



US00D613817S

(12) **United States Design Patent**  
**Kojima**

(10) **Patent No.:** **US D613,817 S**  
(45) **Date of Patent:** **\*\* Apr. 13, 2010**

(54) **MOTIONLESS MIXER**

(75) Inventor: **Hisao Kojima**, Kanagawa (JP)

(73) Assignee: **Anemos Company, Ltd.**, Tokyo (JP)

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/267,841**

(22) Filed: **Oct. 24, 2006**

(30) **Foreign Application Priority Data**

Apr. 24, 2006 (JP) ..... D2006-013164

(51) **LOC (9) Cl.** ..... **23-01**

(52) **U.S. Cl.** ..... **D23/200**

(58) **Field of Classification Search** ..... D23/200,  
D23/207, 266, 263; 138/37, 39, 42; 366/336-340  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,183,682 A \* 1/1980 Lieffers ..... 366/339  
(Continued)

**FOREIGN PATENT DOCUMENTS**

JP 10-85721 A 4/1998  
(Continued)

**OTHER PUBLICATIONS**

S. Hagiwara et al., "Motionless Mixer—Basis & Application", NDC 571.3, Sep. 30, 1981, P1-P7, The Nikkan Kogyo Shimbun Ltd., Tokyo, Japan.

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(57) **CLAIM**

The ornamental design for a motionless mixer, as shown.

**DESCRIPTION**

FIG. 1 is a top plan view of a motionless mixer showing my new design,;

FIG. 2 is a bottom plan view thereof,;

FIG. 3 is a front elevational view thereof, the rear side elevational view being the same image thereof;

FIG. 4 is a left side elevational view thereof, the right side elevational view thereof being the same image thereof;

FIG. 5 is a cross-sectional left side elevational view thereof, taken along a line 5—5 in a direction of arrows of FIG. 3;

FIG. 6 is a cross-sectional perspective view thereof, taken along a line 6—6 in a direction of arrows of FIG. 3;

FIG. 7 is a cross-sectional right side elevational view thereof, taken along a line 7—7 in a direction of arrows of FIG. 3;

FIG. 8 is a cross-sectional perspective view thereof, taken along a line 8—8 in a direction of arrows of FIG. 3;

FIG. 9 is a cross-sectional bottom plan view thereof, taken along a line 9—9 of FIG. 3;

FIG. 10 is a cross-sectional top plan view thereof, taken along a line 10—10 of FIG. 3;

FIG. 11 is a cross-sectional bottom plan view thereof, taken along a line 11—11 of FIG. 3;

FIG. 12 is a cross-sectional top plan view thereof, taken along a line 12—12 of FIG. 3;

FIG. 13 is a cross-sectional bottom plan view thereof, taken along a line 13—13 of FIG. 3;

FIG. 14 is a cross-sectional top plan view thereof, taken along a line 14—14 of FIG. 3;

FIG. 15 is a cross-sectional bottom plan view thereof, taken along a line 15—15 of FIG. 3;

FIG. 16 is a cross-sectional top plan view thereof, taken along a line 16—16 of FIG. 3;

FIG. 17 is a cross-sectional bottom plan view thereof, taken along a line 17—17 of FIG. 3;

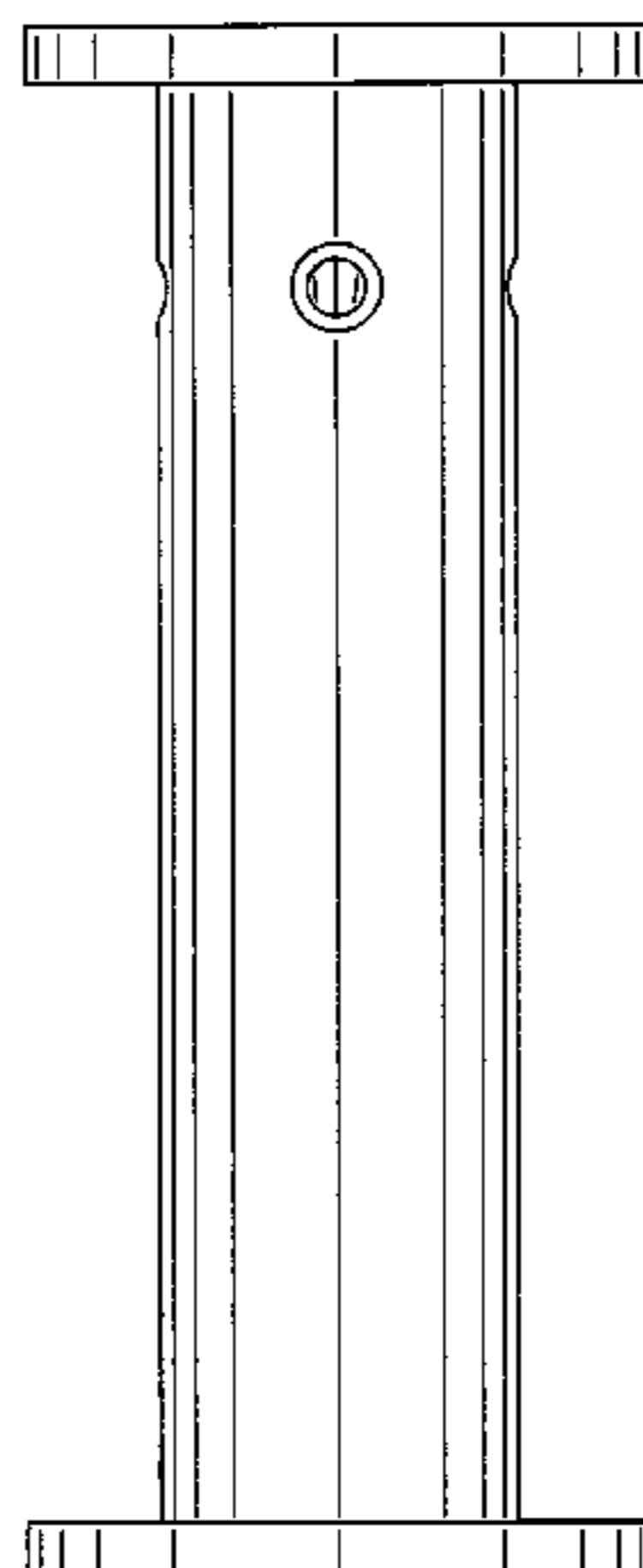
FIG. 18 is a cross-sectional top plan view thereof, taken along a line 18—18 of FIG. 3;

FIG. 19 is a cross-sectional bottom plan view thereof, taken along a line 19—19 of FIG. 3;

FIG. 20 is a cross-sectional top plan view thereof, taken along a line 20—20 of FIG. 3; and,

FIG. 21 is a cross-sectional bottom plan view thereof, taken along a line 21—21 of FIG. 3.

**1 Claim, 21 Drawing Sheets**



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## U.S. PATENT DOCUMENTS

4,466,741 A 8/1984 Kojima  
4,514,095 A \* 4/1985 Ehrfeld et al. .... 366/340  
4,643,584 A \* 2/1987 Allocca ..... 366/337  
4,747,697 A 5/1988 Kojima  
4,824,614 A \* 4/1989 Jones ..... 261/76  
4,850,705 A \* 7/1989 Horner ..... 366/339  
5,758,967 A \* 6/1998 King ..... 366/337  
6,109,781 A \* 8/2000 Ogasawara et al. .... 366/336

D436,647 S \* 1/2001 Etschel et al. .... D23/200  
7,137,731 B2 \* 11/2006 Carlson ..... 366/337

## FOREIGN PATENT DOCUMENTS

JP 2001-62269 A 3/2001  
JP 2003-181256 A 7/2003  
JP 2005-219036 A 8/2005  
WO WO 00/24502-AI 5/2000

\* cited by examiner

Fig. 1

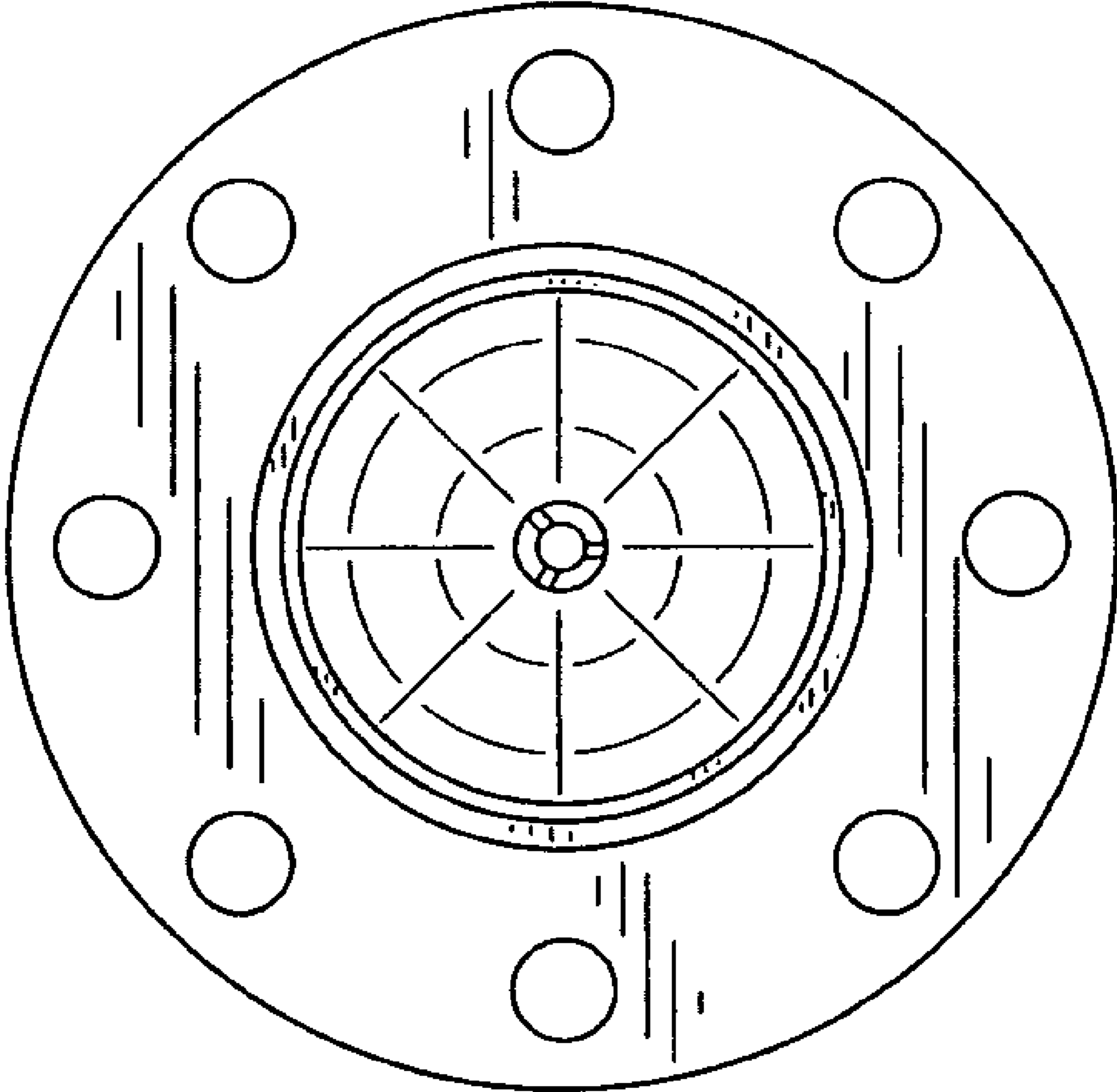


Fig.2

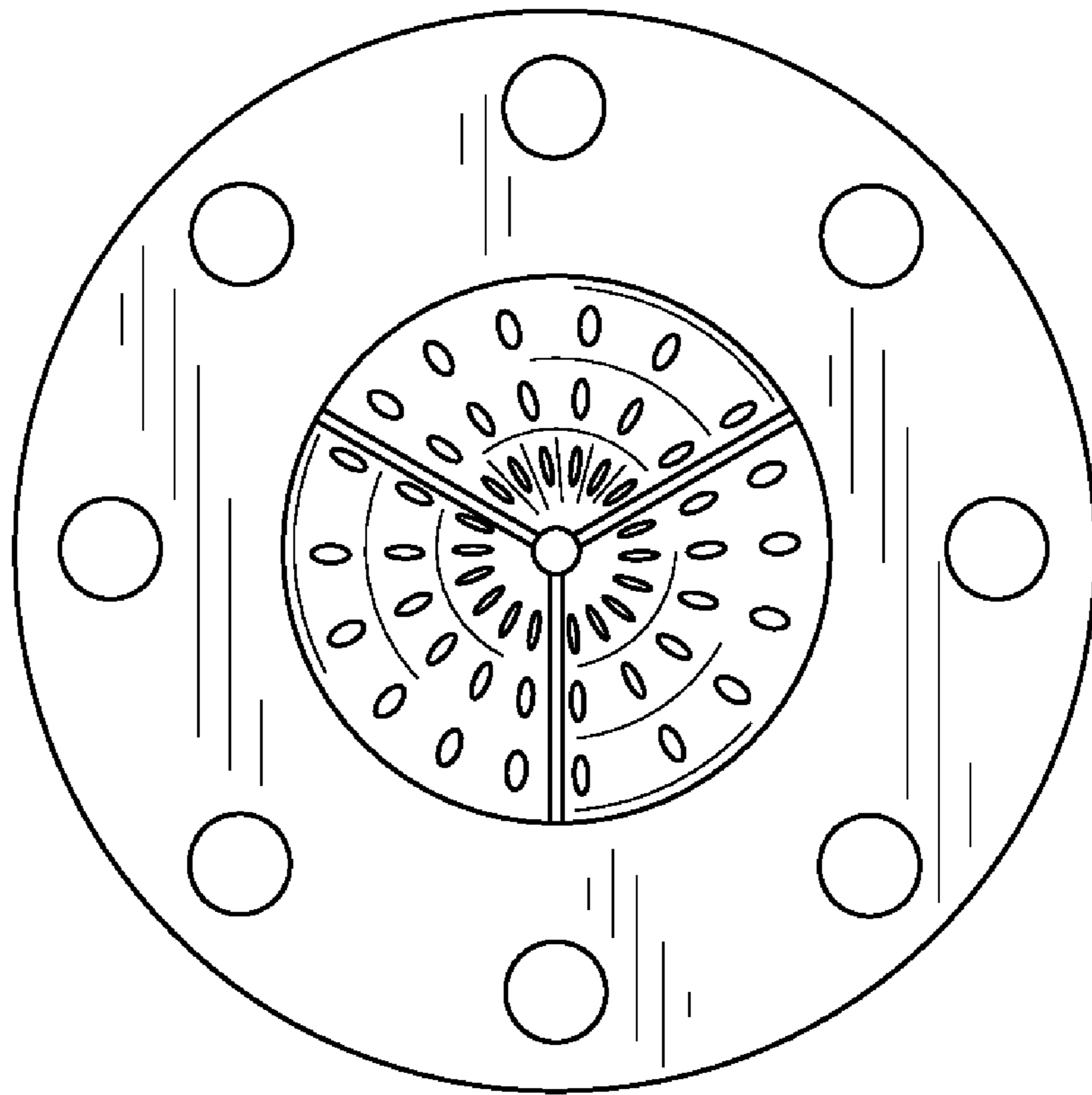


Fig.3

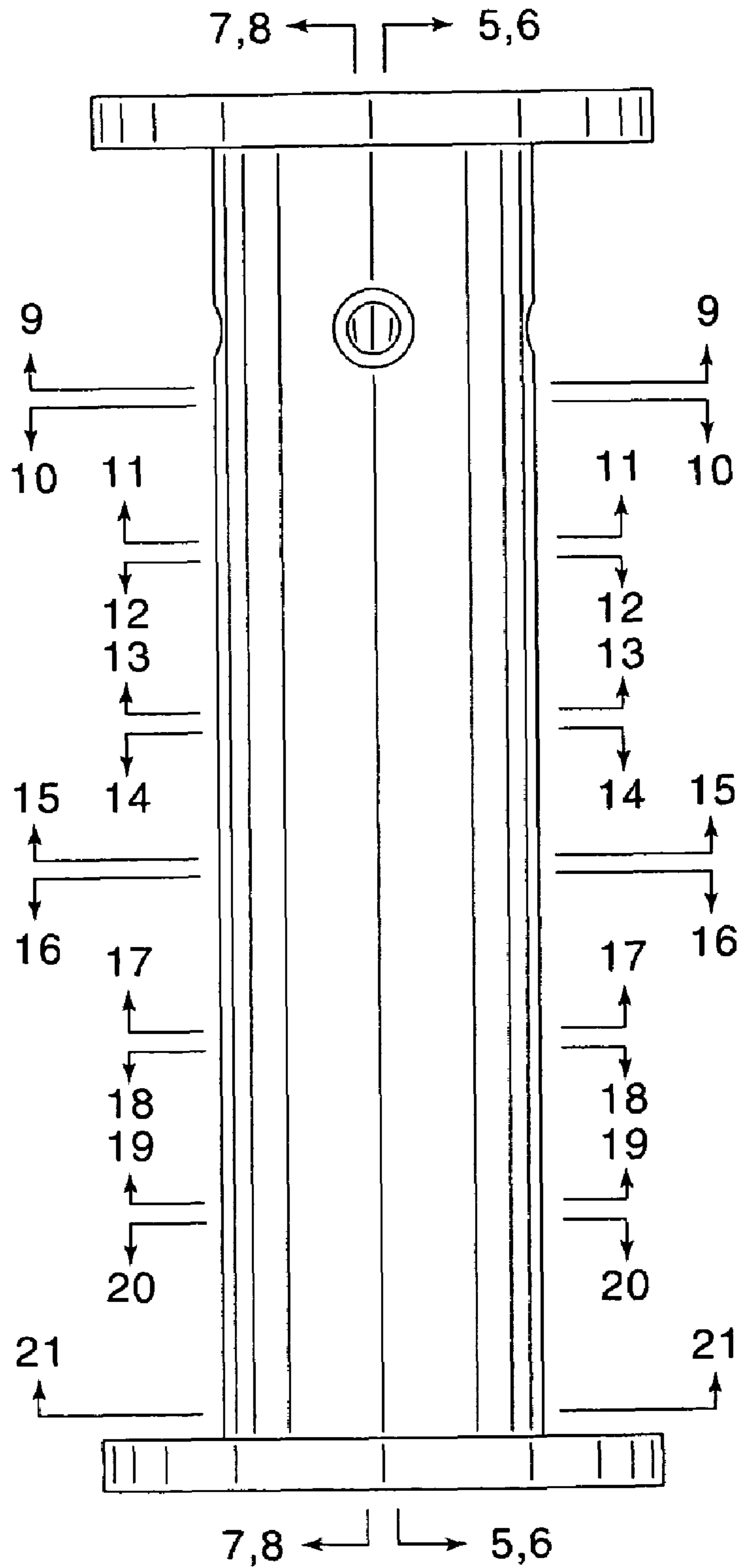


Fig.4

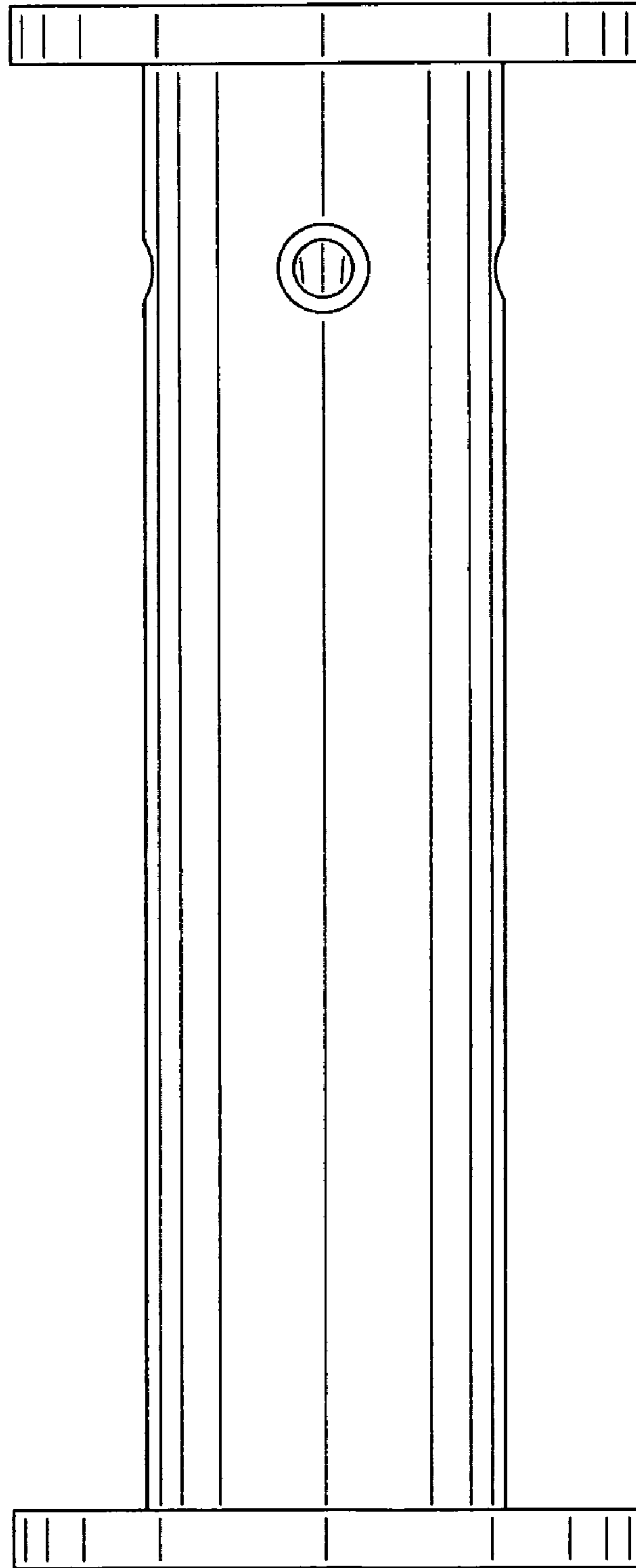


Fig.5

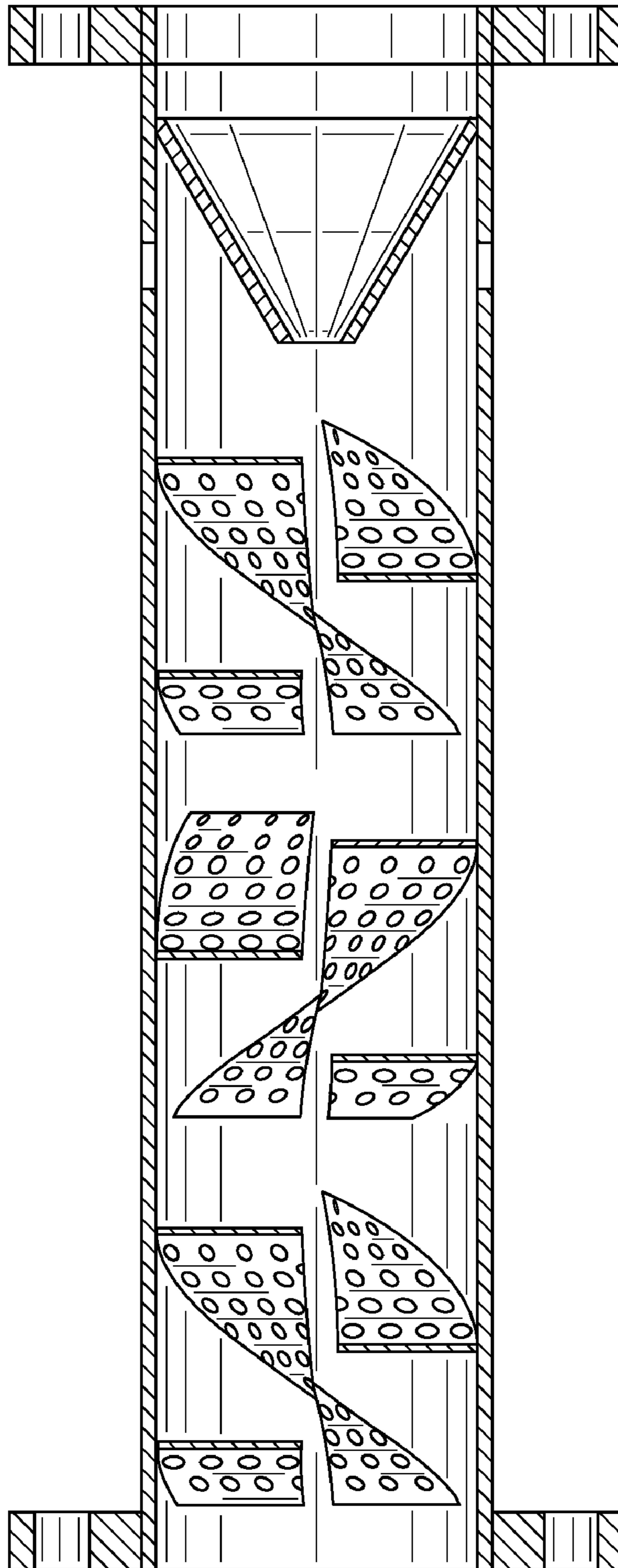


Fig.6

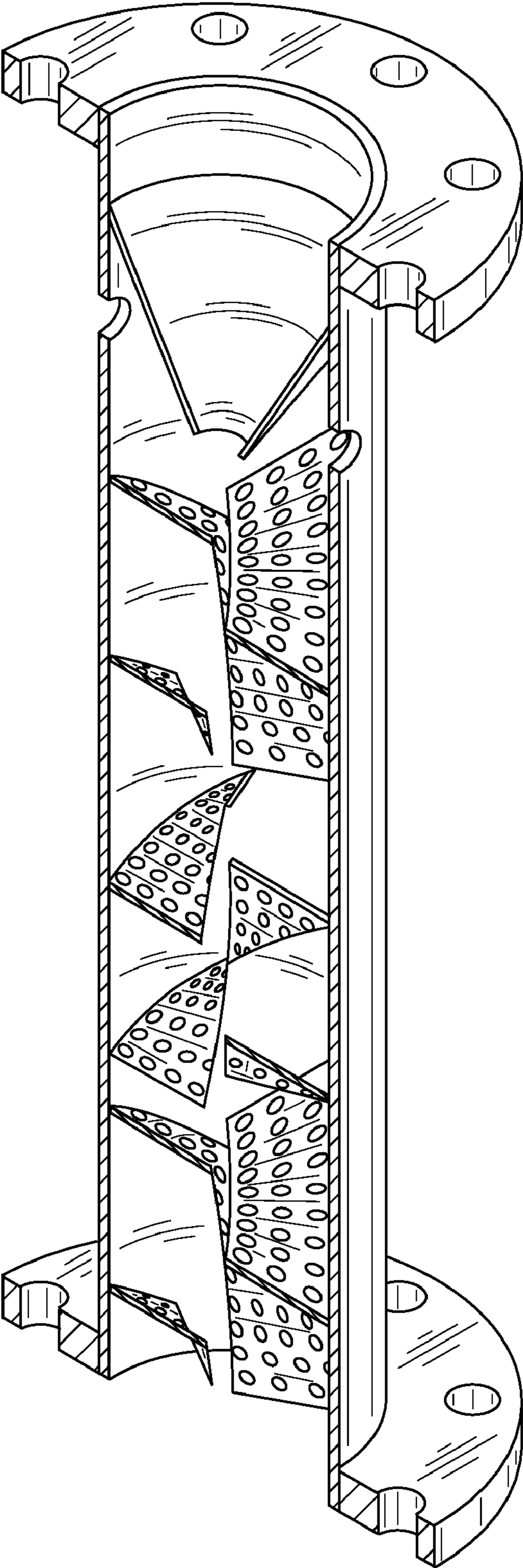




Fig.7

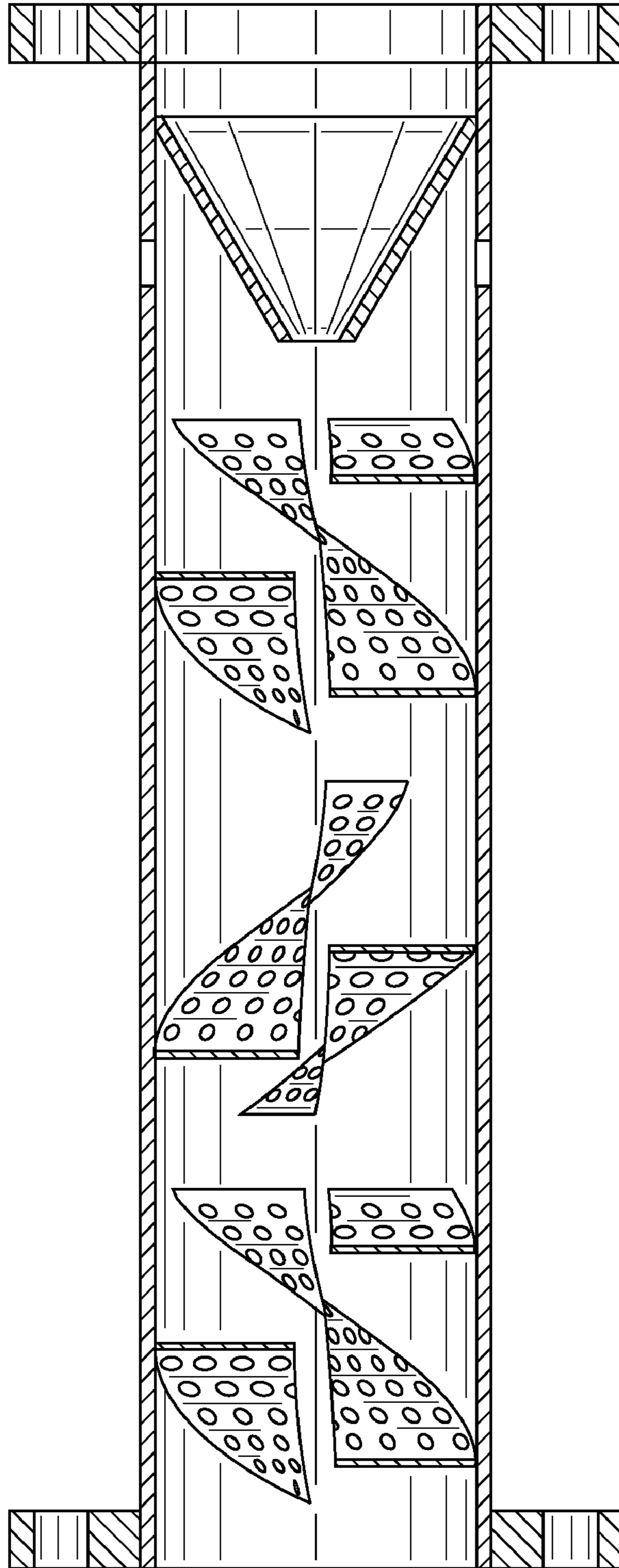


Fig.8

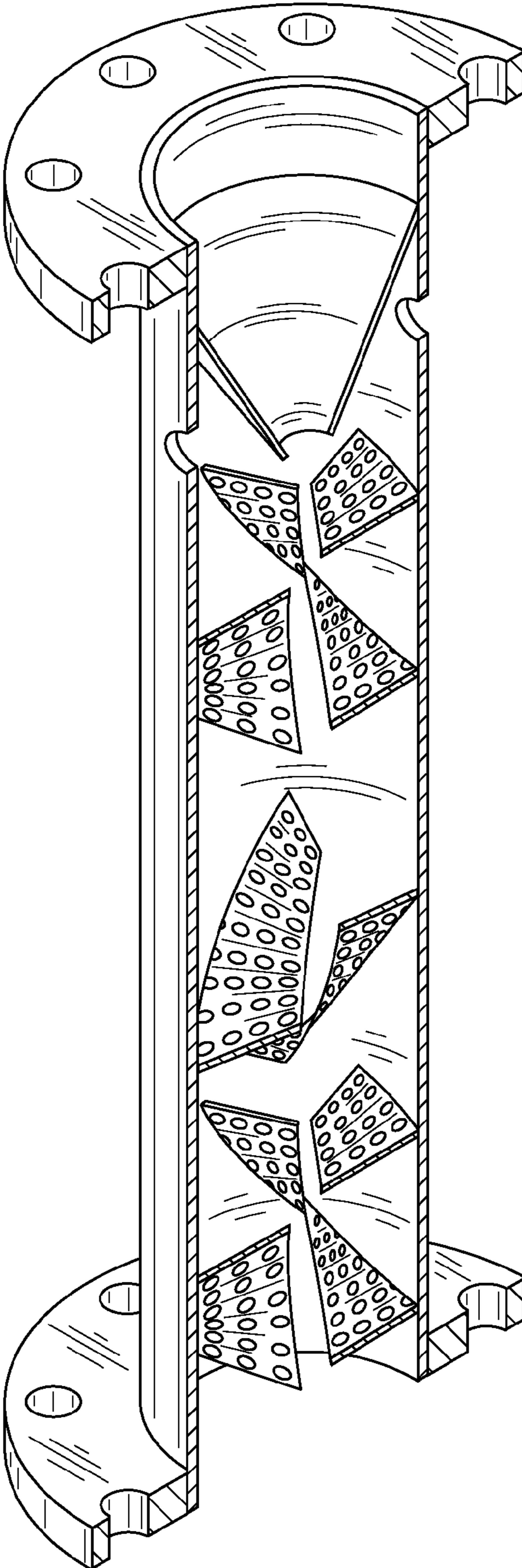


Fig.9

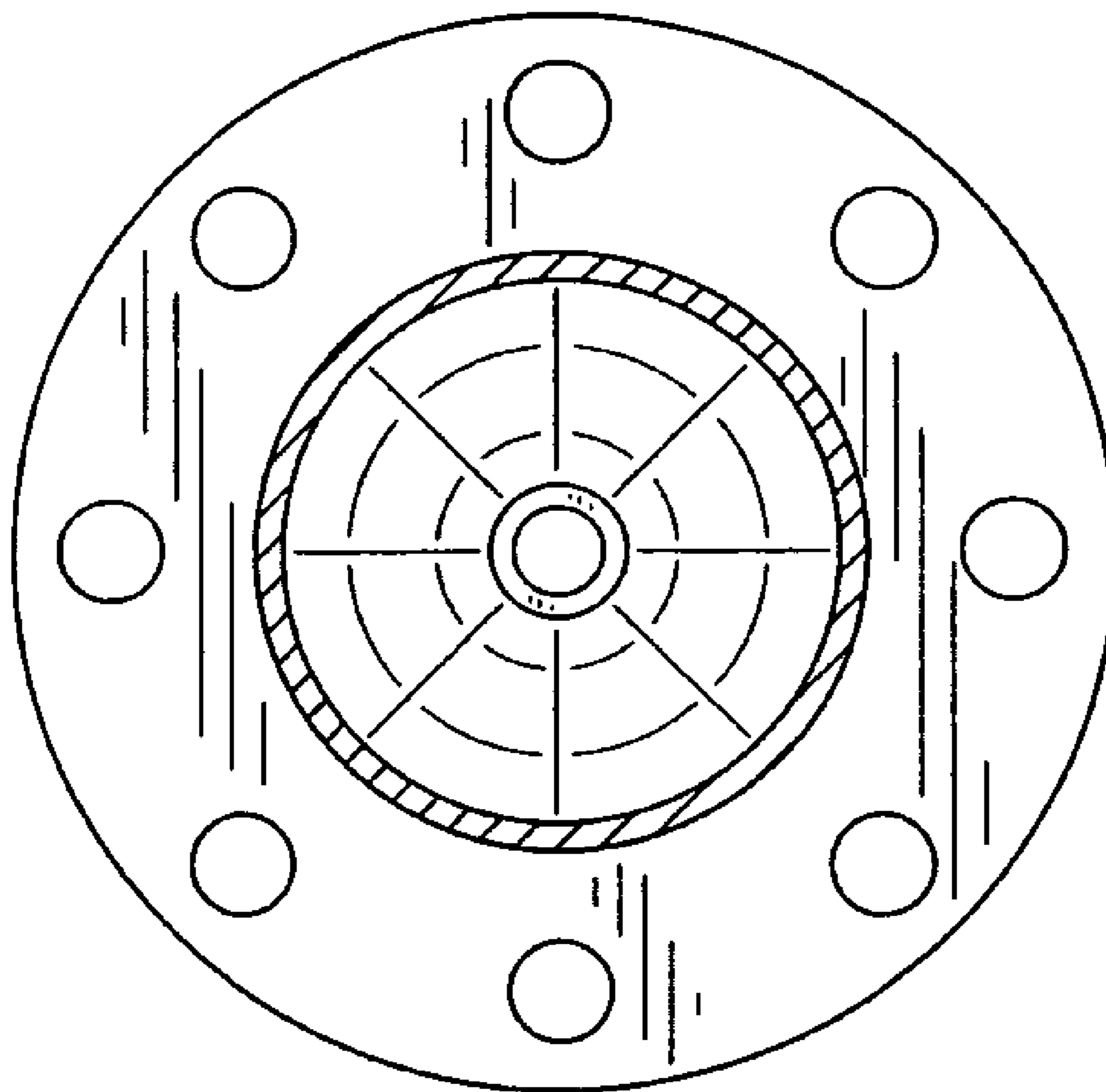


Fig.10

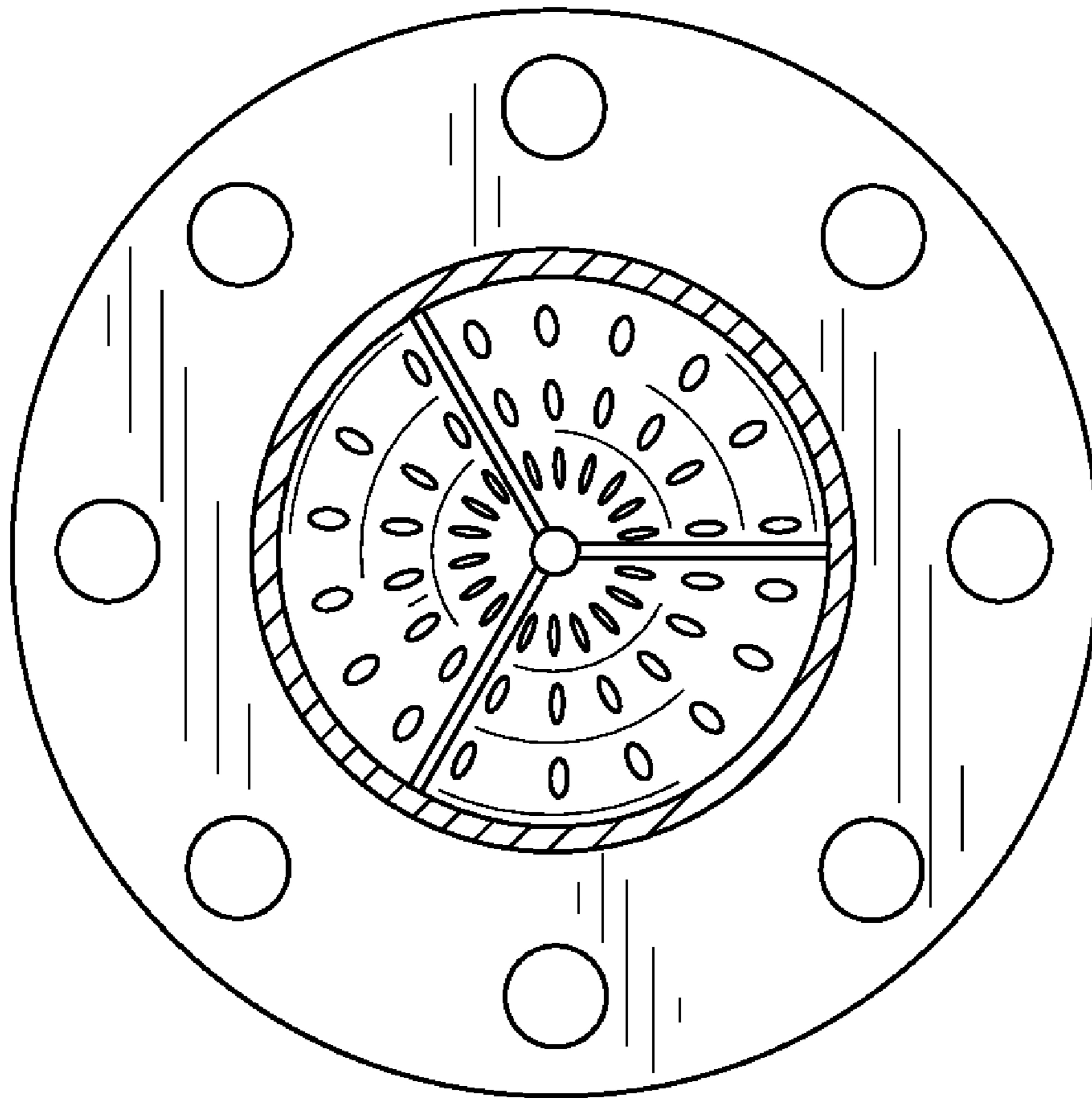


Fig.11

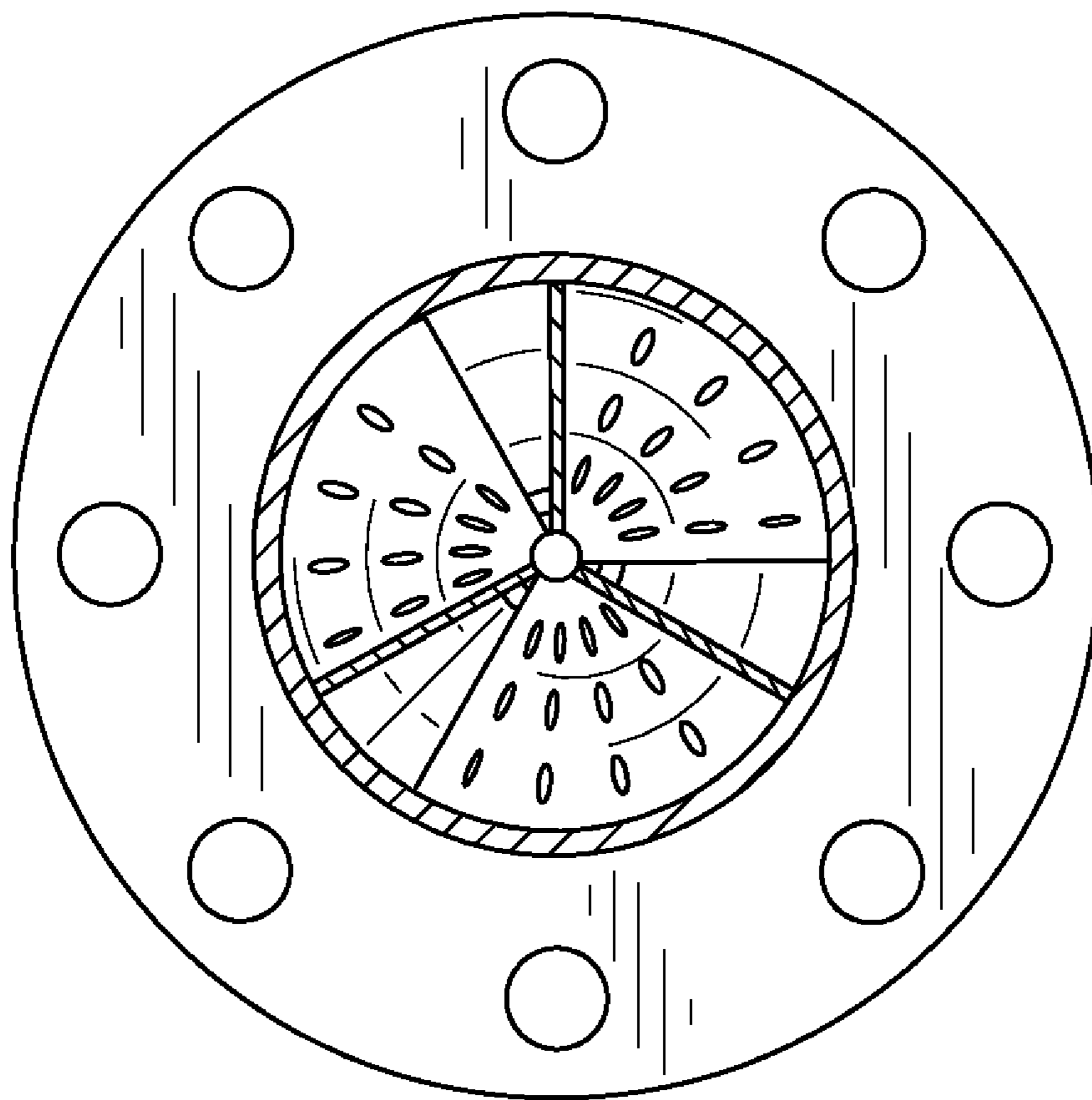


Fig.12

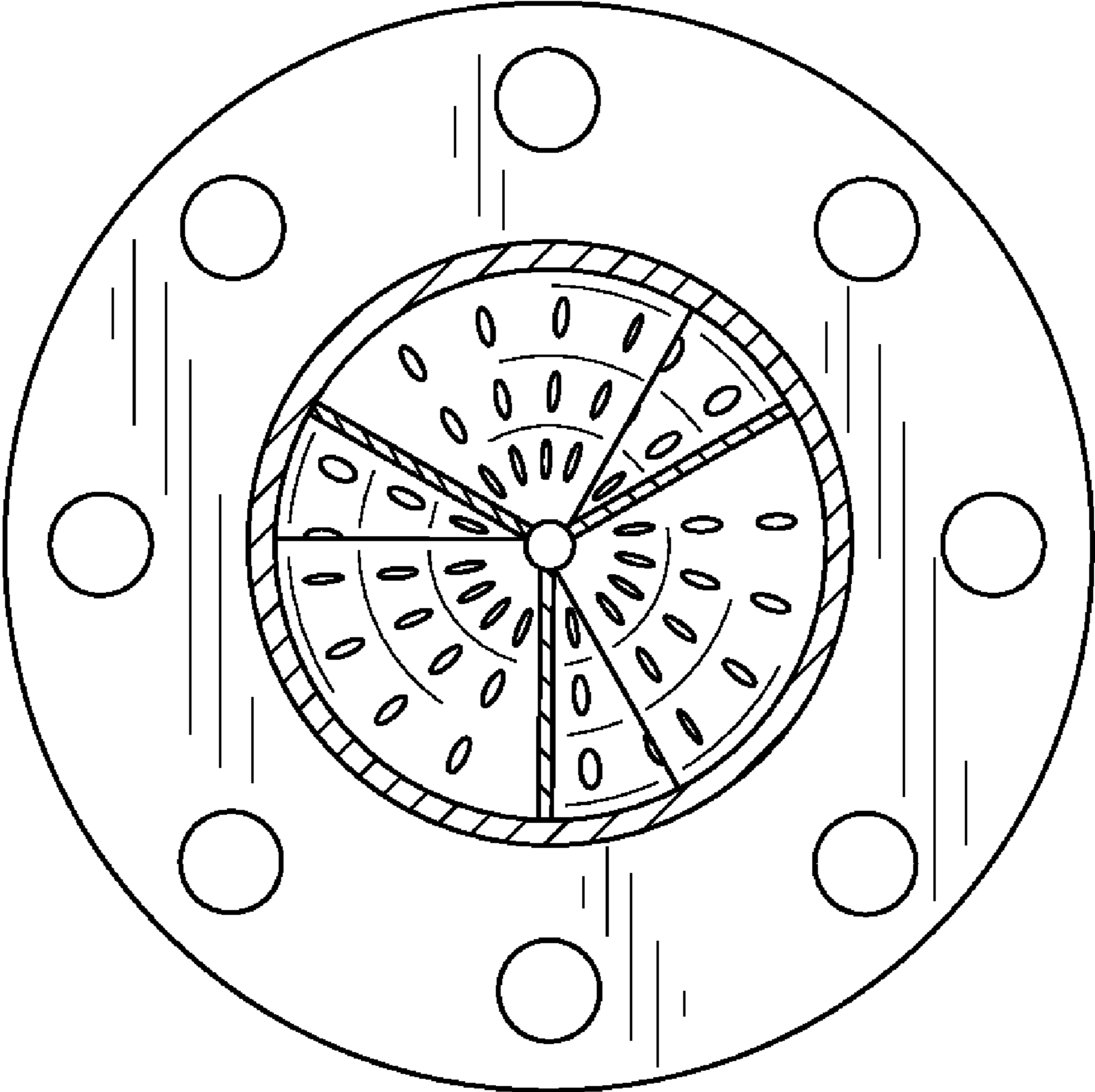


Fig.13

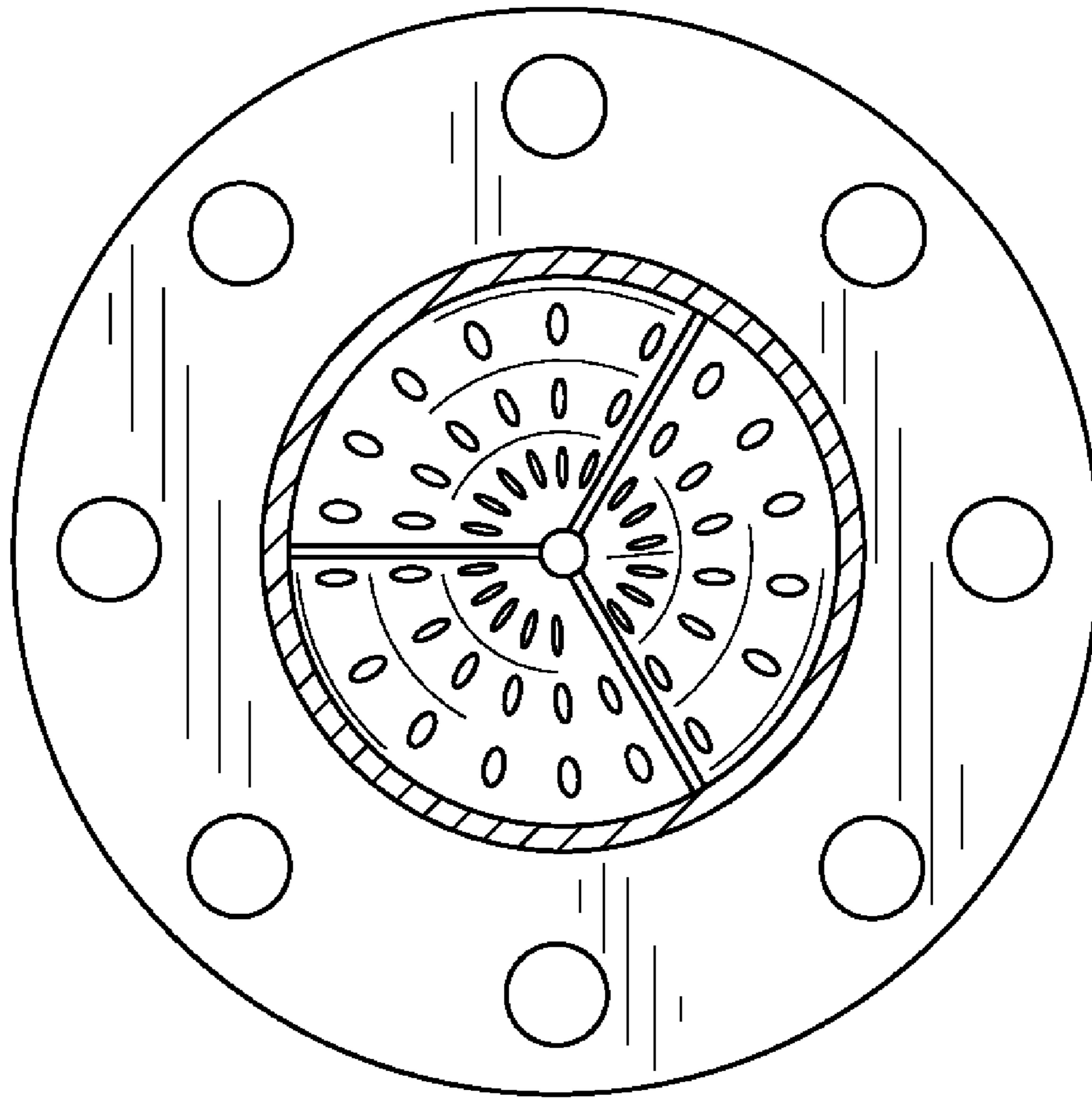


Fig.14

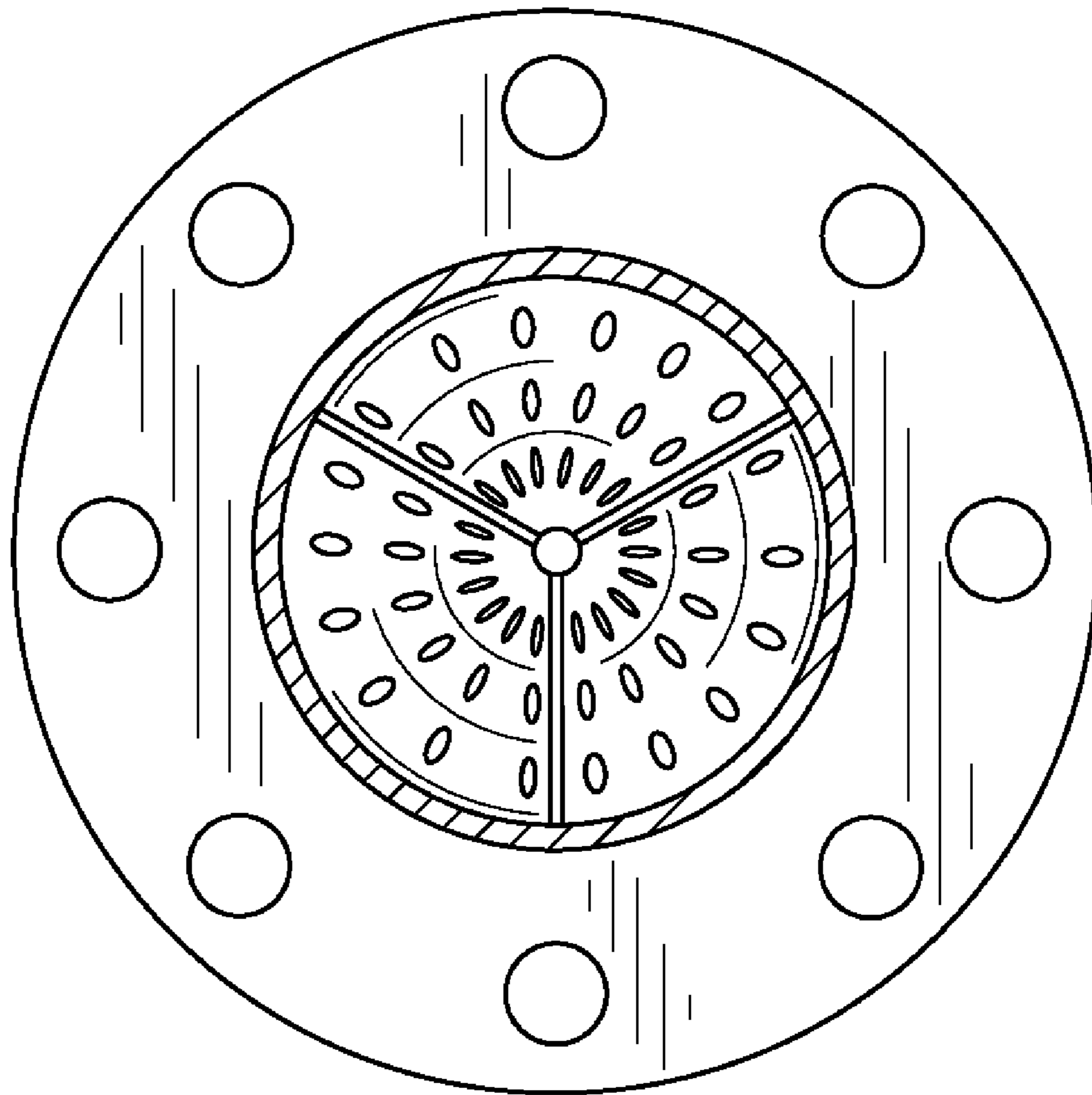




Fig.15

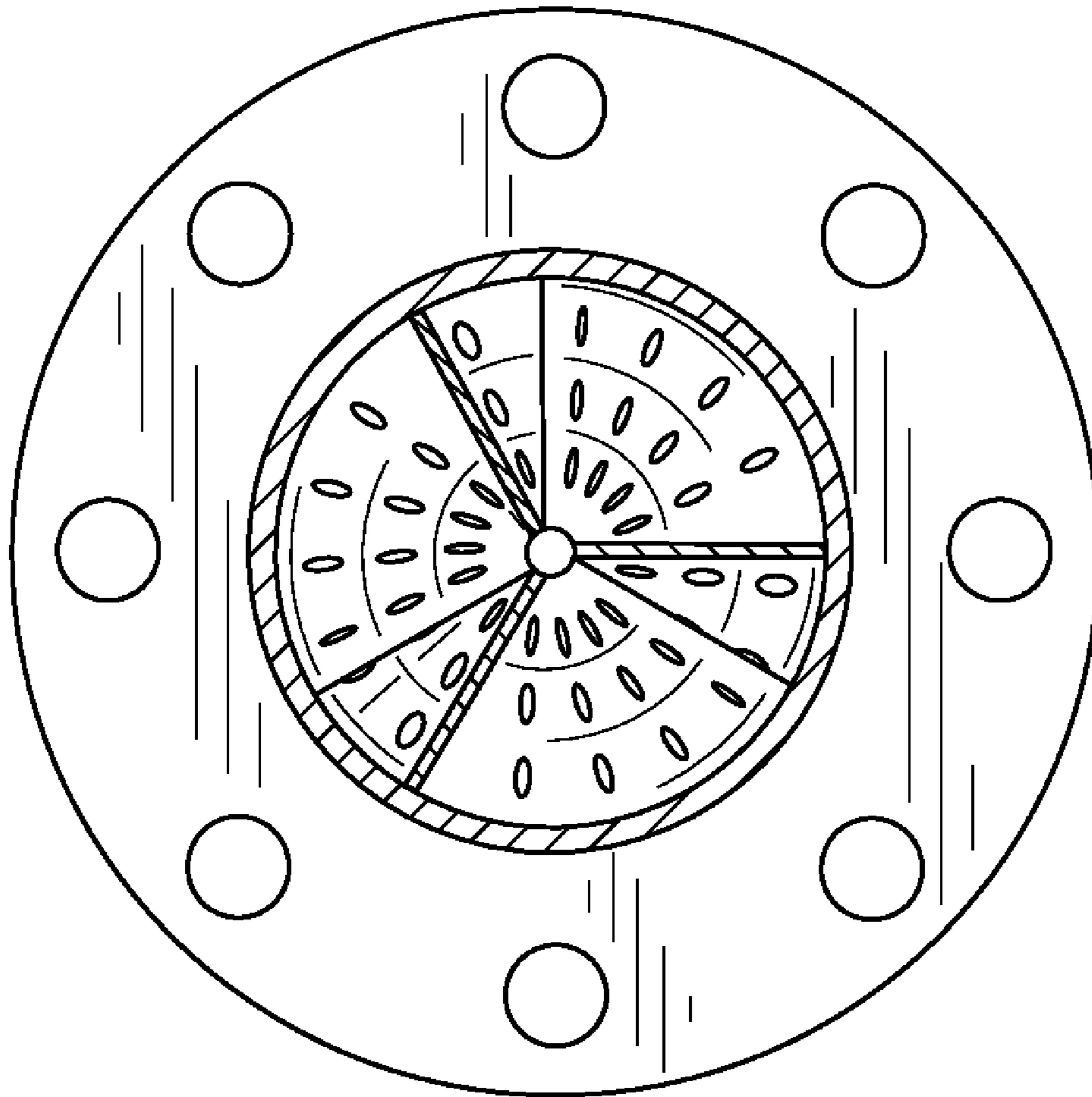


Fig.16

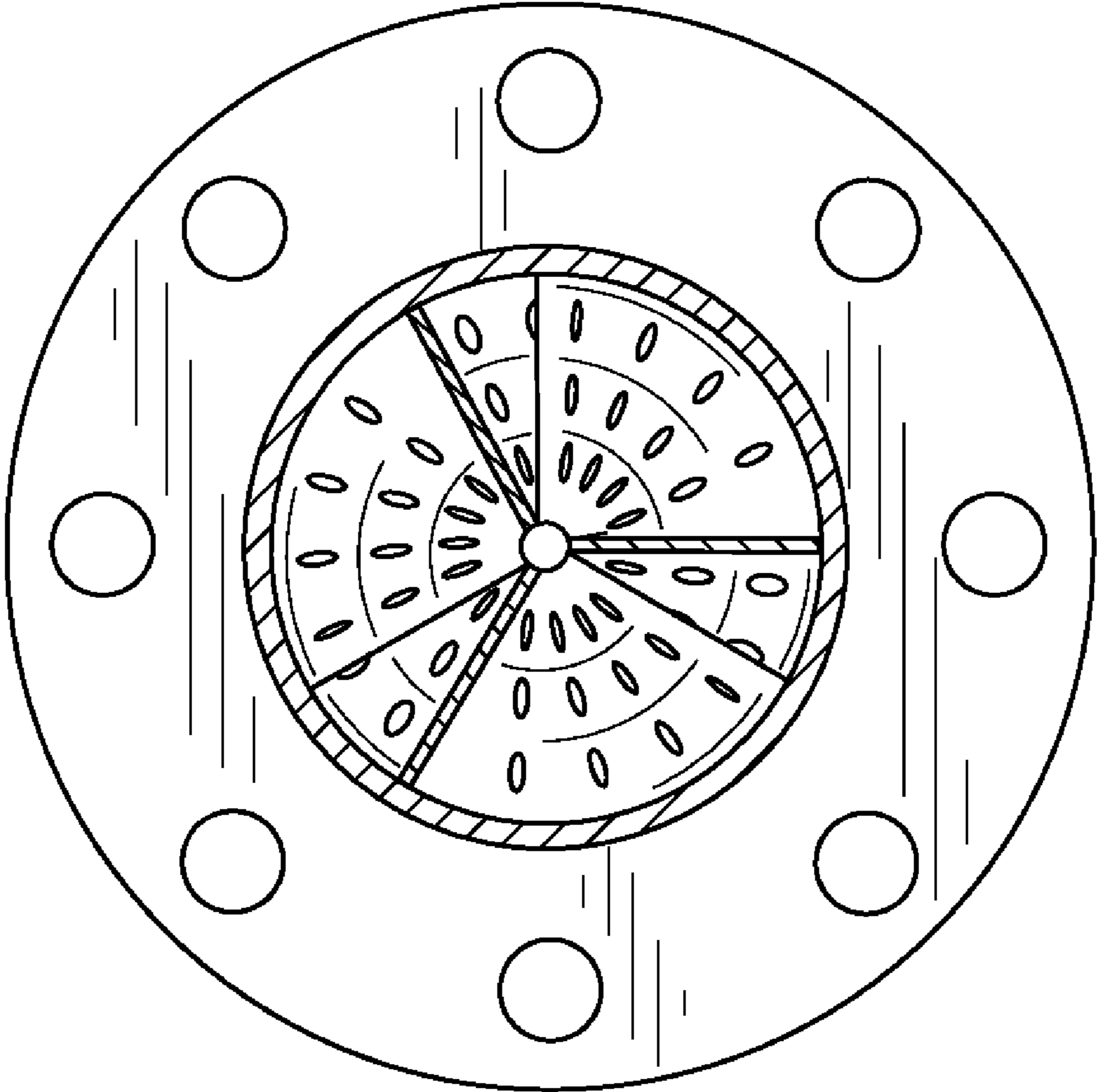


Fig.17

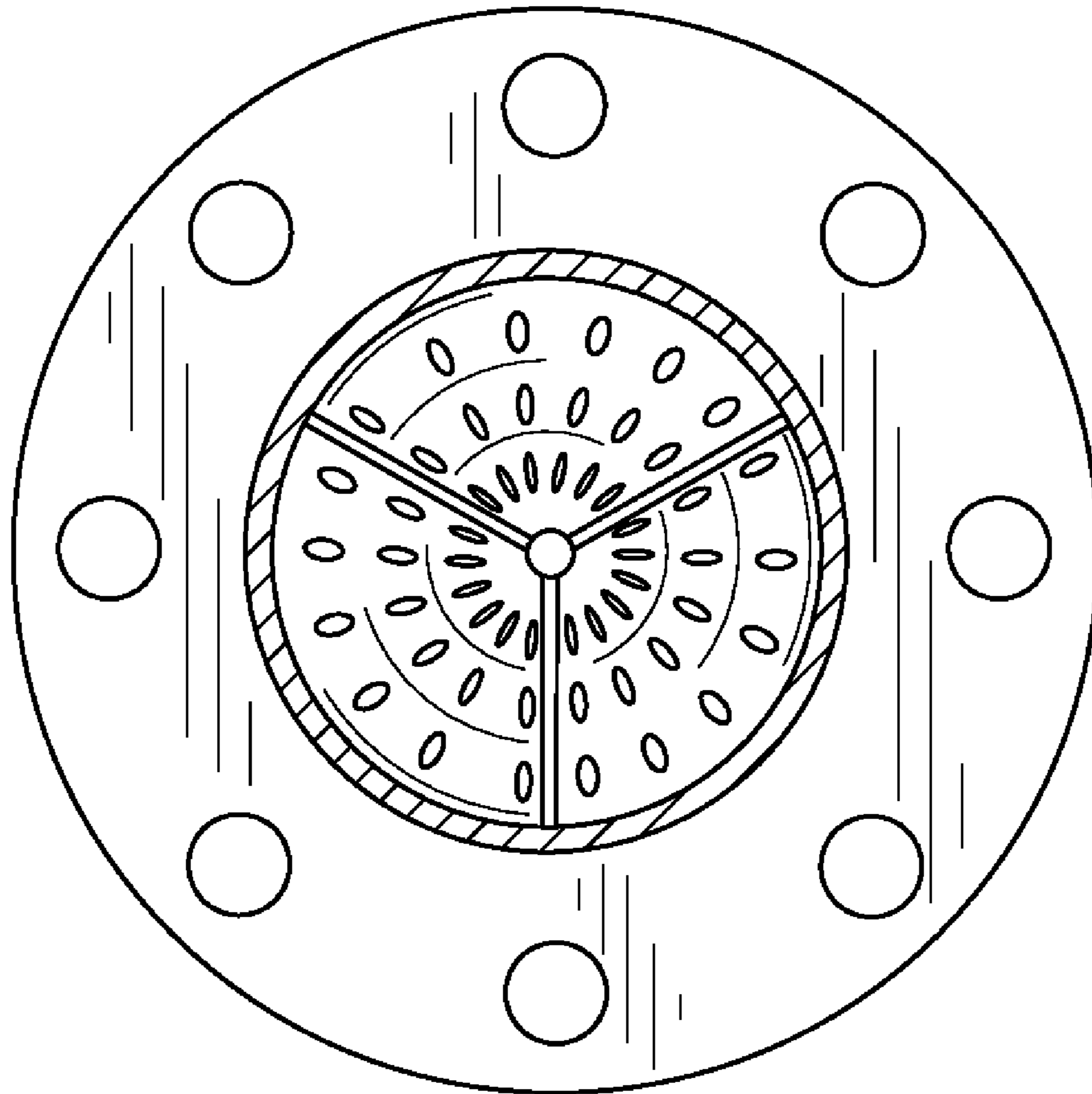


Fig.18

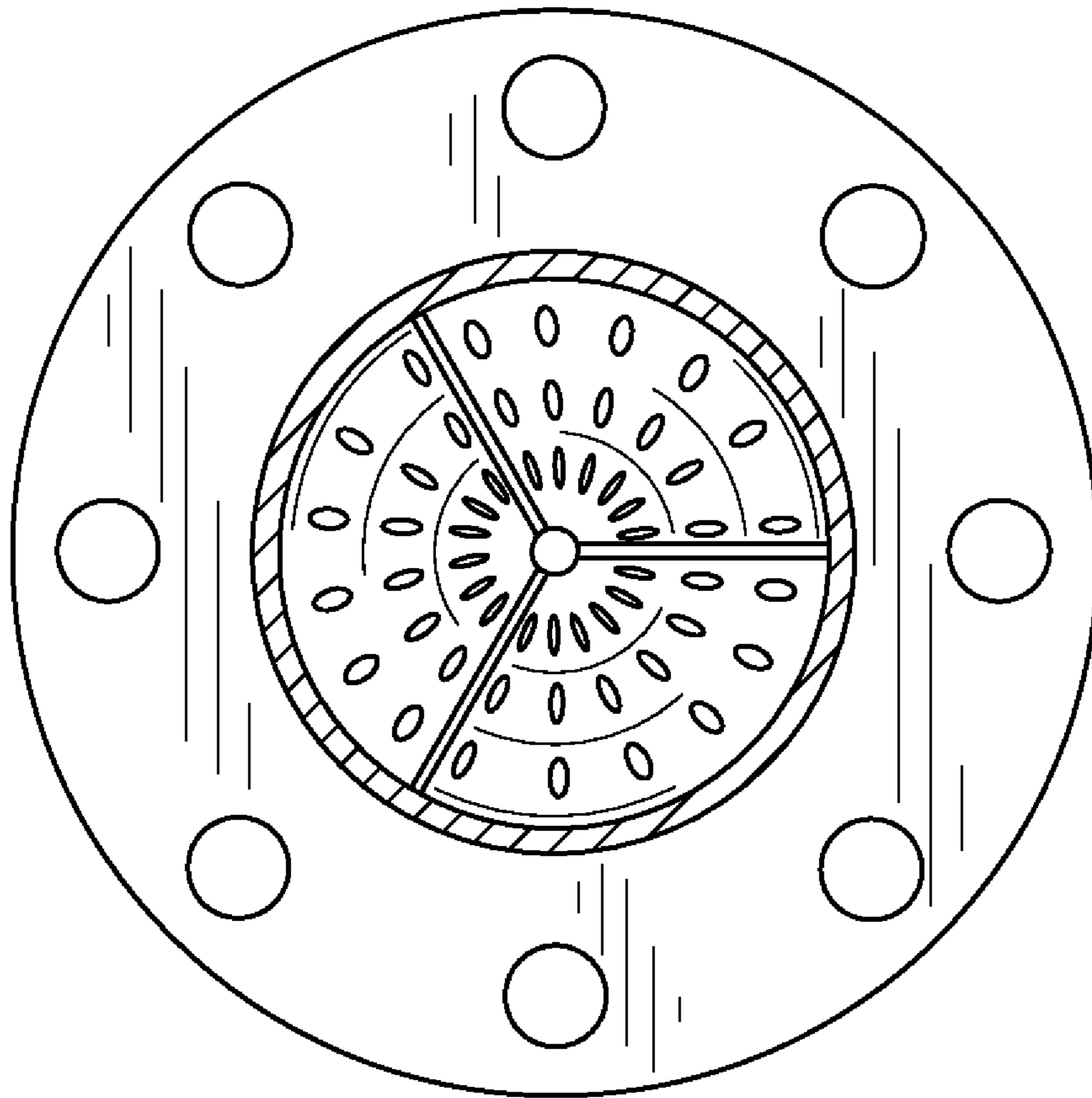


Fig.19

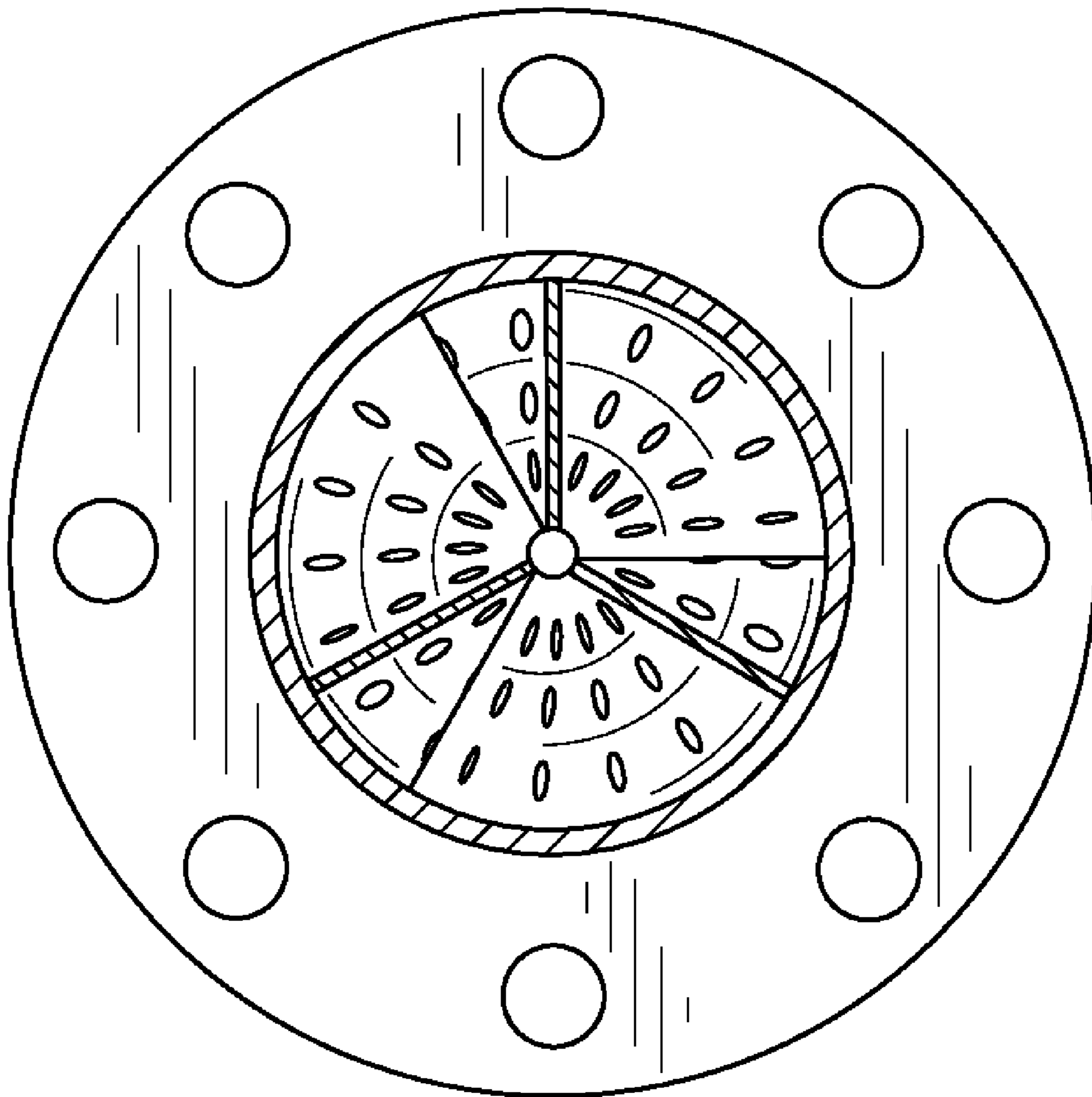


Fig.20

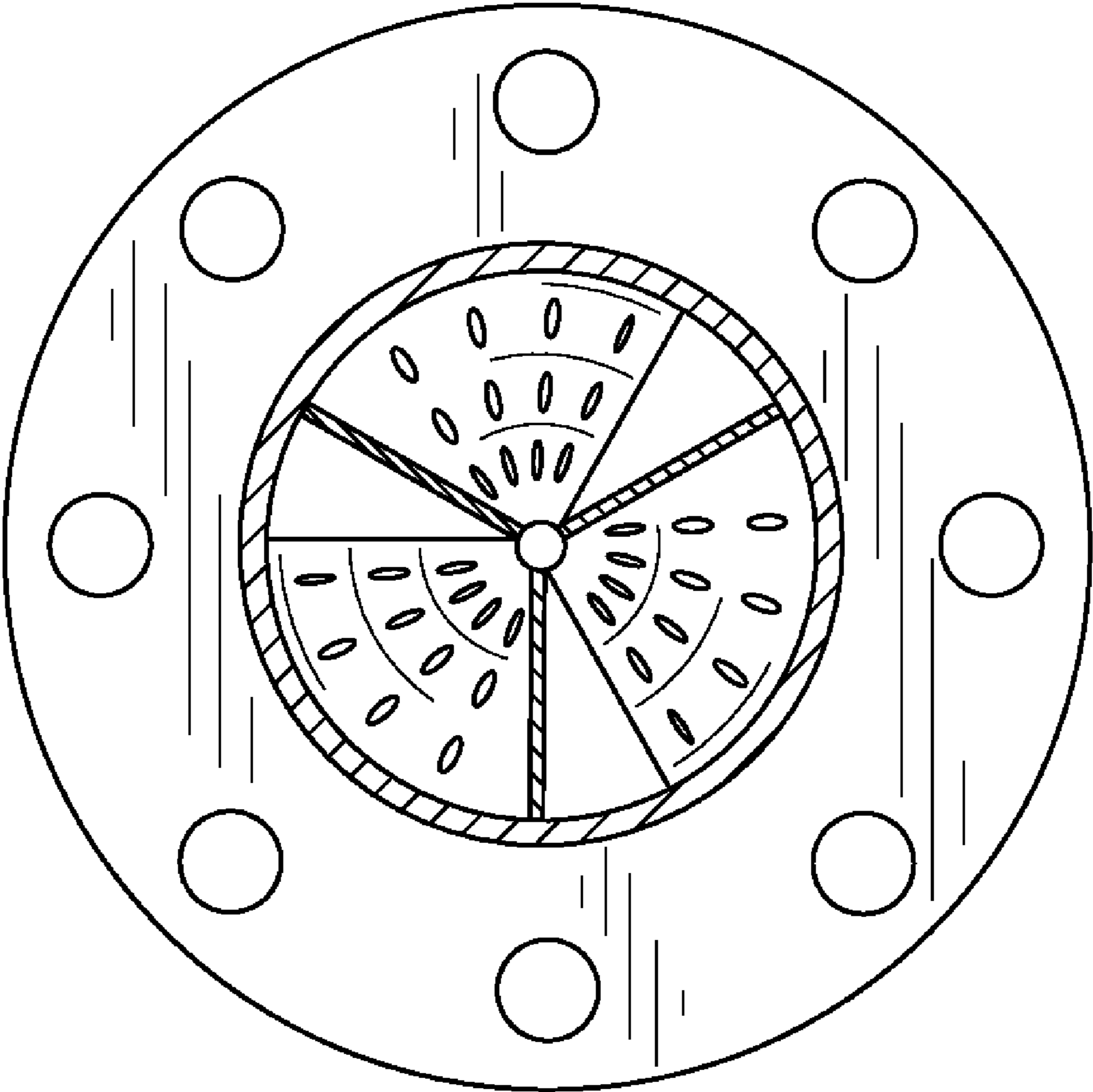


Fig.21

