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(12) **United States Design Patent**  
**Kirk et al.**

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(45) **Date of Patent:** **\*\* Sep. 7, 2021**

- (54) **CENTRALIZER FOR CENTRALIZING TUBING IN A WELLBORE**
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- (73) Assignee: **VULCAN COMPLETION PRODUCTS UK LIMITED**, Aberdeen (GB)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/637,795**
- (22) Filed: **Feb. 22, 2018**
- (51) **LOC (13) Cl.** ..... **15-03**
- (52) **U.S. Cl.**  
USPC ..... **D15/21**
- (58) **Field of Classification Search**  
USPC ..... D15/10, 21  
CPC .. E21B 17/10; E21B 17/1042; E21B 17/1078;  
E21B 17/1064  
See application file for complete search history.

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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 first embodiment of a centralizer for centralizing tubing in a wellbore.

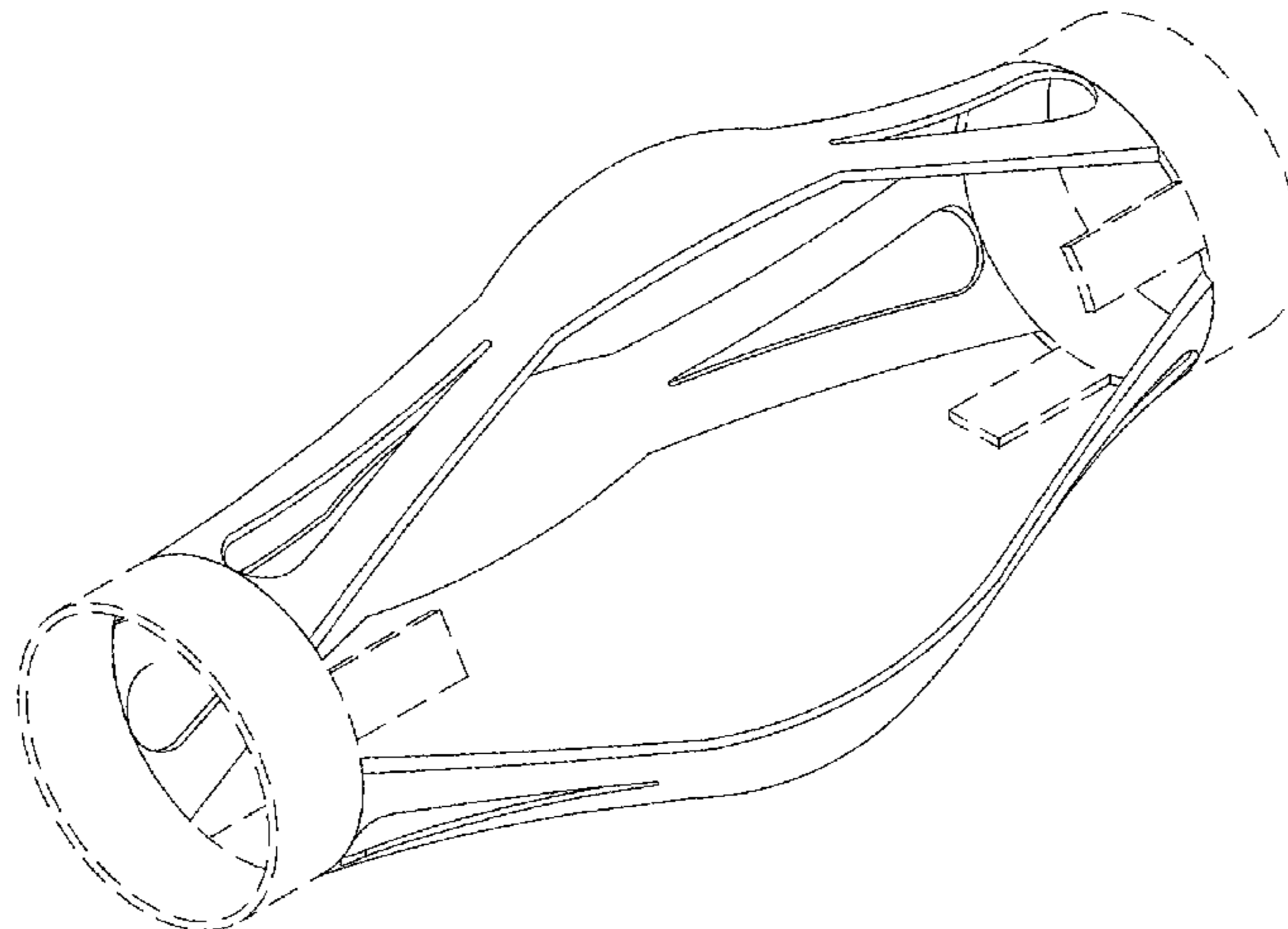


FIG. 2 is a first end view of the centralizer shown in FIG. 1.  
FIG. 3 is a second end view of the centralizer shown in FIG. 1.

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

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

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

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

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

FIG. 9 is a 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 a 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 fourth 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, 46 Drawing Sheets**



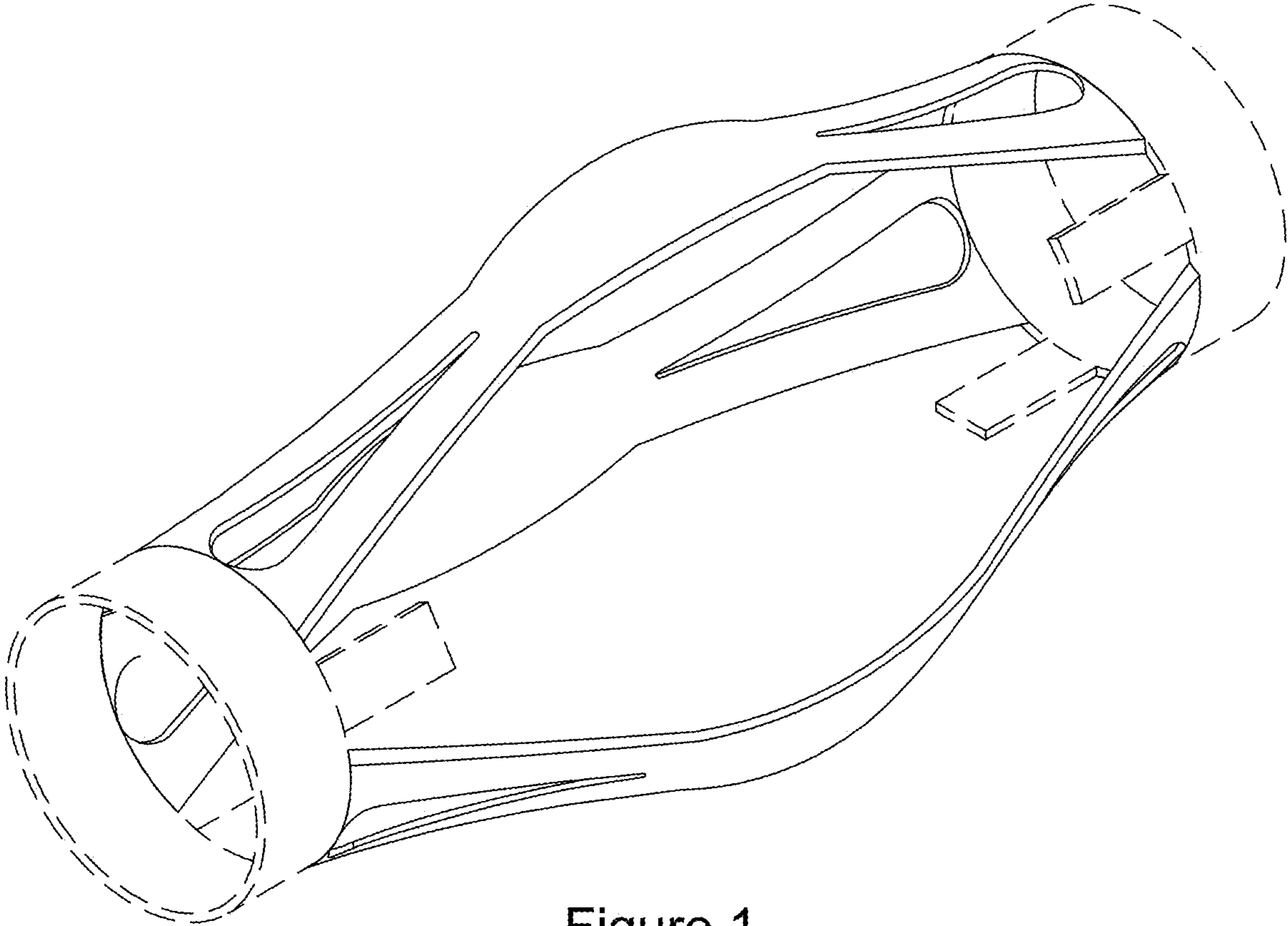


Figure 1

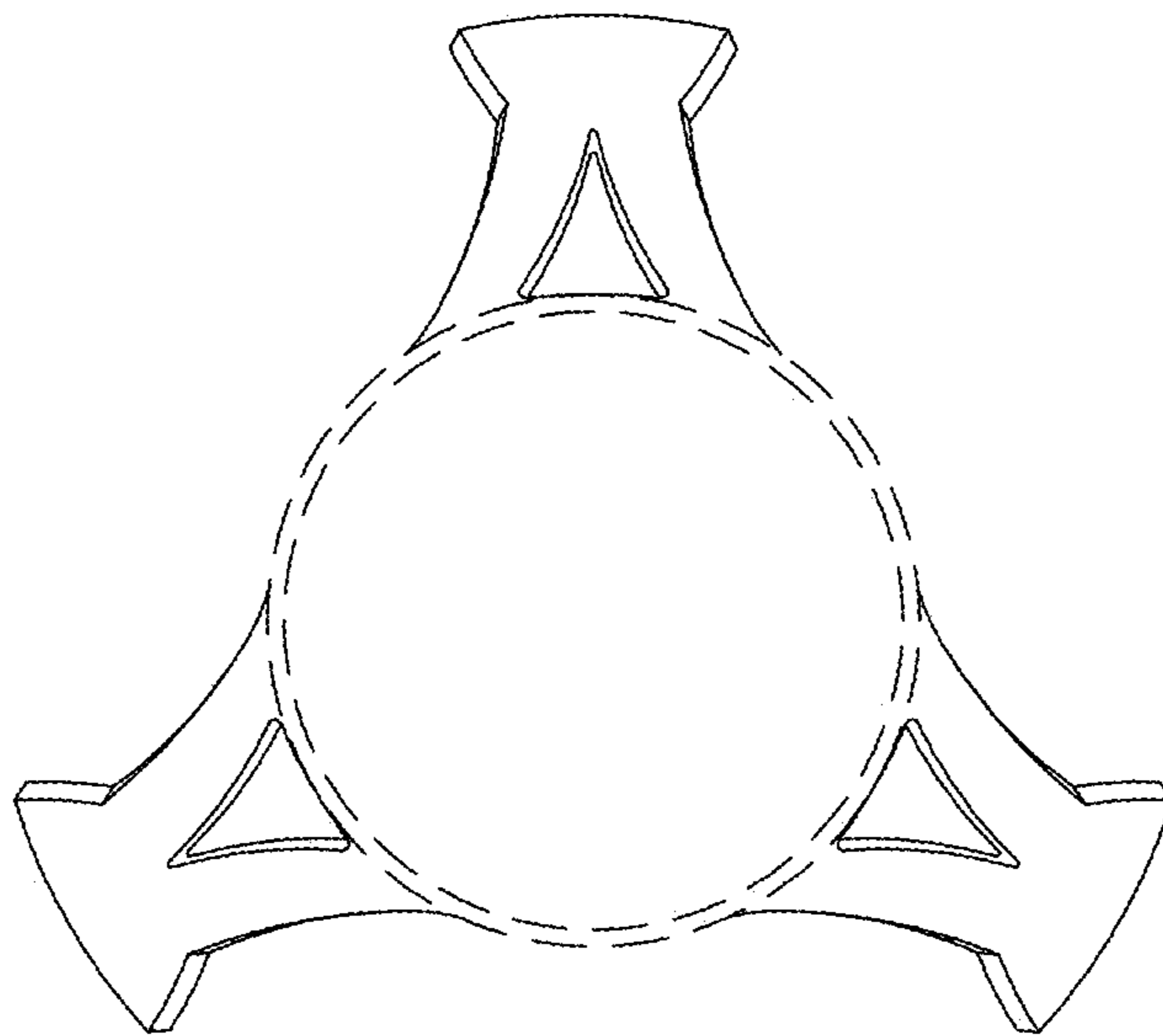


Figure 2

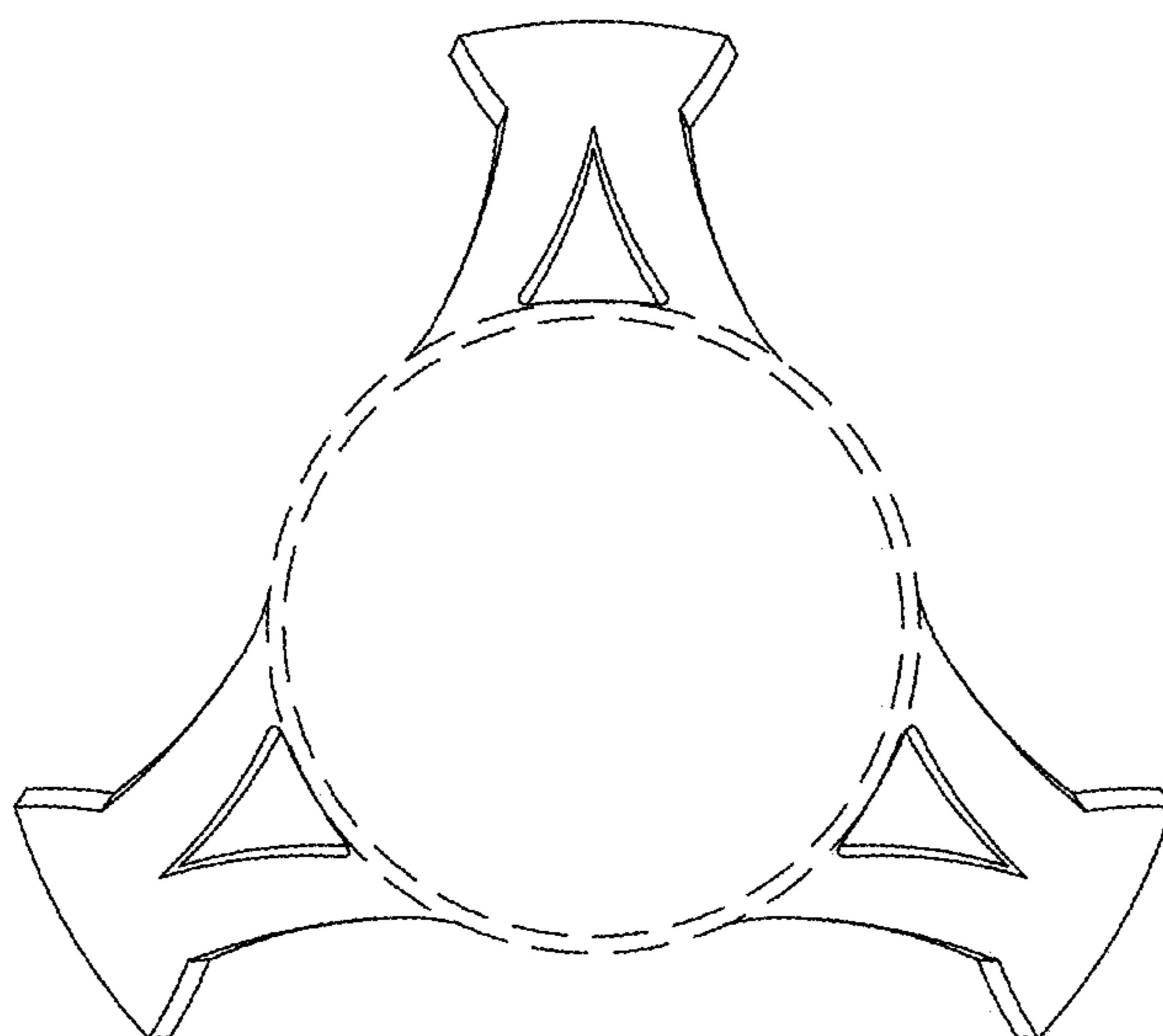


Figure 3

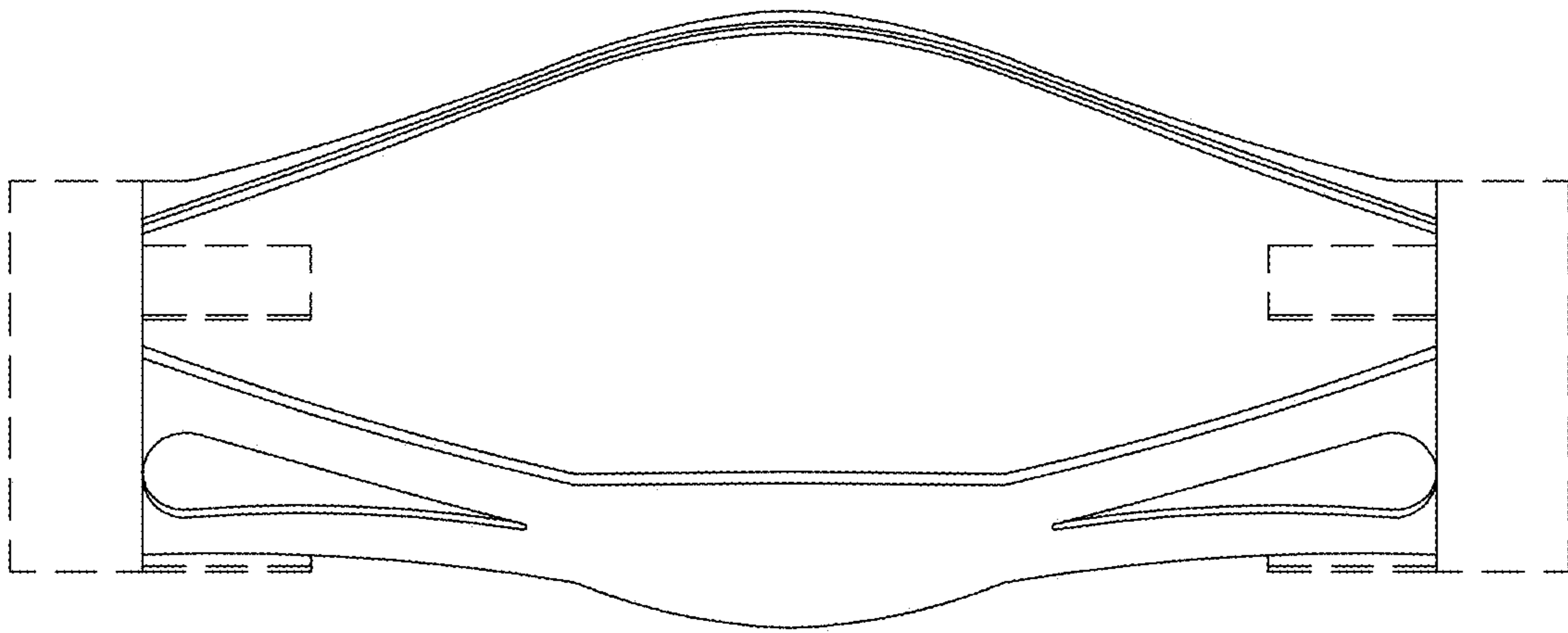


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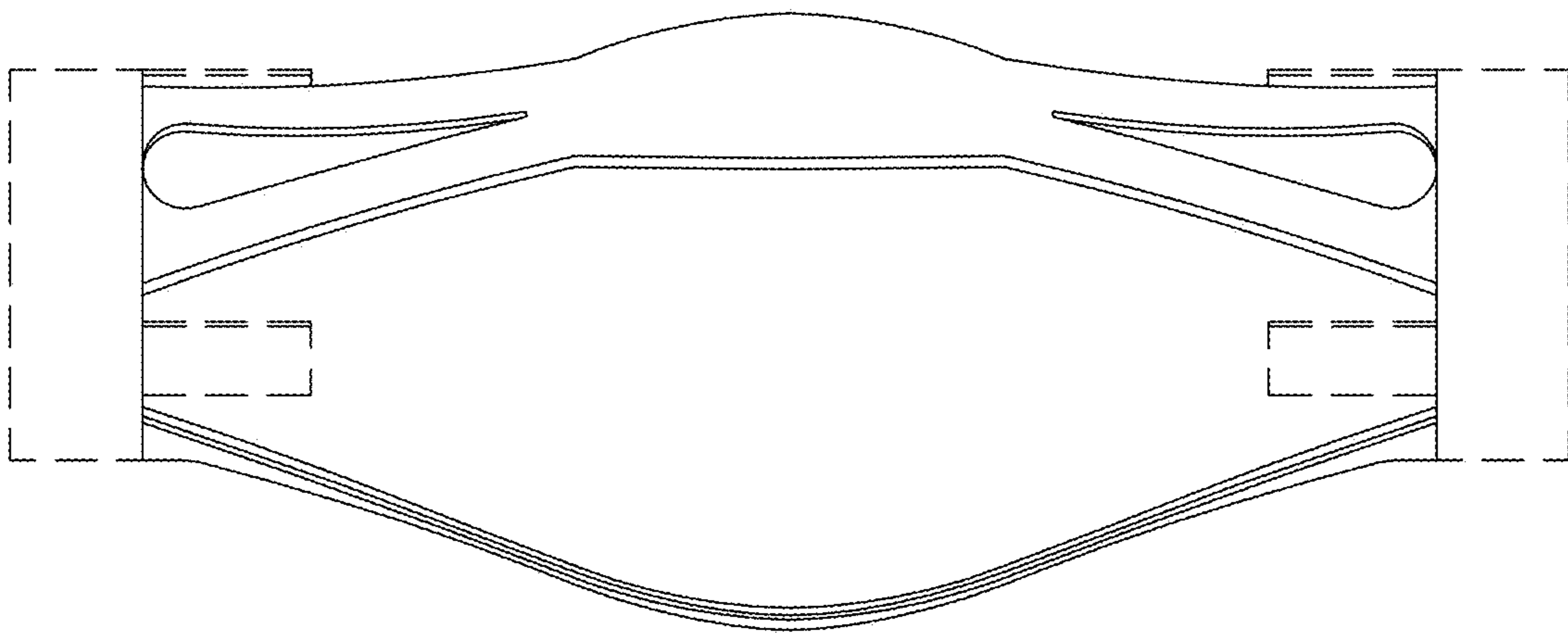


Figure 5

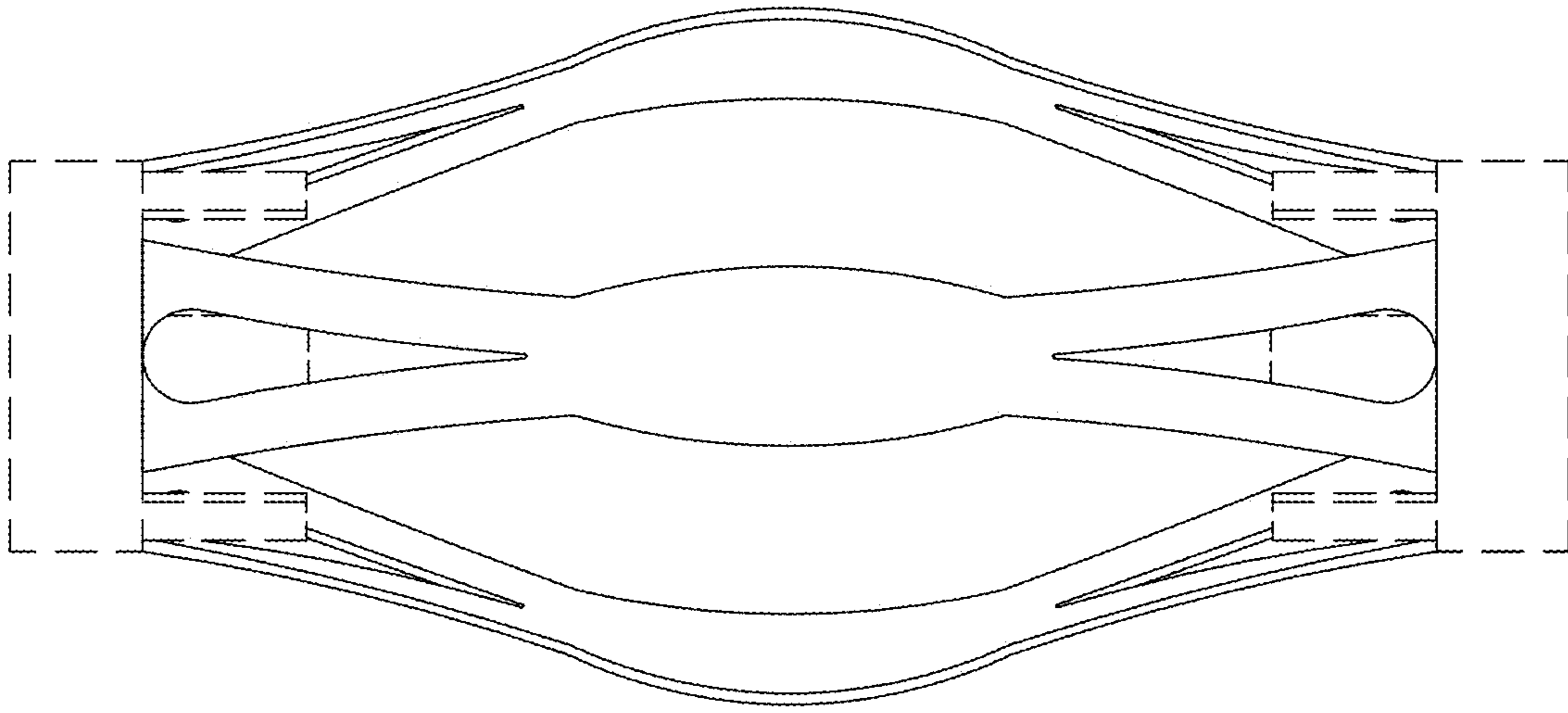


Figure 6

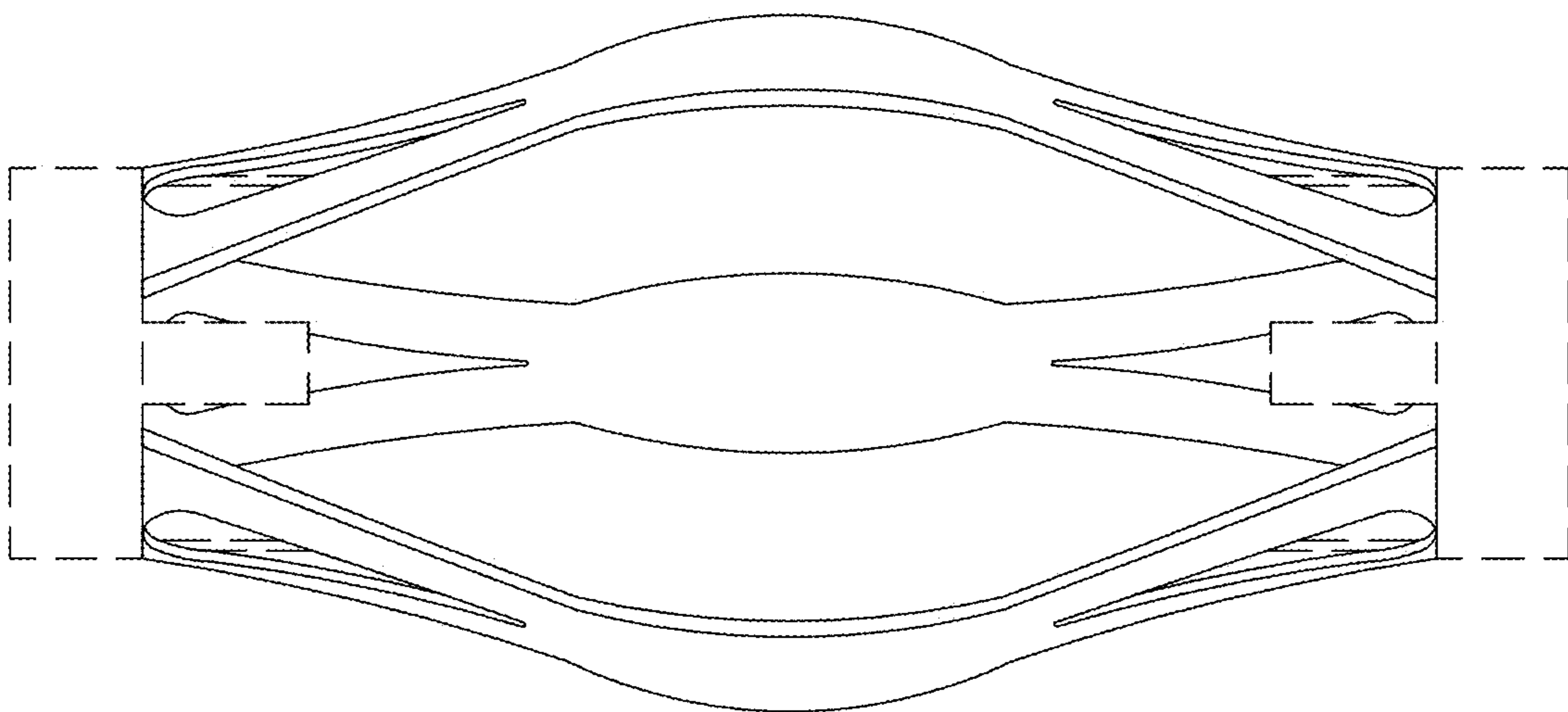


Figure 7

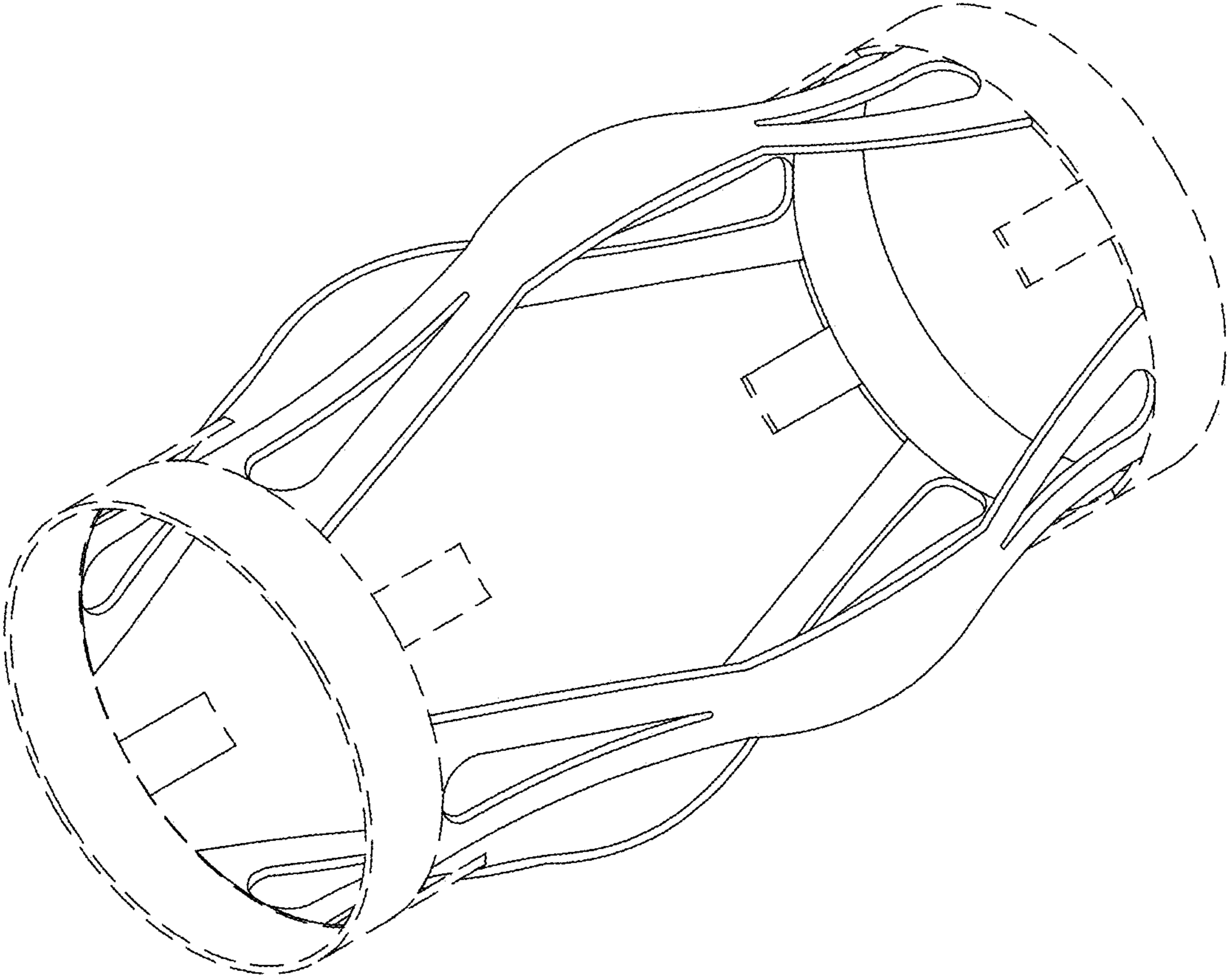


Figure 8



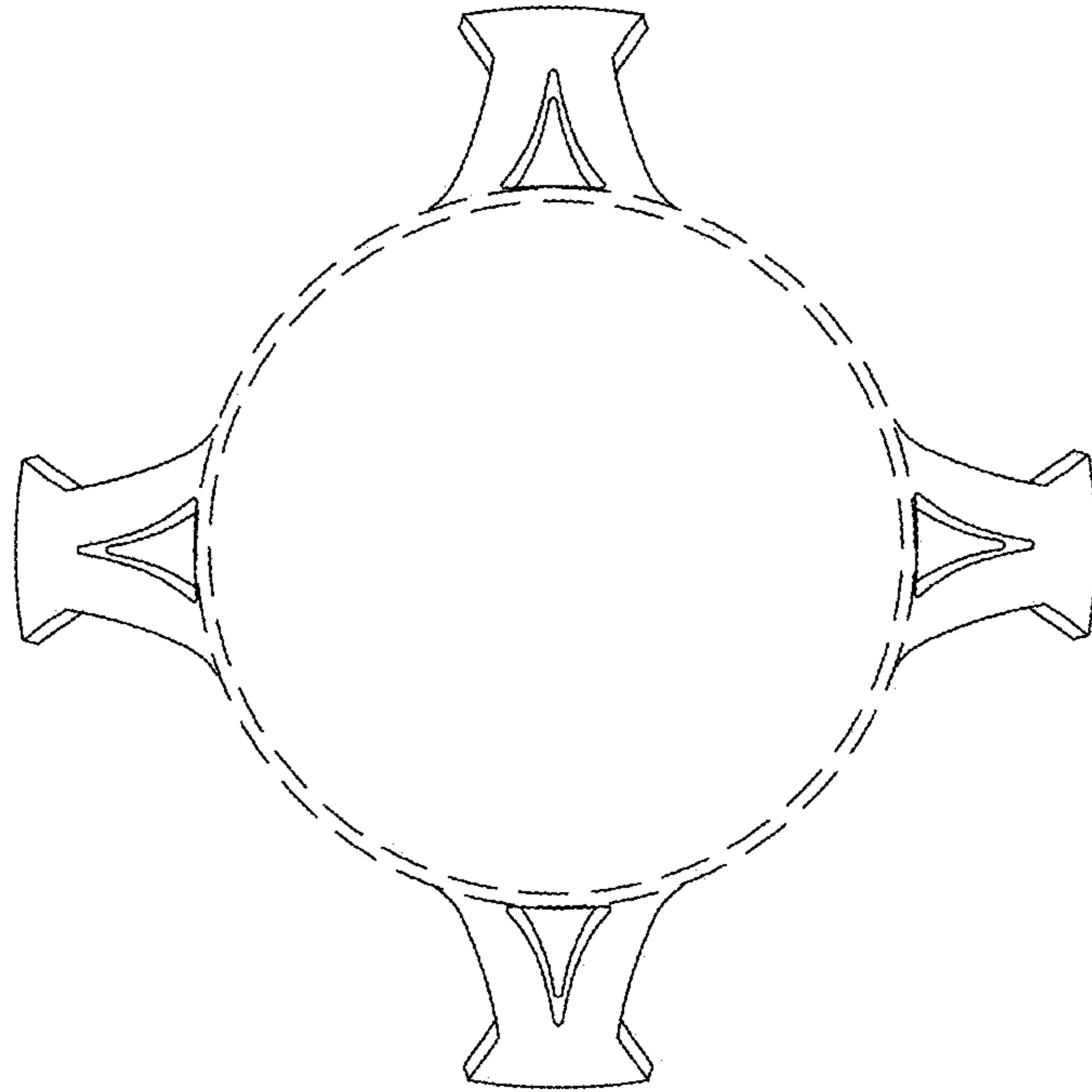


Figure 9

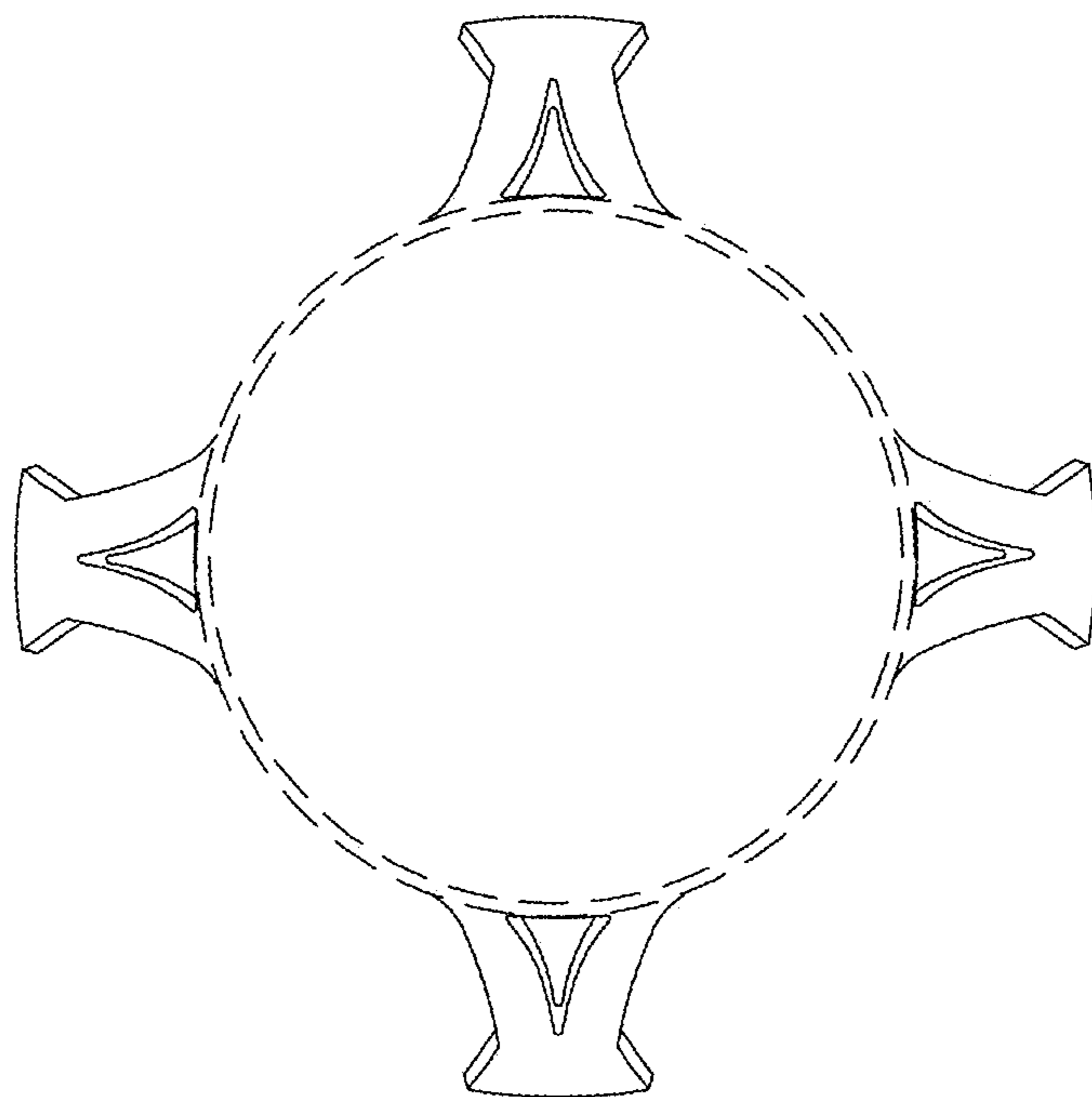


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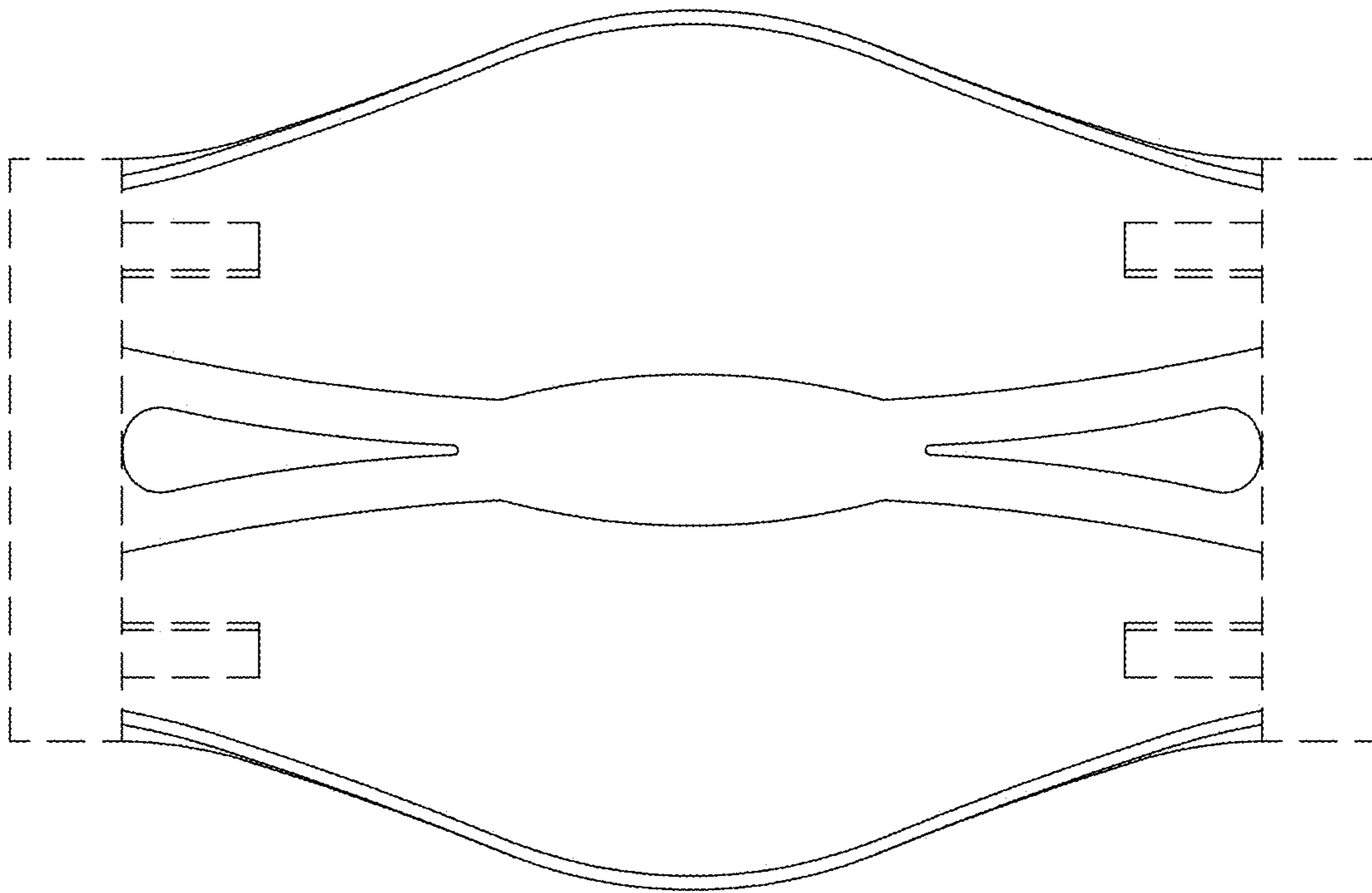


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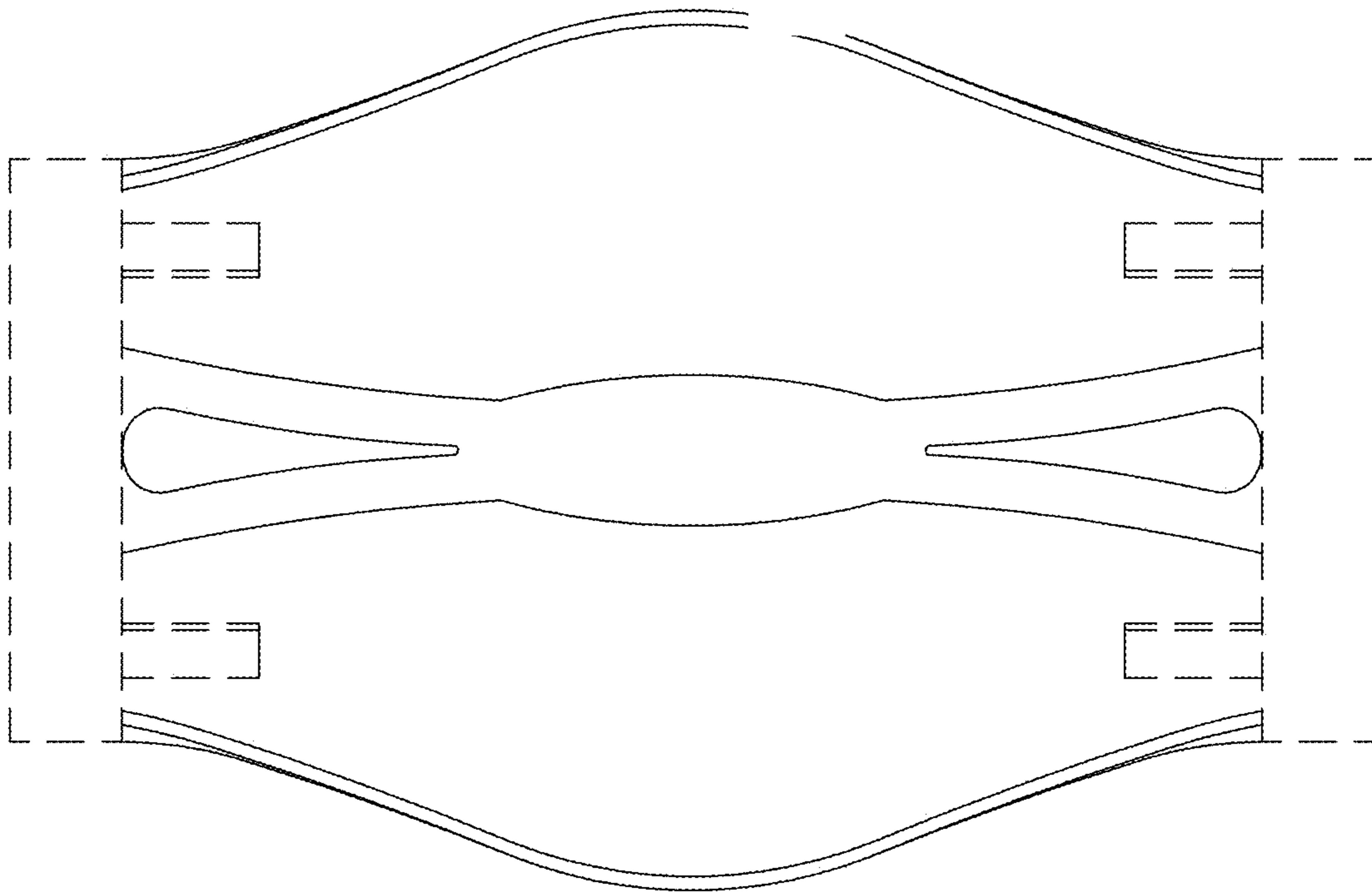


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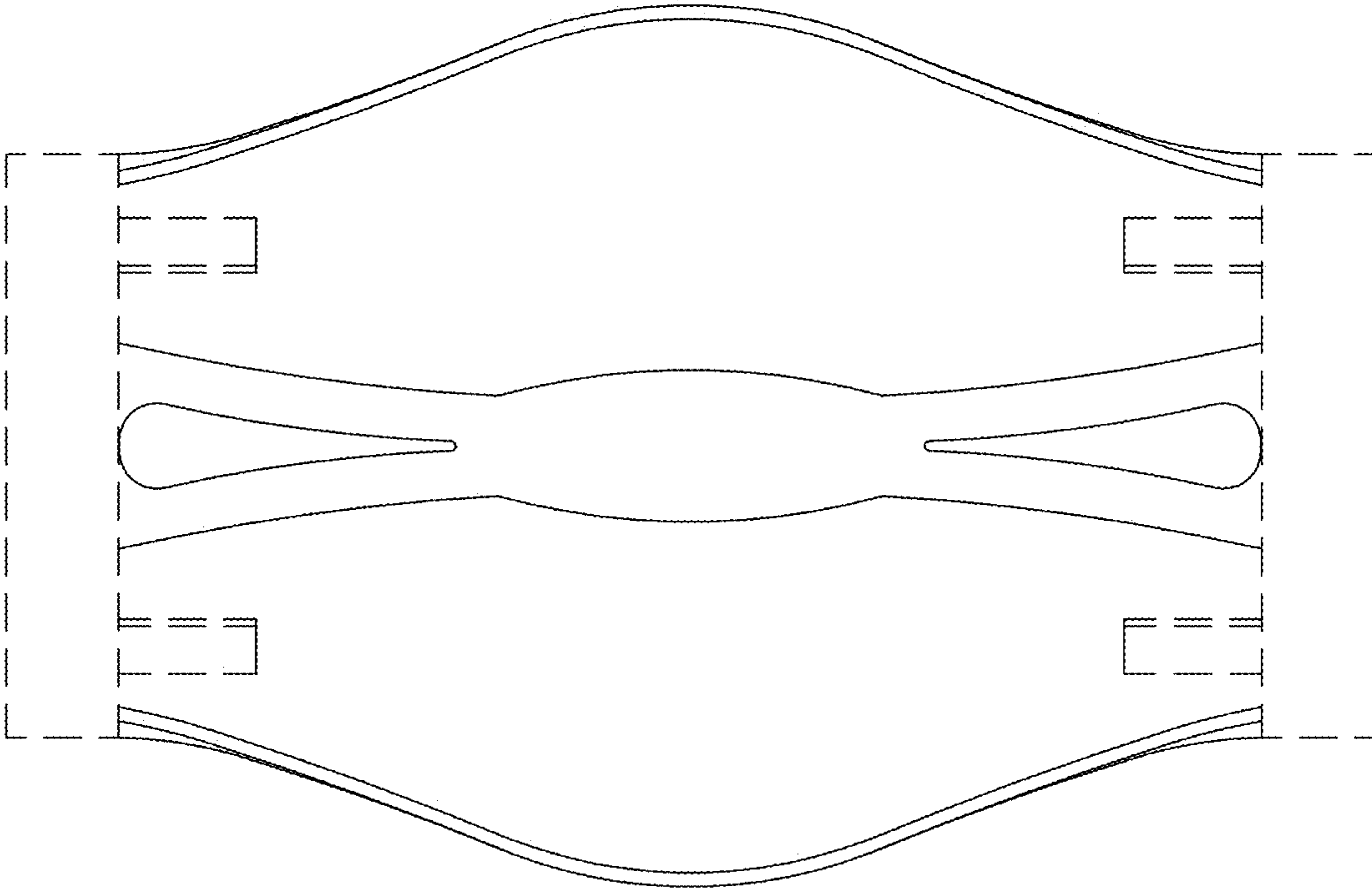


Figure 13

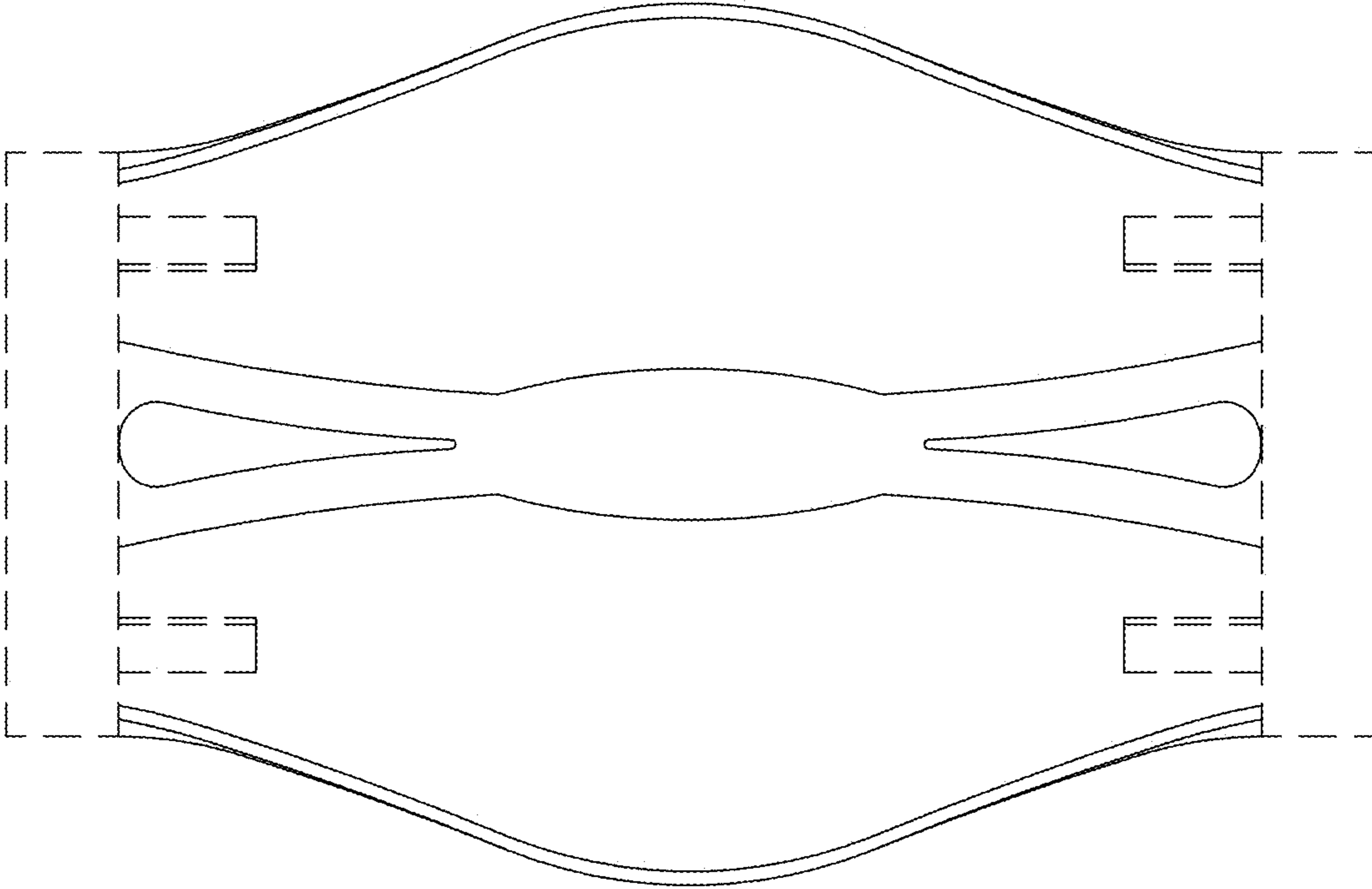


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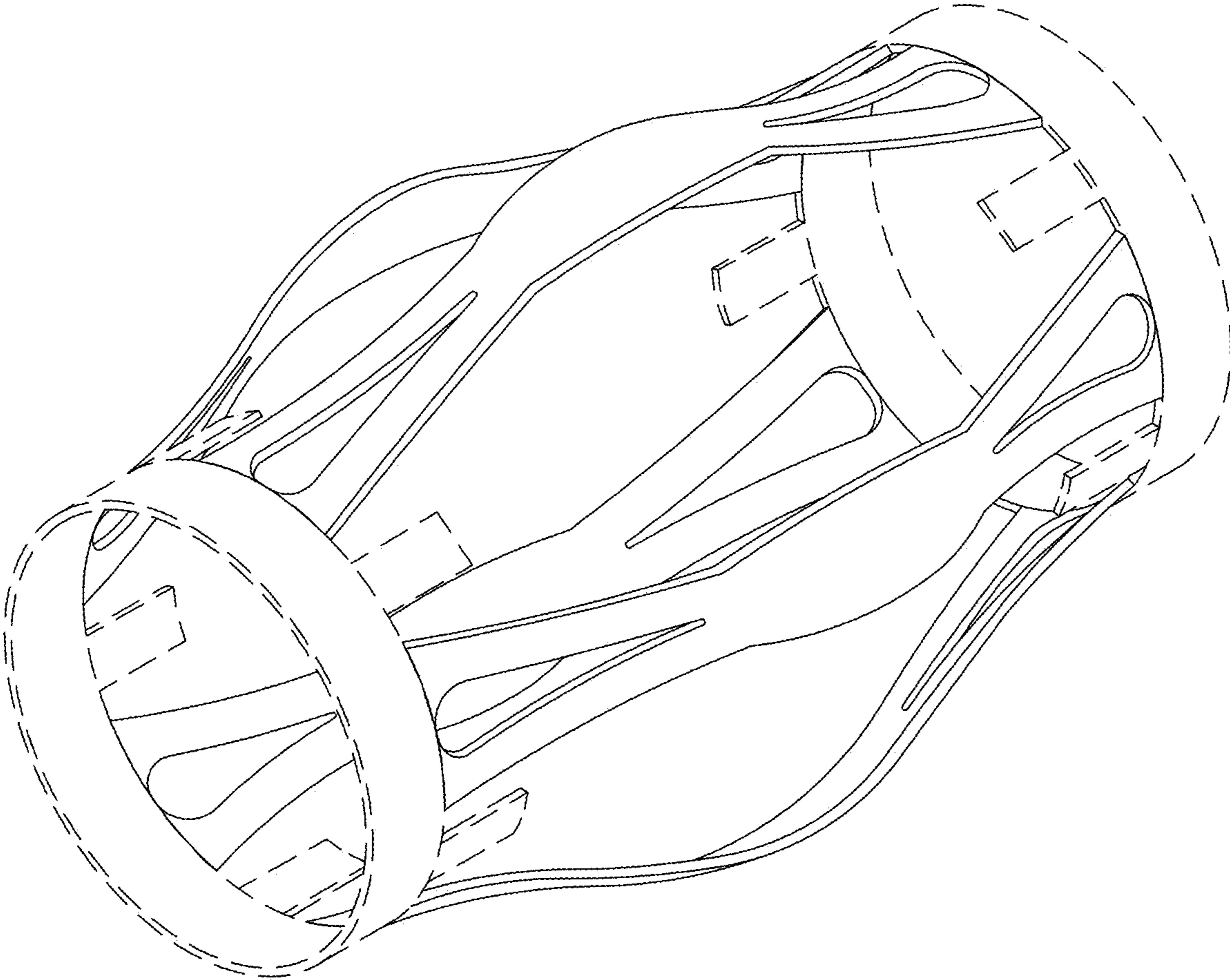


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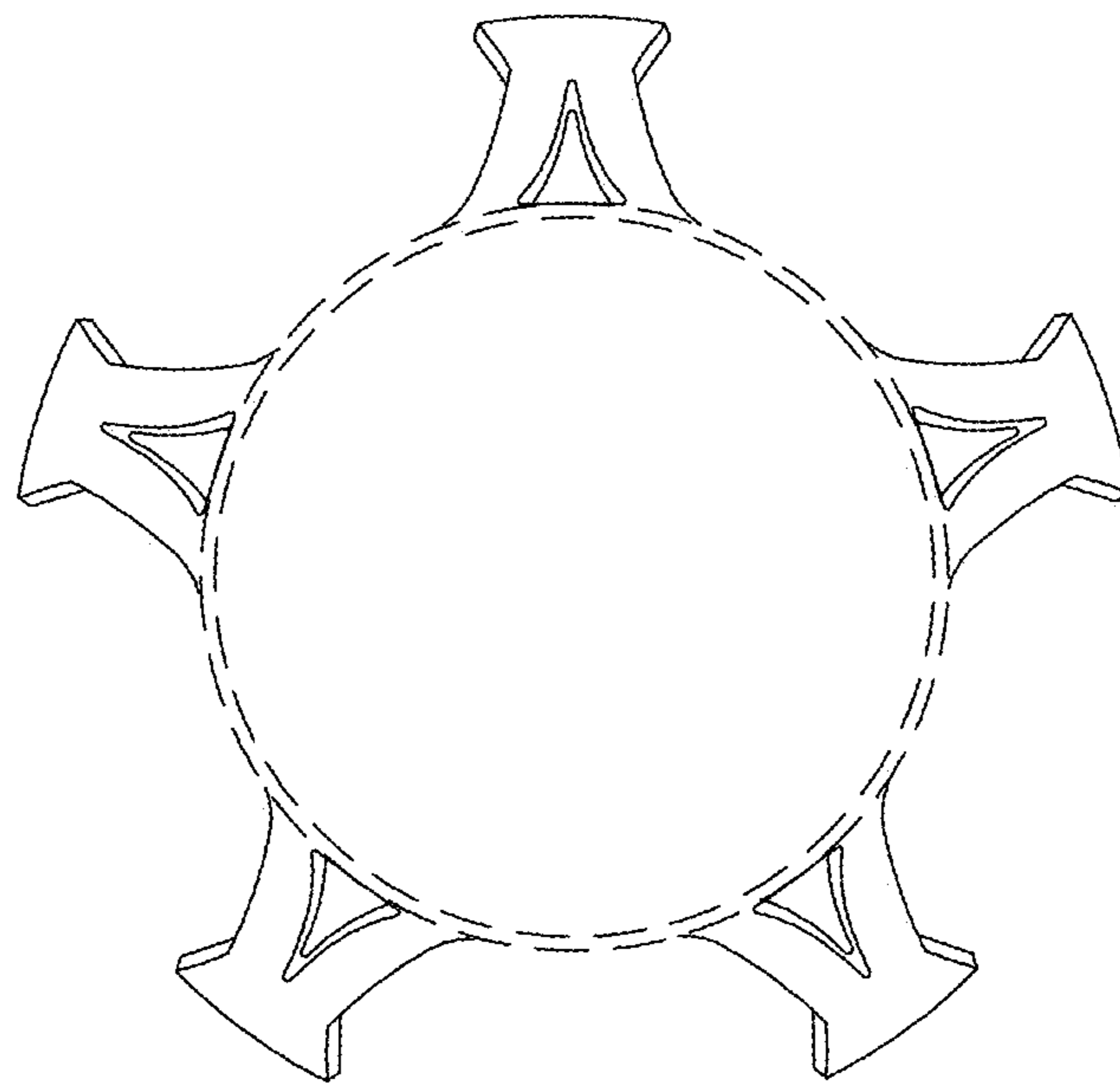


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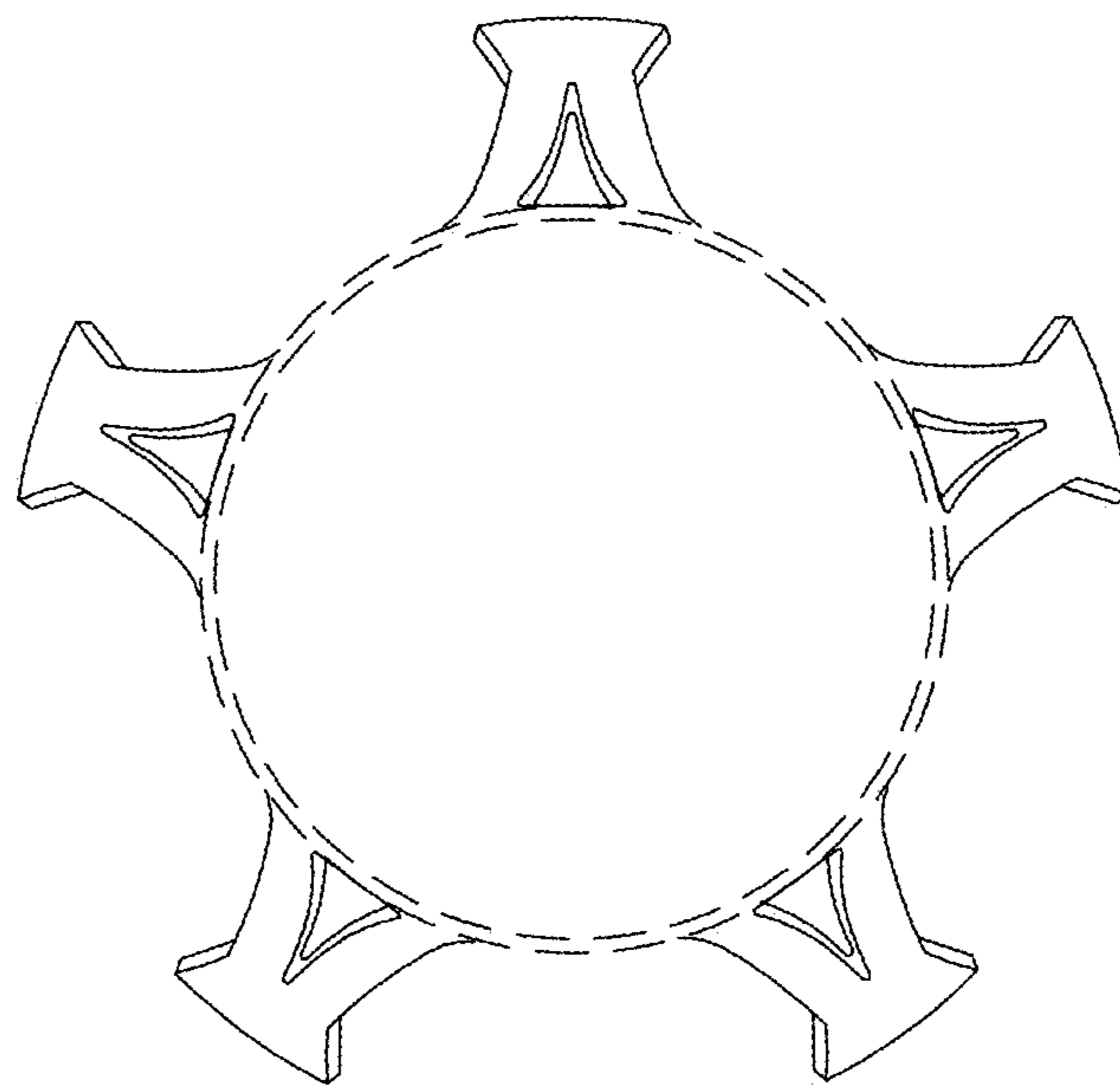


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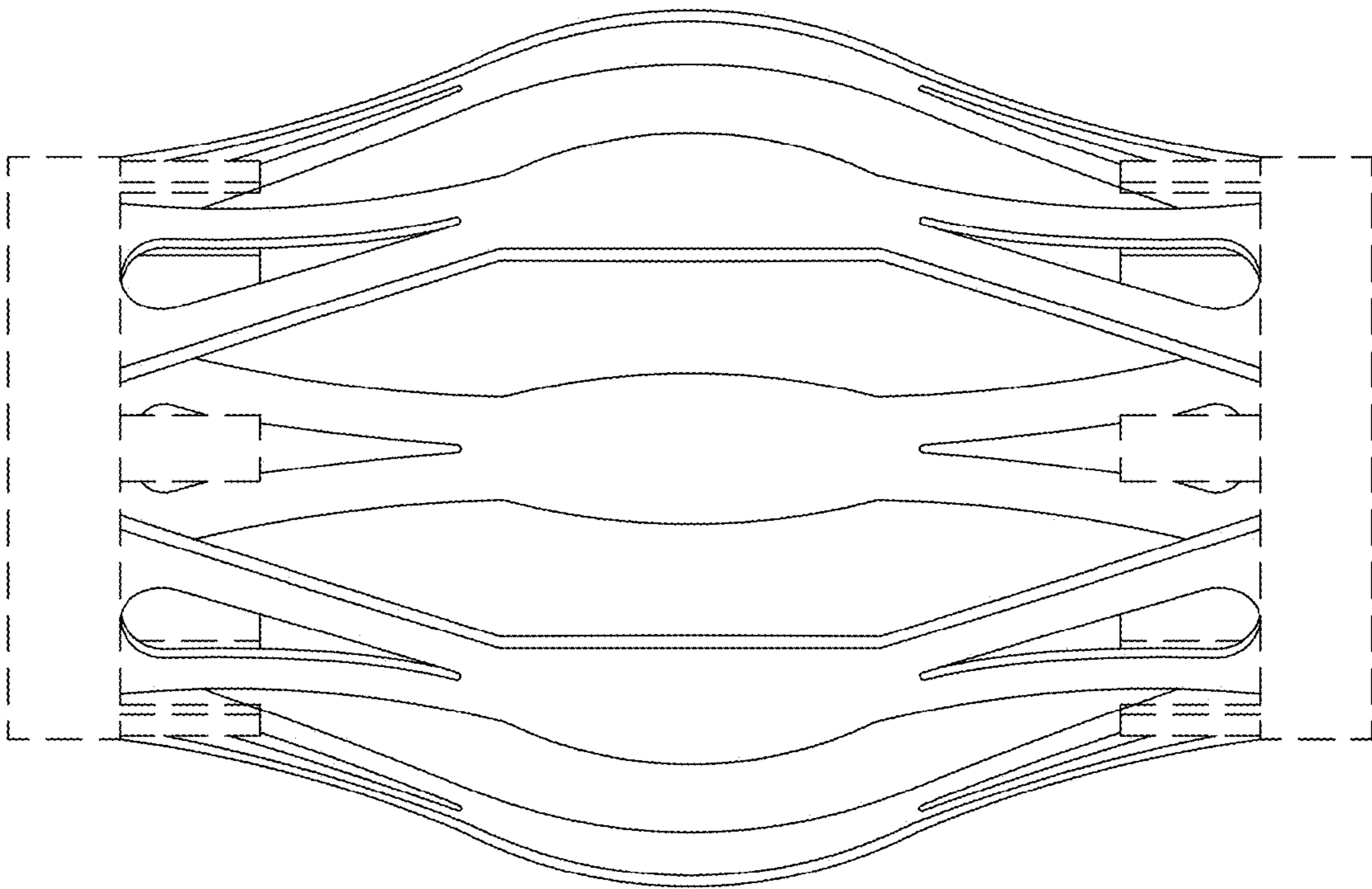


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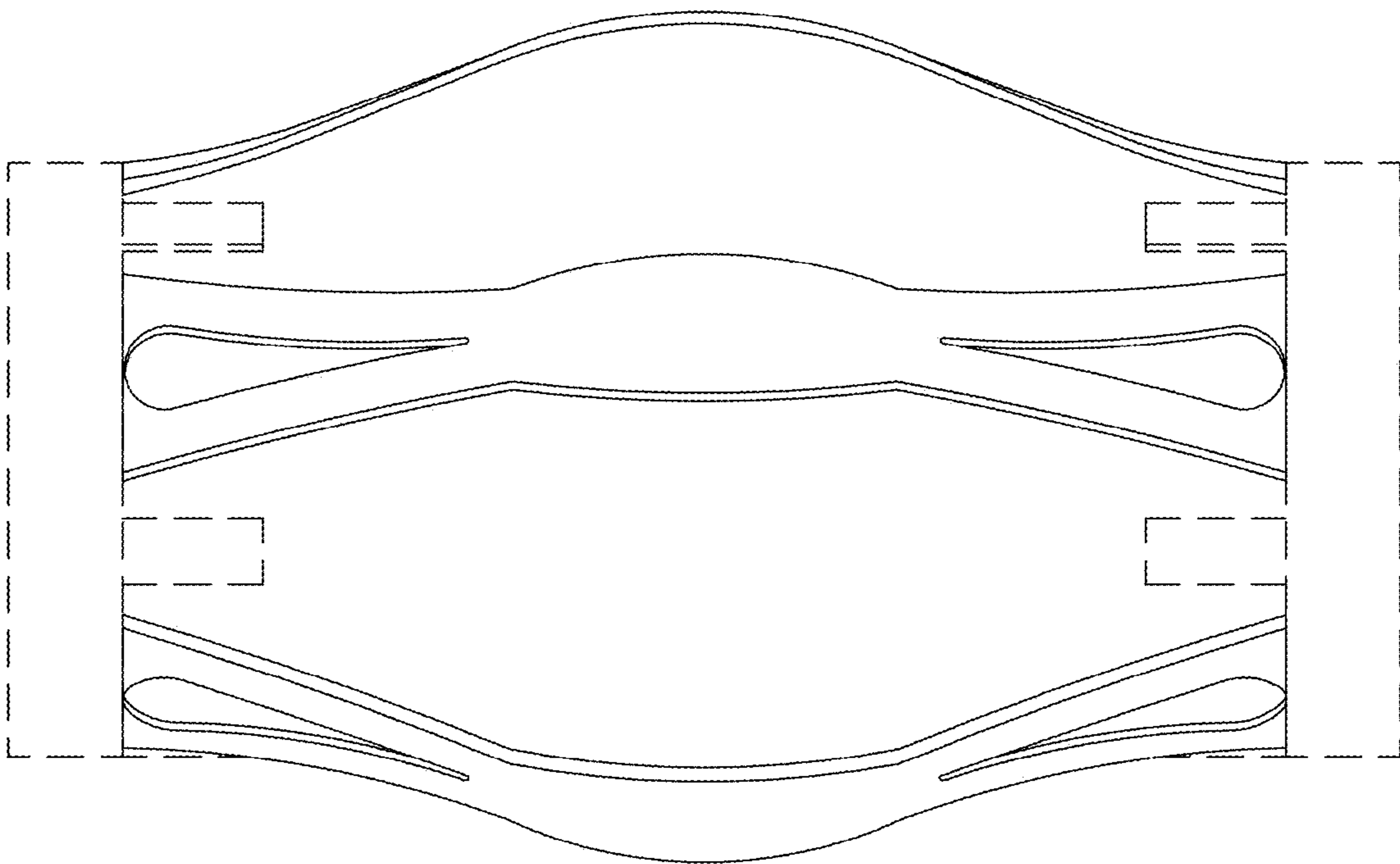


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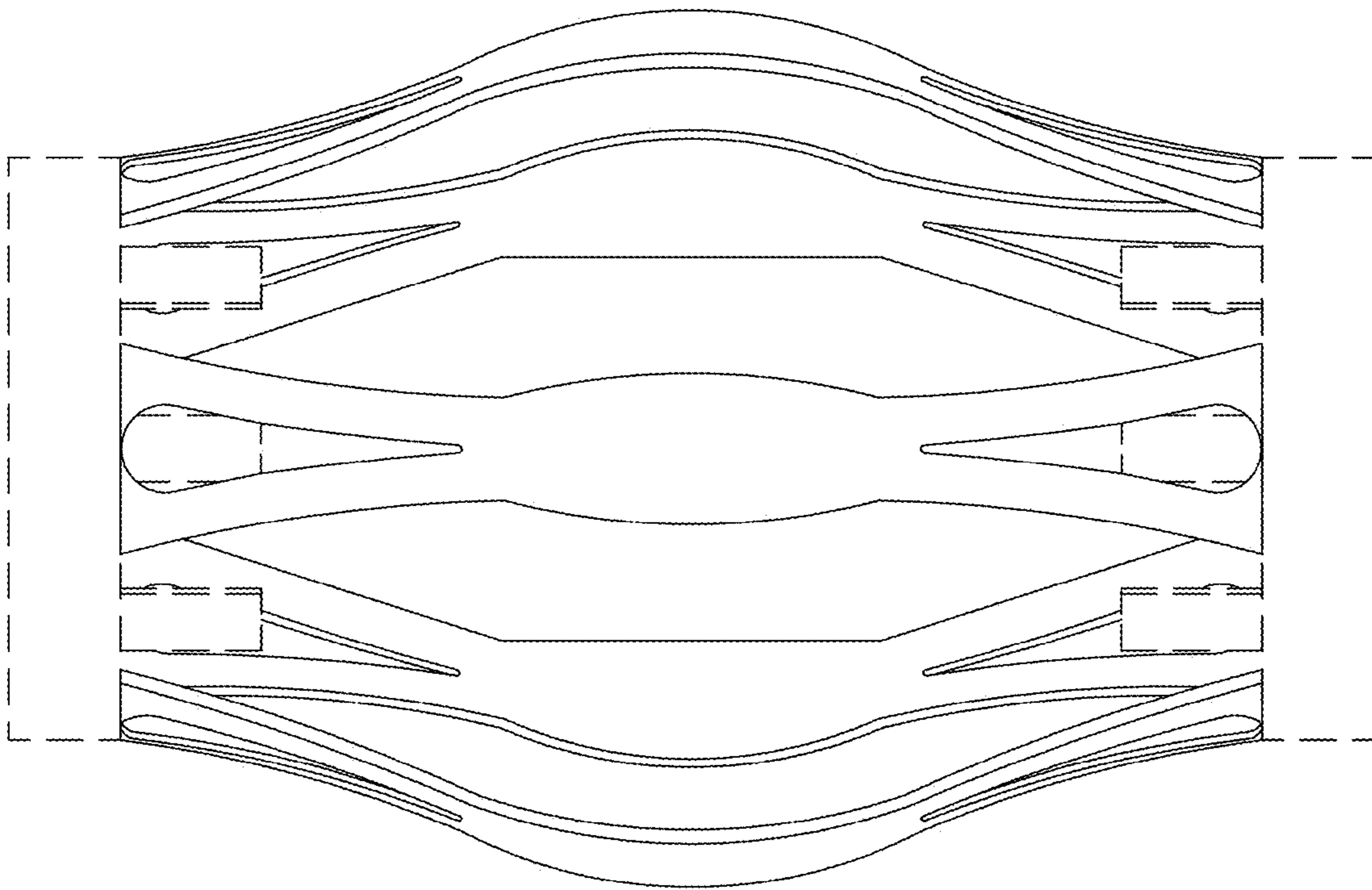


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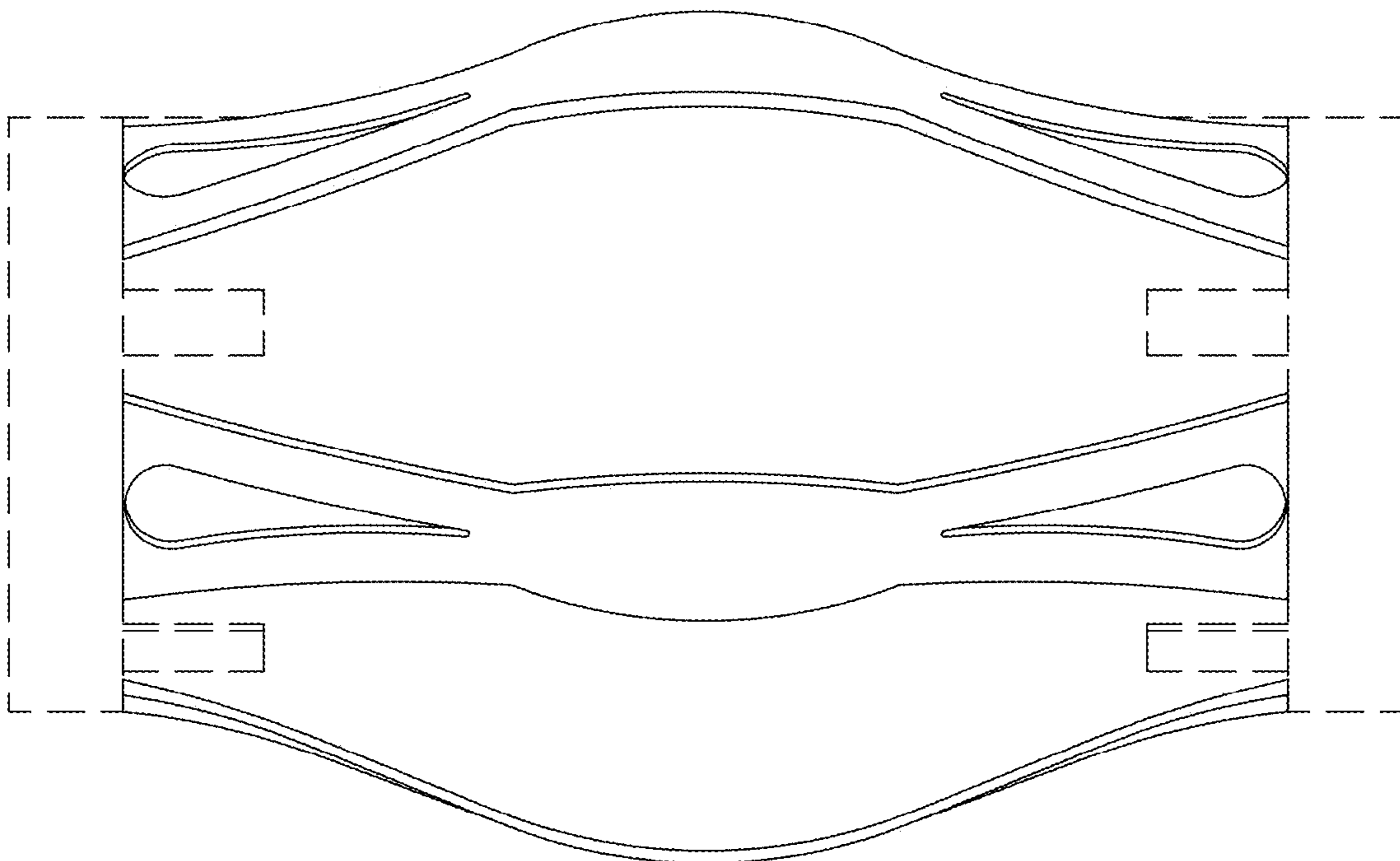


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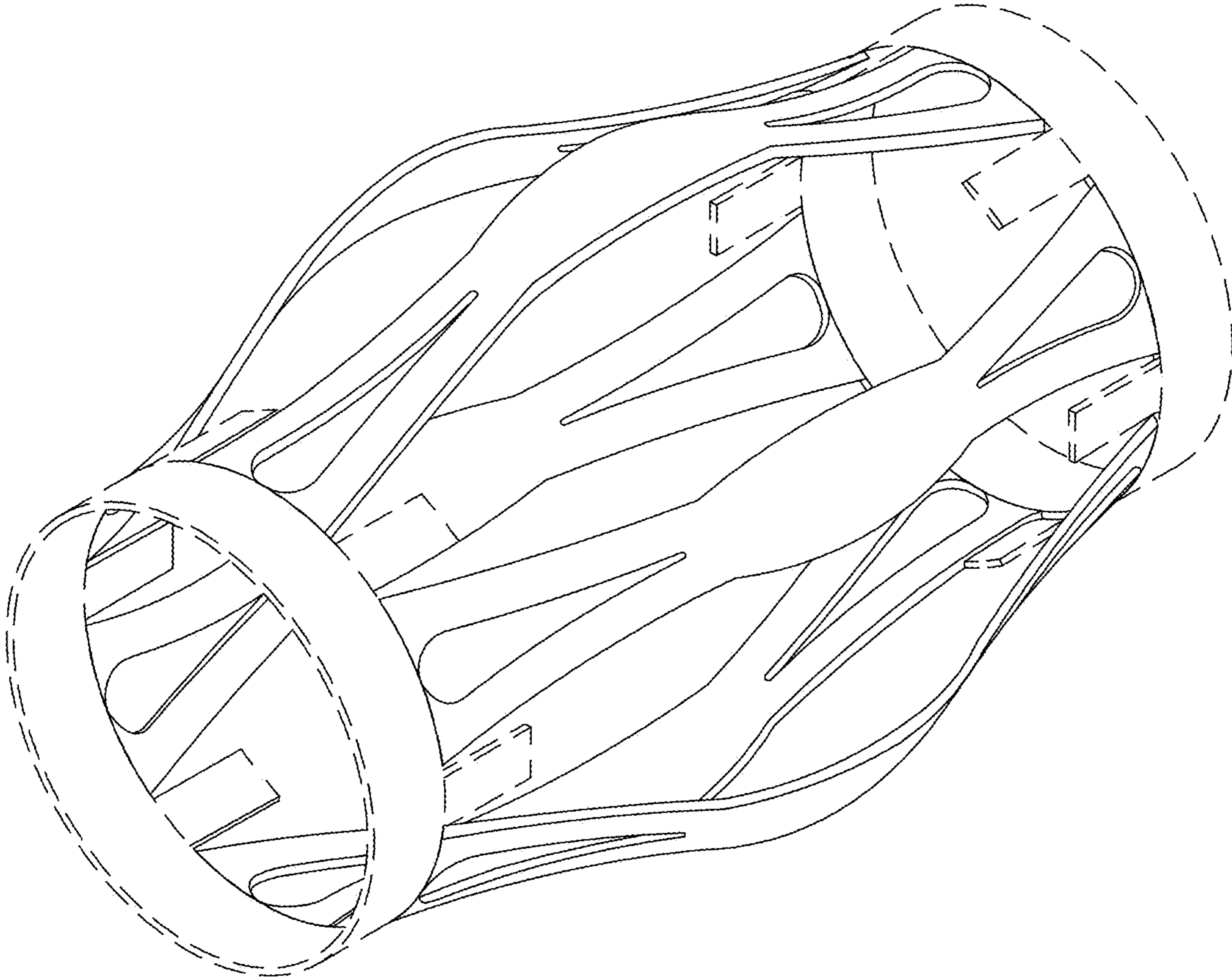


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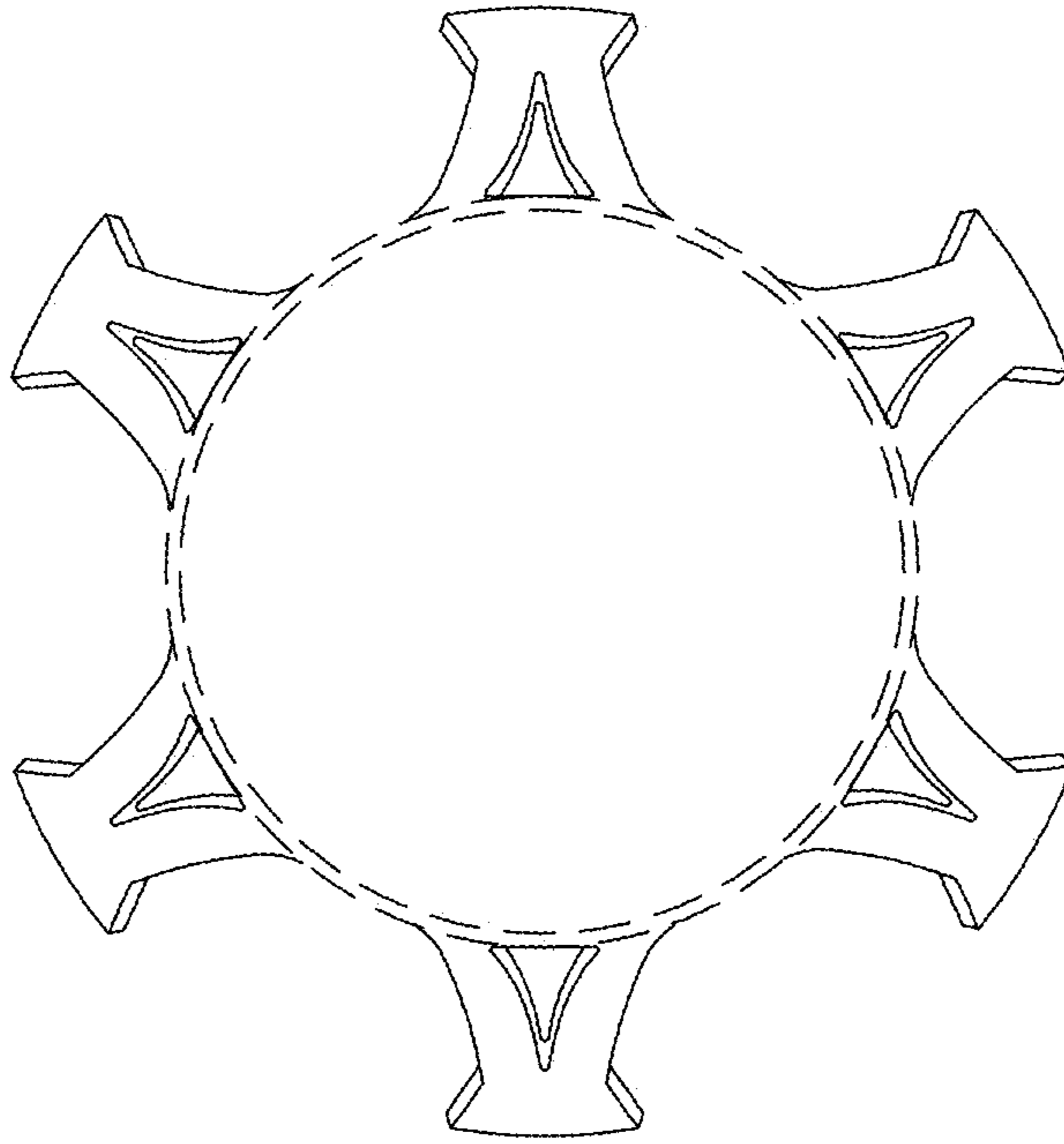


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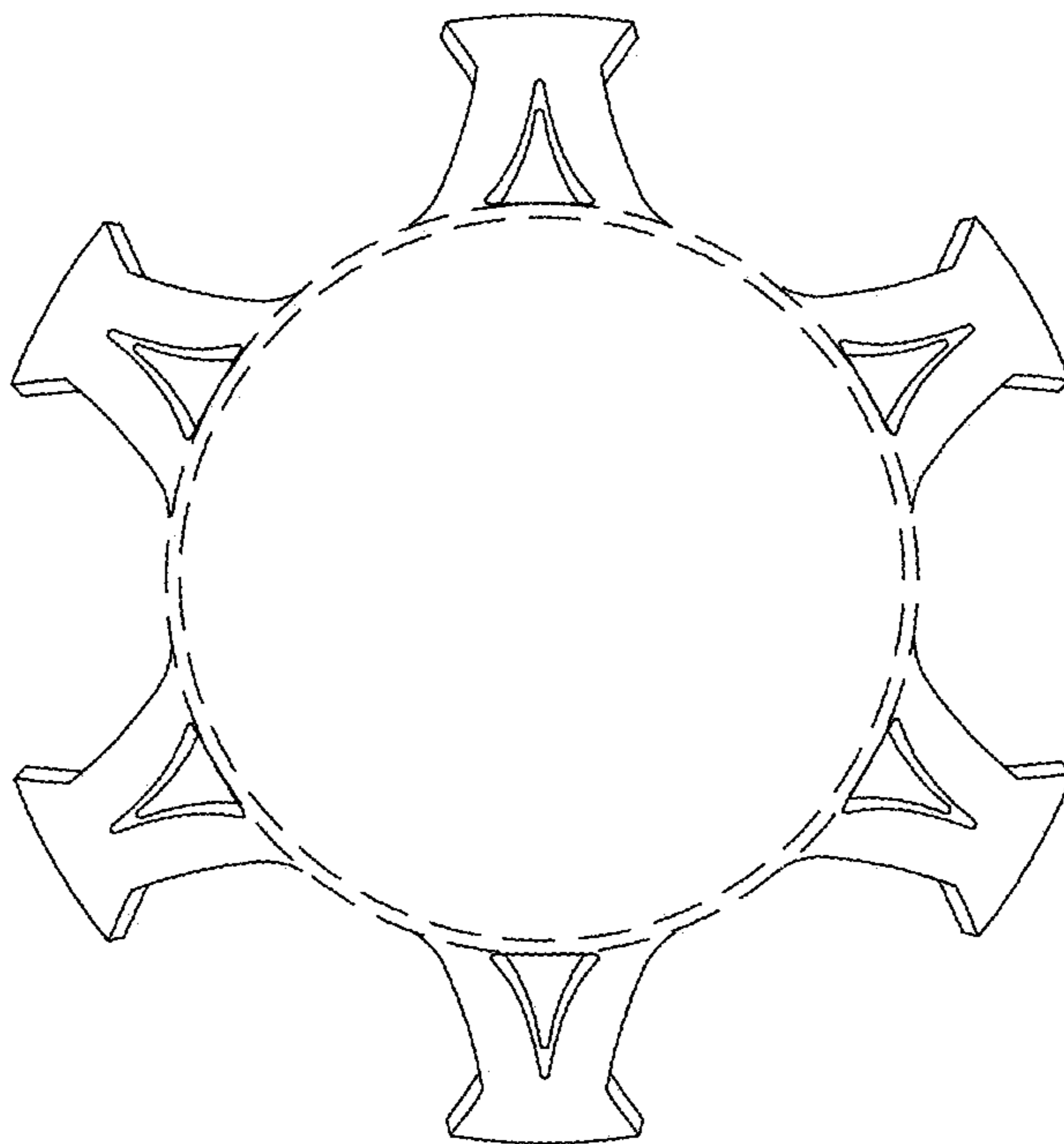


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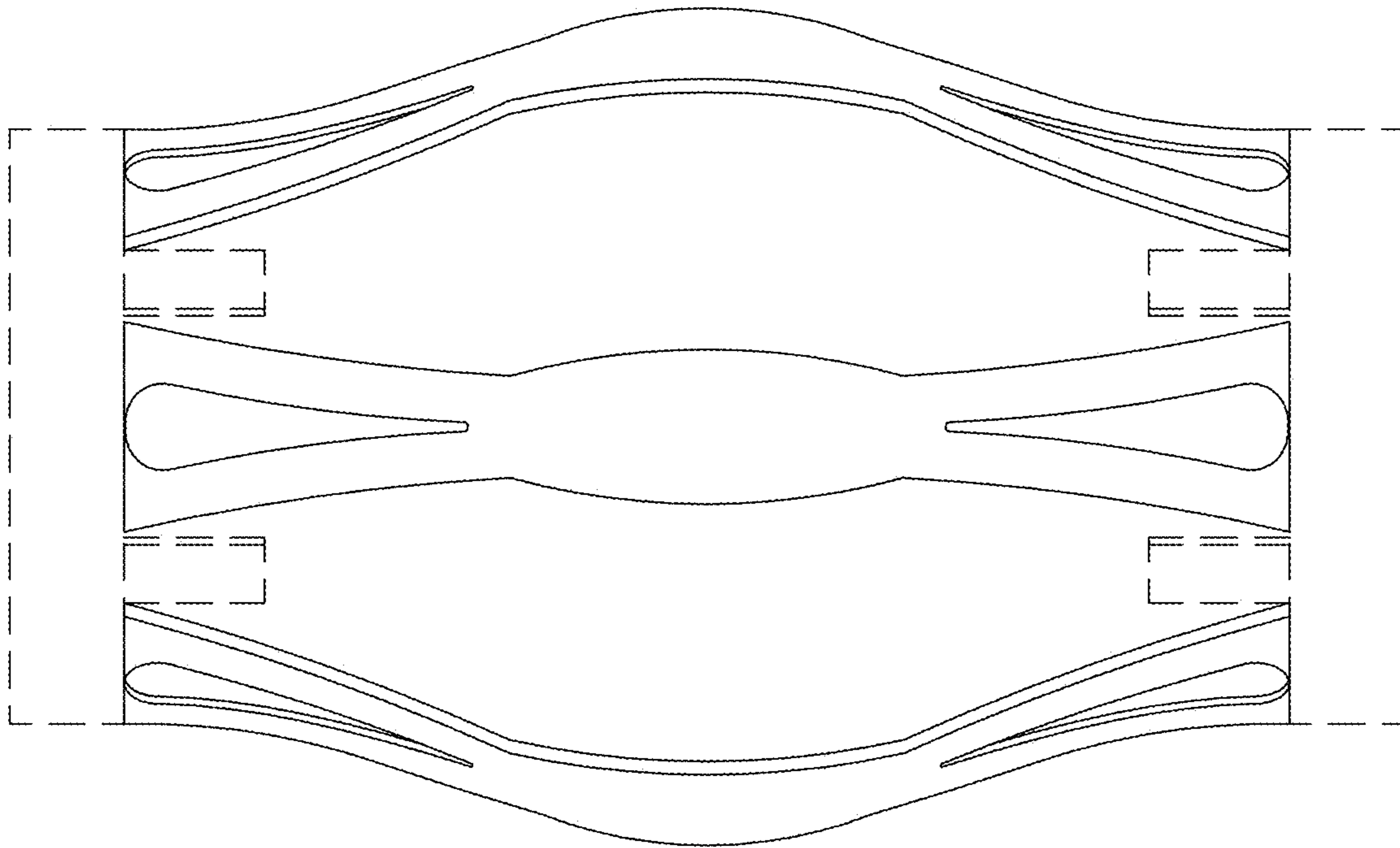


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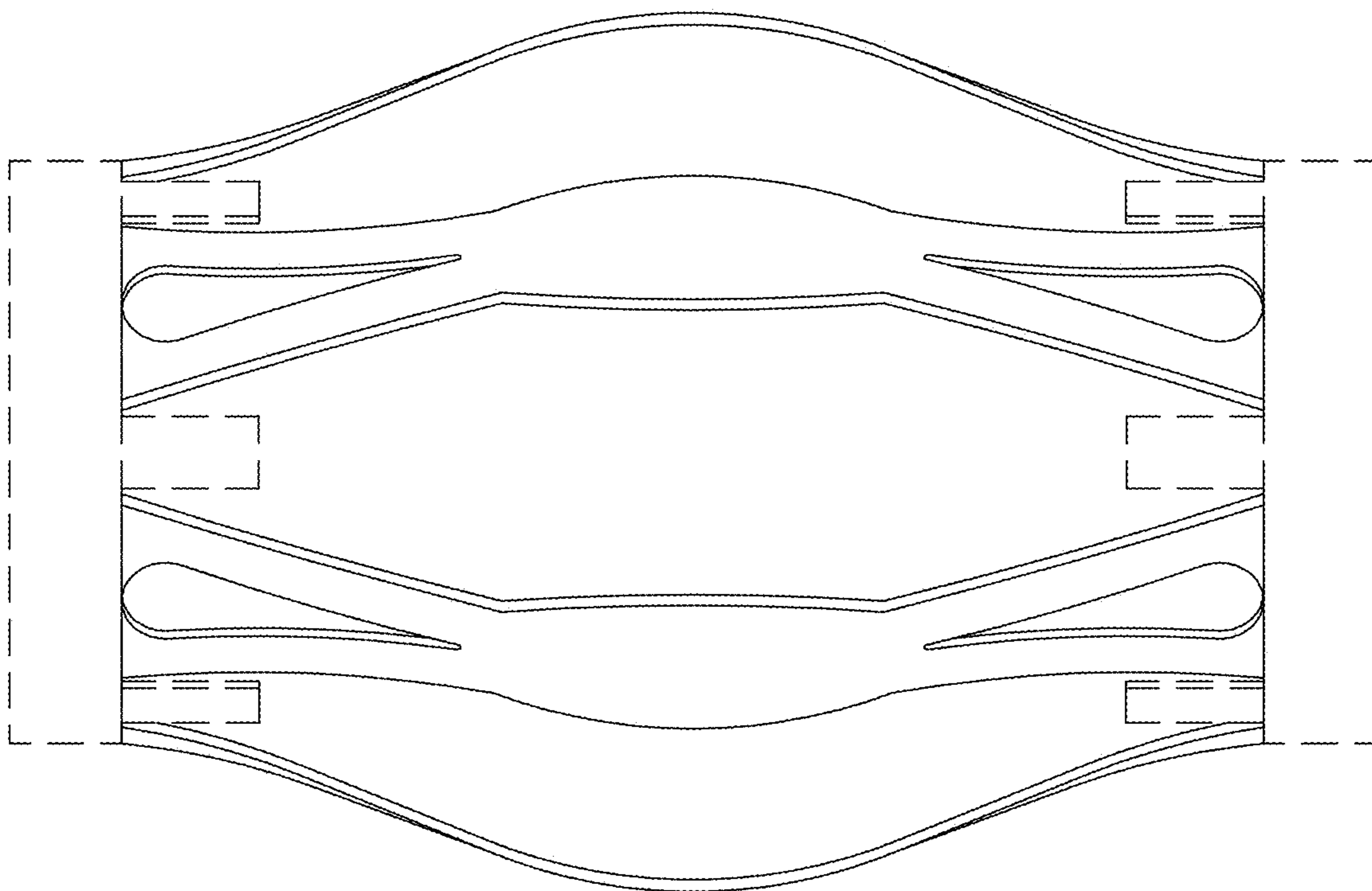


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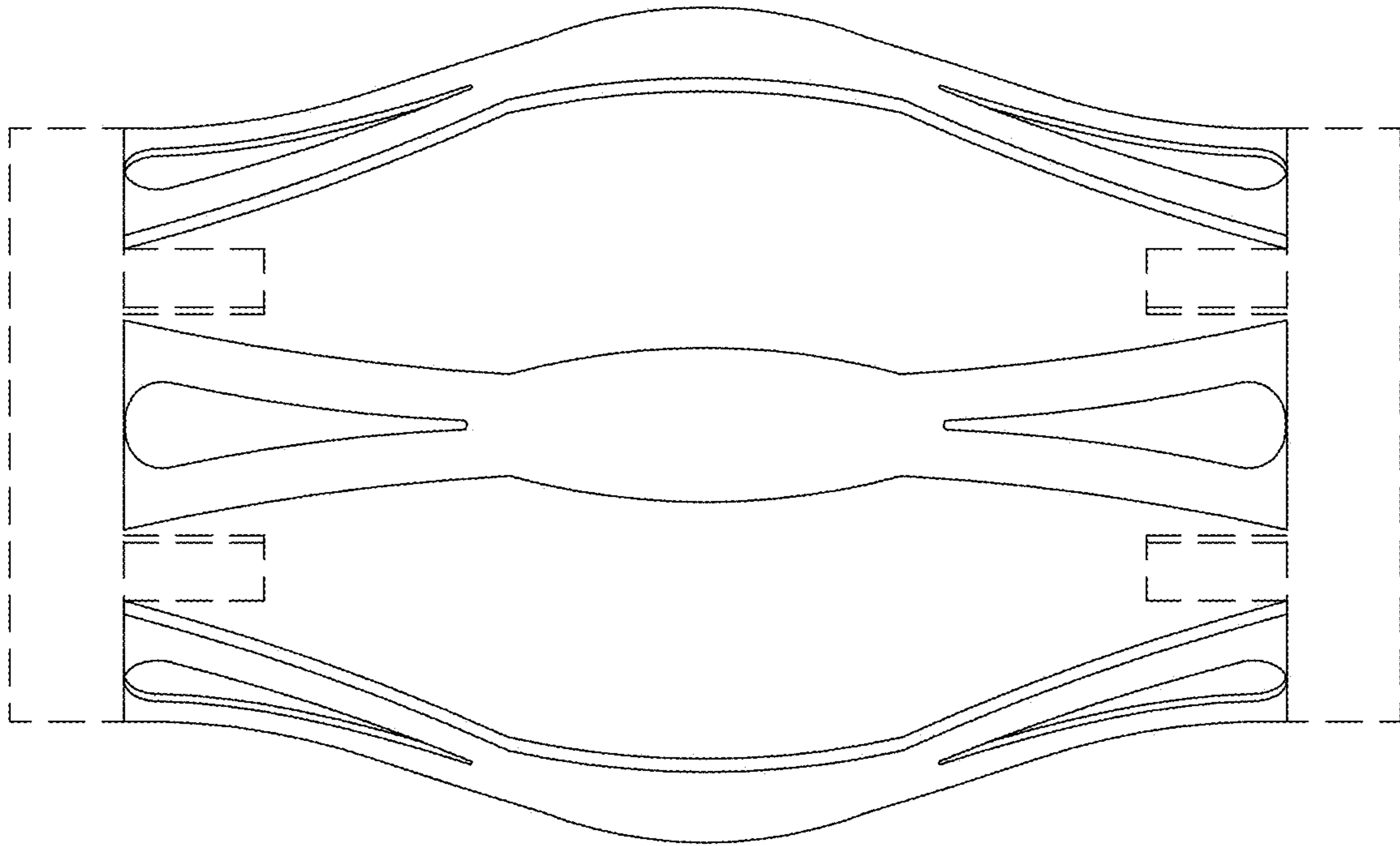


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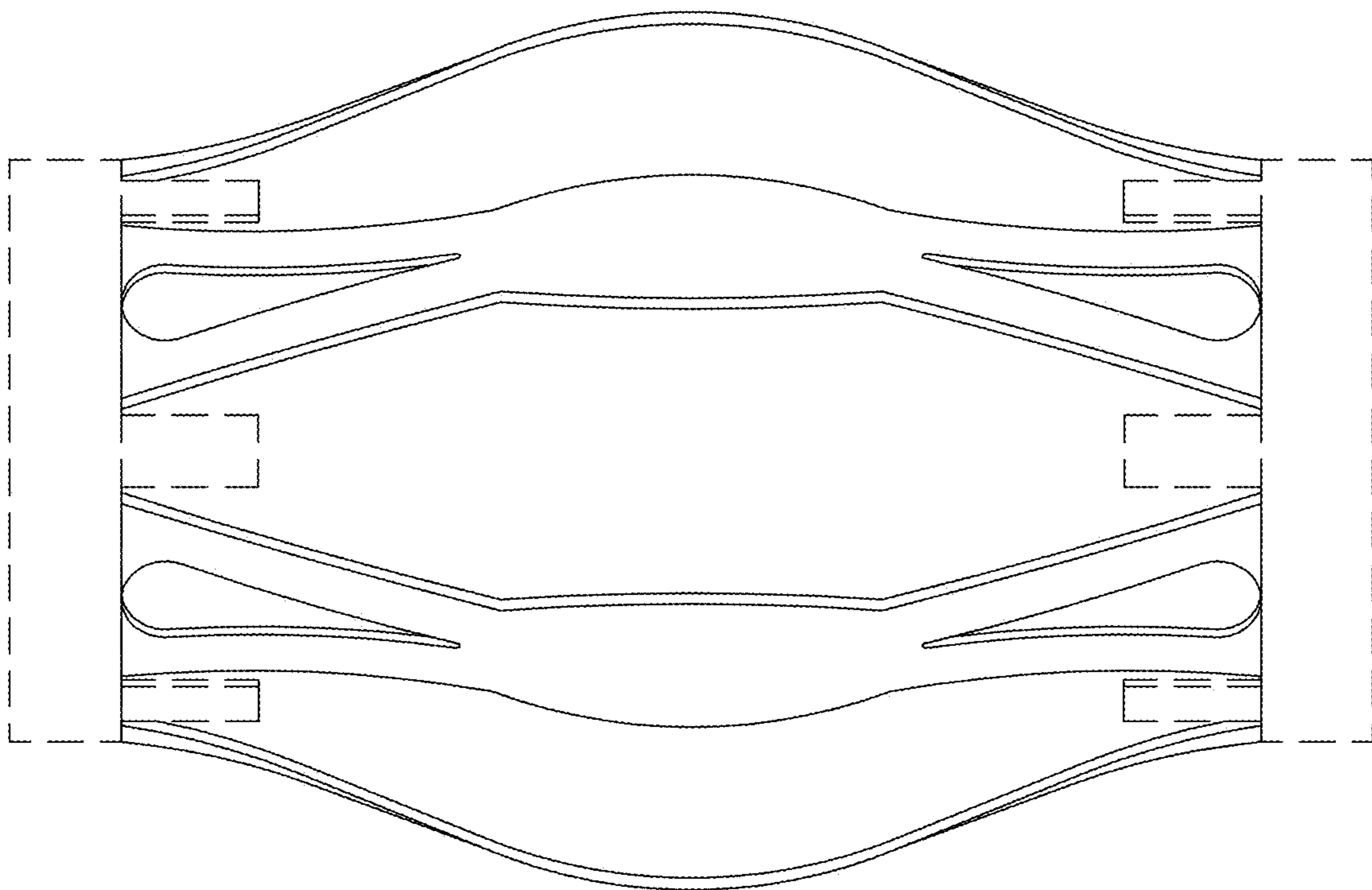


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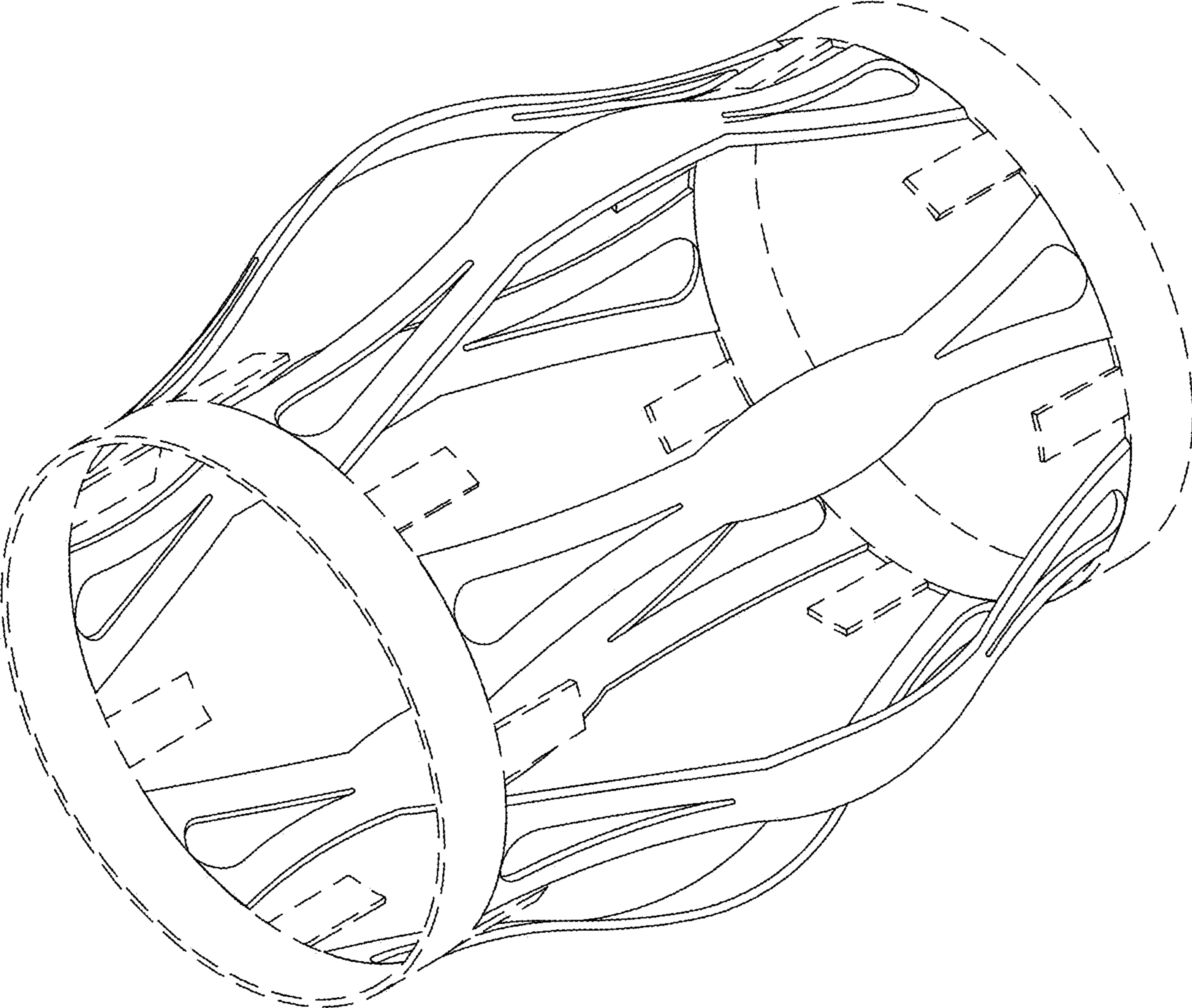


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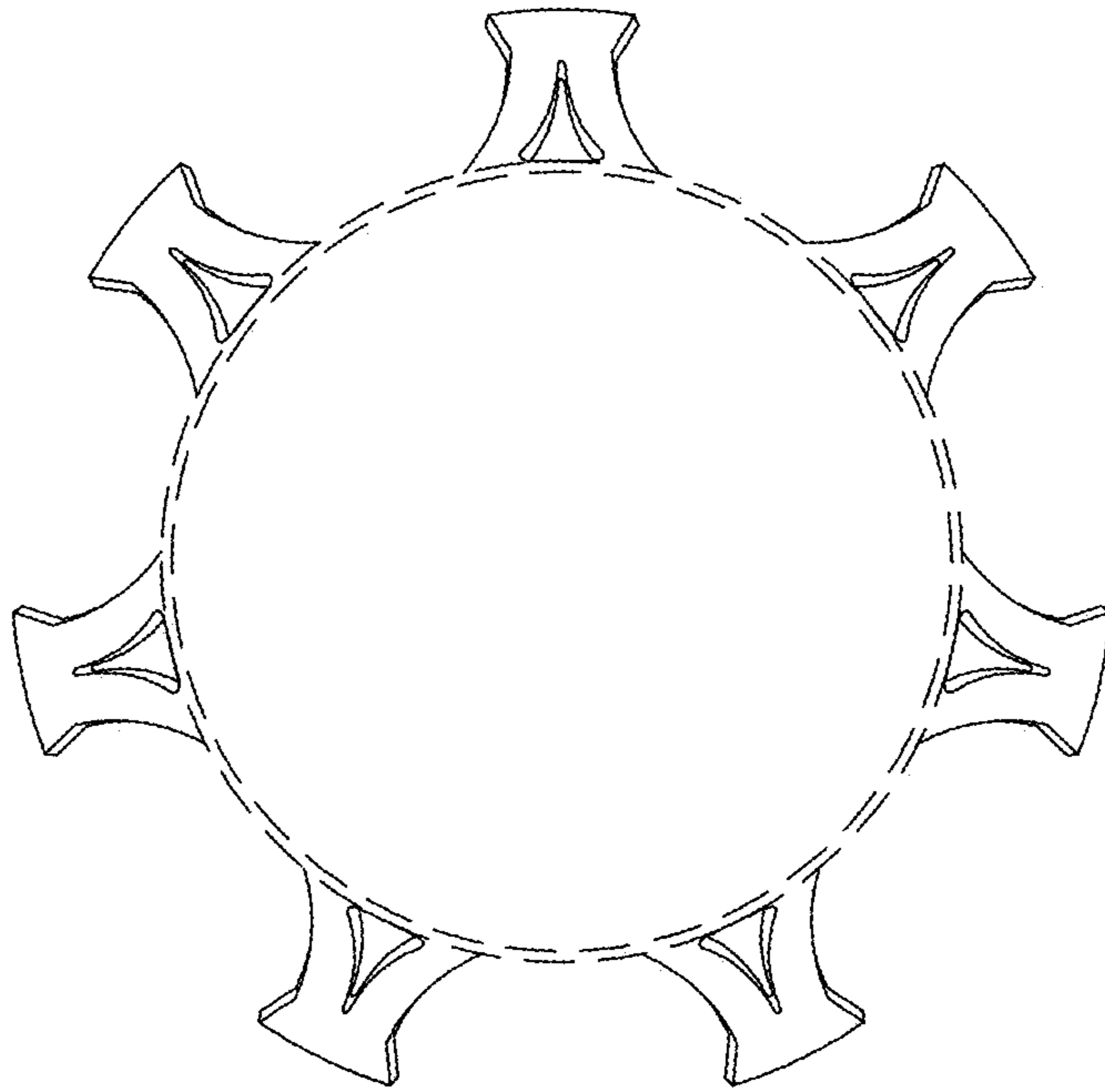


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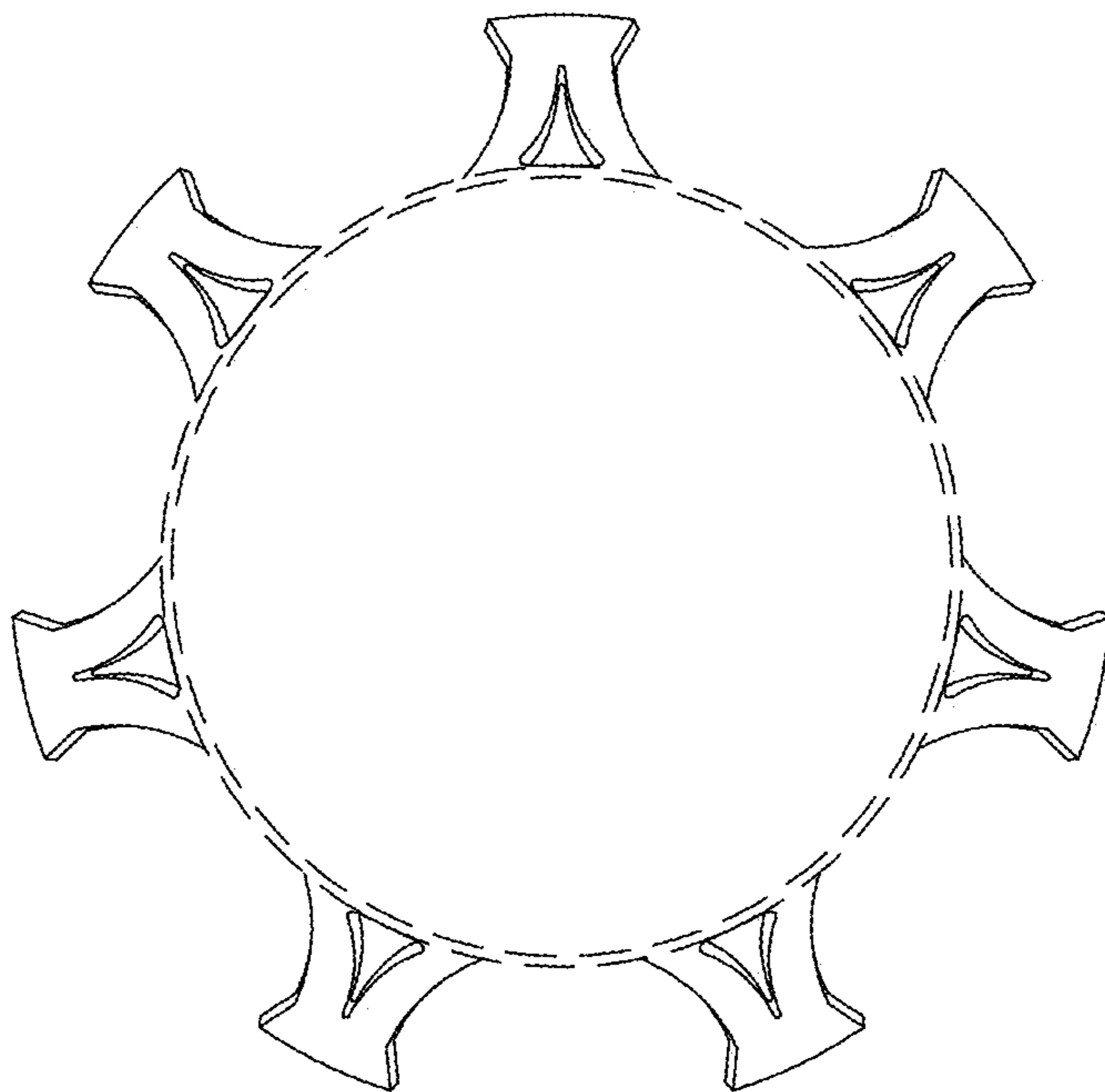


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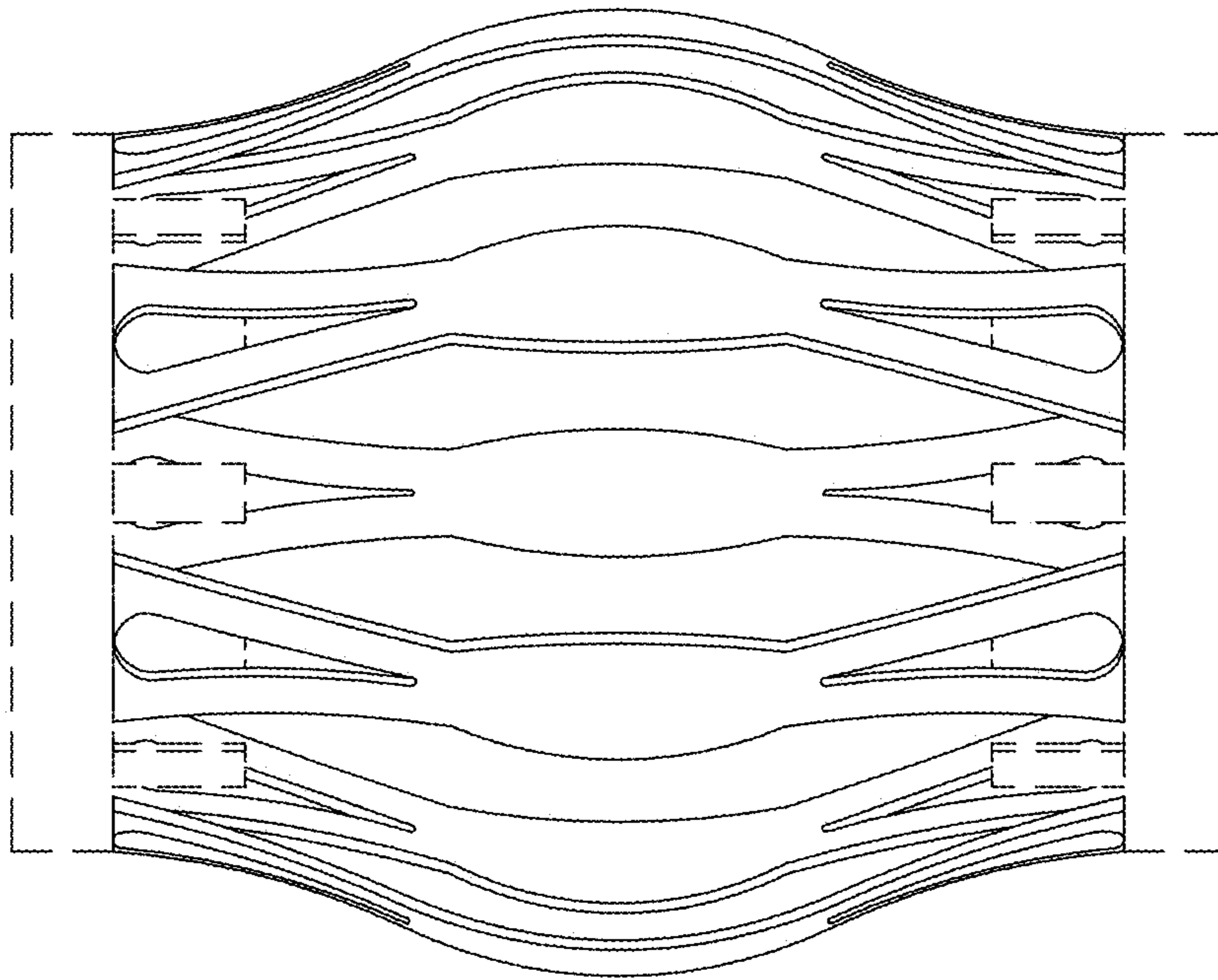


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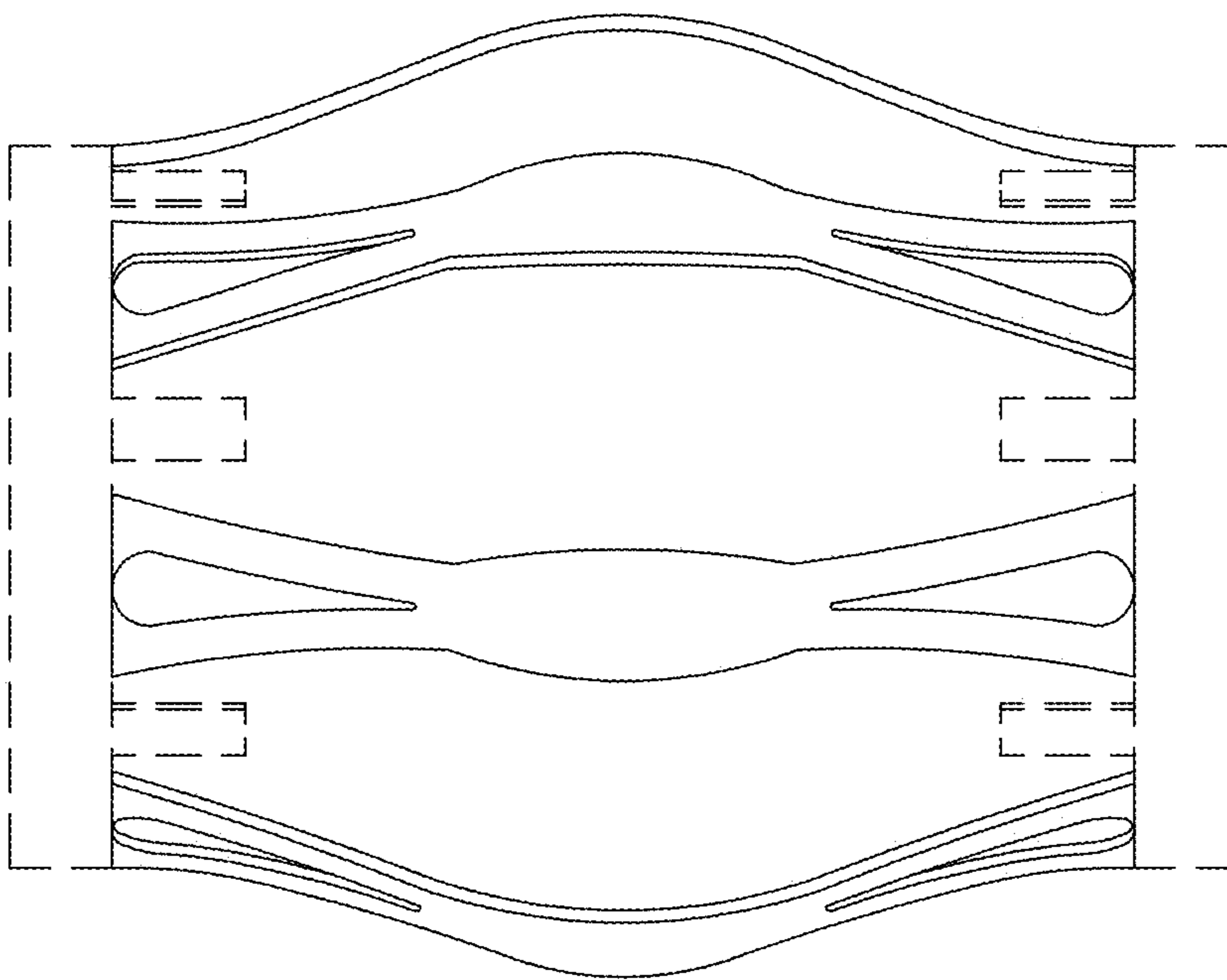


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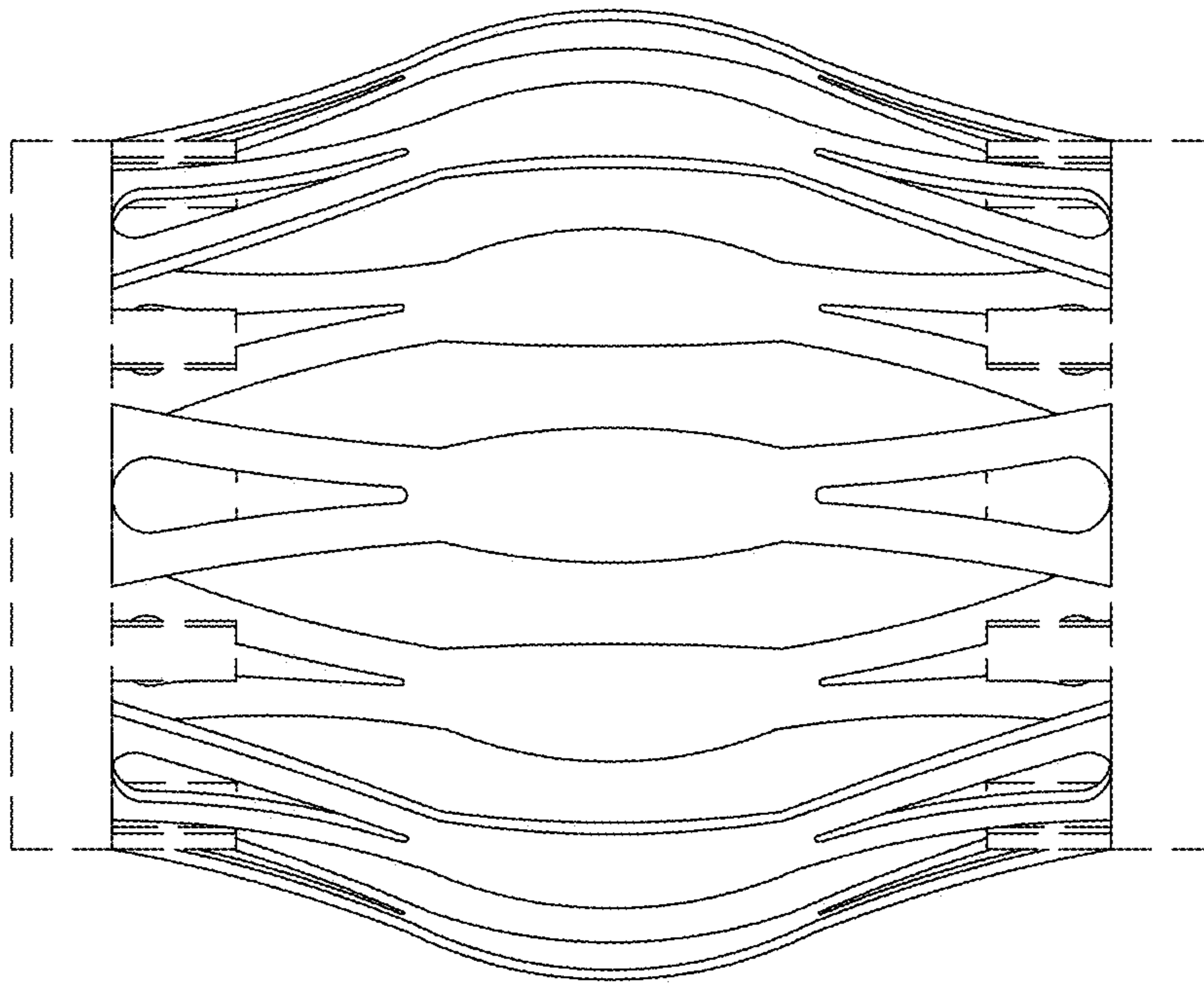


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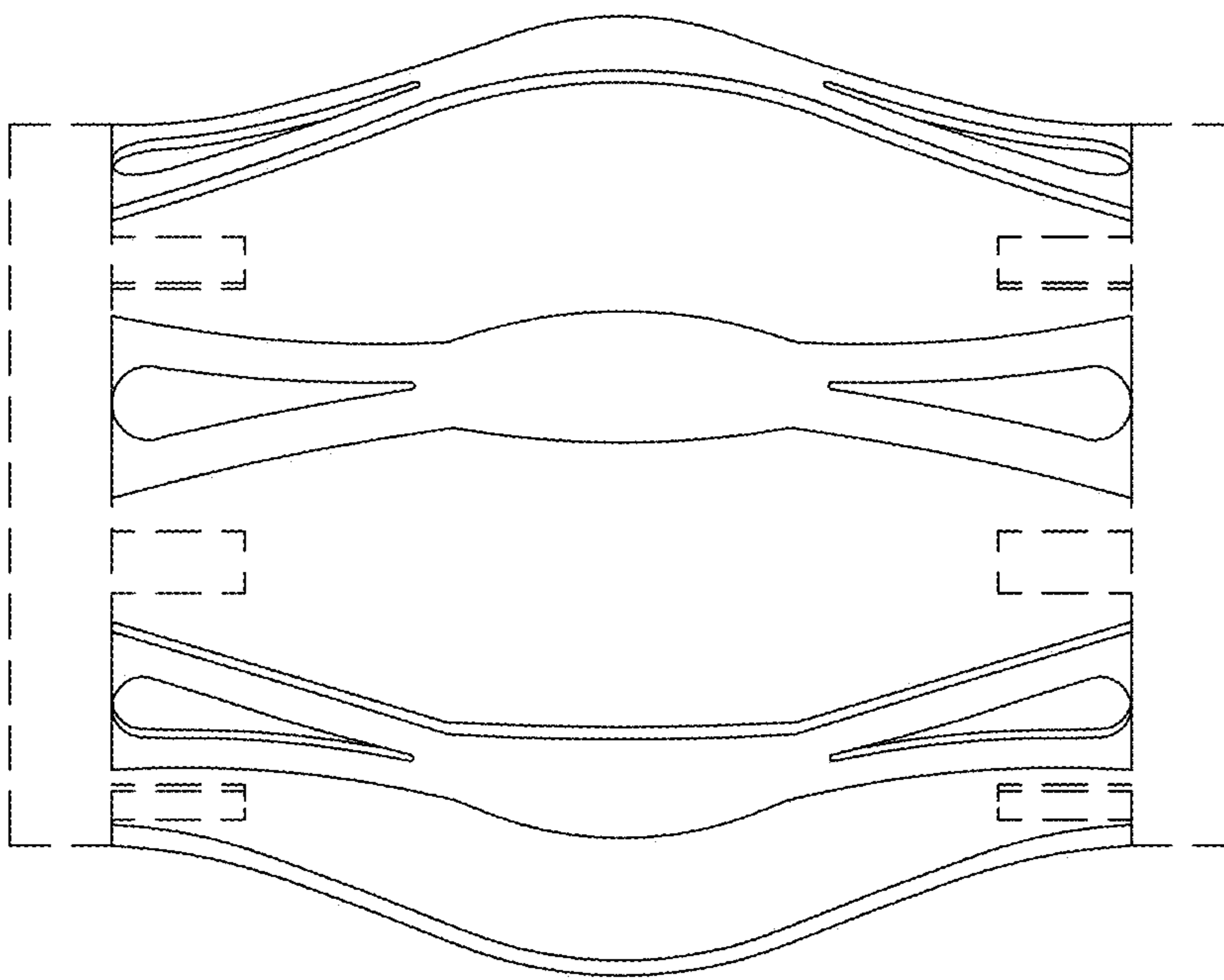


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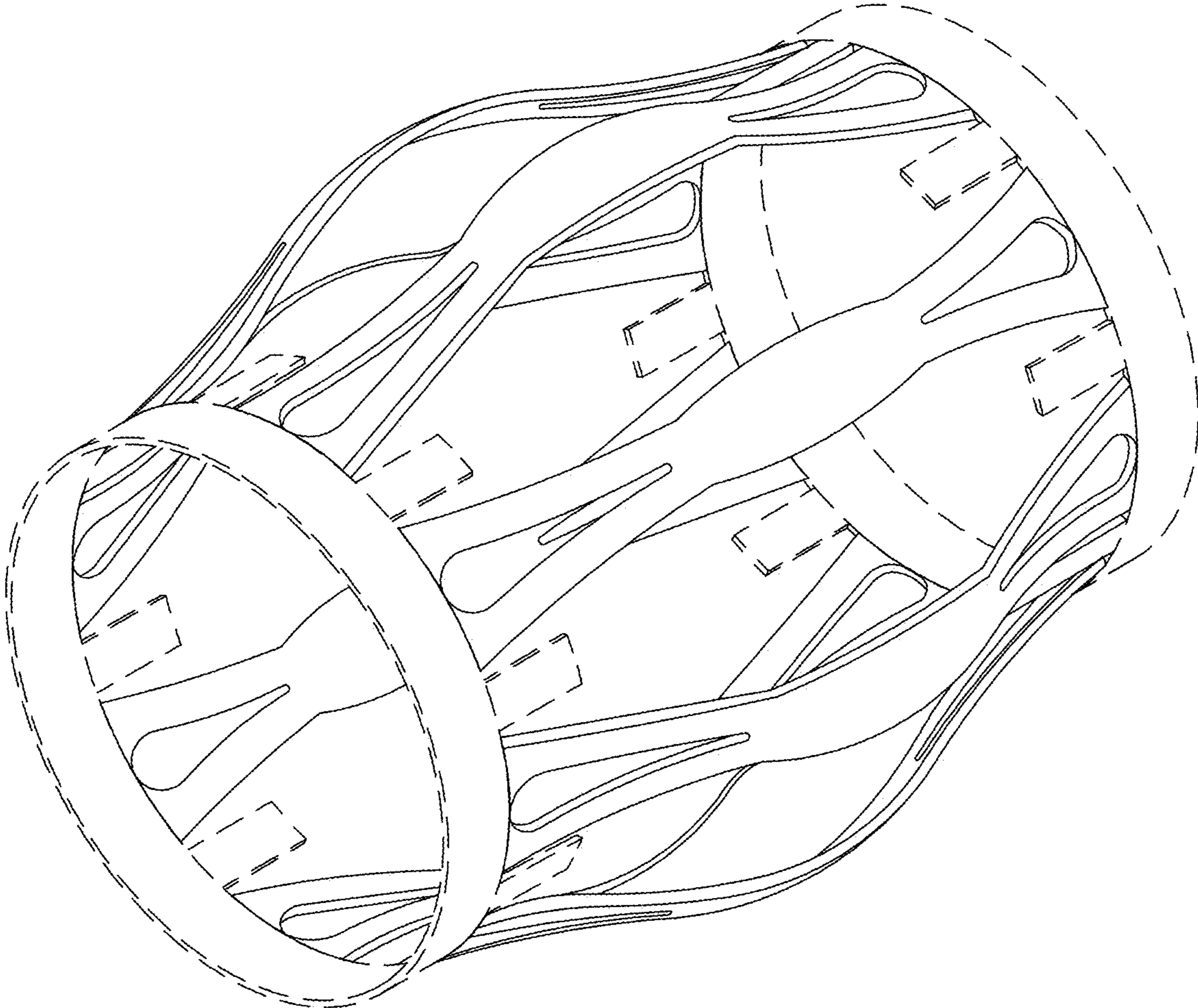


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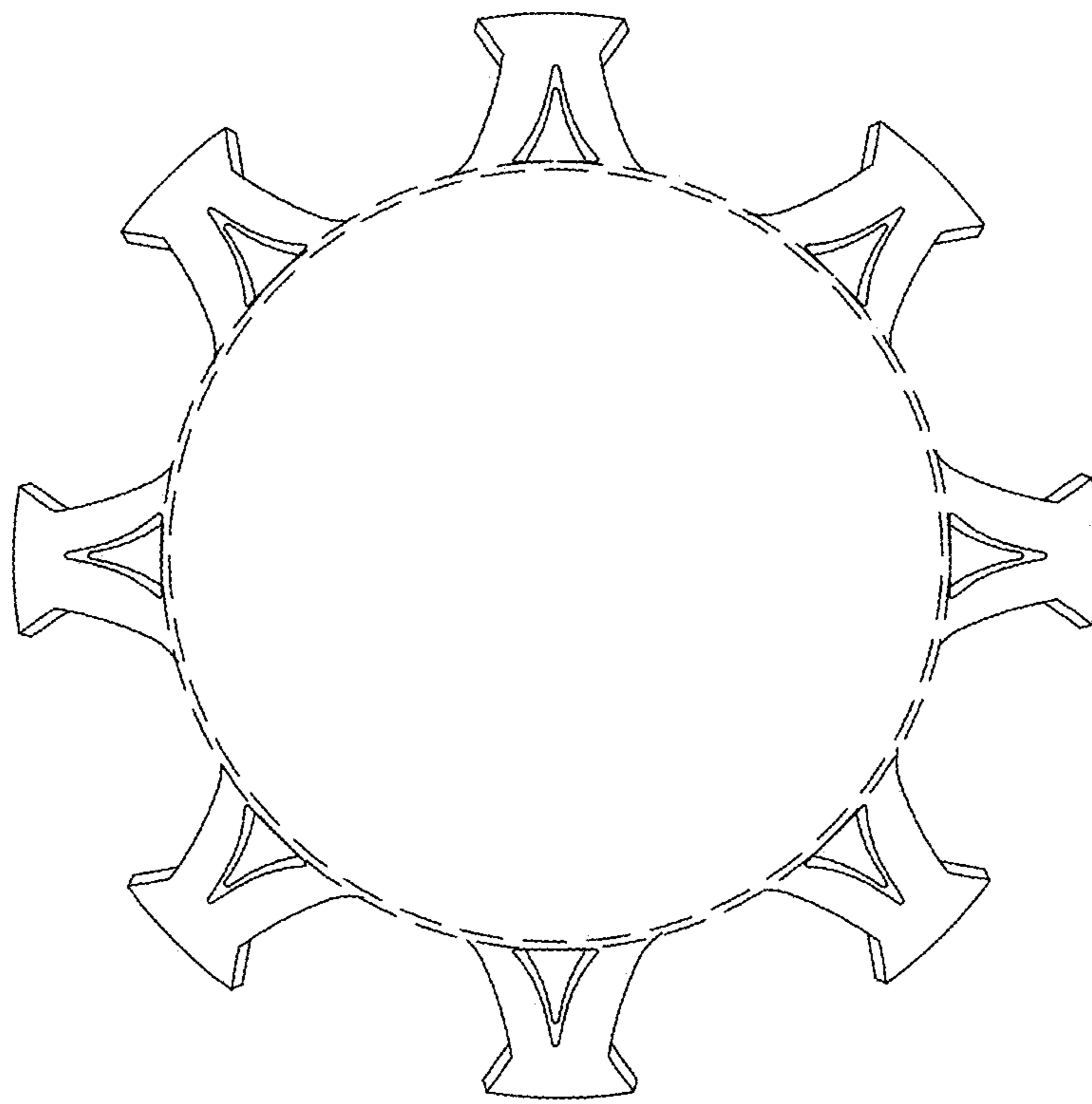


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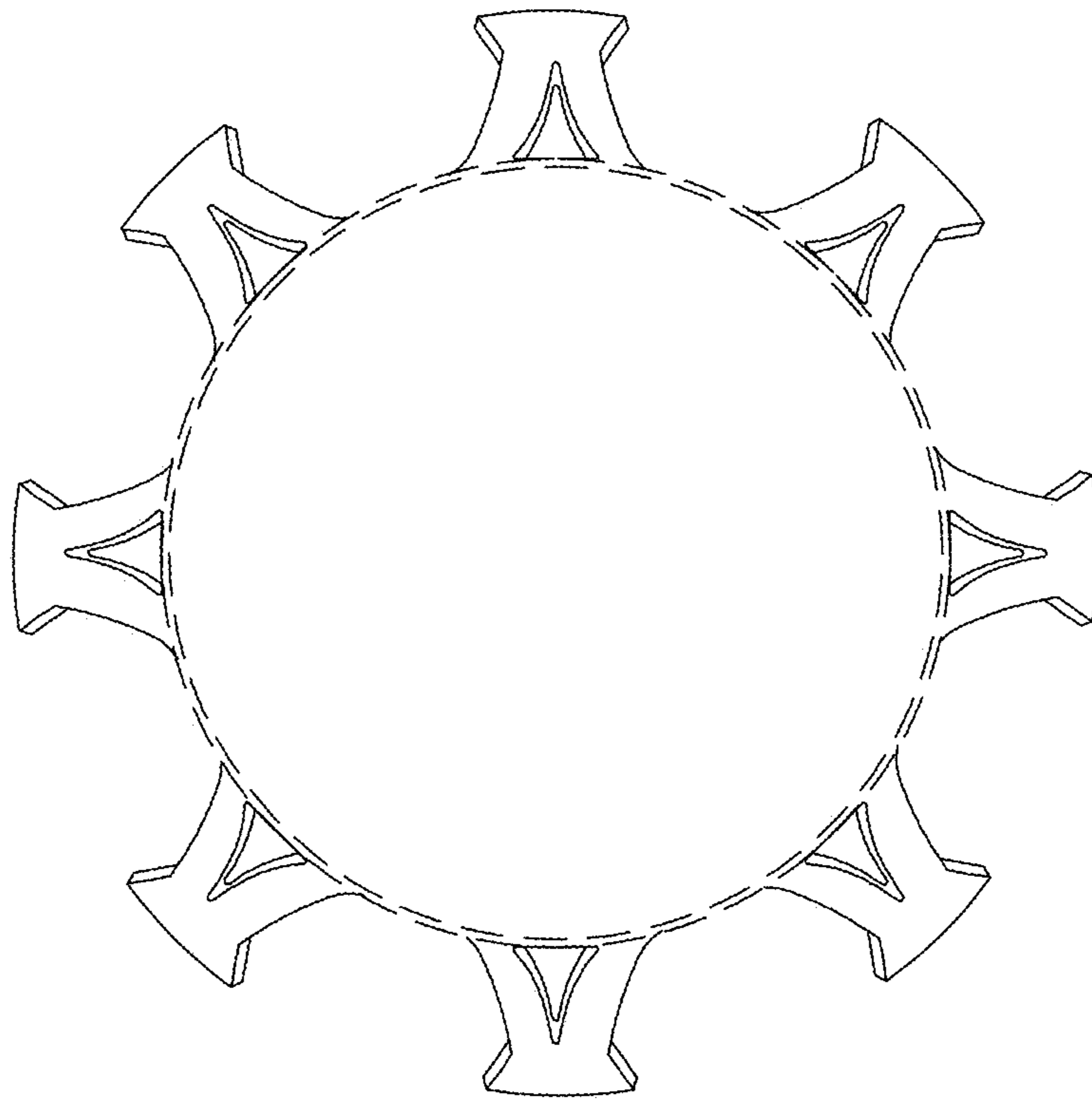


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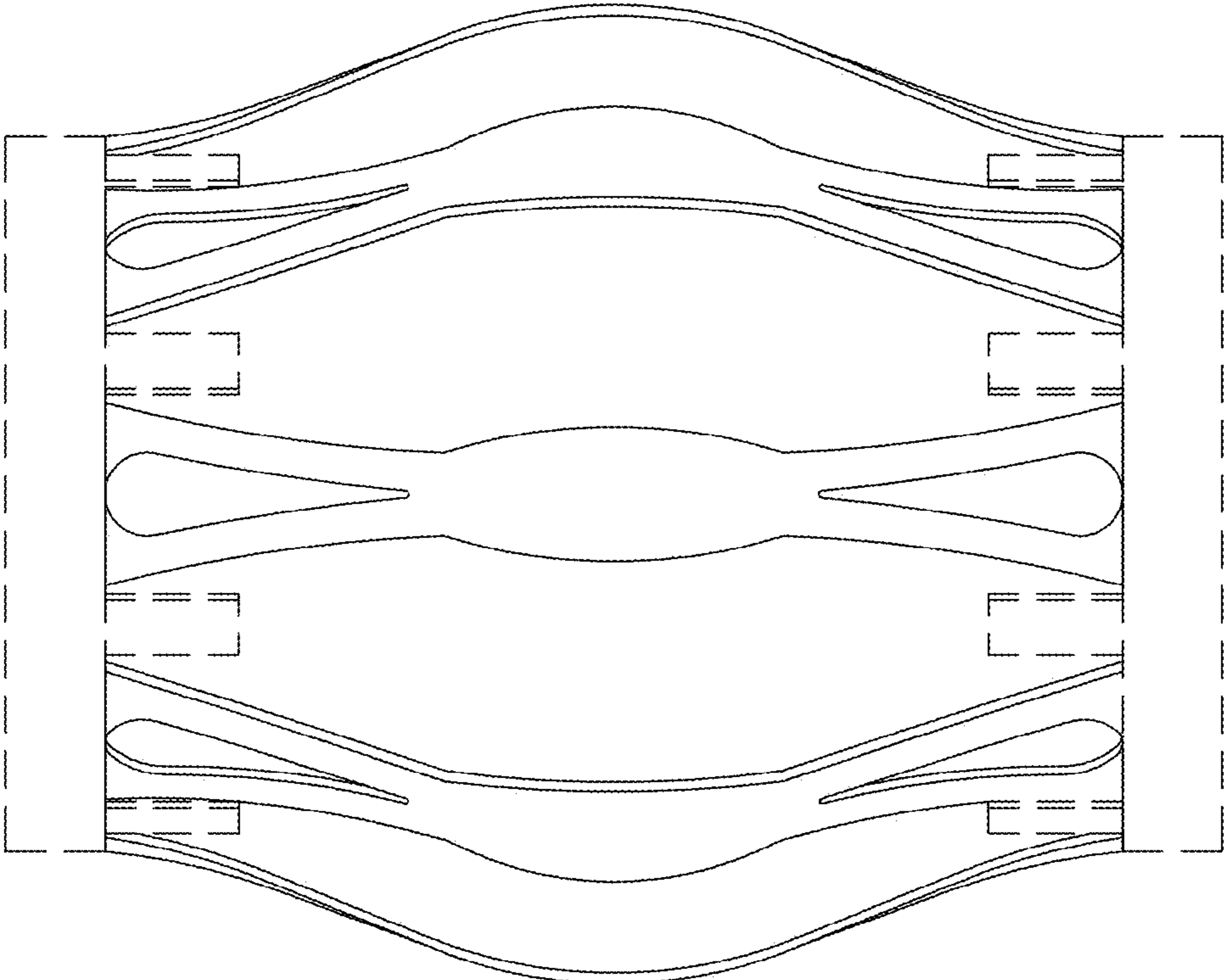


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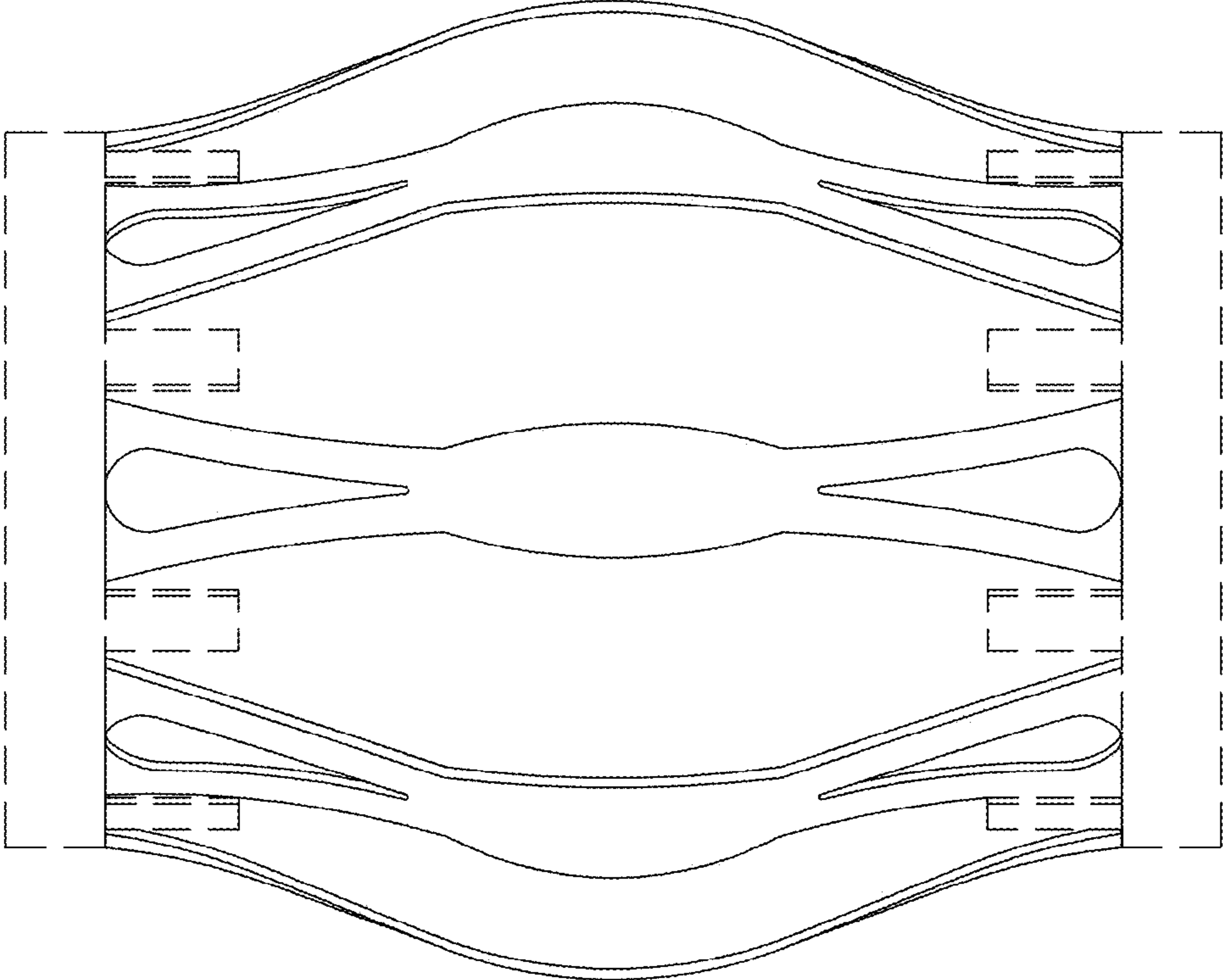


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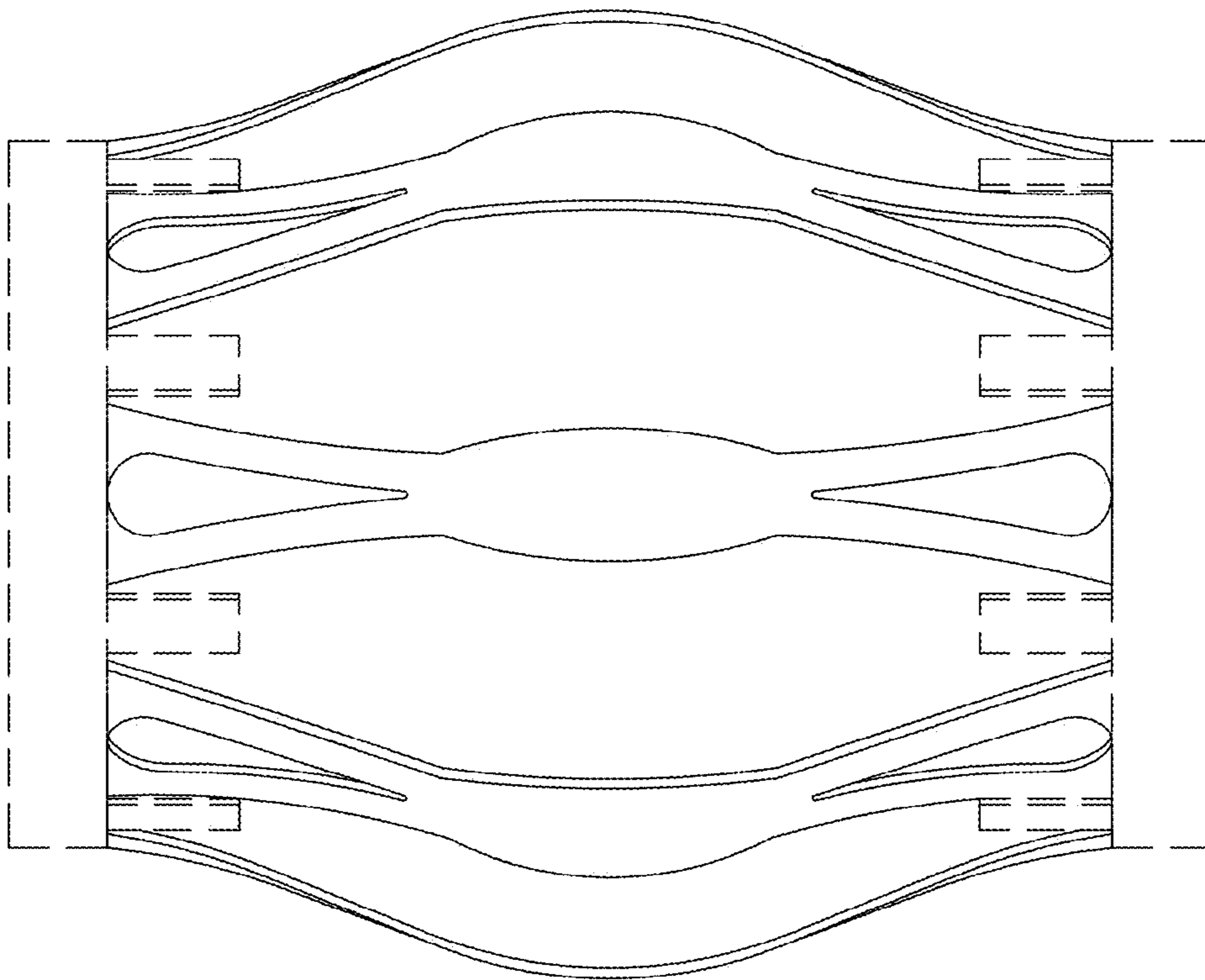


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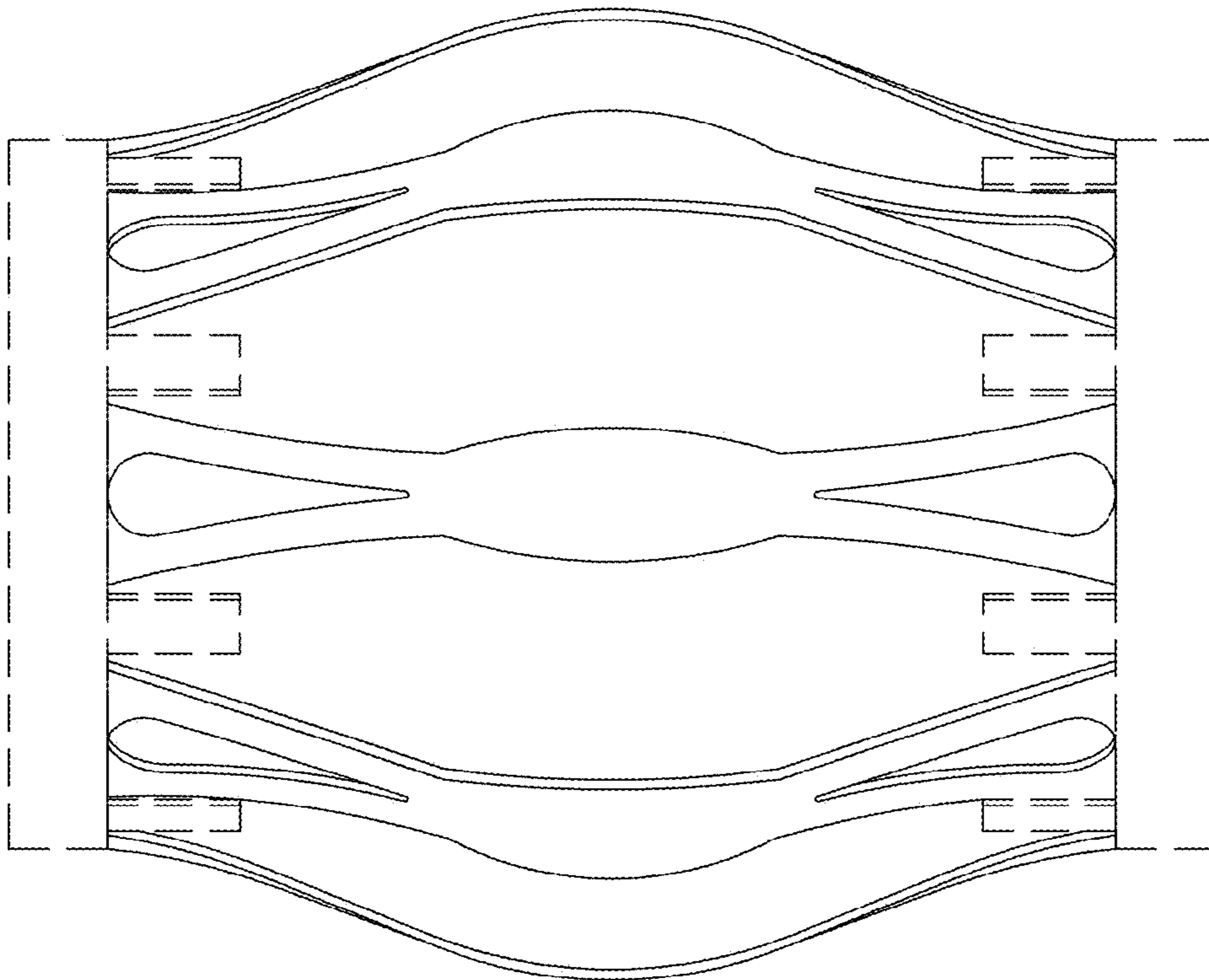


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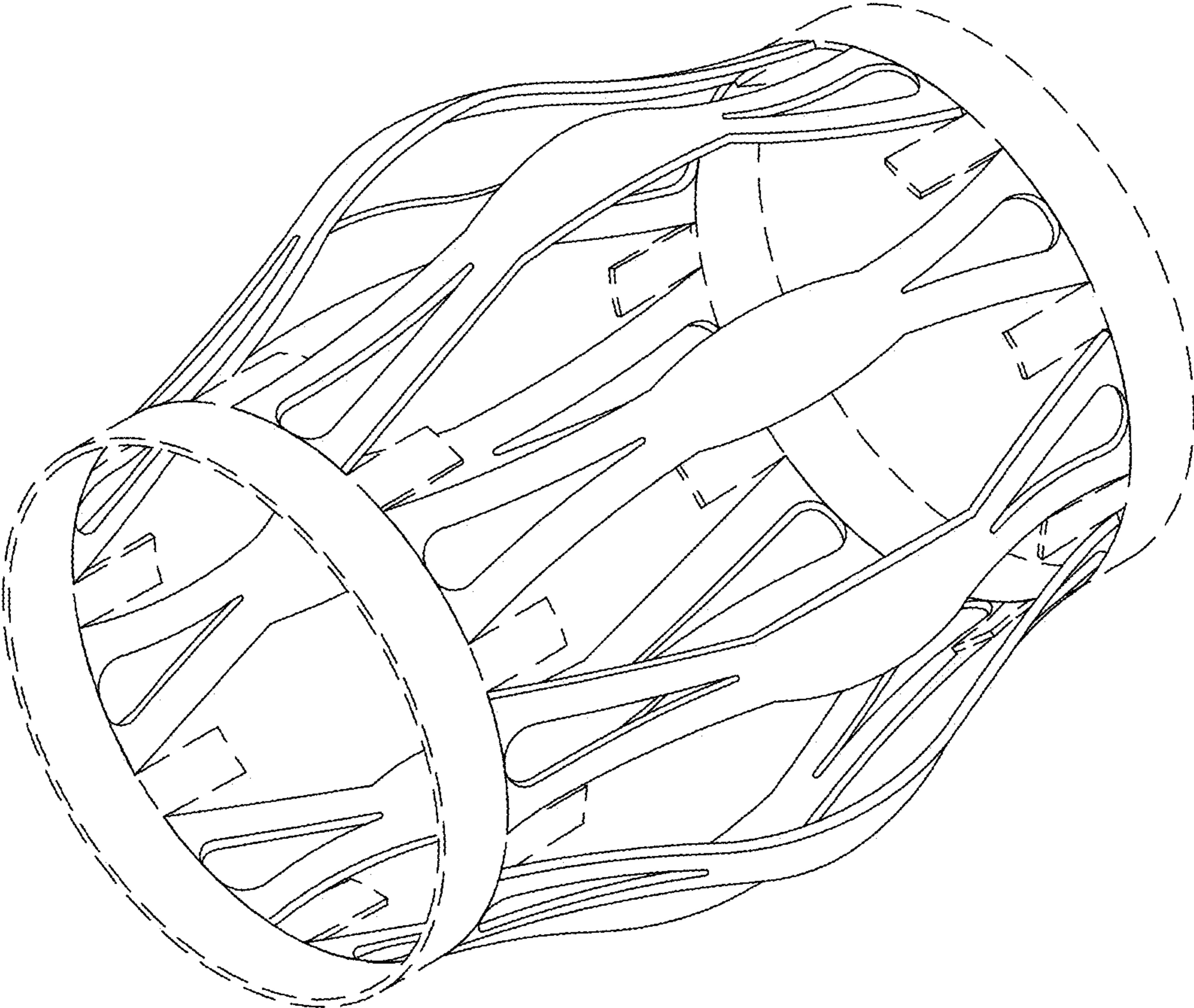


Figure 43



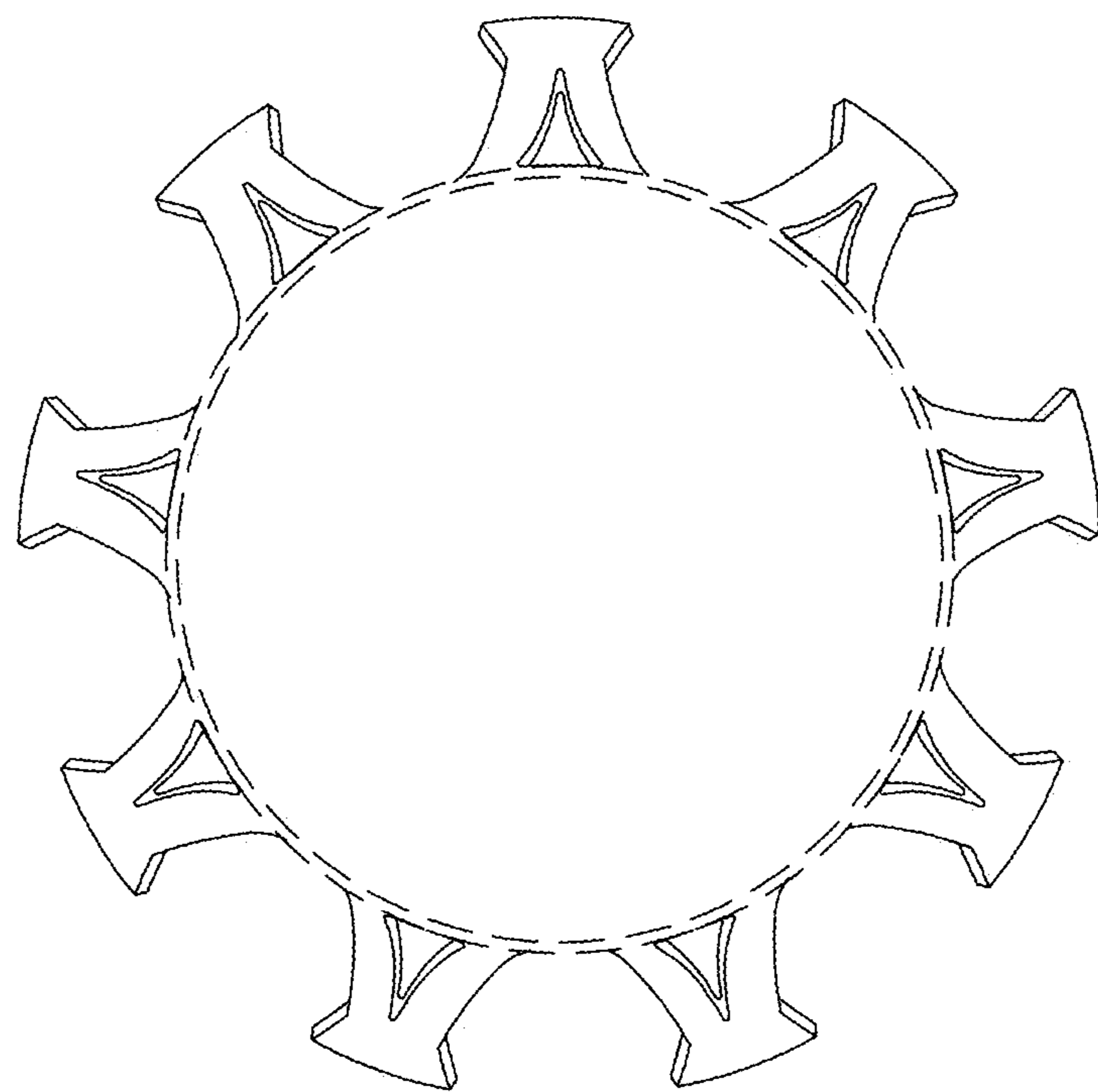


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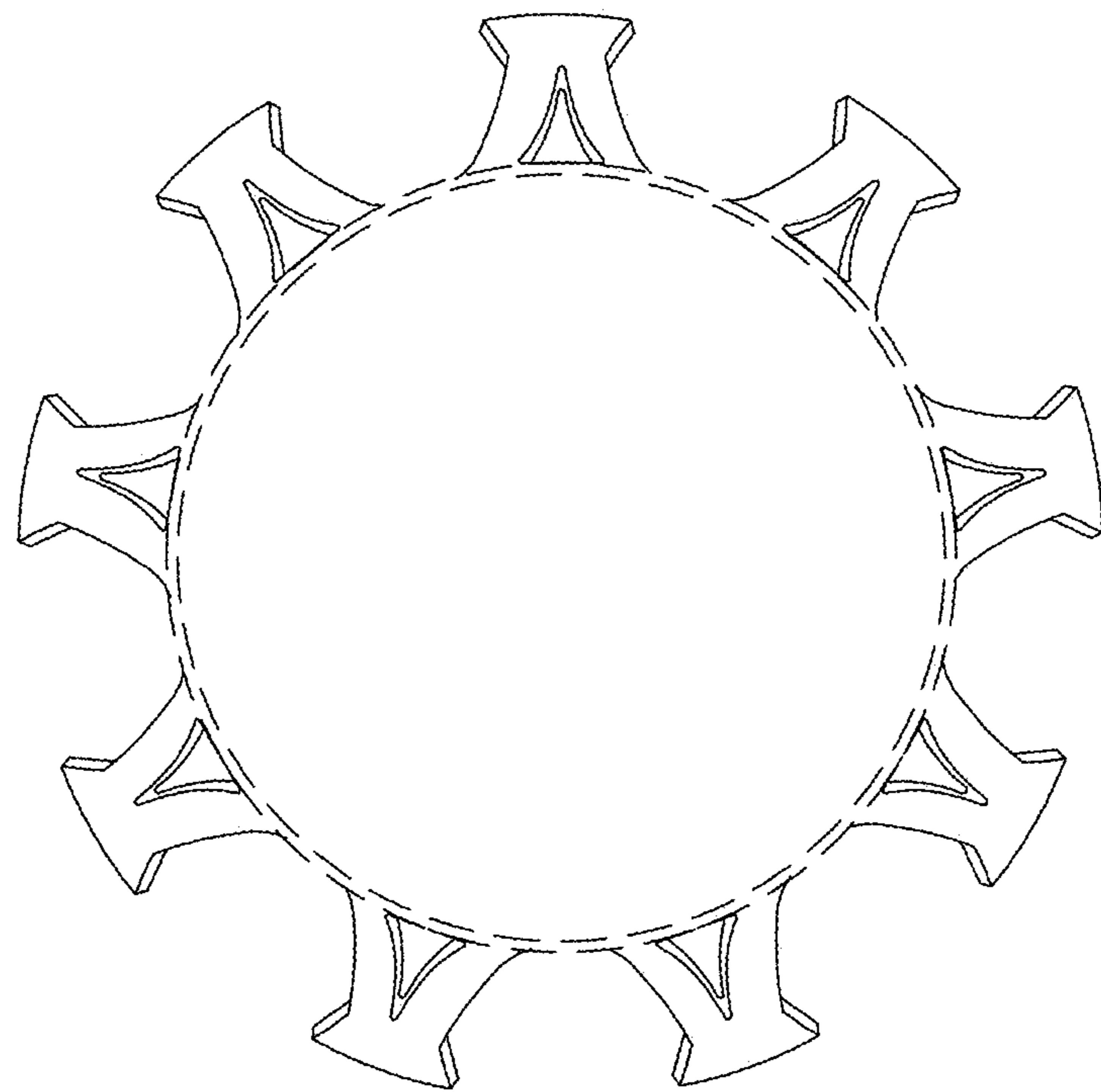


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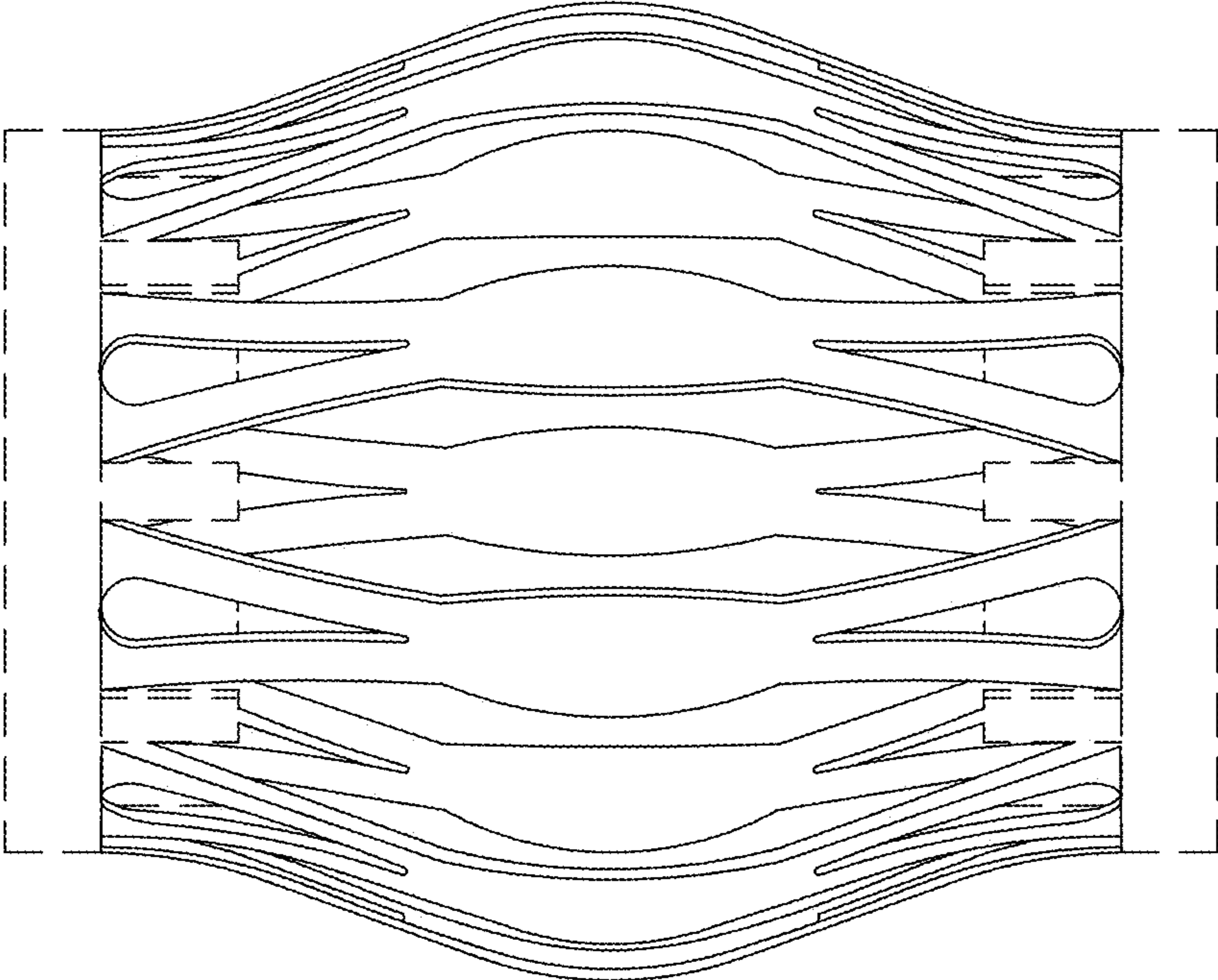


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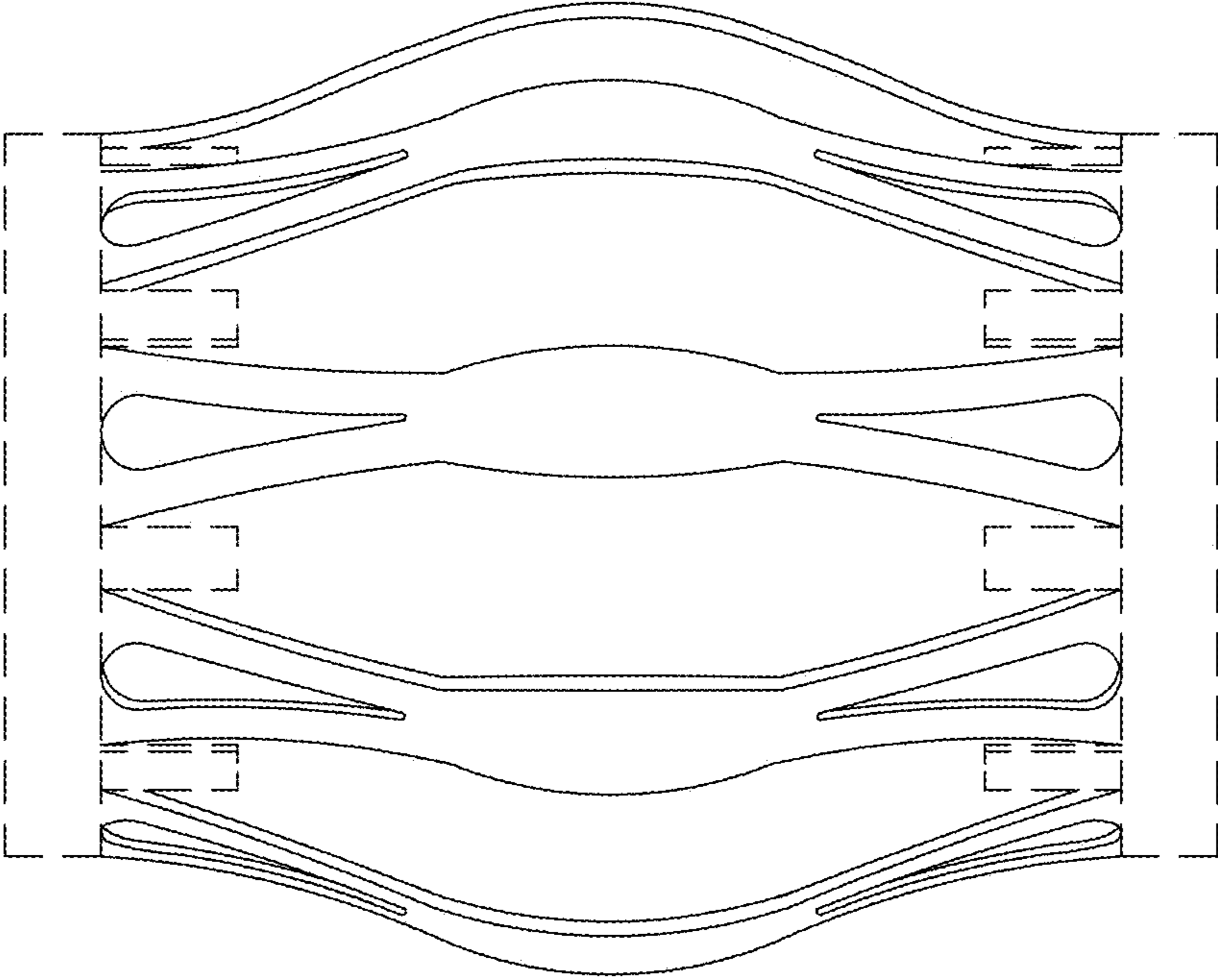


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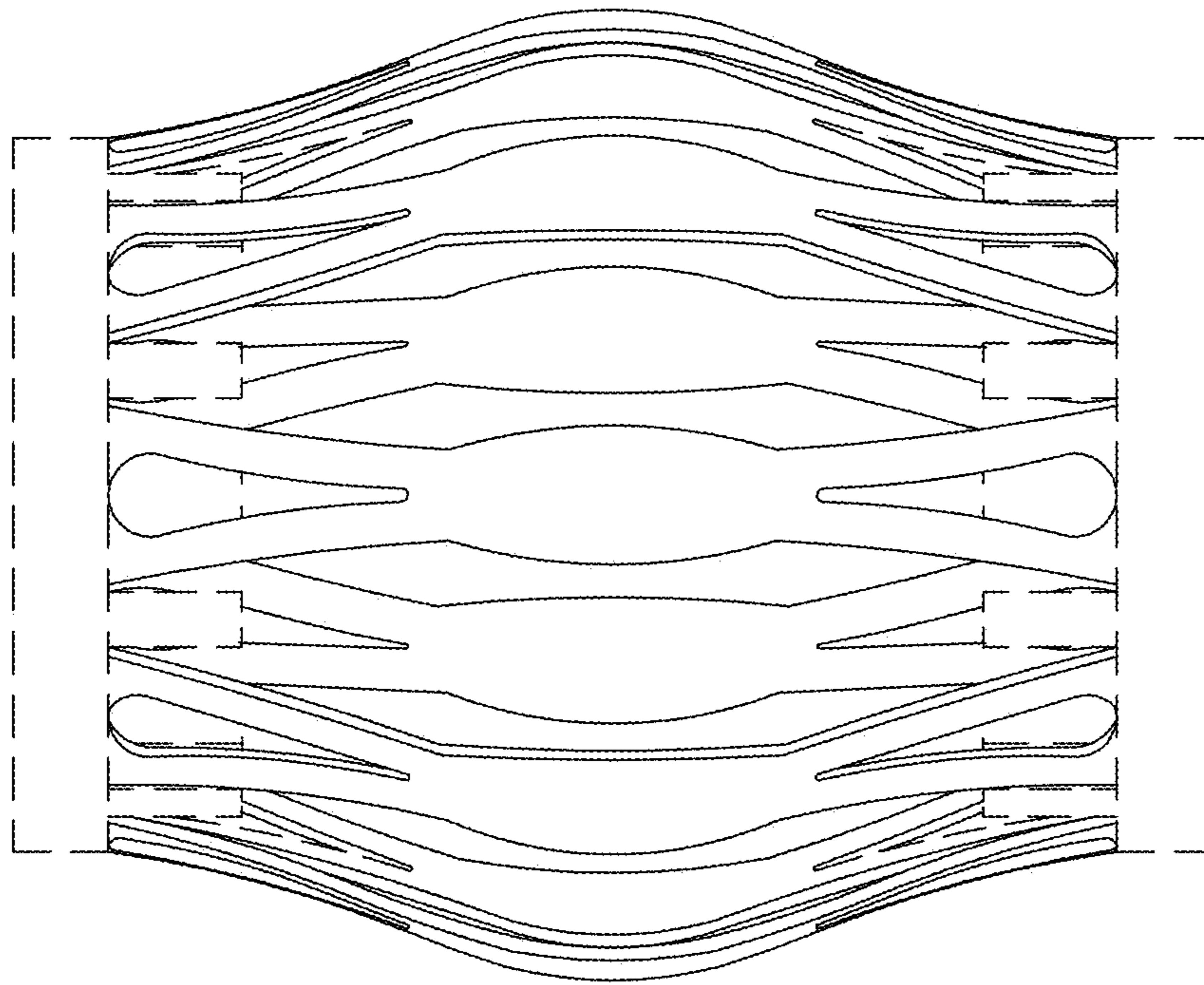


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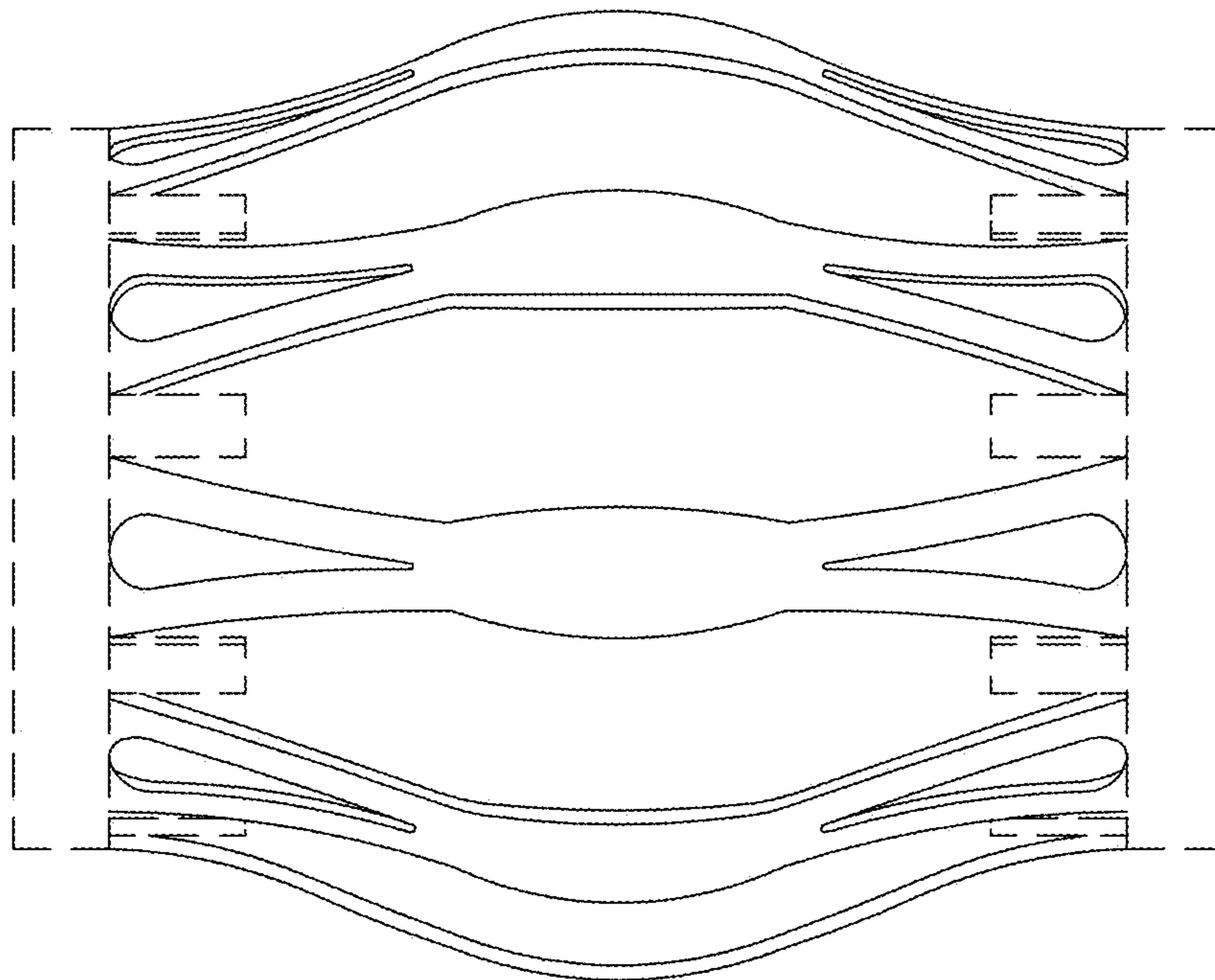


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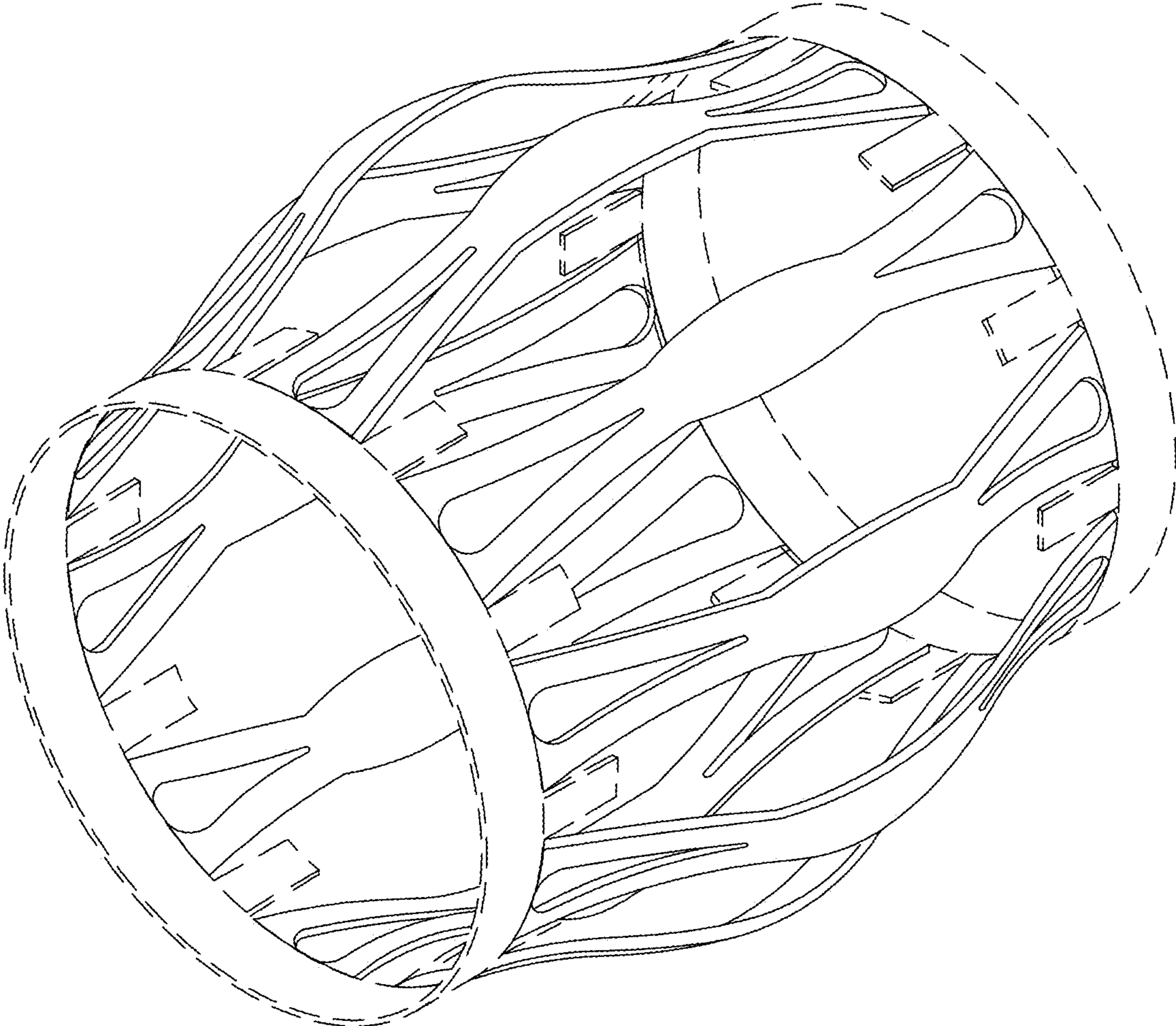


Figure 50



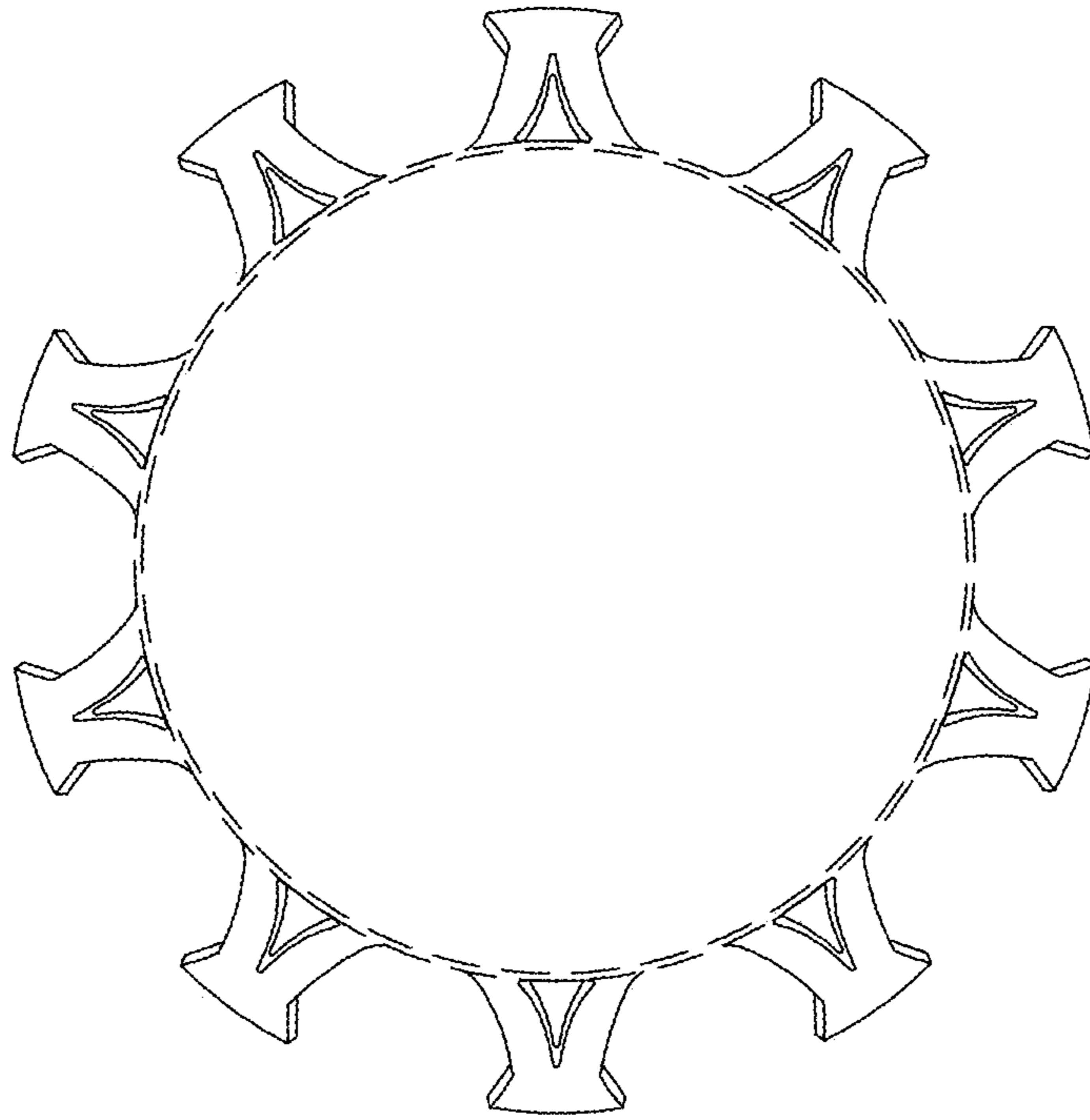


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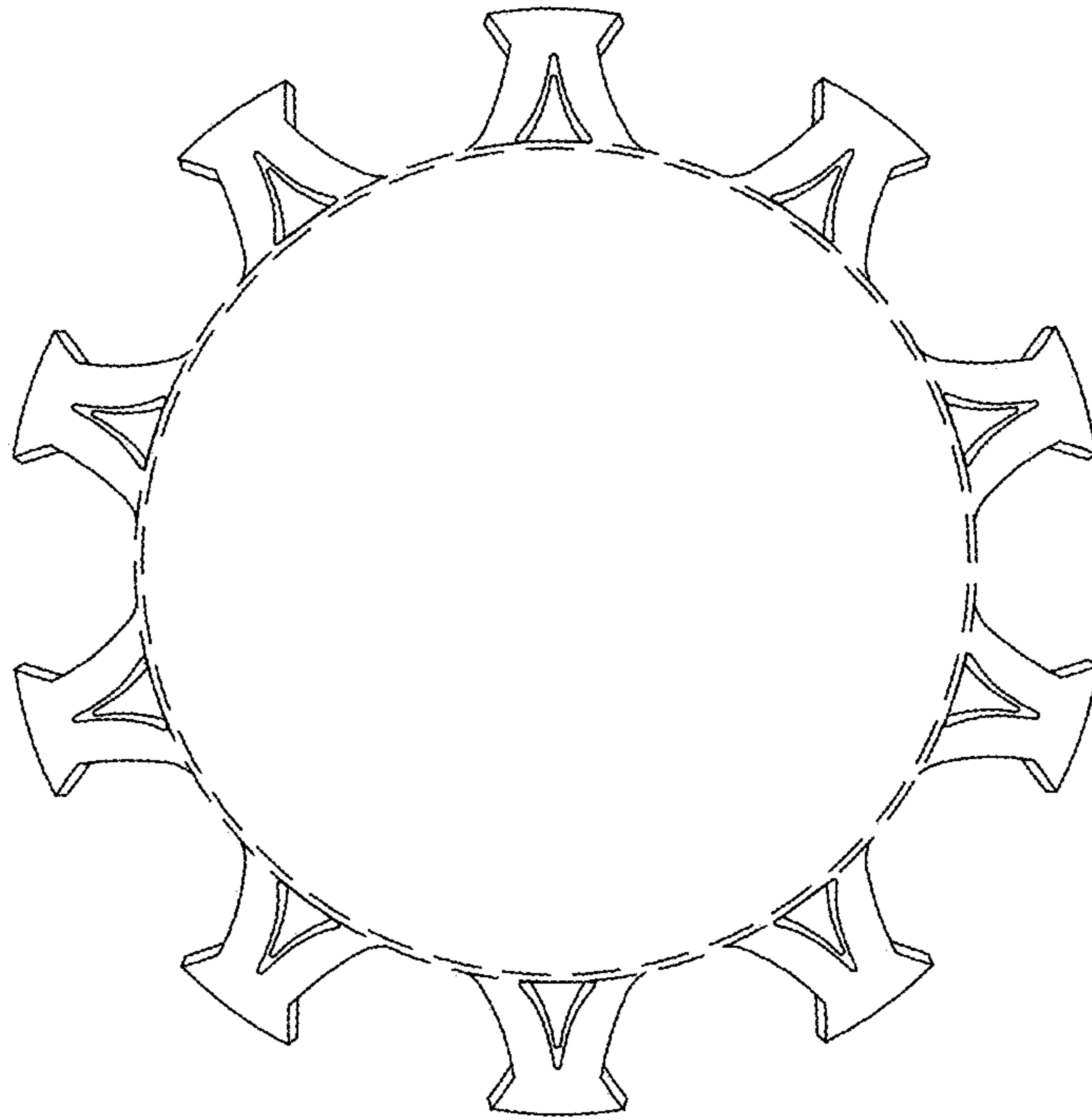


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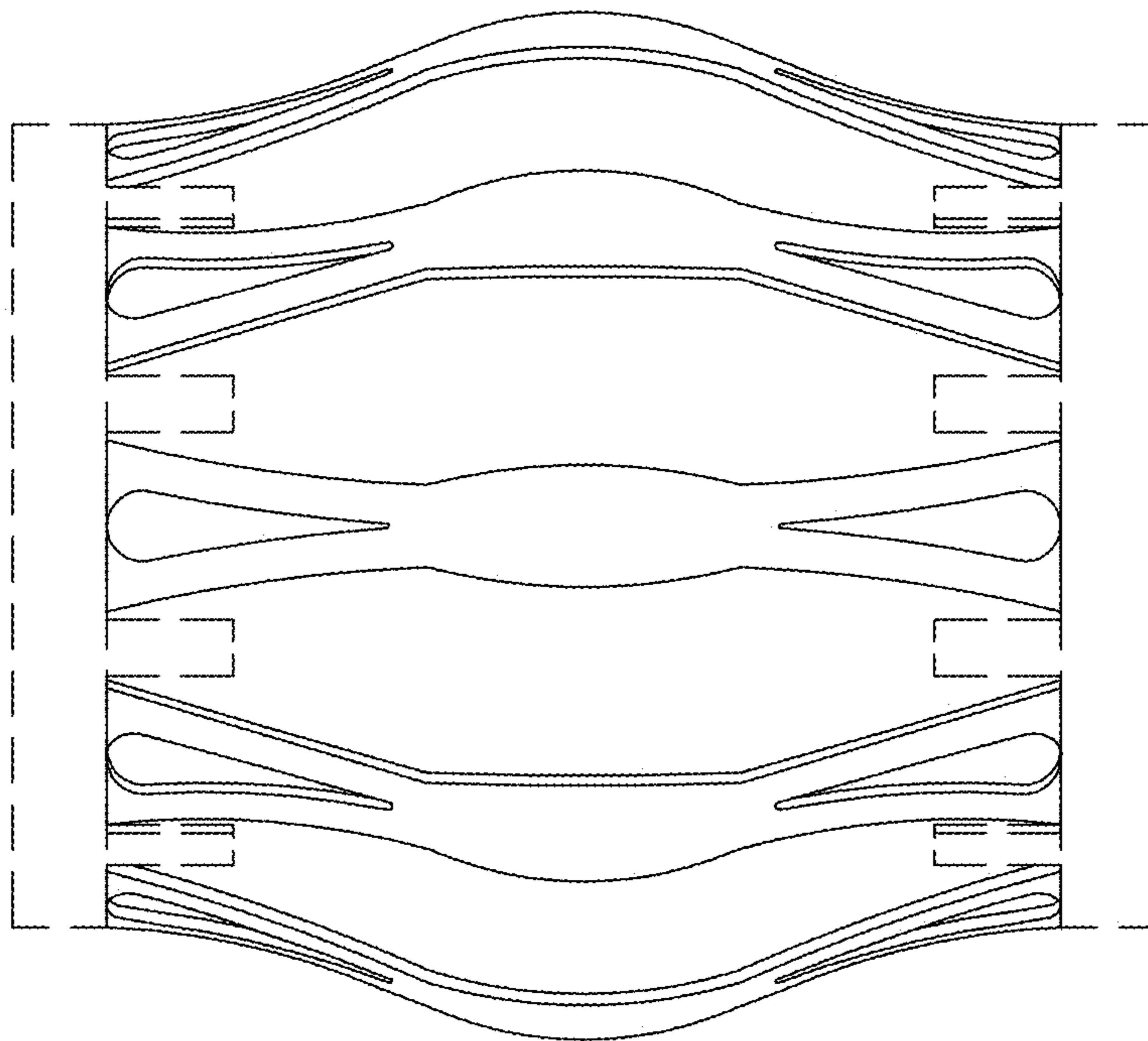


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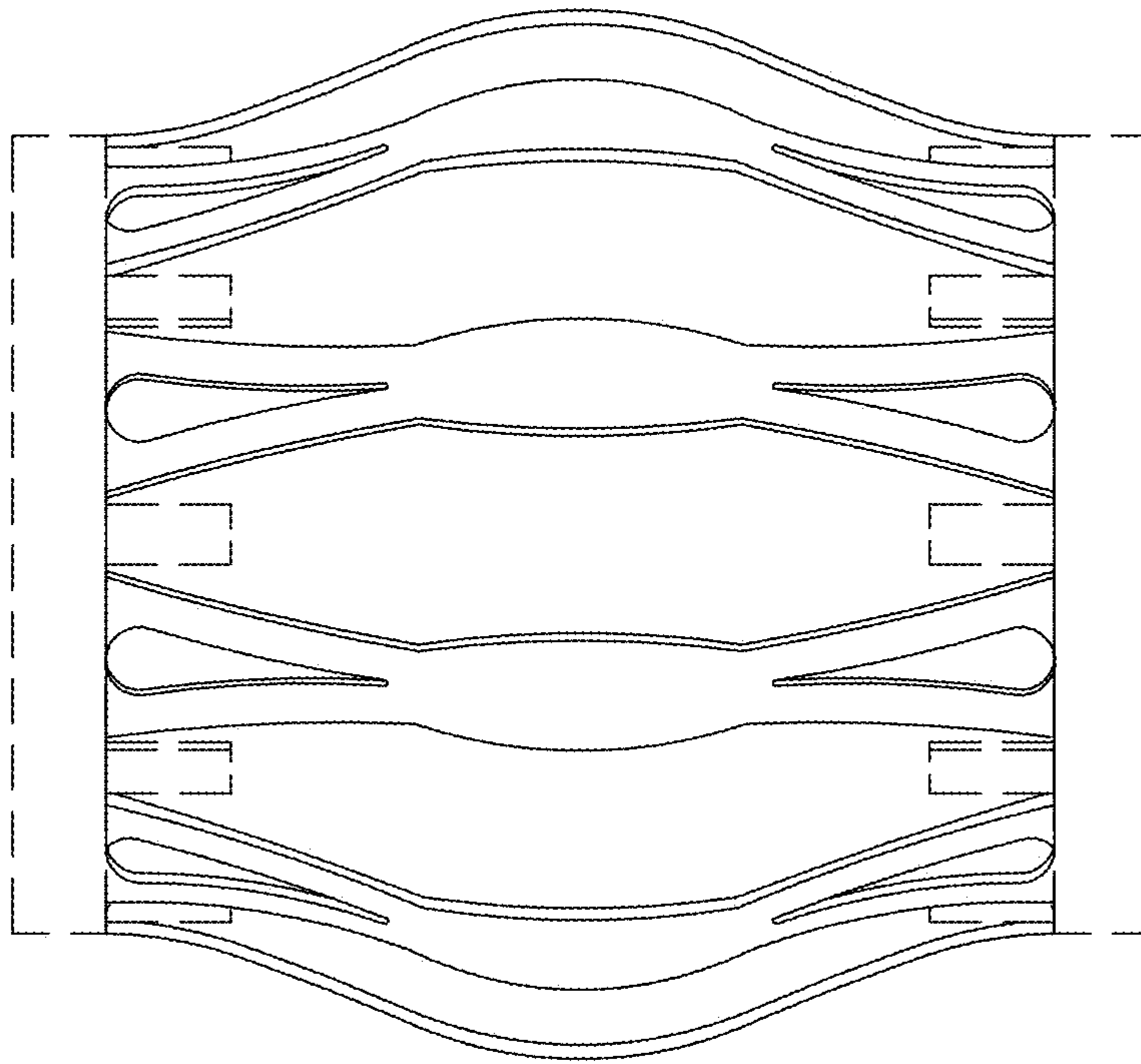


Figure 54

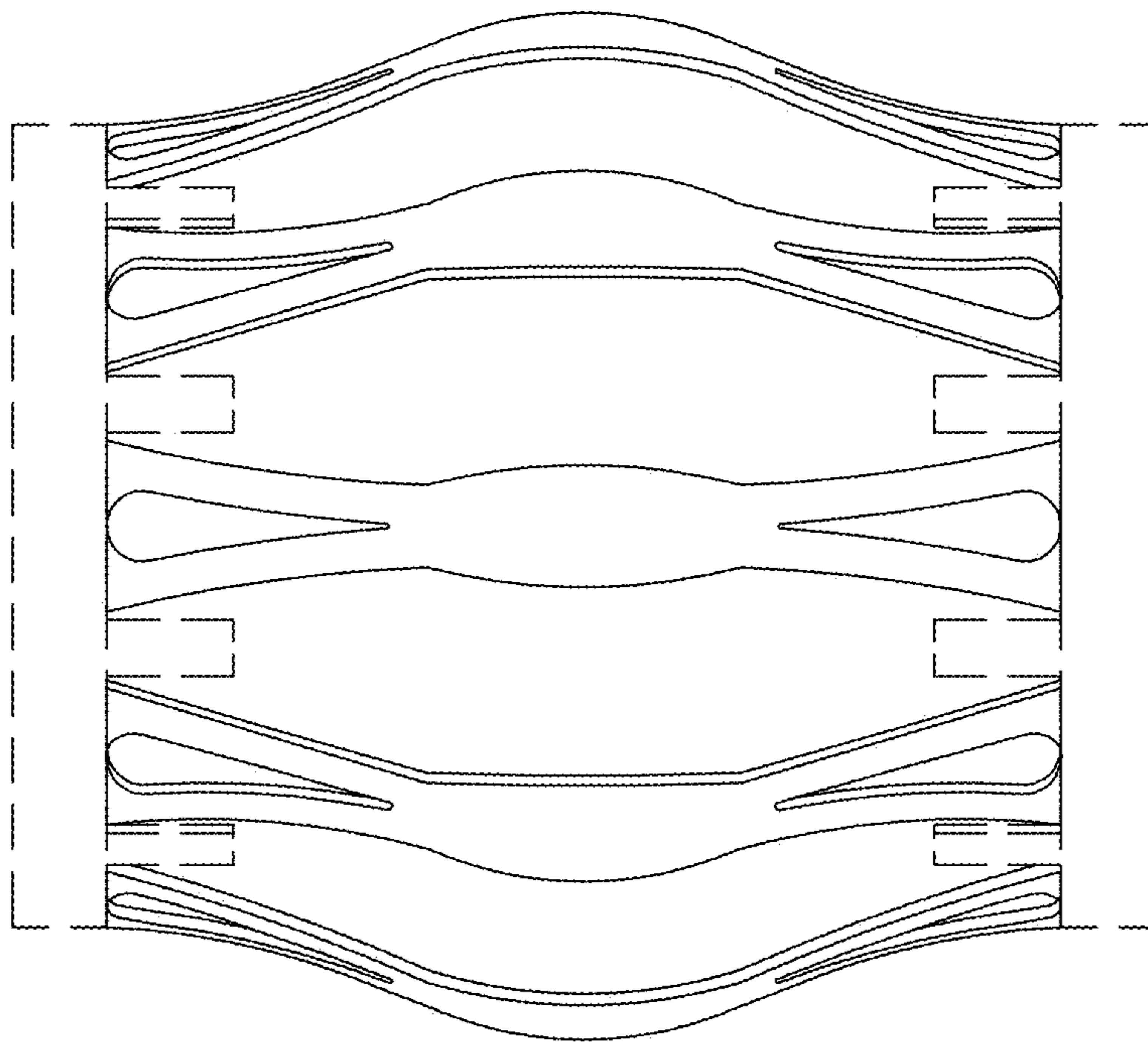


Figure 55

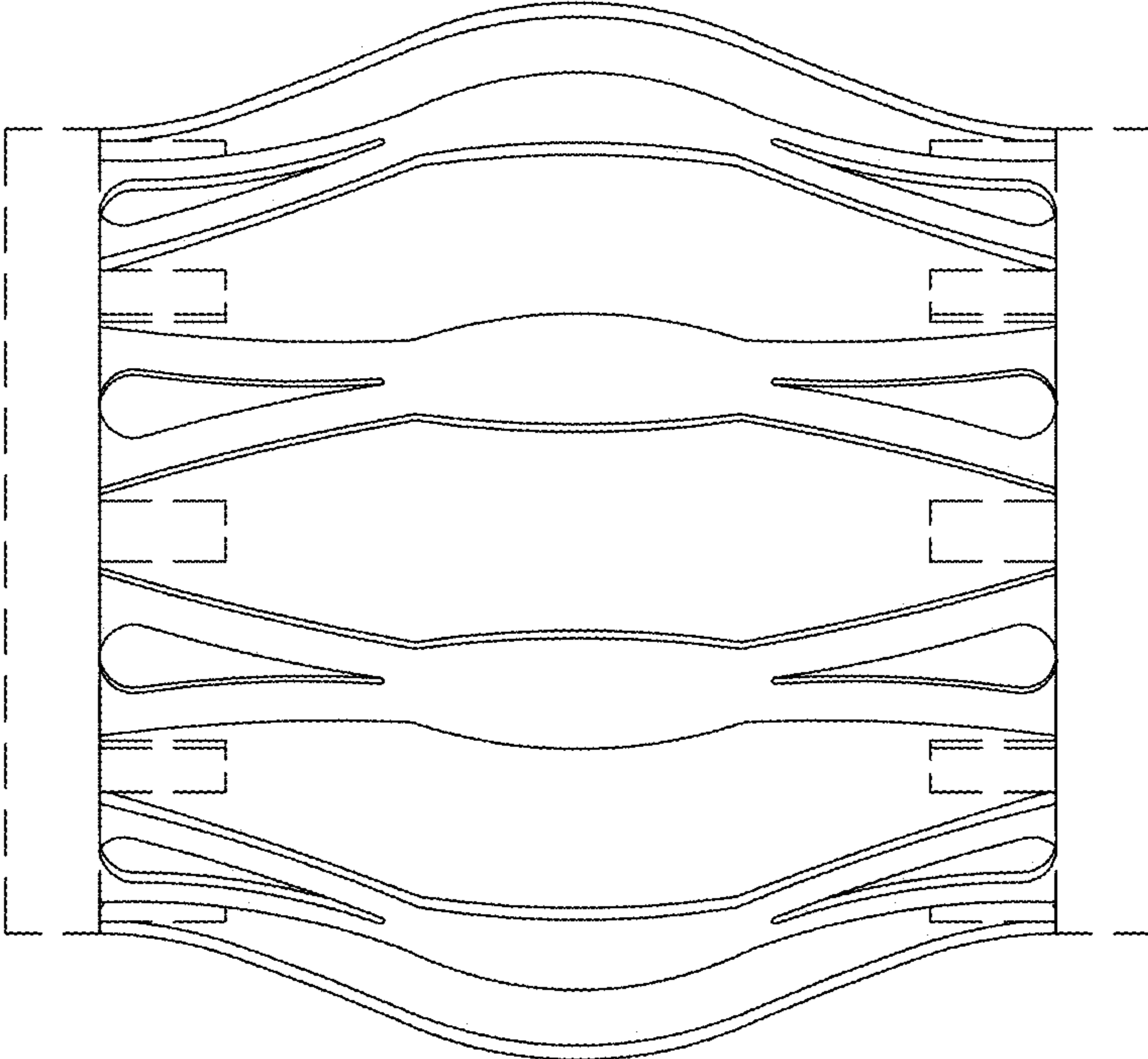


Figure 56



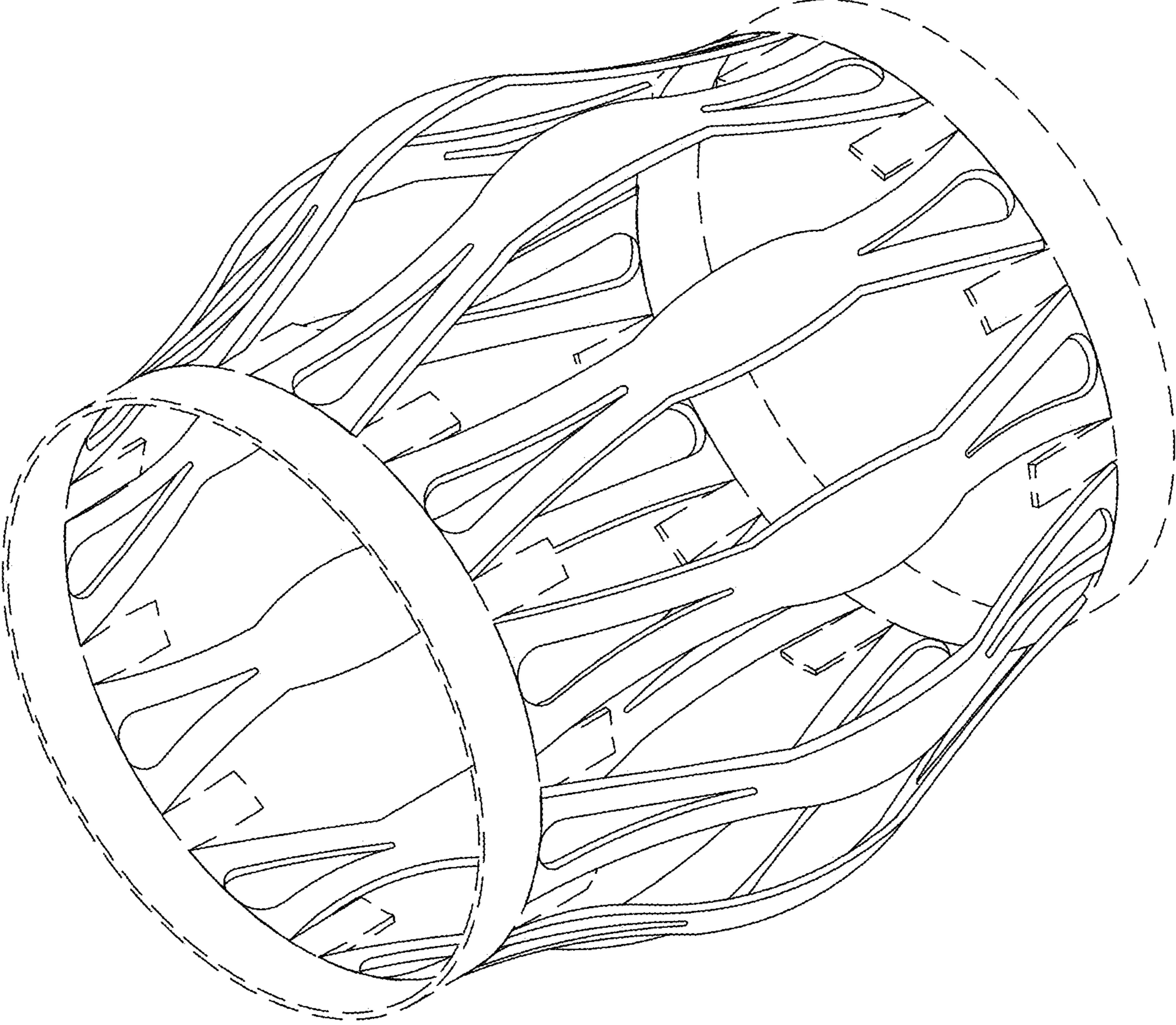


Figure 57

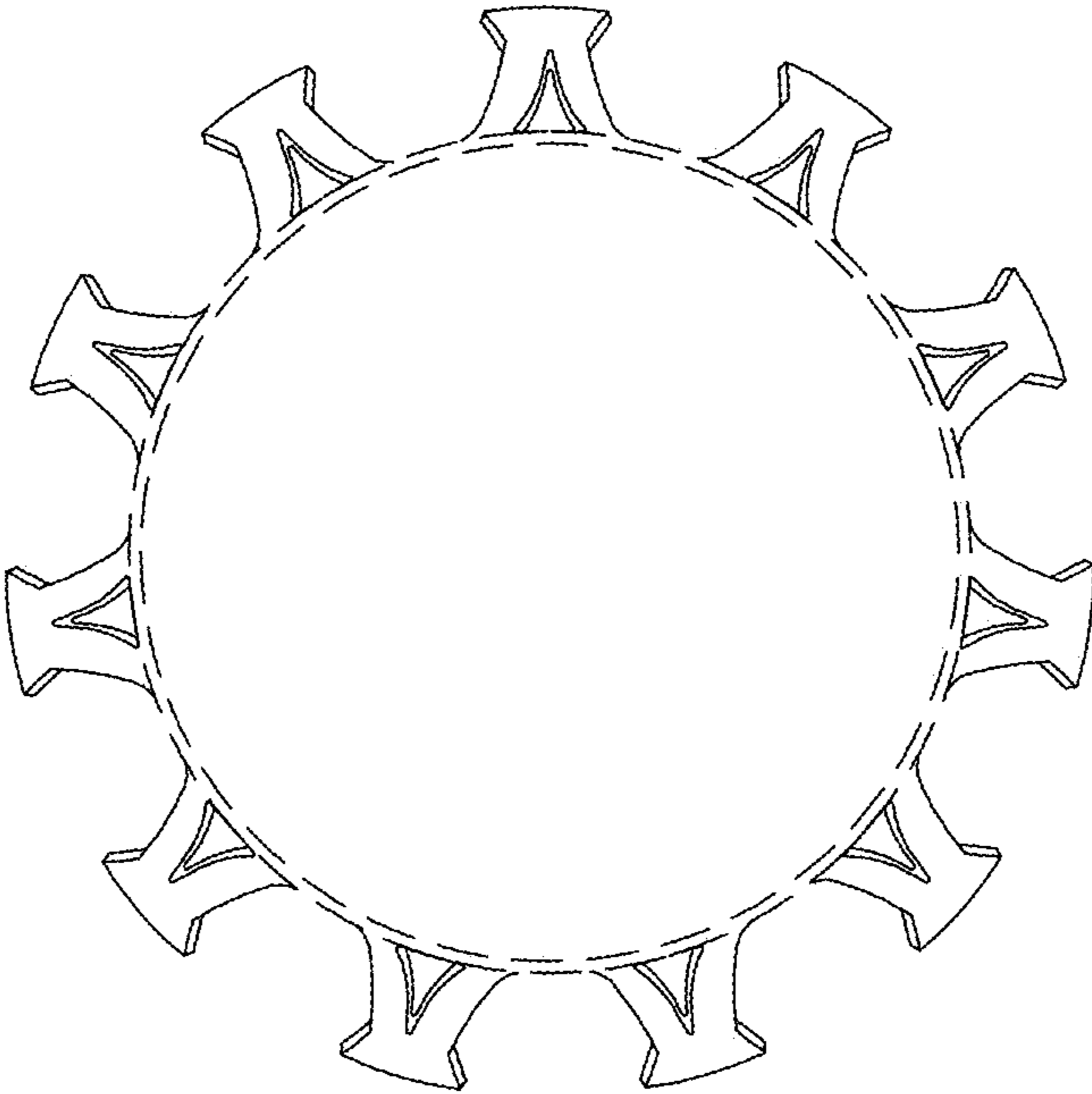


Figure 58

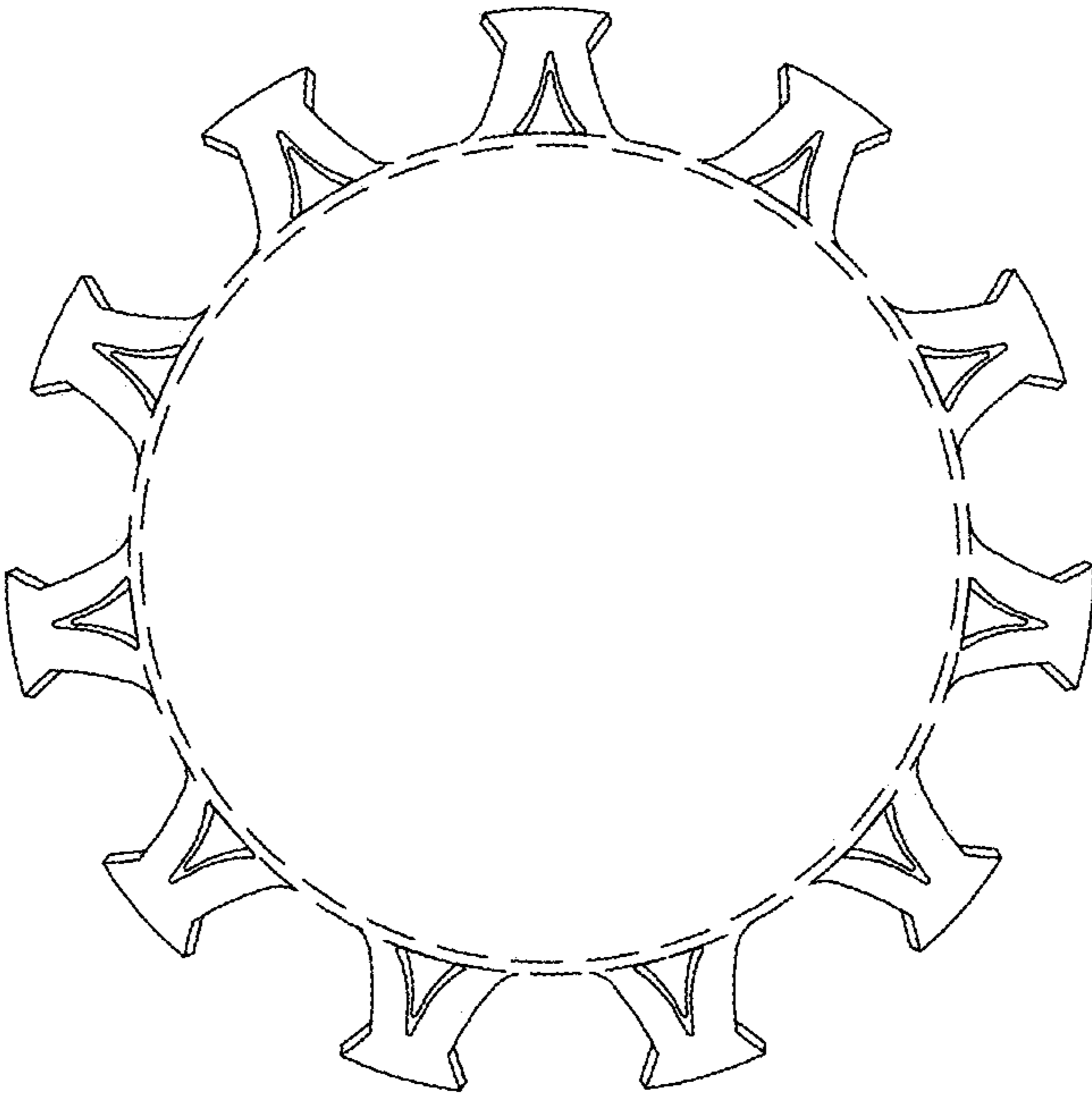


Figure 59

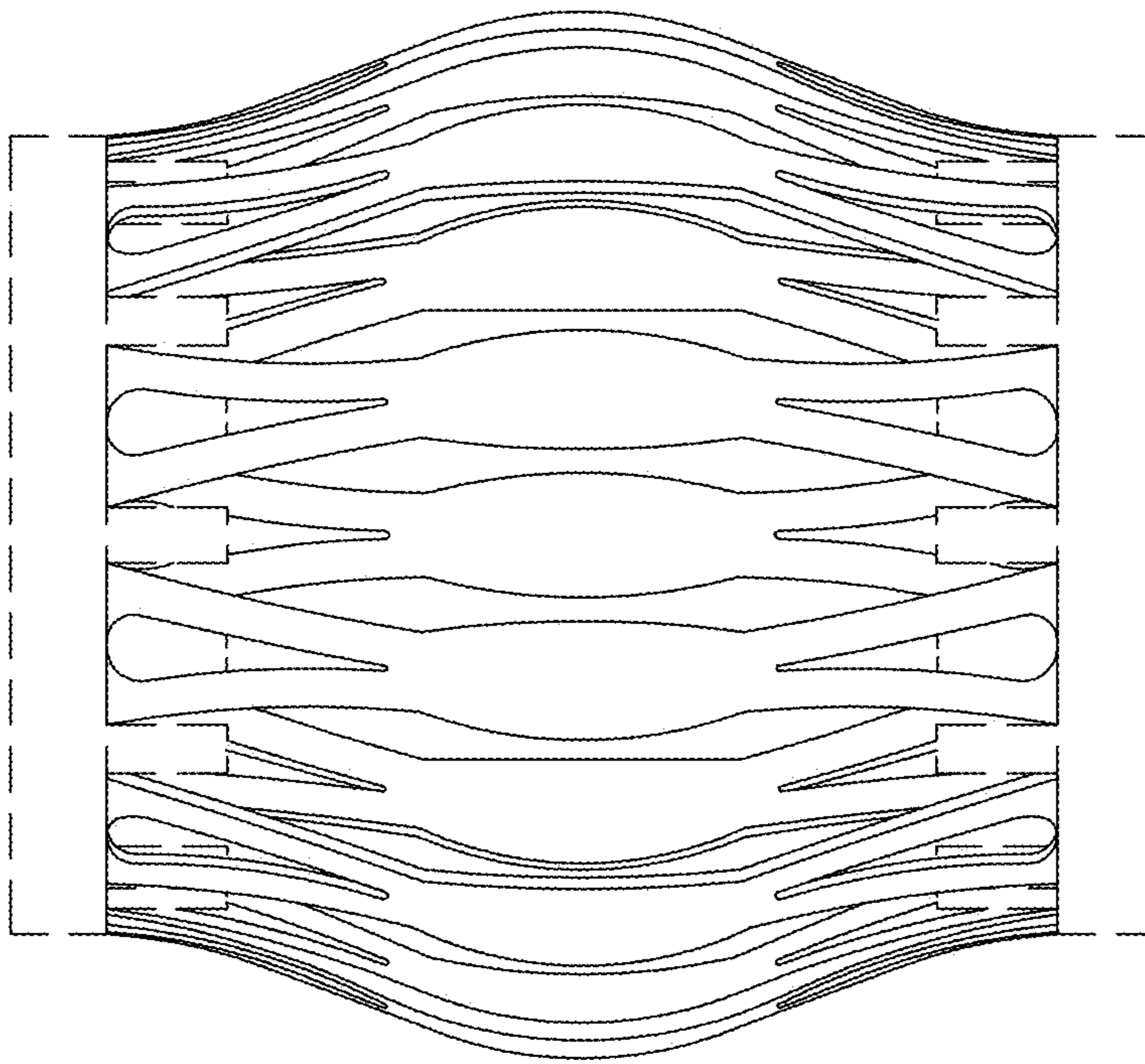


Figure 60

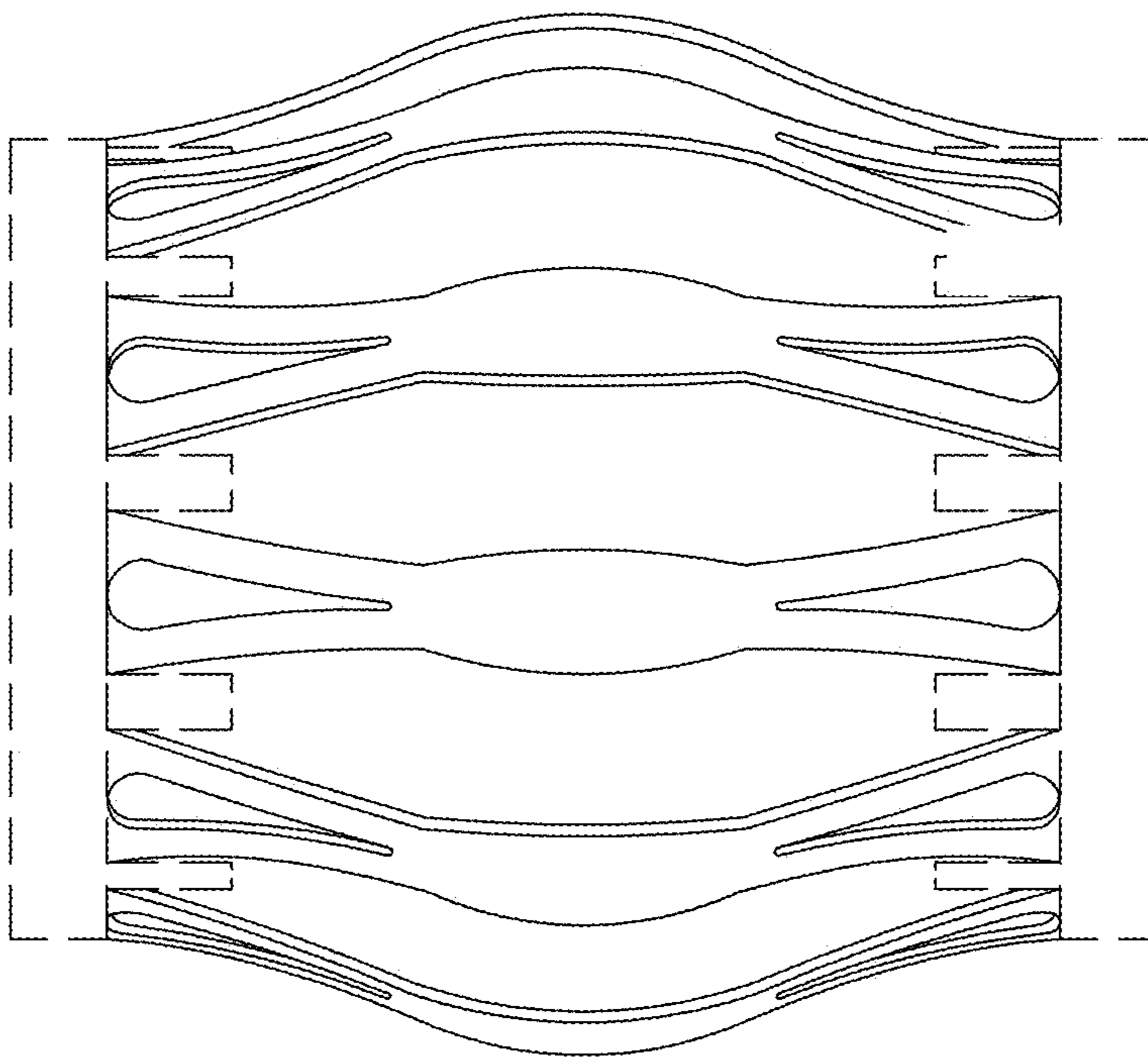


Figure 61

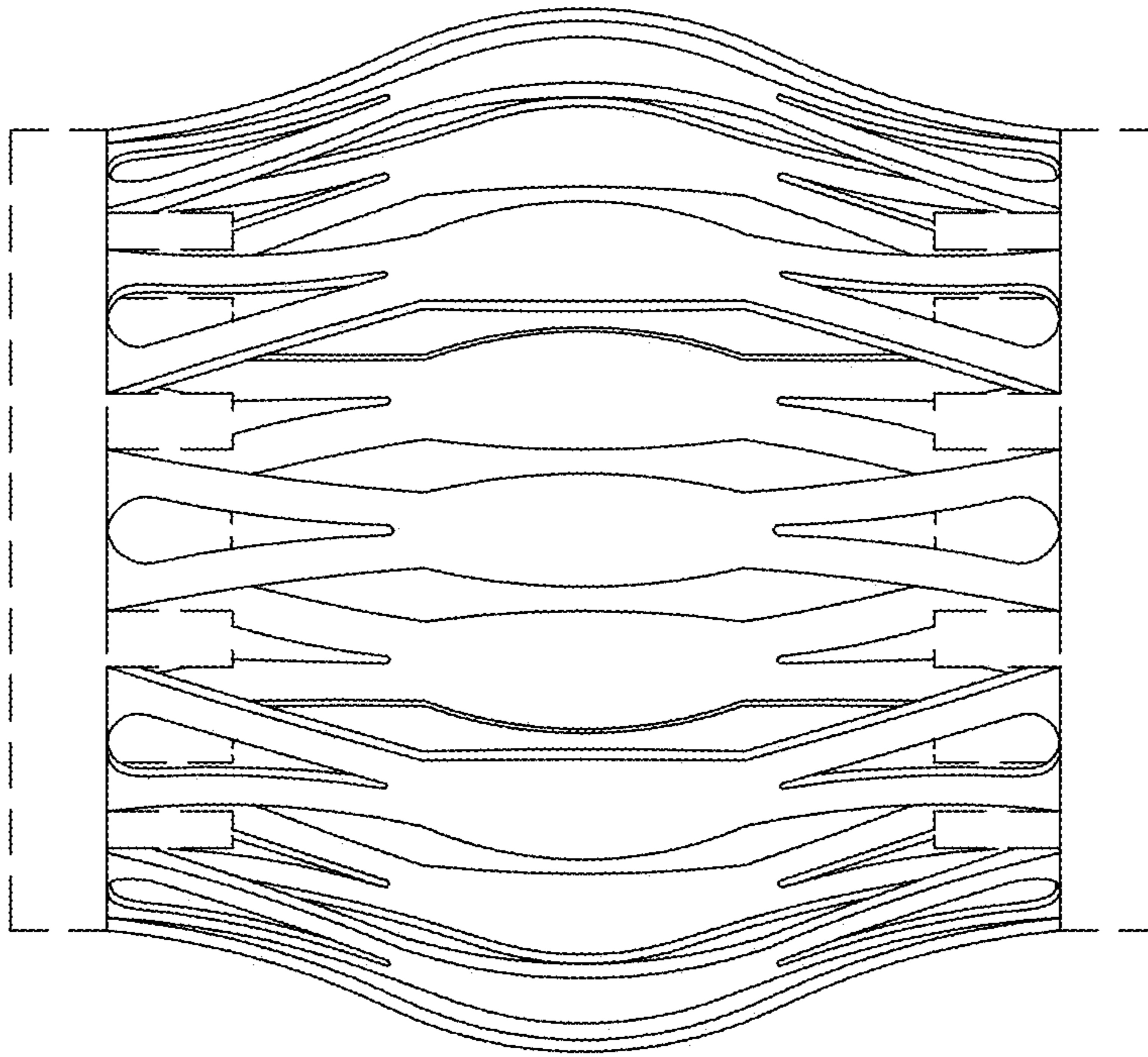


Figure 62

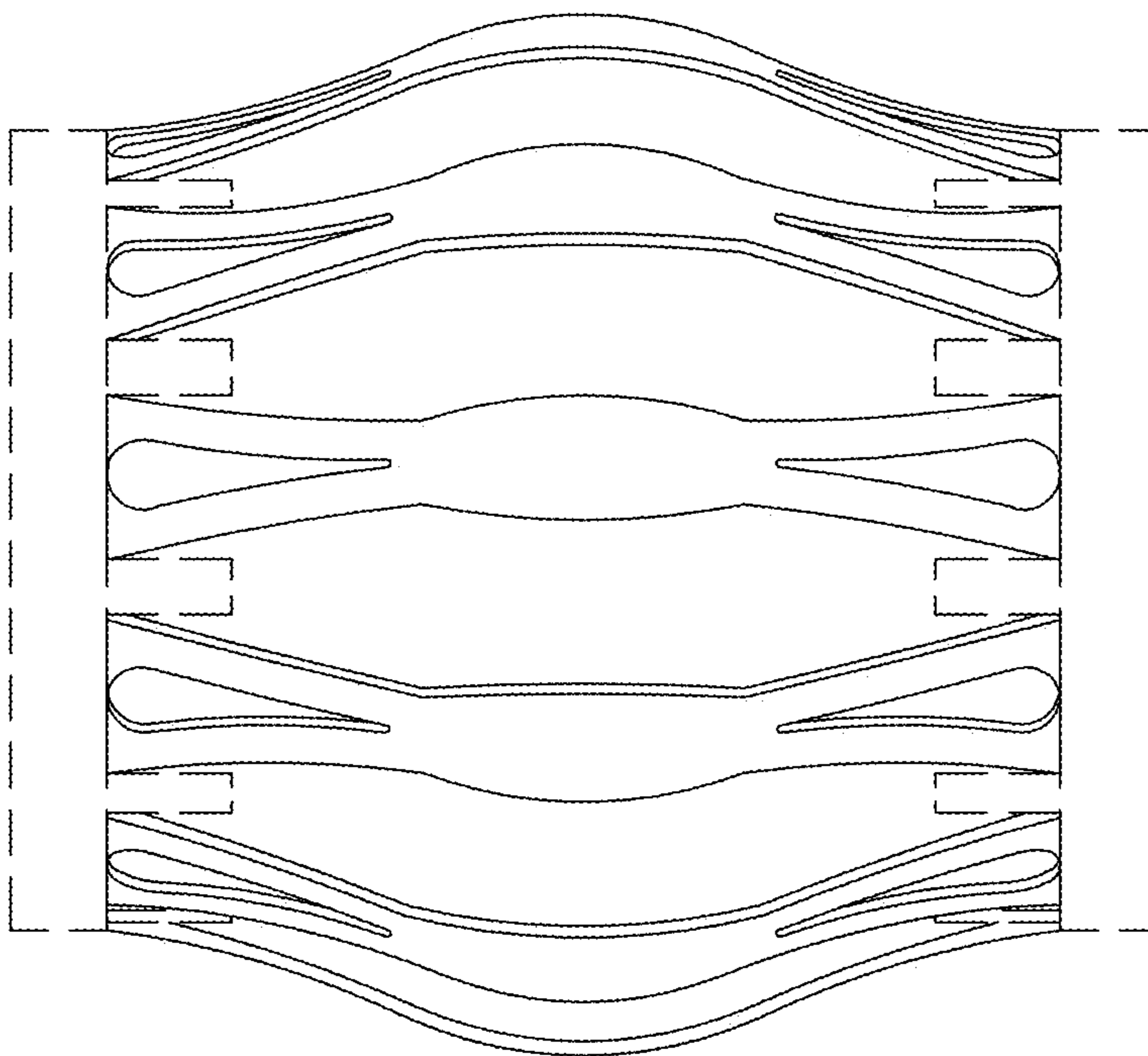


Figure 63



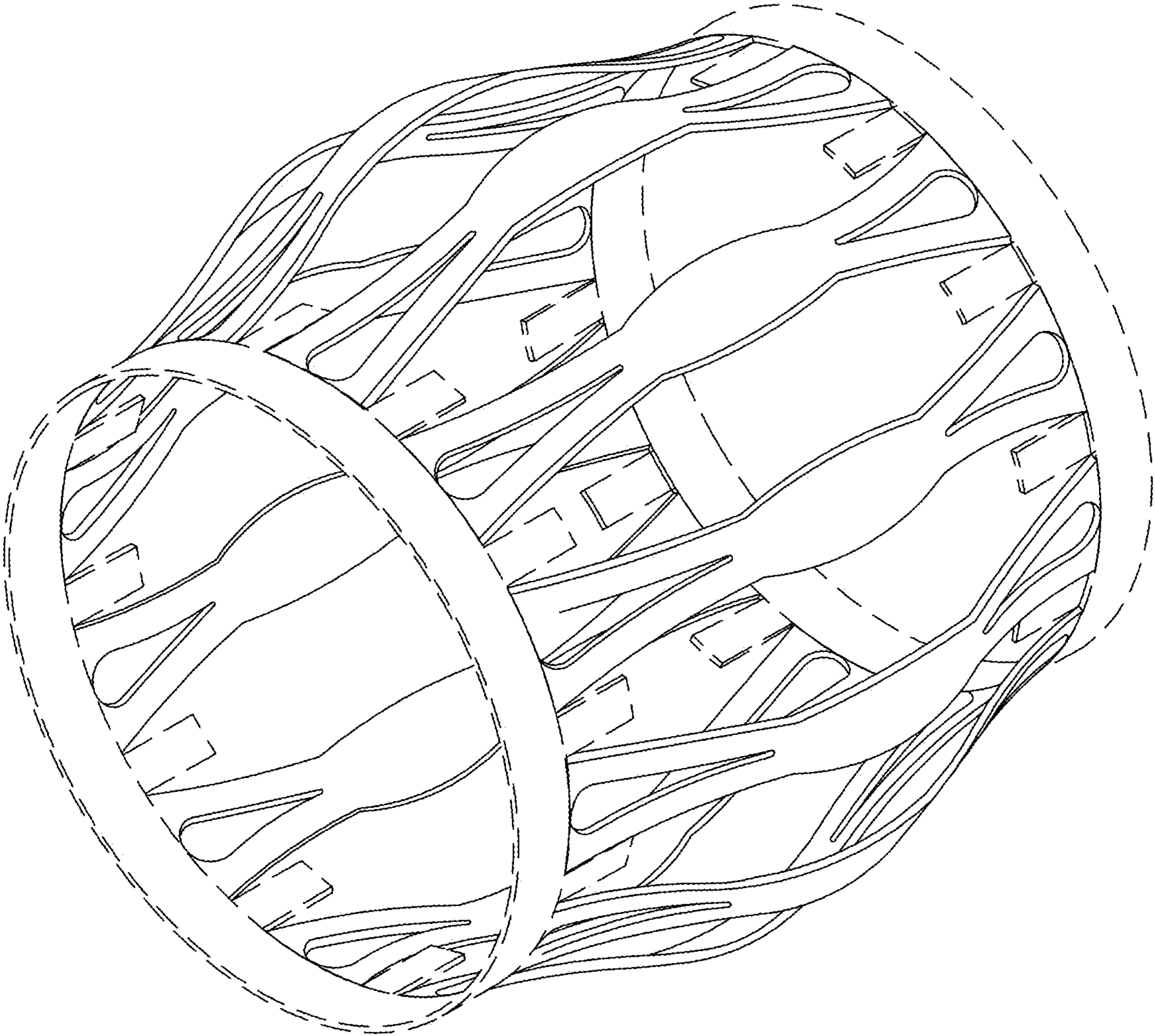


Figure 64



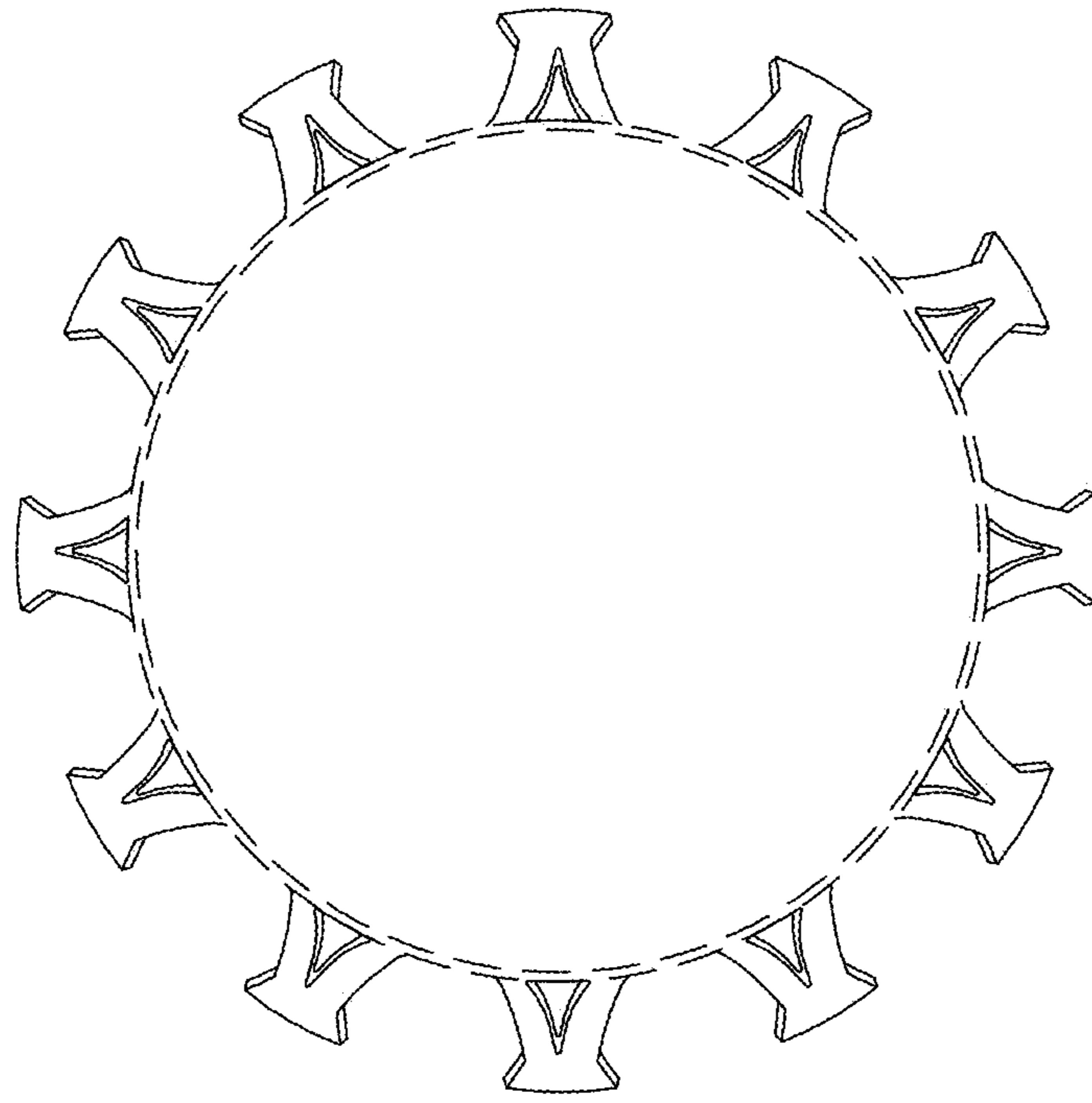


Figure 65

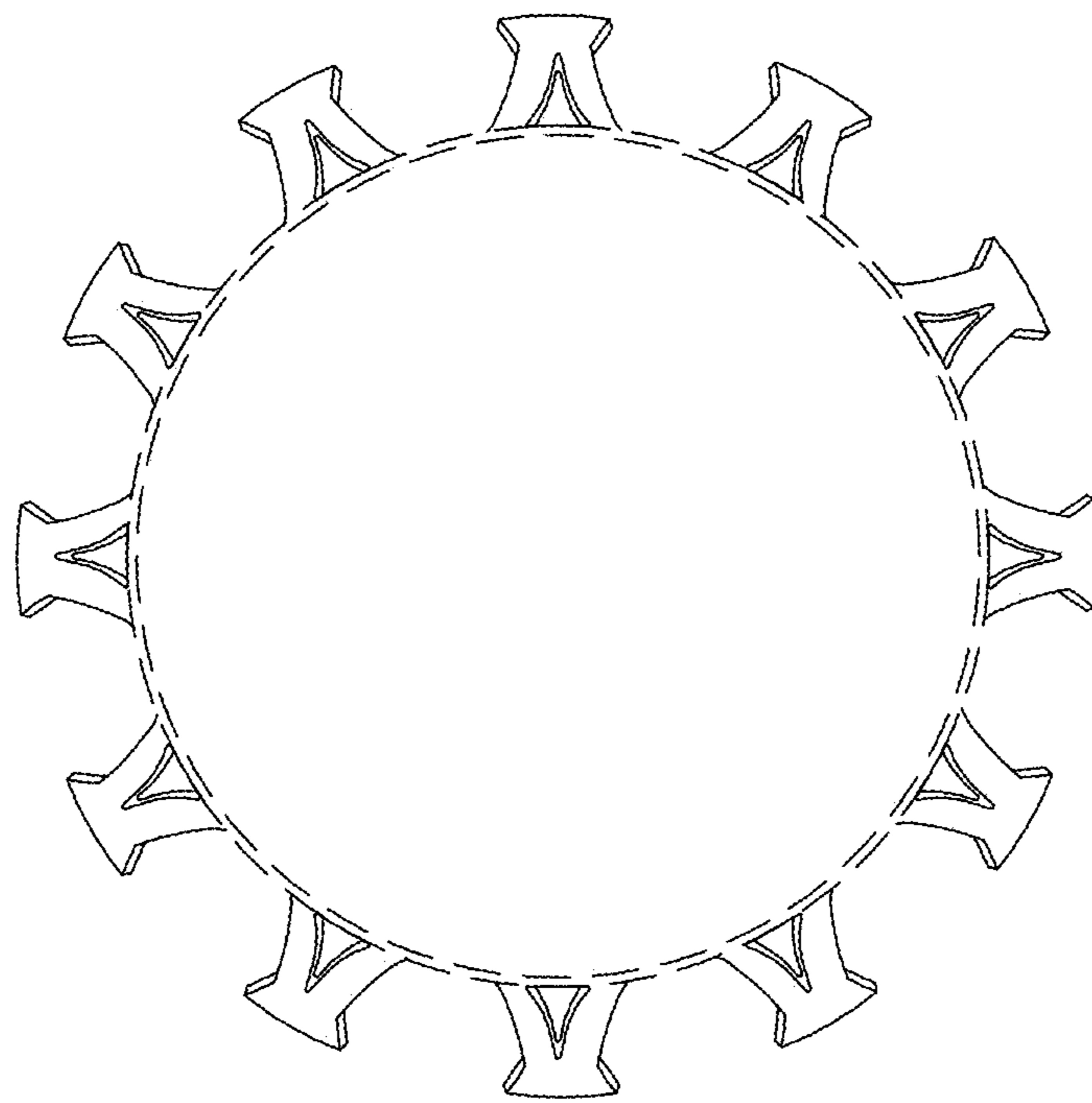


Figure 66

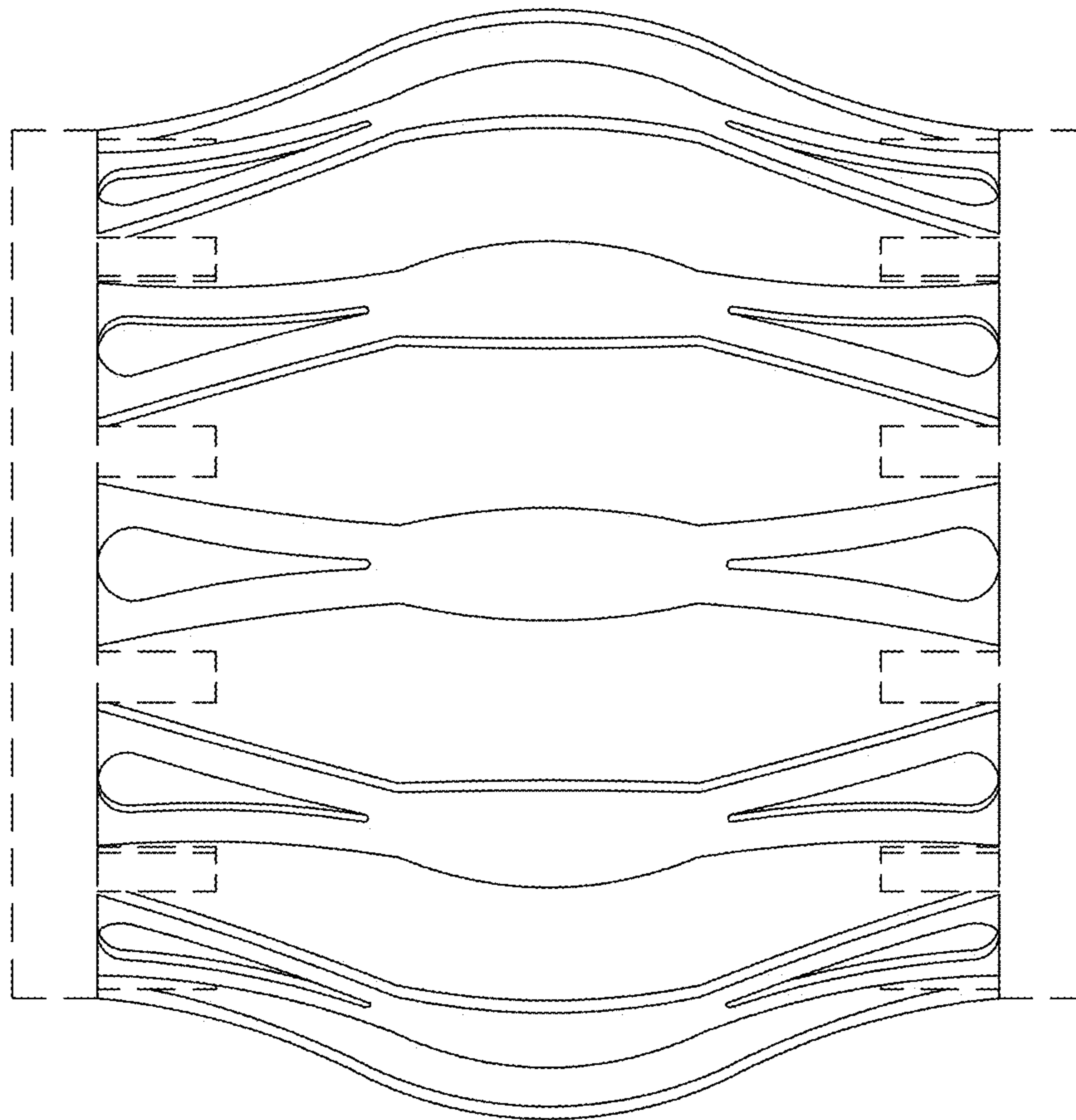


Figure 67

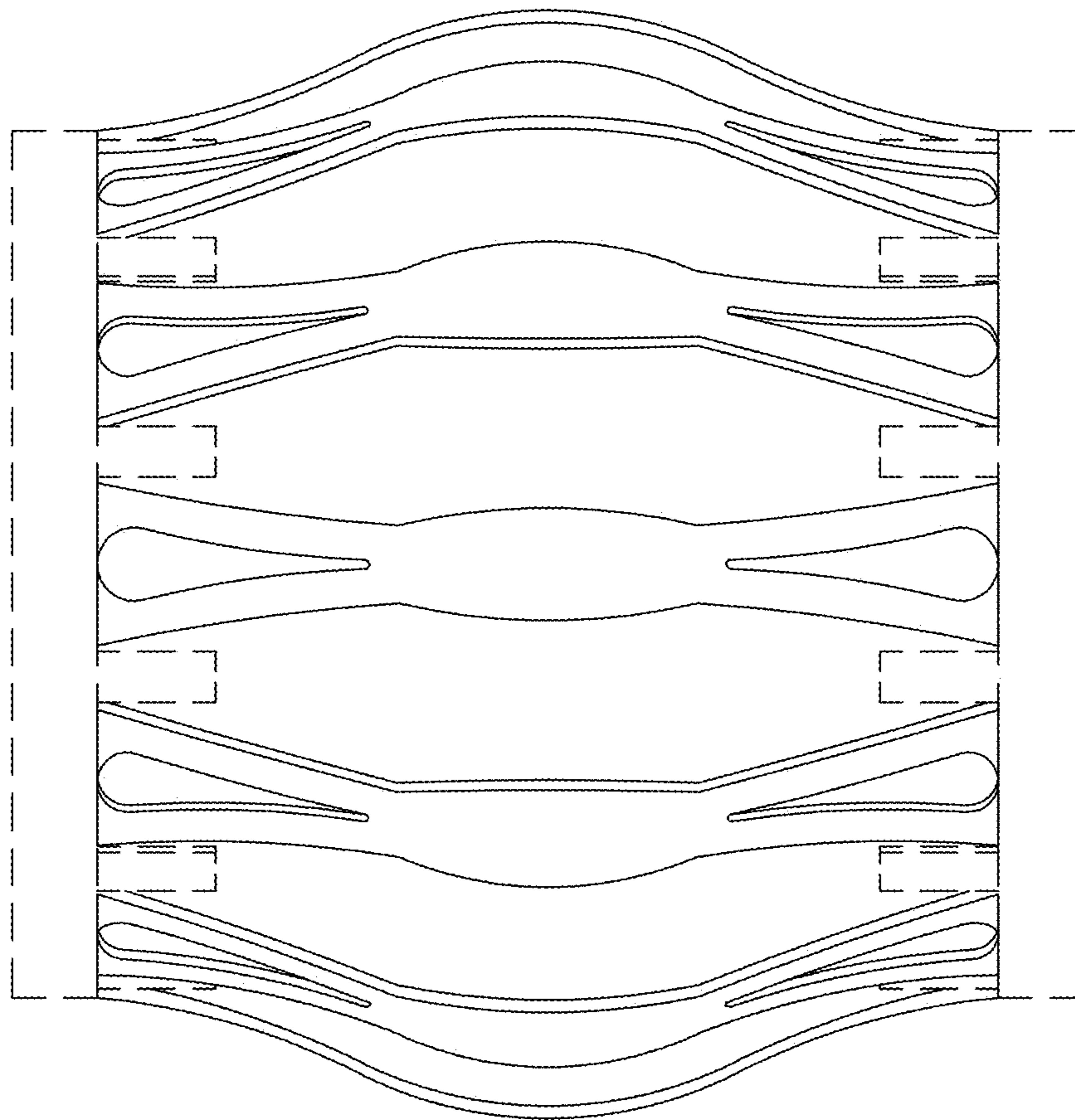


Figure 68

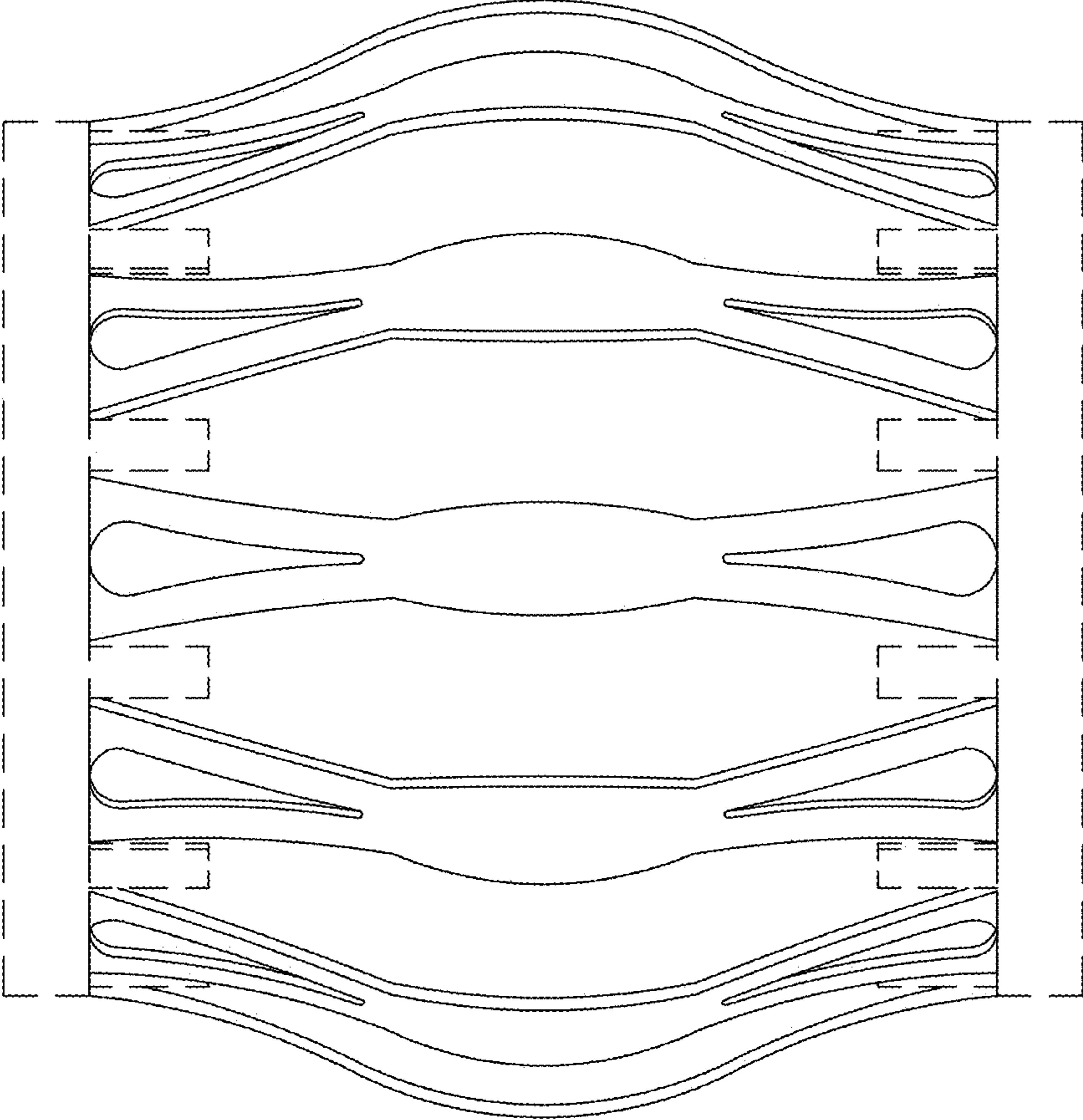


Figure 69

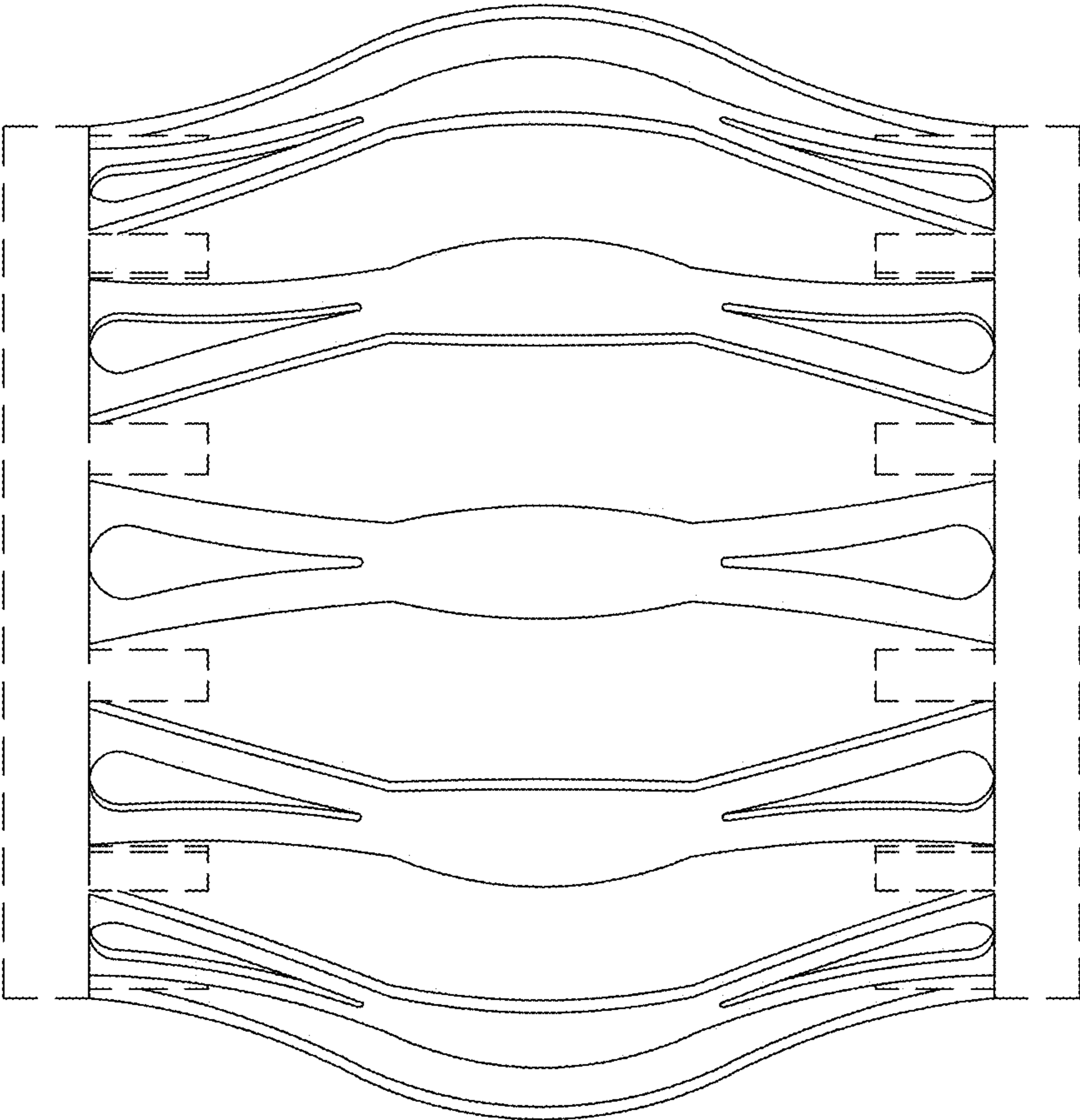


Figure 70