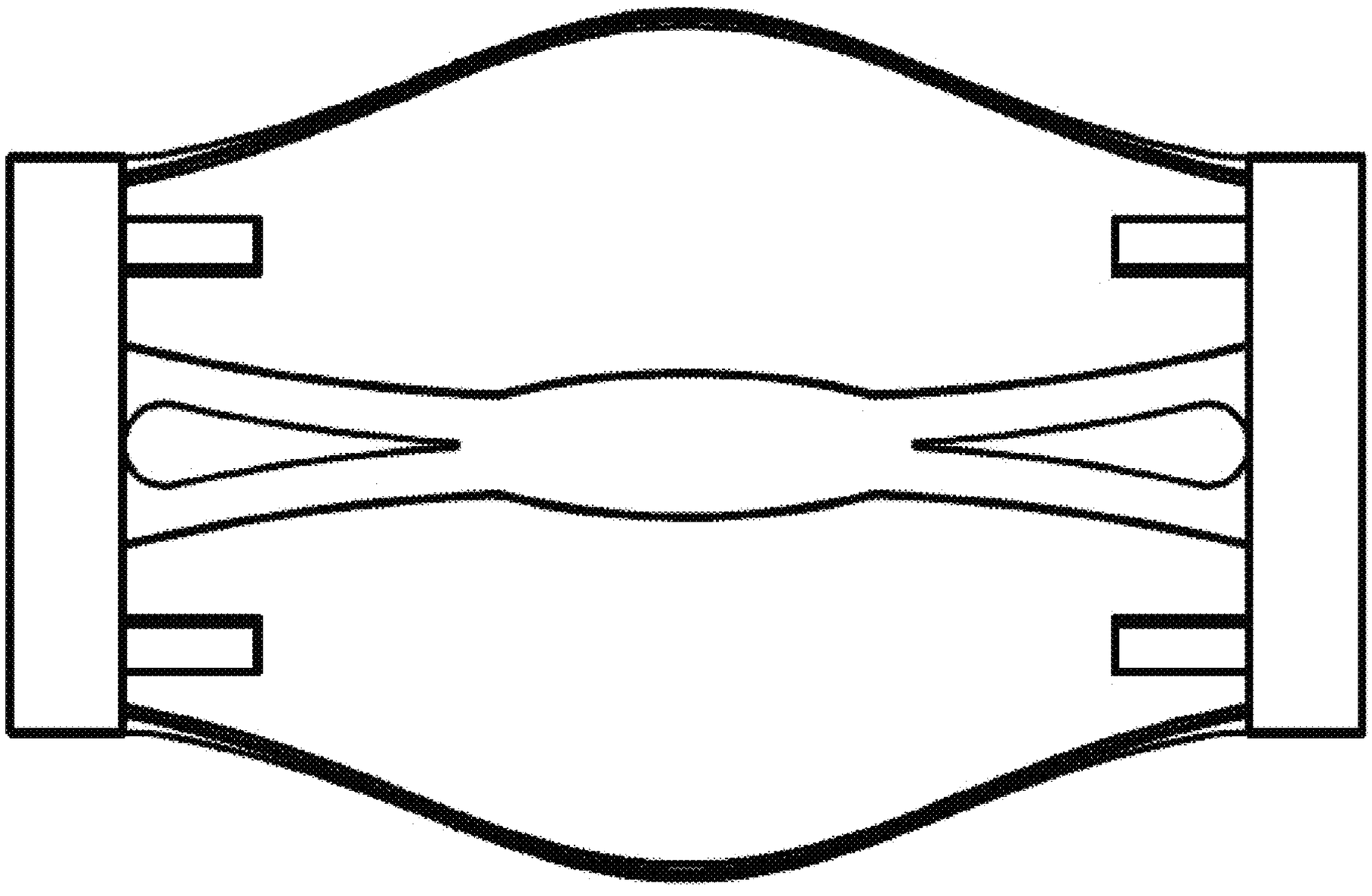

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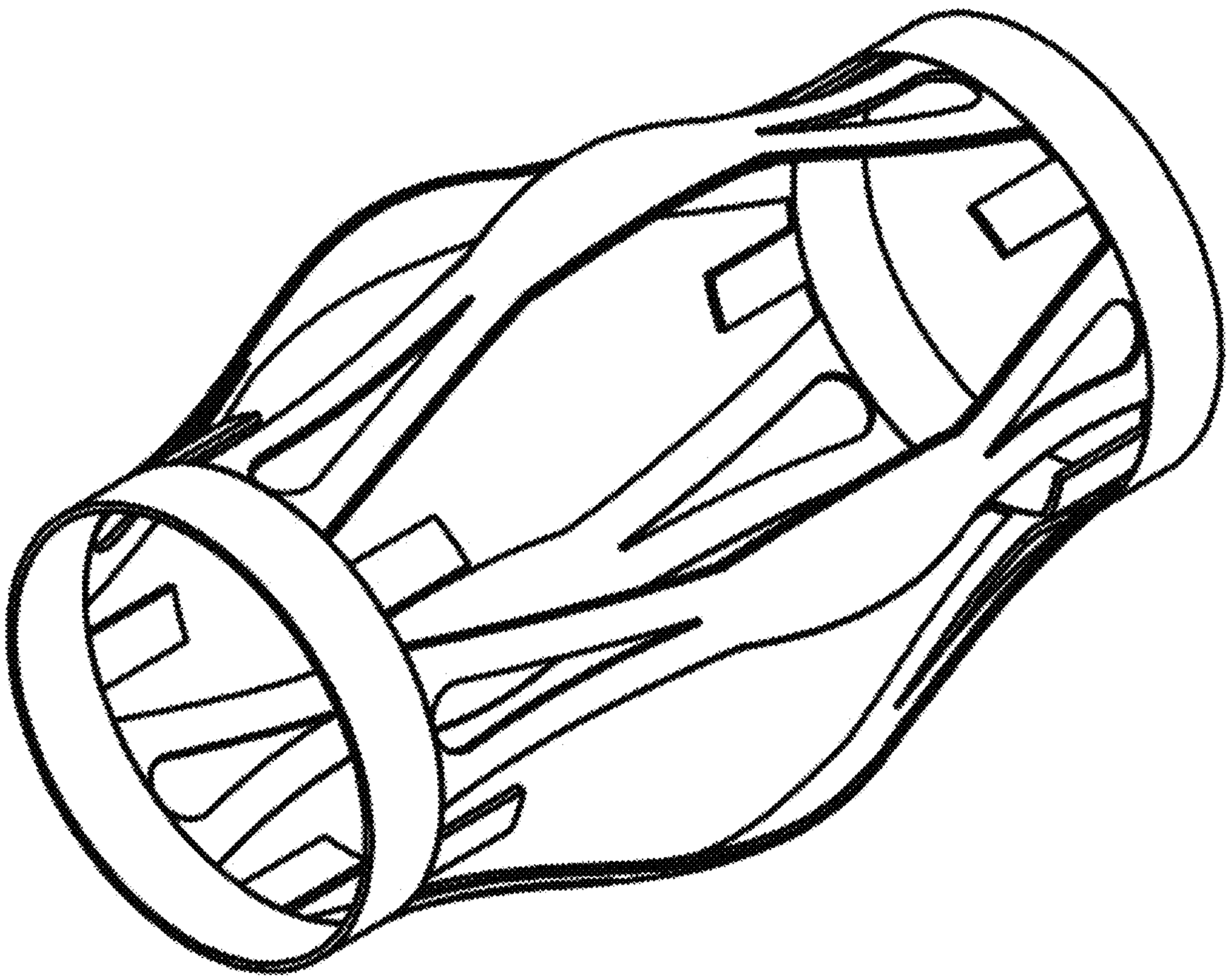

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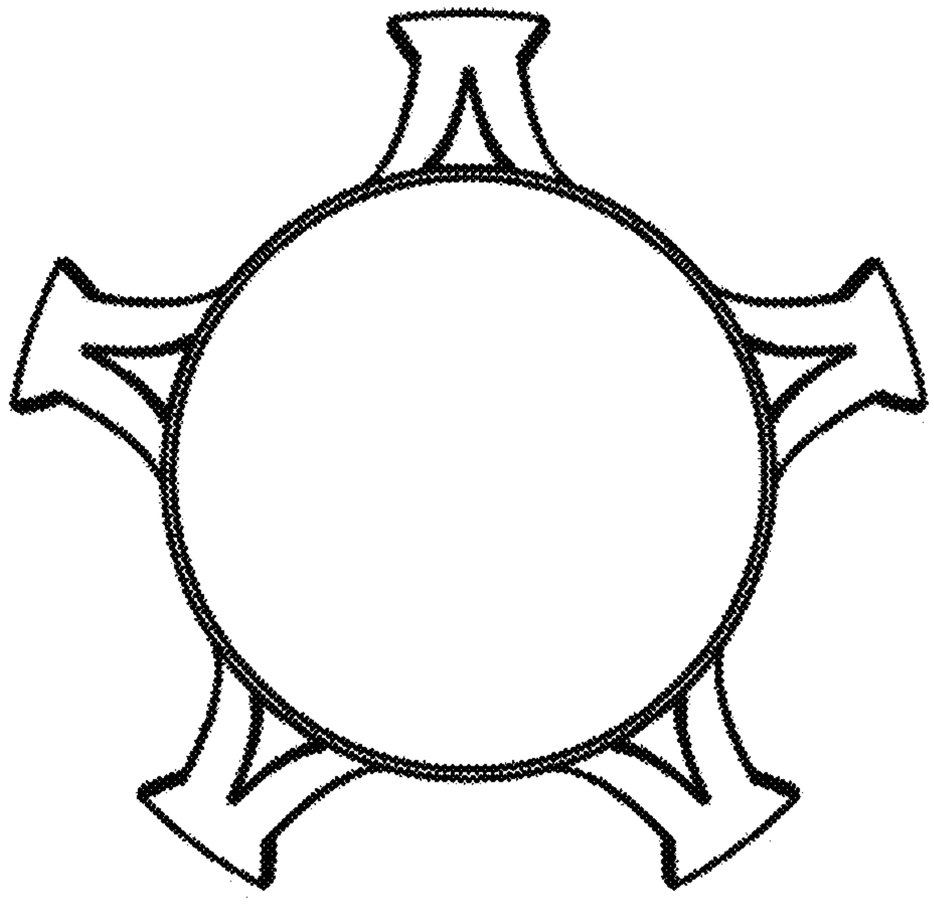

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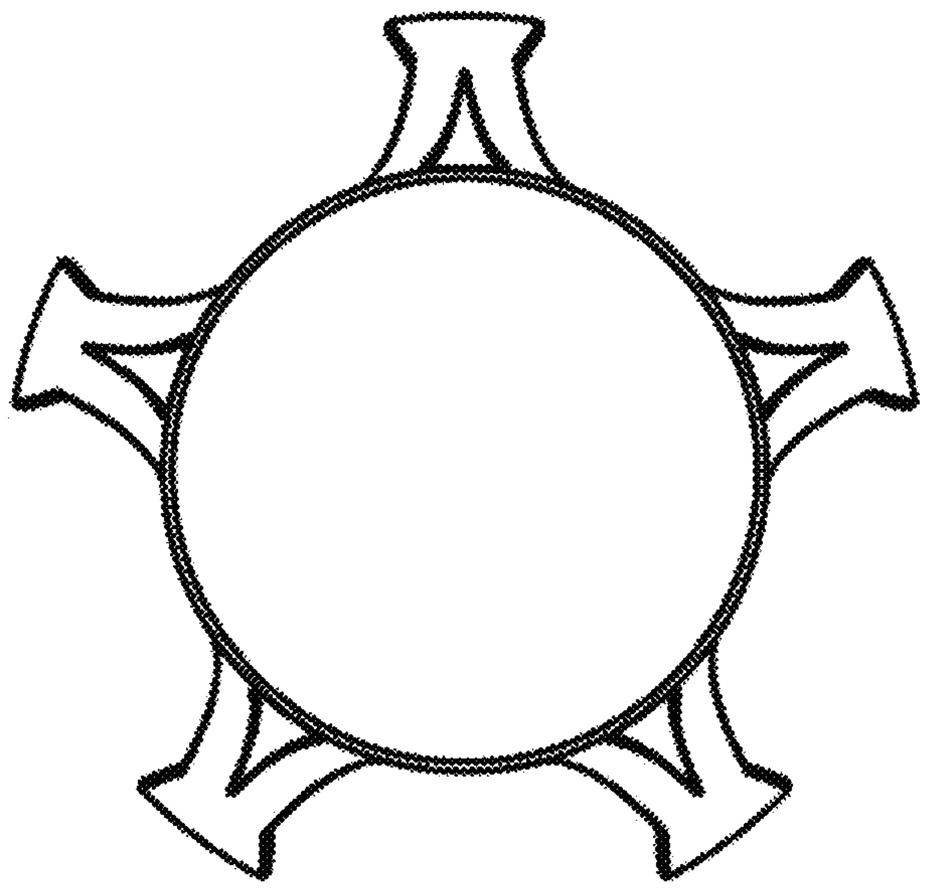

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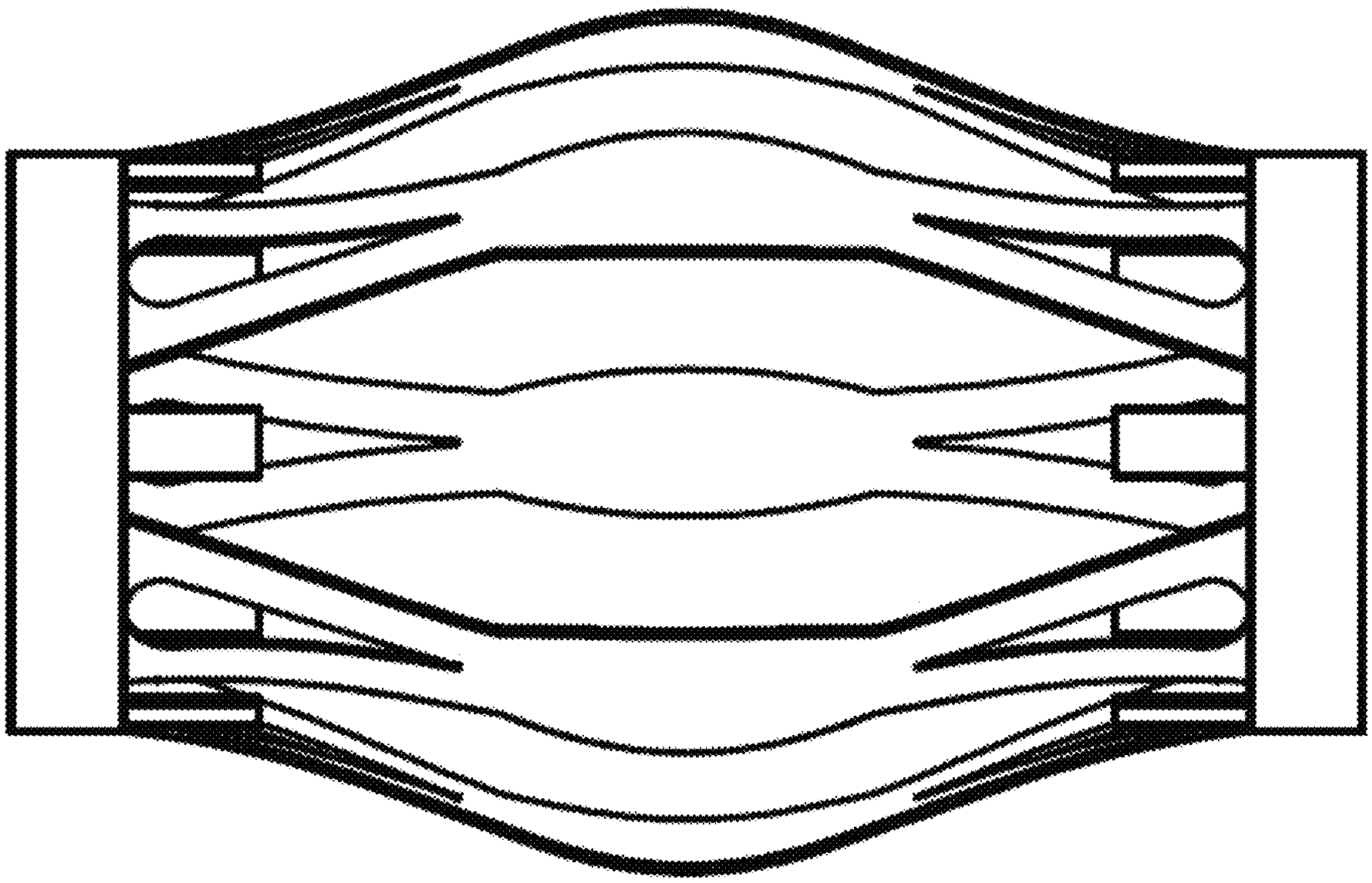

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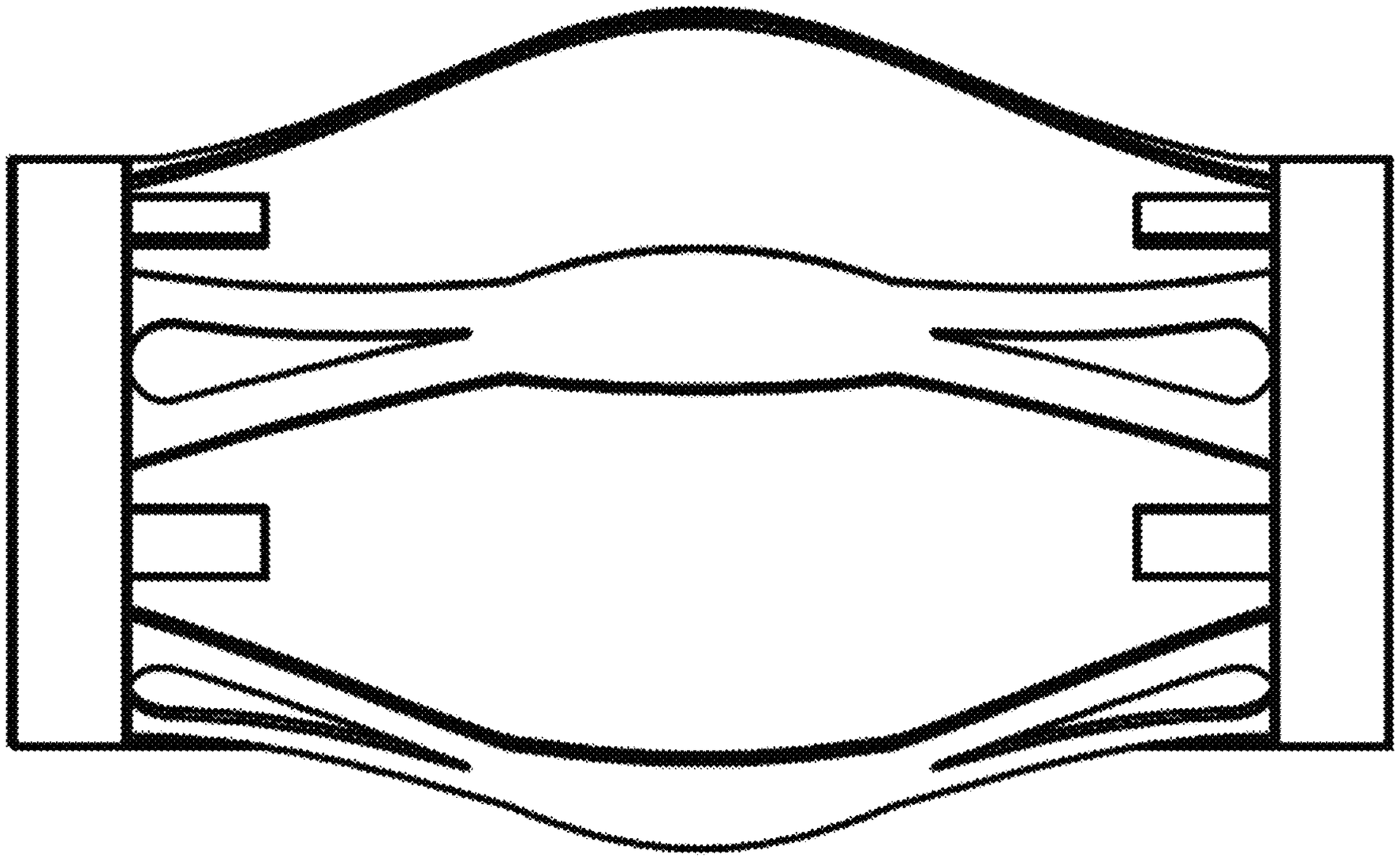

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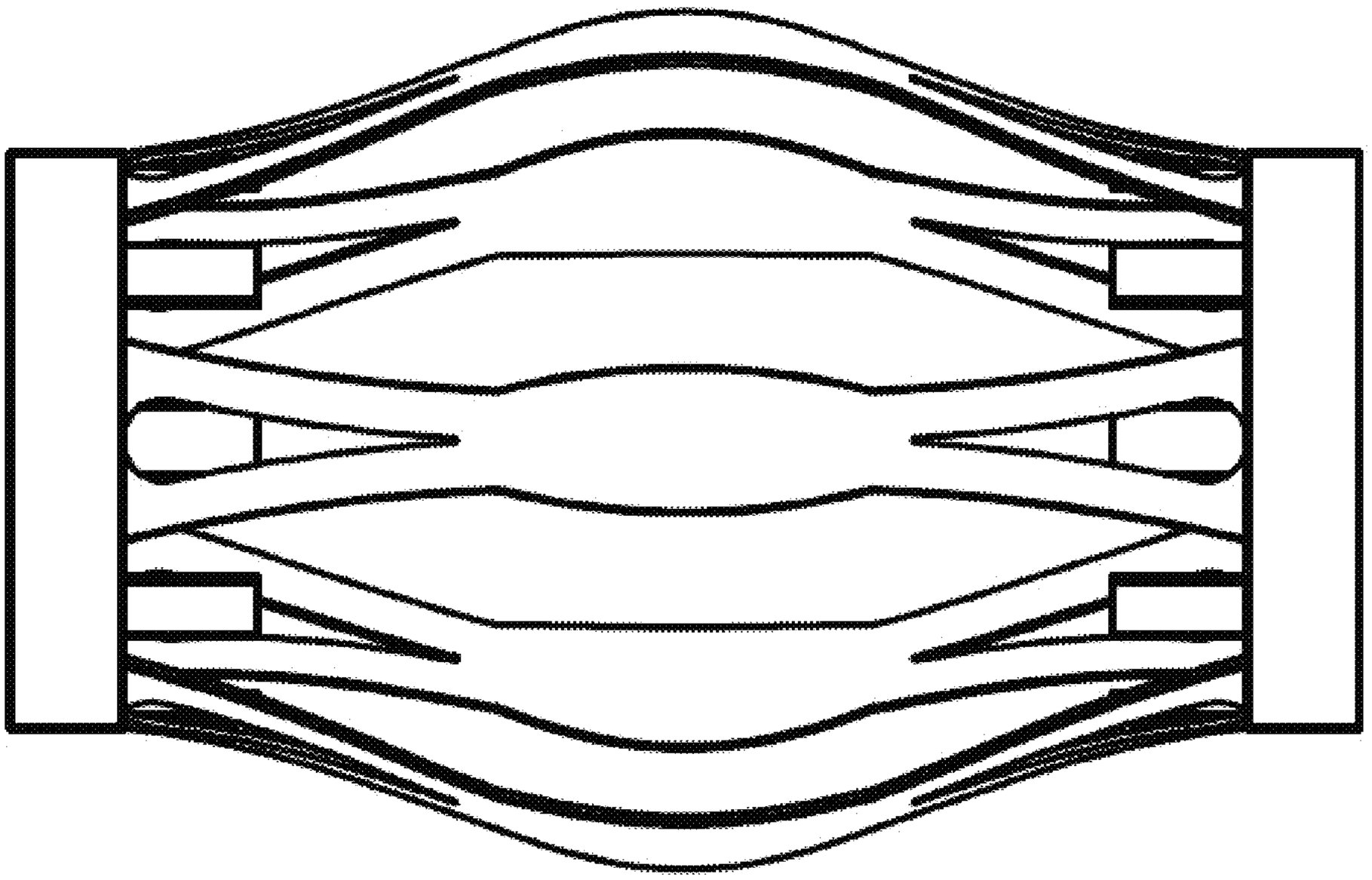

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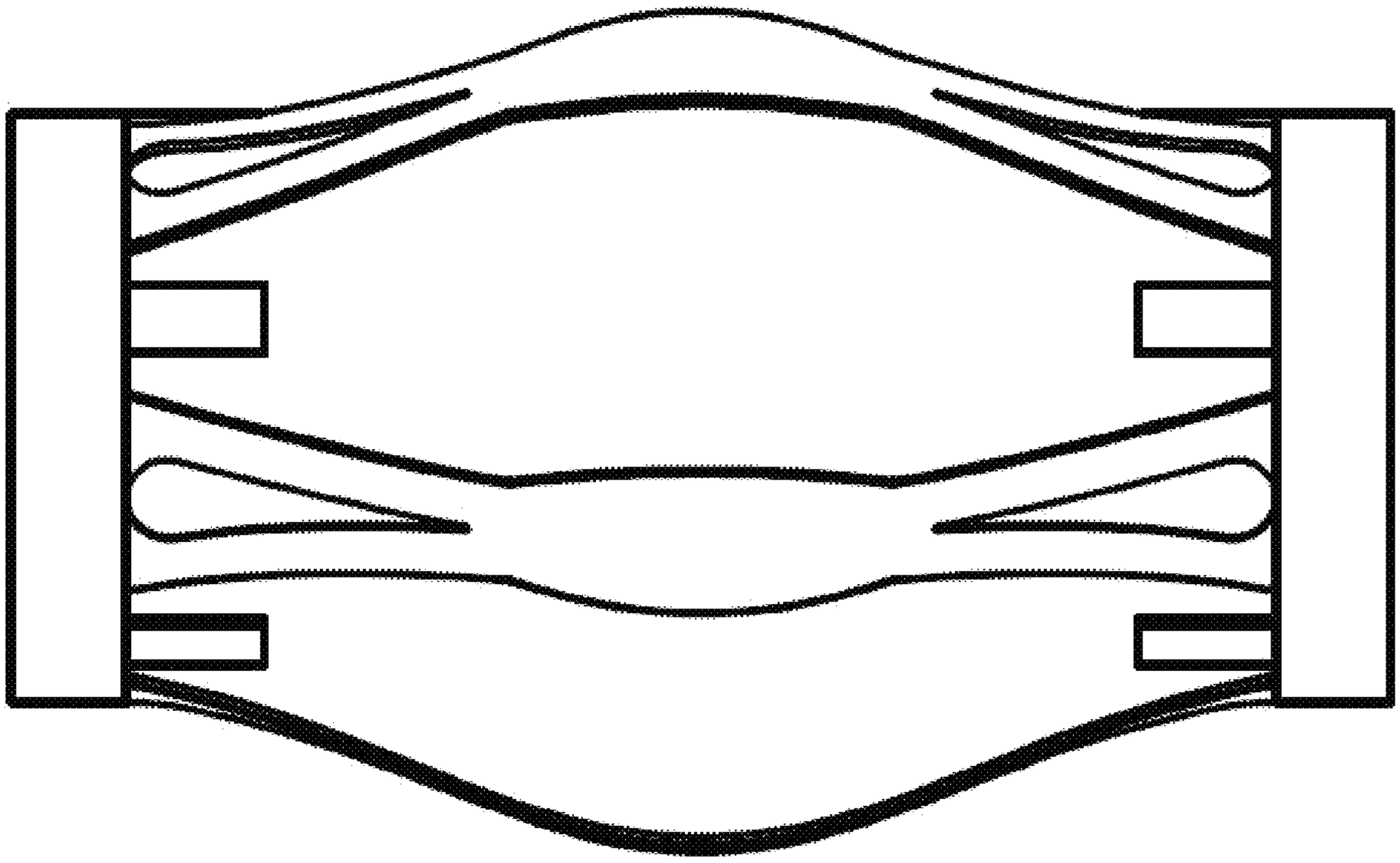

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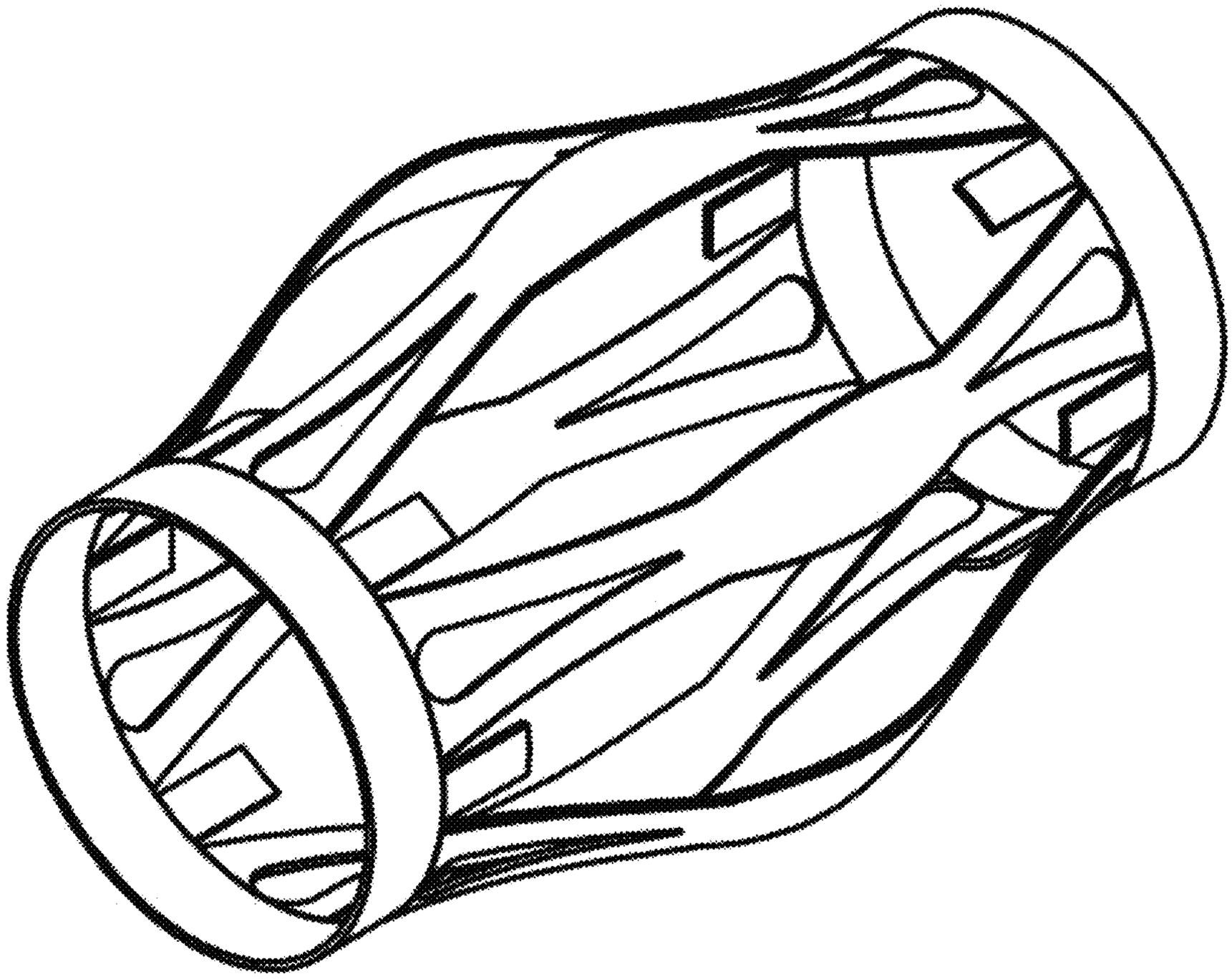

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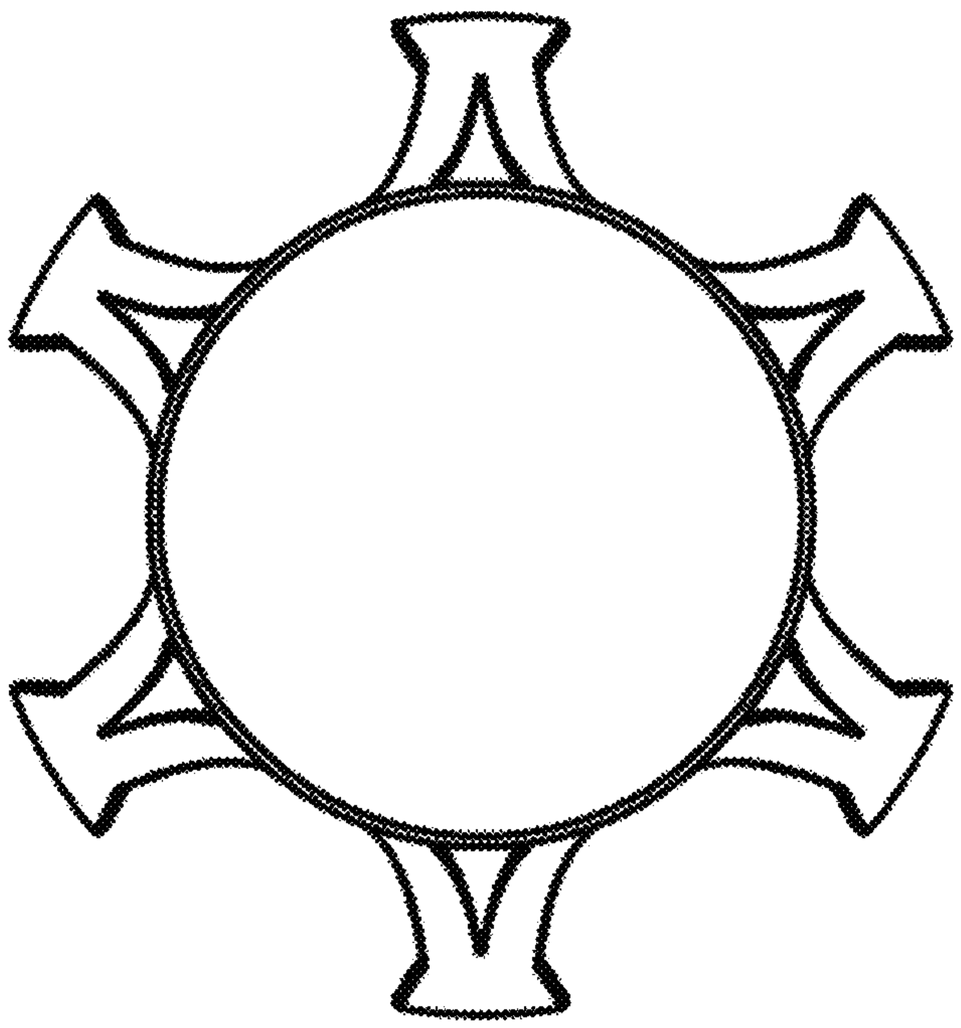

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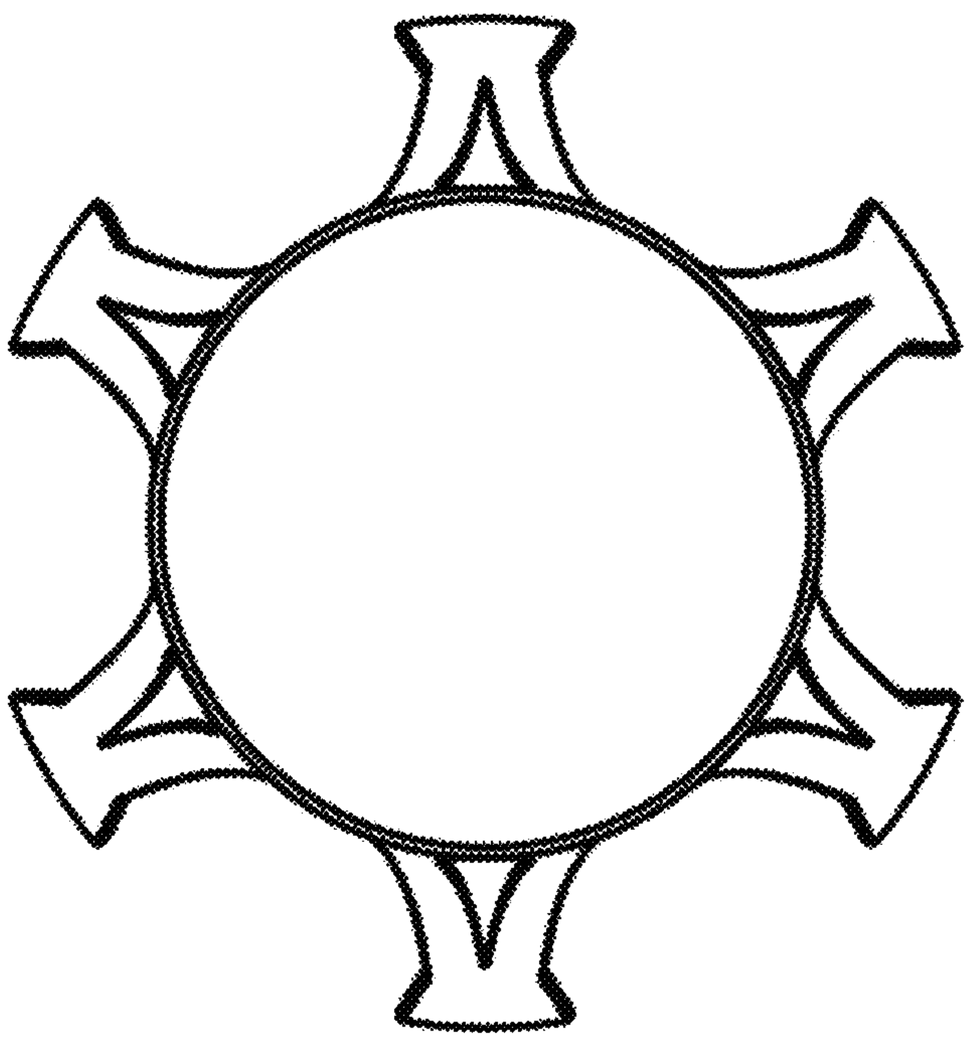

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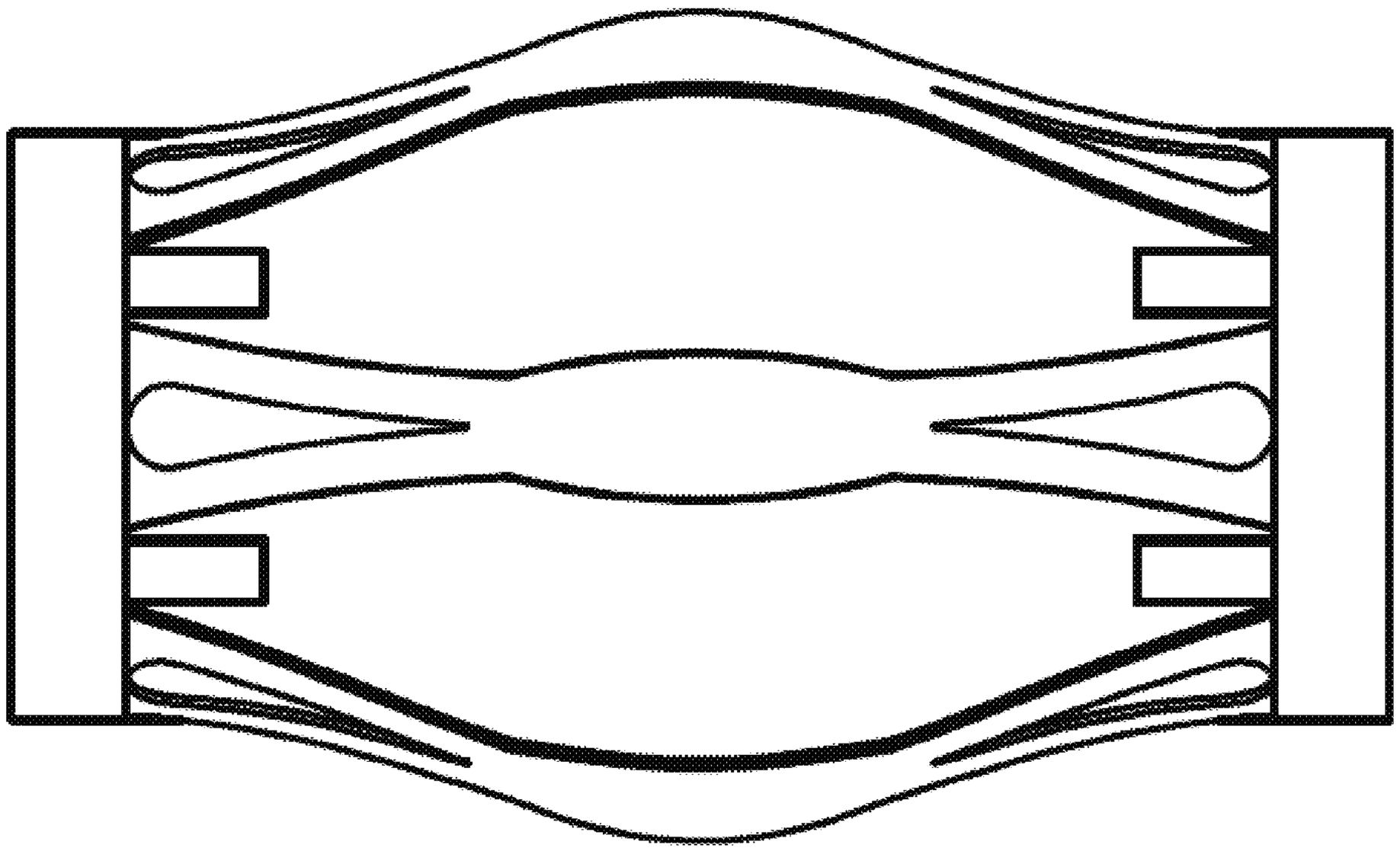

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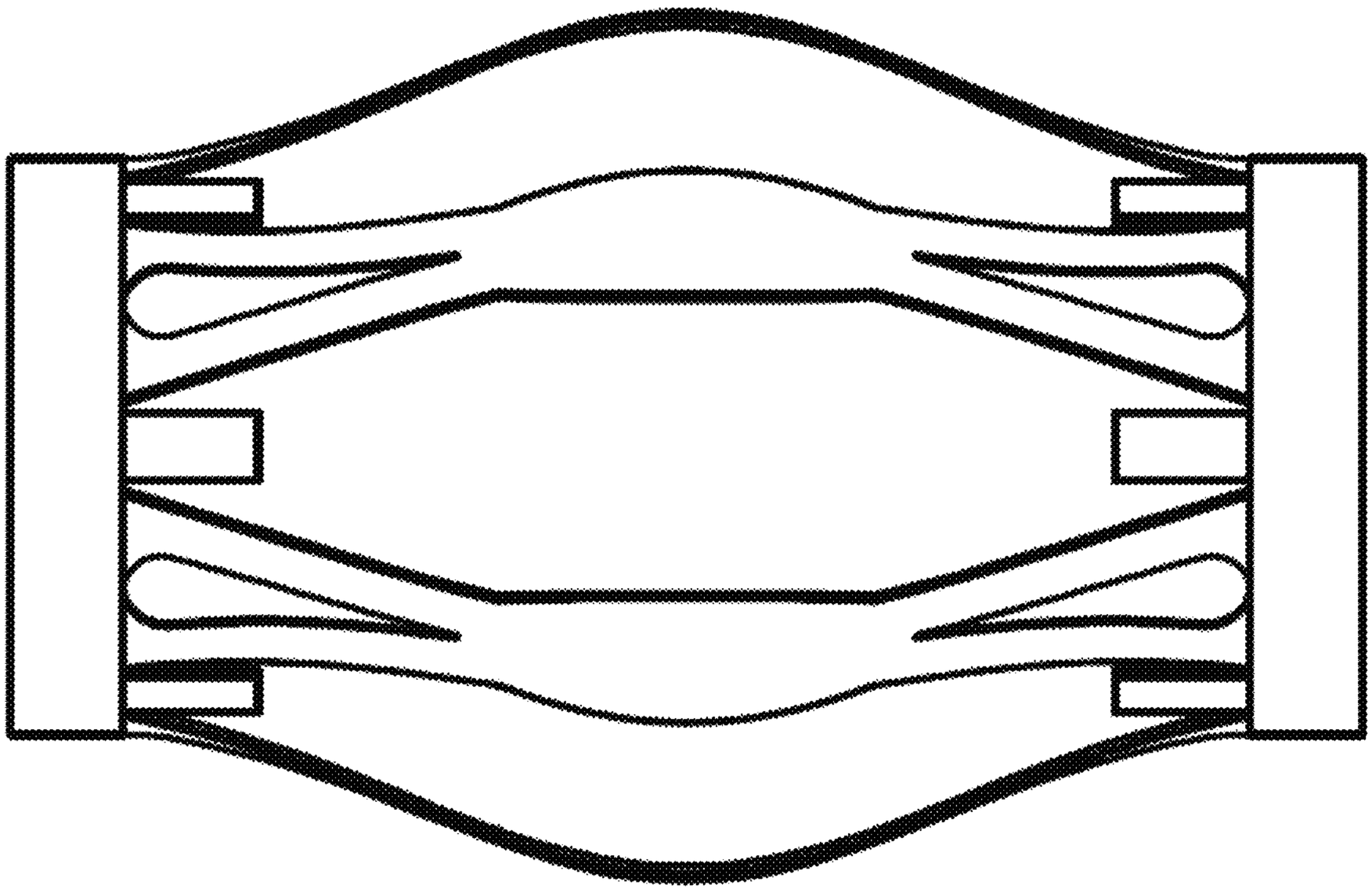

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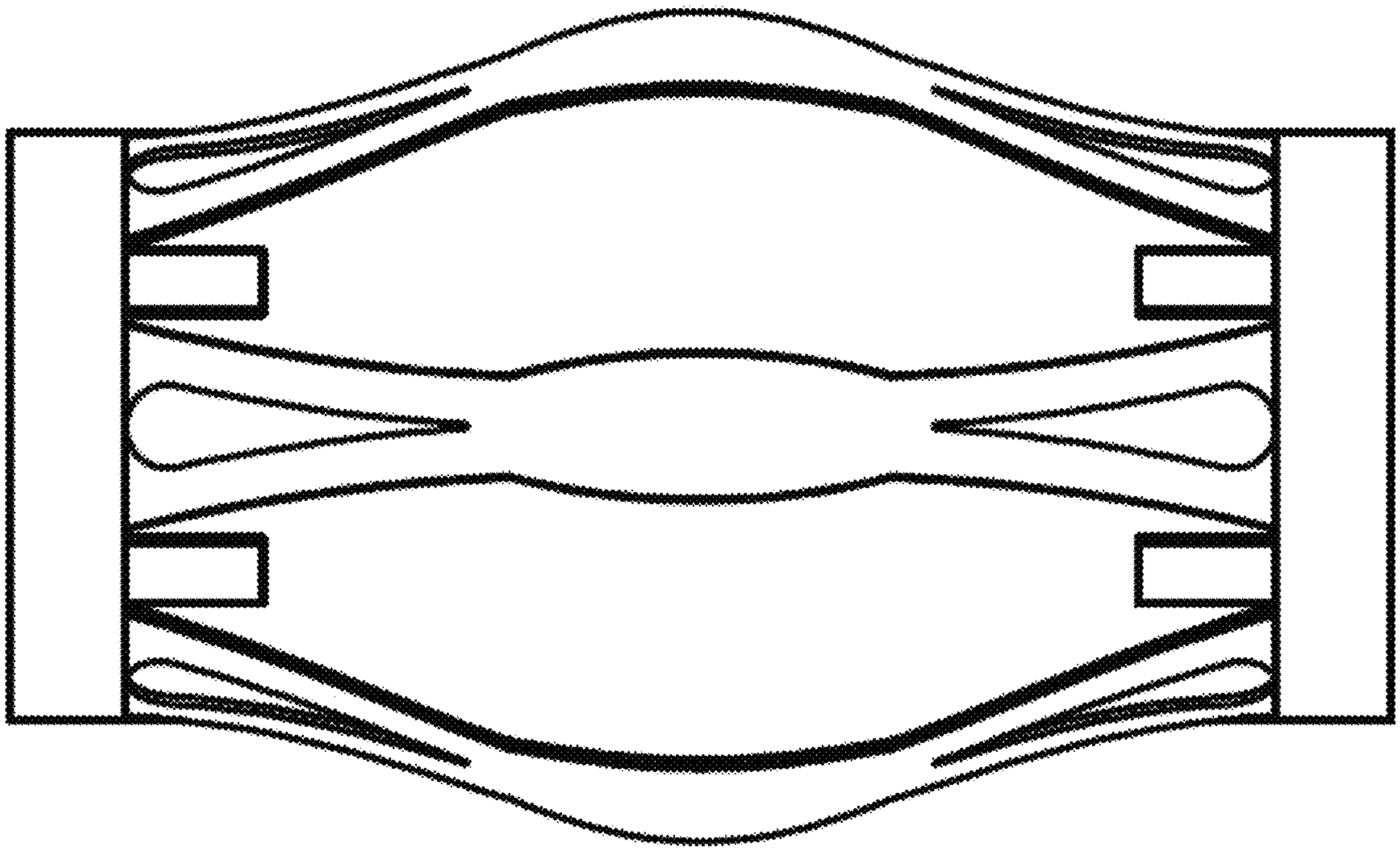

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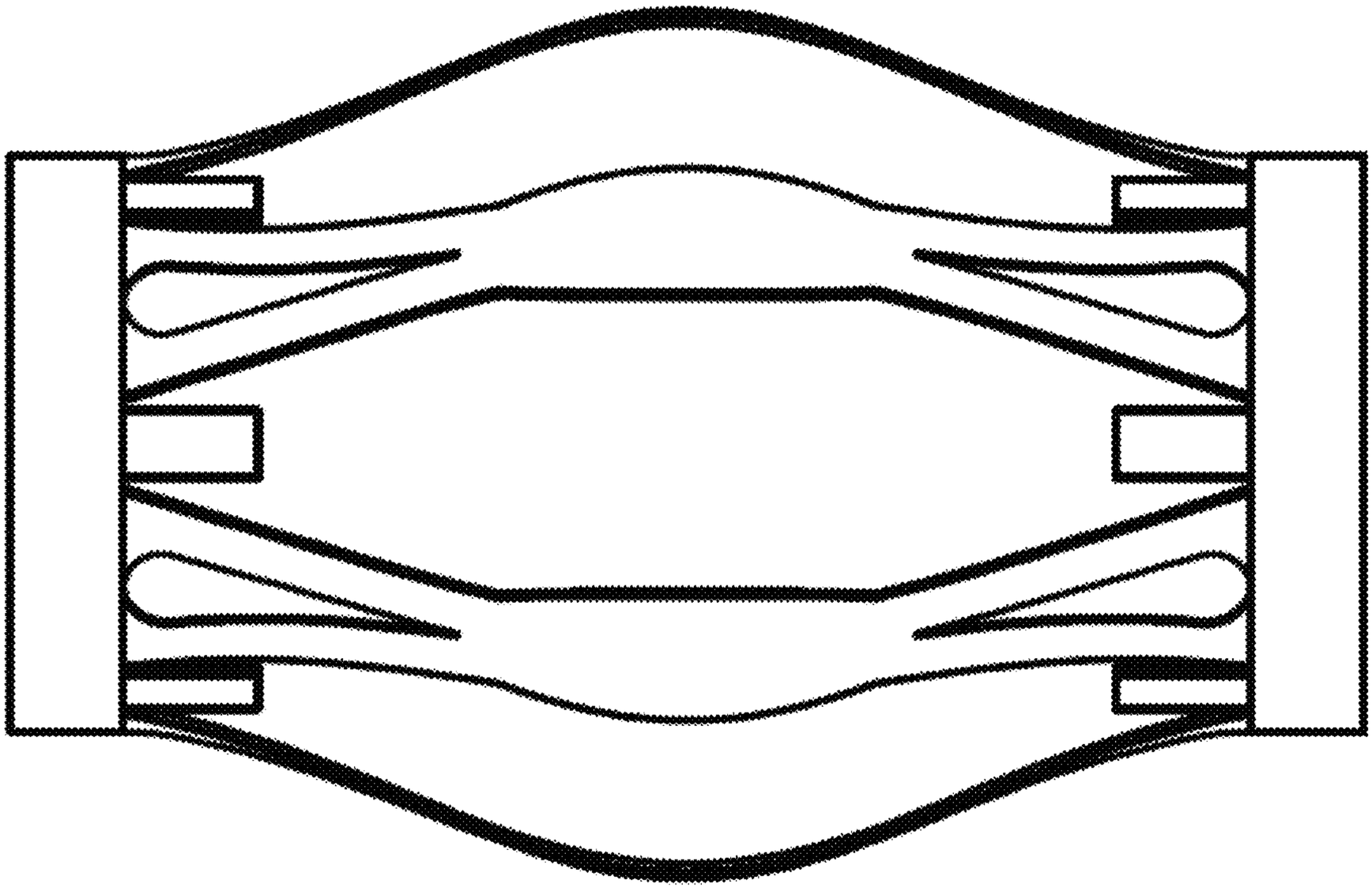

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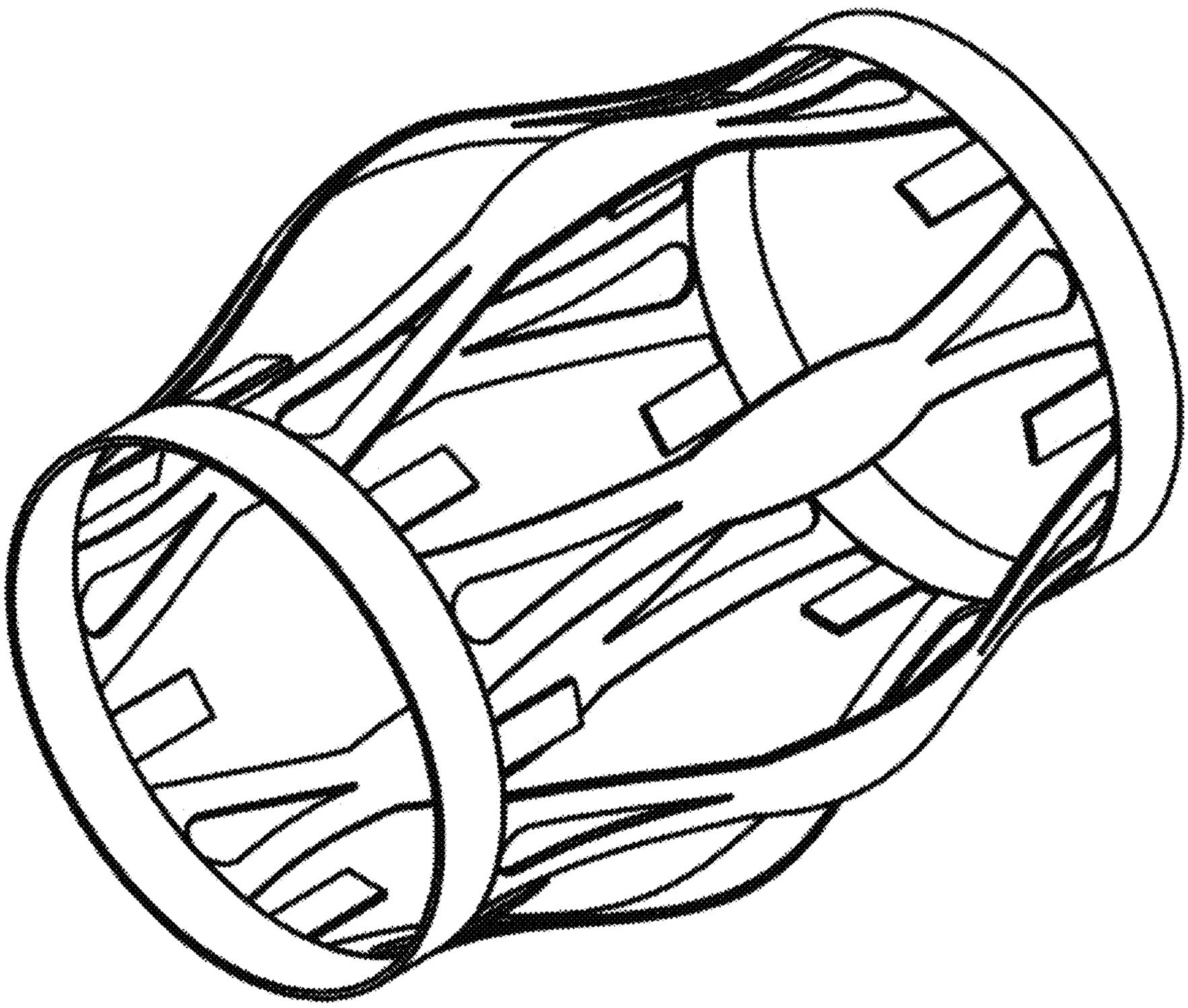

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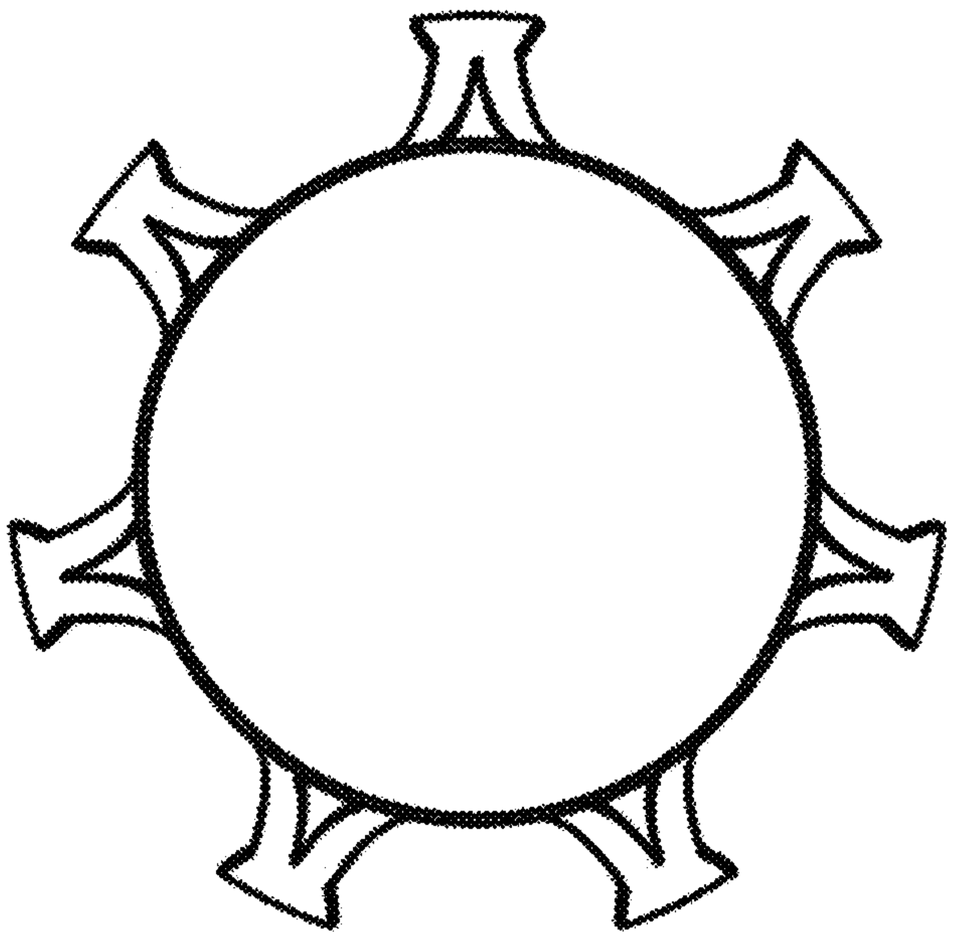


Figure 30

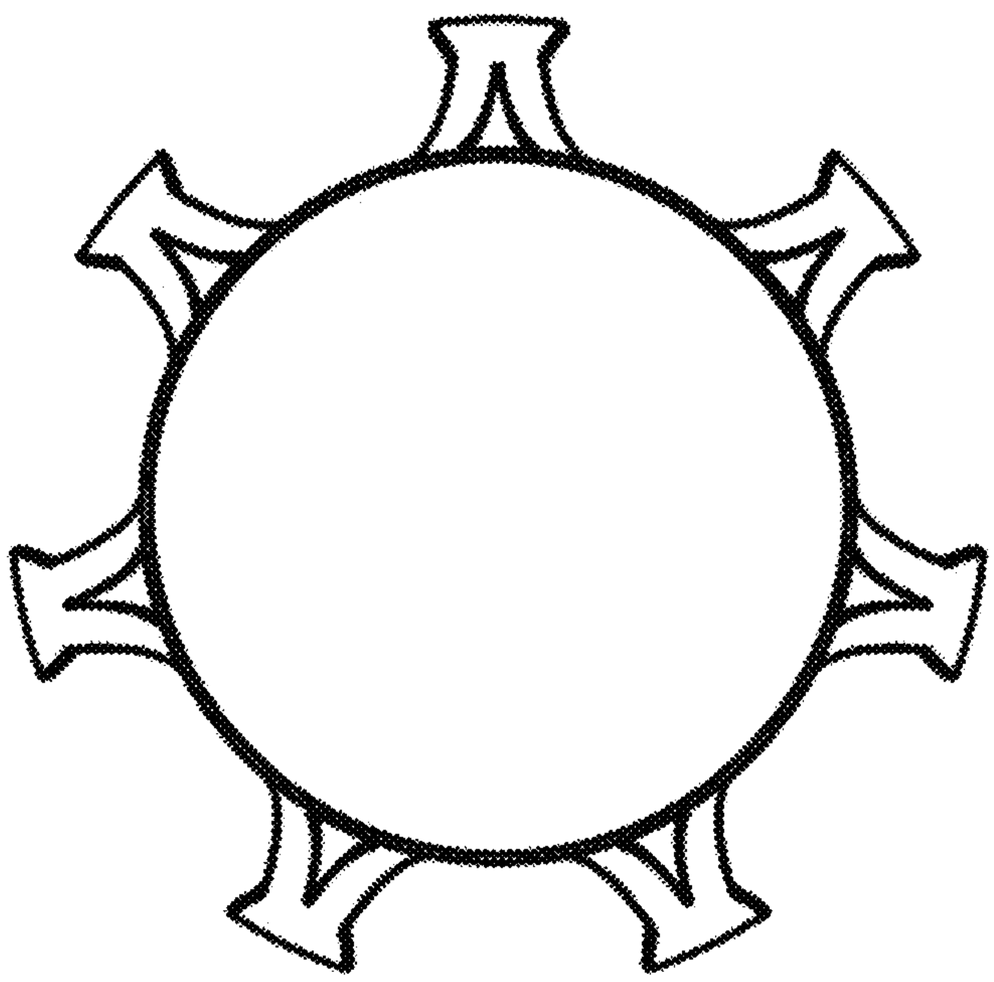
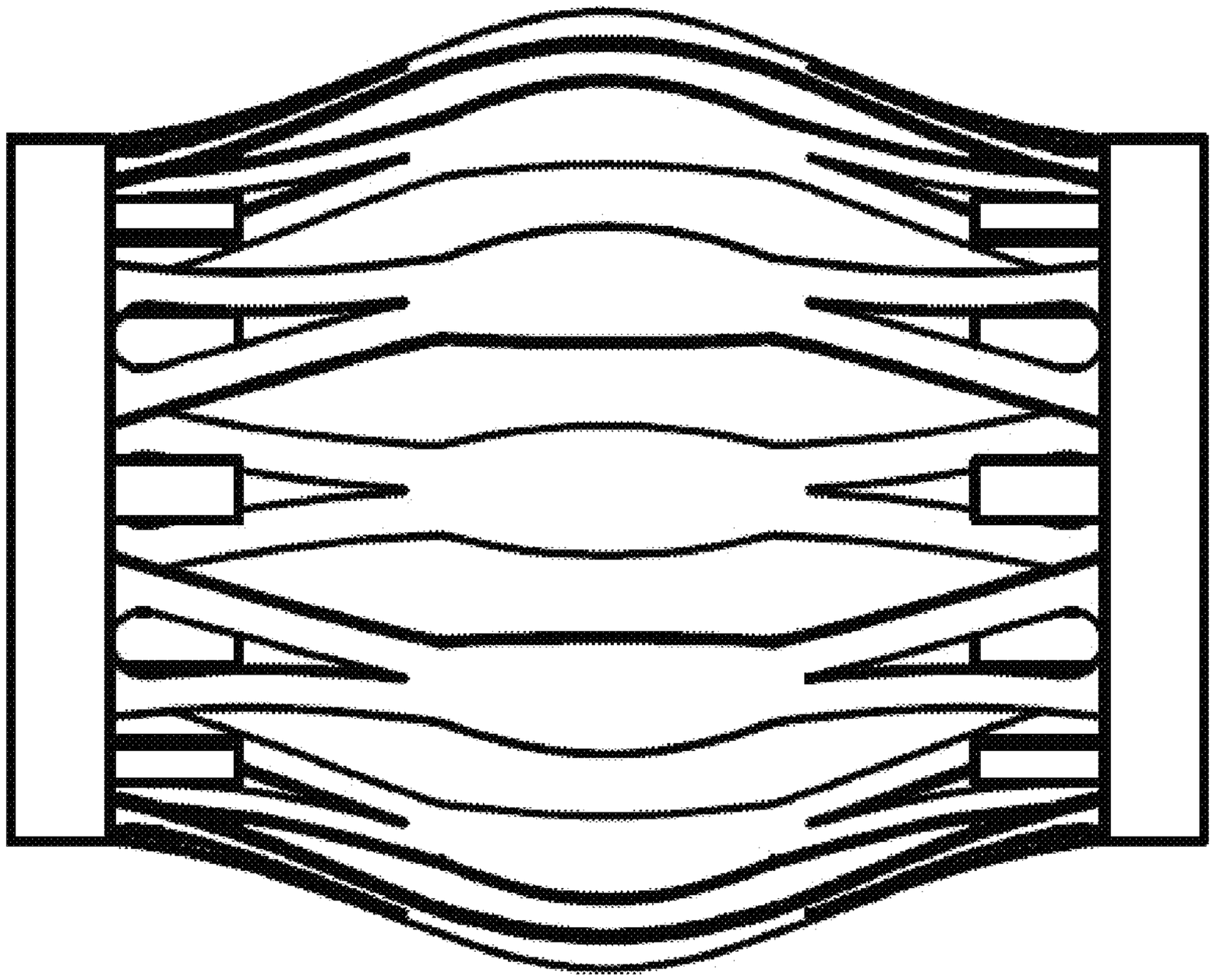


Figure 31



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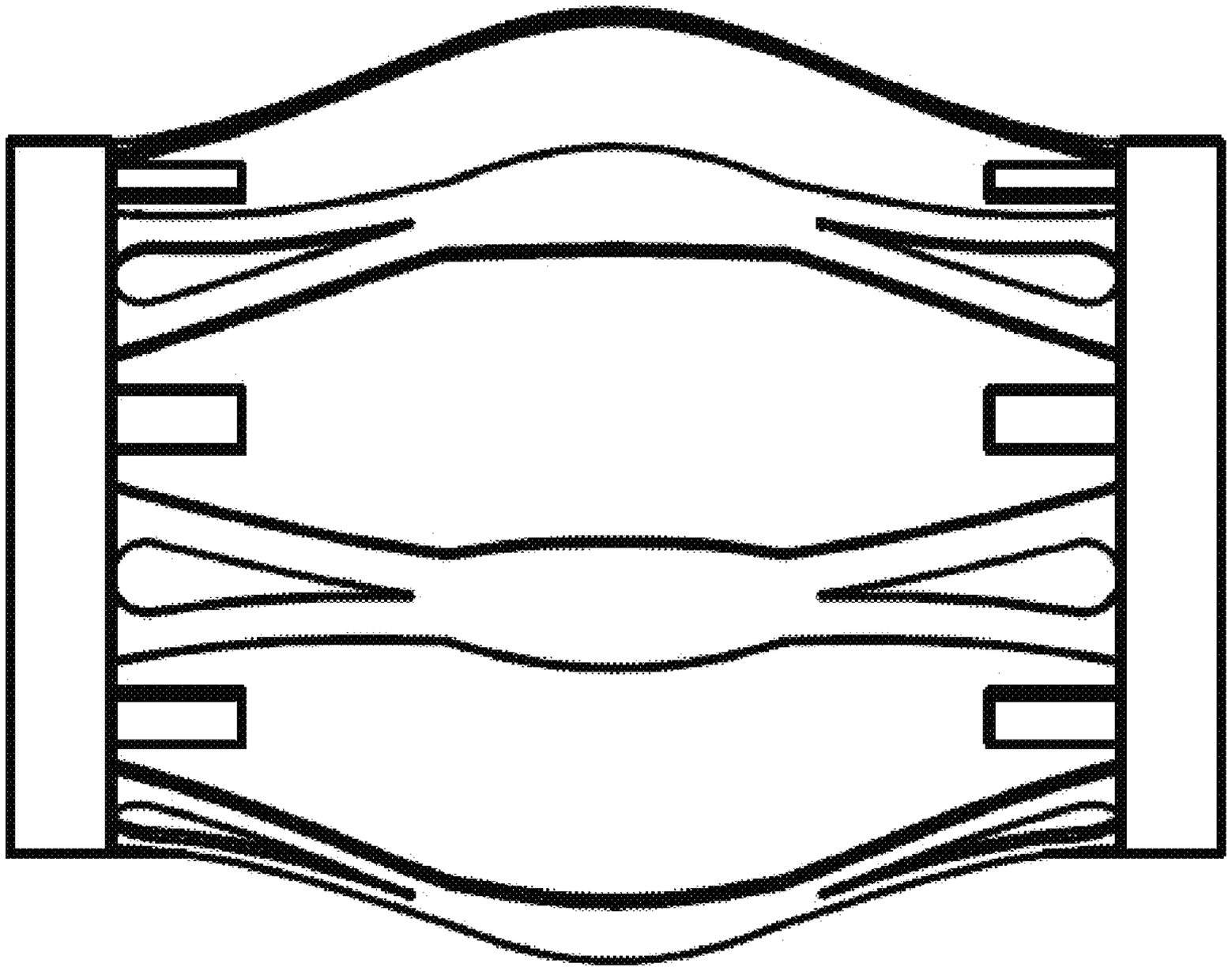

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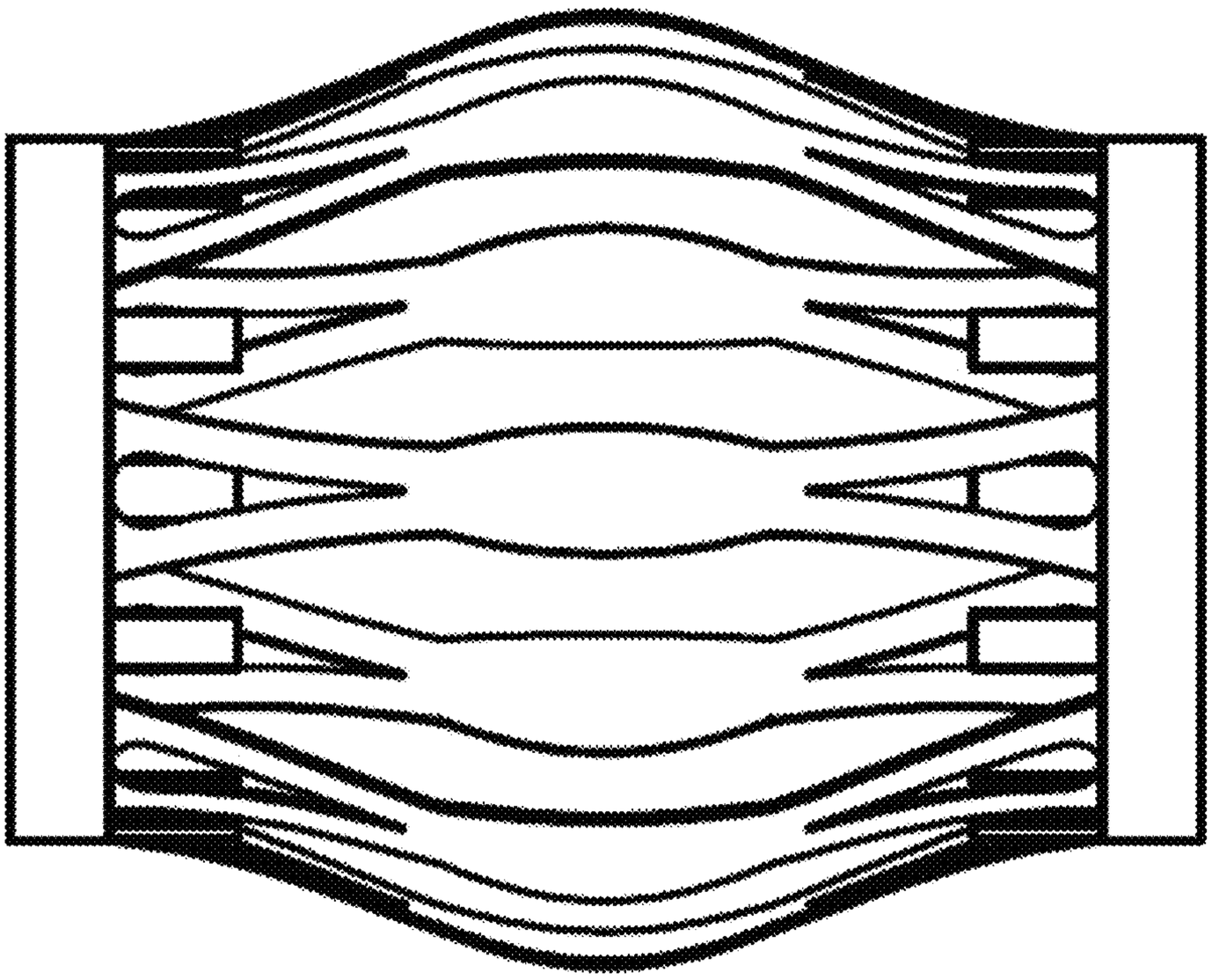

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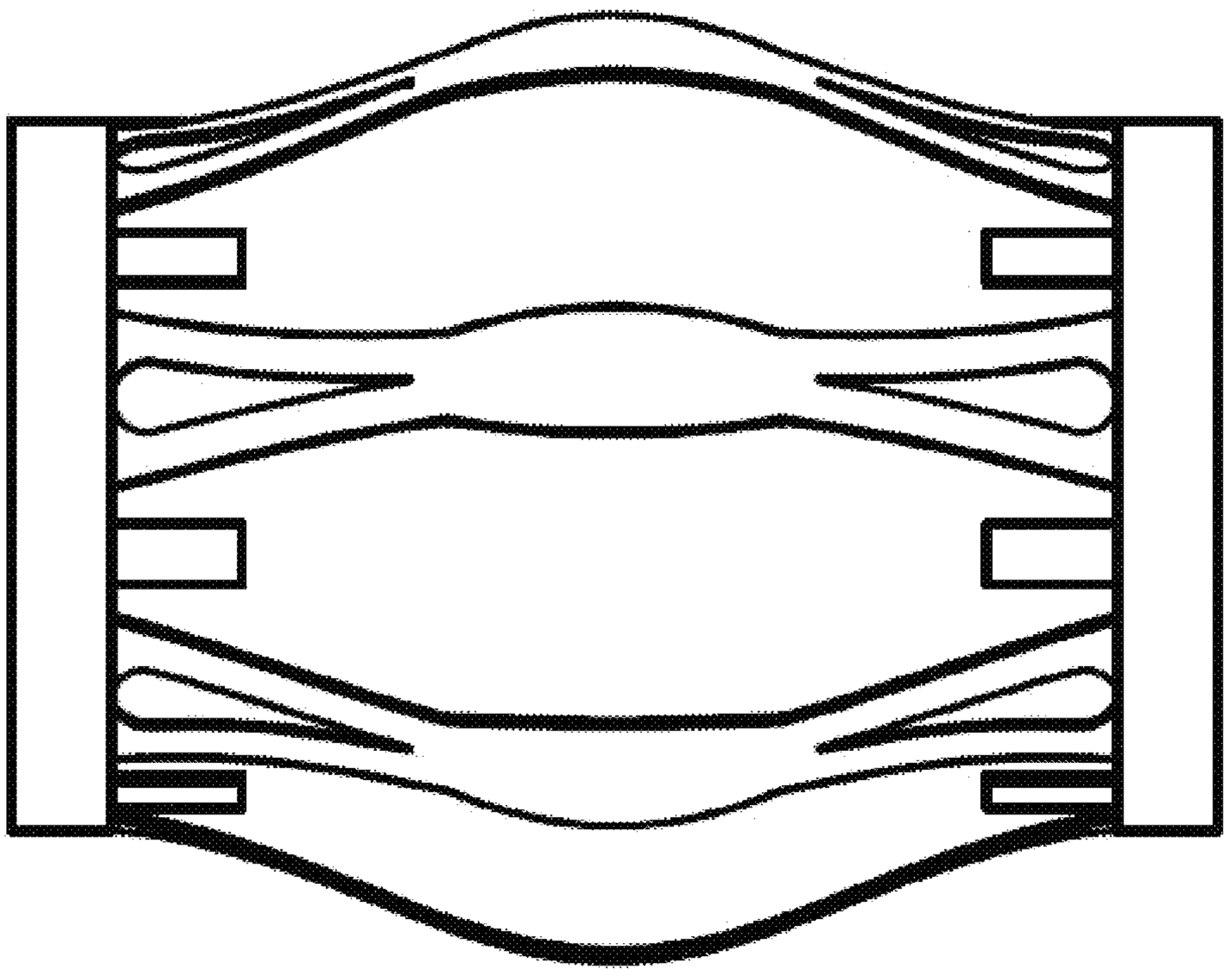

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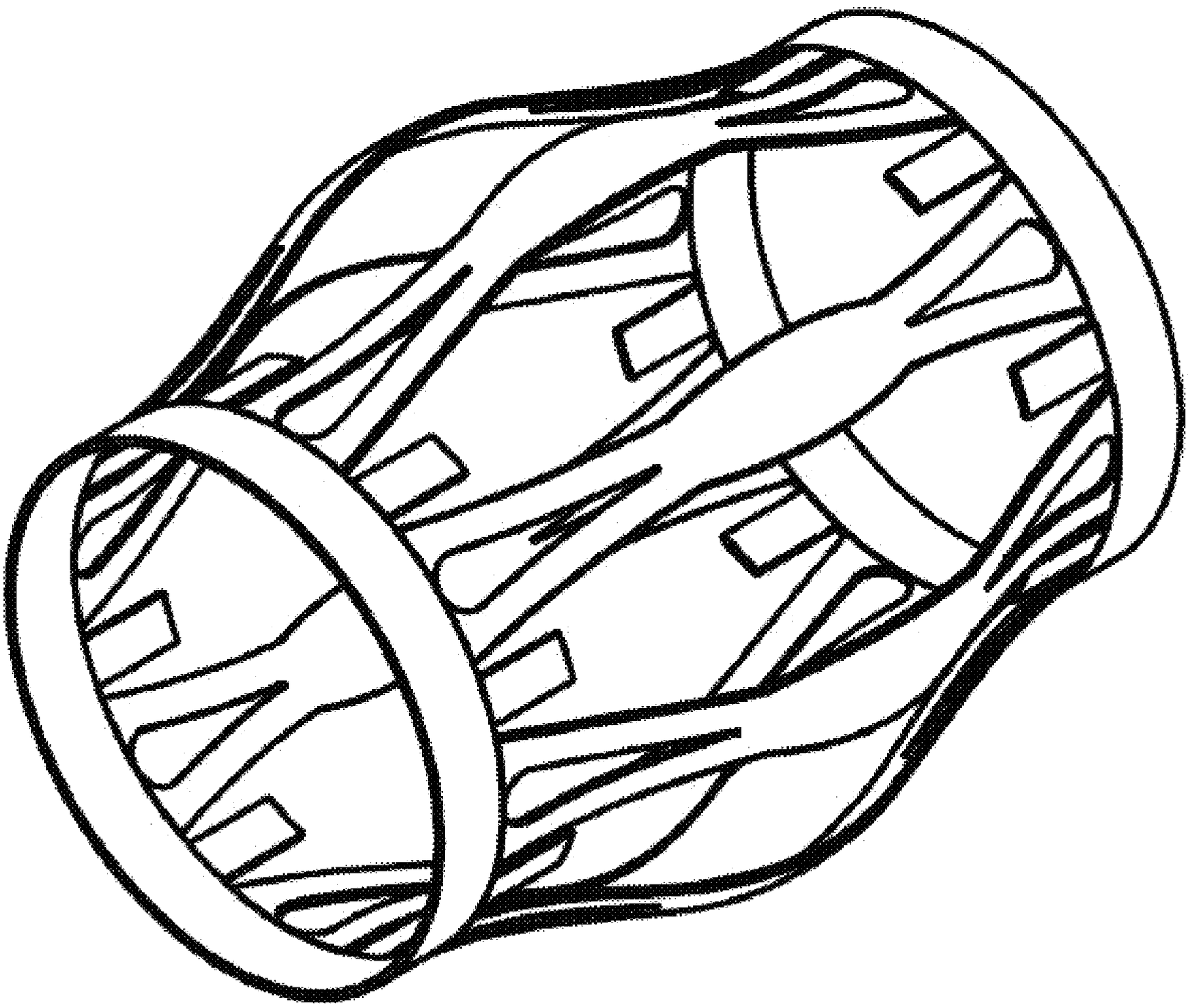
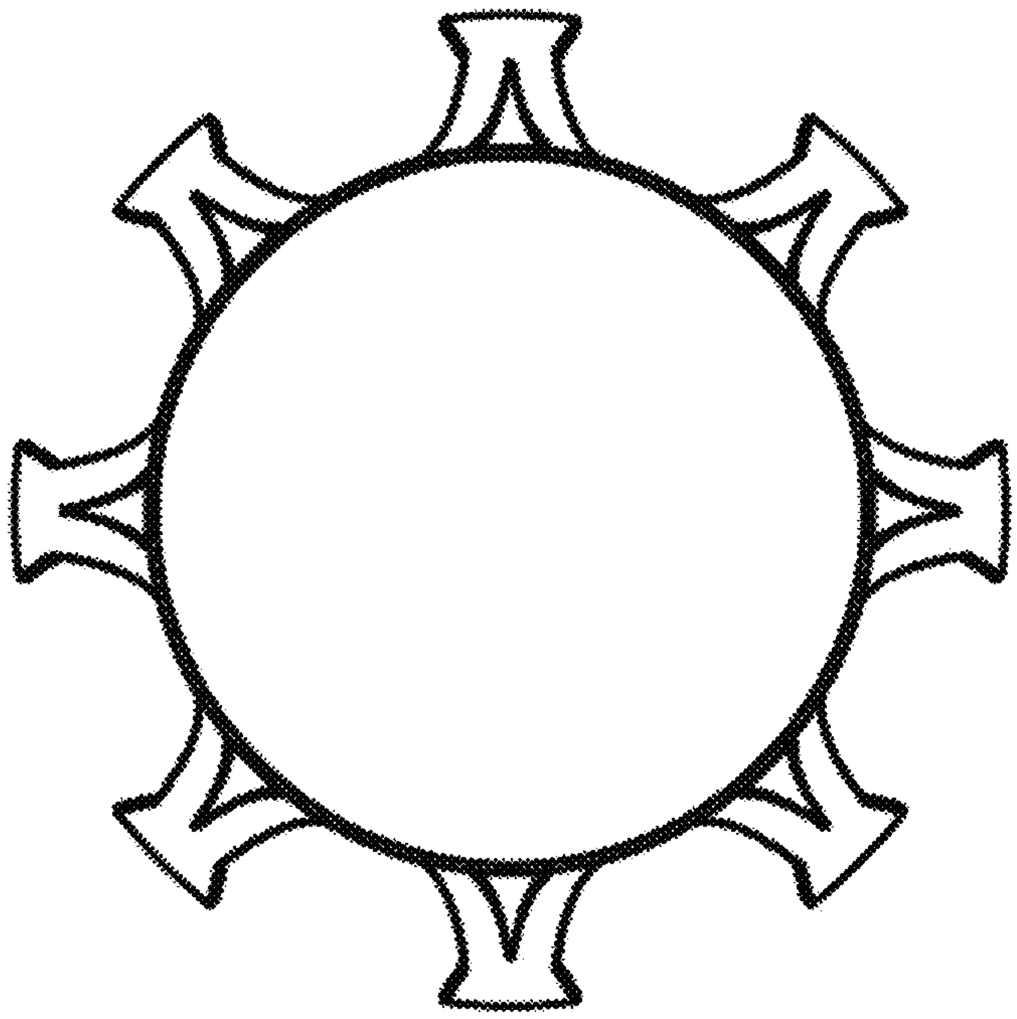


Figure 36



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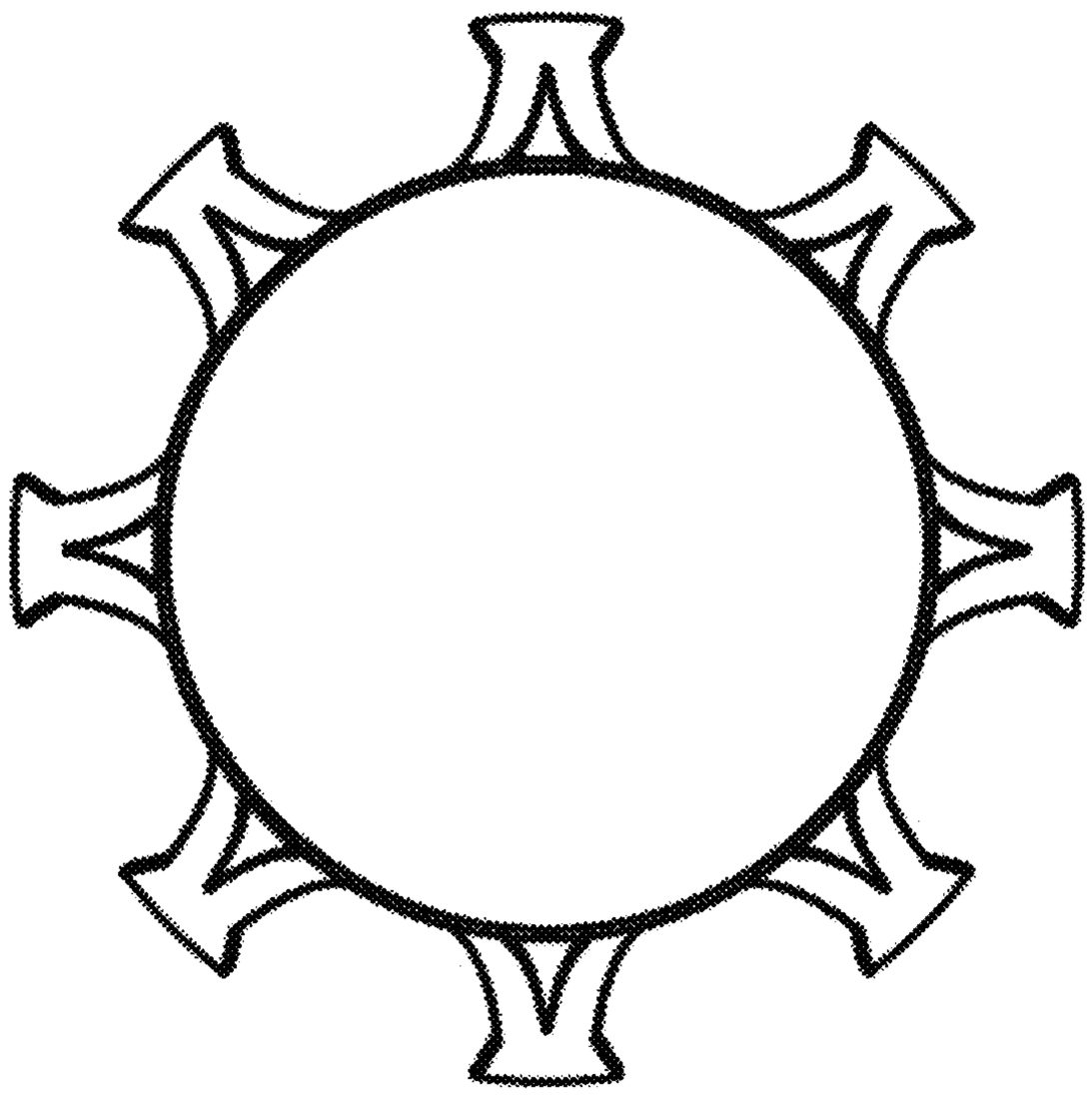

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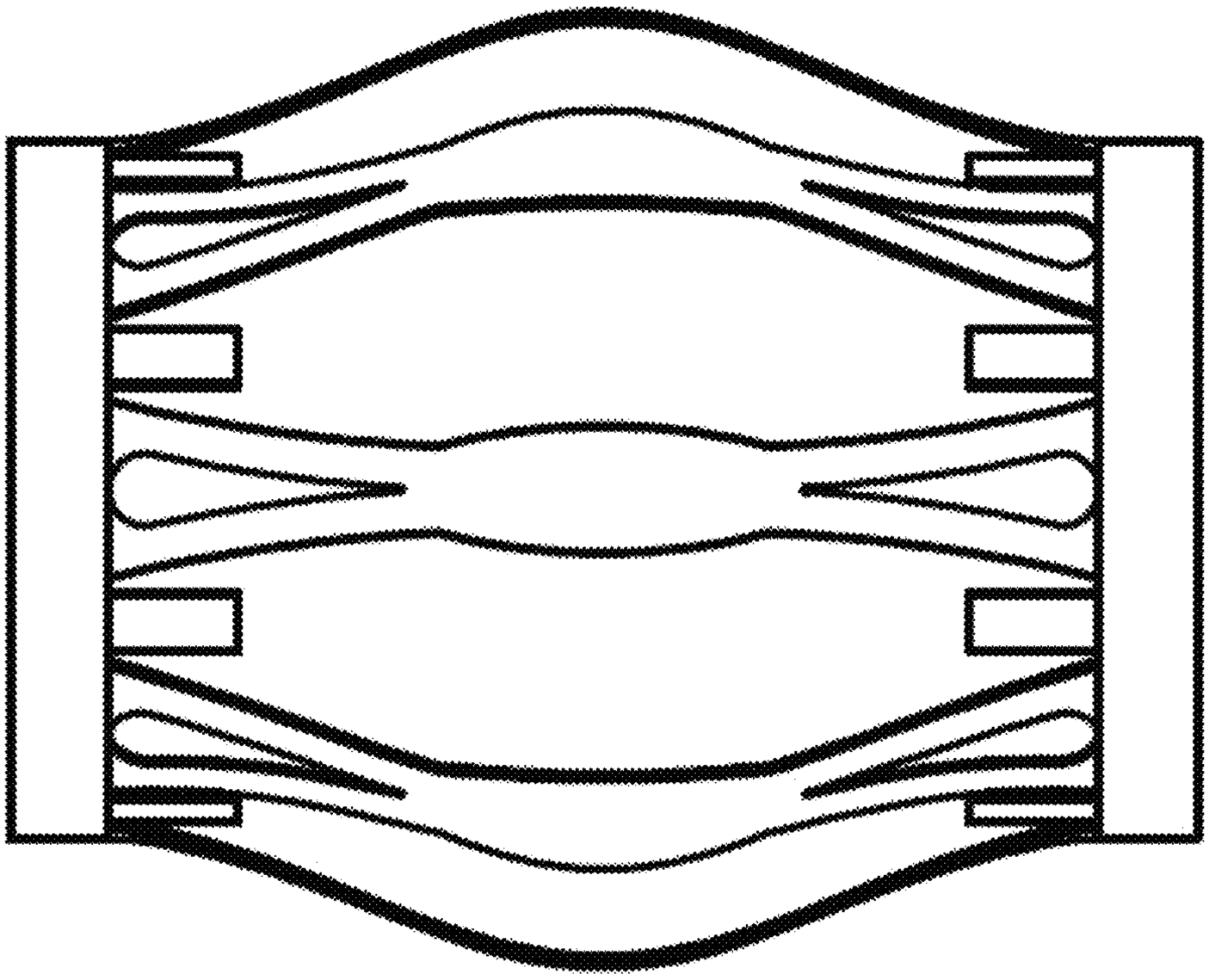

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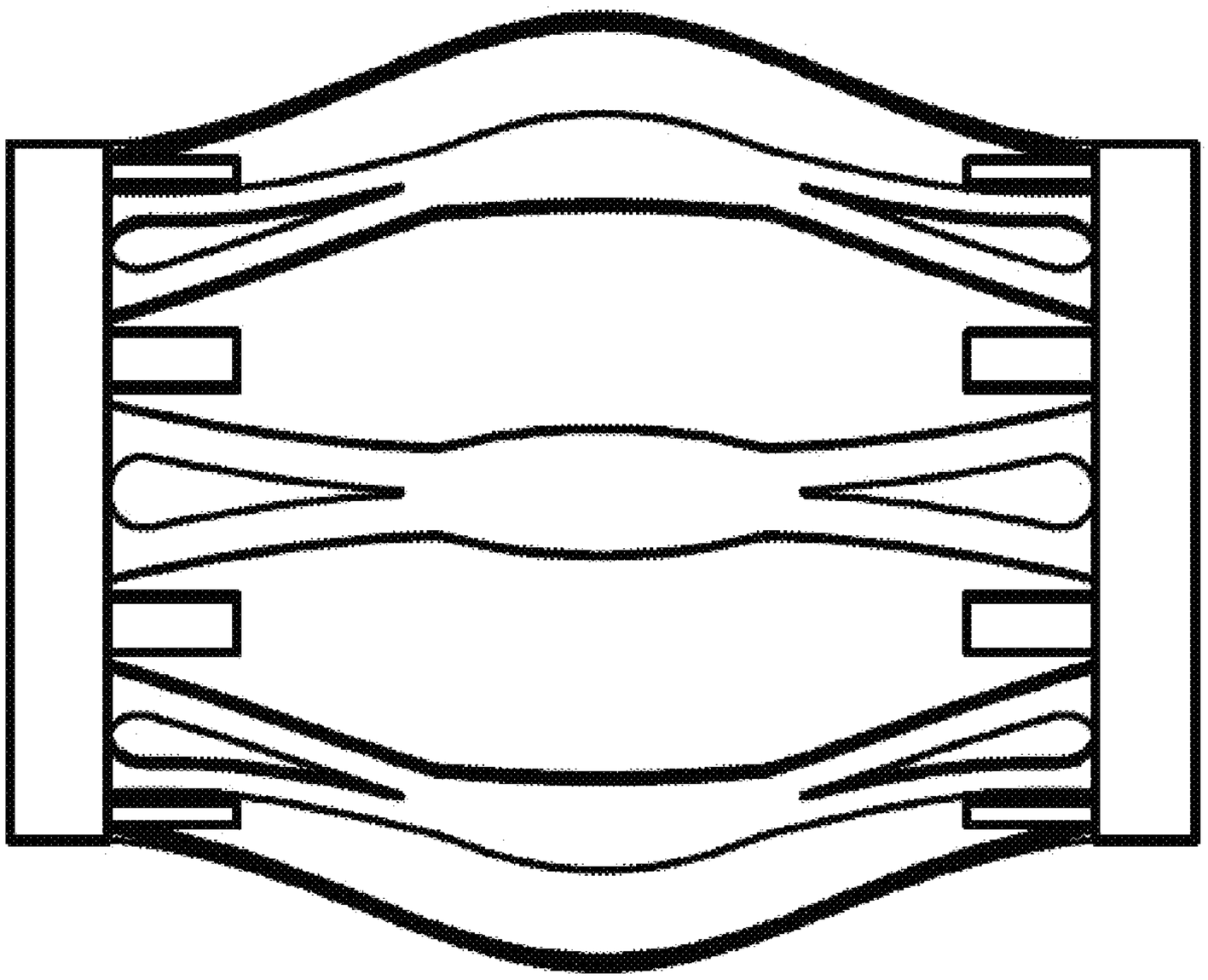

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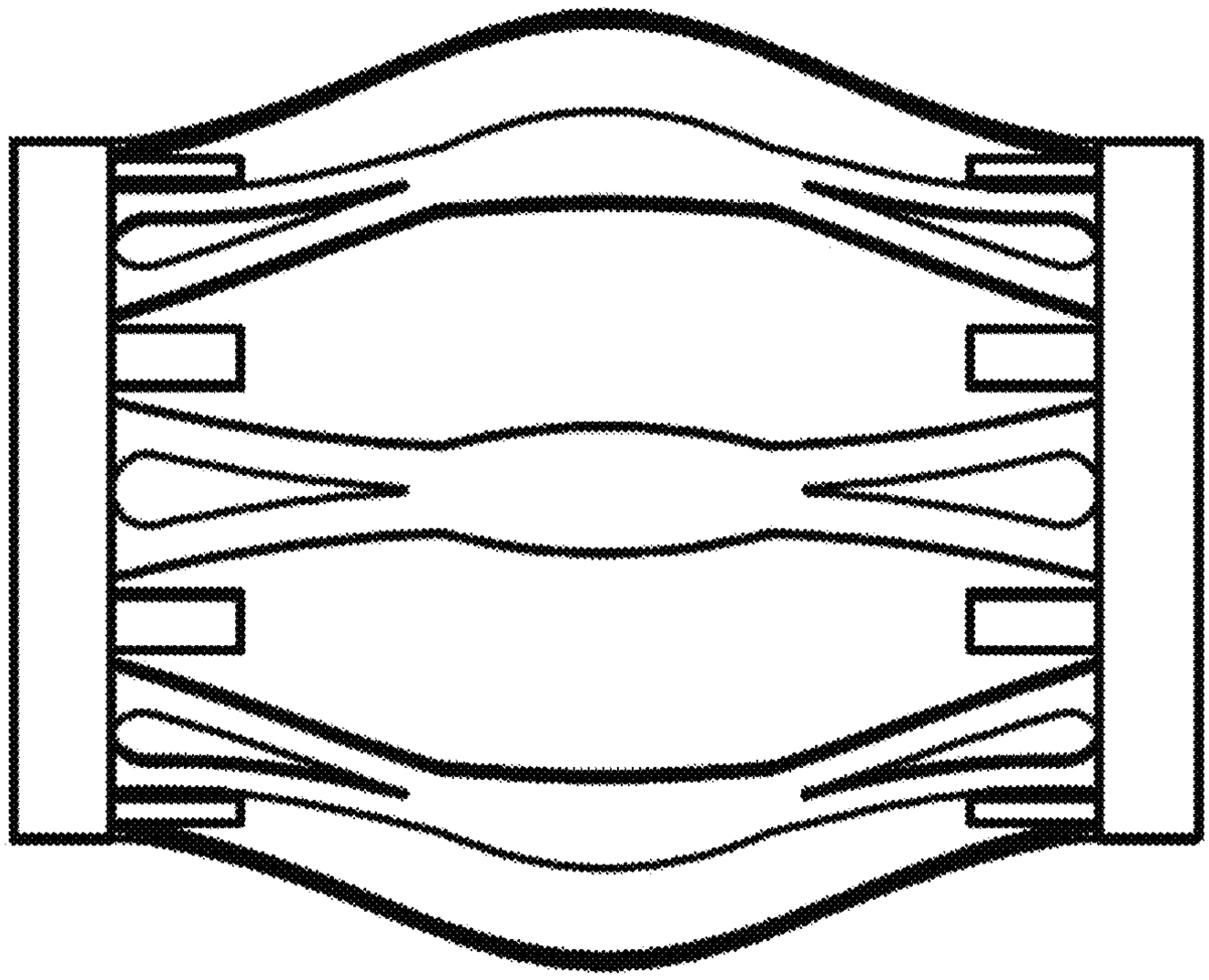

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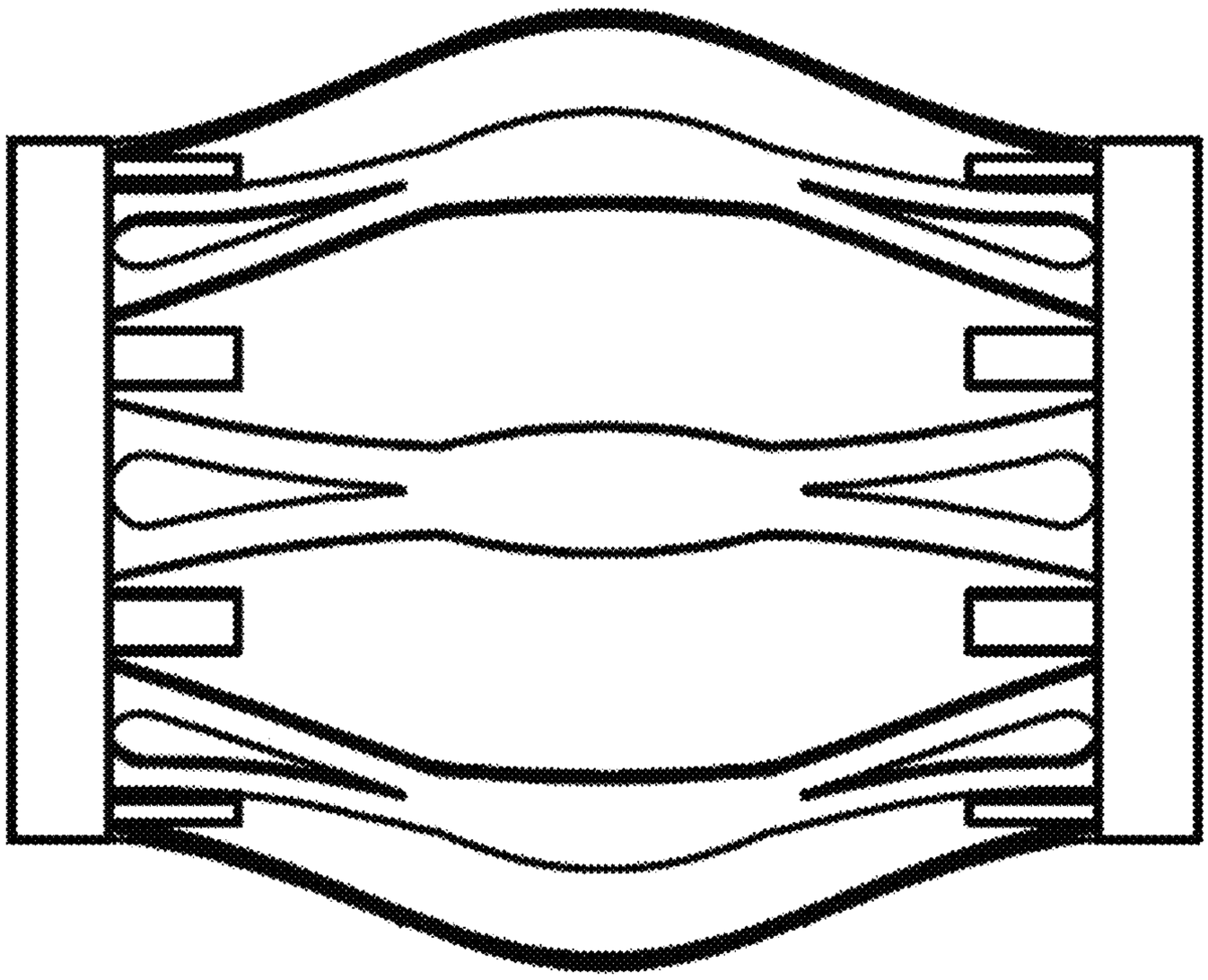

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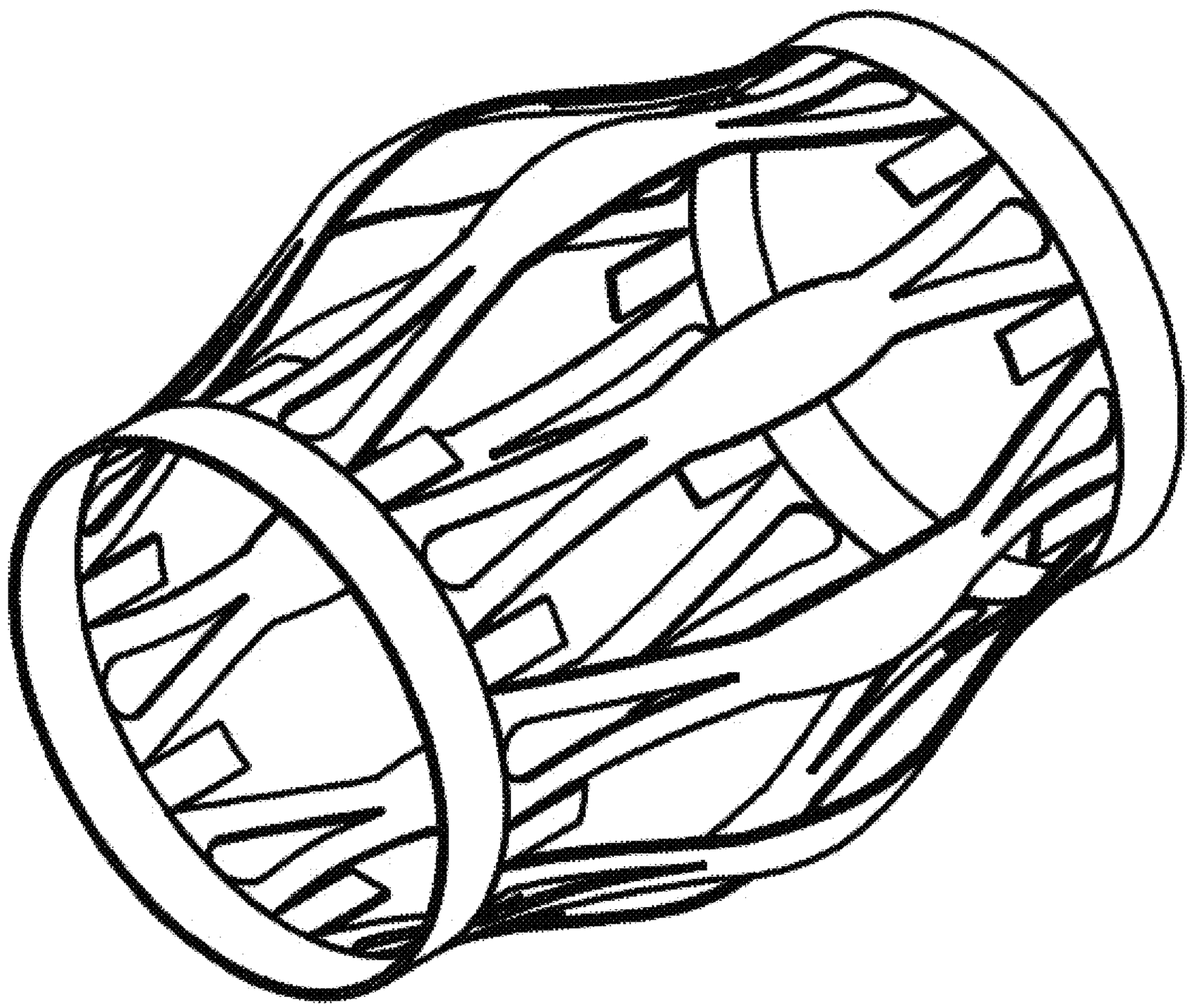

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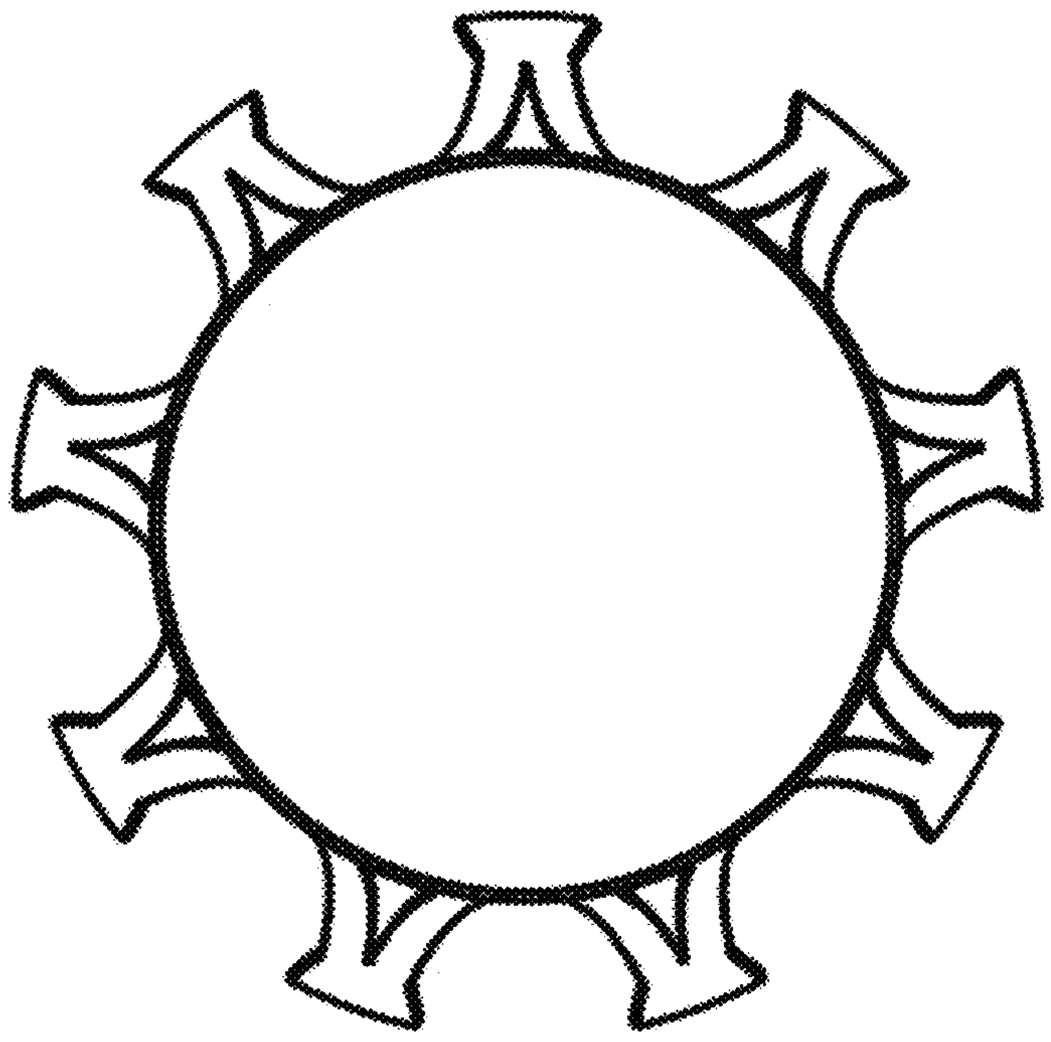

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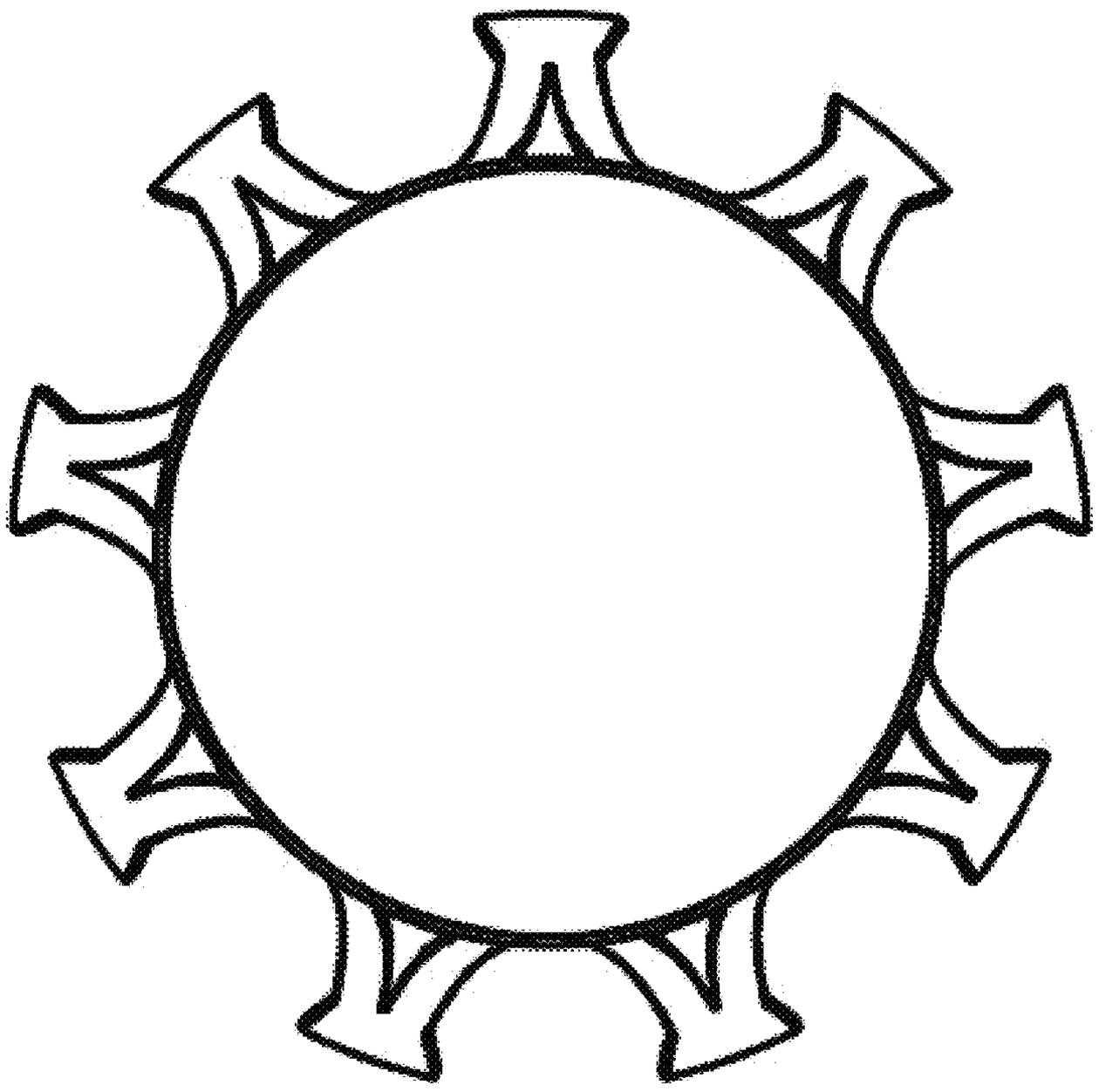

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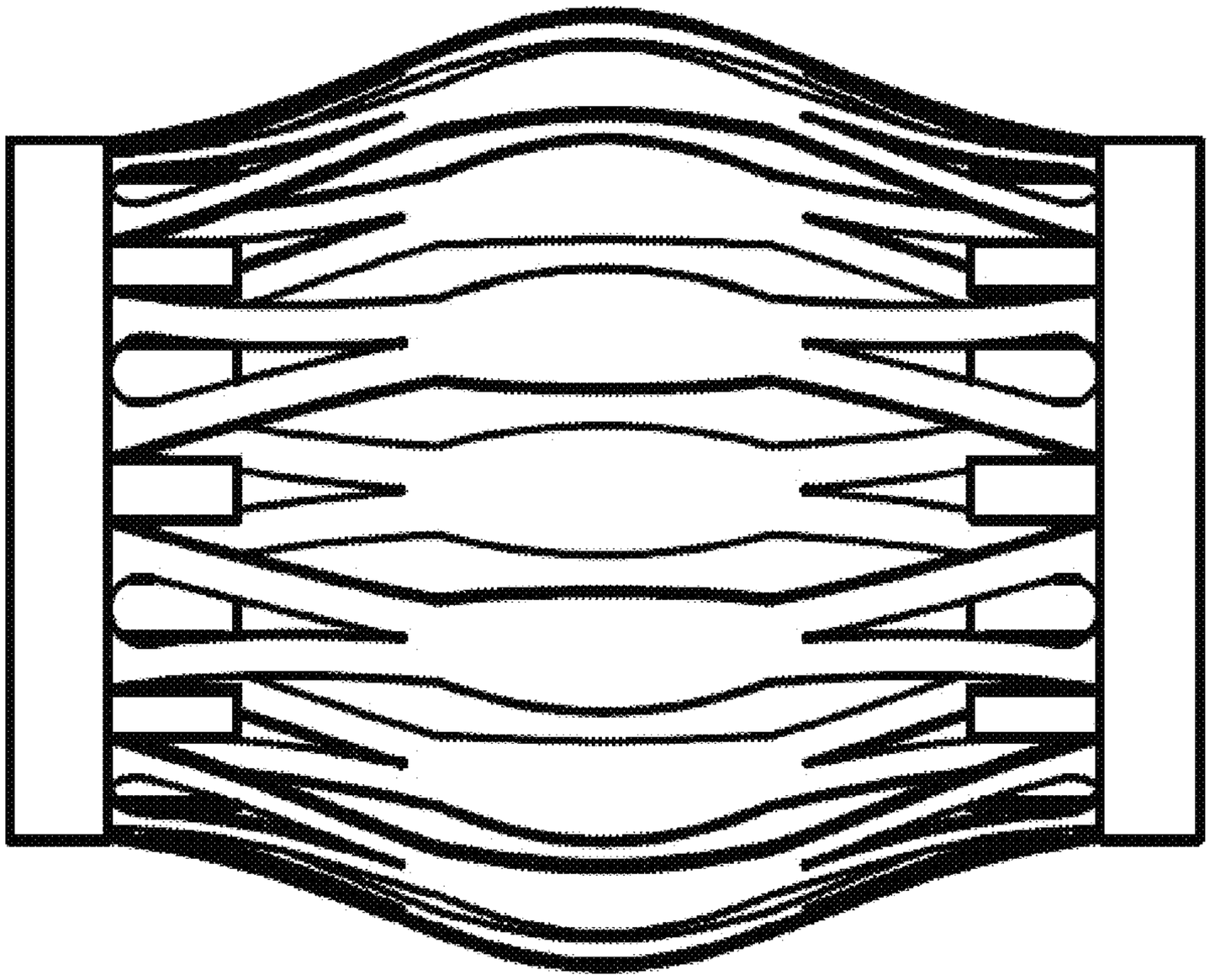

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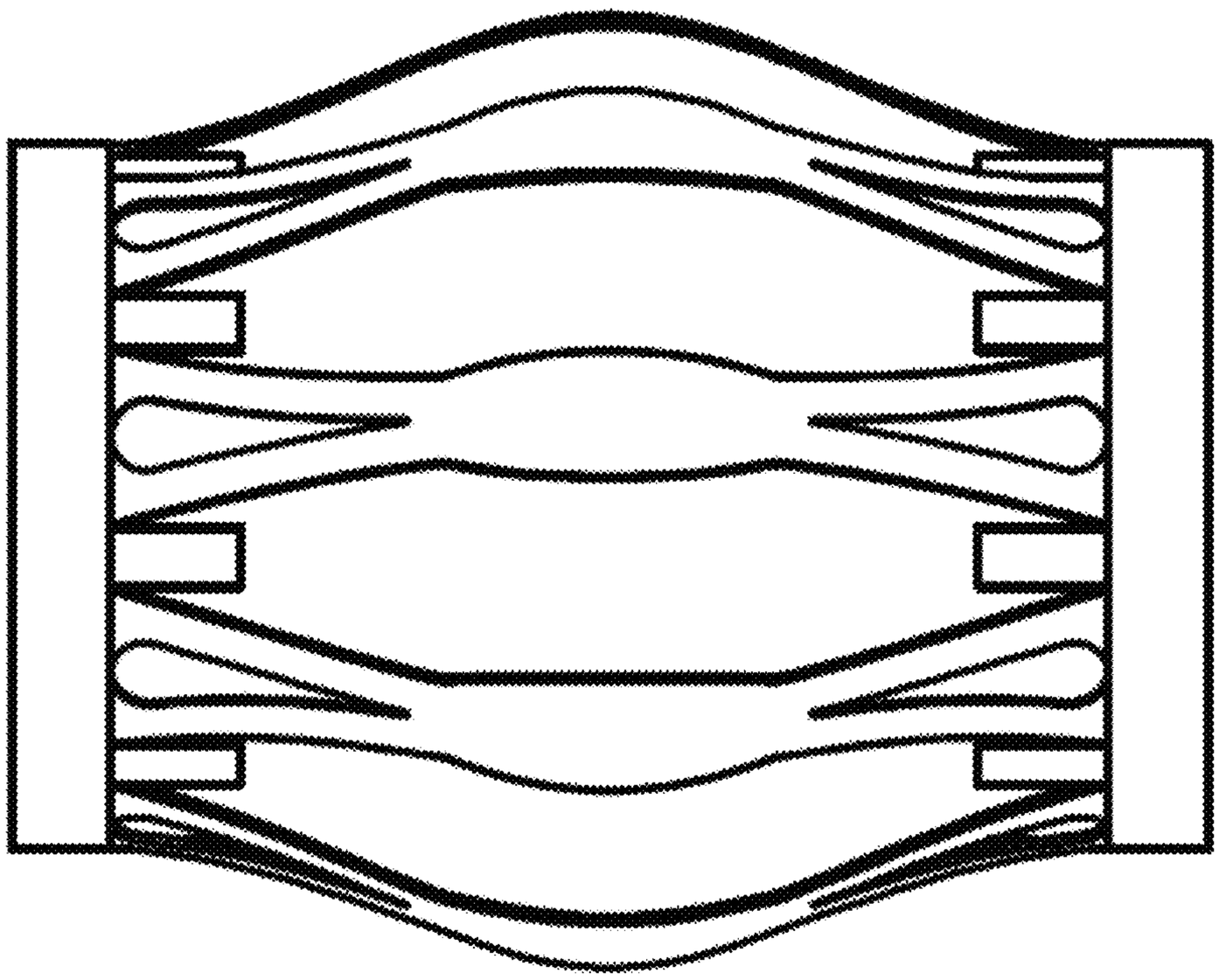

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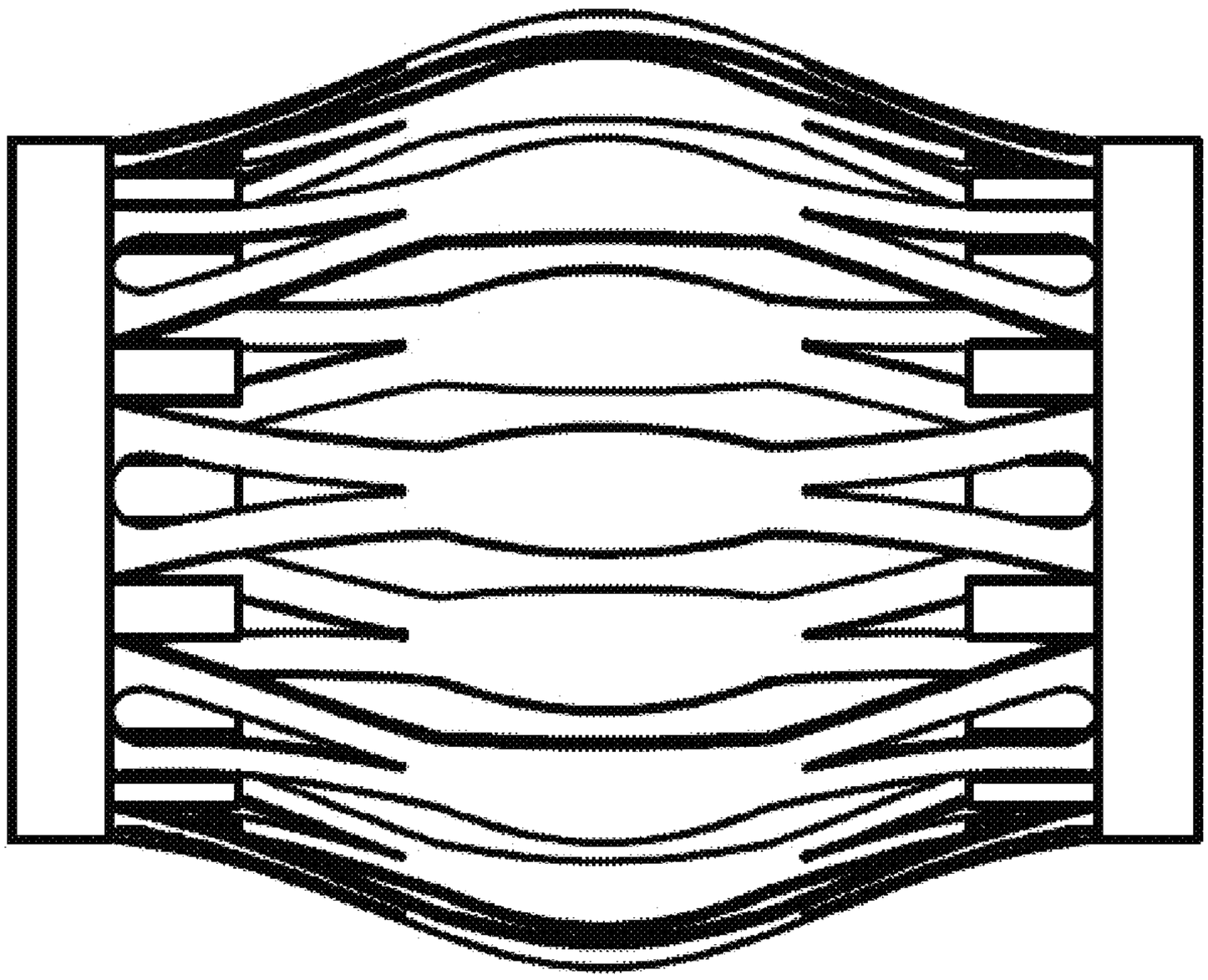

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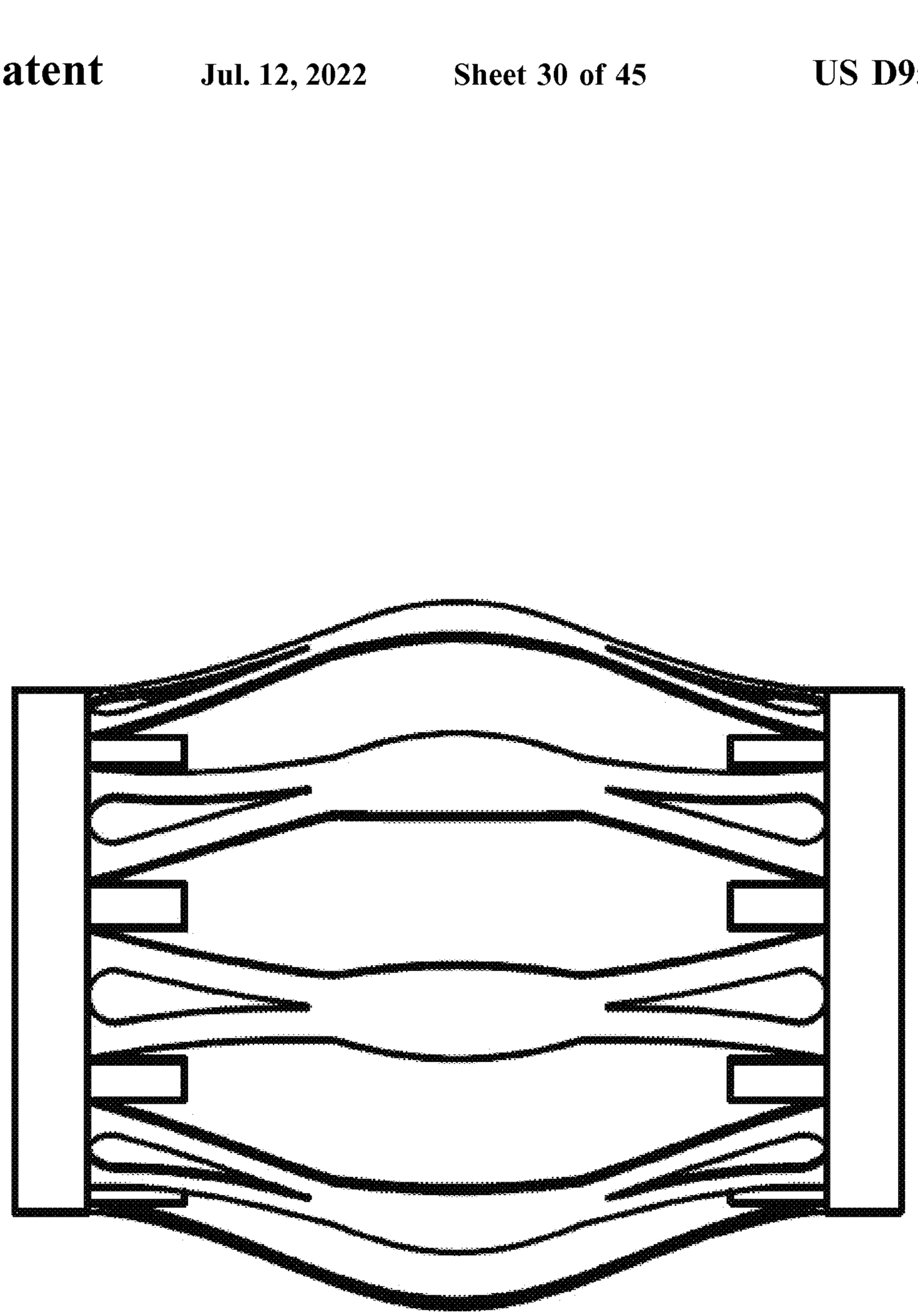

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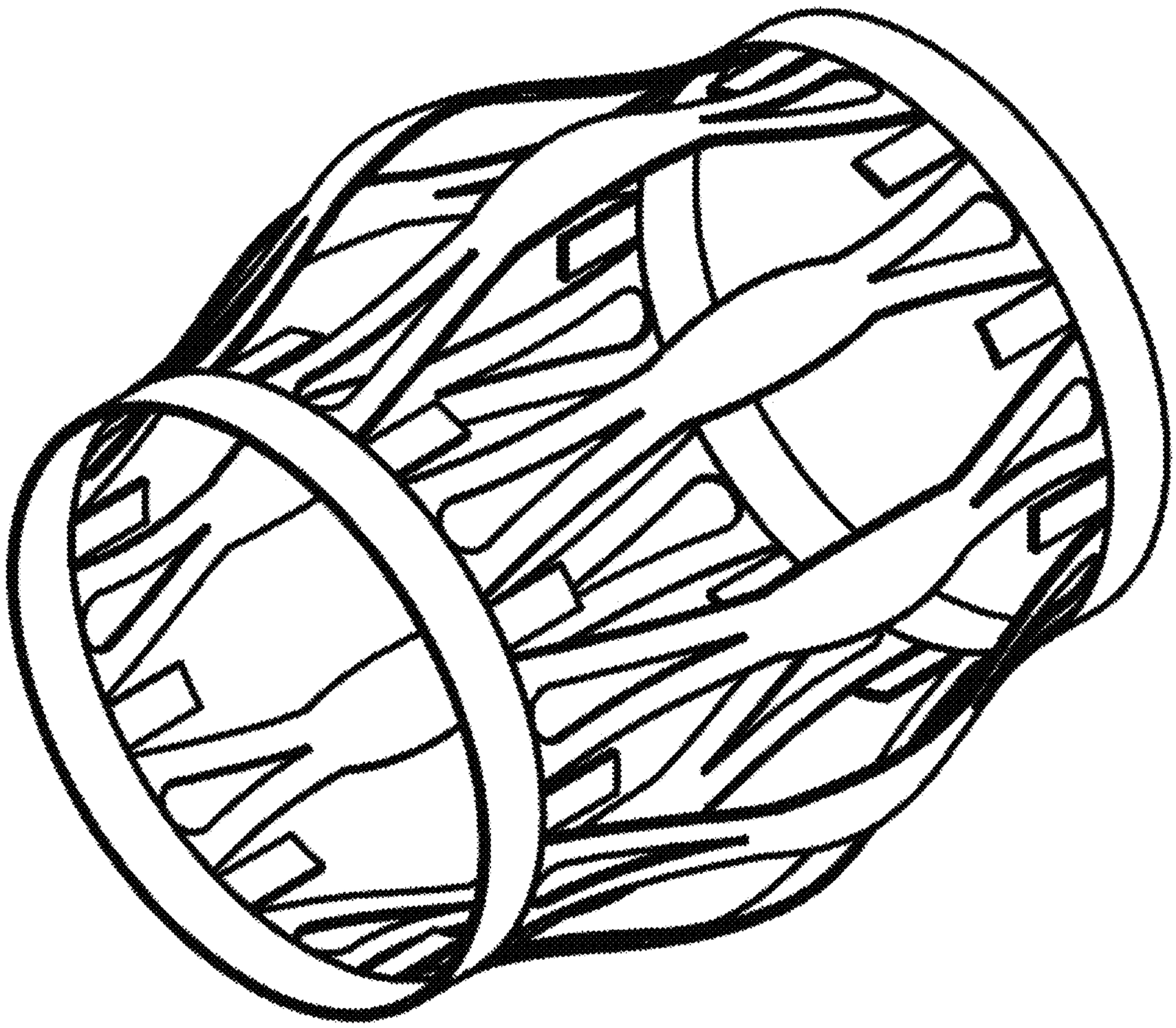

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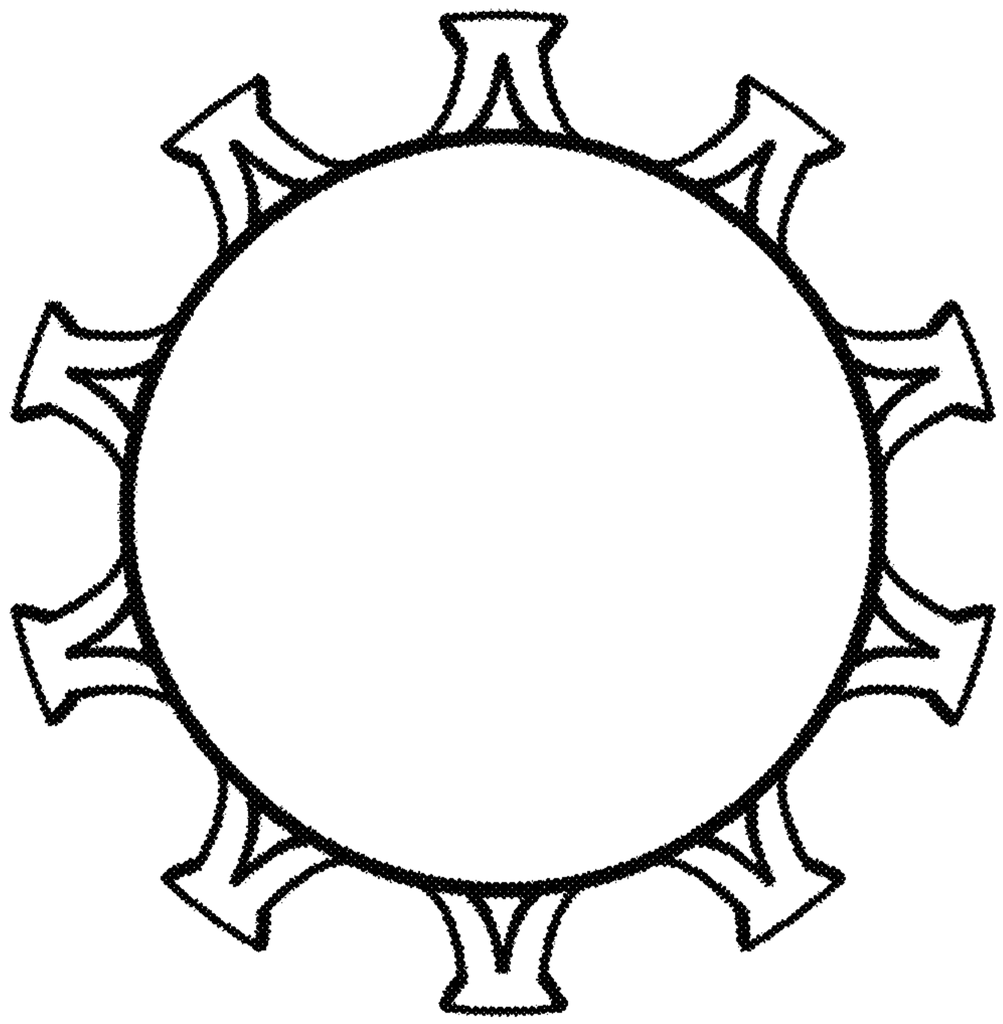

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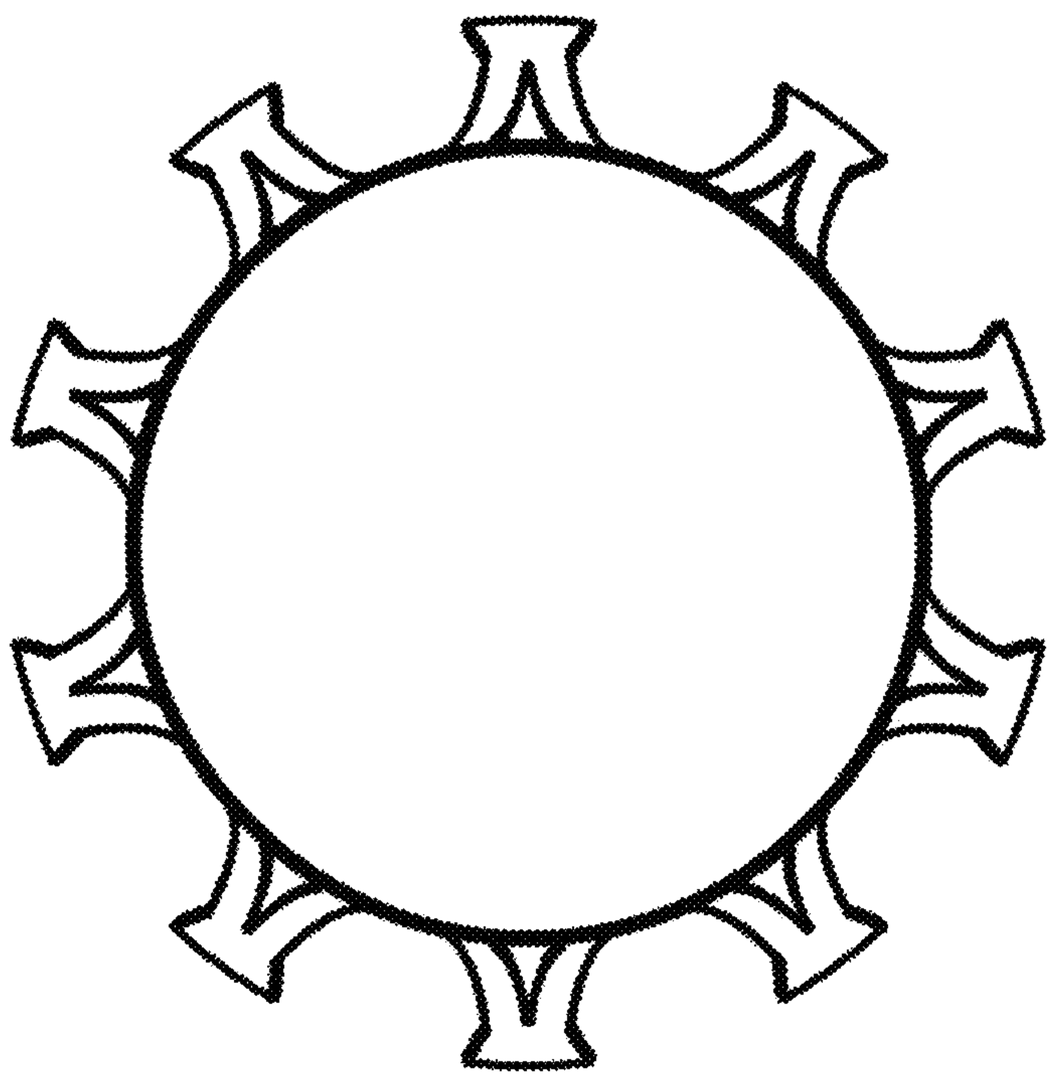

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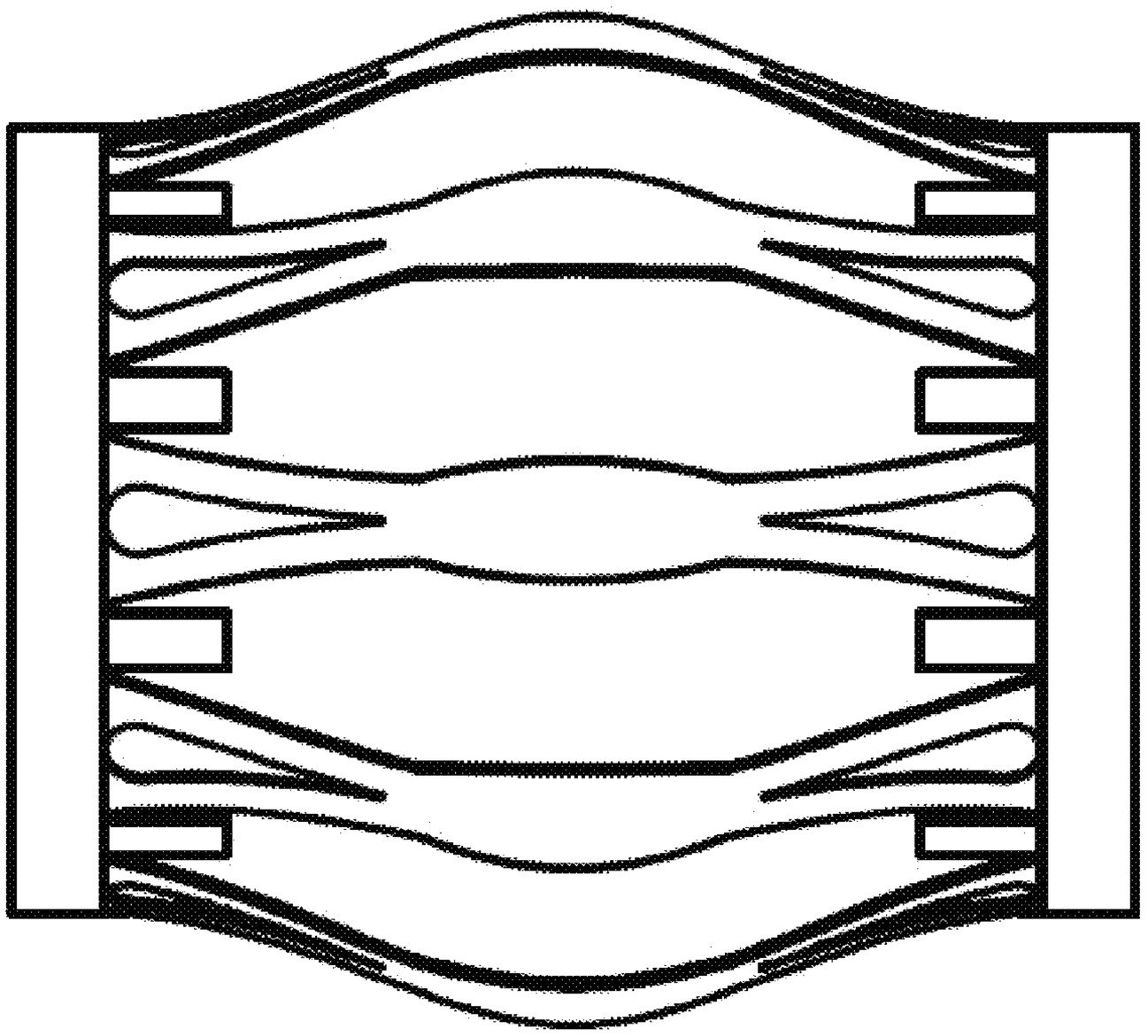

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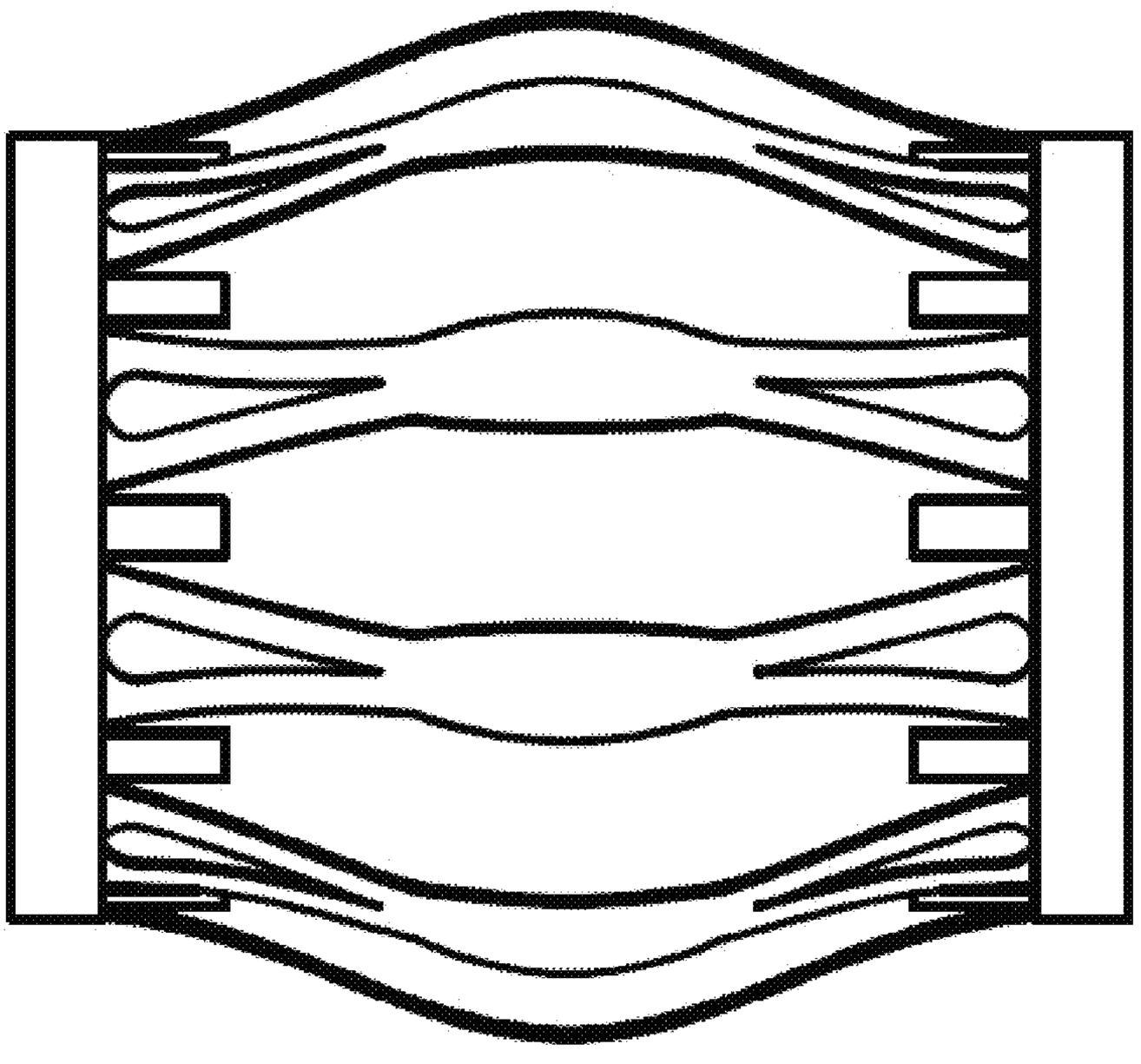

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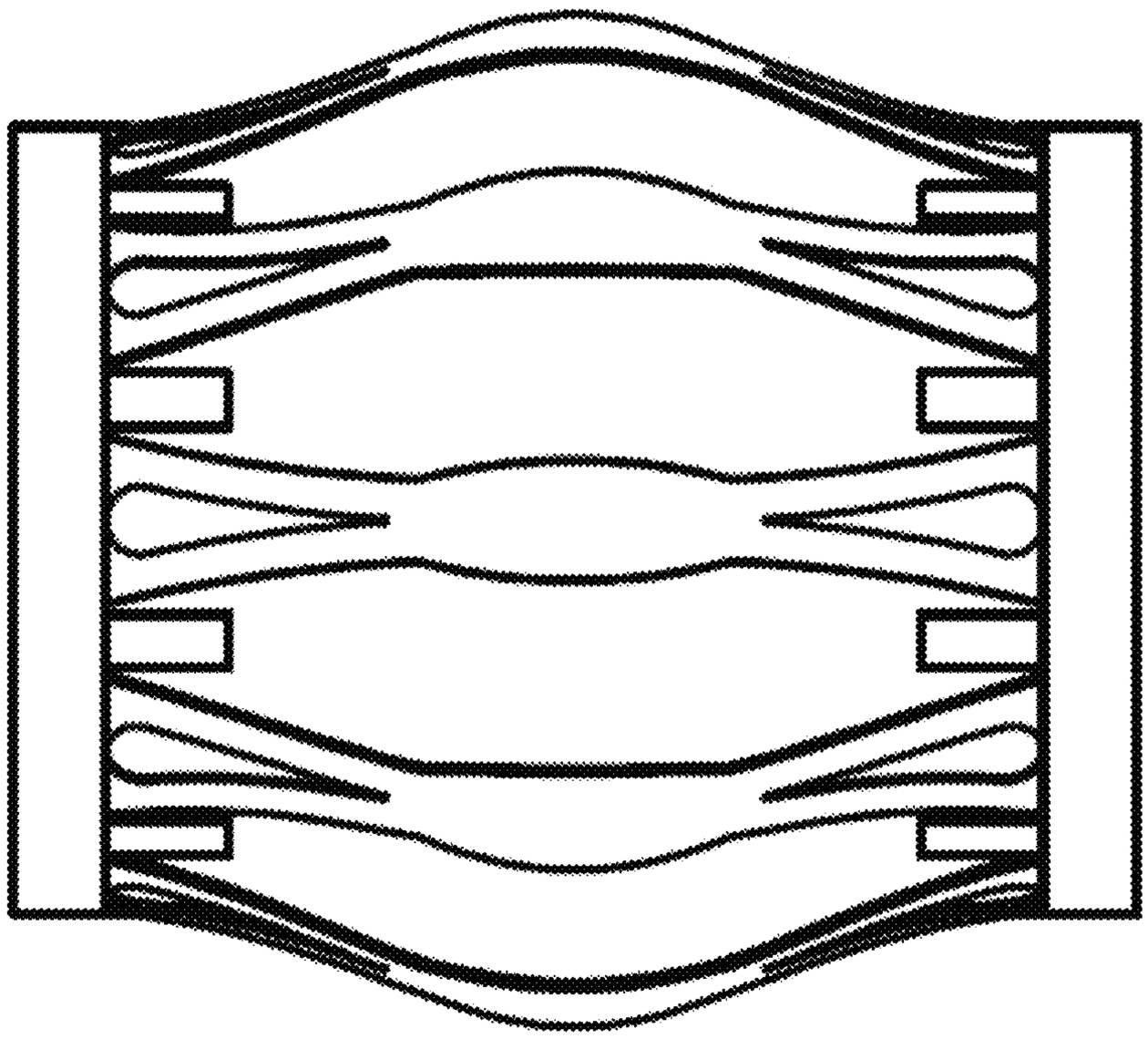

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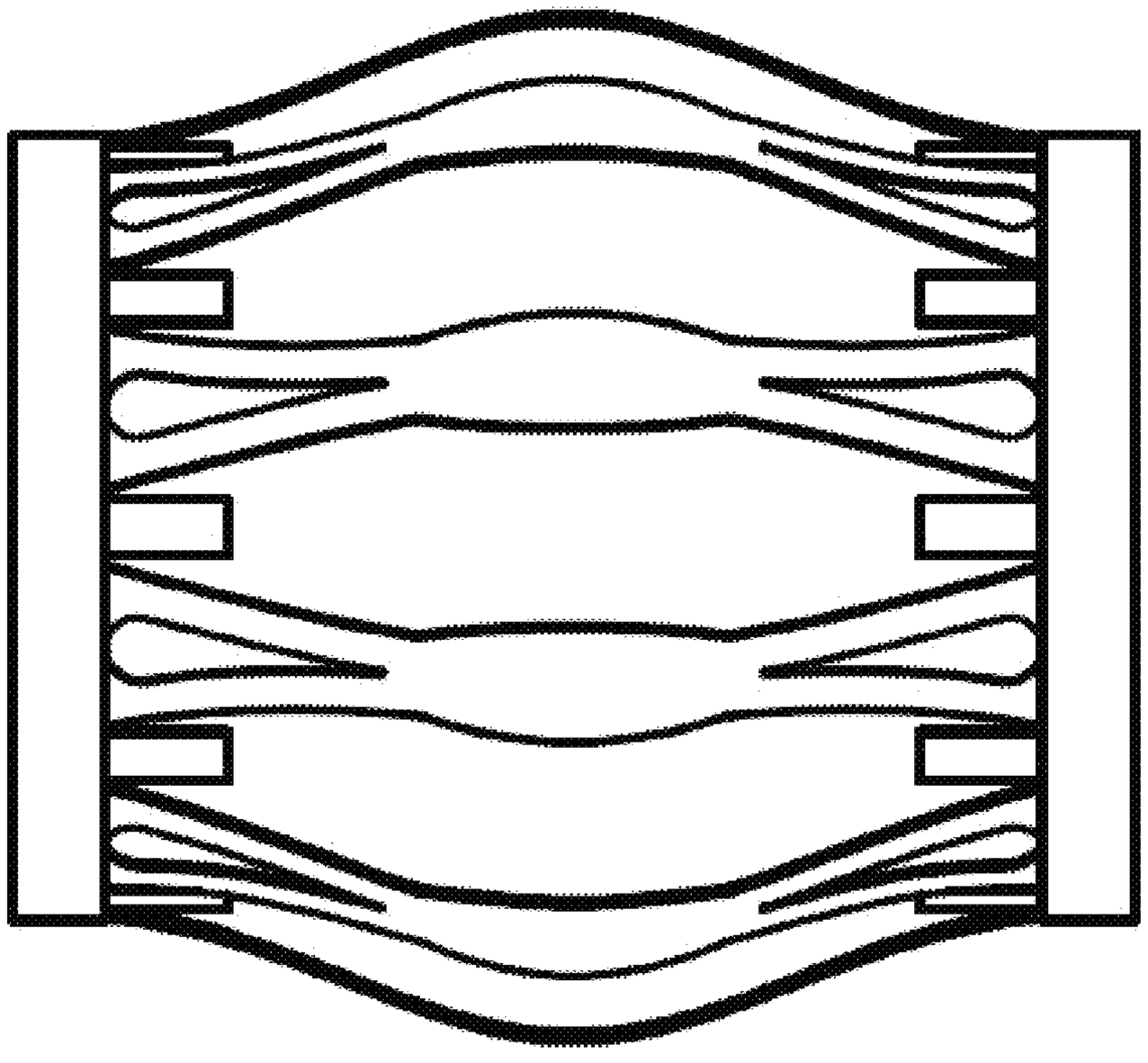

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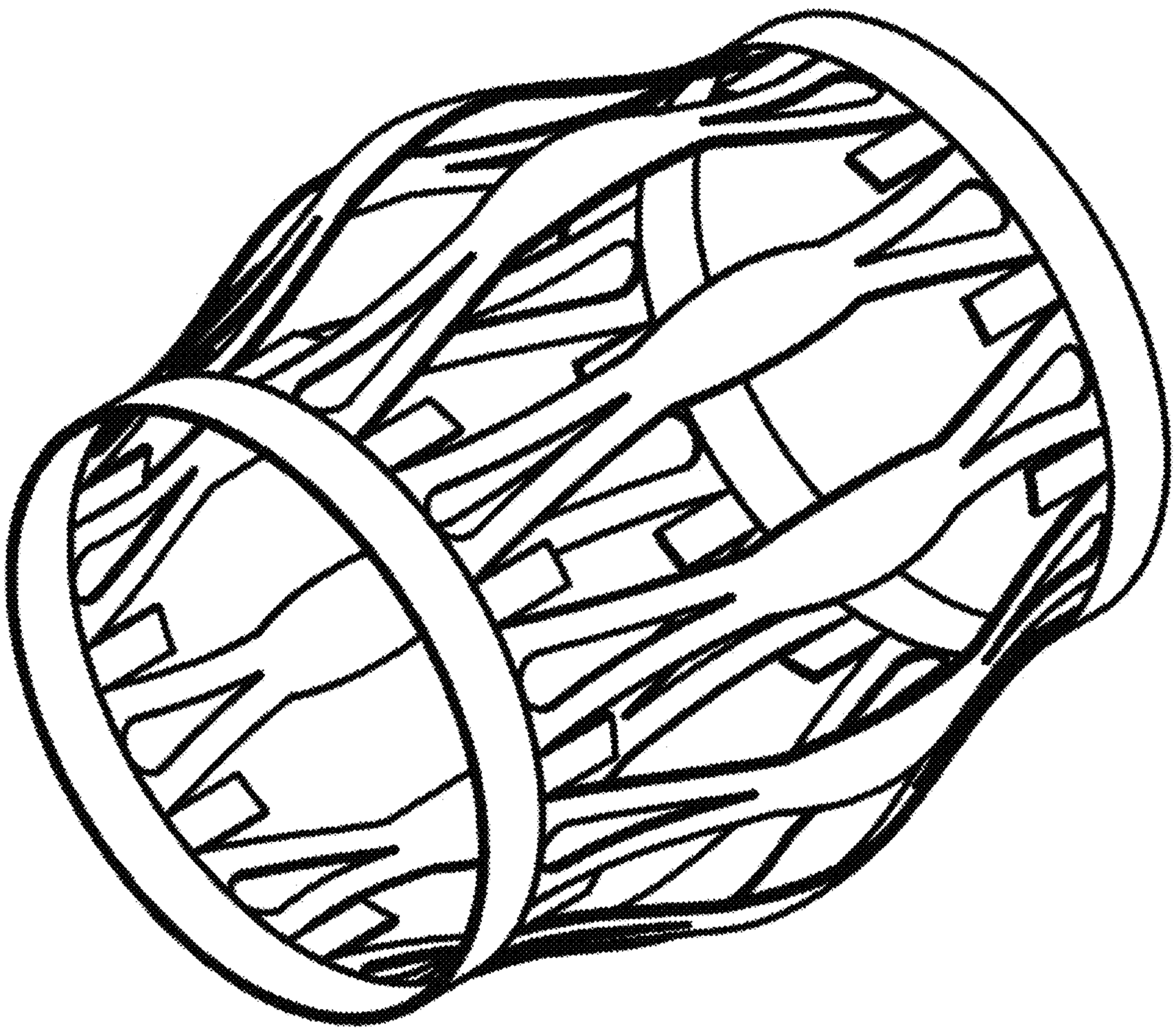

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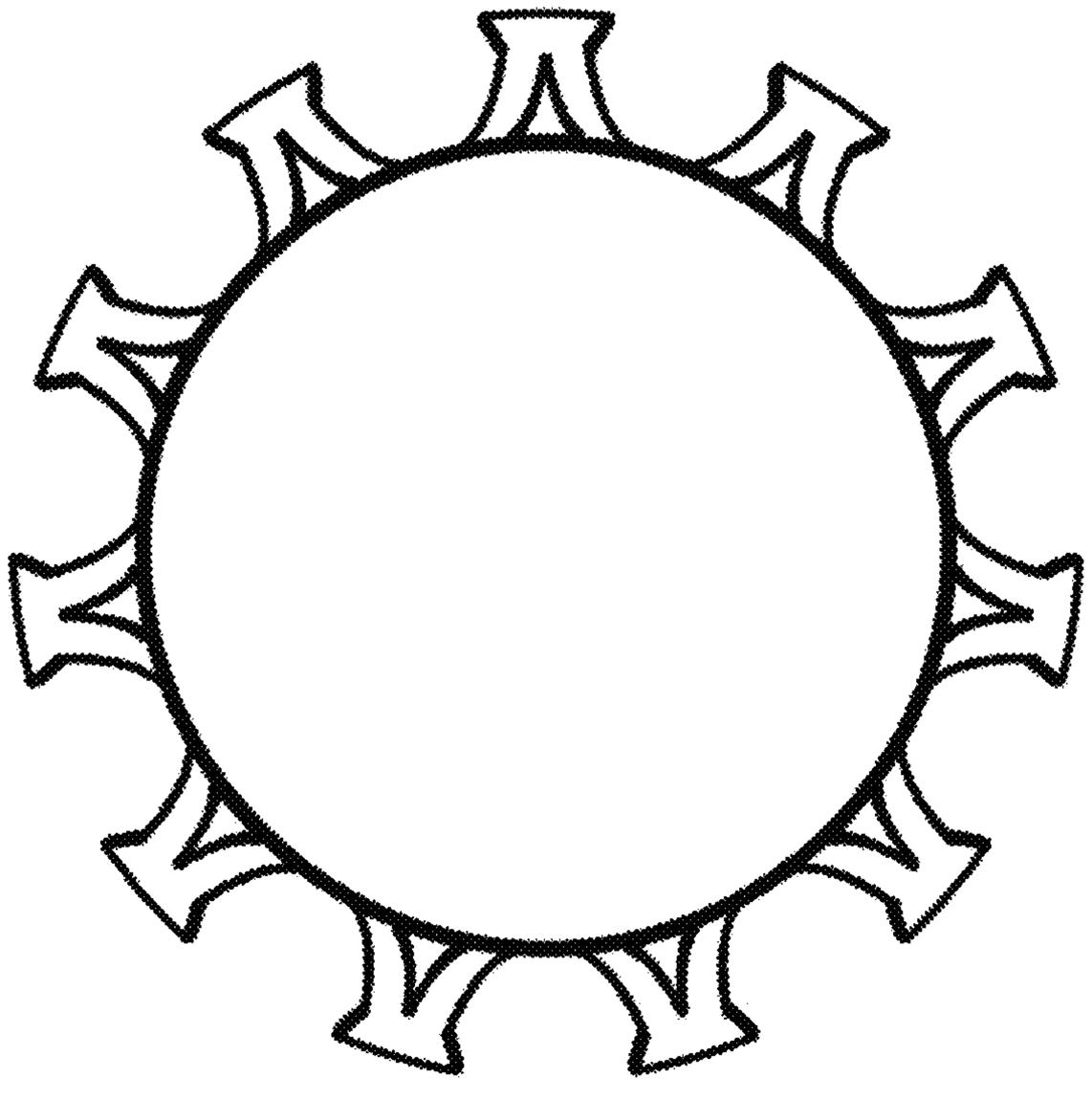

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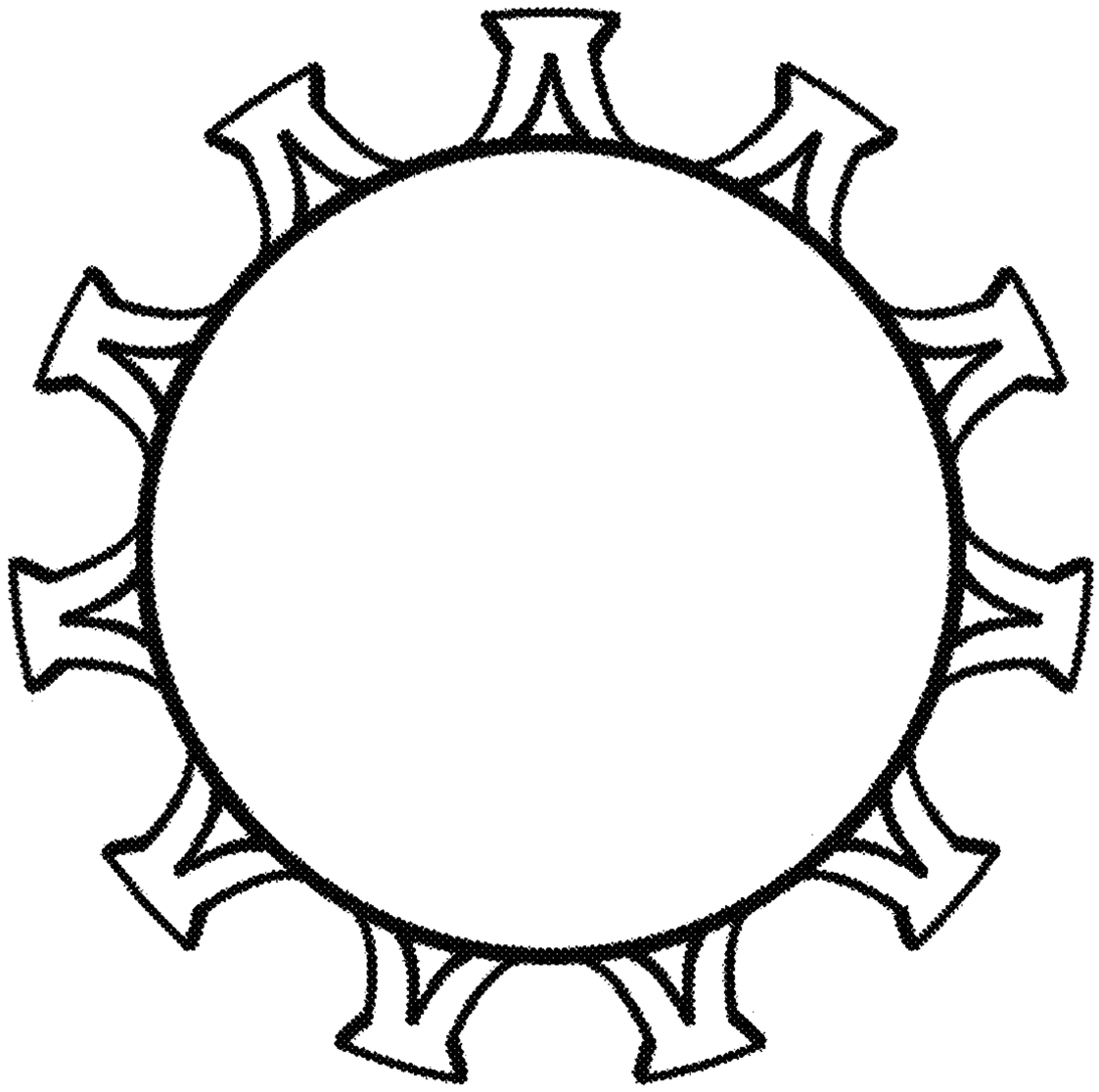

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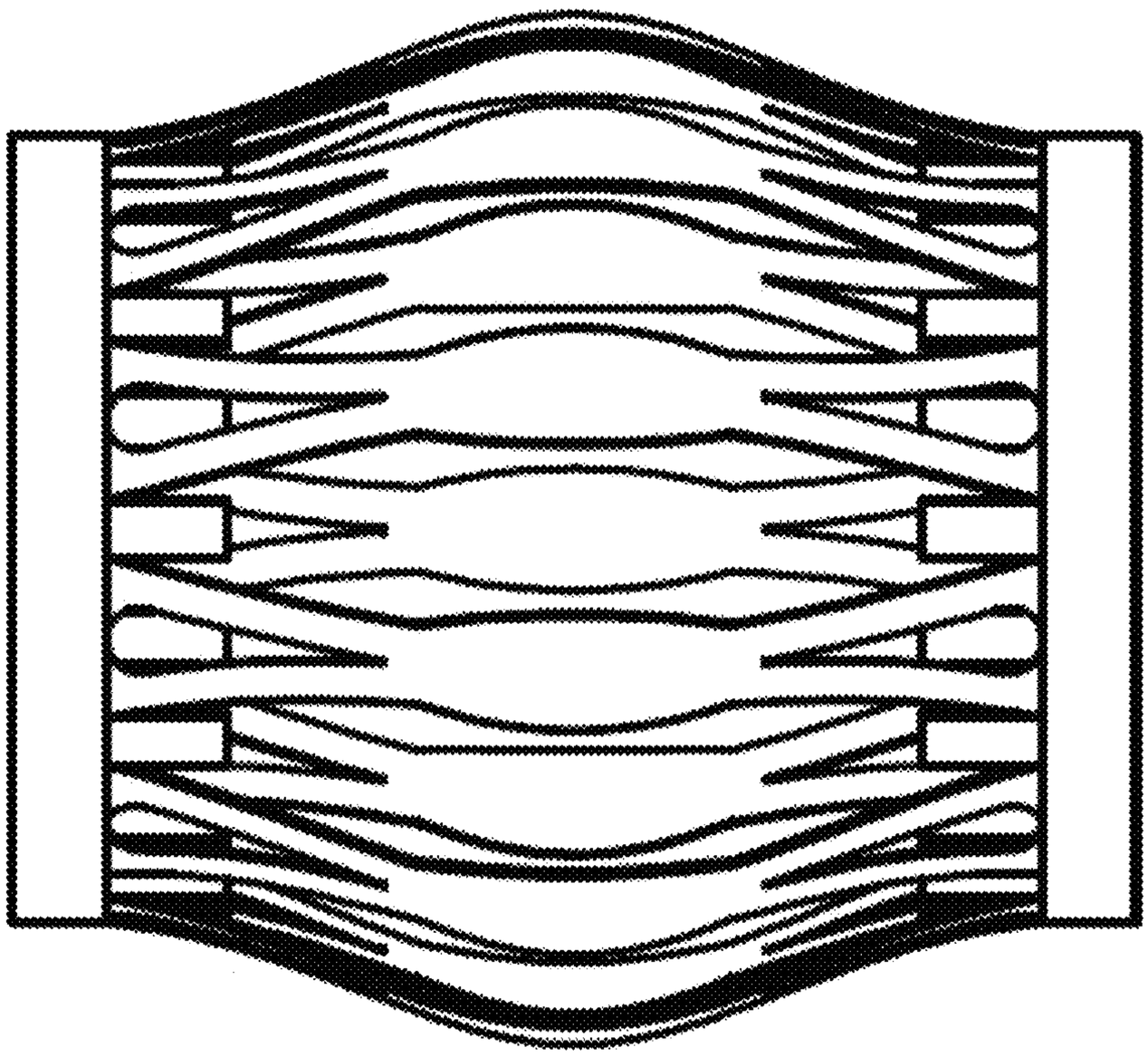

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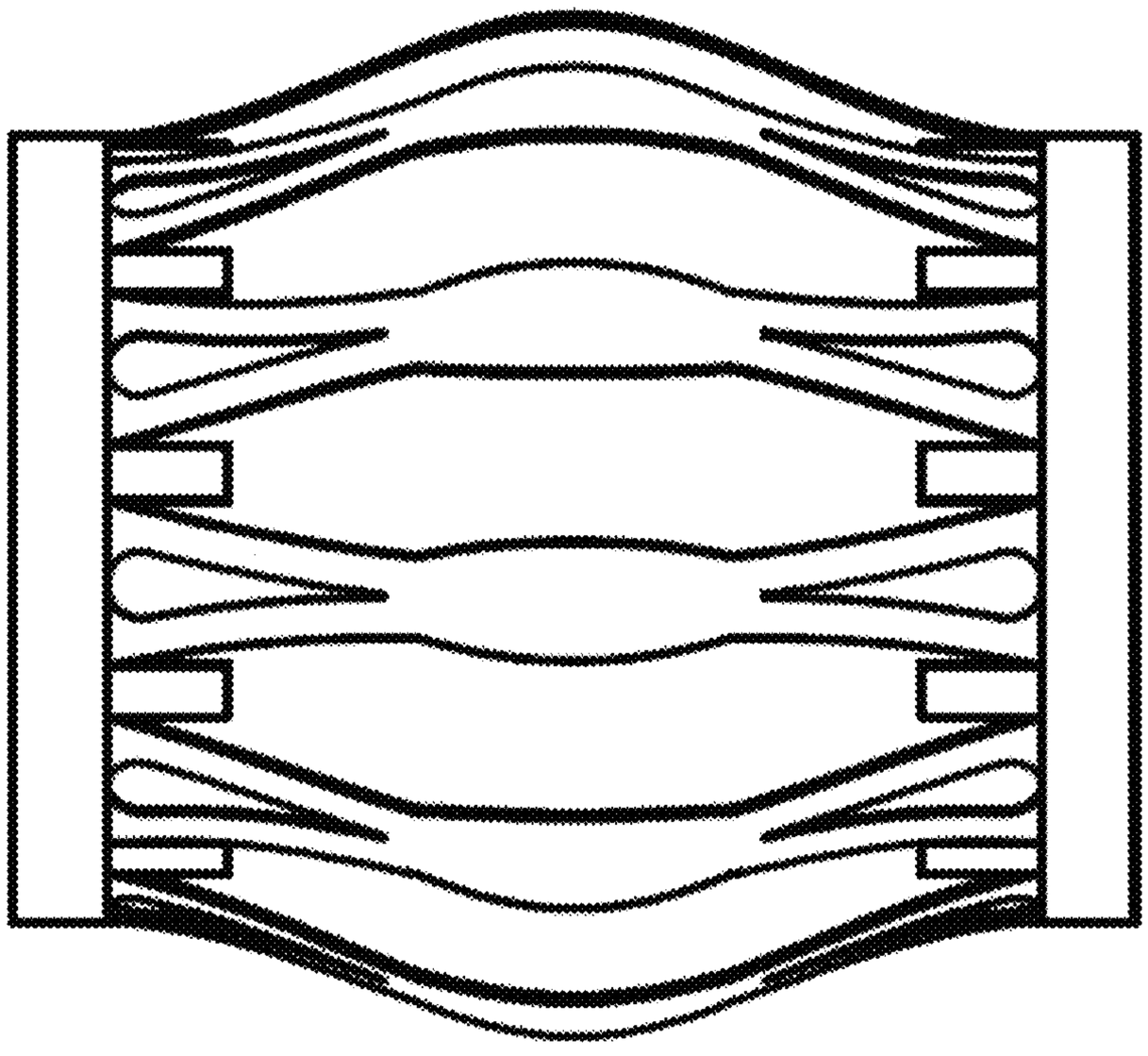

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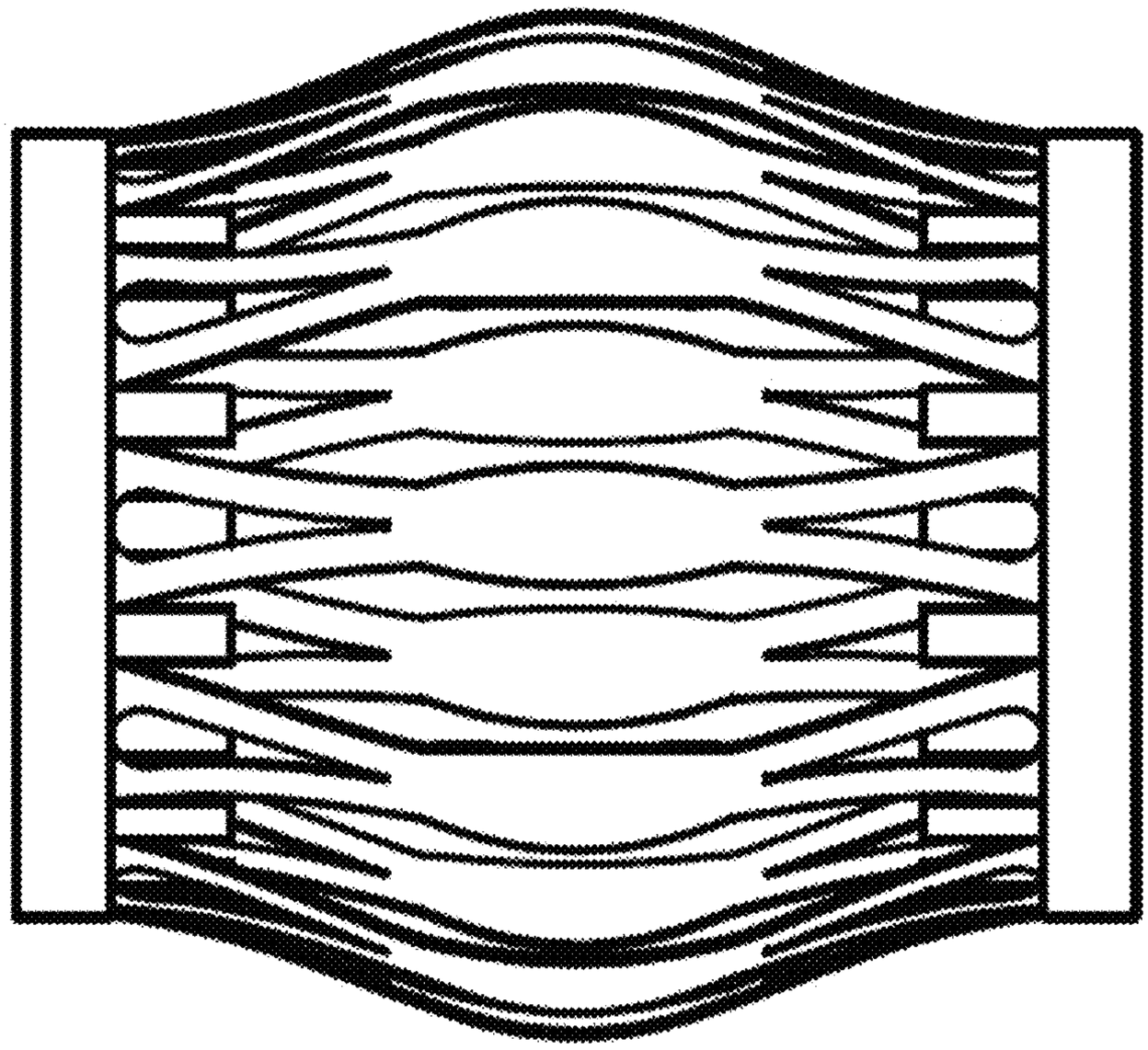

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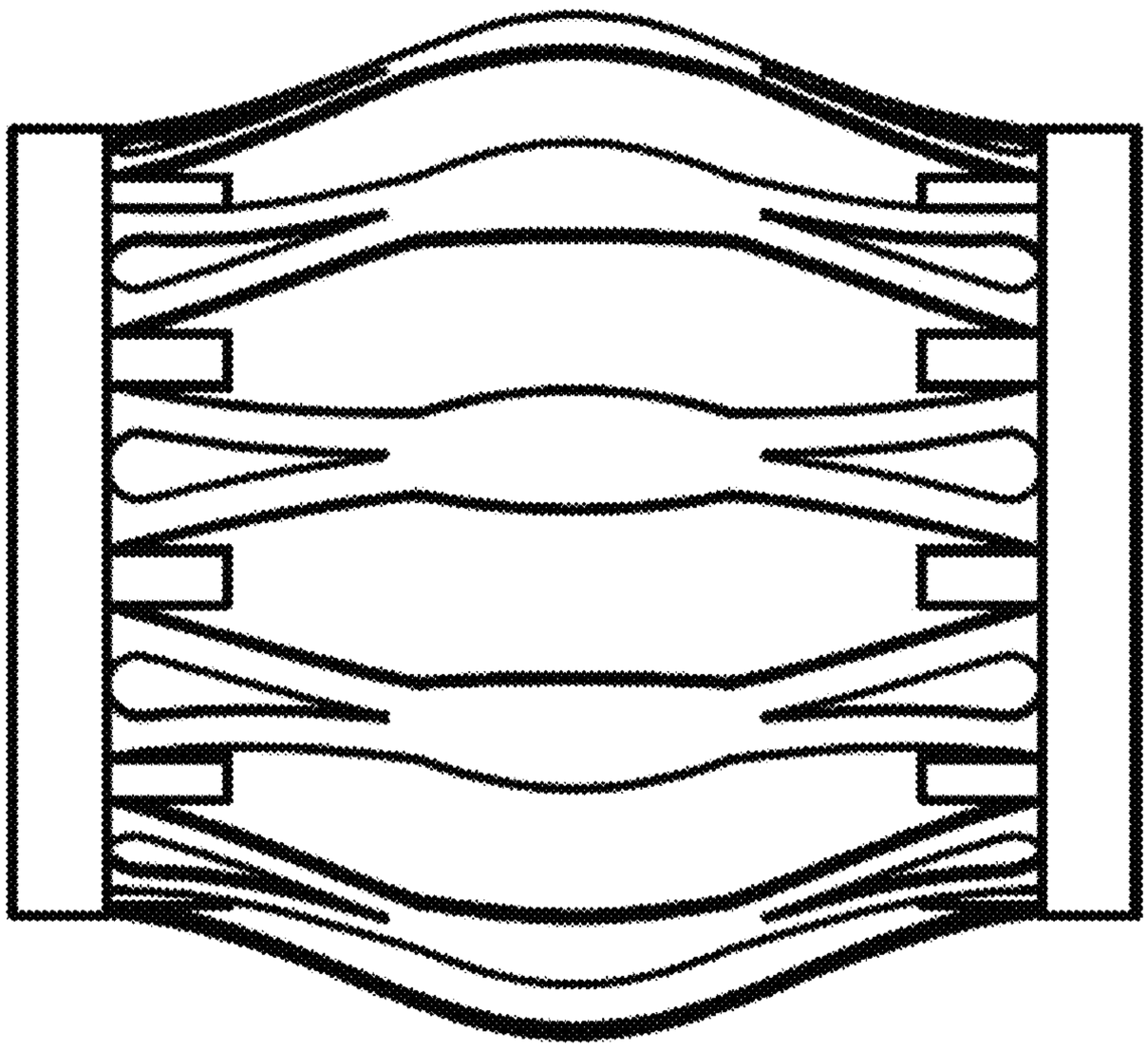

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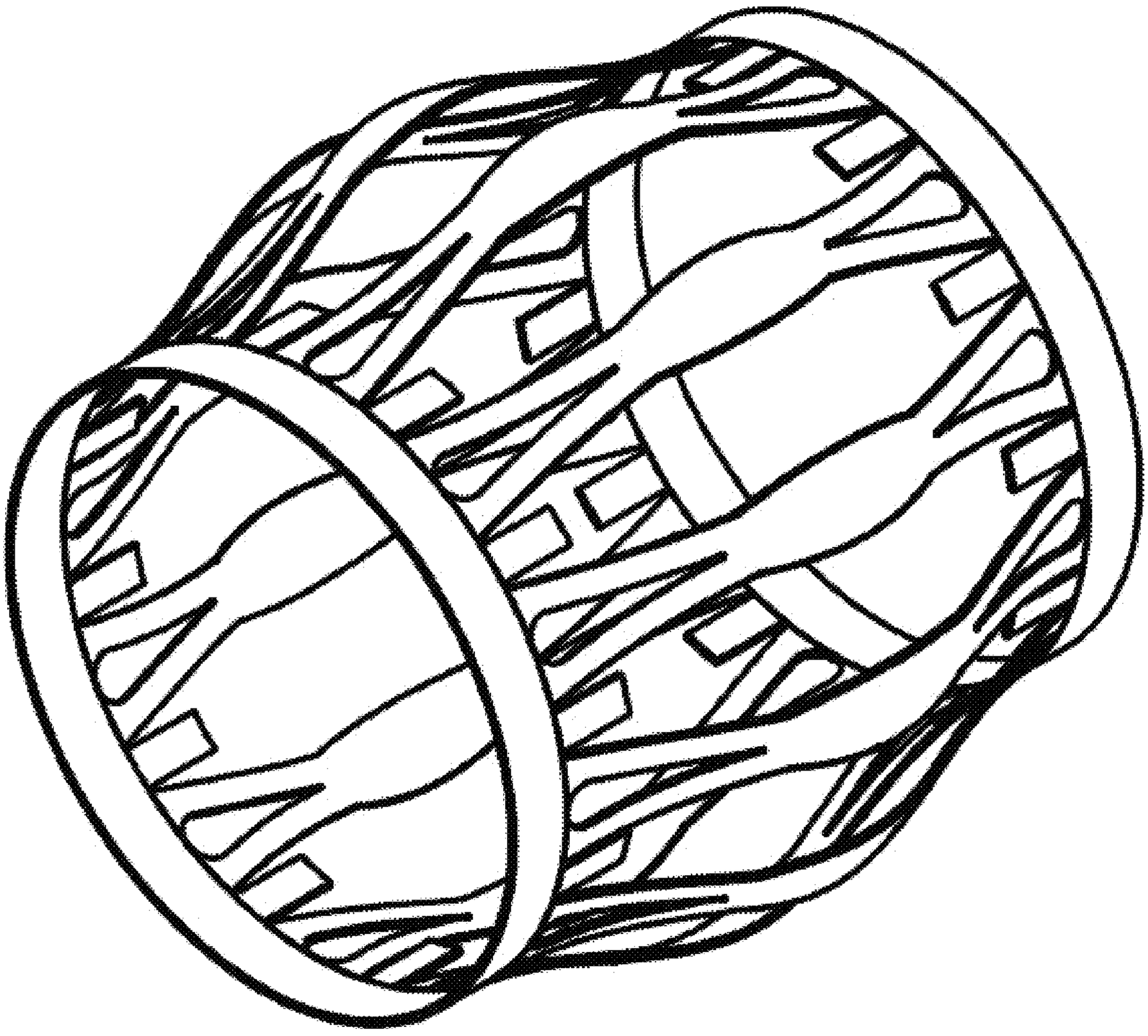

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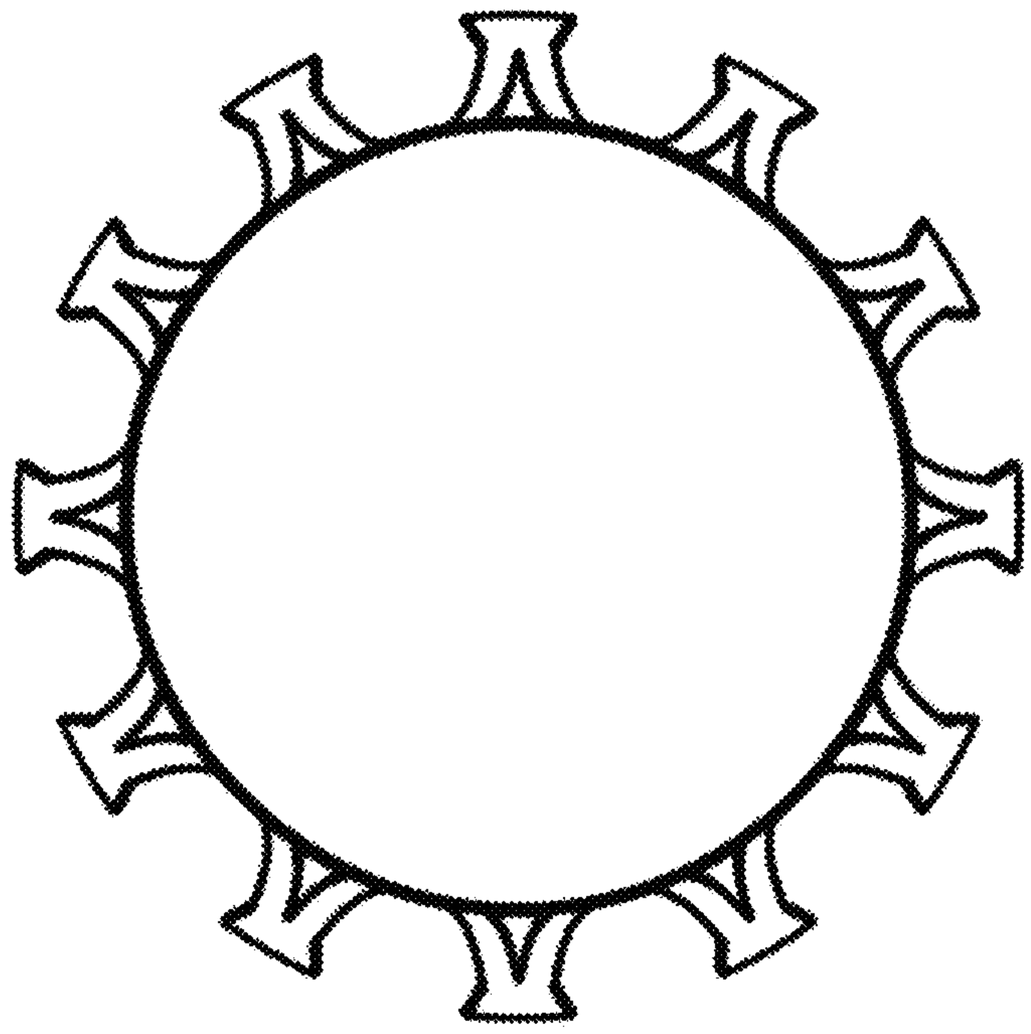

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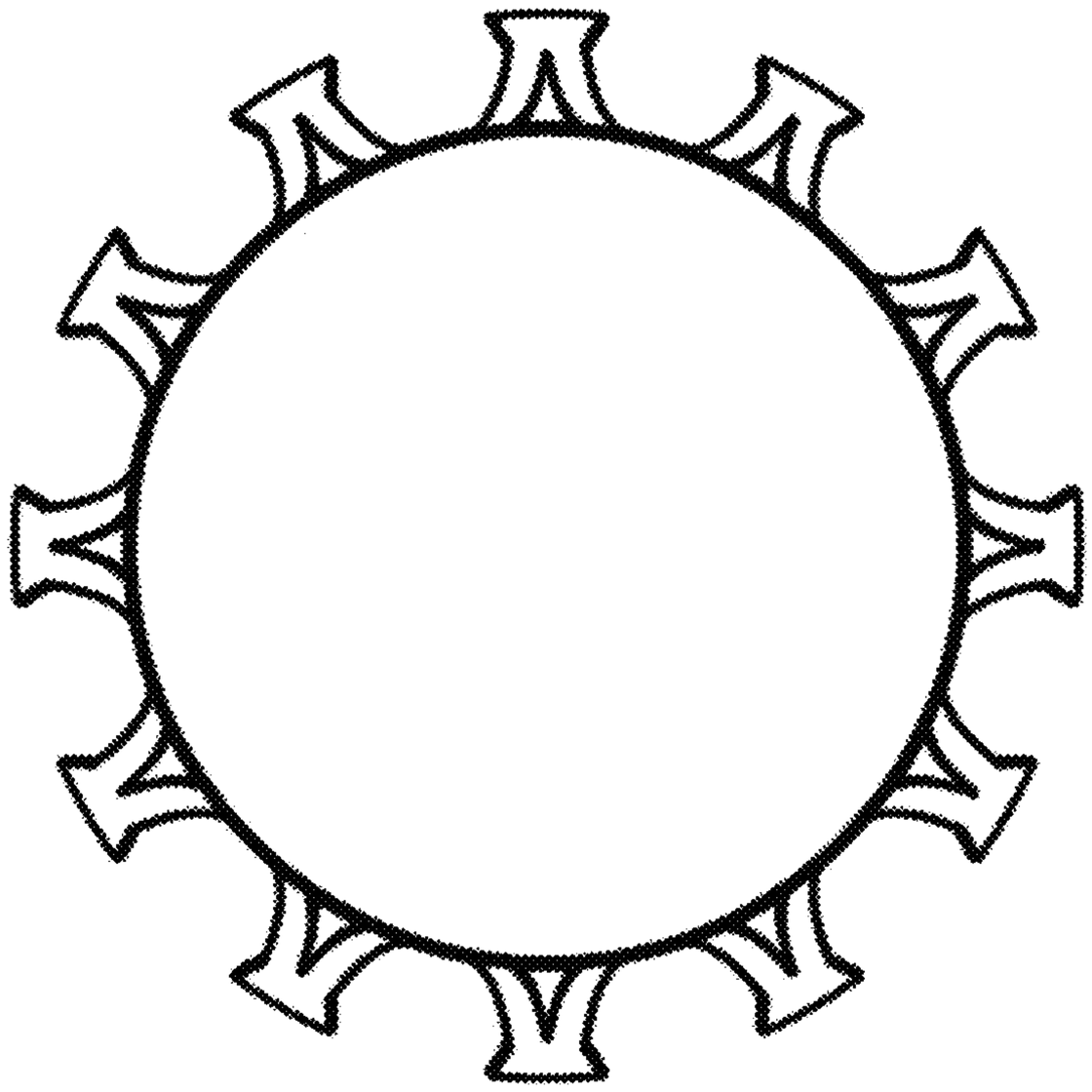

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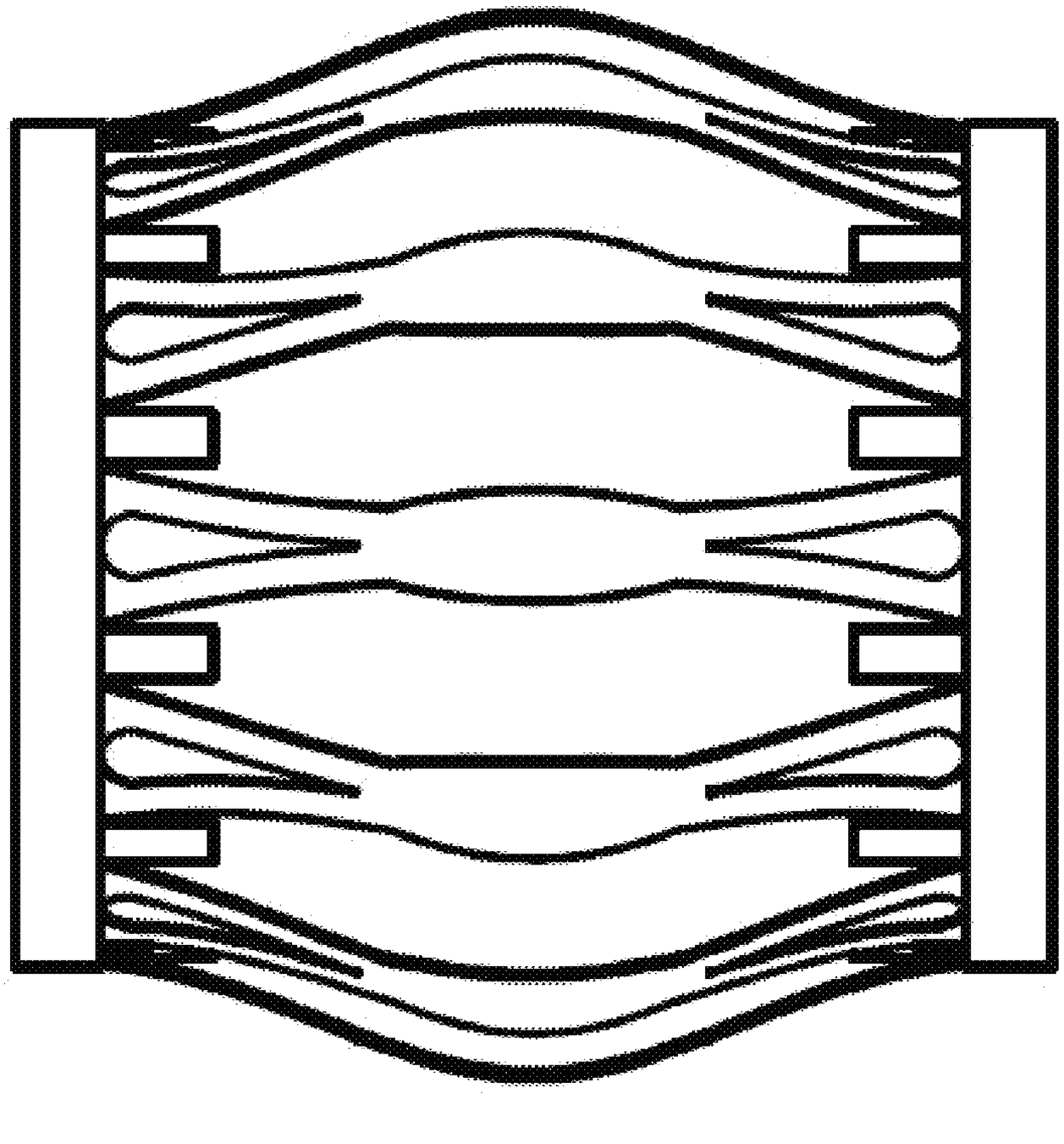

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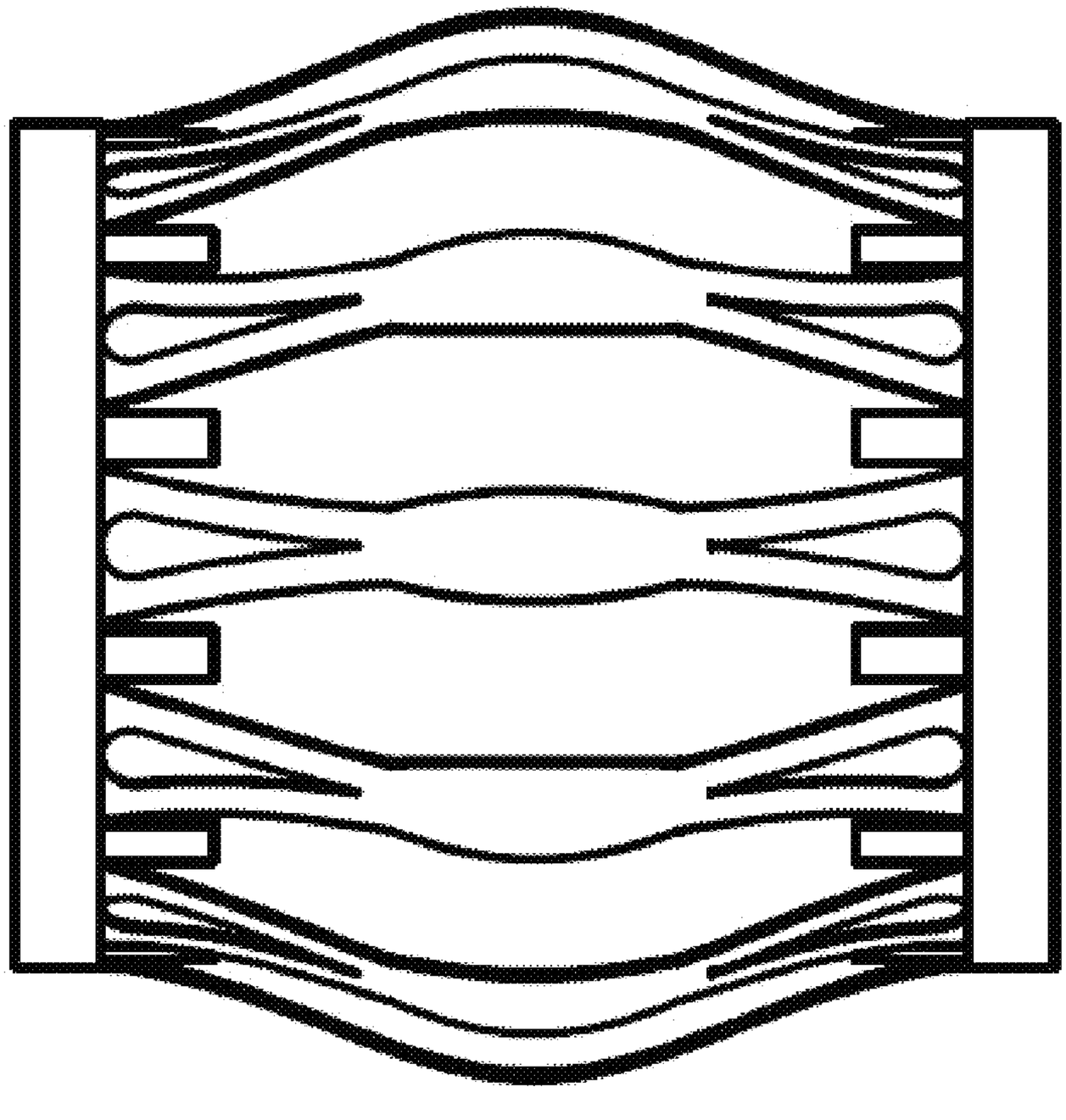

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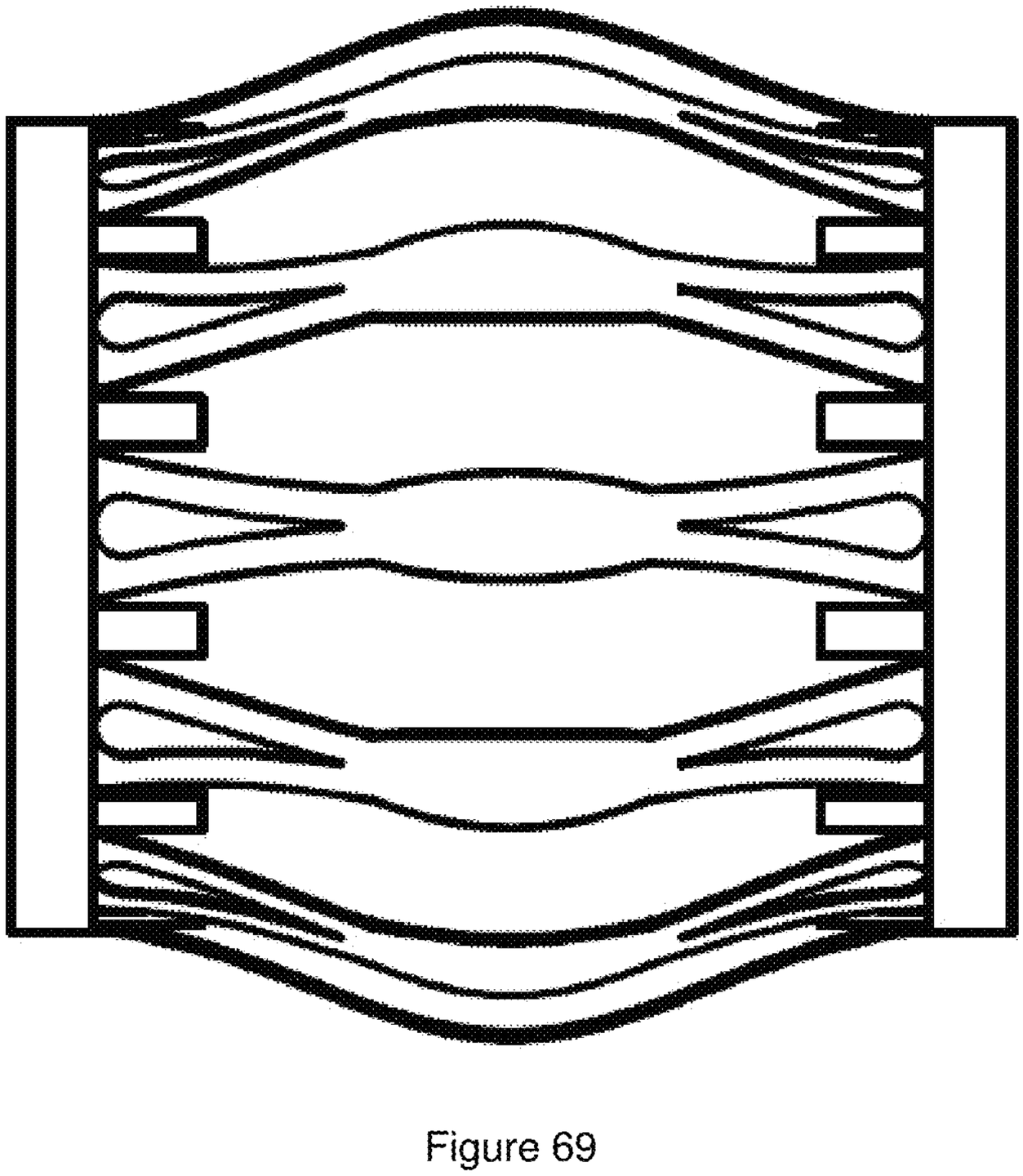

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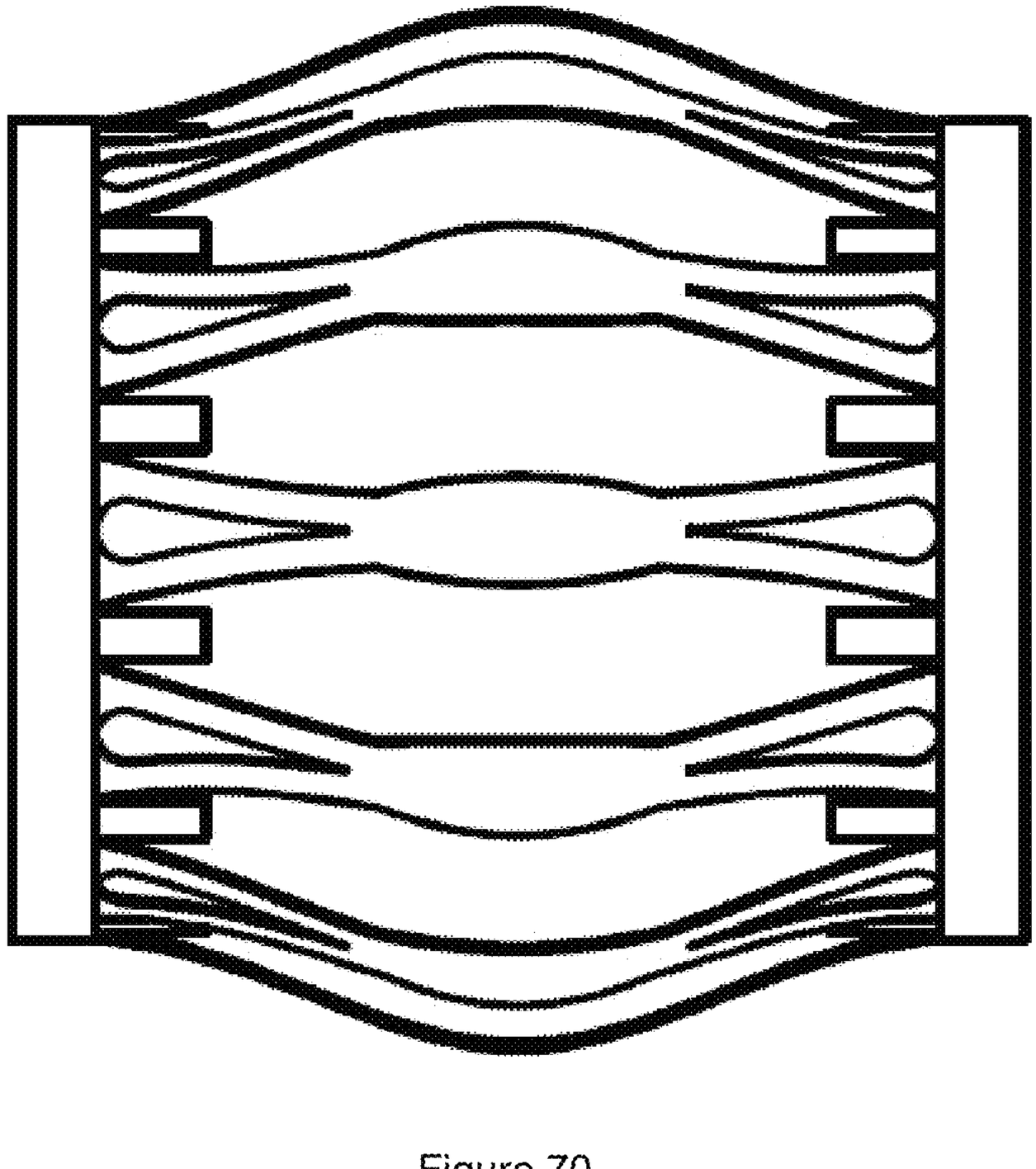

Figure 70