



US00D632374S

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

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(54) **HEAT EXCHANGER FIN**

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(73) Assignee: **Goodman Global, Inc.**, Houston, TX (US)

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

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(51) **LOC (9) Cl.** **23-03**

(52) **U.S. Cl.** **D23/323**

(58) **Field of Classification Search** D23/314,
D23/323, 330, 386, 499; 165/150–152, 182,
165/DIG. 501; 62/290

See application file for complete search history.

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(57) **CLAIM**

The ornamental design for a heat exchanger fin, as shown and described.

DESCRIPTION

FIG. 1 is an enlarged perspective view of a portion of a heat exchanger fin showing a pattern of raised slots in the fin according to the invention disposed between a pair of collared holes;

FIG. 2 is a top view of the portion of the heat exchanger fin of FIG. 1;

FIG. 3 is a bottom view of the portion of the heat exchanger fin of FIG. 1;

FIG. 4 is a left side view of the portion of the heat exchanger fin of FIG. 1;

FIG. 5 is a right side view of the portion of the heat exchanger fin of FIG. 1;

FIG. 6 is a front view of the portion heat exchanger fin of FIG. 1;

FIG. 7 is a cross section view of the portion of the heat exchanger fin of FIG. 1 taken along lines 7—7 of FIG. 2;

FIG. 8 is a perspective view of a section of a heat exchanger fin according to a first embodiment of the invention characterized by having a single longitudinal row of collared holes separated by patterns of raised slots according to the invention as detailed in FIGS. 1-7;

FIG. 9 is a top view of a portion of the section of the heat exchanger fin of FIG. 8;

FIG. 10 is a perspective view of a section of a heat exchanger fin according to a second embodiment of the invention characterized by two longitudinal rows of collared holes separated by patterns of raised slots according to the invention as detailed in FIGS. 1-7, wherein the first longitudinal row of collared holes is longitudinally offset from the second longitudinal row of collared holes;

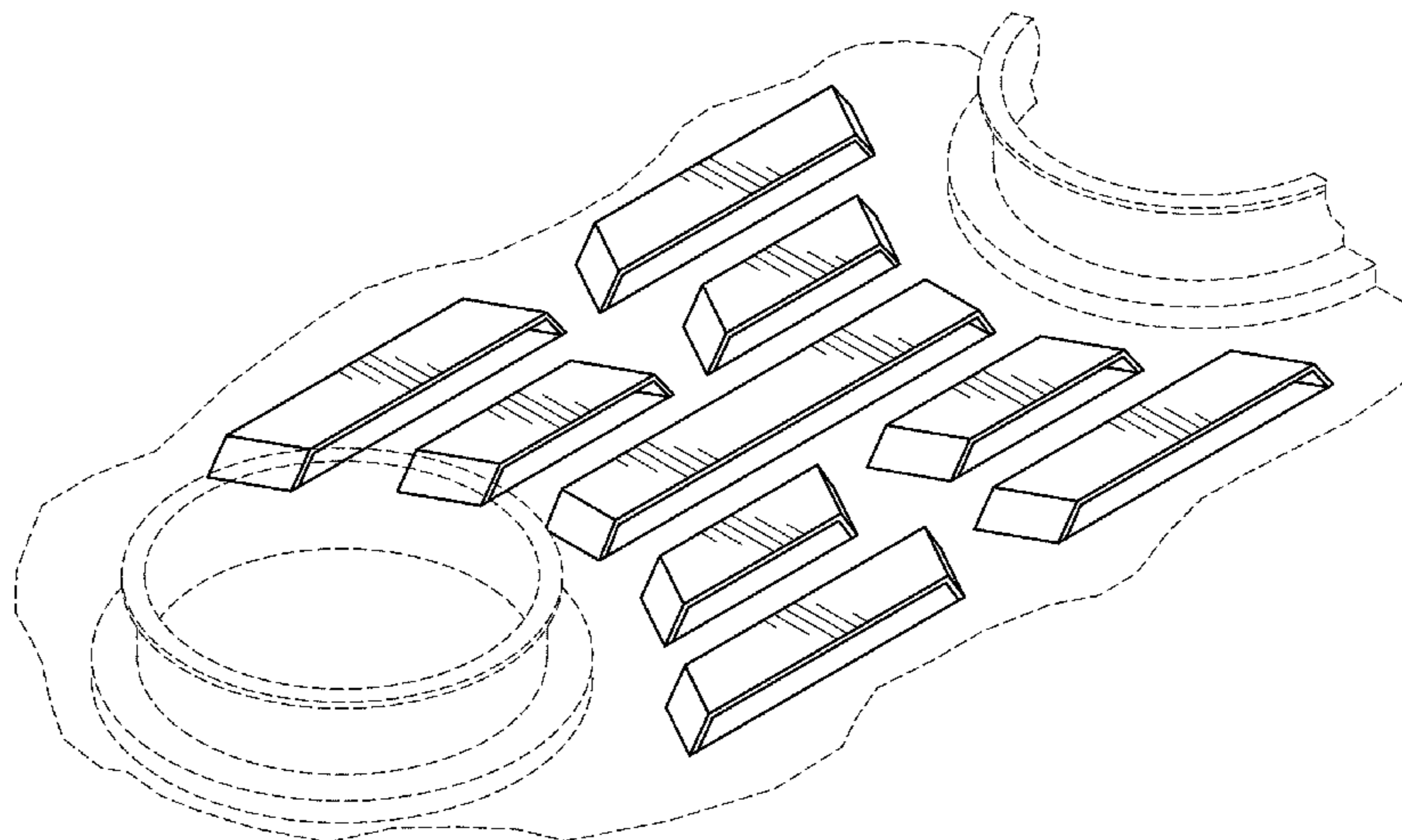
FIG. 11 is a top view of the section of the heat exchanger fin of FIG. 10;

FIG. 12 is a top view of a section of a heat exchanger fin according to a third embodiment of the invention characterized by three or more longitudinal rows of collared holes separated by patterns of raised slots according to the invention as detailed in FIGS. 1-7, wherein each longitudinal row of collared holes is longitudinally offset from an adjacent longitudinal row of collared holes; and,

FIG. 13 is a top view of a section of heat exchanger fin according to a fourth embodiment of the invention characterized by two or more longitudinal rows of collared holes separated by patterns of raised slots according to the invention as detailed in FIGS. 1-7, wherein each longitudinal row of collared holes is longitudinally aligned with an adjacent longitudinal row of collared holes.

In FIGS. 1-13, the structure shown in broken lines is not part of the design sought to be patented. FIGS. 1-7 have been drawn in a larger scale than FIGS. 8-11, which in turn have been drawn in a larger scale than FIGS. 12 and 13.

1 Claim, 10 Drawing Sheets



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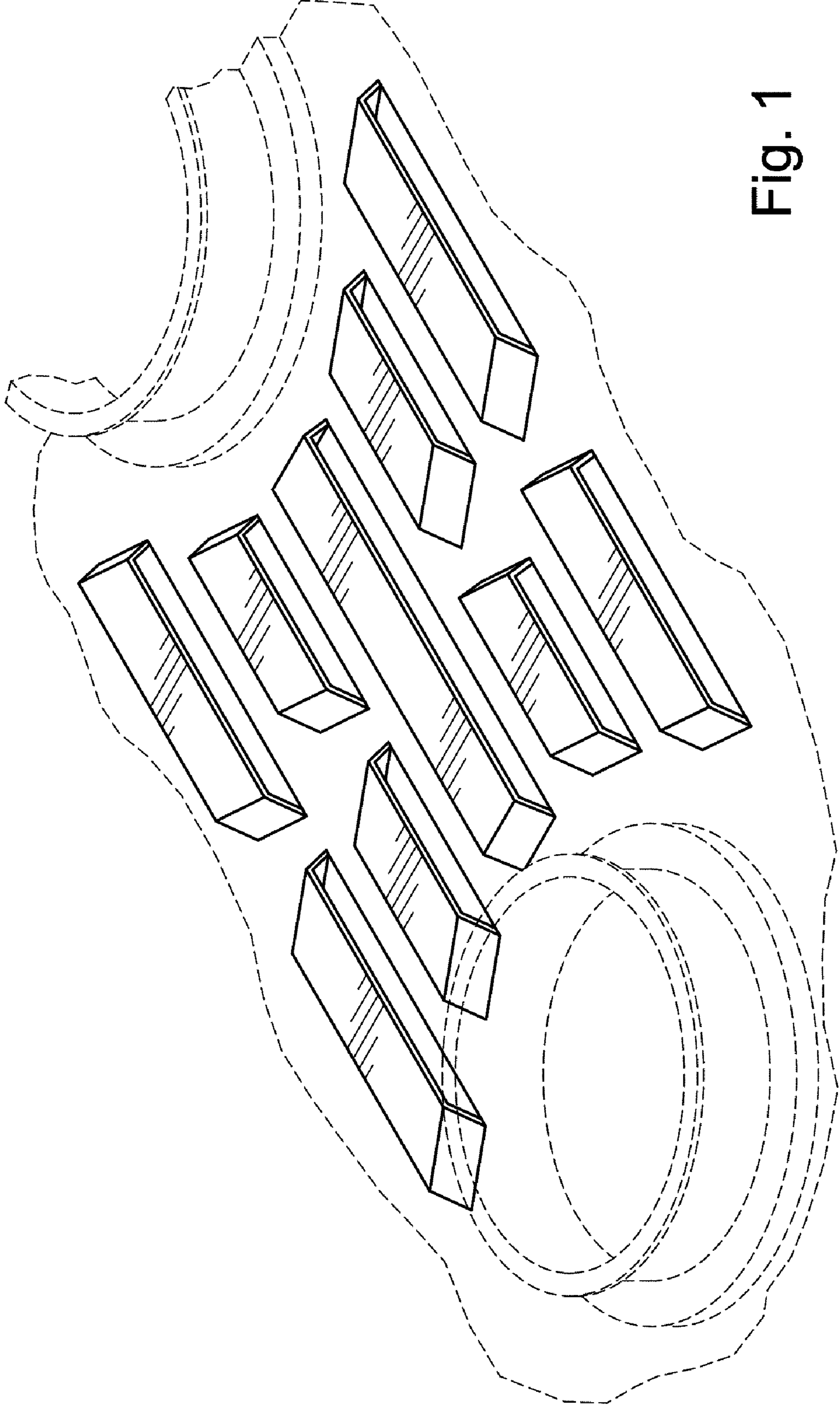


Fig. 1

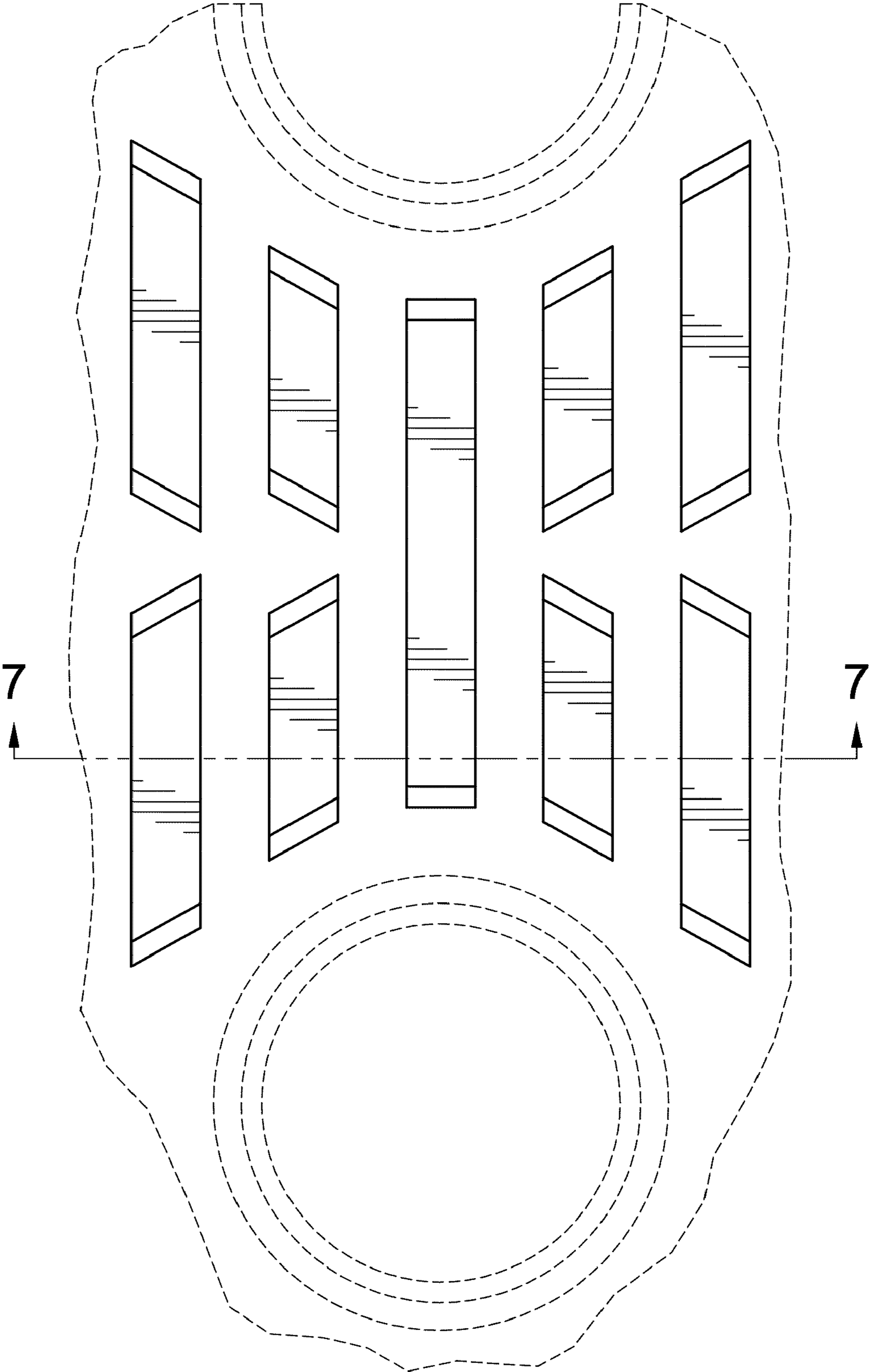


Fig. 2

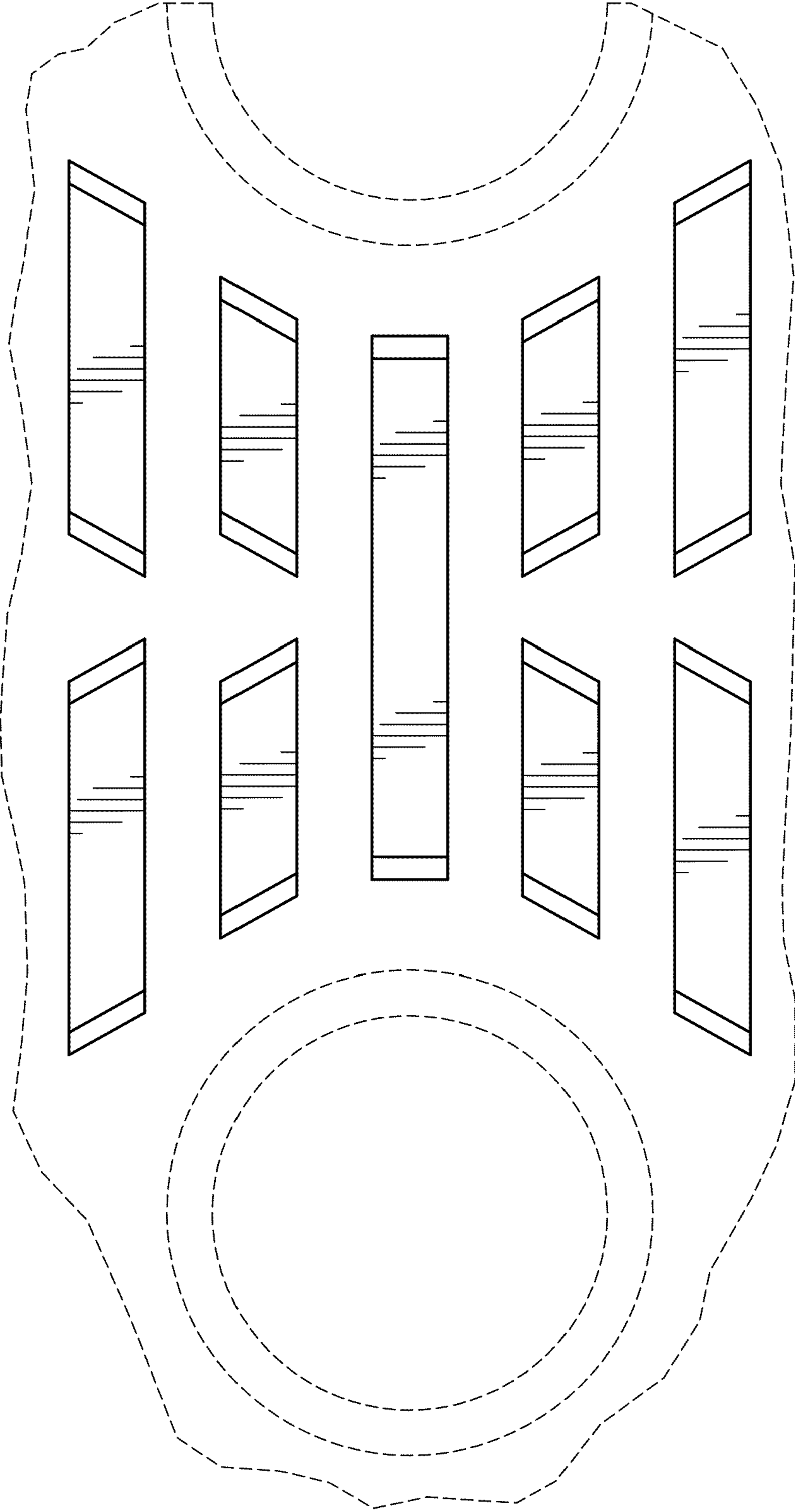


Fig. 3

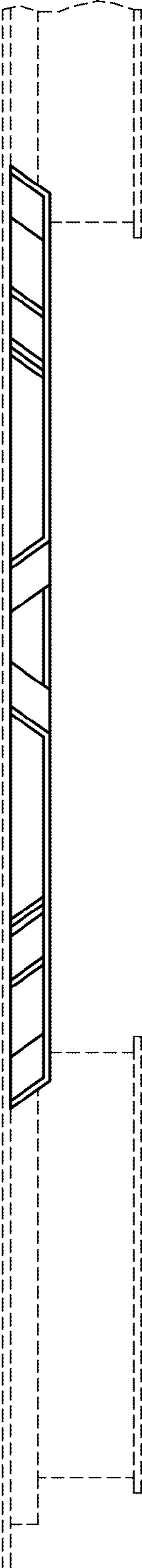


Fig. 4

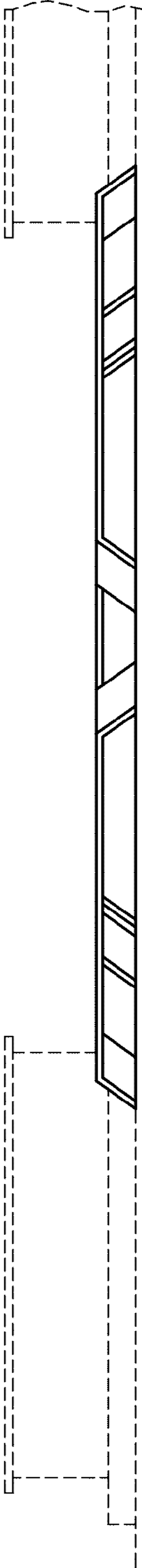


Fig. 5

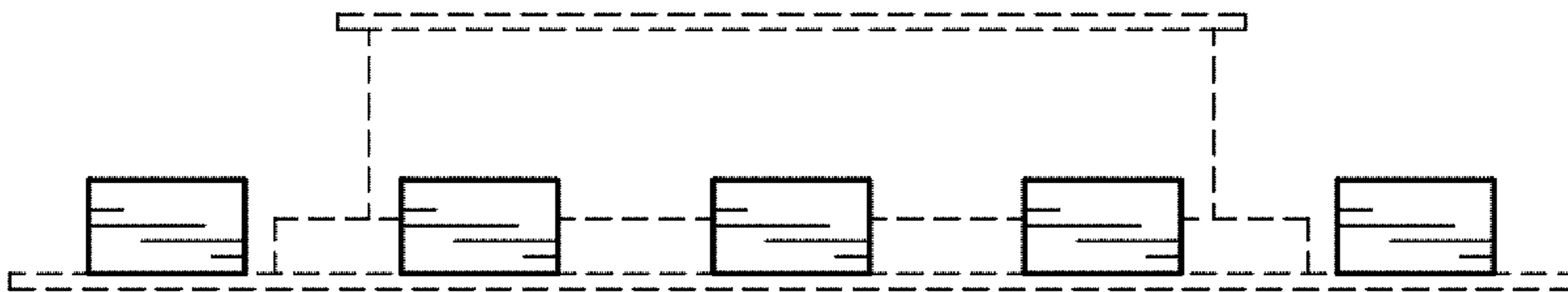


Fig. 6

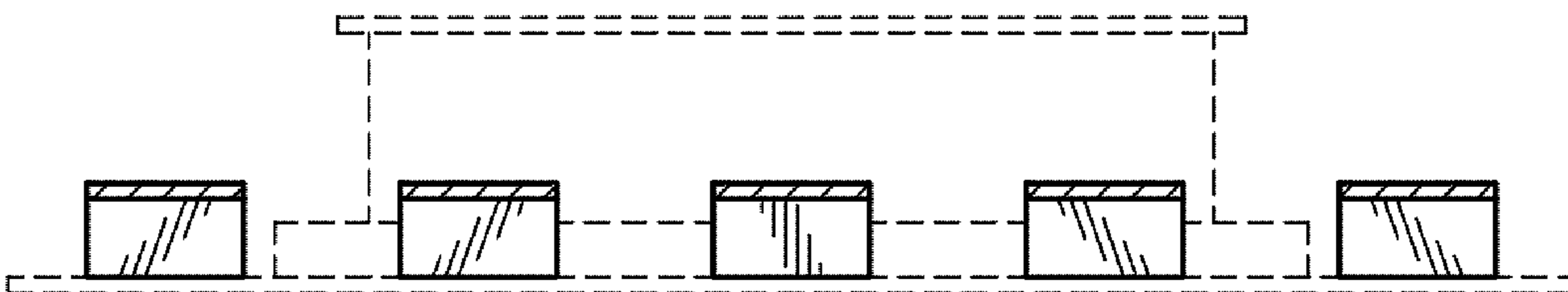


Fig. 7

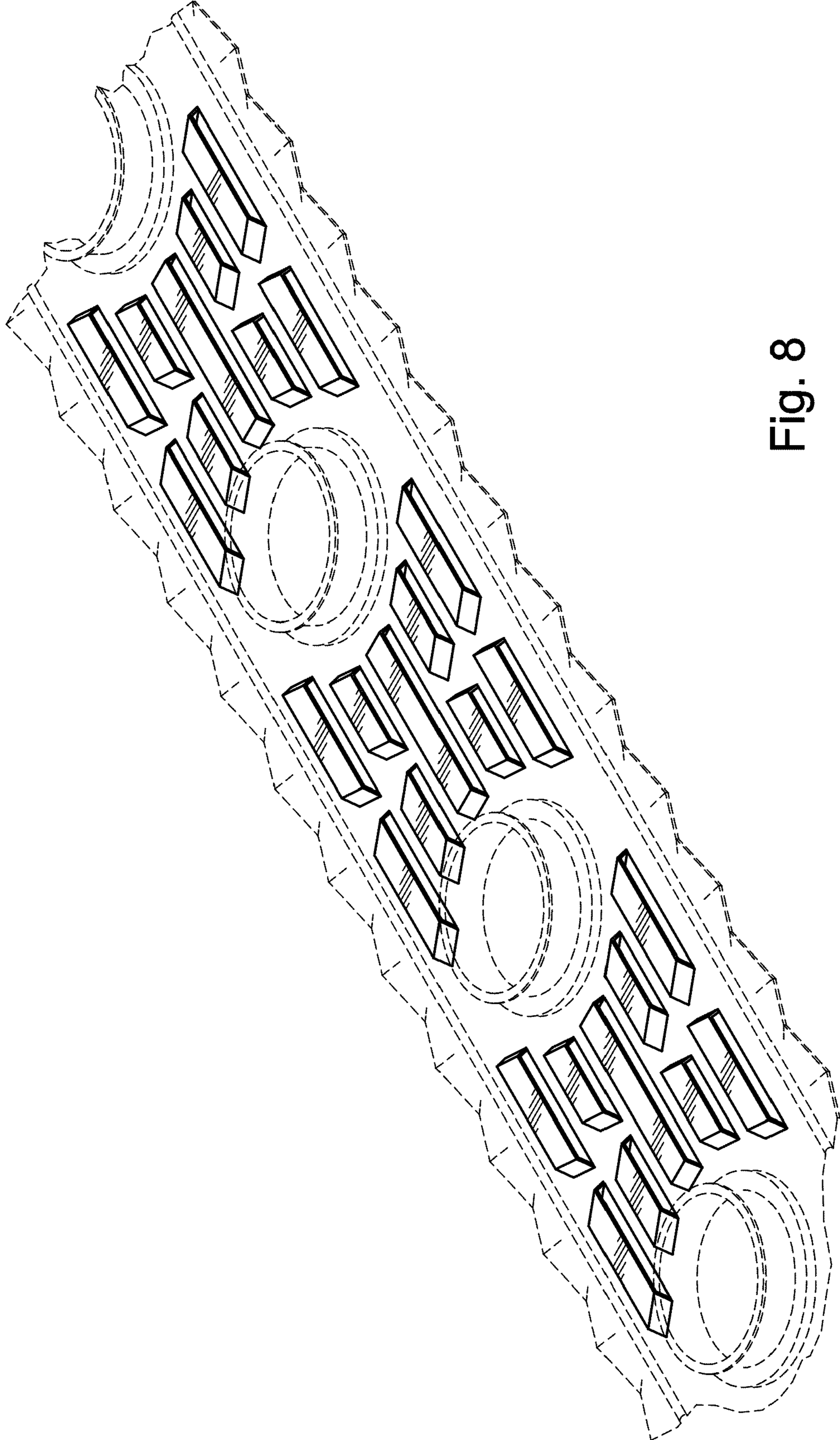


Fig. 8

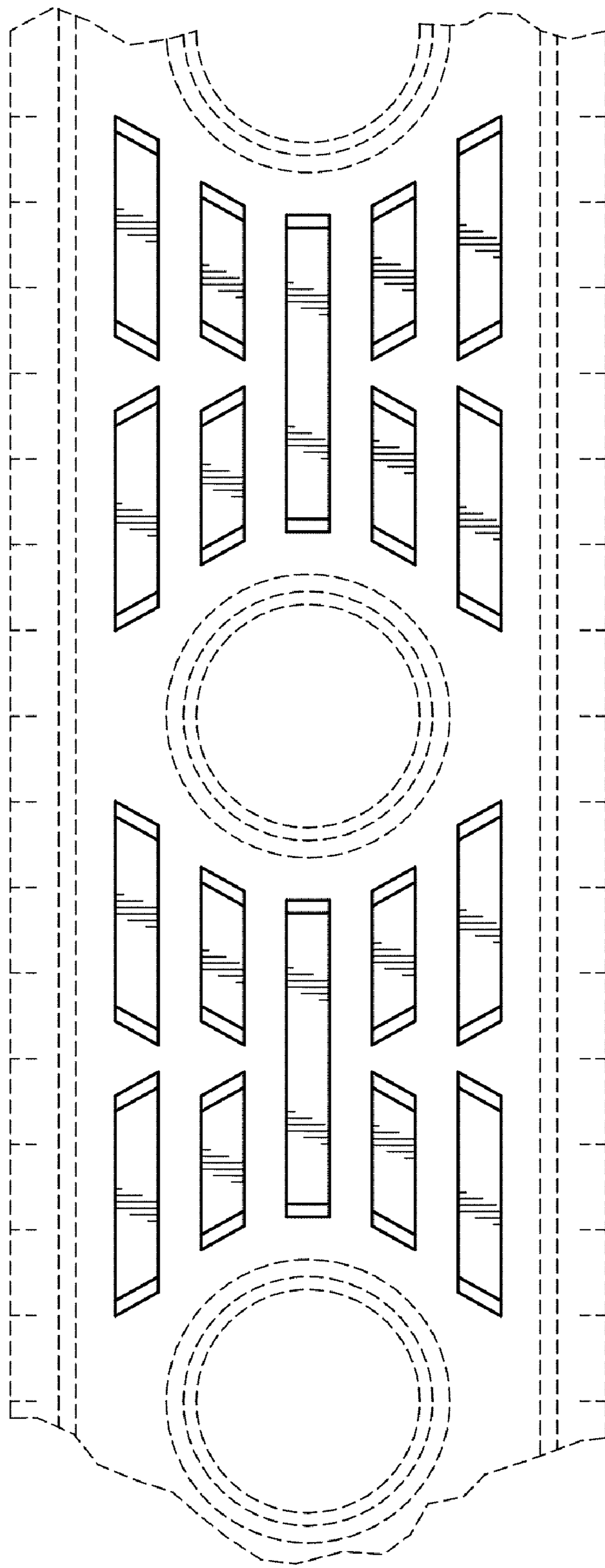


Fig. 9

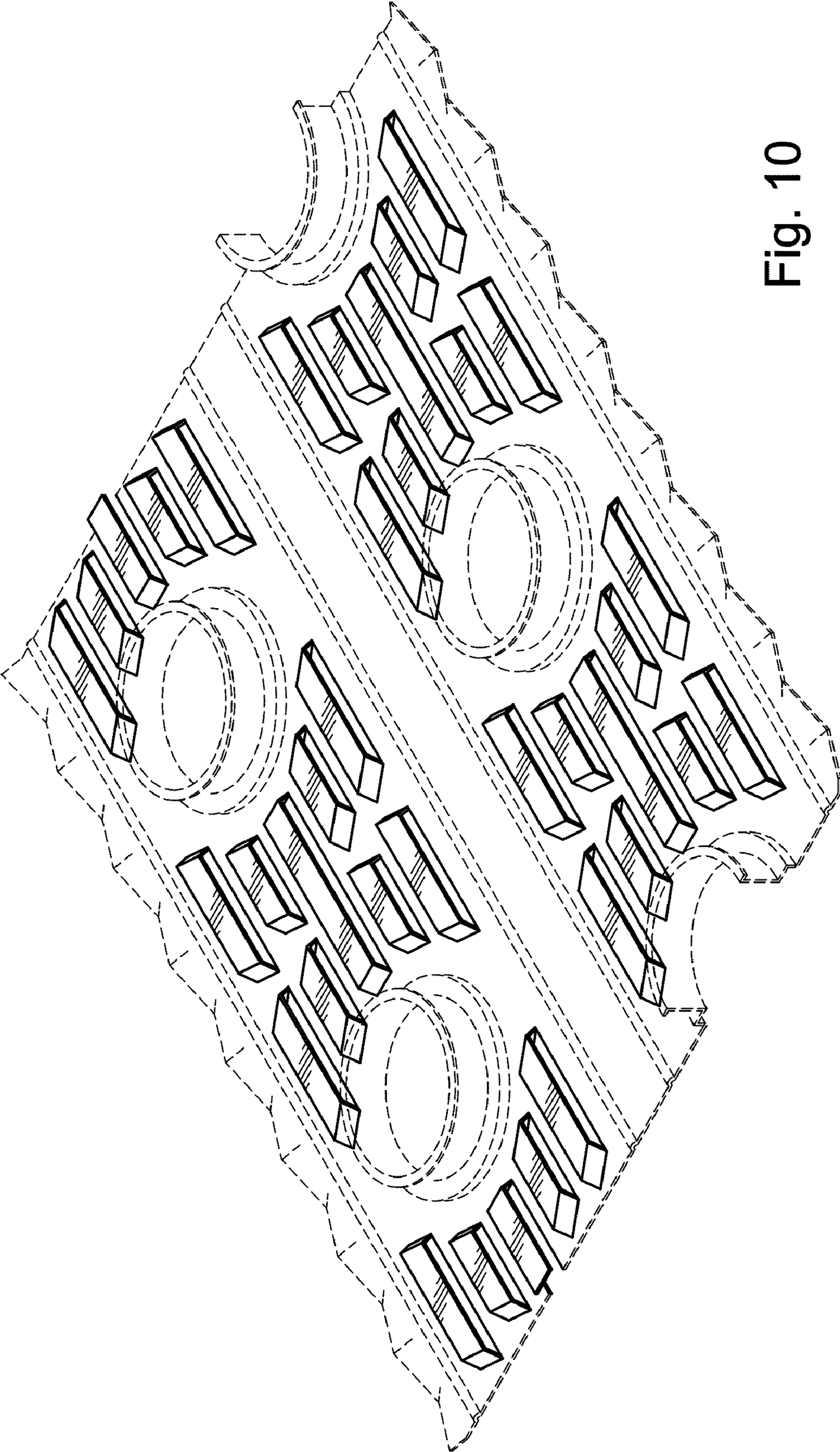


Fig. 10

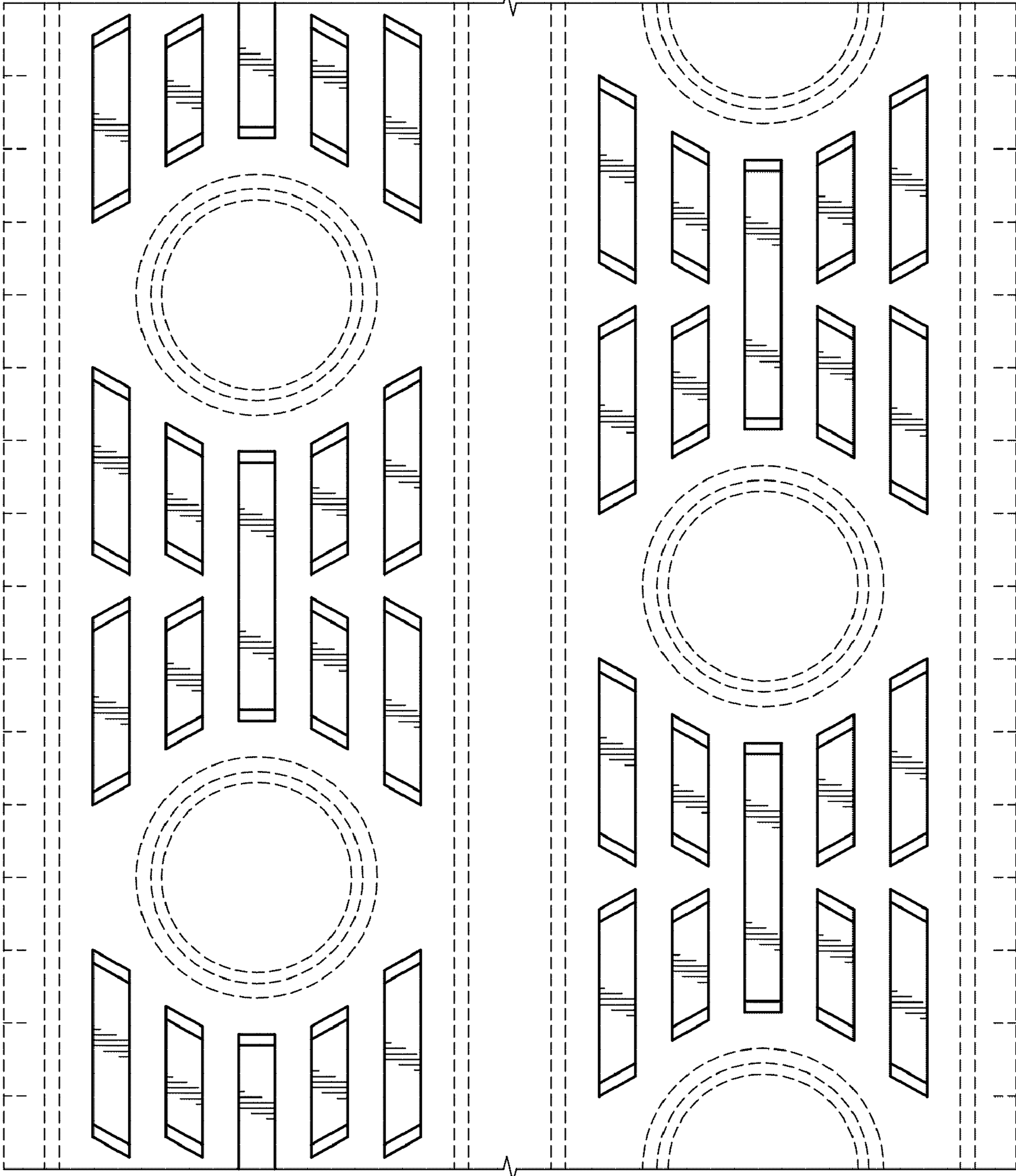


Fig. 11

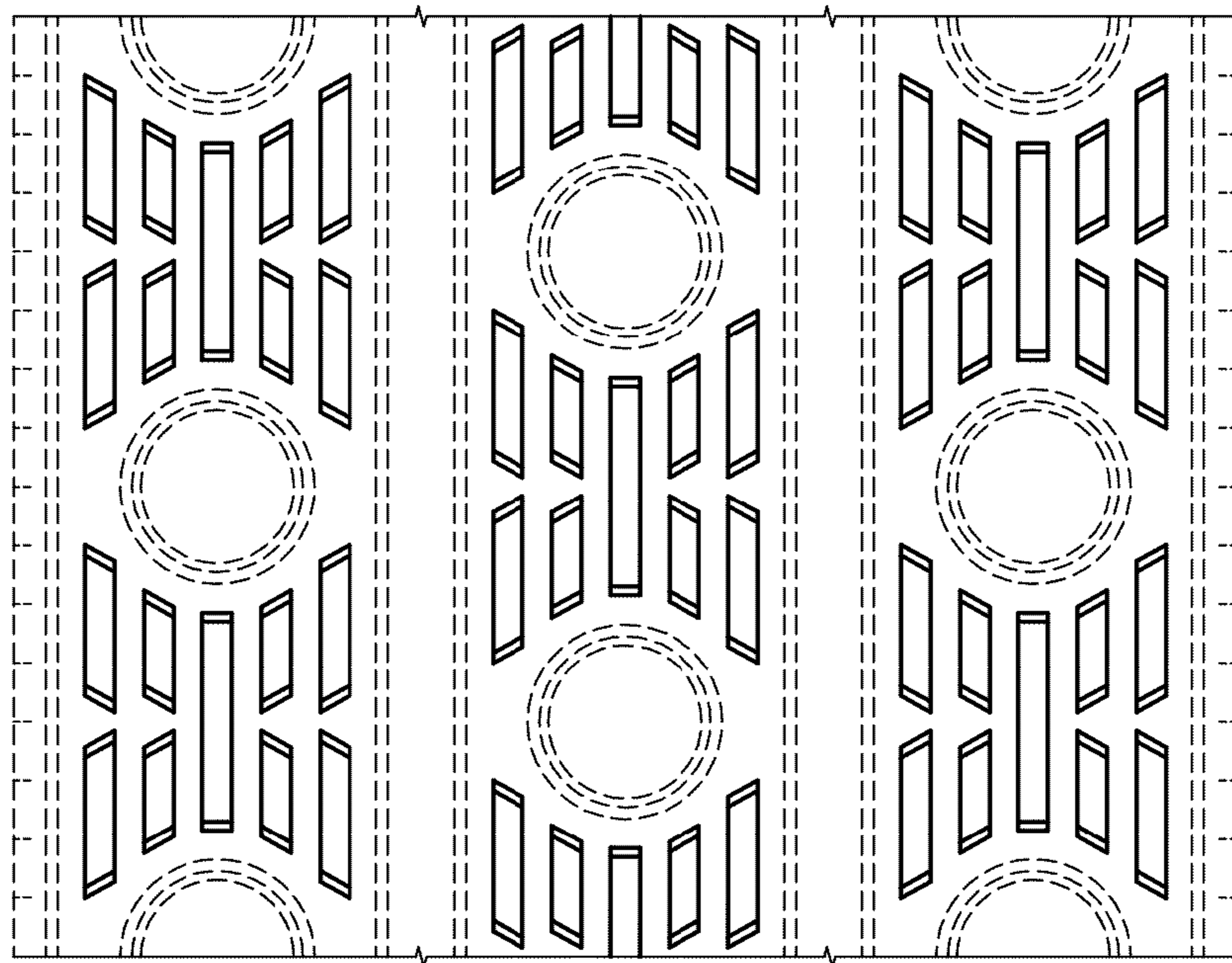


Fig. 12

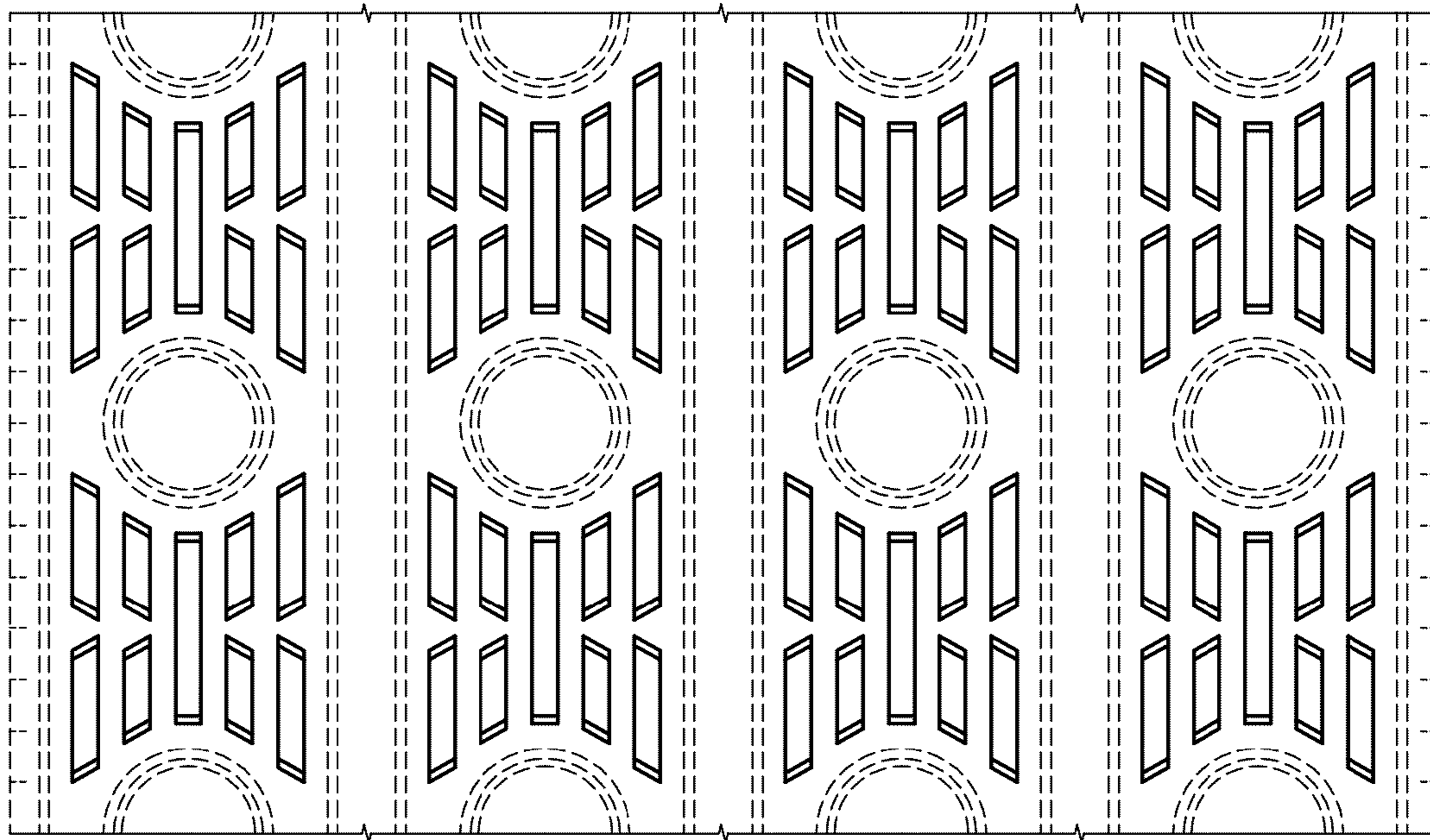


Fig. 13