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(12)

United States Design Patent
Choi

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(54) CONNECTOR

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(51) LOC (15) Cl. 13-03

(52) U.S. Cl.

USPC D13/147

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D13/101, 107, 116, 118, 120, 121, 123,
D13/137.1, 137.2, 137.4, 14, 9, 153, 154;
D14/435.1, 433

CPC H01R 24/00; H01R 24/46; H01R 12/00;
H01R 12/70; H01R 12/52; H01R 12/707;
H01R 12/716; H01R 13/40; H01R 13/58;
H01R 13/627; H01R 13/62; H01R 13/66;
H01R 13/6335; H01R 13/6272; H01R
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H01R 13/6587; H01R 24/50; H01R
12/73; H01R 13/00; H01R 13/02; H01R
13/10; H01R 13/2407; H01R 13/2492;

H01R 4/363; H01R 2201/00; H01R 3/08;
G02B 6/38; G02B 6/38875; G02B 6/4284
See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

D767,499	S	*	9/2016	Goto	.....	D13/147
D923,581	S	*	6/2021	Oosaka	.....	D13/147
D923,582	S	*	6/2021	Oosaka	.....	D13/147
D967,033	S	*	10/2022	Horino	.....	D13/133
D967,034	S	*	10/2022	Horino	.....	D13/133

(Continued)

FOREIGN PATENT DOCUMENTS

CN	306308459	*	2/2021
JP	D1675220	*	12/2023

(Continued)

OTHER PUBLICATIONS

2401305G mmWave antenna module connector, posted Jan. 30, 2024 [online], [retrieved Sep. 18, 2024]. Retrieved from internet, <https://www.youtube.com/watch?v=dqrLH52Tf2g> (Year: 2024).*

(Continued)

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(57) CLAIM

The ornamental design for a connector as shown and described herein.

DESCRIPTION

FIG. 1 is a perspective view of a connector showing the new design;
FIG. 2 is a front view thereof;
FIG. 3 is a rear view thereof;
FIG. 4 is a left-side view thereof;
FIG. 5 is a right-side view thereof;
FIG. 6 is a top plan view thereof;

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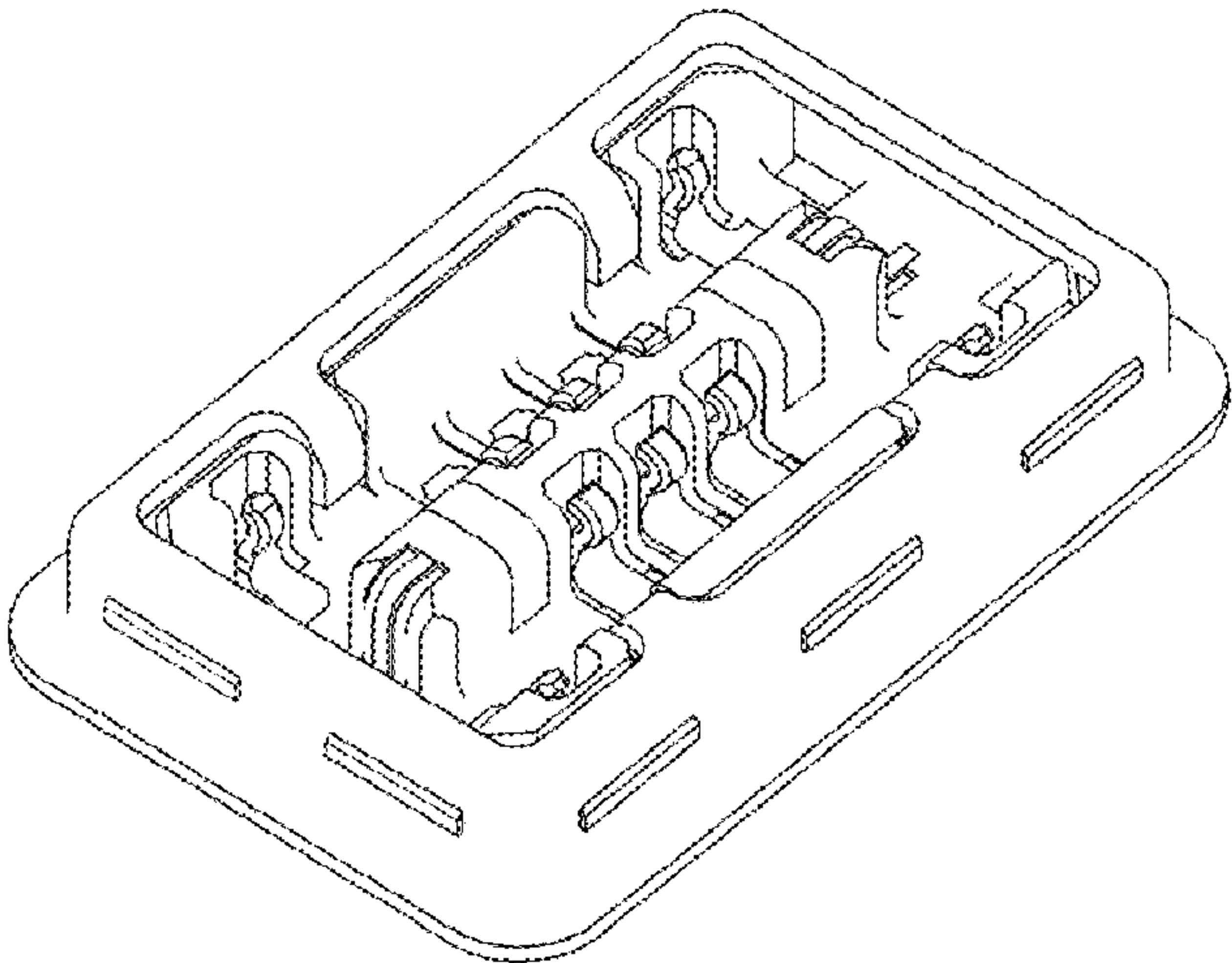


FIG. 7 is a bottom view thereof; and,
FIG. 8 is a bottom perspective view thereof.

1 Claim, 8 Drawing Sheets

(56) References Cited

U.S. PATENT DOCUMENTS

D972,514	S	*	12/2022	Horino	.....	D13/133
D985,509	S	*	5/2023	Yokoyama	.....	D13/147
D1,042,355	S	*	9/2024	Ishida	.....	D13/147
2021/0359471	A1	*	11/2021	Oosaka	.....	H01R 12/73
2022/0052470	A1	*	2/2022	Hosoda	.....	H01R 12/7005

FOREIGN PATENT DOCUMENTS

KR	301041468.0000	*	1/2020
KR	301180480.0000	*	9/2022
TW	231182-0001	*	5/2024

OTHER PUBLICATIONS

Molex RF mmWave connectors, posted Sep. 29, 2021 [online], [retrieved Sep. 18, 2024]. Retrieved from internet, <https://www.connectortips.com/flex-to-board-rf-mmwave-connectors-meet-high-speed-5g-needs/> (Year: 2021).*

LS Mtron GB170 LST03, posted Jan. 21, 2024 [online], [retrieved Sep. 18, 2024]. Retrieved from internet, <https://www.lsmtron.com/us/en/pr/press/1979> (Year: 2024).*

Jae WP7 series, posted Sep. 18, 2024 [online], [retrieved Sep. 18, 2024]. Retrieved from internet, https://www.jae.com/en/connectors/series/detail/id=64346&type_code=T1020 (Year: 2024).*

* cited by examiner

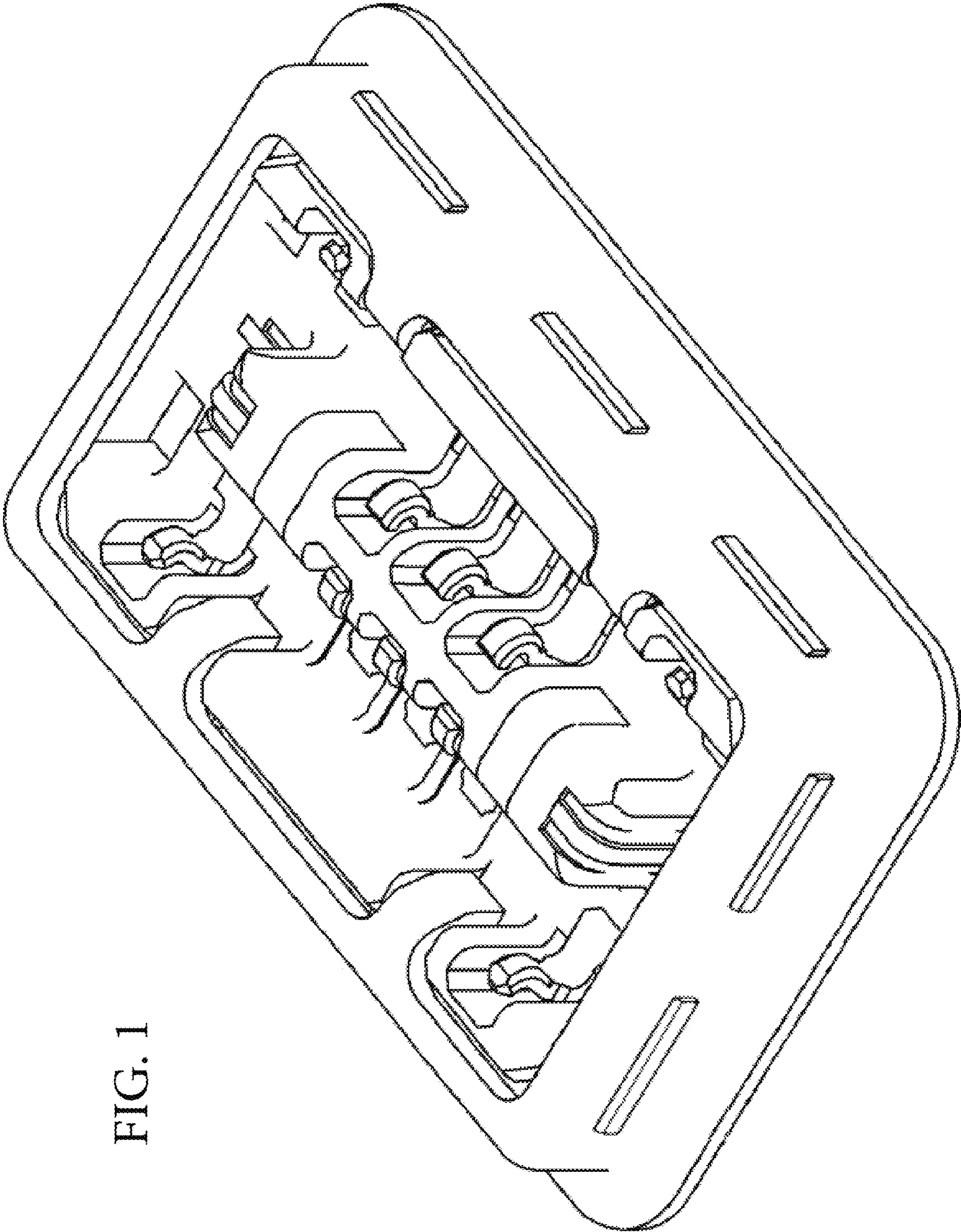


FIG. 1

FIG. 2

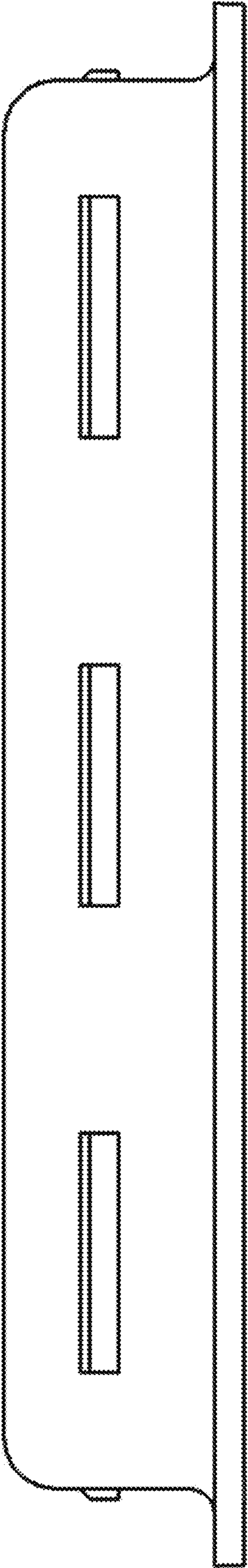


FIG. 3

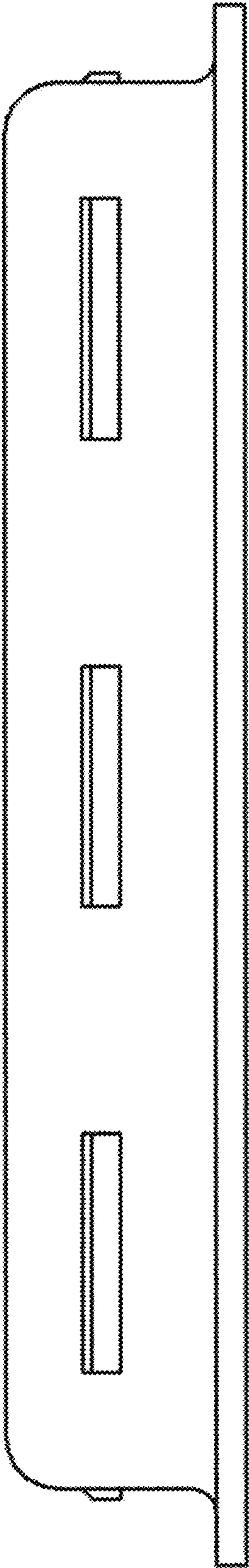


FIG. 4

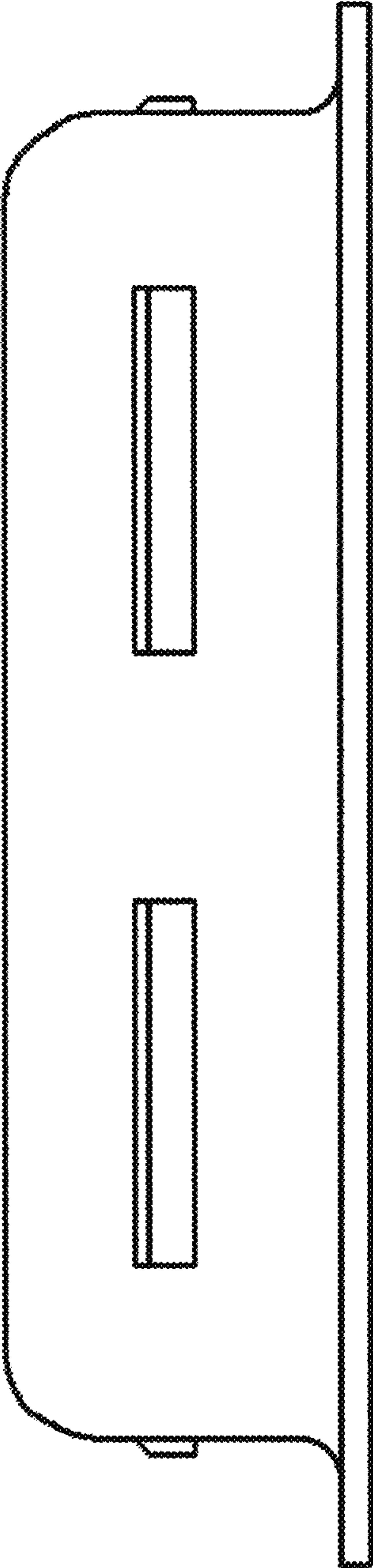


FIG. 5

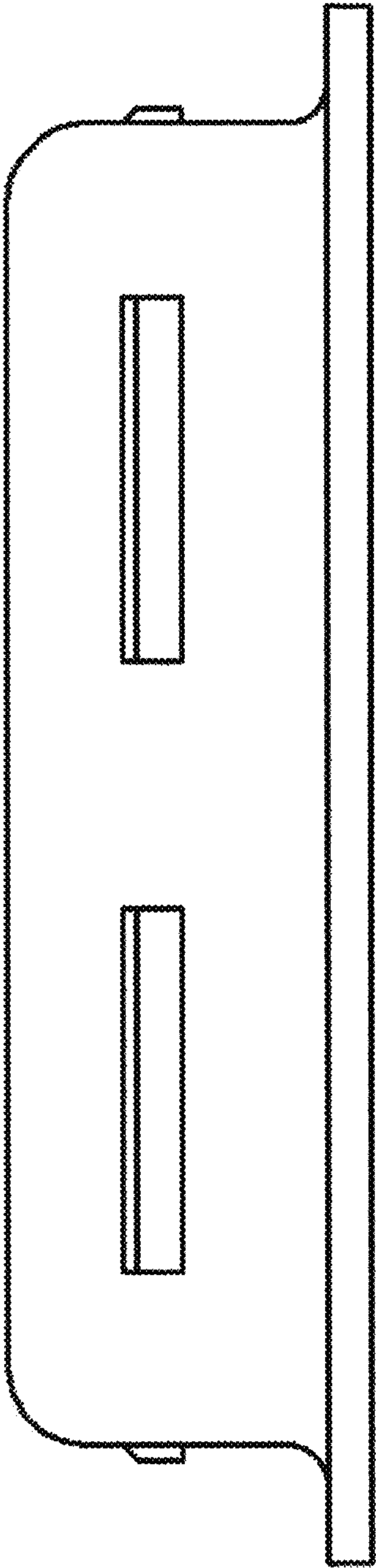


FIG. 6

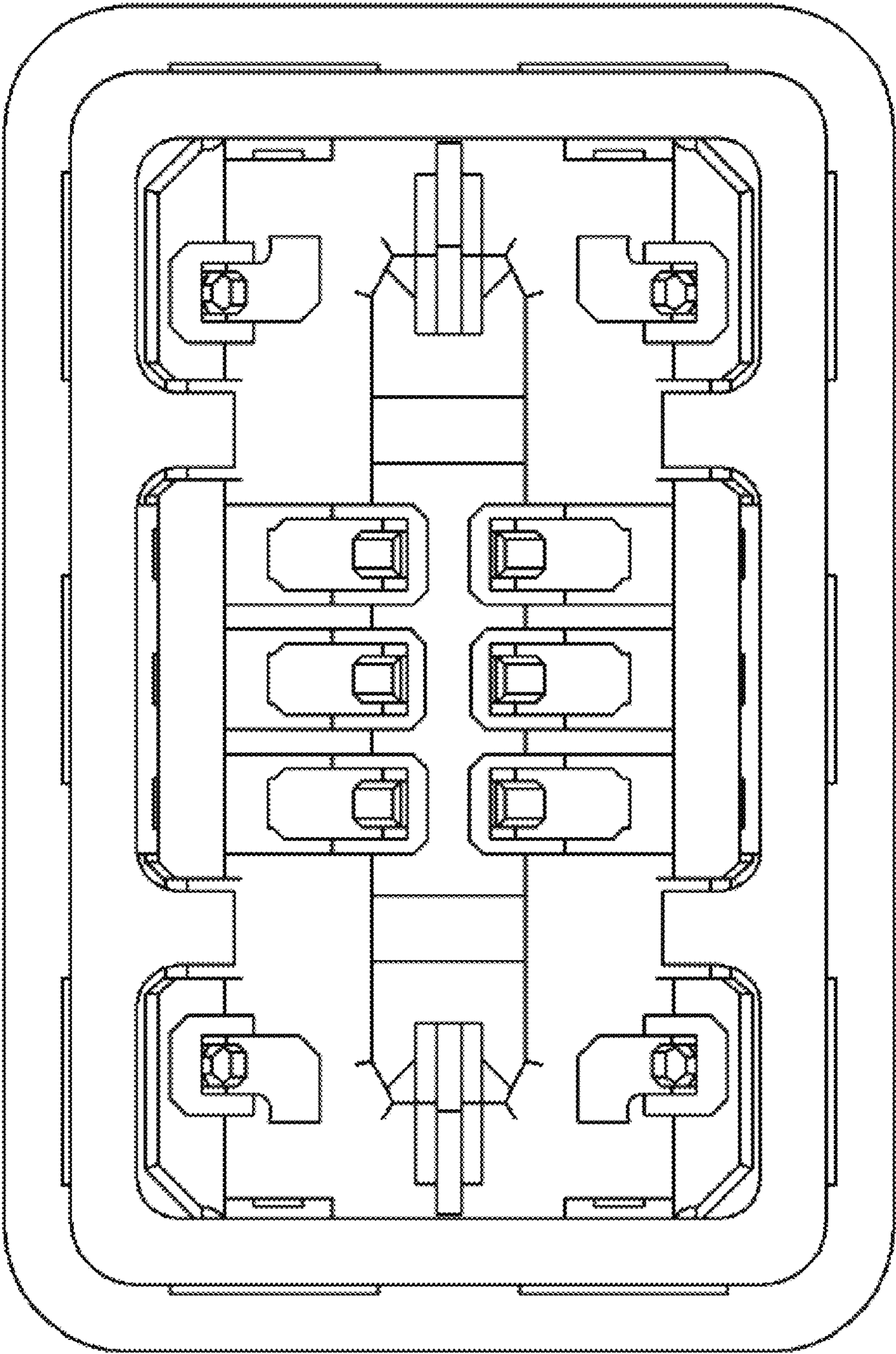


FIG. 7

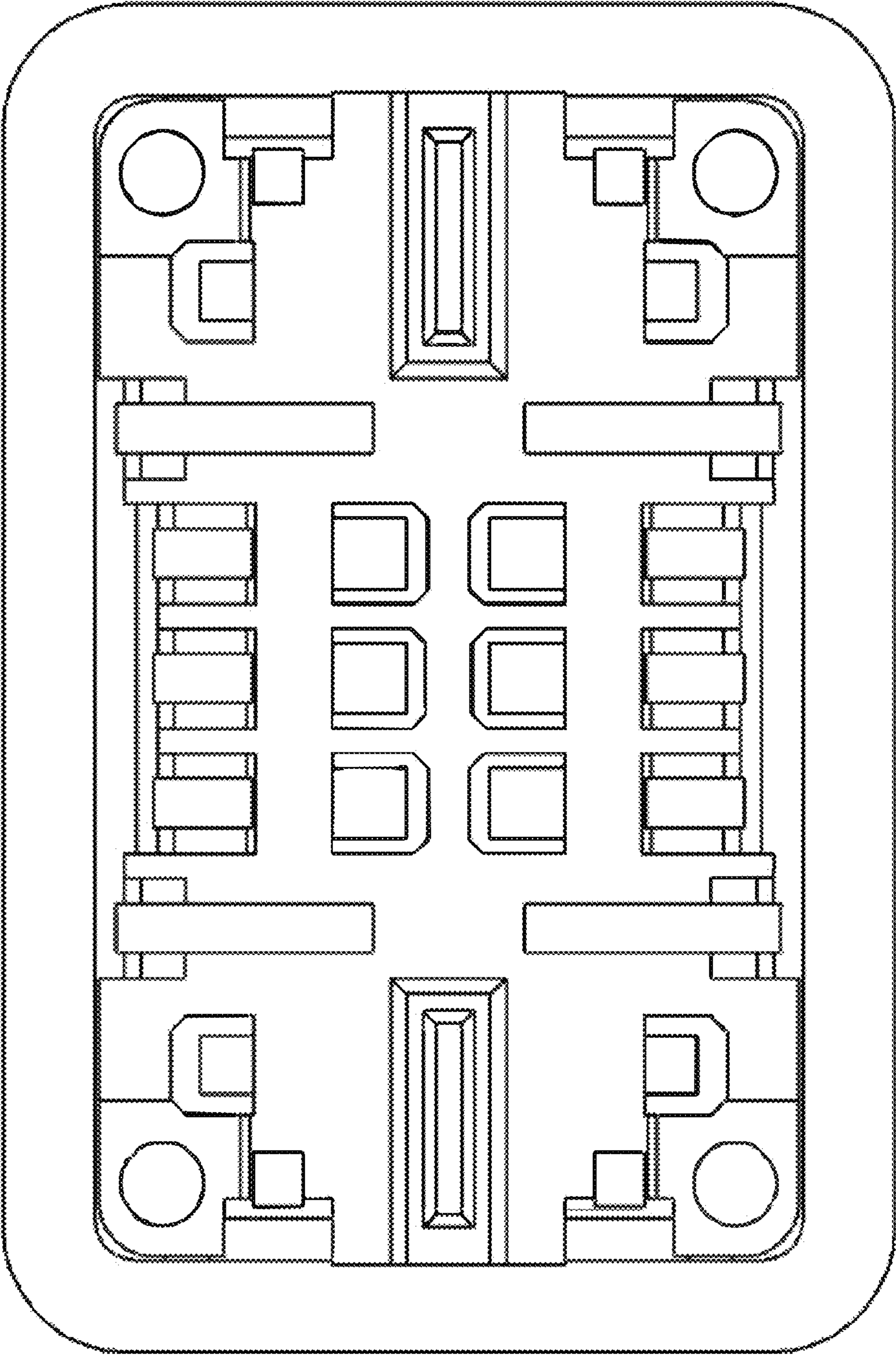


FIG. 8

