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

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(54) **FILTER ELEMENT FOR BALLAST WATER TREATMENT**

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

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(30) **Foreign Application Priority Data**

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(51) **LOC (10) Cl.** ..... **23-01**

(52) **U.S. Cl.**  
USPC ..... **D23/209**

(58) **Field of Classification Search**

USPC ..... D23/207, 209, 365; D15/5; 210/483, 210/493.1, 495, 499, 497.01, 282, 232  
CPC ..... B01D 35/02  
See application file for complete search history.

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*Primary Examiner* — Robin V Webster

(74) *Attorney, Agent, or Firm* — Drinker Biddle & Reath LLP

(57) **CLAIM**

The ornamental design for a filter element for ballast water treatment, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a first embodiment of a filter element for ballast water treatment of the present invention.  
FIG. 2 is a rear view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 3 is a top plan view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 4 is a bottom view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 5 is a right side view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 6 is a left side view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 7 is a perspective view of the first embodiment of the filter element for ballast water treatment of FIG. 1.  
FIG. 8 is a sectional view of the first embodiment of the filter element for ballast water treatment of FIG. 1, taken along the line 8-8 of FIG. 3.

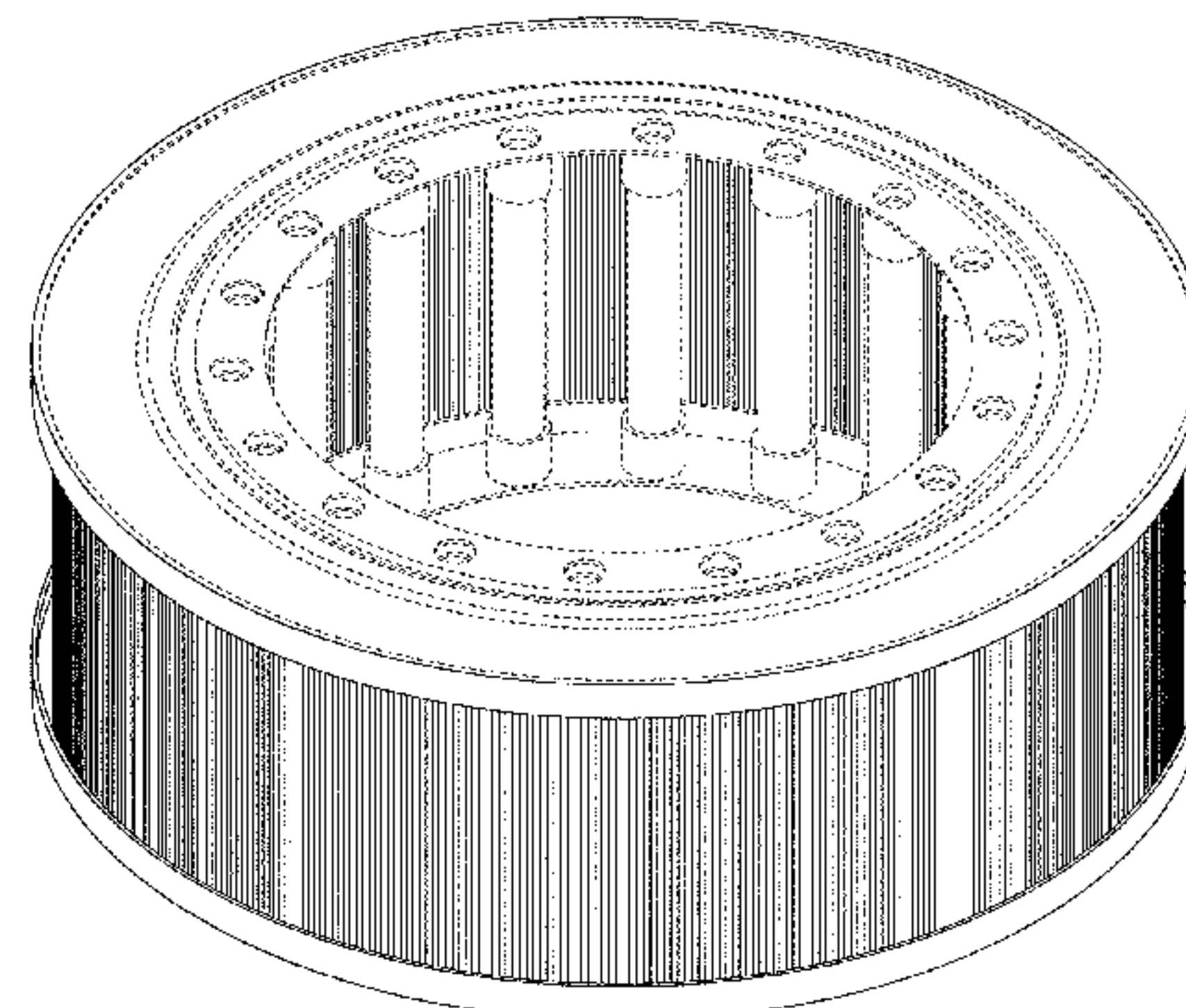
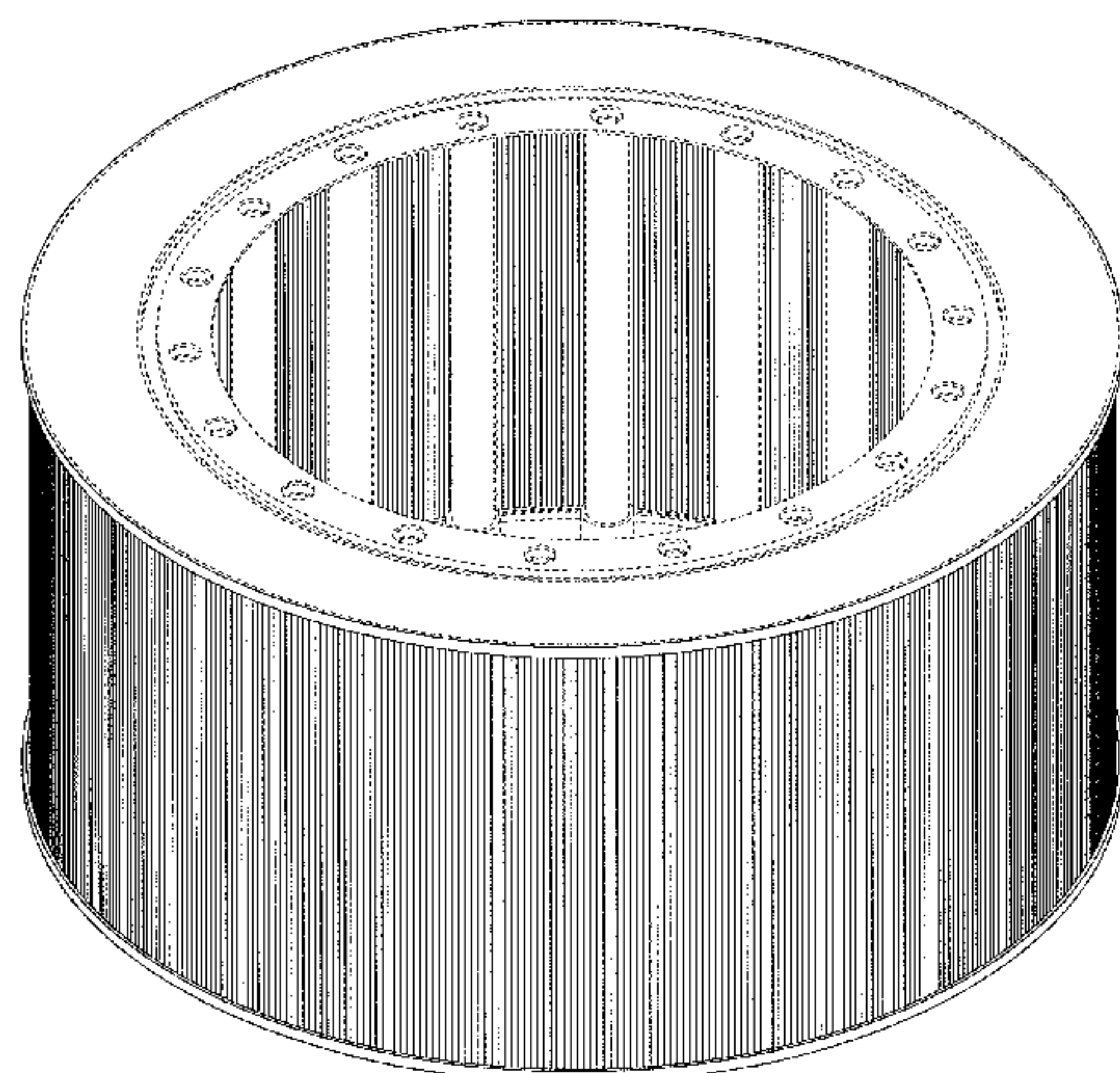


FIG. 9 is a sectional view of the first embodiment of the filter element for ballast water treatment of FIG. 1, taken along the line 9-9 of FIG. 1.

FIG. 10 is an enlarged sectional view of the first embodiment of the filter element for ballast water treatment of FIG. 1, taken along the line 10-10 of FIG. 8.

FIG. 11 is an enlarged sectional view of the first embodiment of the filter element for ballast water treatment of FIG. 1, taken along the line 11-11 of FIG. 8.

FIG. 12 is an enlarged sectional view of the first embodiment of the filter element for ballast water treatment of FIG. 1, taken along the line 12-1, 12-1 and 12-2, 12-2 of FIG. 9.

FIG. 13 is a reference view of the first embodiment of the filter element for ballast water treatment of FIG. 1 in use, wherein the filter elements are connected vertically and mounted to a ballast water treatment equipment, which is for illustrative purpose only and form no part of the claimed design.

FIG. 14 is a front view of a second embodiment of a filter element for ballast water treatment of the present invention.

FIG. 15 is a rear view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 16 is a top plan view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 17 is a bottom view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 18 is a right side view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 19 is a left side view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 20 is a perspective view of the second embodiment of the filter element for ballast water treatment of FIG. 14.

FIG. 21 is a sectional view of the second embodiment of the filter element for ballast water treatment of FIG. 14, taken along the line 21-21 of FIG. 16.

FIG. 22 is a sectional view of the second embodiment of the filter element for ballast water treatment of FIG. 14, taken along the line 22-22 of FIG. 14.

FIG. 23 is an enlarged sectional view of the second embodiment of the filter element for ballast water treatment of FIG. 14, taken along the line 23-23 of FIG. 21.

FIG. 24 is an enlarged sectional view of the second embodiment of the filter element for ballast water treatment of FIG. 14, taken along the line 24-24 of FIG. 21.

FIG. 25 is an enlarged sectional view of the second embodiment of the filter element for ballast water treatment of FIG. 14, taken along the line 25-1, 25-1 and 25-2, 25-2 of FIG. 22; and,

FIG. 26 is a reference view of the second embodiment of the filter element for ballast water treatment of FIG. 14 in use, wherein the filter elements are connected vertically and mounted to a ballast water treatment equipment, which is for illustrative purpose only and form no part of the claimed design.

The features shown in broken lines depict environmental subject matter only and form no part of the claimed design.

**1 Claim, 26 Drawing Sheets**



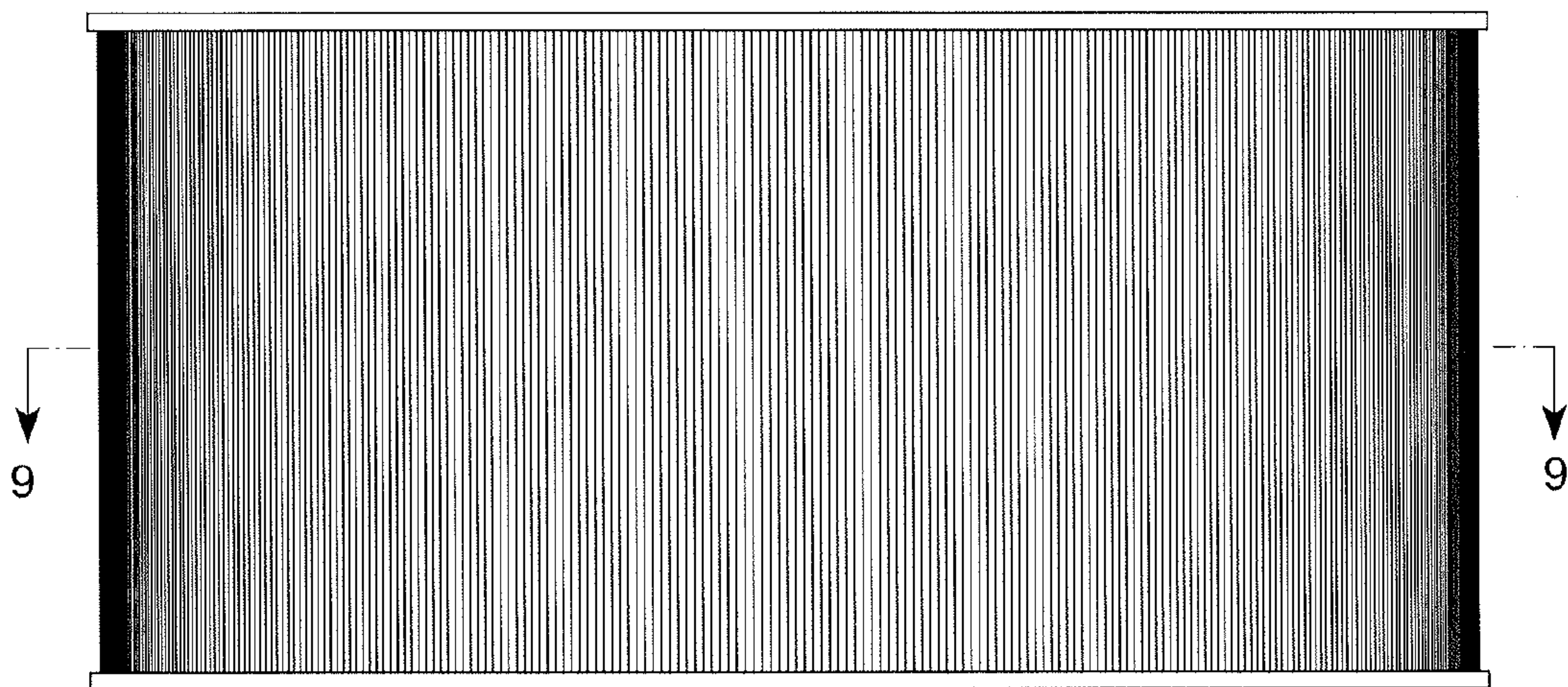


Fig. 1

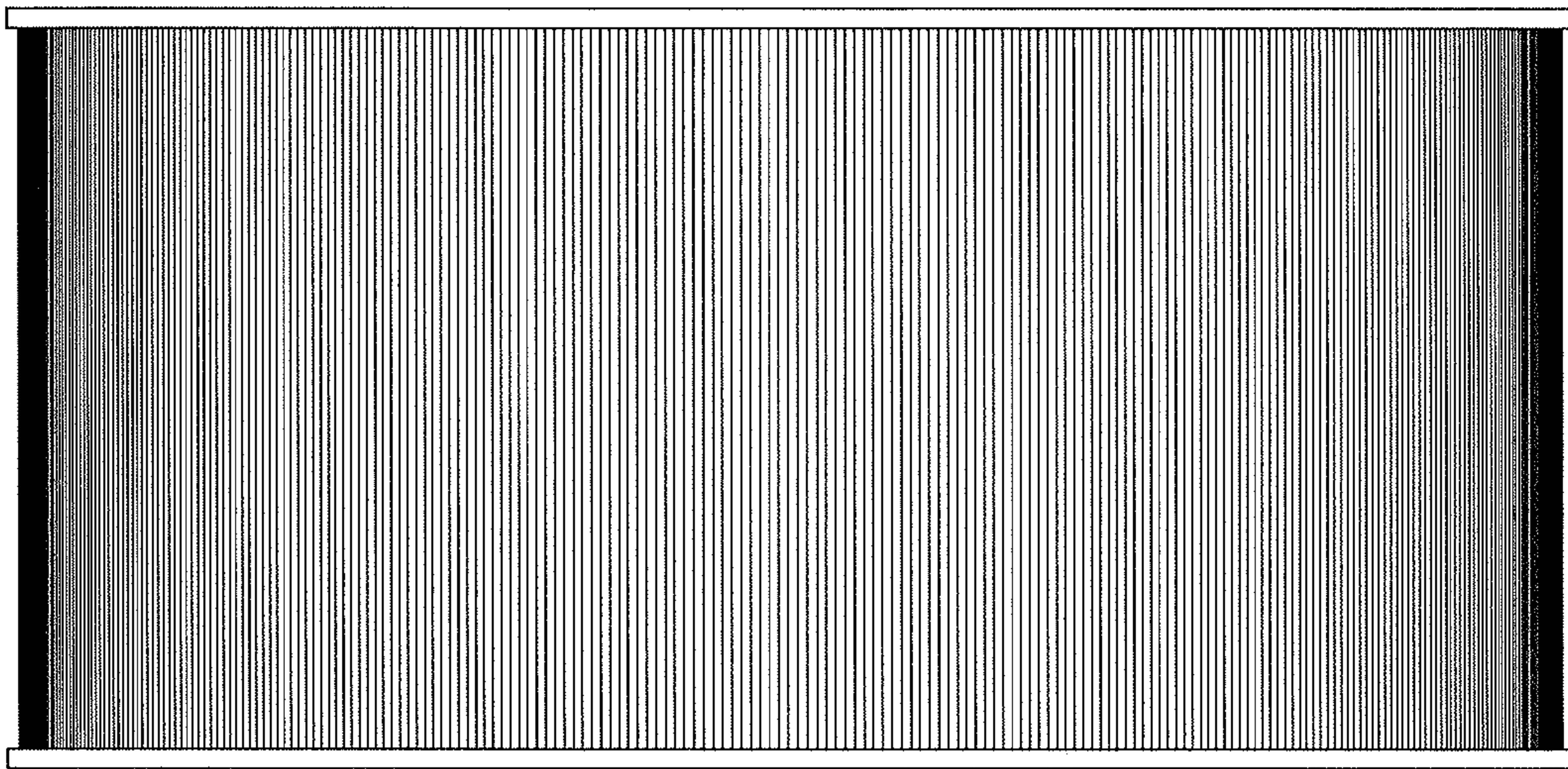


Fig.2

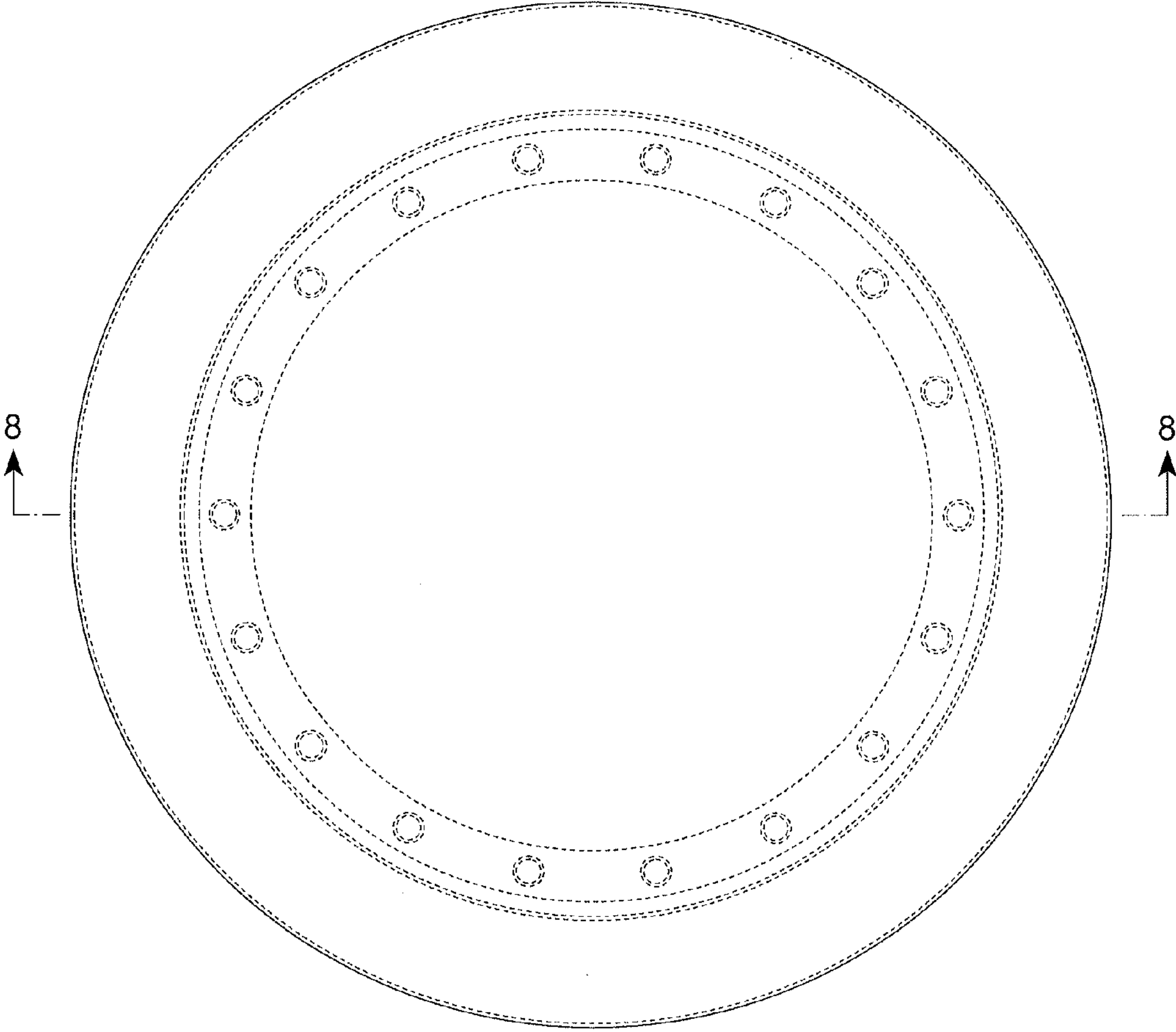


Fig.3

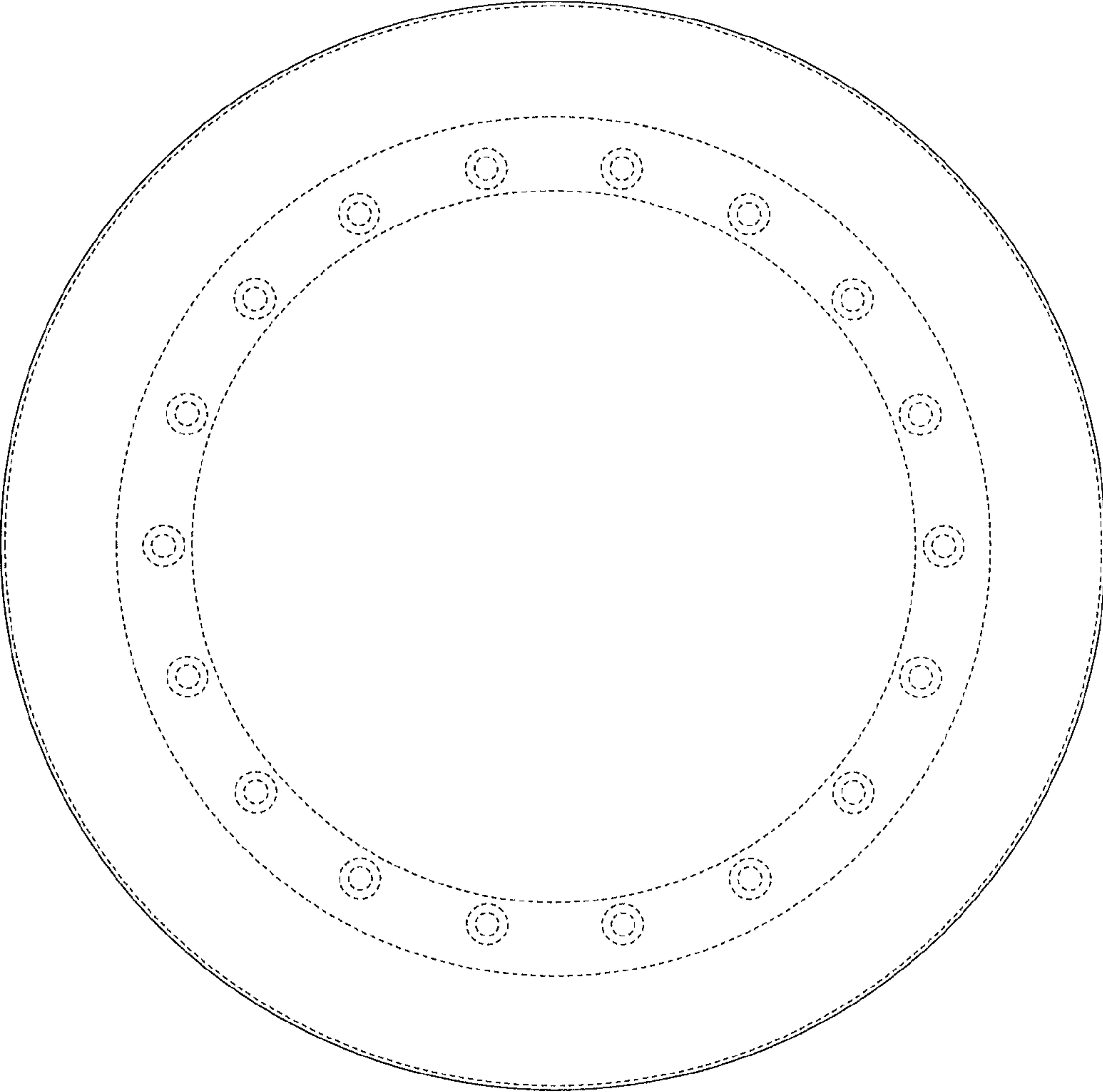


Fig.4

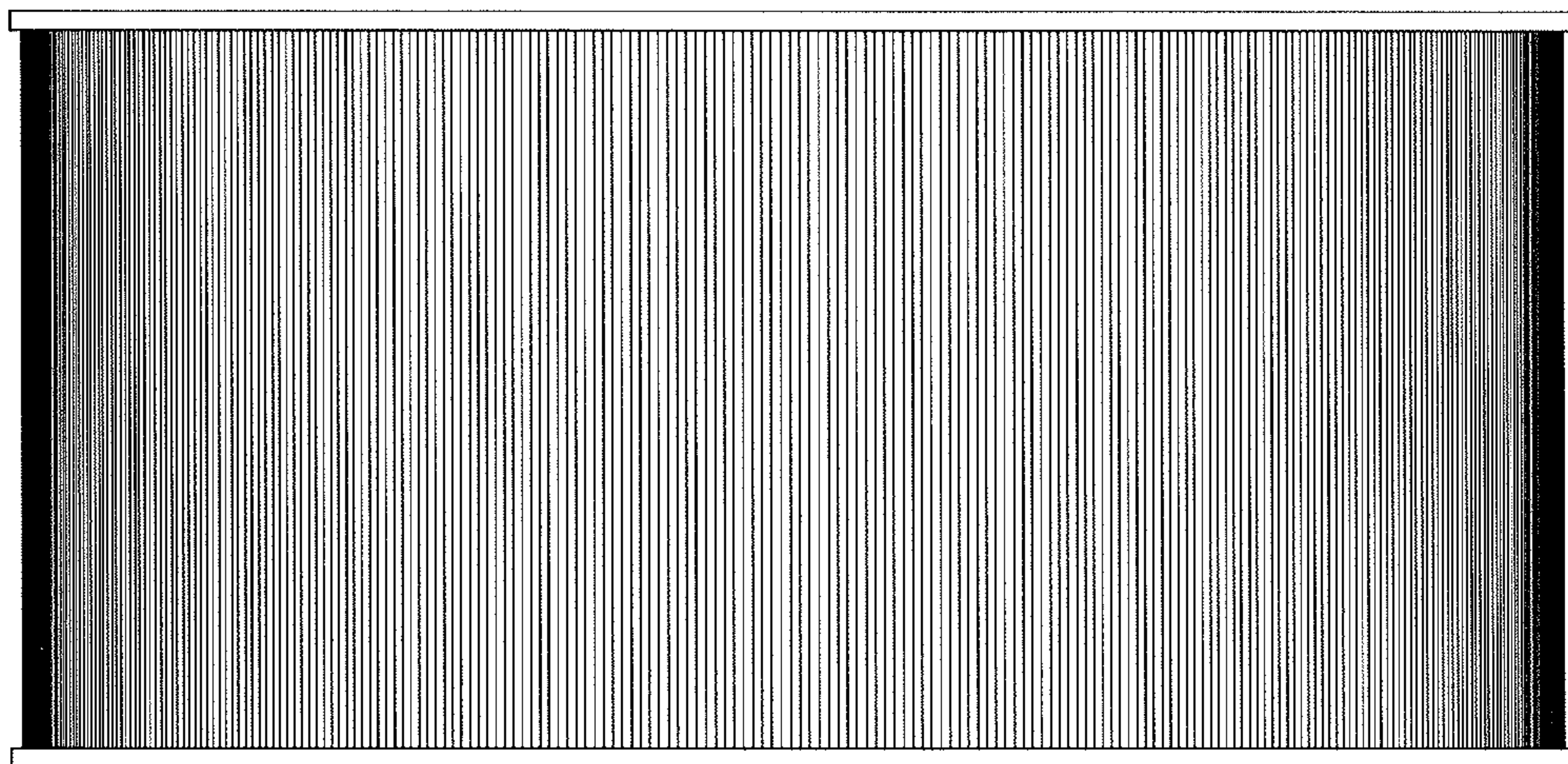


Fig.5



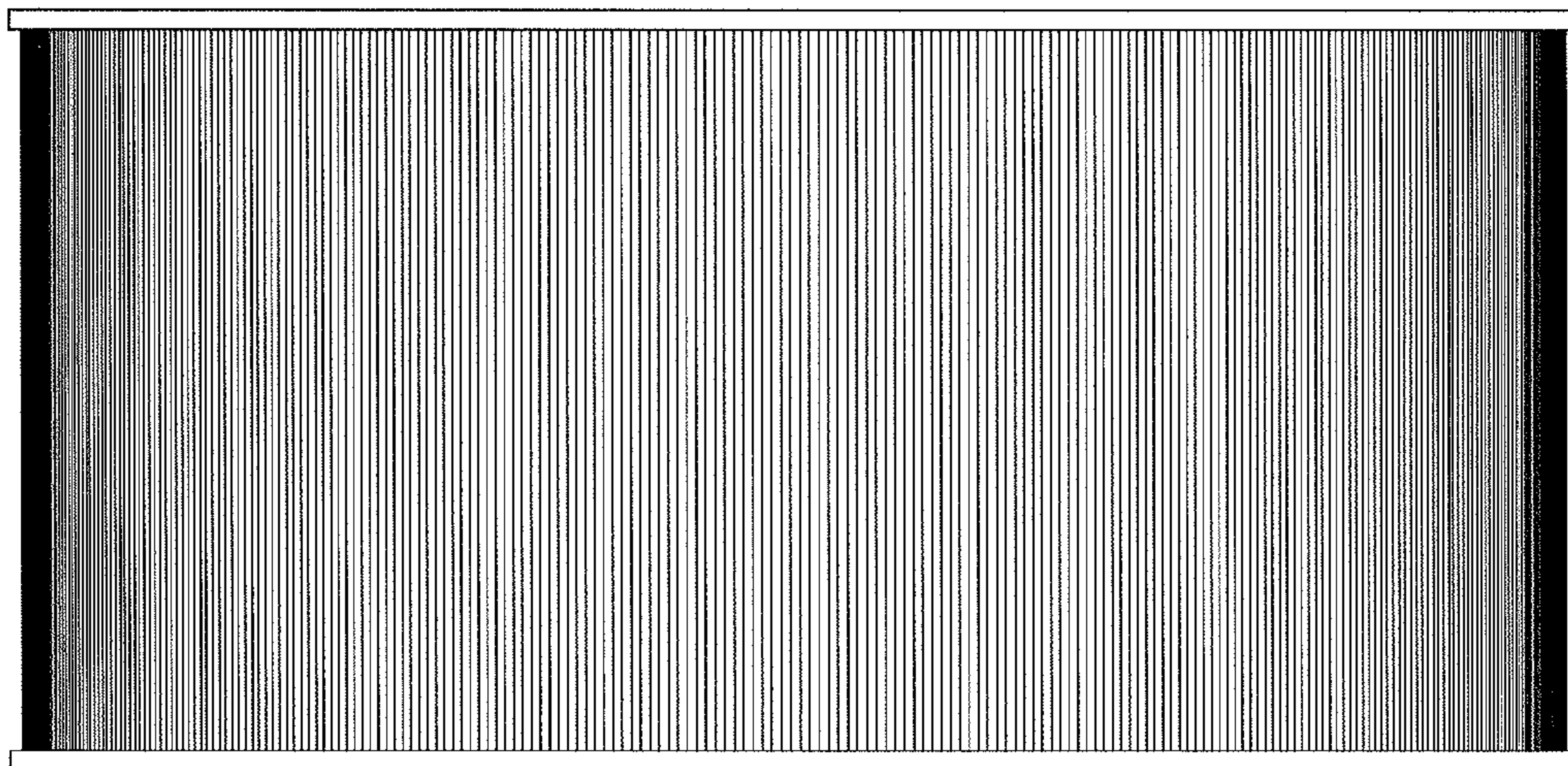


Fig.6



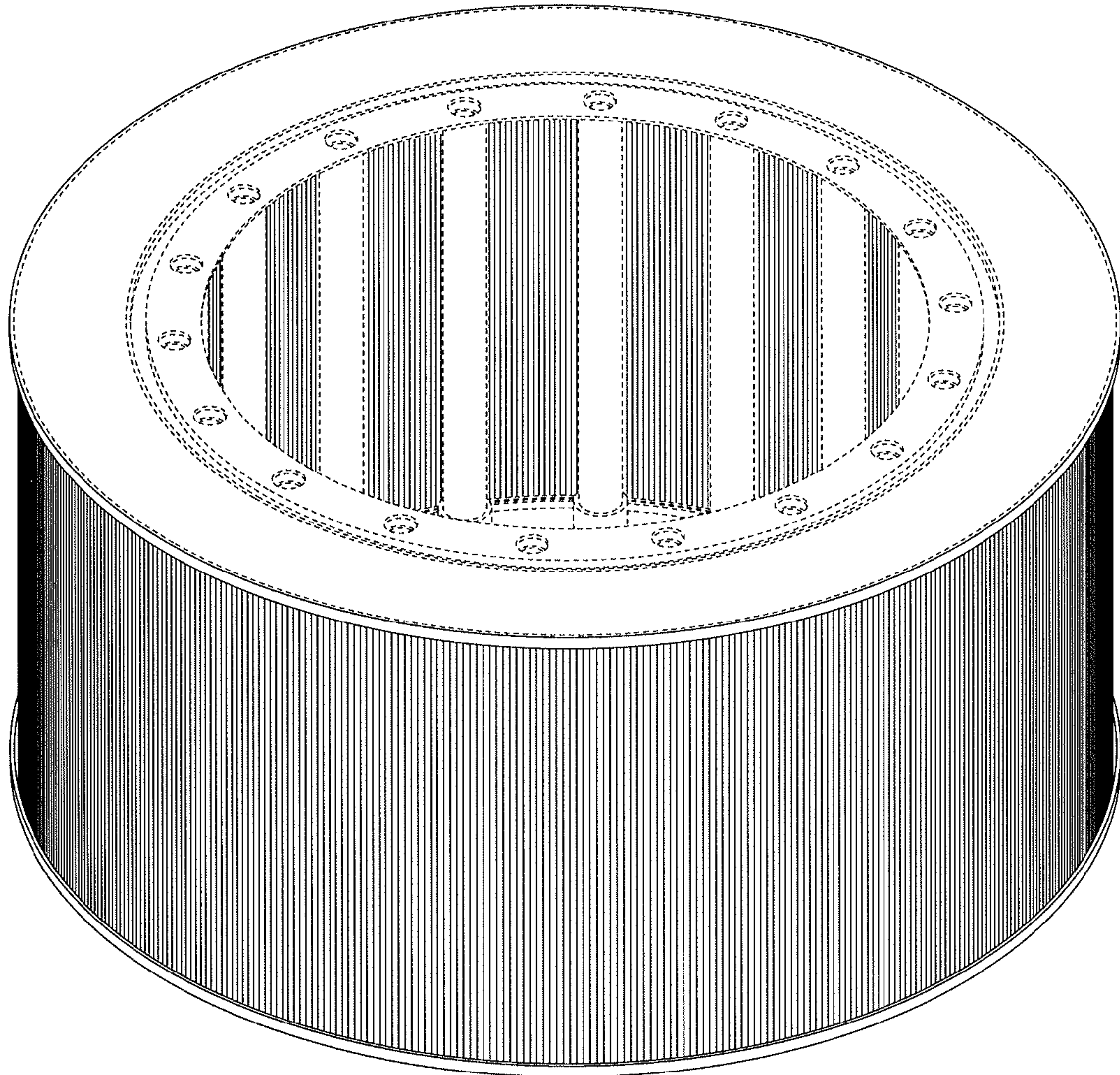


Fig.7

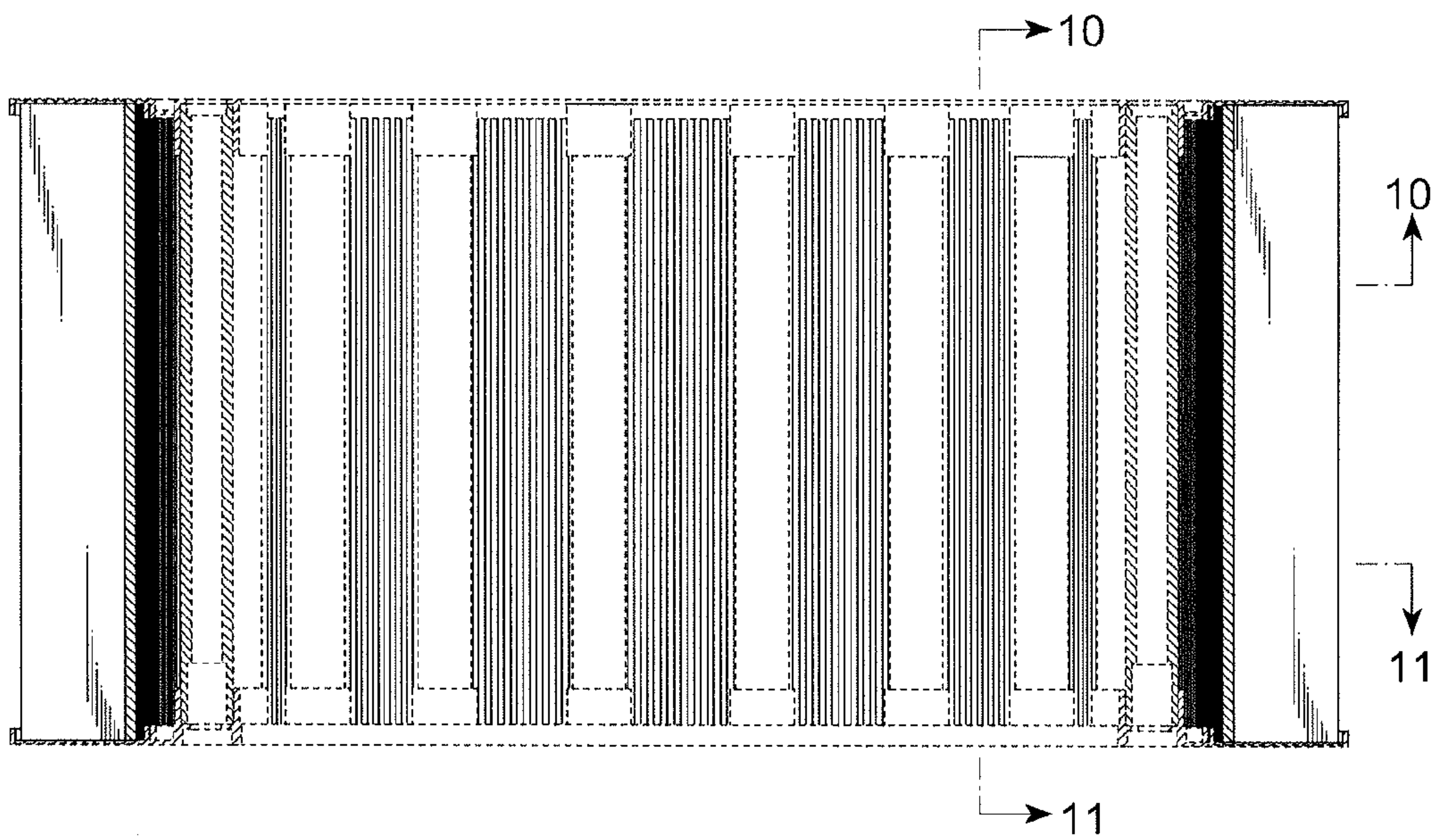


Fig.8

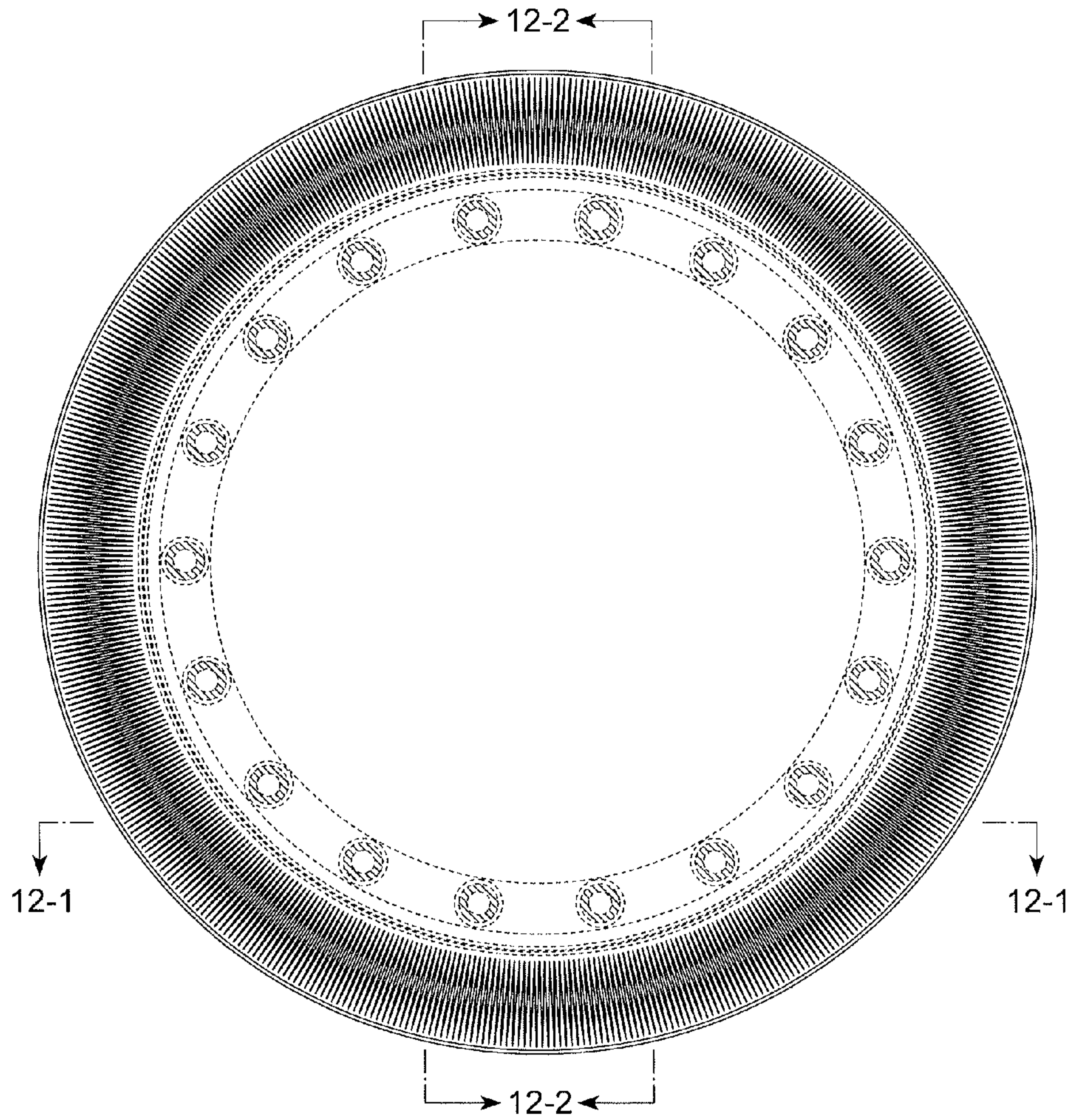


Fig.9



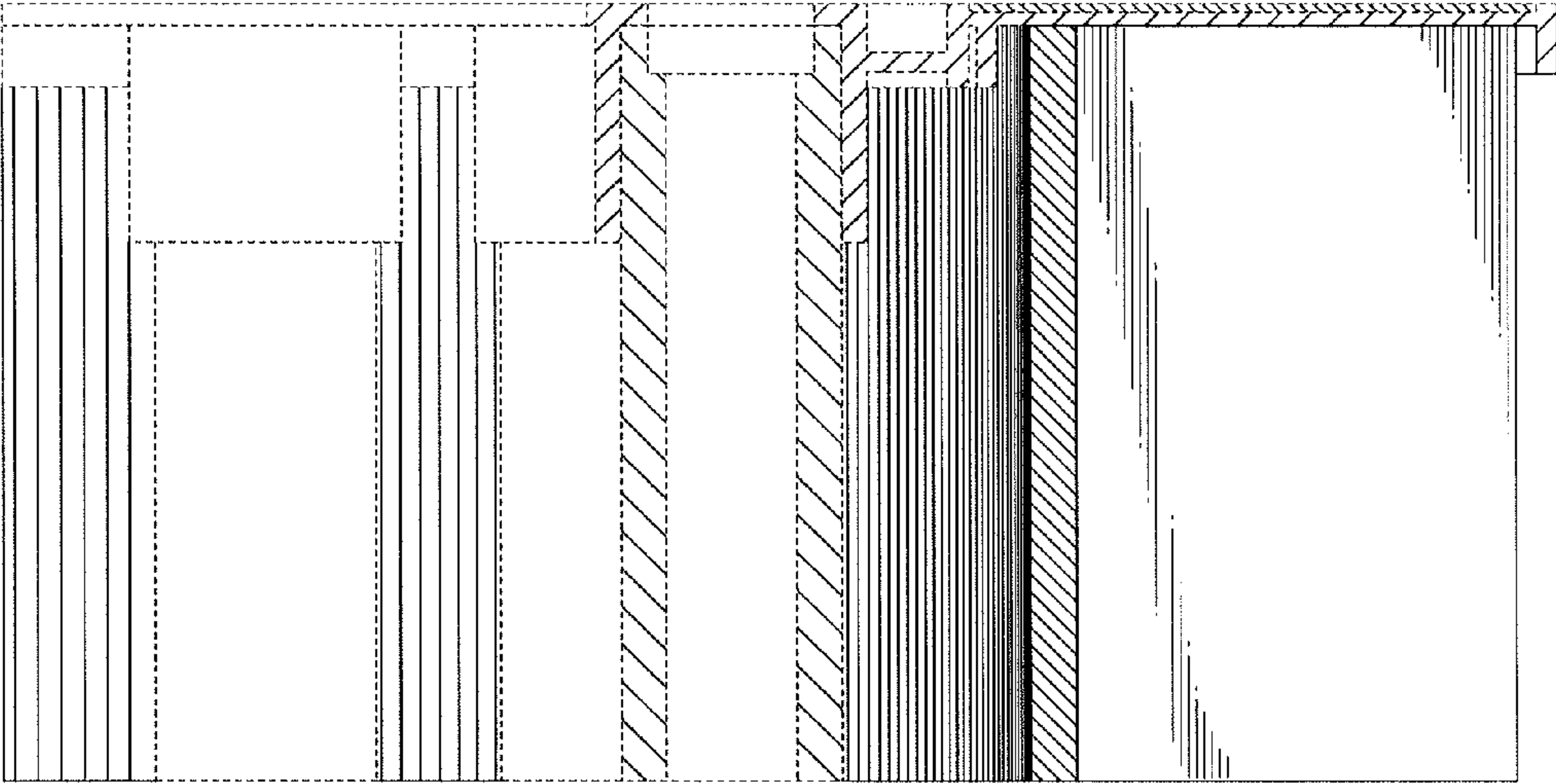


Fig.10



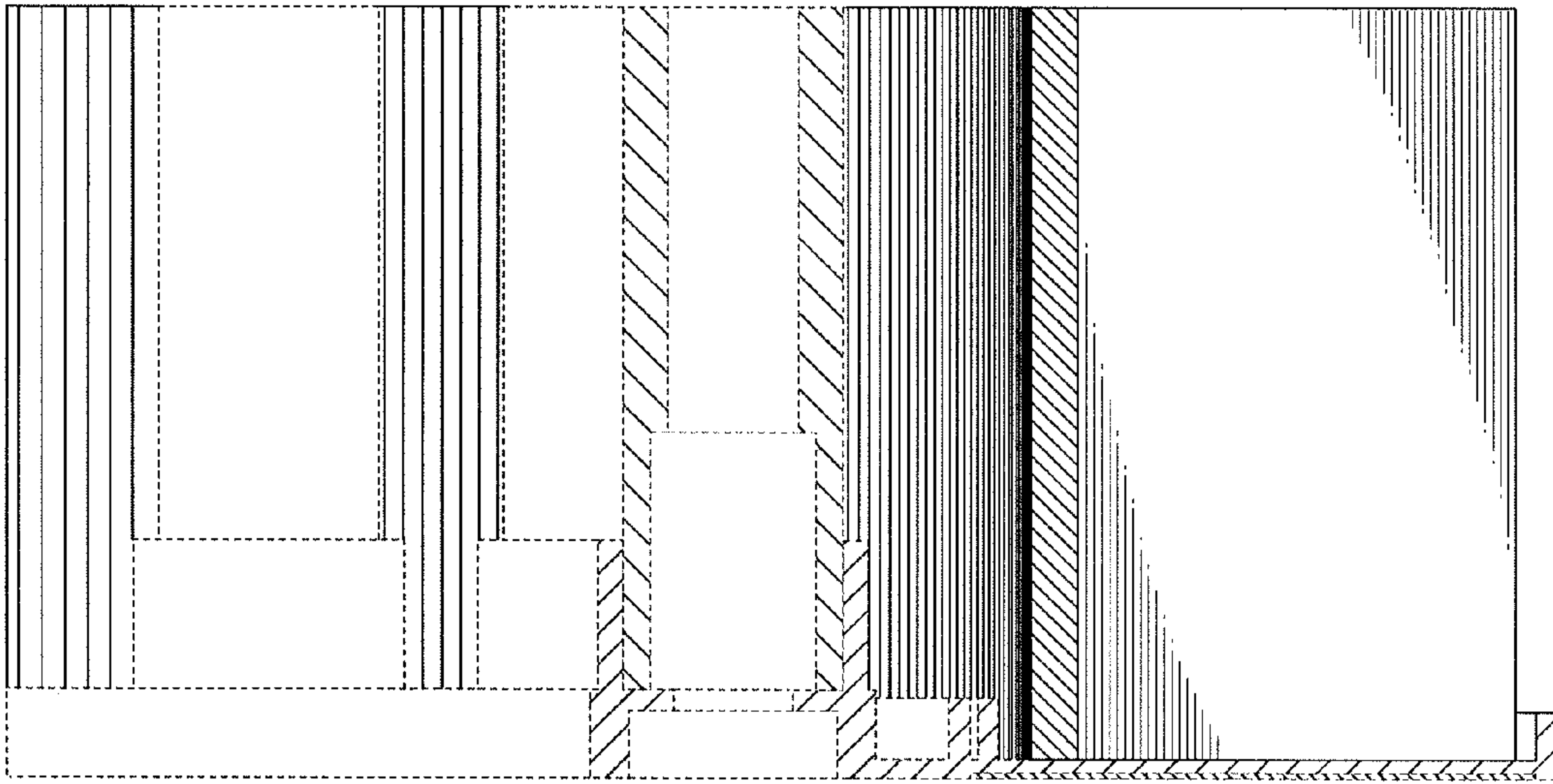


Fig.11

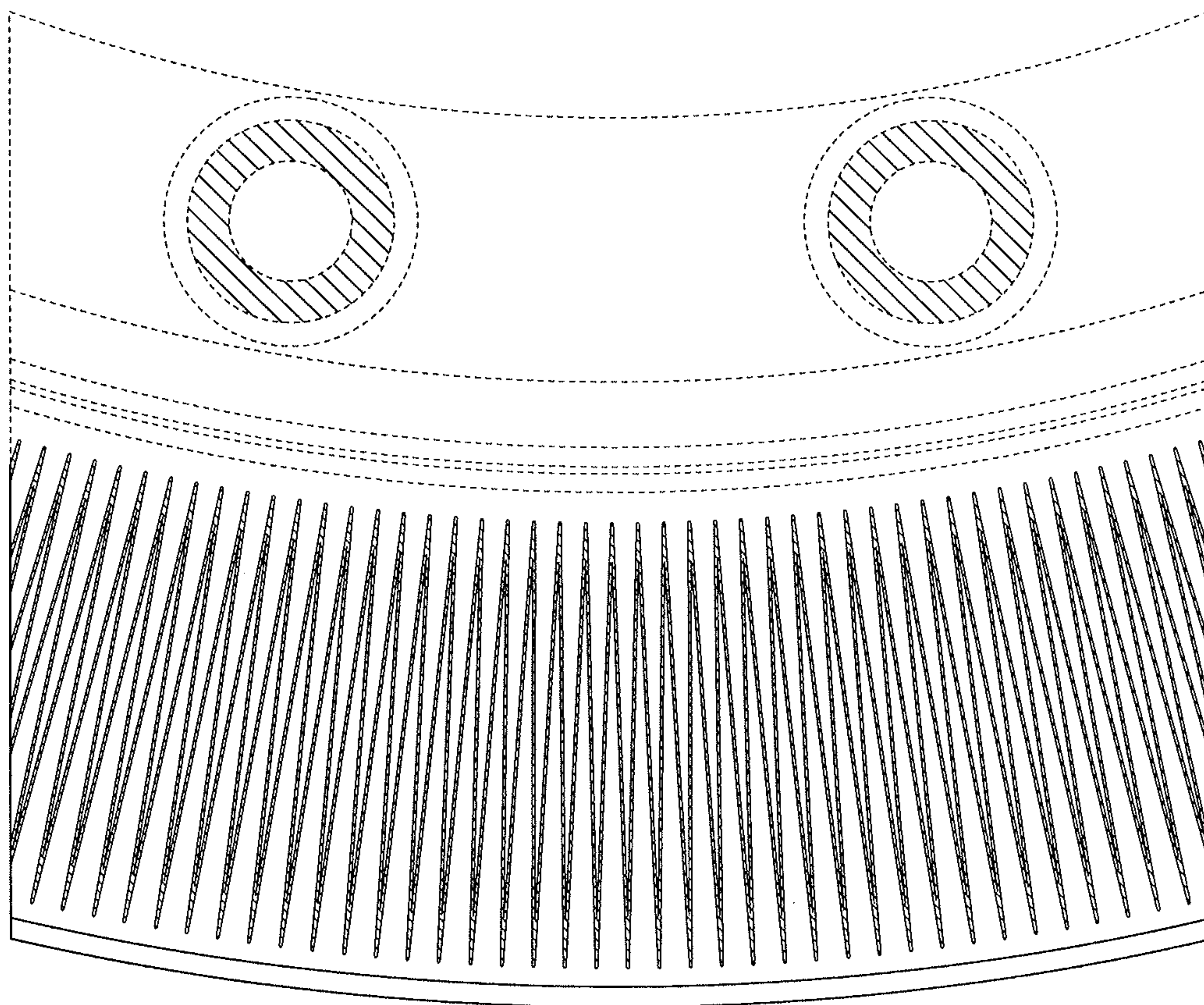


Fig.12

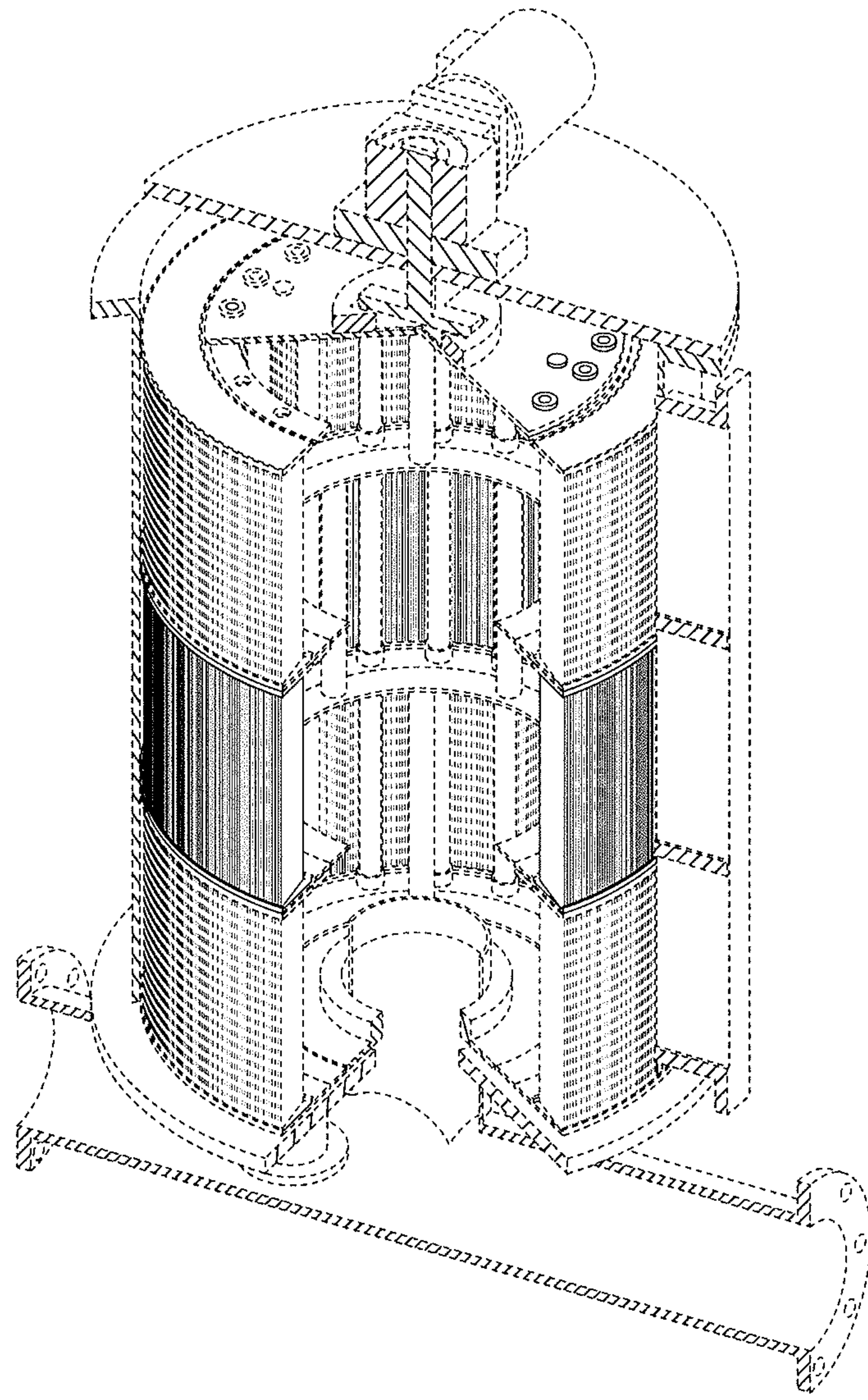


Fig.13

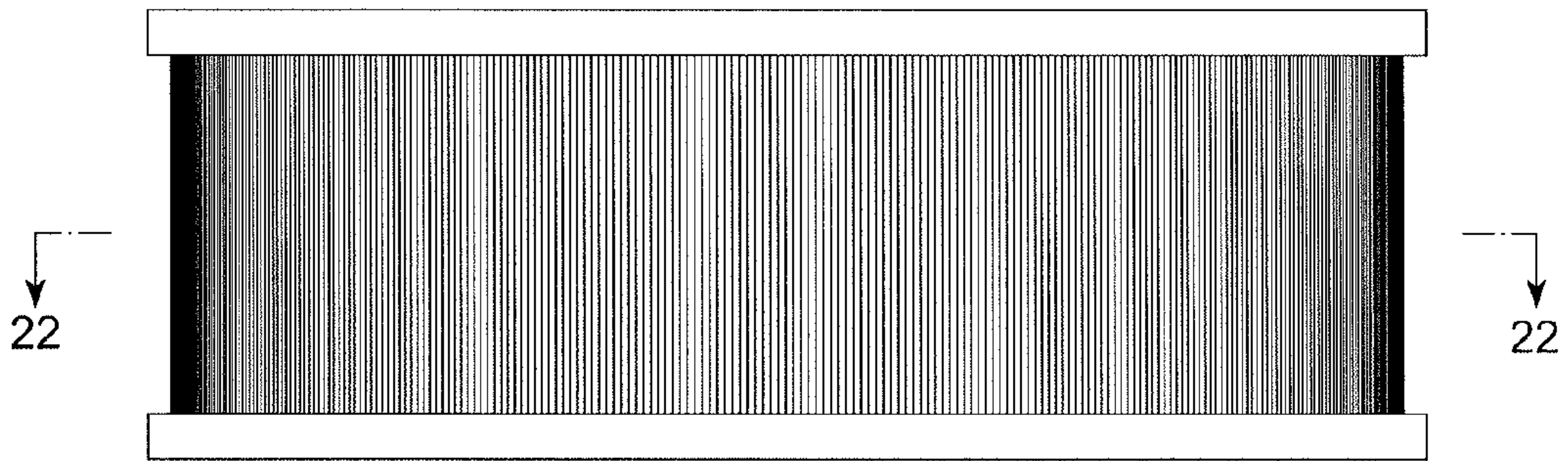


Fig. 14



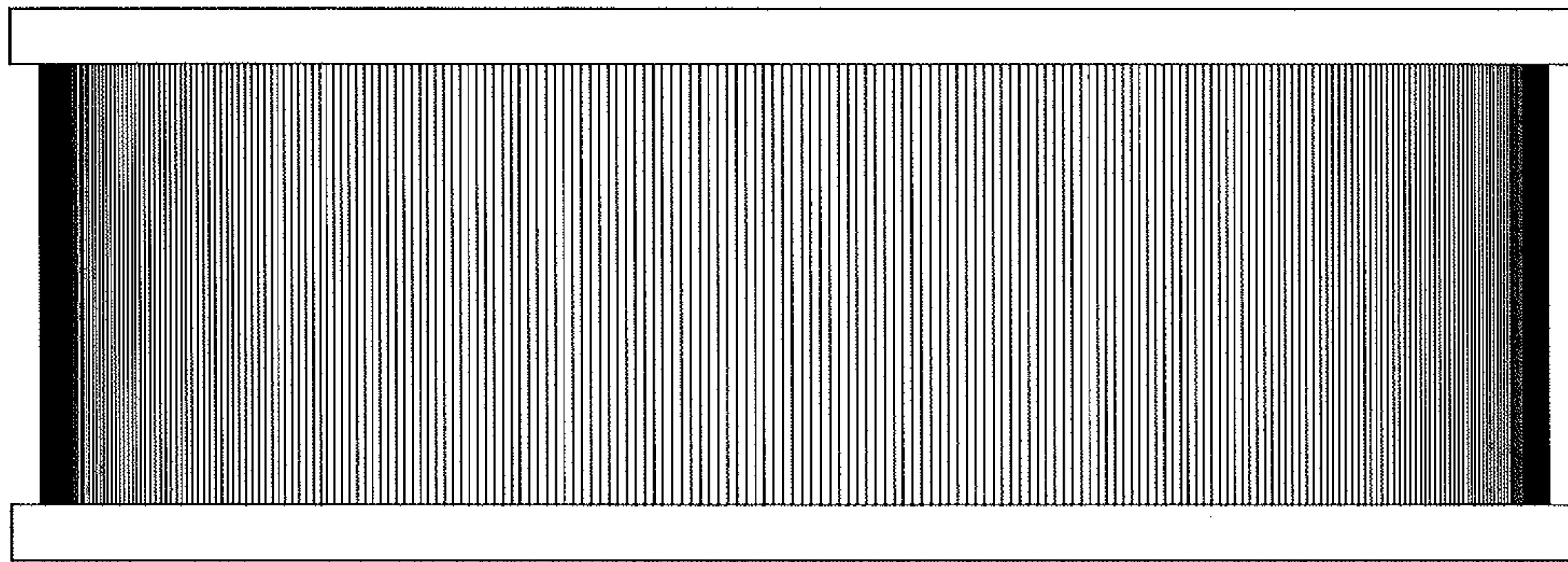


Fig.15

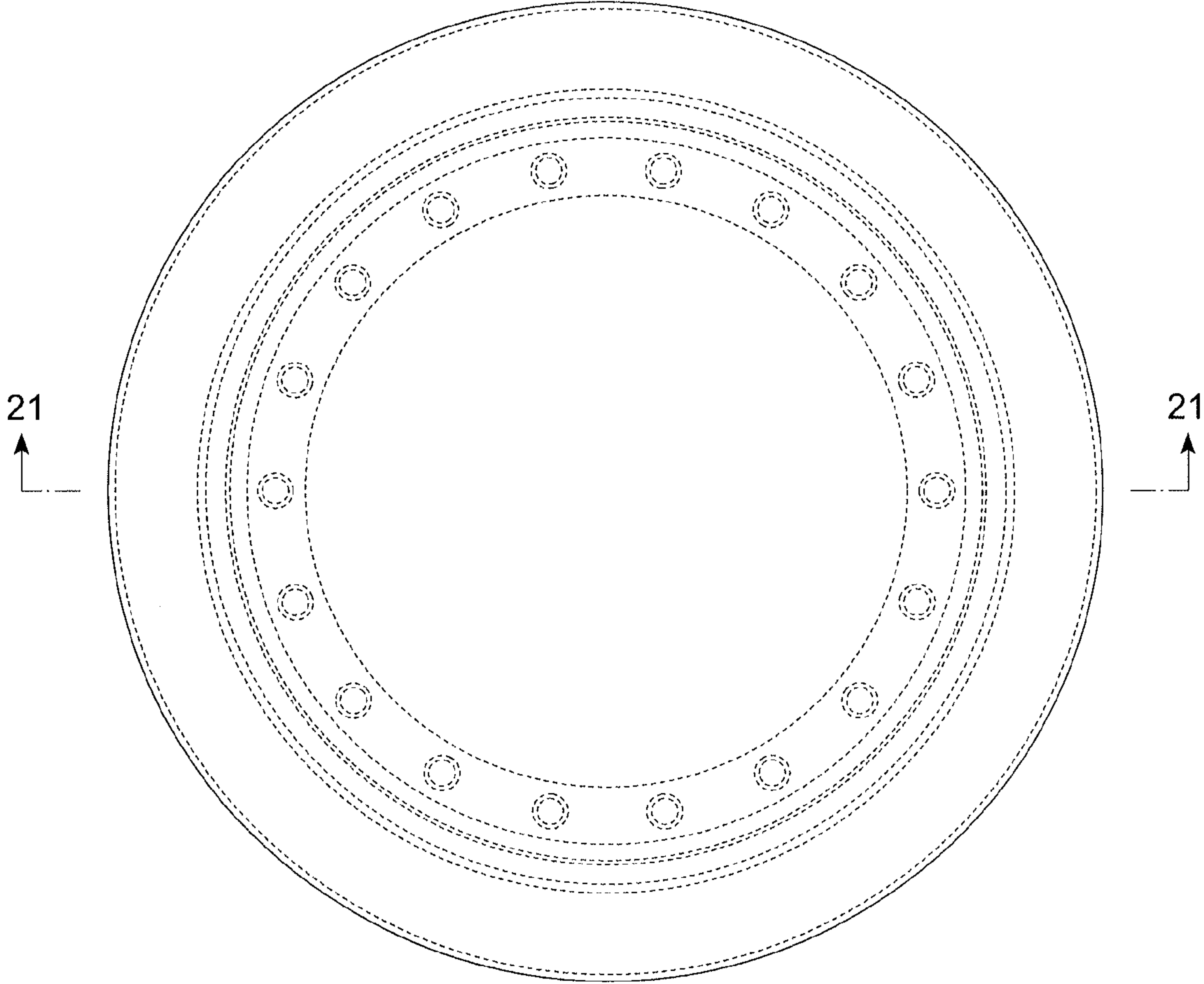


Fig.16

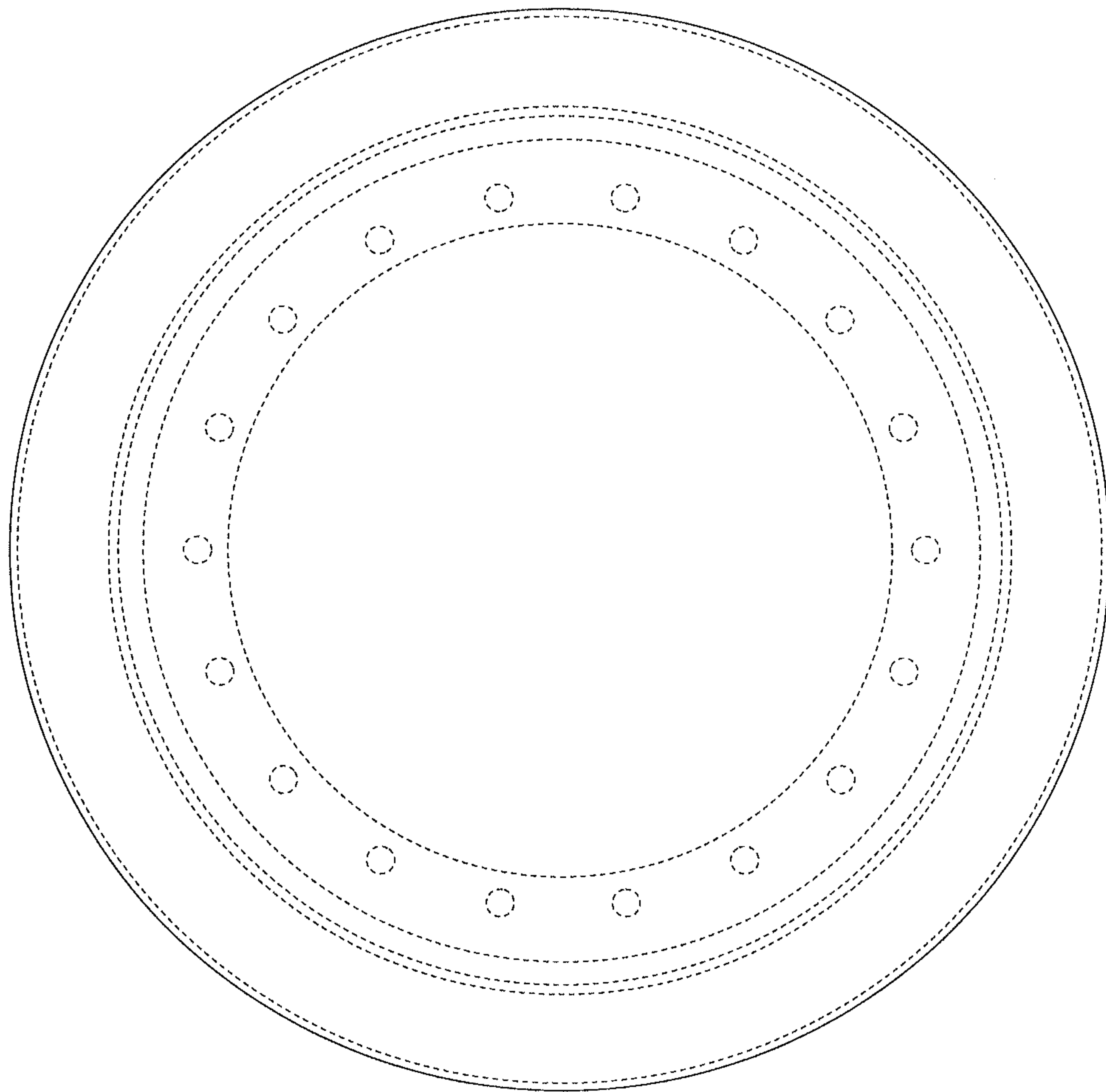


Fig.17

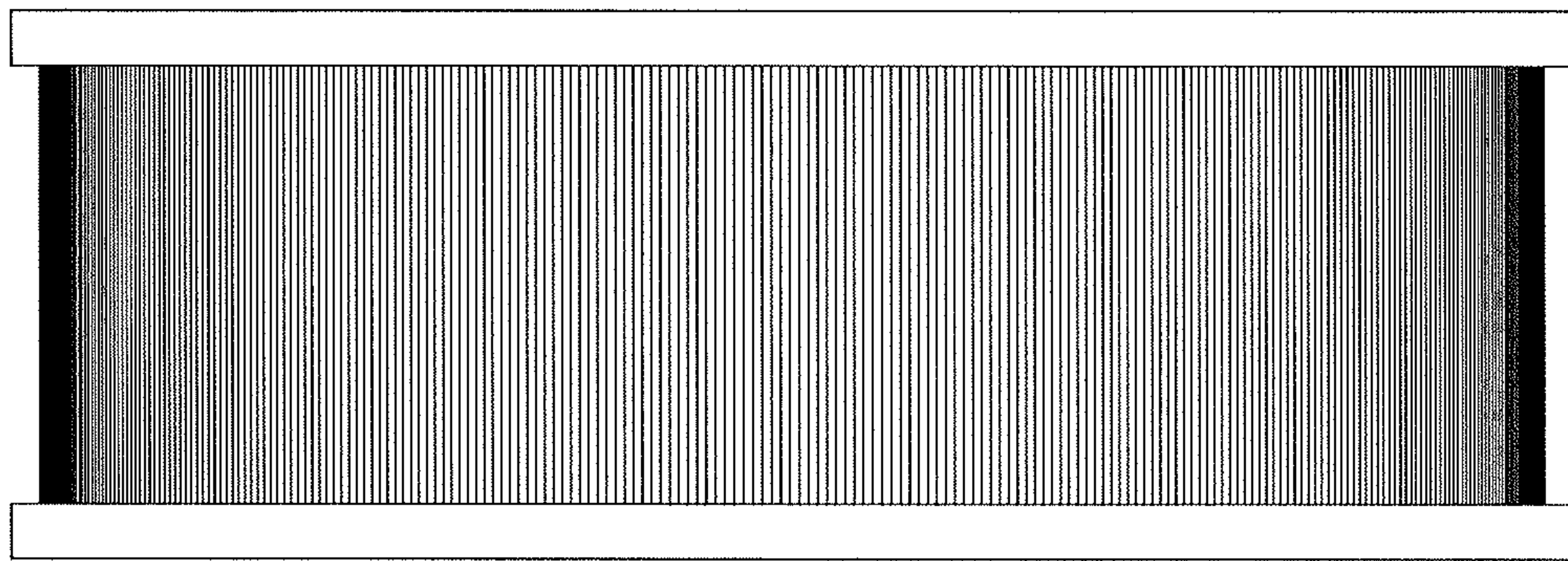


Fig.18



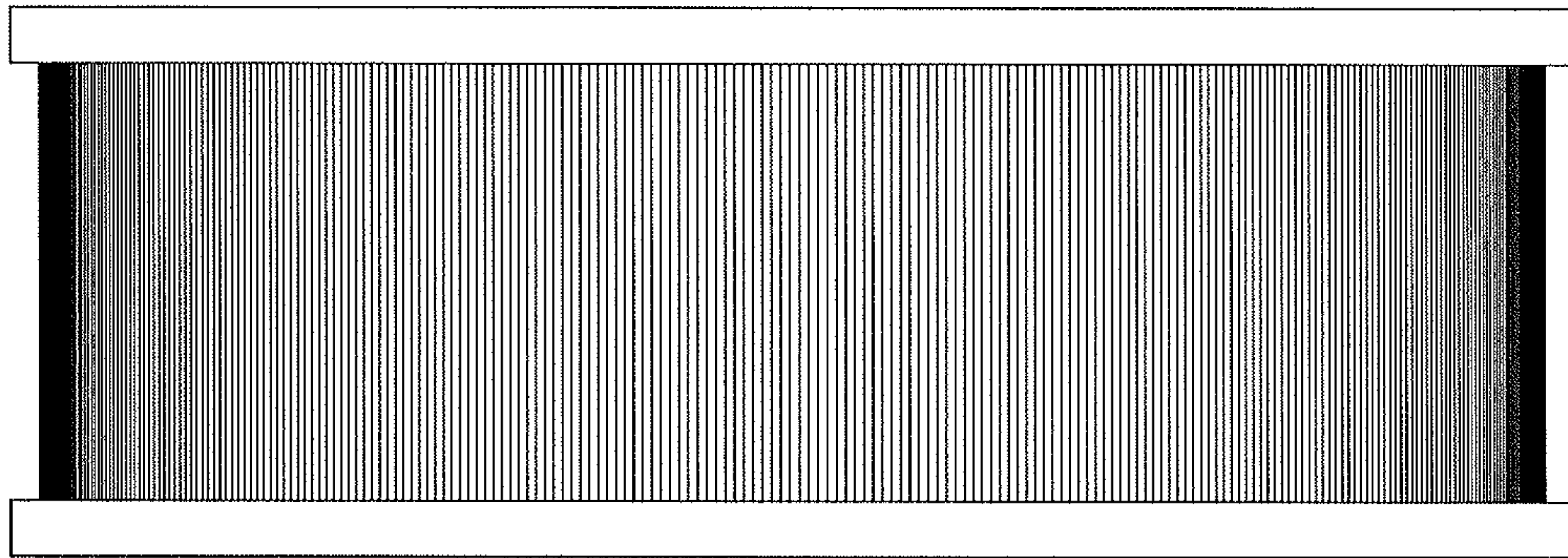


Fig.19

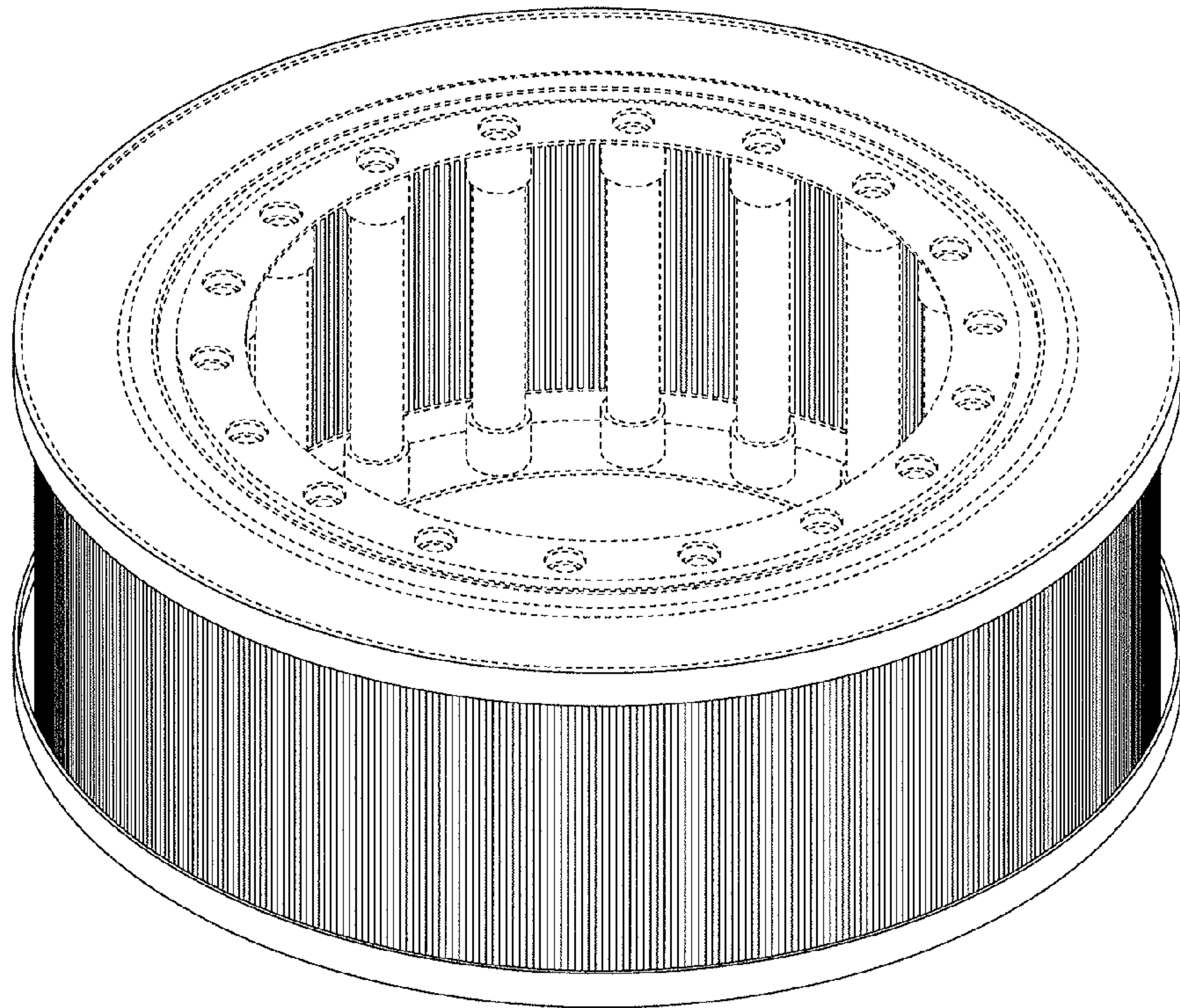


Fig.20

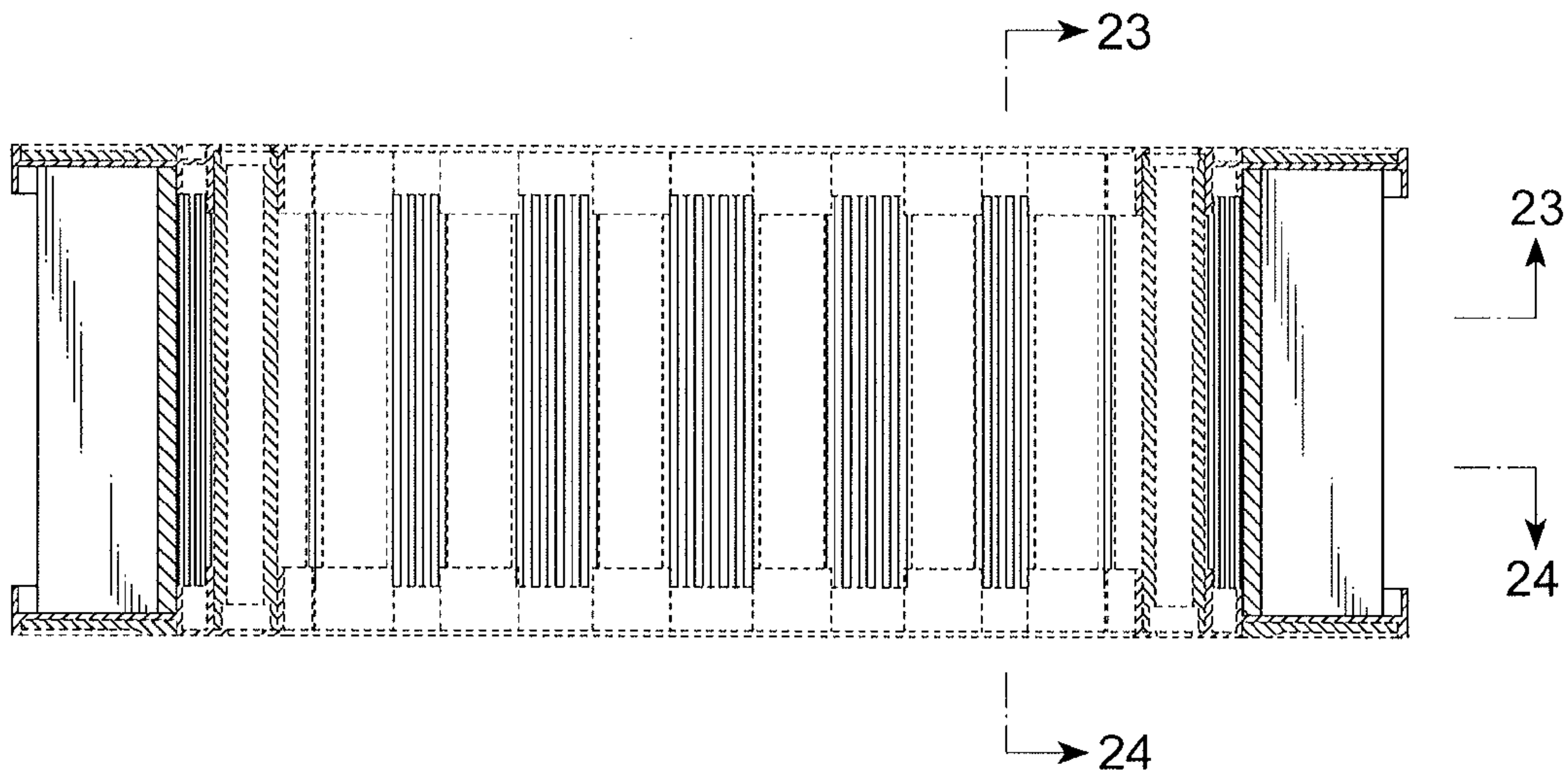


Fig.21

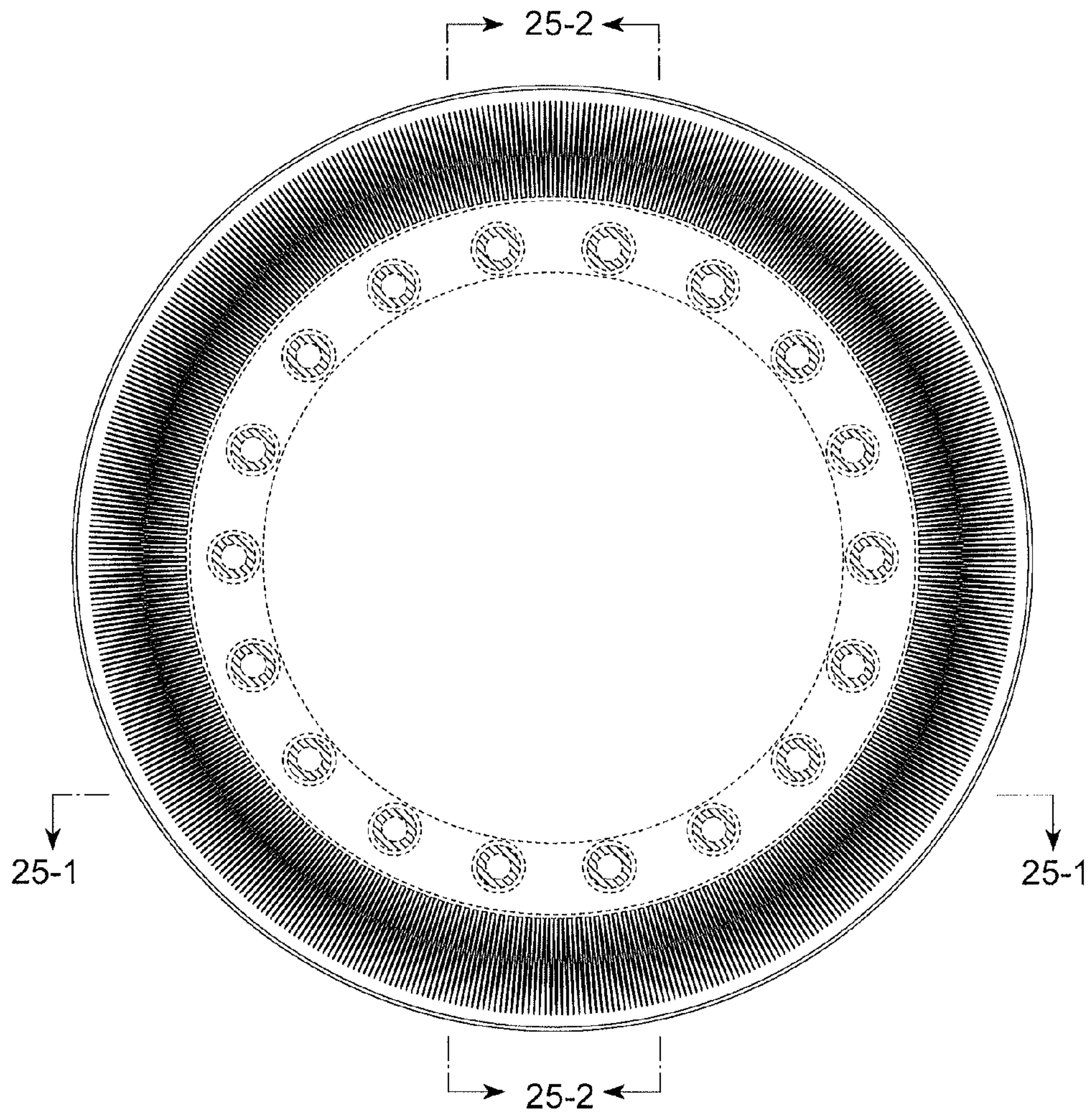


Fig.22



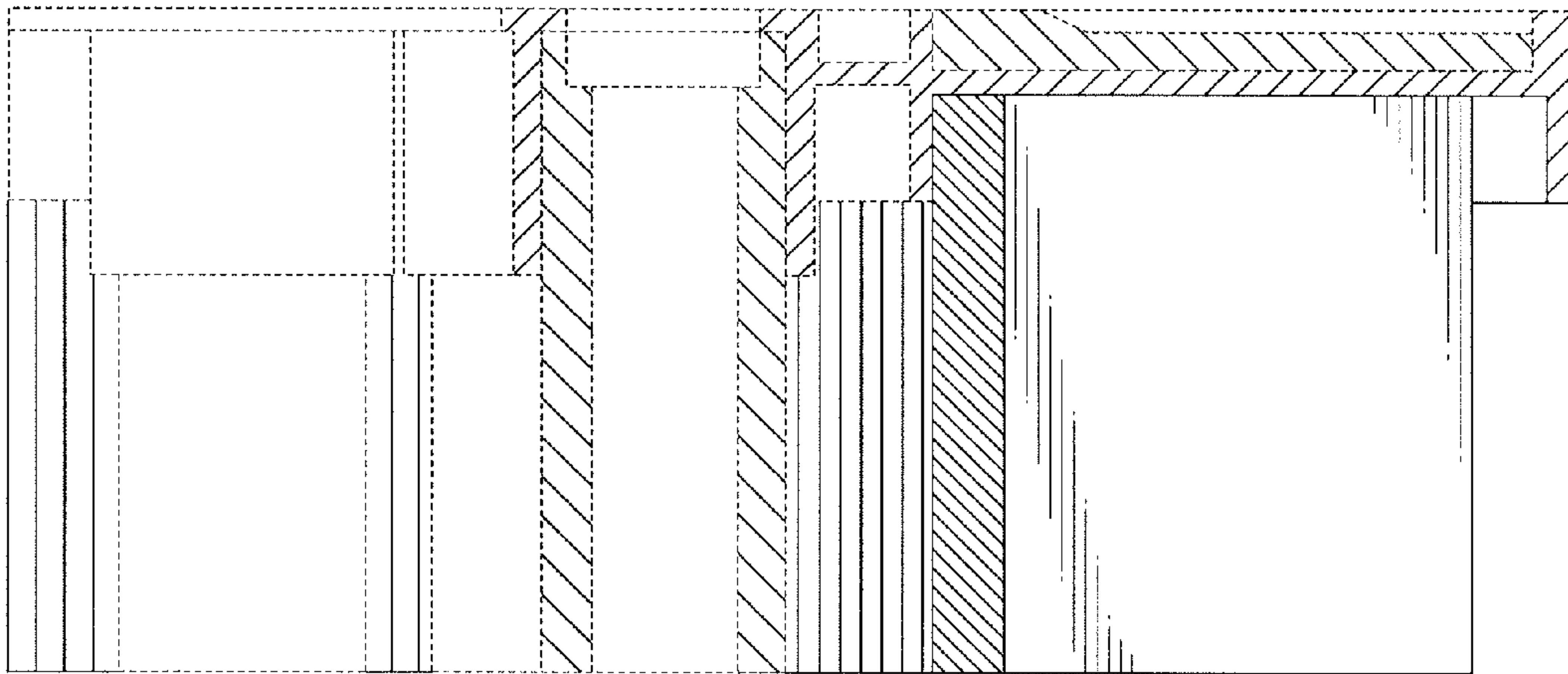


Fig.23

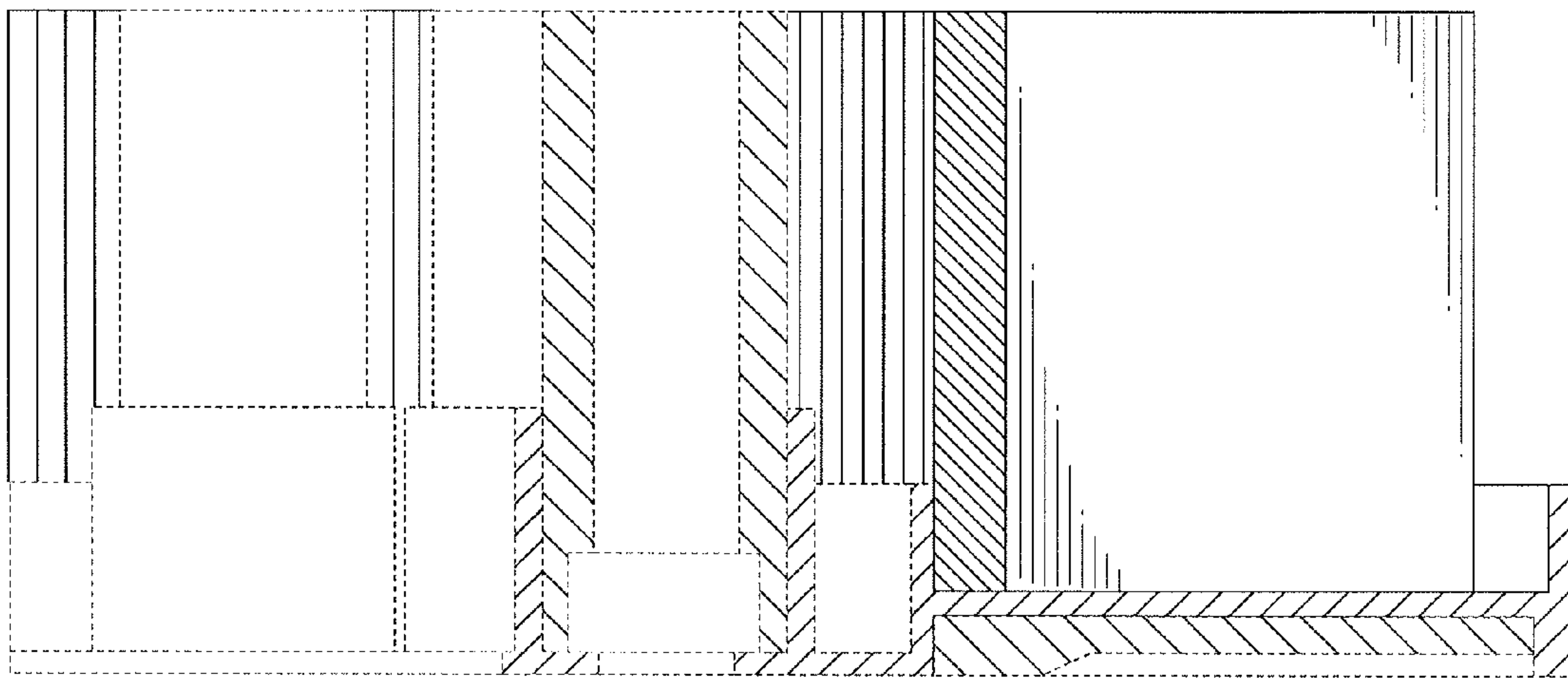


Fig.24

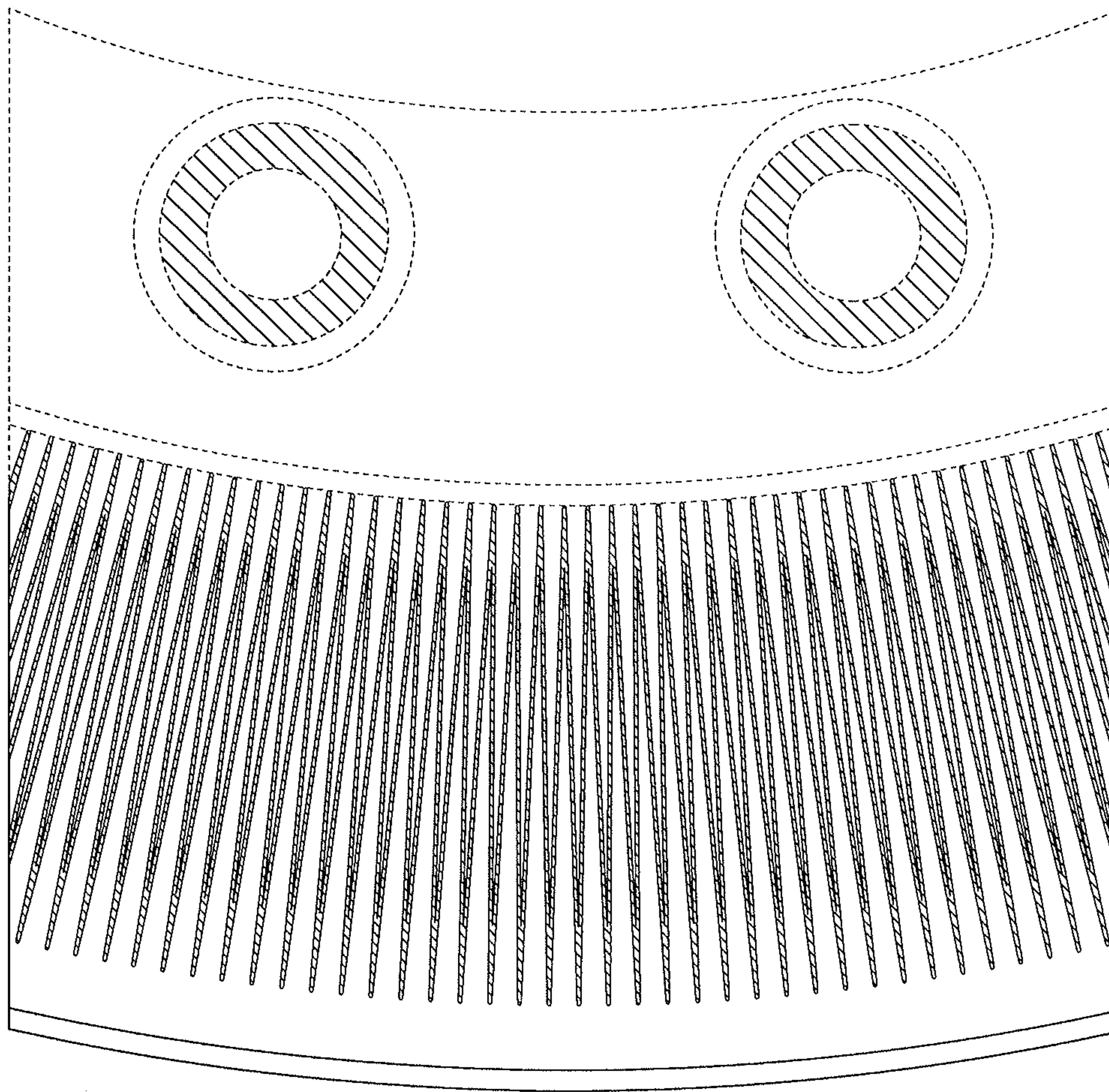


Fig.25

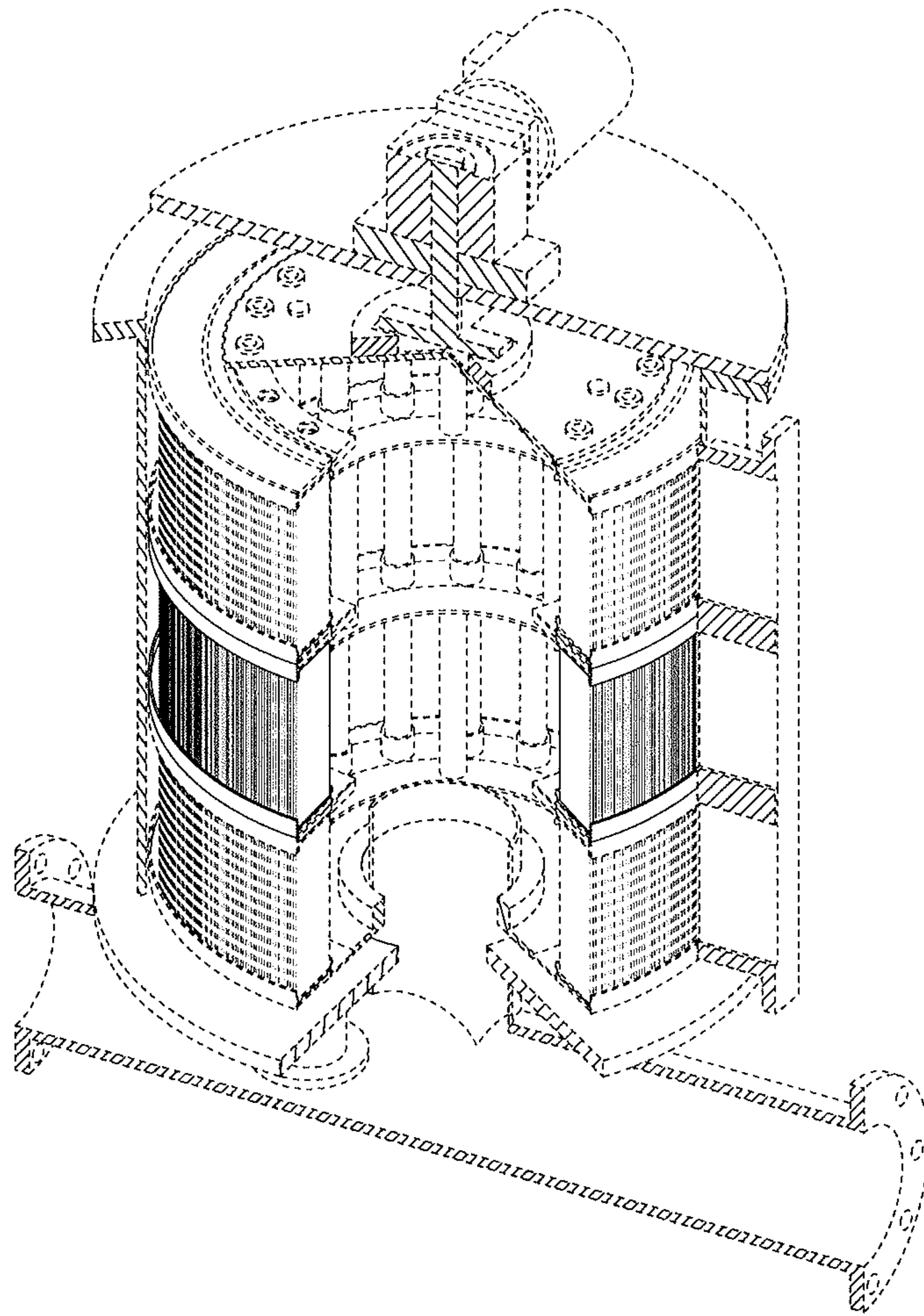


Fig.26