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

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(54) **FIXTURE FOR DELIVERING 1752 SOLDER COLUMNS ONTO A SUBSTRATE**

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(\*\*) Term: **15 Years**

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(51) **LOC (12) Cl.** ..... **13-03**

(52) **U.S. Cl.**

USPC ..... **D13/182; D15/144.1**

(58) **Field of Classification Search**

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D15/144.2, 199; 439/66, 71, 620.15,  
439/620.2

CPC .. H01R 13/66; H01R 13/665; H01R 13/6658;  
H01L 23/32; H01L 23/40; H01L 21/00;  
H01L 21/02; H01L 21/02002; B23K 3/06;  
B23K 3/0607; B23K 37/04; B23K  
37/0408; B23K 37/0426; B23K 37/0435;  
B23K 37/0461; B23K 37/0623; B23K  
37/06; H05K 3/4015

See application file for complete search history.

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(57) **CLAIM**

The ornamental design for a fixture for delivering 1752 solder columns onto a substrate, as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of a fixture for delivering 1752 solder columns onto a substrate, showing my new design;

FIG. 2 is a bottom perspective view thereof;

FIG. 3 is a top view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a left side view thereof;

FIG. 6 is a right side view thereof;

FIG. 7 is a front side view thereof;

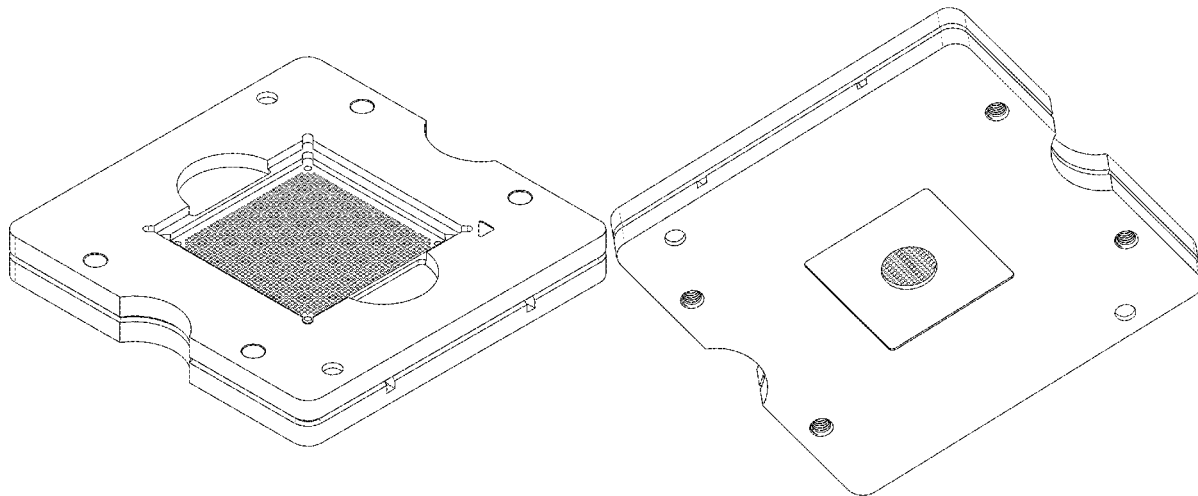
FIG. 8 is a rear side view thereof;

FIG. 9 is a top exploded perspective view thereof;

FIG. 10 is a bottom exploded perspective view thereof; and, FIG. 11 is a bottom view of the top plate of the fixture for delivering 1752 solder columns onto a substrate, shown separately for ease of illustration.

The broken lines shown in the drawings represent portions of the fixture for delivering 1752 solder columns onto a substrate that form no part of the claimed design.

**1 Claim, 9 Drawing Sheets**



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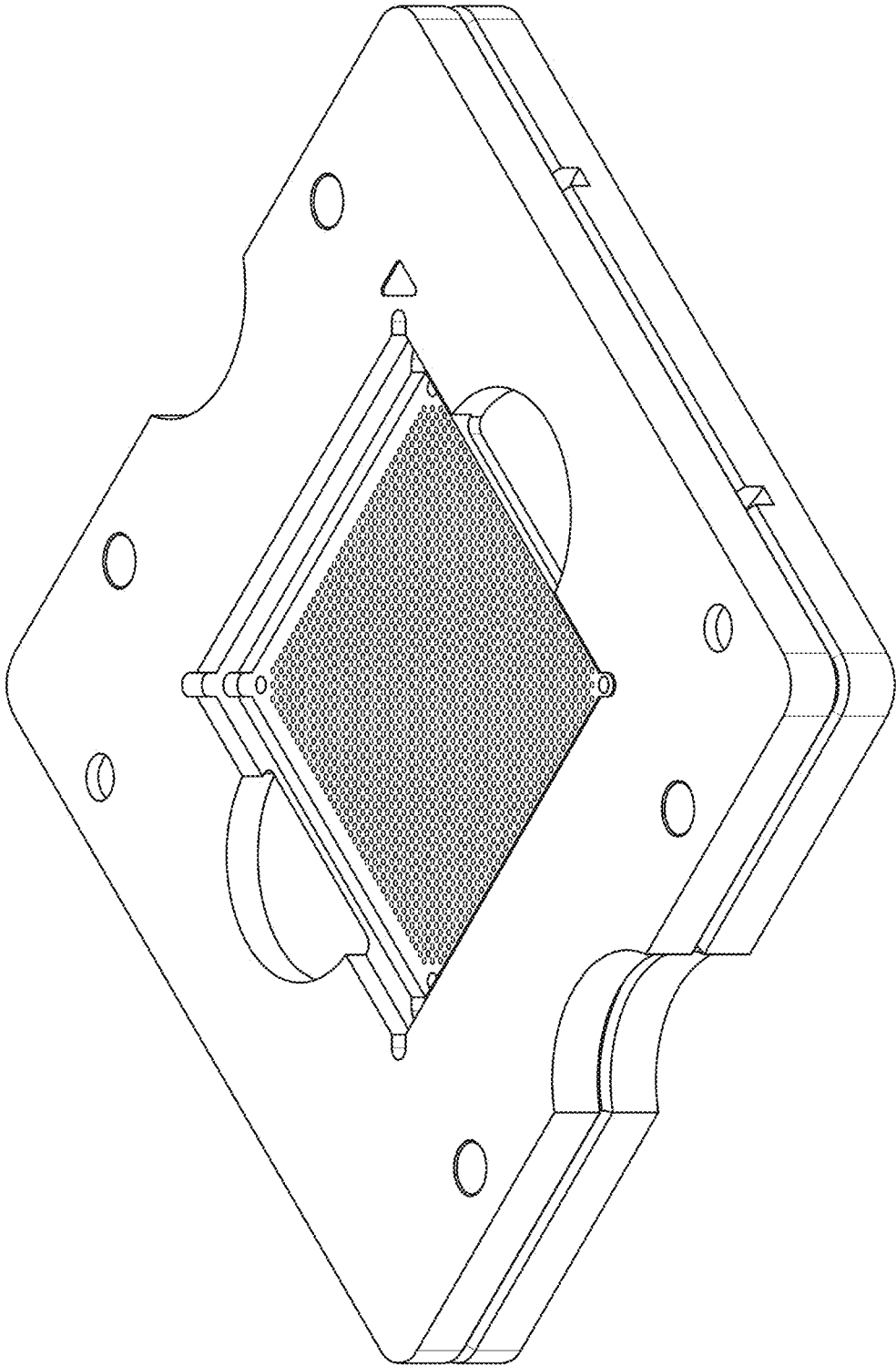


FIG. 1

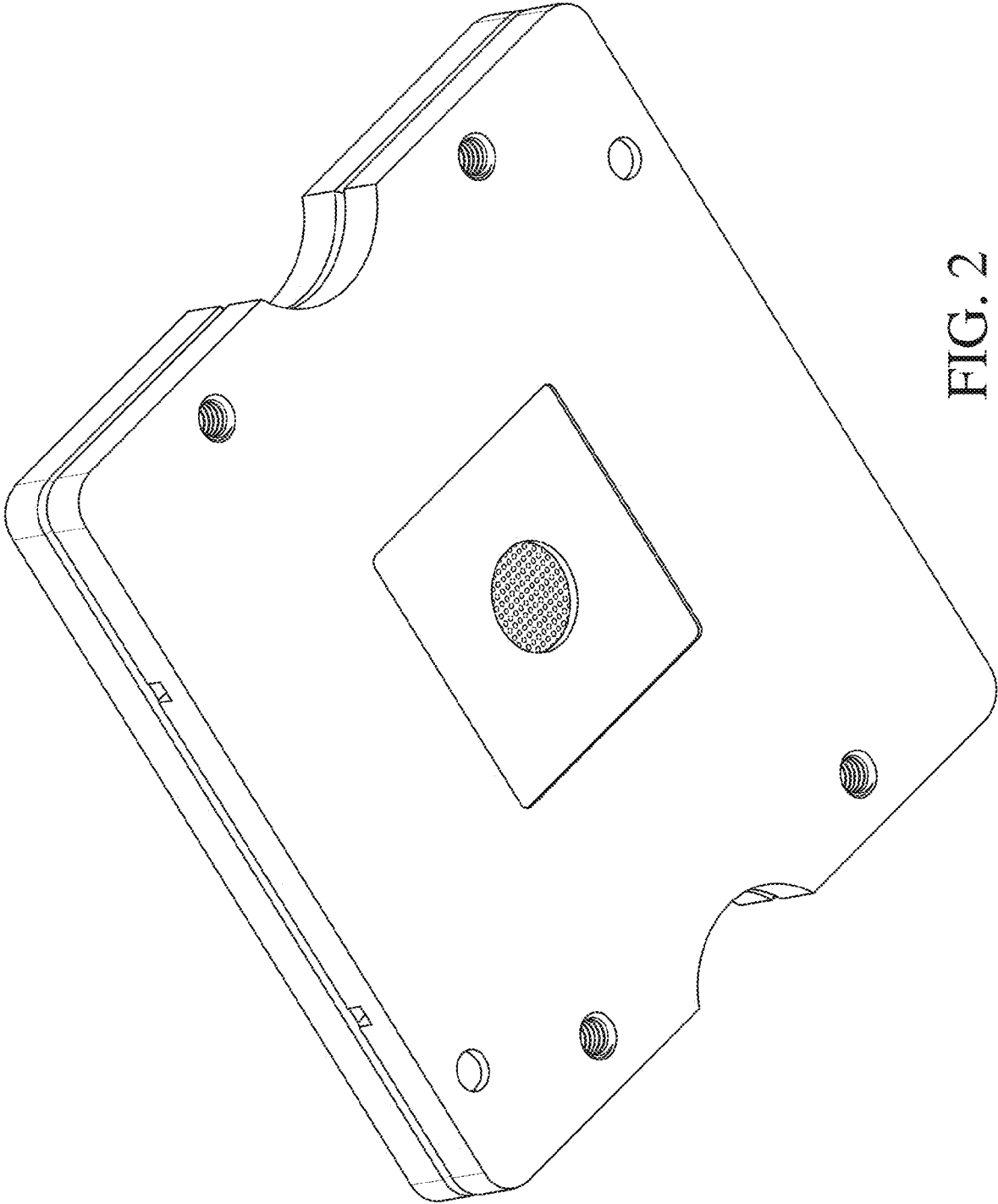


FIG. 2

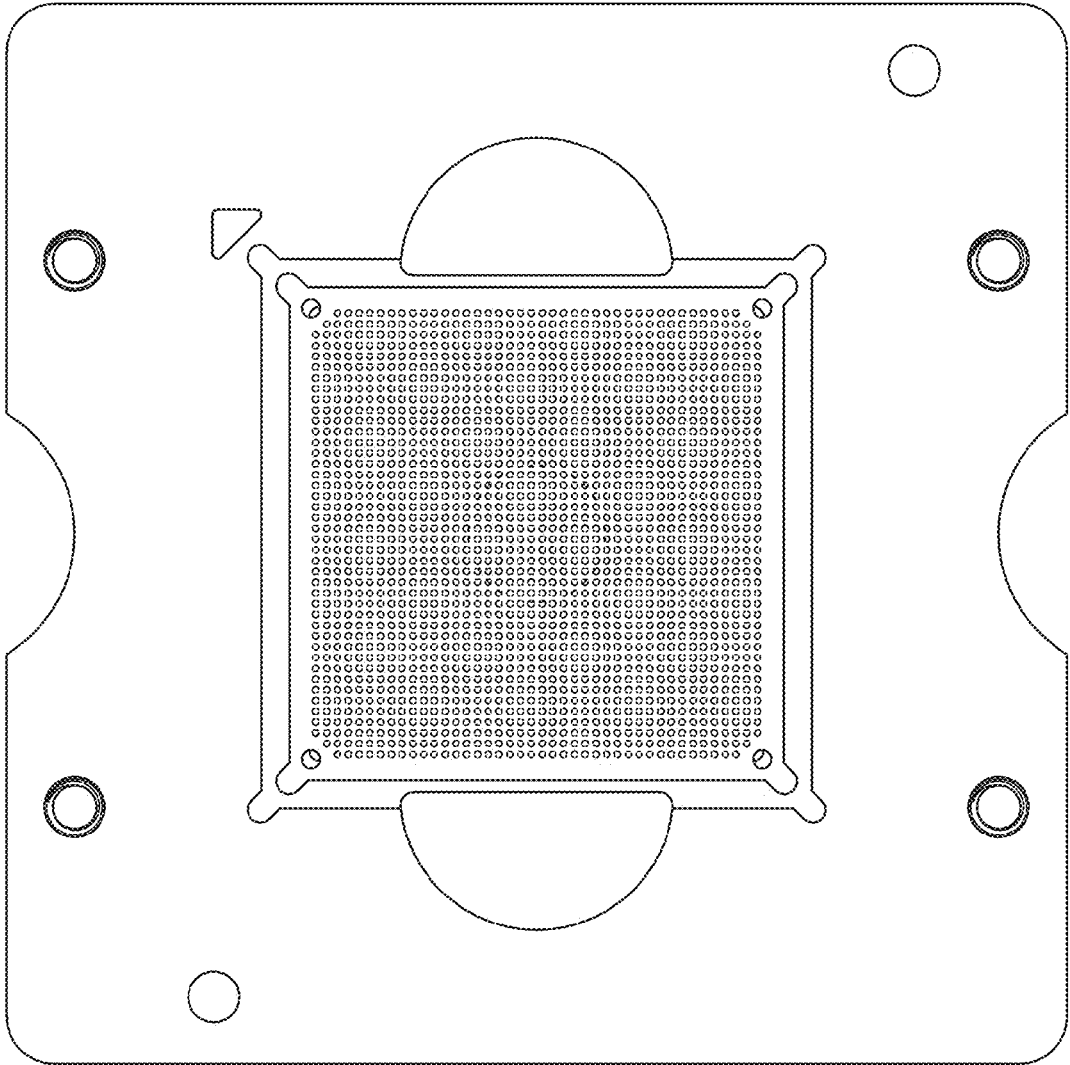


FIG. 3

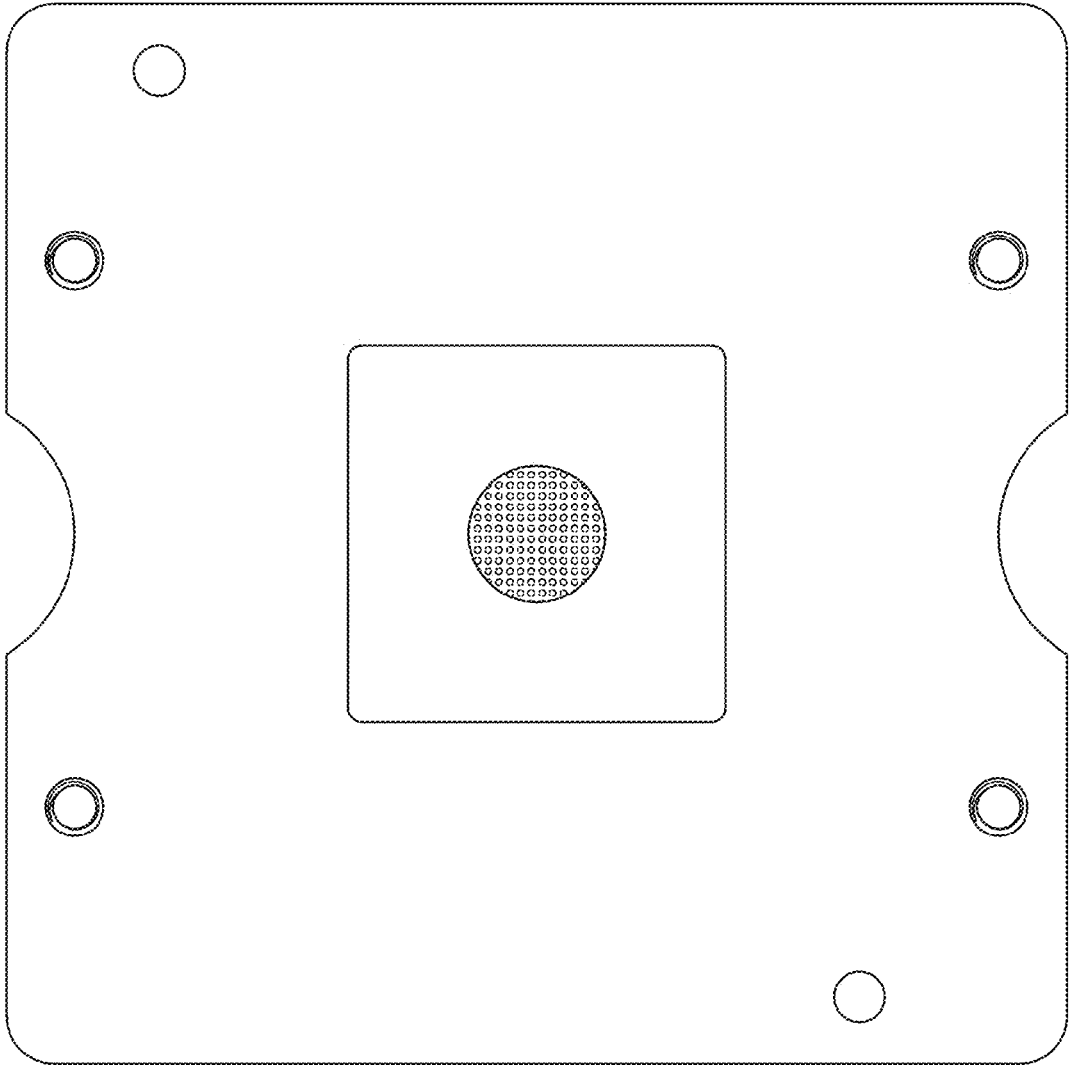


FIG. 4

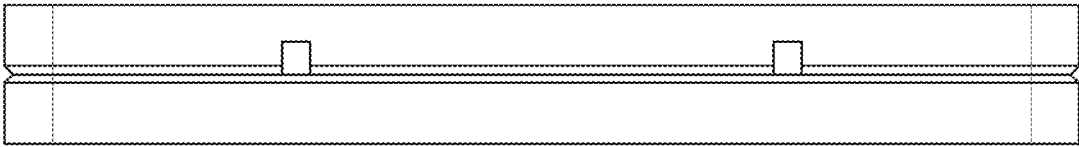


FIG. 6

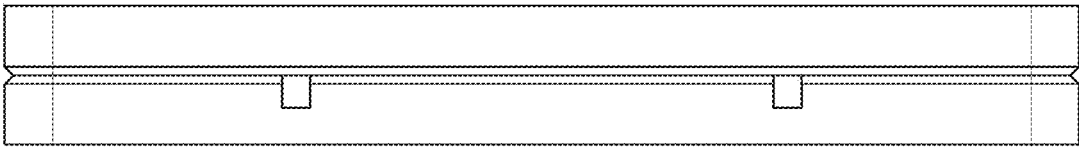


FIG. 5

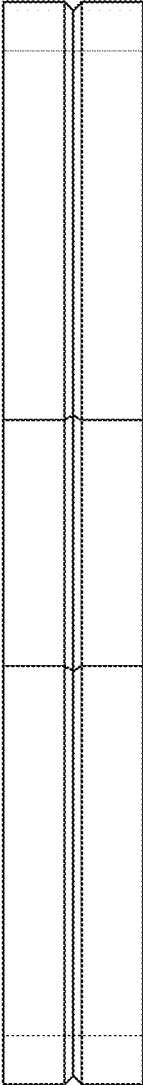


FIG. 7

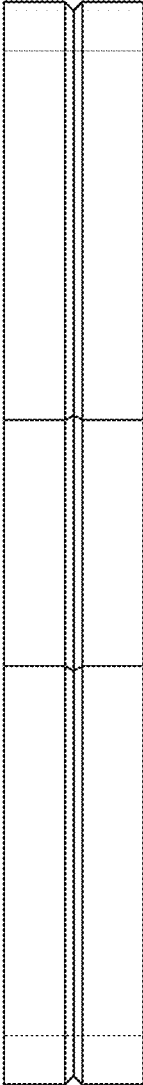


FIG. 8



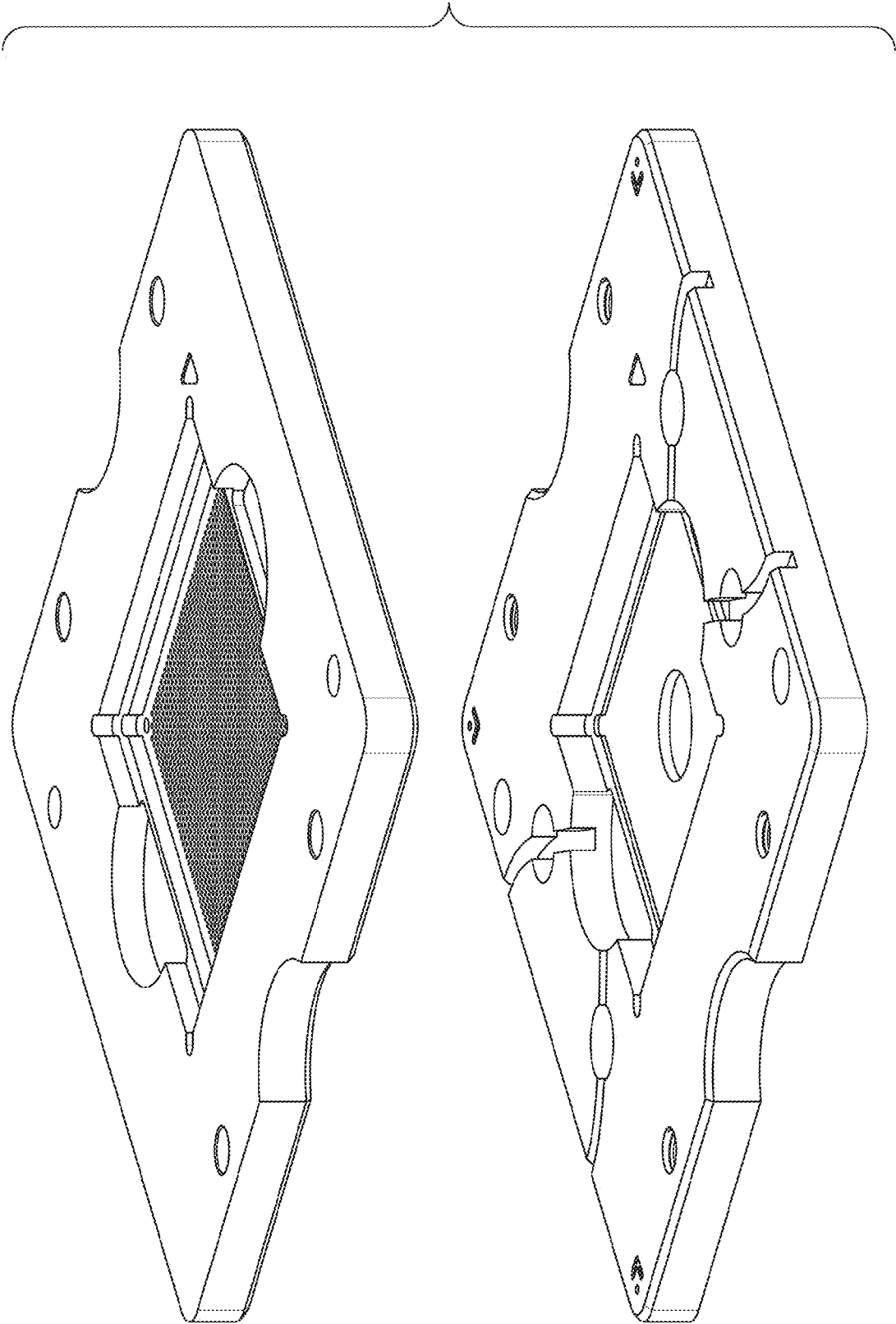


FIG. 9

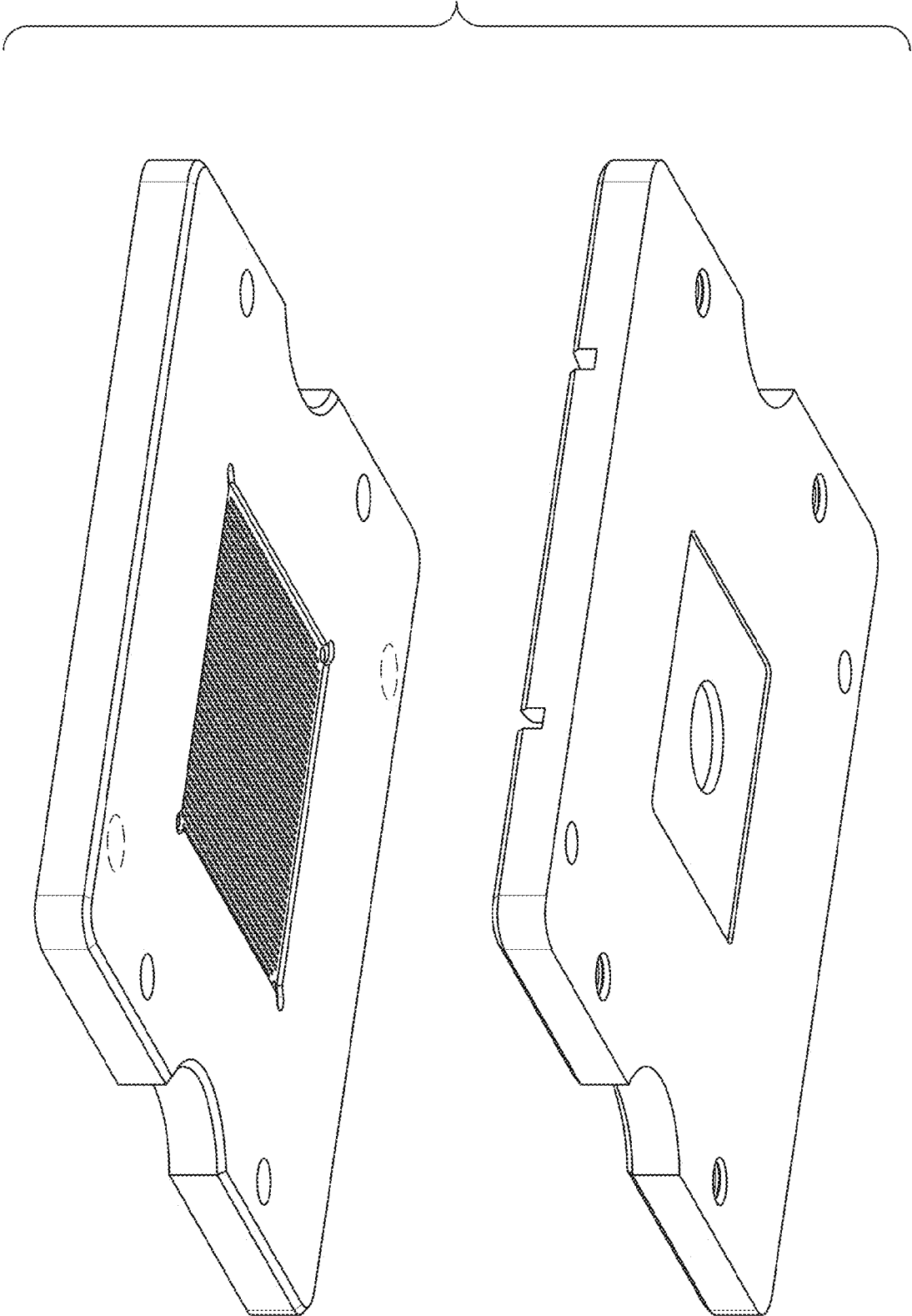


FIG. 10

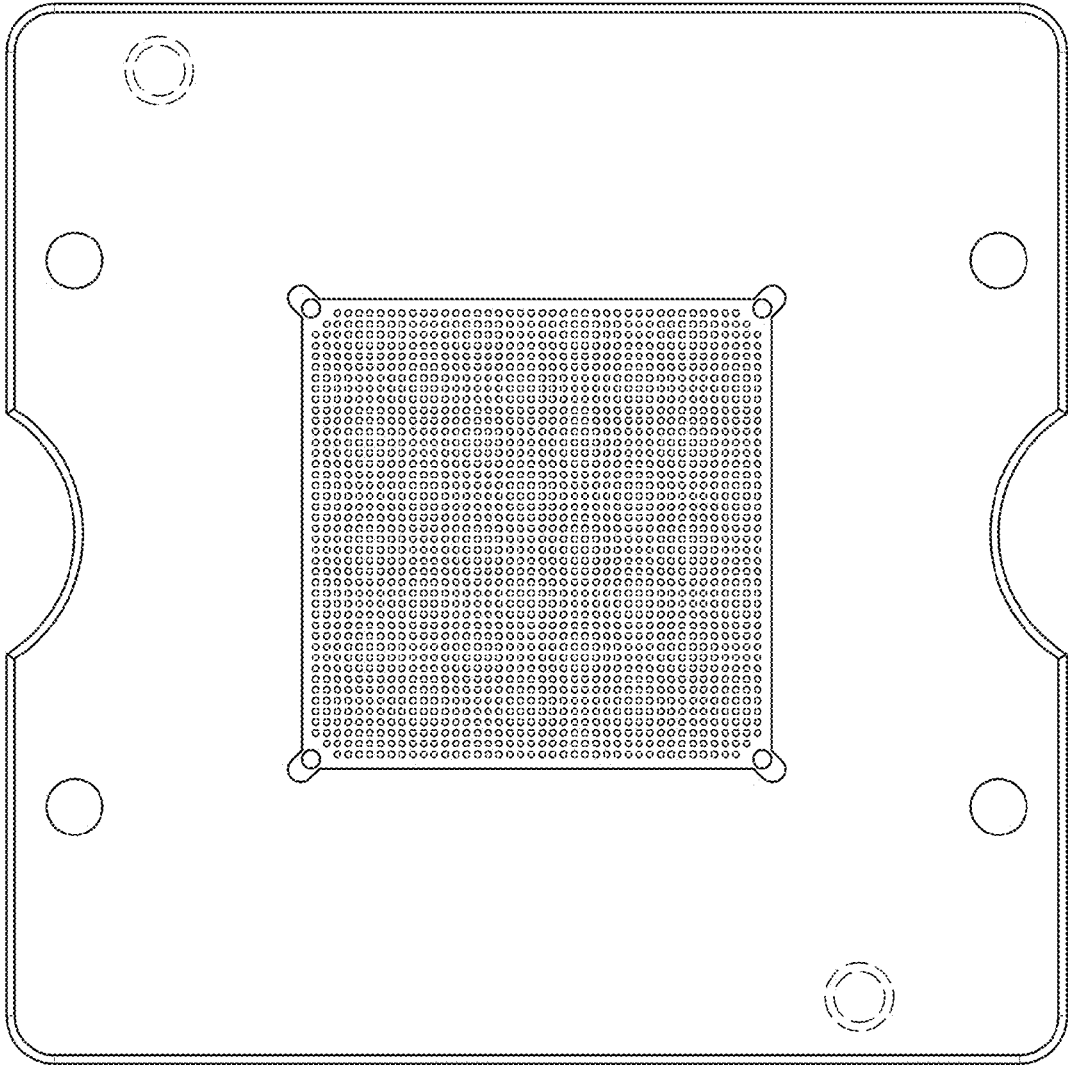


FIG. 11