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(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;

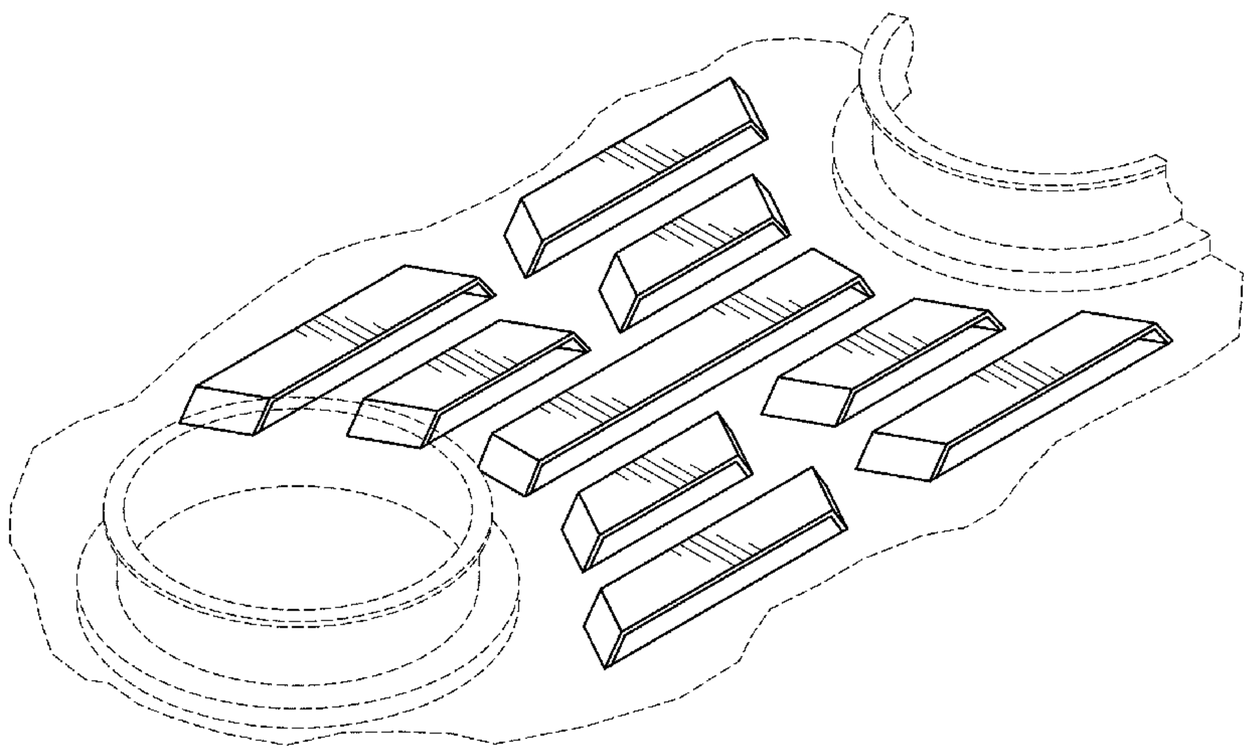
FIG. **11** is a top view of the section of the heat exchanger fin of FIG. **10**;

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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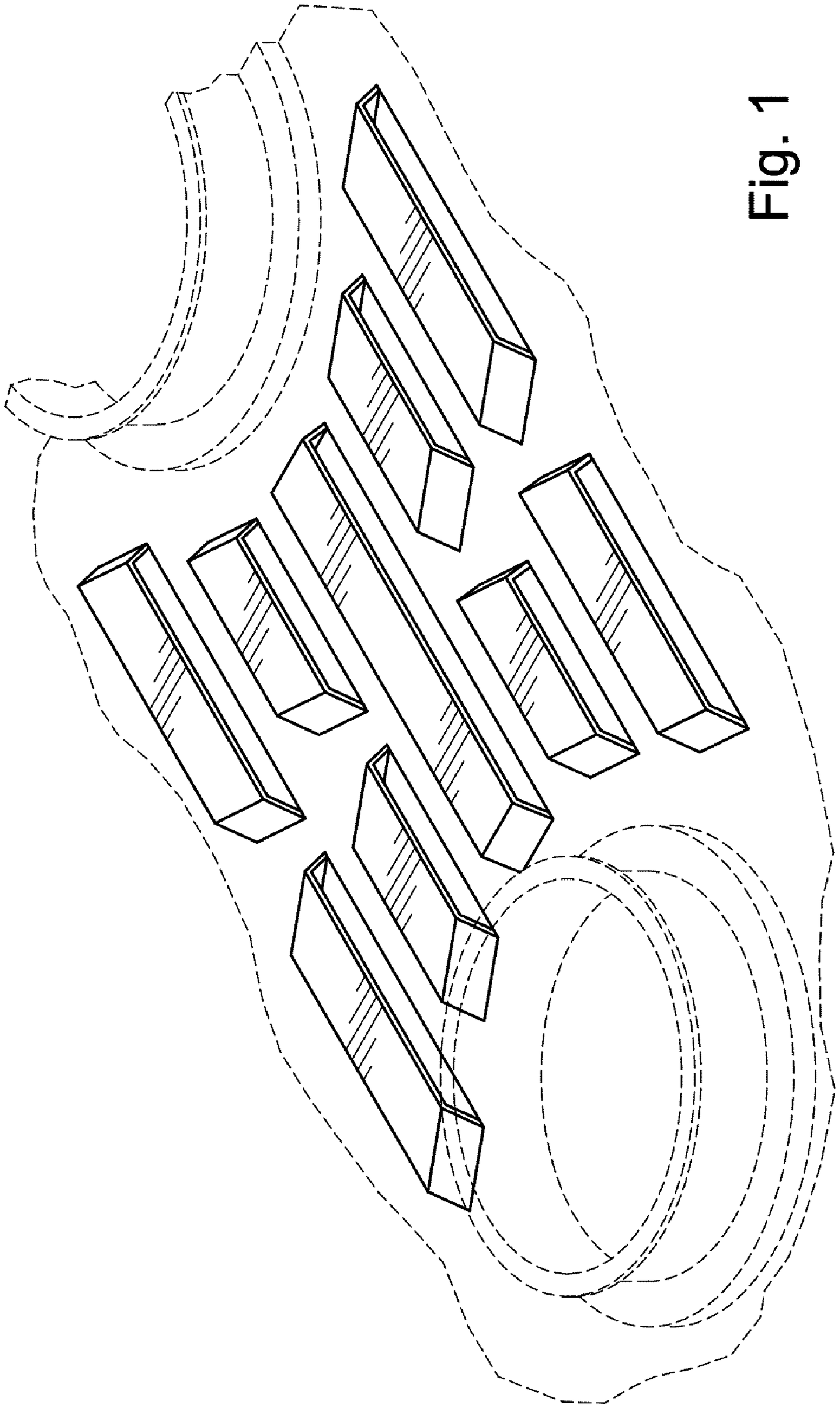

Fig. 1

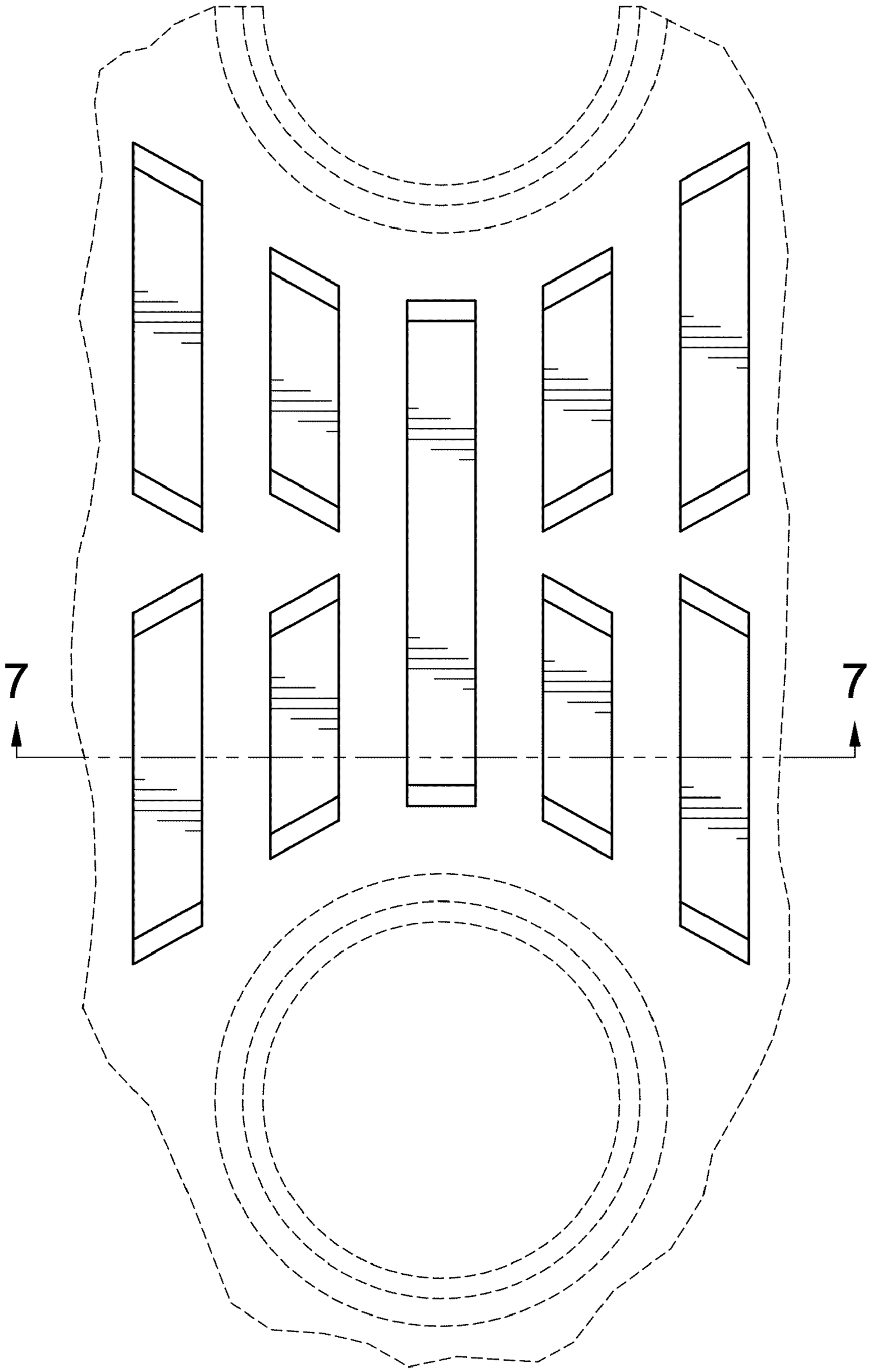

Fig. 2

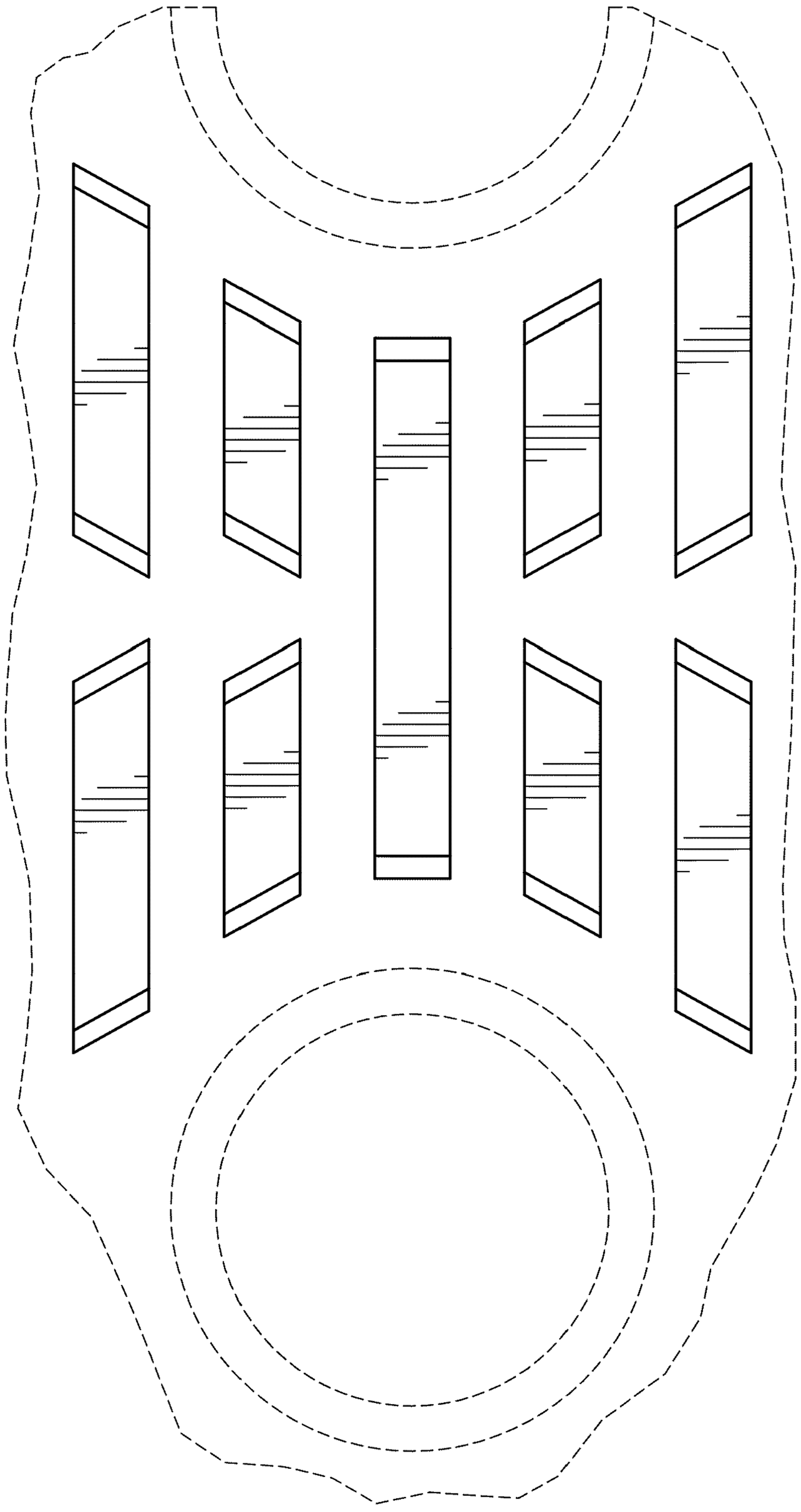

Fig. 3

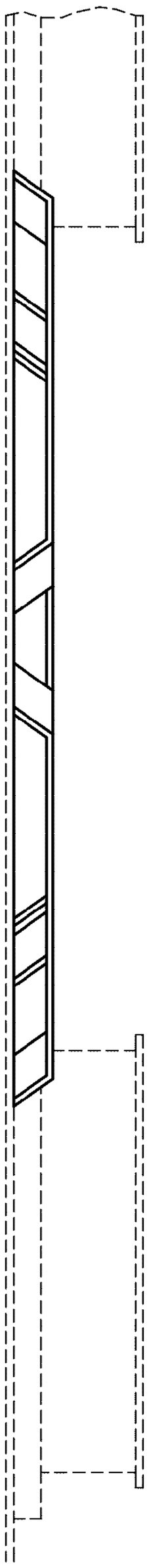

Fig. 4

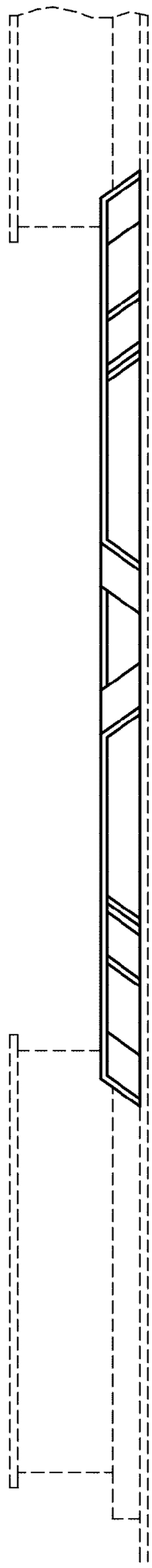

Fig. 5

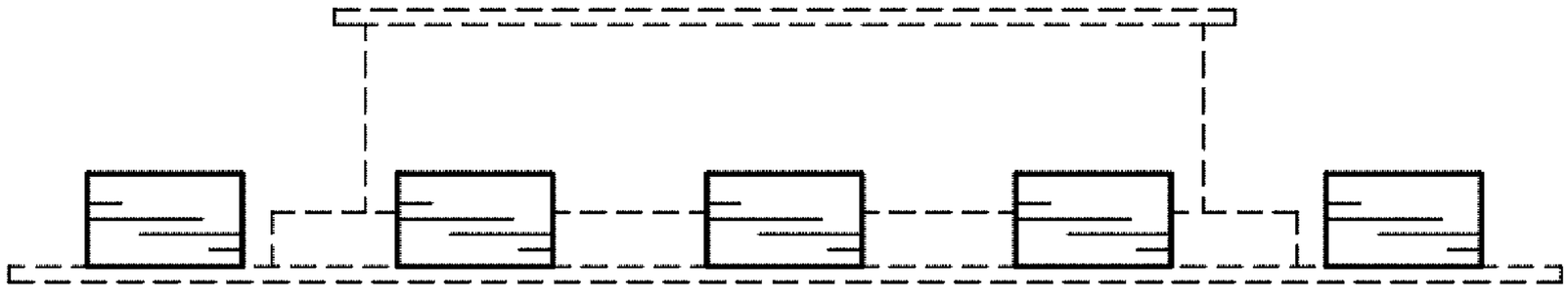

Fig. 6

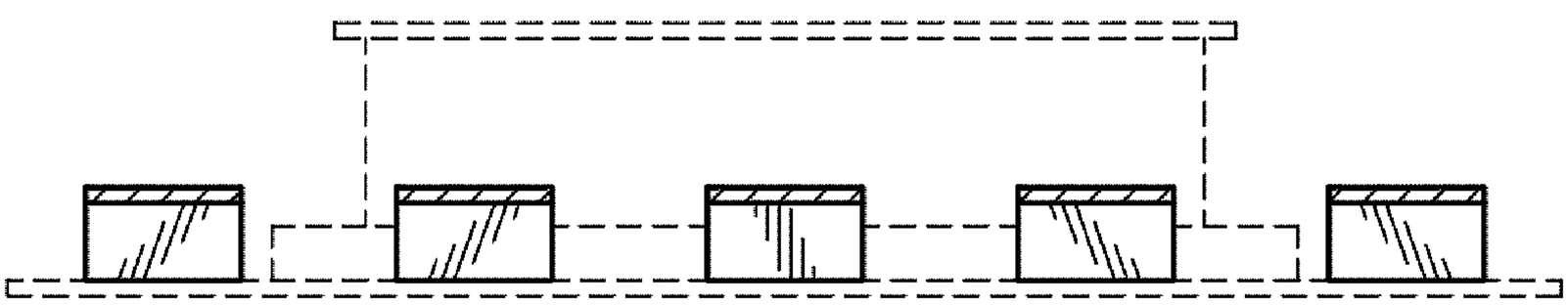

Fig. 7

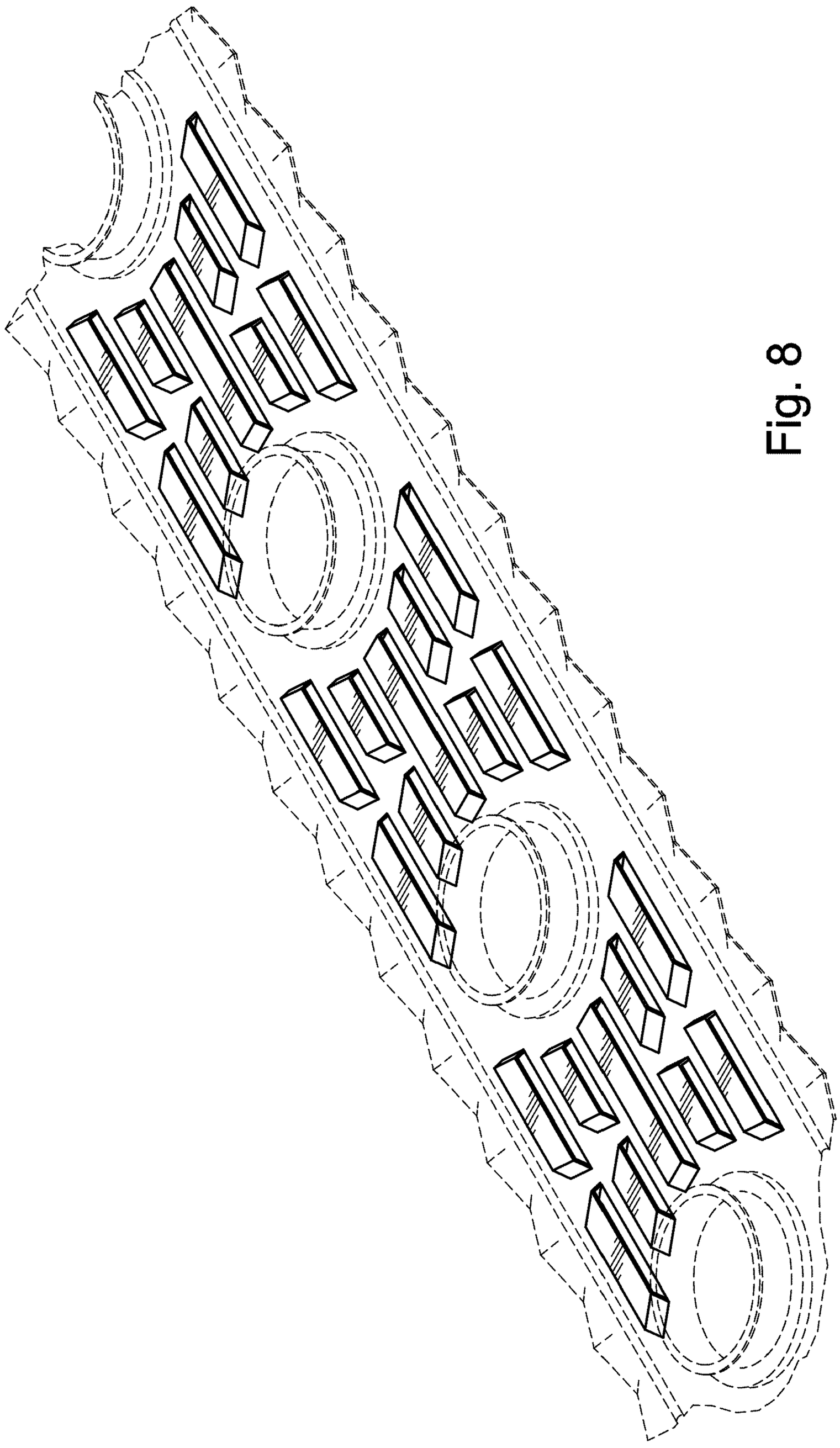

Fig. 8

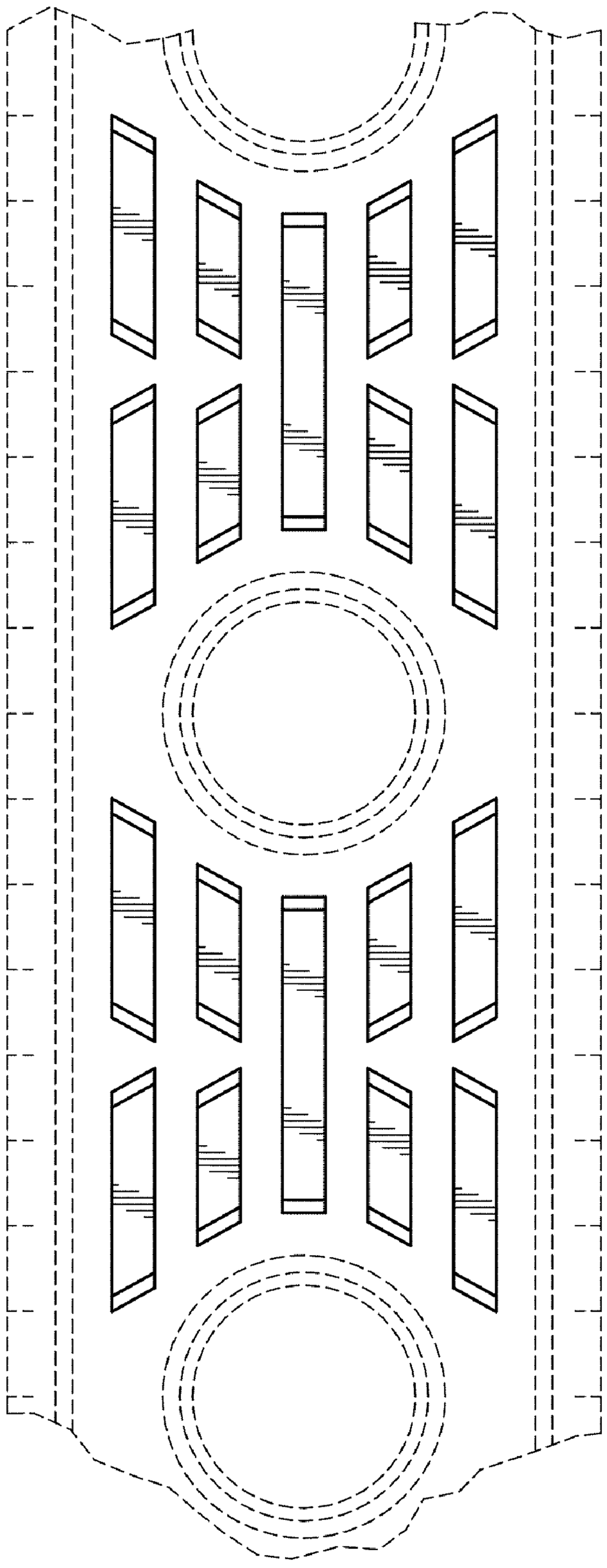

Fig. 9

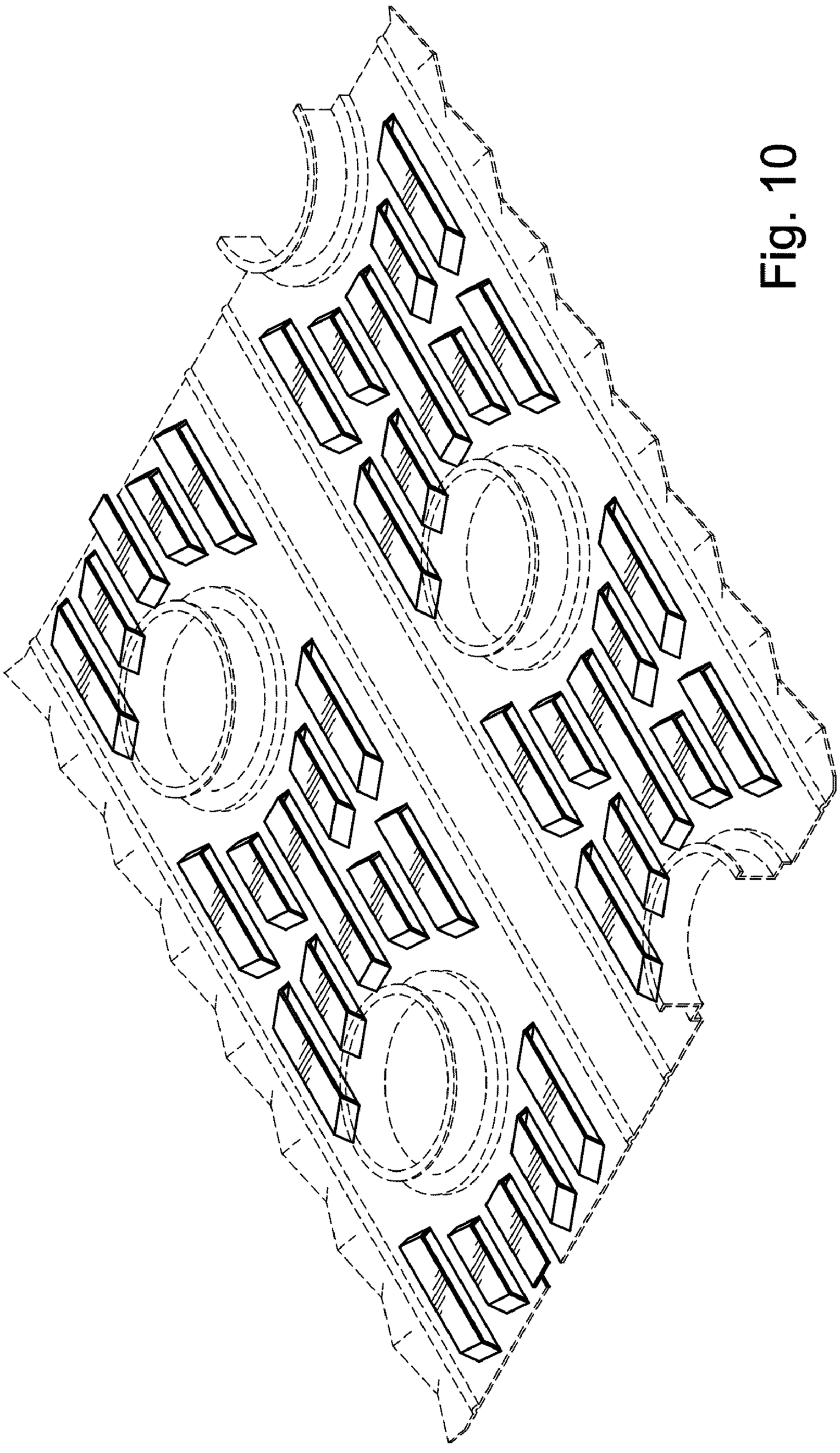

Fig. 10

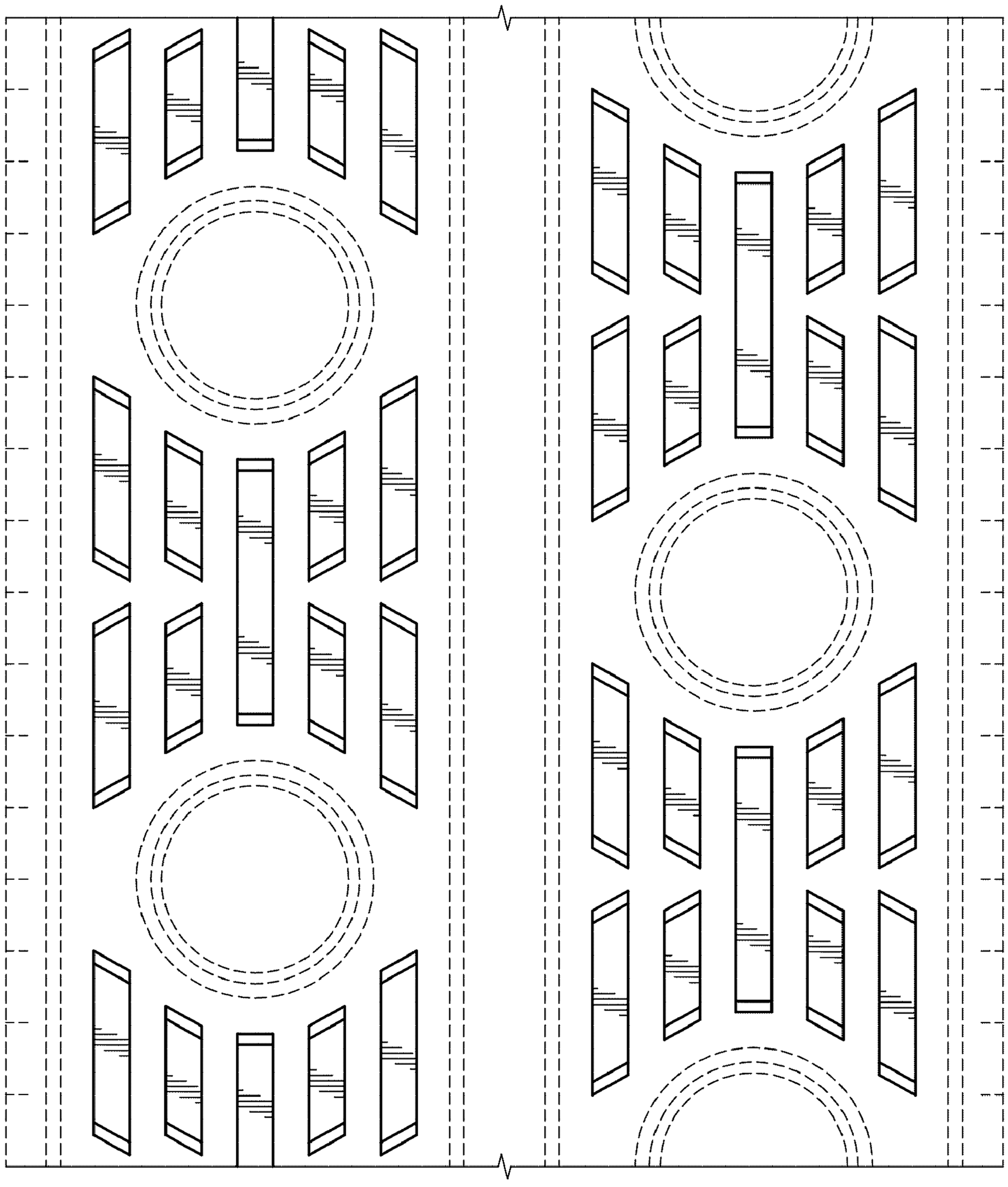

Fig. 11

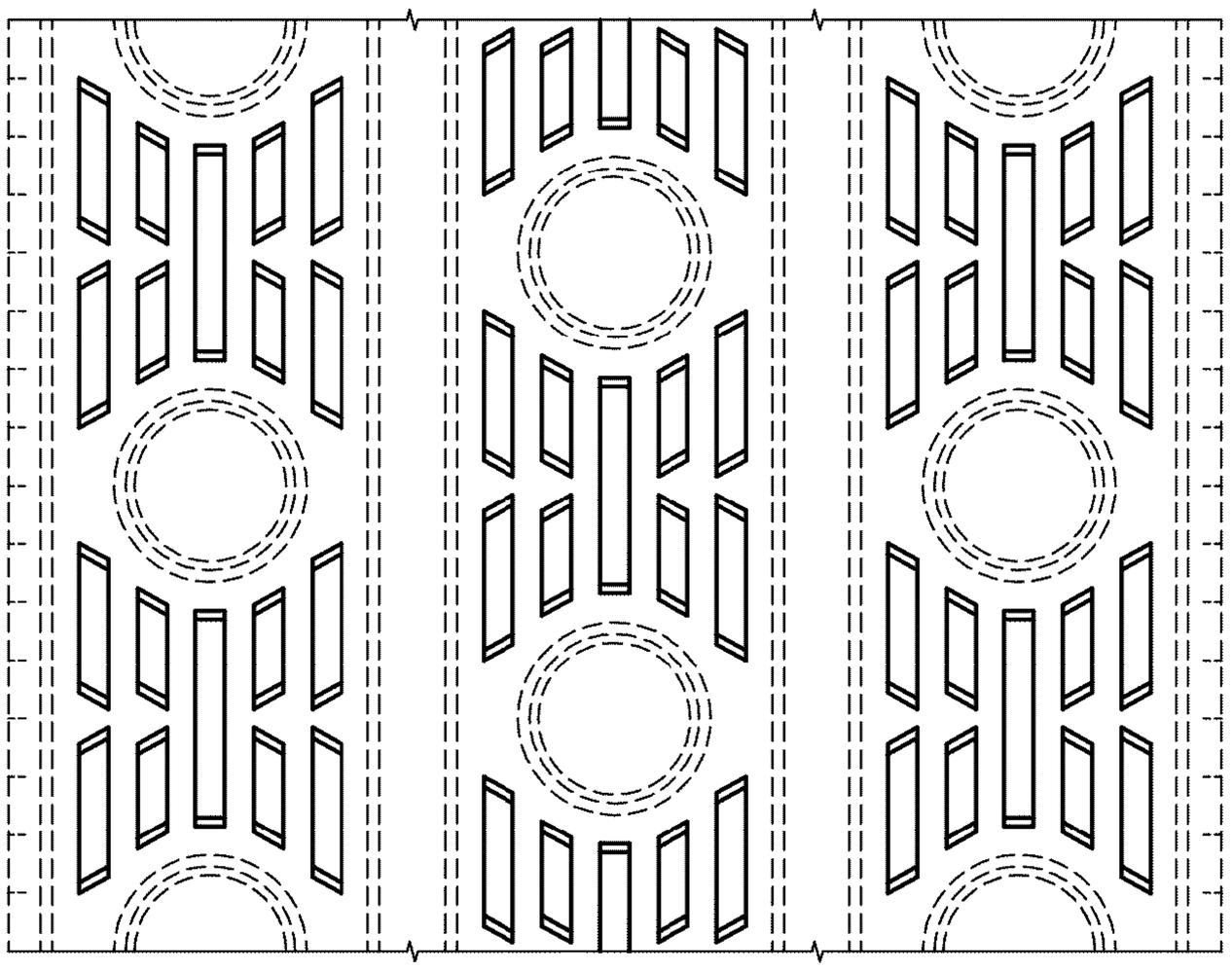

Fig. 12

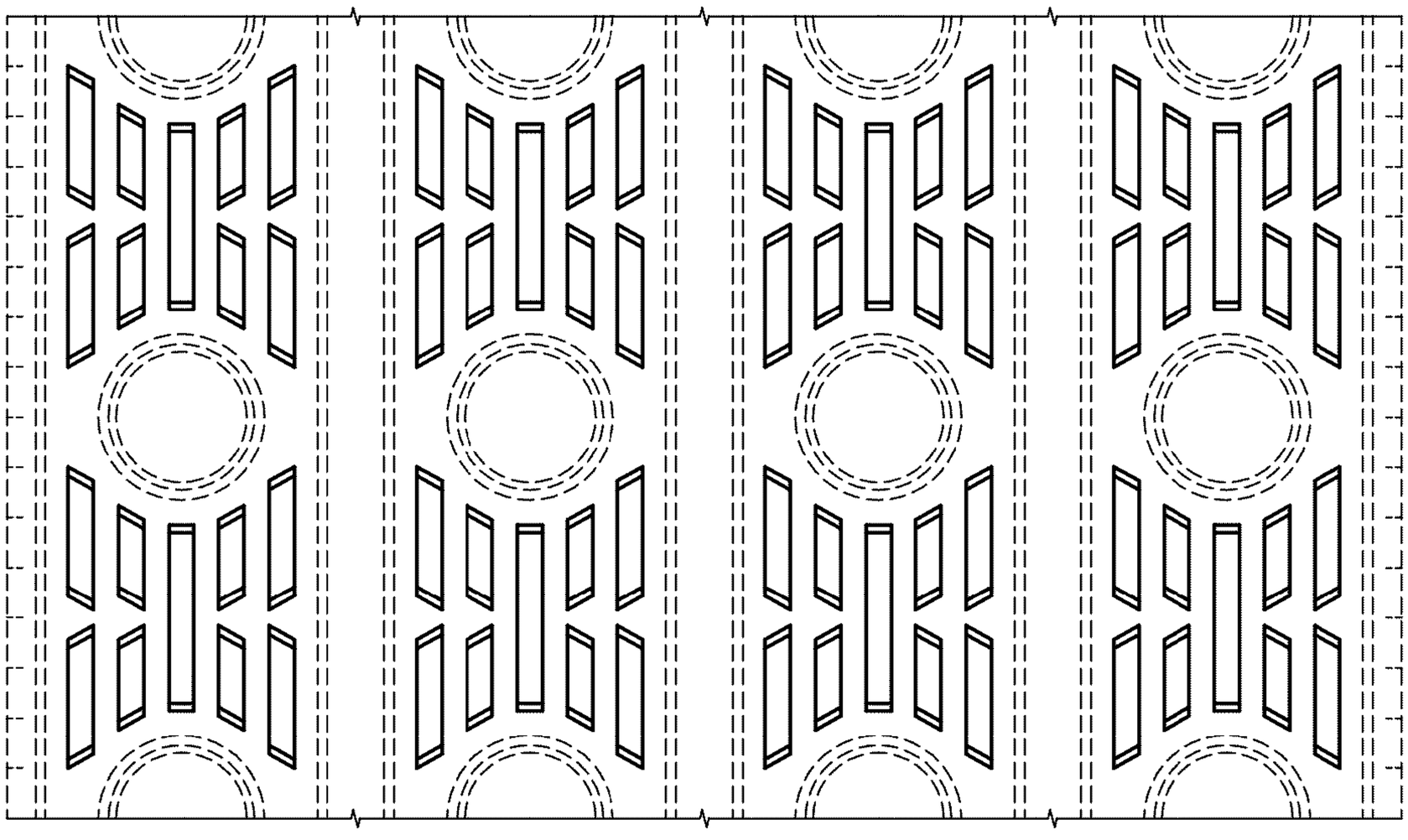

Fig. 13