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United States Design Patent

Ogawa et al.

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(54) STAMP COMPONENT FOR TRANSFERRING MICROSTRUCTURE

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(52) U.S. Cl.
USPC D13/182

(58) Field of Classification Search
USPC D13/182, 184, 199; D15/144, 144.1;
D19/12, 101, 108, 65, 100; D18/15, 18
(Continued)

(56) References Cited

U.S. PATENT DOCUMENTS

D26,484 S * 1/1897 Hudson D18/15
D29,302 S * 9/1898 Brandt et al. D7/672
(Continued)

OTHER PUBLICATIONS

3D integration of heterogeneous MEMS structures by stamping transfer, <https://www.semanticscholar.org/paper/3D-integration-of-heterogeneous-MEMS-structures-by-Onoe-Iwase/0dd8d4632f3944b5a2ee0282c379672c8b6259a2>, 2024. (Year: 2024).*

Primary Examiner — Elizabeth J Oswecki

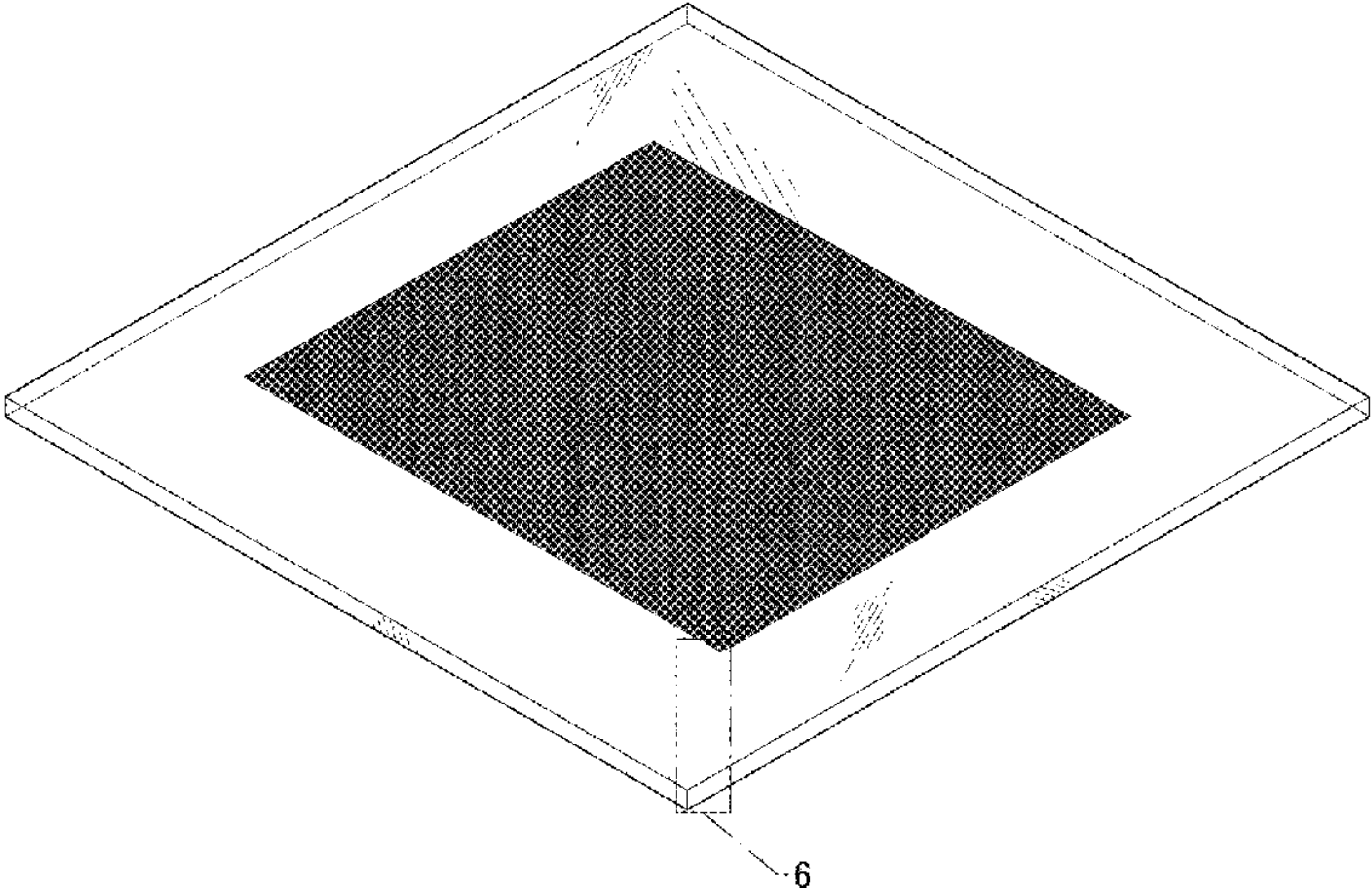
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(57) CLAIM

The ornamental design for a stamp component for transferring microstructure, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a stamp component for transferring microstructure, showing our new design;
FIG. 2 is a front elevational view thereof, the rear elevational view being identical thereto;
FIG. 3 is a left side elevational view thereof, the right side elevational view being identical thereto;
FIG. 4 is a top plan view thereof;
FIG. 5 is a bottom plan view thereof;
FIG. 6 is an enlarged portion view labeled, “6,” in FIG. 1;
FIG. 7 is an enlarged portion view labeled, “7,” in FIG. 6;
FIG. 8 is an enlarged portion view labeled, “8,” in FIG. 2;
and,
FIG. 9 is an enlarged portion view labeled, “9,” in FIG. 8.
(Continued)



The dot-dashed lines depict the boundaries of the enlarged portion views of FIGS. 6-9 in FIGS. 1, 2, and 6-9 and form no part of the claimed design.

1 Claim, 6 Drawing Sheets

Related U.S. Application Data

continuation of application No. 29/835,030, filed on Apr. 15, 2022, now Pat. No. Des. 1,070,795.

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24/00; H01L 24/10; H01L 24/13; H01L
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24/75; H01L 24/95; H01L 25/00; H01L
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H01L 33/00; H01L 33/60; H01L 33/62

See application file for complete search history.

(56)

References Cited

U.S. PATENT DOCUMENTS

2,547,487 A * 4/1951 Penney C09J 7/20
156/247
3,158,096 A * 11/1964 Arnold B41K 1/04
101/368
3,403,623 A * 10/1968 Blackwood B41K 1/36
101/368
D290,469 S * 6/1987 Boehringer D18/15
6,143,412 A * 11/2000 Schueller B82Y 30/00
428/338
D589,473 S * 3/2009 Takamoto D13/182
D621,803 S * 8/2010 Maruyama D13/182
D628,170 S * 11/2010 Maruyama D13/182
D656,909 S * 4/2012 Taniguchi D19/69
D656,910 S * 4/2012 Taniguchi D19/69
D664,511 S * 7/2012 Taniguchi D13/182
D664,512 S * 7/2012 Taniguchi D13/182
D680,505 S * 4/2013 Taniguchi D19/69
D689,831 S * 9/2013 Taniguchi D13/182
D690,278 S * 9/2013 Taniguchi D13/182
D734,732 S * 7/2015 Nakabayashi D13/182
D816,763 S * 5/2018 Yasoshima D18/15
D831,736 S * 10/2018 Shih D18/15
D831,737 S * 10/2018 Shih D18/15
D834,088 S * 11/2018 Shih D18/15
D960,968 S * 8/2022 Lin D18/15
2003/0068519 A1 * 4/2003 Brewer H01L 25/0655
257/E21.705
2008/0261039 A1 * 10/2008 Tanaka H01L 24/83
257/676
2019/0112186 A1 * 4/2019 Jang B29C 33/00
2019/0299266 A1 * 10/2019 Schneider A61C 8/0037
2022/0124949 A1 * 4/2022 Nakagawa H01L 21/6838
2022/0221732 A1 * 7/2022 Bilinsky G02B 27/425
2022/0315418 A1 * 10/2022 Ogawa C08L 83/14
2024/0047243 A1 * 2/2024 Nakagawa H01L 21/67144

* cited by examiner

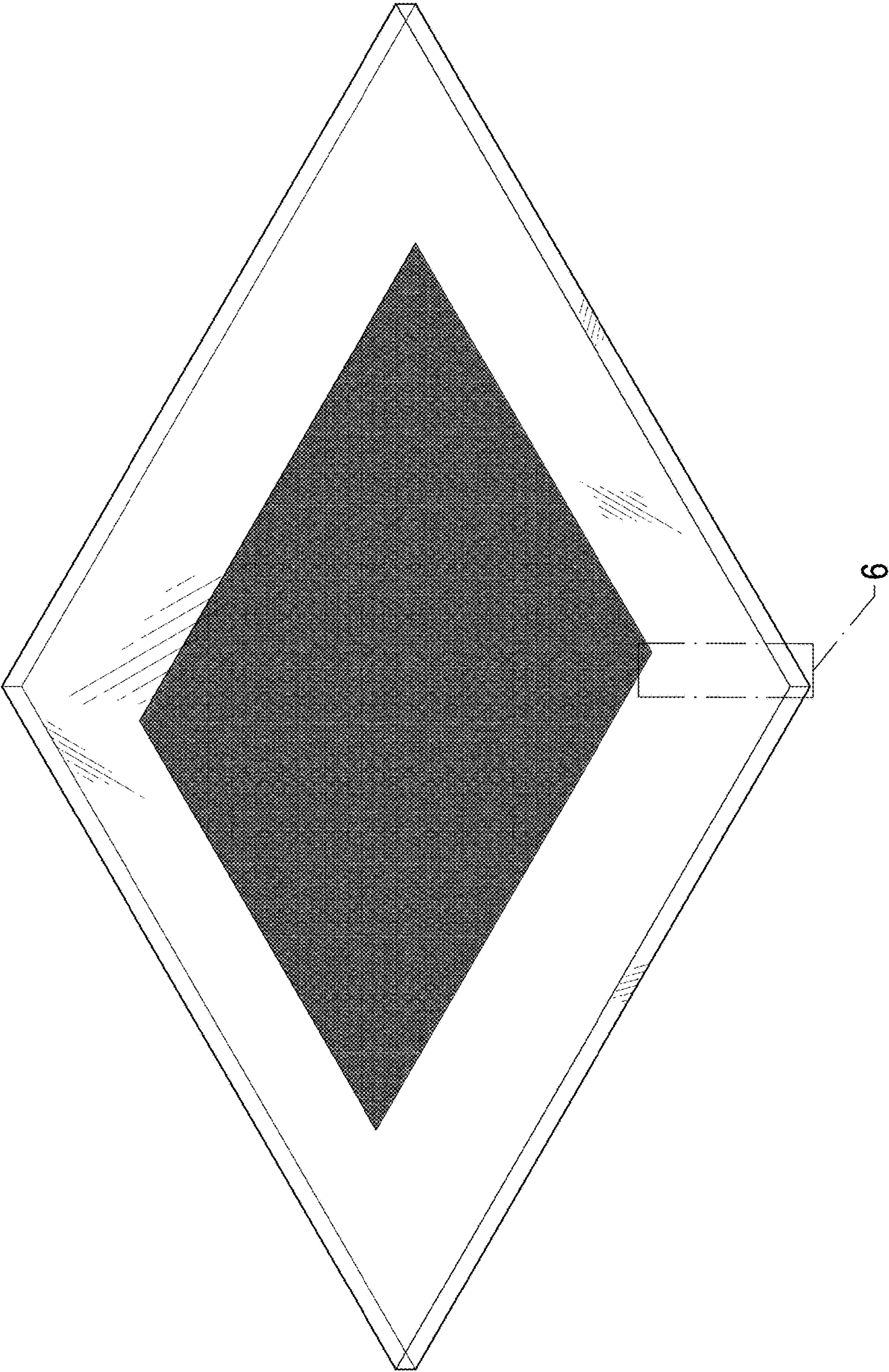


FIG. 1



FIG. 2



FIG. 3

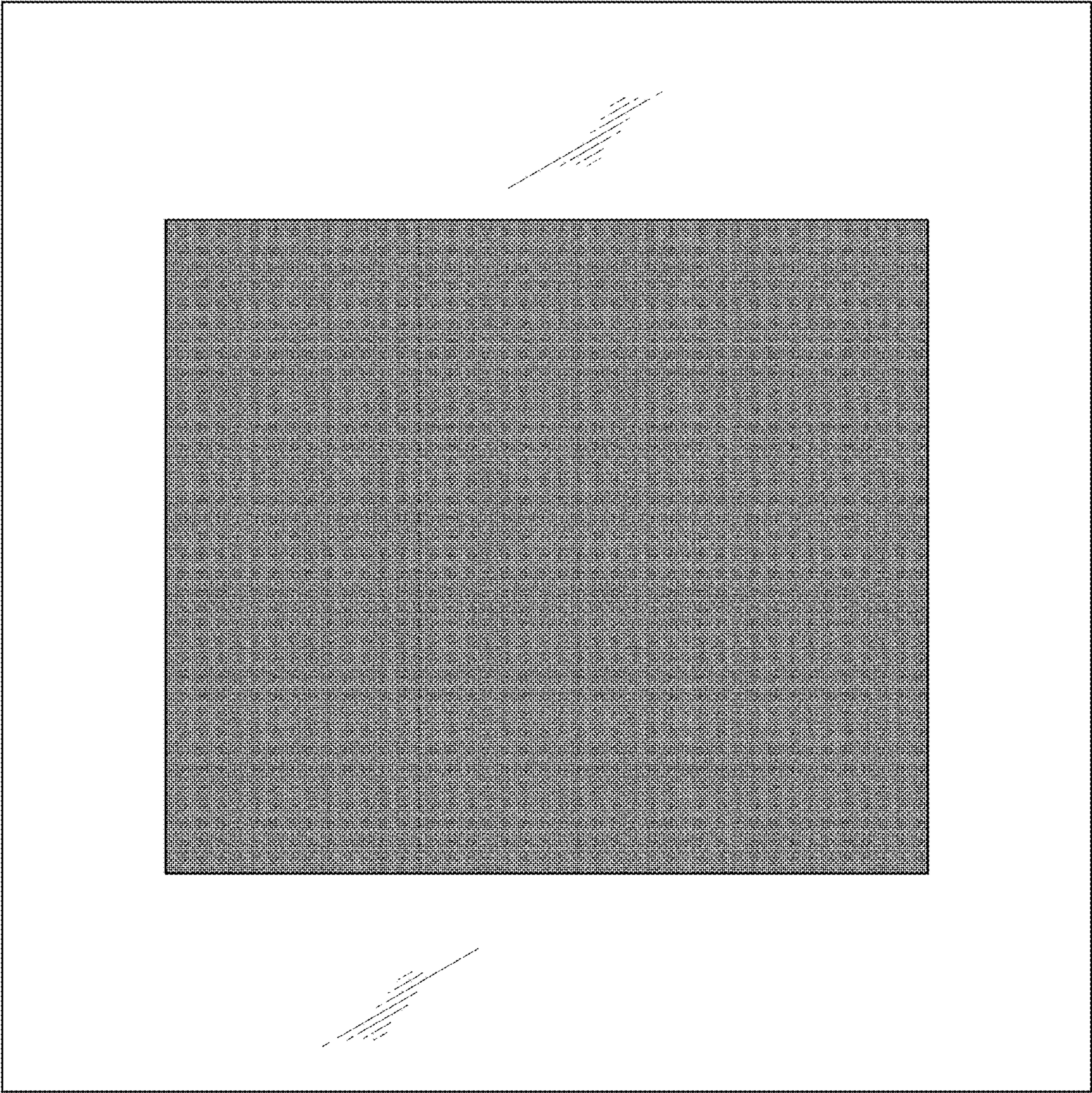


FIG. 4

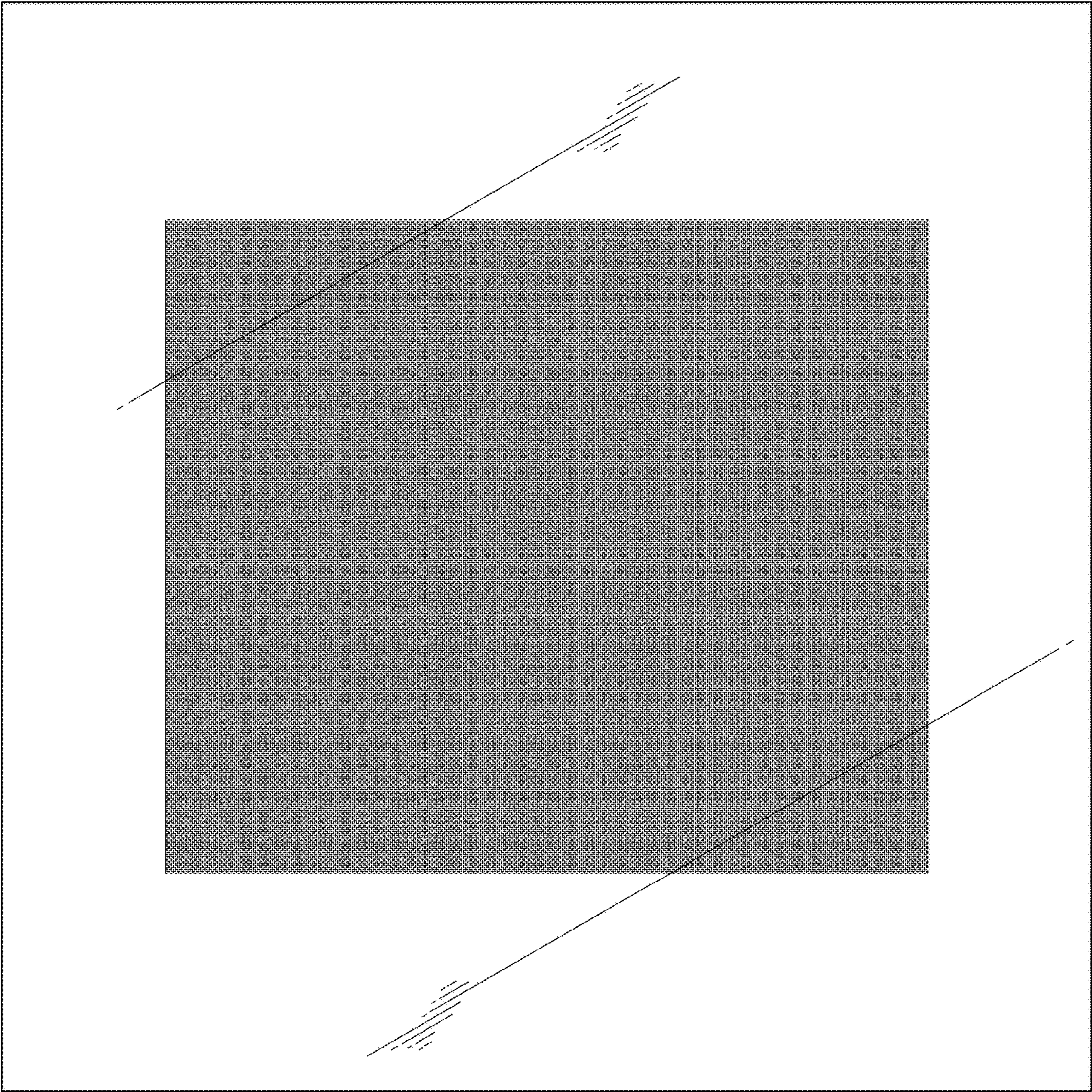


FIG. 5

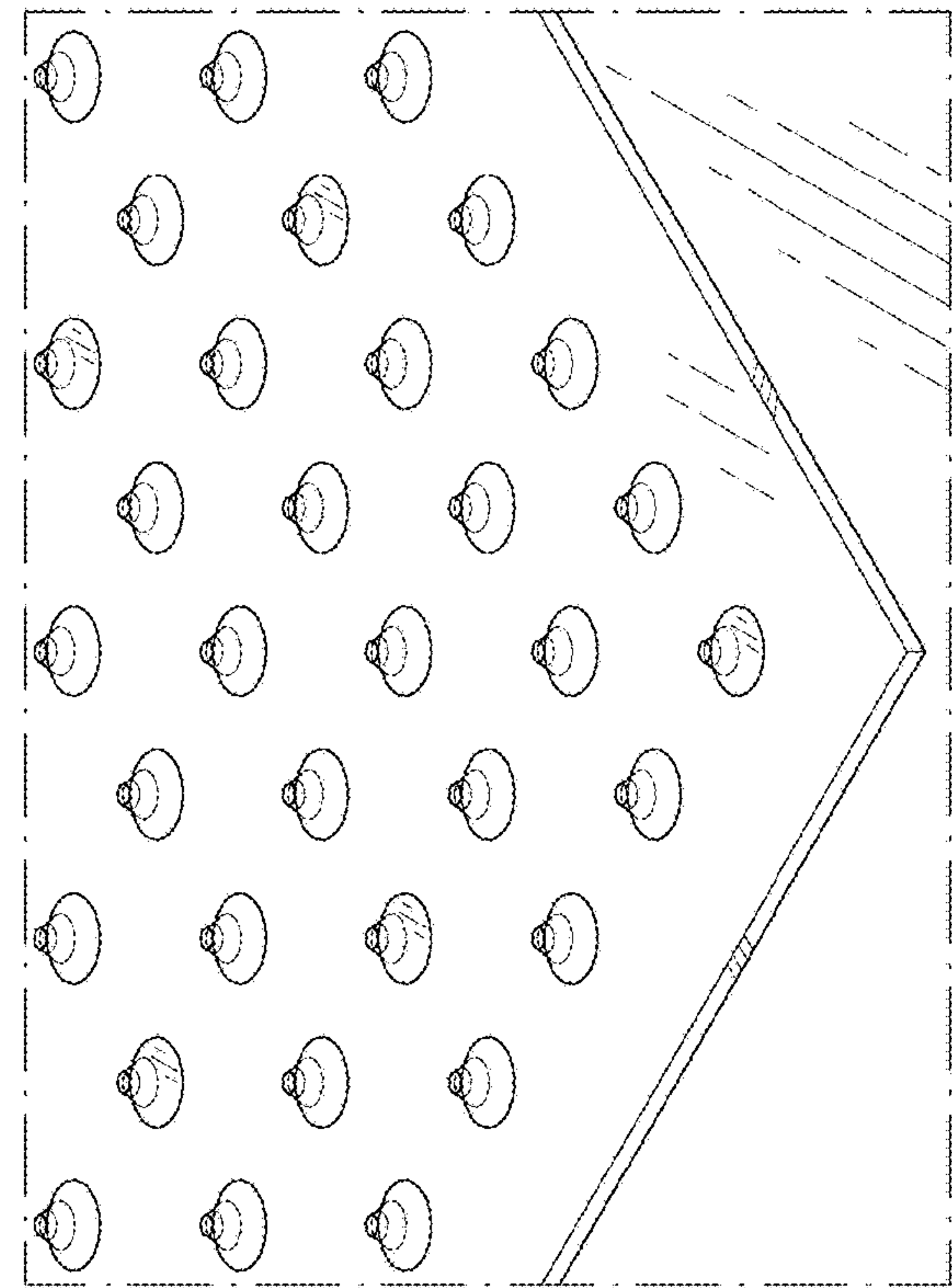


FIG. 7

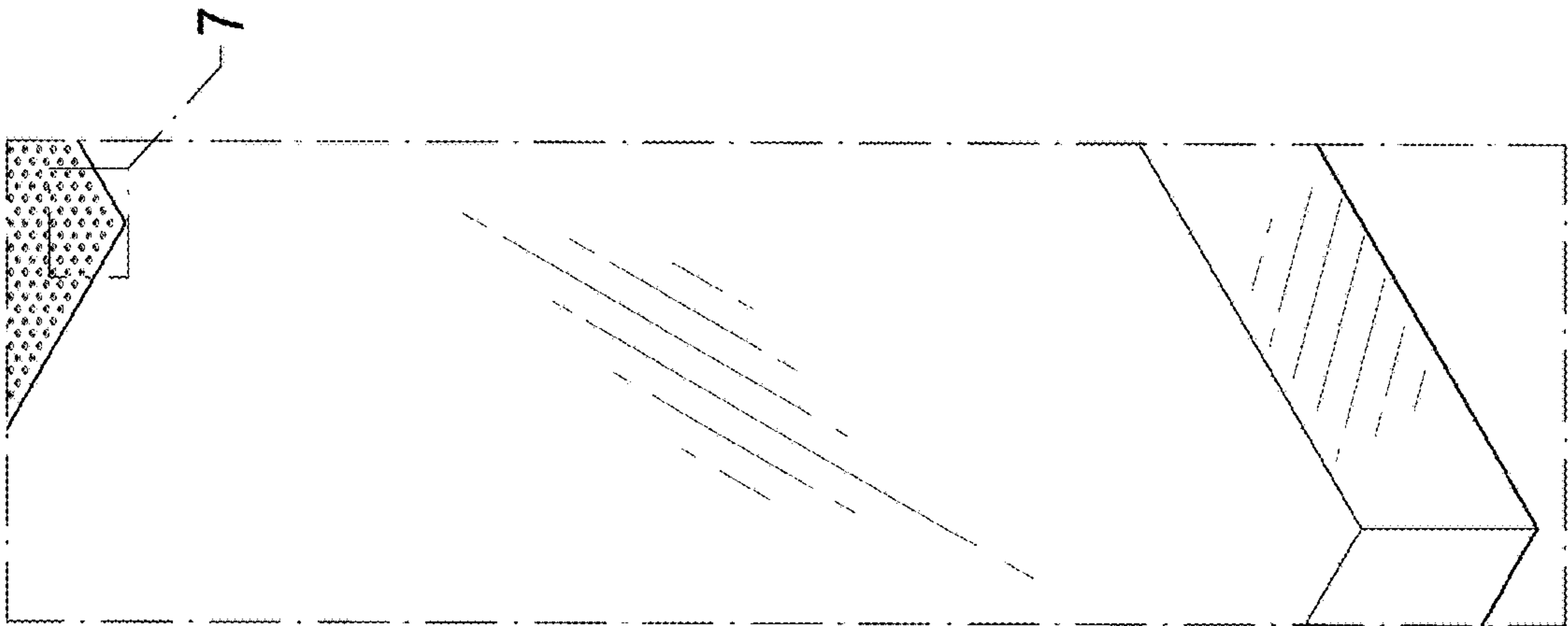


FIG. 6

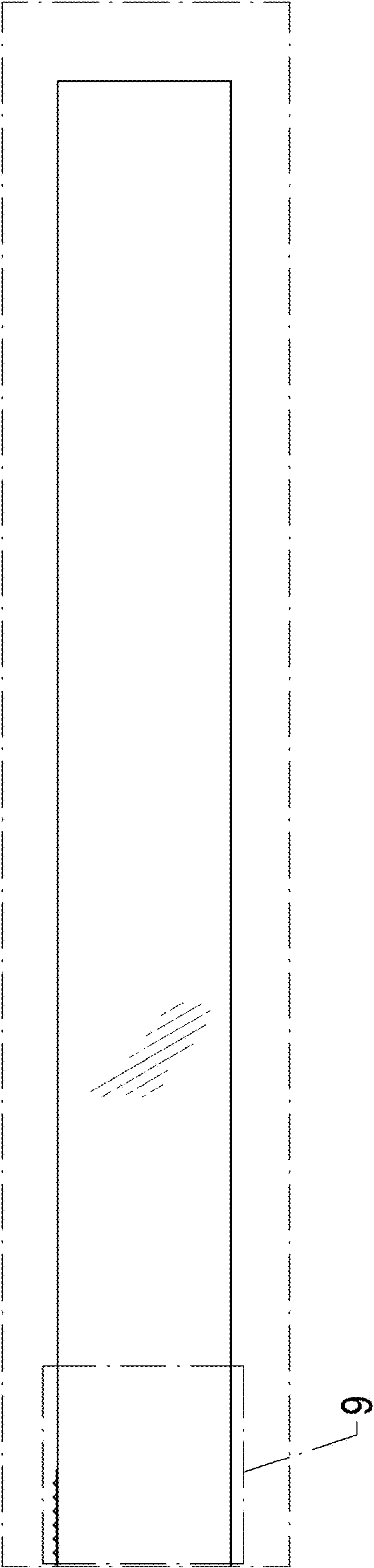


FIG. 8

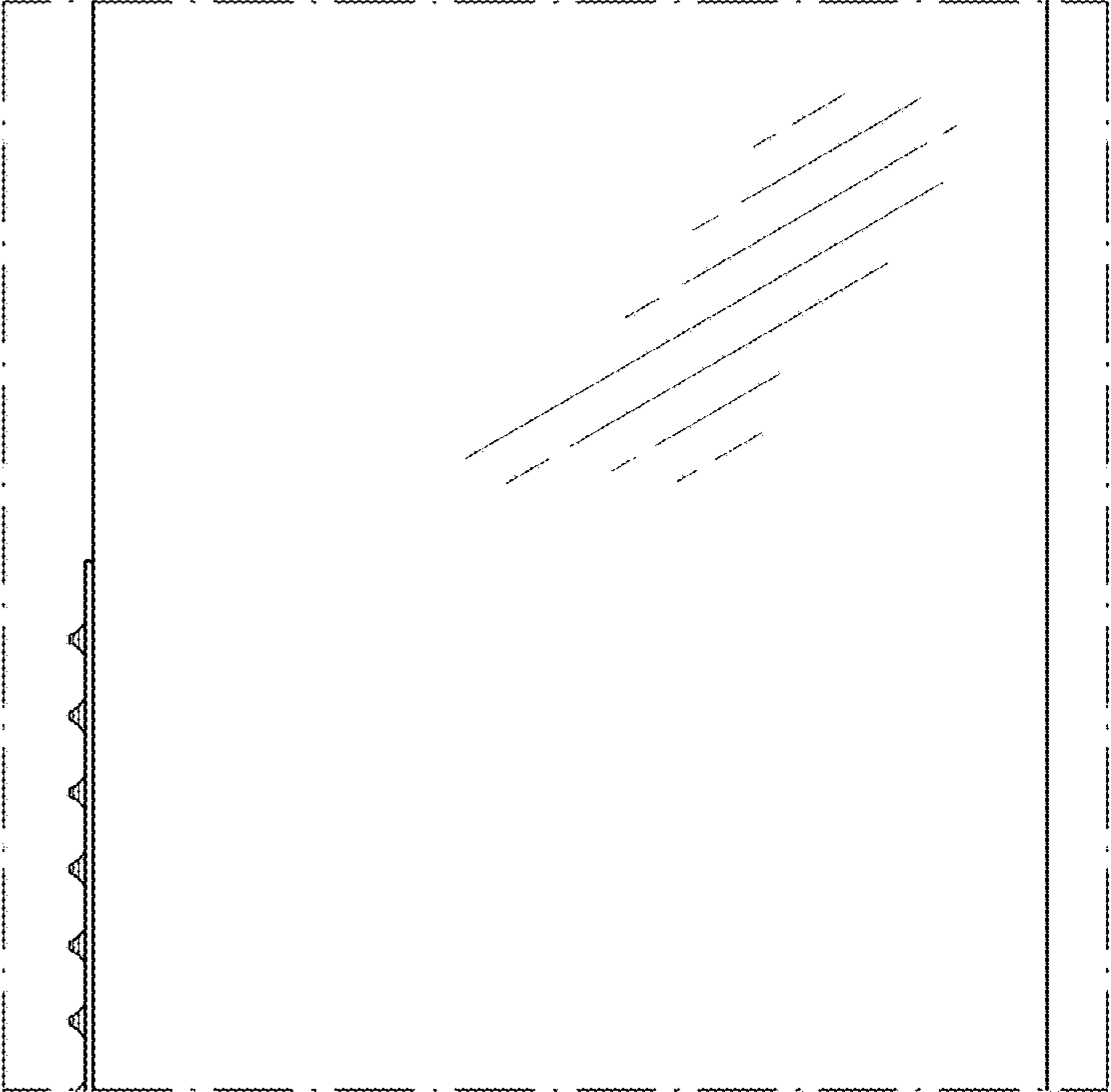


FIG. 9