



US00D941788S

(12) **United States Design Patent** (10) **Patent No.:** **US D941,788 S**
Byrne et al. (45) **Date of Patent:** **** Jan. 25, 2022**

(54) **CIRCUIT BOARD**

(71) Applicants: **Norman R. Byrne**, Ada, MI (US);
Daniel P. Byrne, Lowell, MI (US);
Aaron G. Lautenbach, Rockford, MI
(US); **Hansen Ma**, Grand Rapids, MI
(US); **Peter J. Maher**, Grand Rapids,
MI (US); **Shawn R. Gibson**, Fremont,
MI (US)

(72) Inventors: **Norman R. Byrne**, Ada, MI (US);
Daniel P. Byrne, Lowell, MI (US);
Aaron G. Lautenbach, Rockford, MI
(US); **Hansen Ma**, Grand Rapids, MI
(US); **Peter J. Maher**, Grand Rapids,
MI (US); **Shawn R. Gibson**, Fremont,
MI (US)

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

(21) Appl. No.: **29/726,951**

(22) Filed: **Mar. 6, 2020**

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

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

(58) **Field of Classification Search**
USPC D13/182; 361/748, 752, 760, 761, 807,
361/808, 736, 719, 720; 174/250, 253,
174/255, 68.1; 363/144, 147
CPC H05K 3/30; H05K 3/301; H05K 3/284;
H05K 3/303; H05K 1/18; H05K 1/181;
H05K 1/182; H05K 1/183; H05K 1/185;
H05K 1/00; H05K 7/1417; H05K 7/02;
H05K 7/12; H05K 7/06; H01L 2924/14
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D292,698 S * 11/1987 DeVita D13/182
5,326,284 A * 7/1994 Bohbot H05K 1/0228
439/607.01
D430,856 S * 9/2000 Wilkerson D13/182

(Continued)

Primary Examiner — Elizabeth J Oswecki

(74) *Attorney, Agent, or Firm* — Gardner, Linn, Burkhart
& Ondersma LLP

(57) **CLAIM**

The ornamental design for a circuit board, as shown and
described.

DESCRIPTION

FIG. 1 is a top-front perspective view of a circuit board
showing our new design;
FIG. 2 is top-rear perspective view thereof;
FIG. 3 is another top-front perspective view thereof;
FIG. 4 is a bottom-front perspective view thereof;
FIG. 5 is a bottom-rear perspective view thereof;
FIG. 6 is a top plan view thereof;
FIG. 7 is a bottom plan view thereof;
FIG. 8 is a front elevation thereof;
FIG. 9 is a rear elevation thereof;
FIG. 10 is a side elevation view thereof;
FIG. 11 is an opposite side elevation view thereof;
FIG. 12 is another top-front perspective view of the circuit
board of FIG. 1, with circuit structures shown in broken lines
omitted to show the underlying structure;
FIG. 13 is a bottom-rear perspective view thereof;
FIG. 14 is another top-front perspective view thereof;
FIG. 15 is a top-rear perspective view thereof;
FIG. 16 is a bottom-front perspective view thereof;
FIG. 17 is a top plan view thereof;
FIG. 18 is a bottom plan view thereof;
FIG. 19 is a front elevation thereof;
FIG. 20 is a rear elevation thereof;
FIG. 21 is a side elevation view thereof; and,
FIG. 22 is an opposite side elevation view thereof.
The broken lines in the drawings are for the purpose of
illustrating portions of the circuit board that form no part of
the claimed design.

1 Claim, 15 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D508,681 S * 8/2005 Enderlein D13/182
 D525,213 S * 7/2006 Enderlein D13/182
 D639,756 S * 6/2011 Greene, Jr. D13/182
 D642,546 S * 8/2011 Greene, Jr. D13/182
 D647,072 S * 10/2011 Bentley D13/182
 9,048,598 B2 6/2015 Byrne et al.
 9,257,823 B2 2/2016 Byrne et al.
 9,312,673 B2 4/2016 Byrne et al.
 D799,438 S * 10/2017 Takahashi D13/182
 10,008,816 B2 6/2018 Byrne et al.
 D837,171 S * 1/2019 Vasoya D13/182
 D883,240 S * 5/2020 Fathauer H05K 1/115
 D13/182
 D887,998 S * 6/2020 Krasnopolski D13/182
 D887,999 S * 6/2020 Chen D13/182
 D888,674 S * 6/2020 Chen D13/182
 10,673,191 B2 6/2020 Byrne et al.
 10,680,392 B2 6/2020 Byrne et al.
 D909,319 S * 2/2021 Nordeen D13/182
 D911,298 S * 2/2021 Krasnopolski D13/182
 D922,337 S * 6/2021 Migliorino D13/173
 D922,338 S * 6/2021 Migliorino D13/173
 2002/0154528 A1 10/2002 Ravid
 2008/0144290 A1 * 6/2008 Brandt H05K 5/0052
 361/720
 2009/0268390 A1 * 10/2009 King G06F 13/409
 361/679.33
 2013/0280956 A1 10/2013 Cheng et al.
 2019/0341712 A1 11/2019 Byrne et al.

* cited by examiner

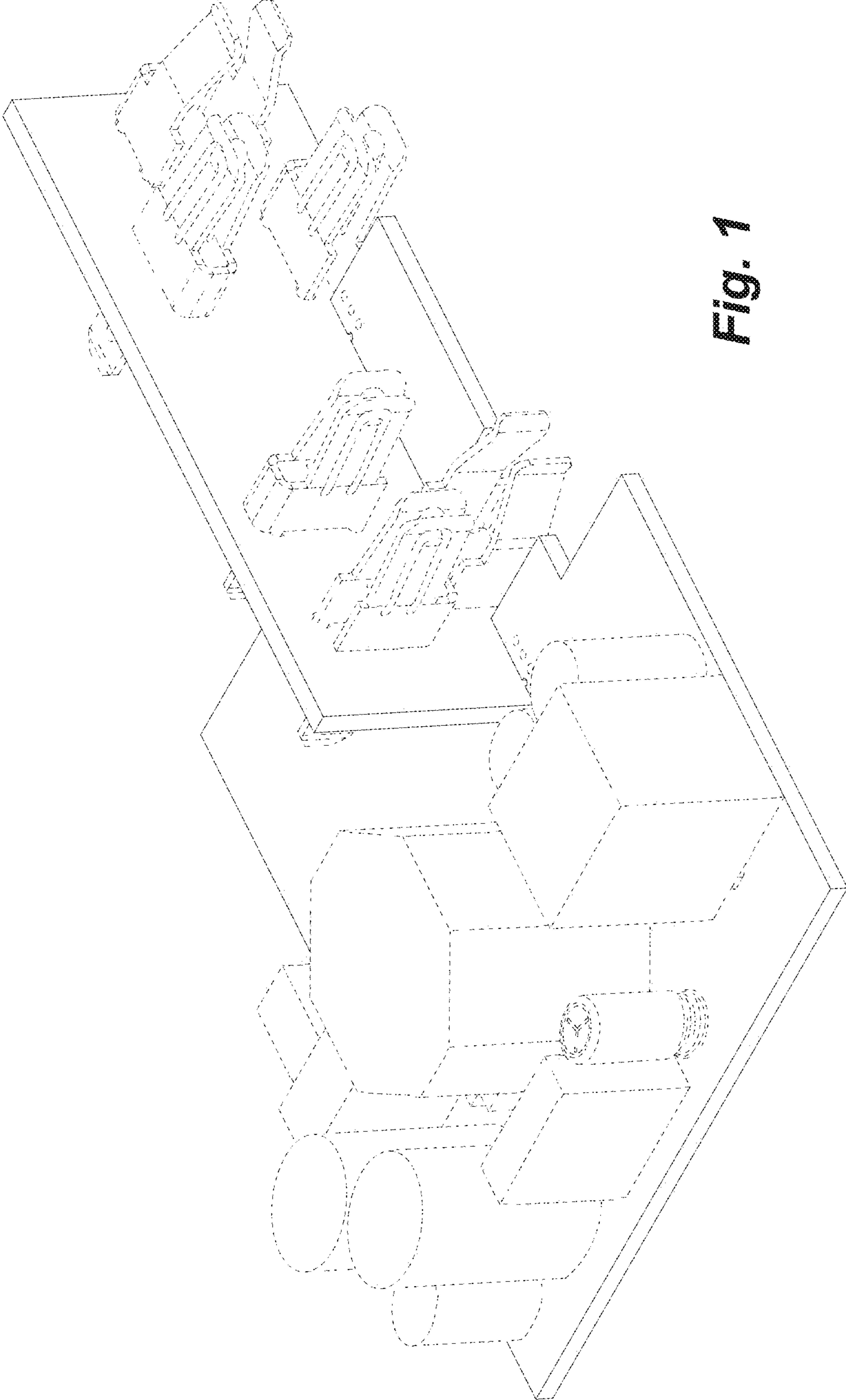


Fig. 1

Fig. 2

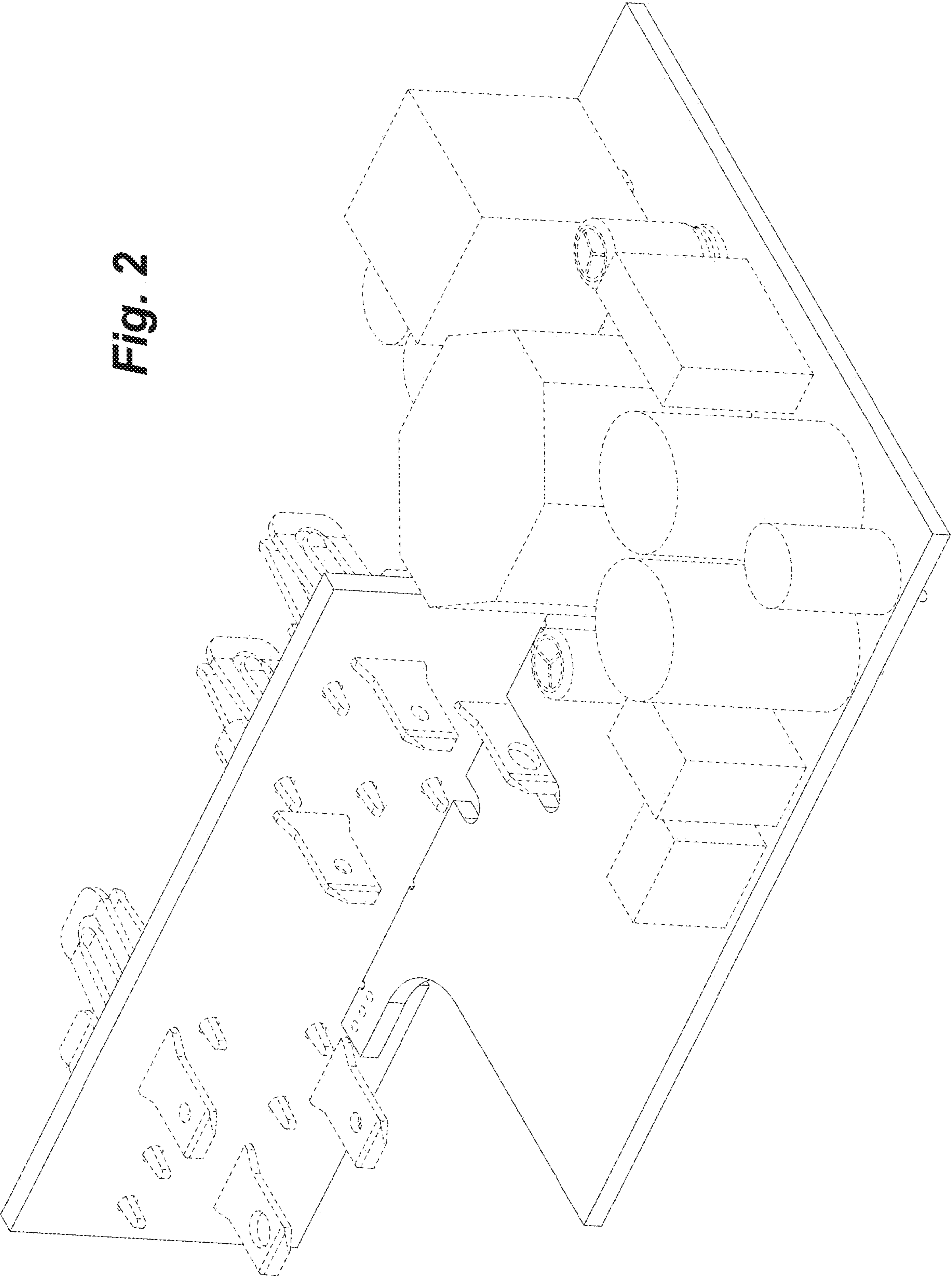
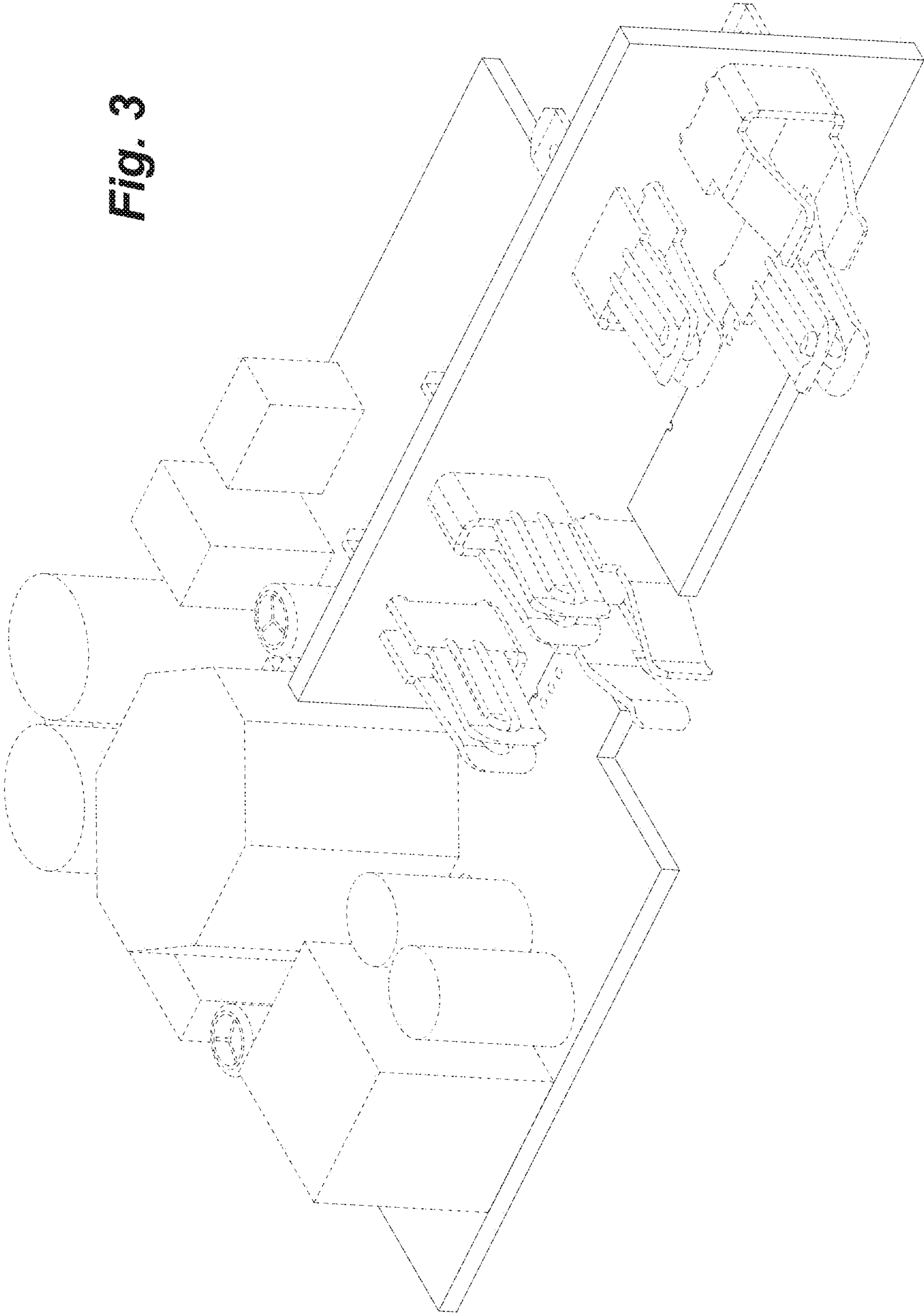


Fig. 3



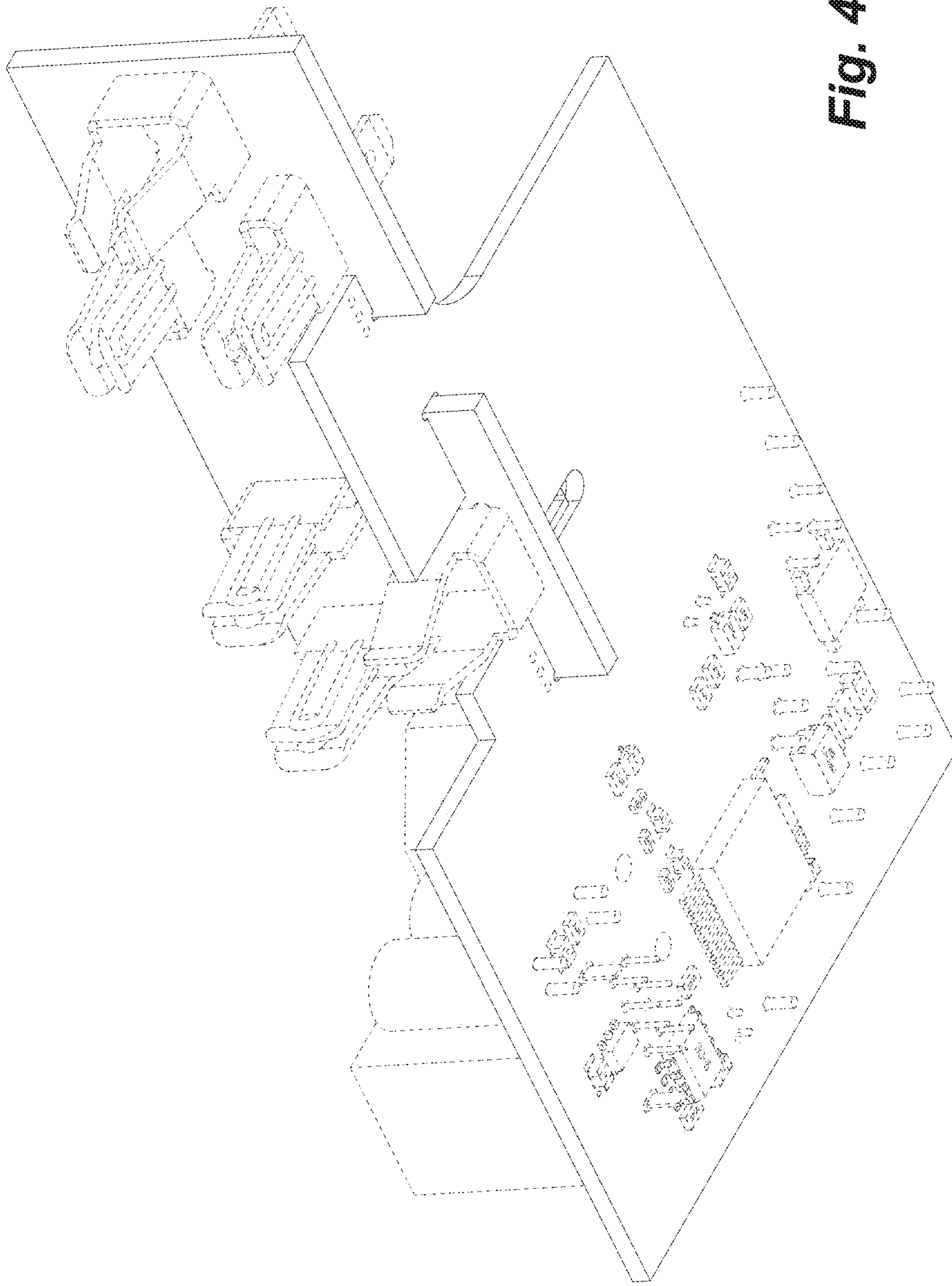


Fig. 4

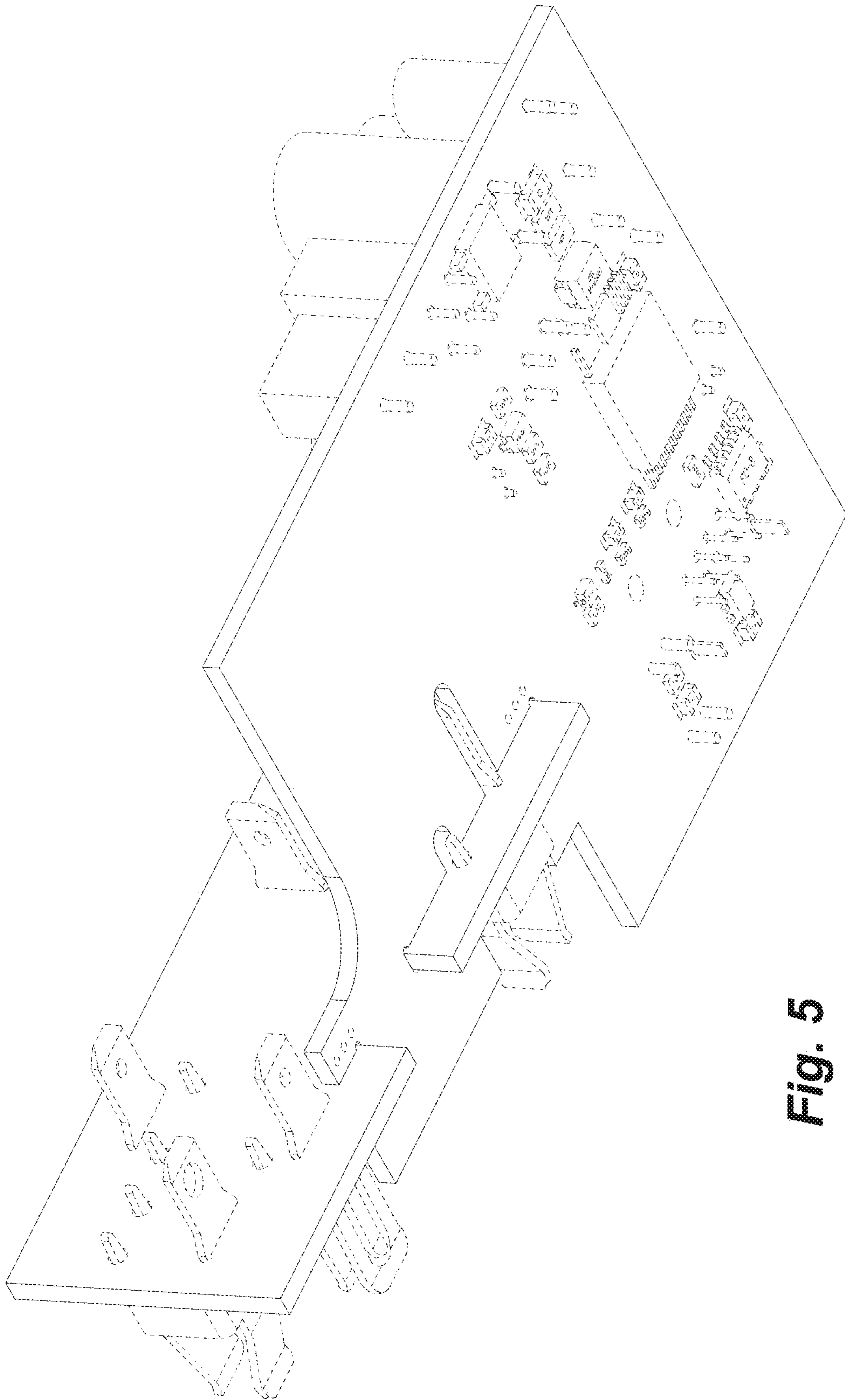


Fig. 5

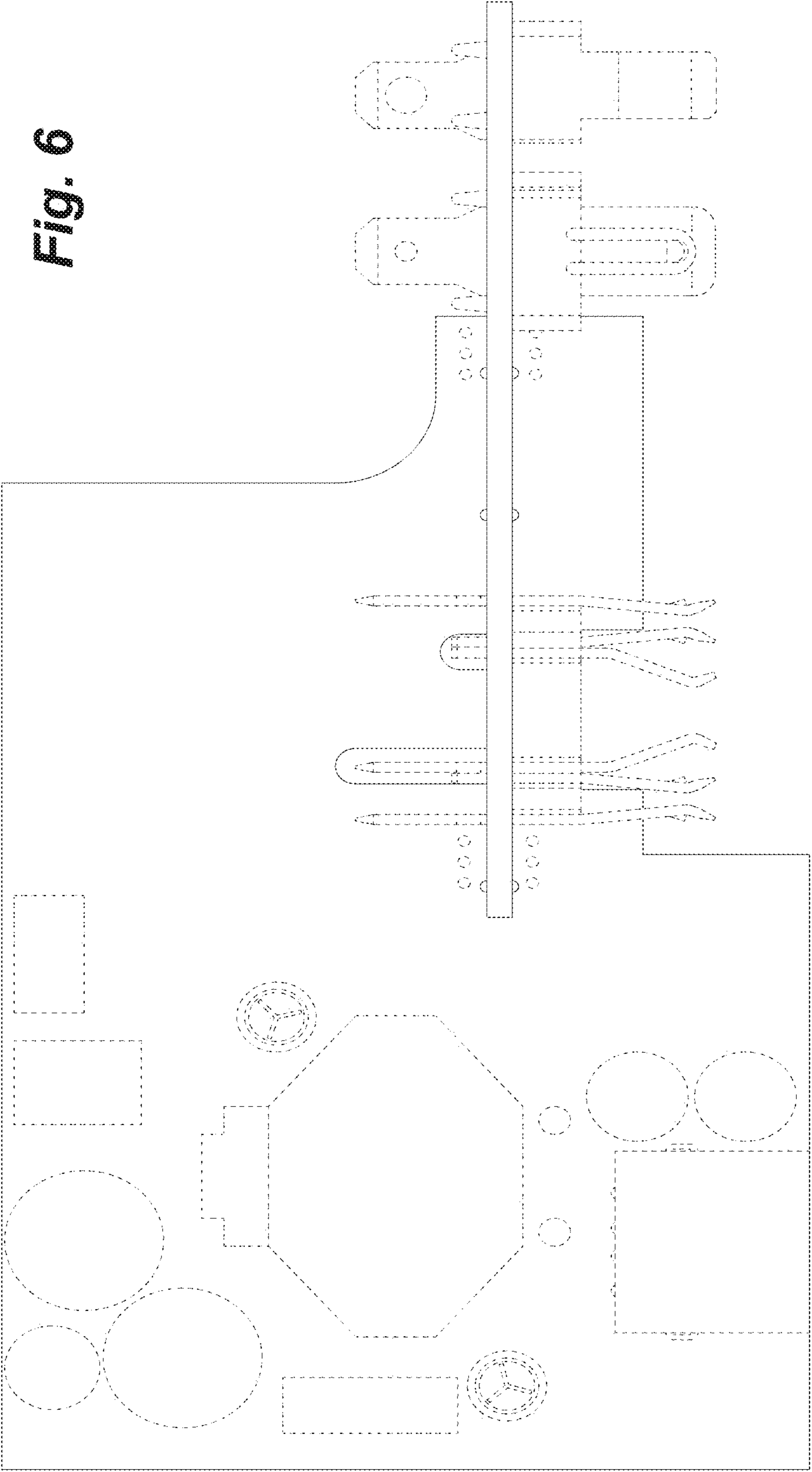


Fig. 6

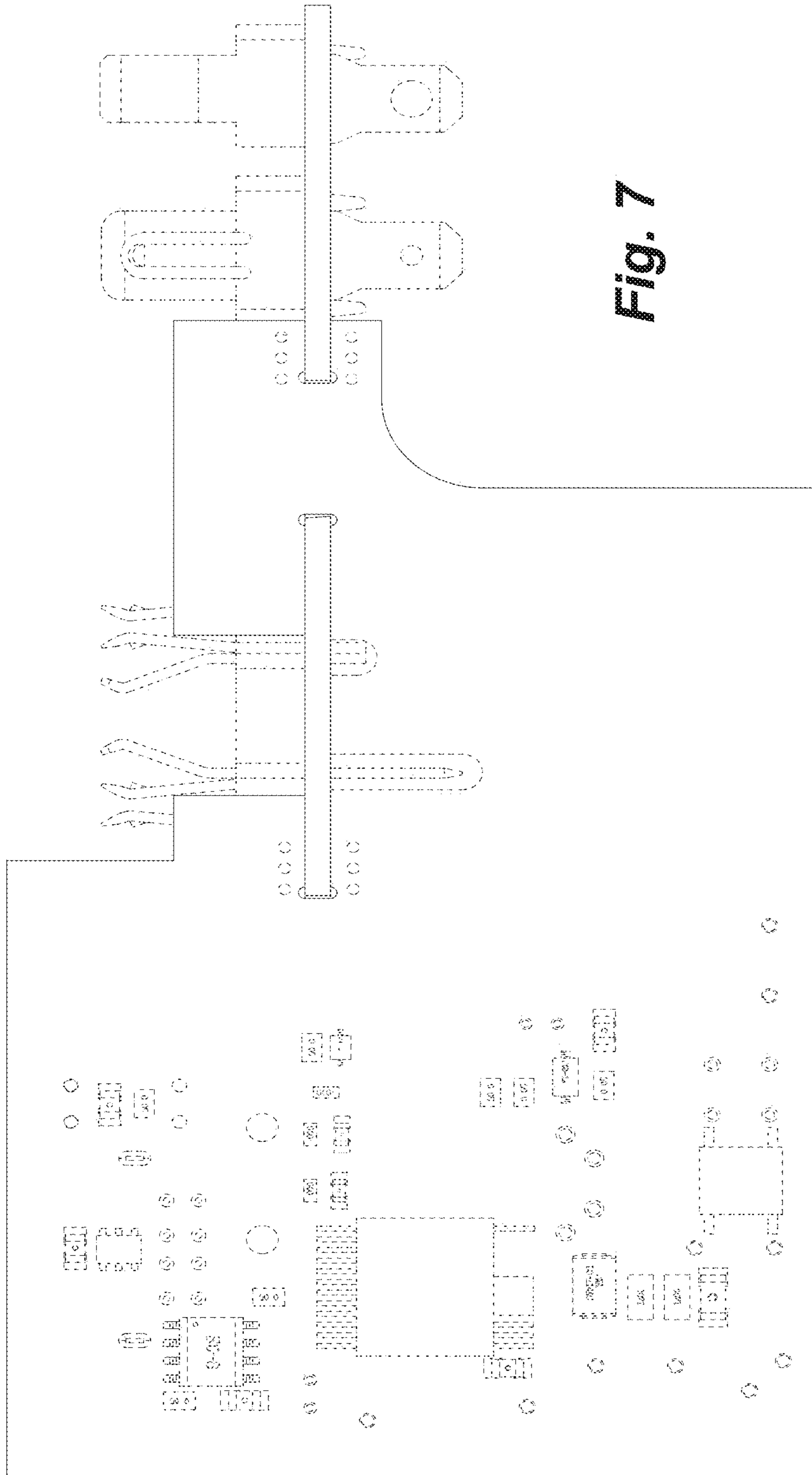


Fig. 7

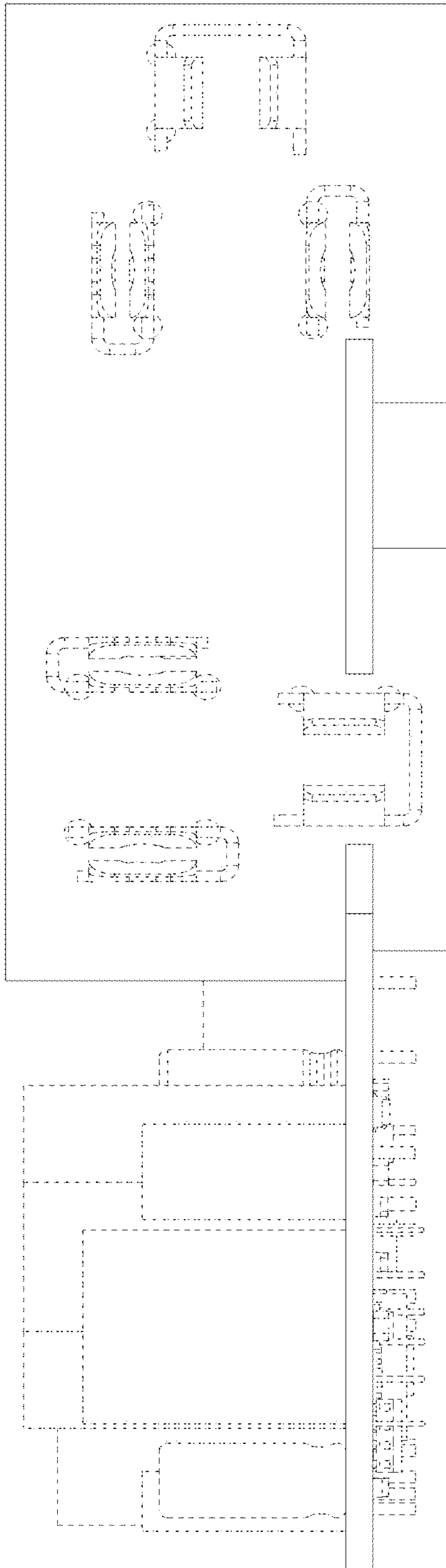


Fig. 8

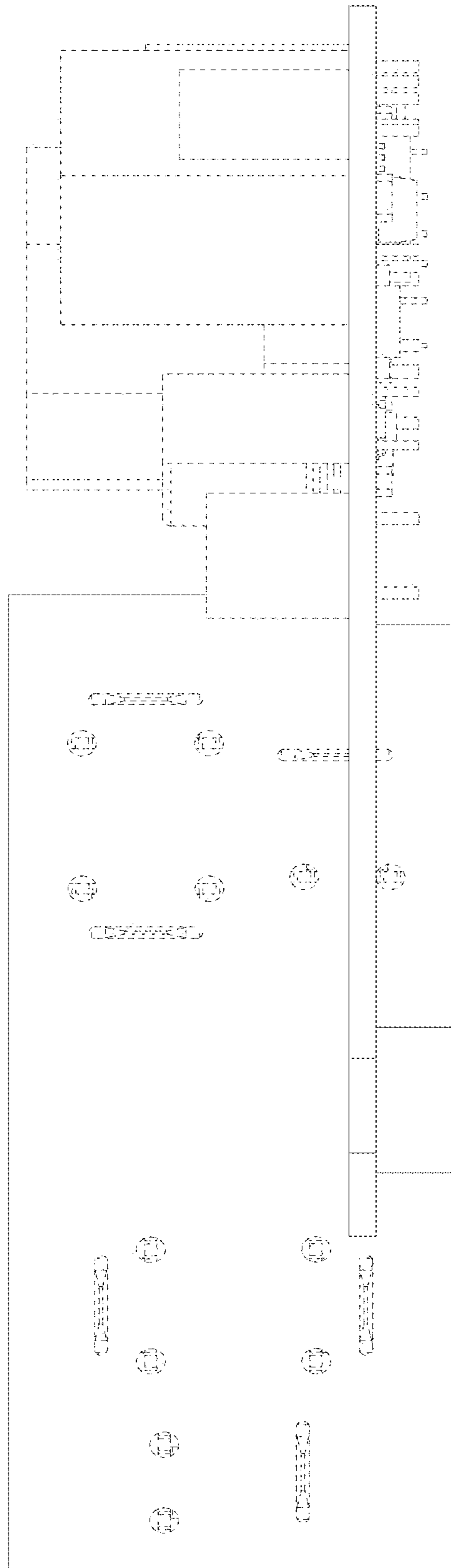


Fig. 9

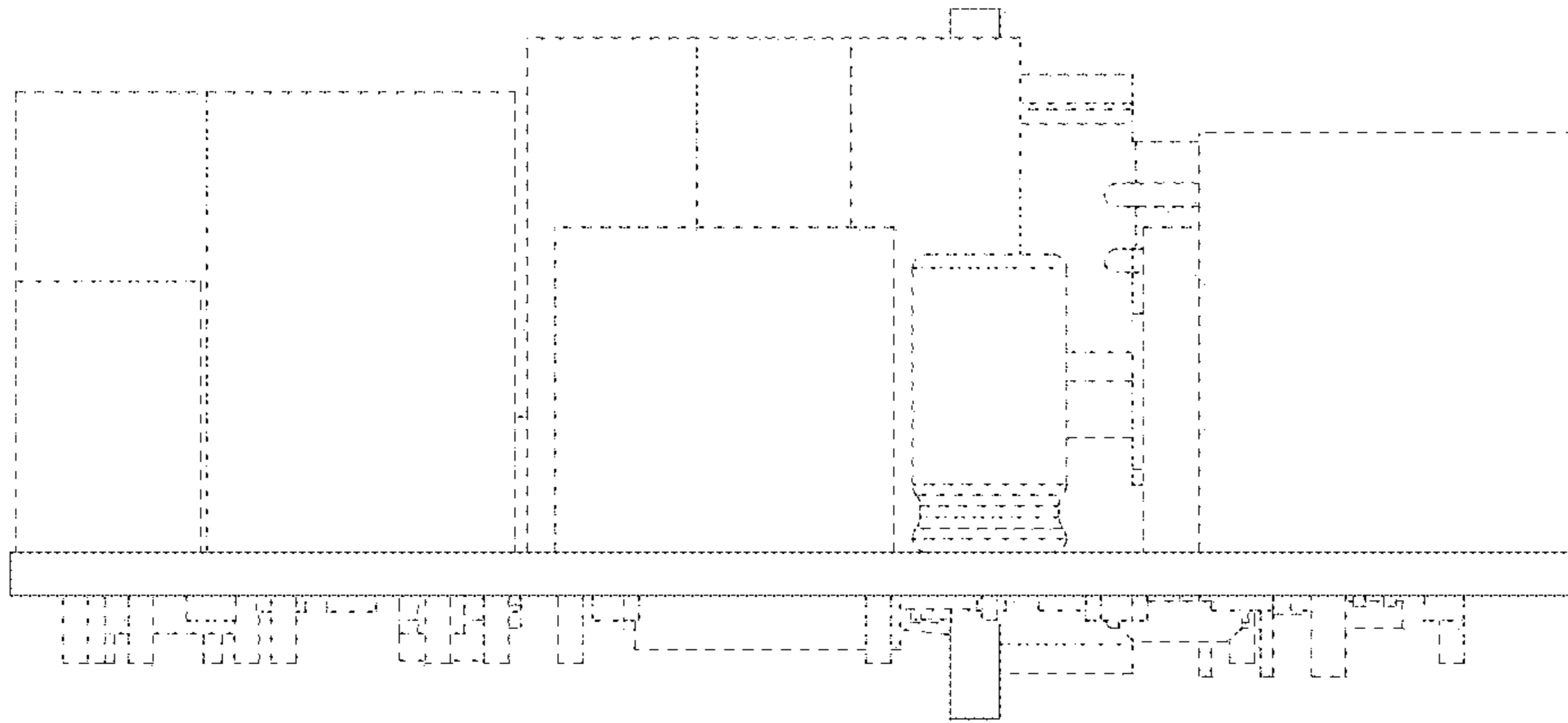


Fig. 10

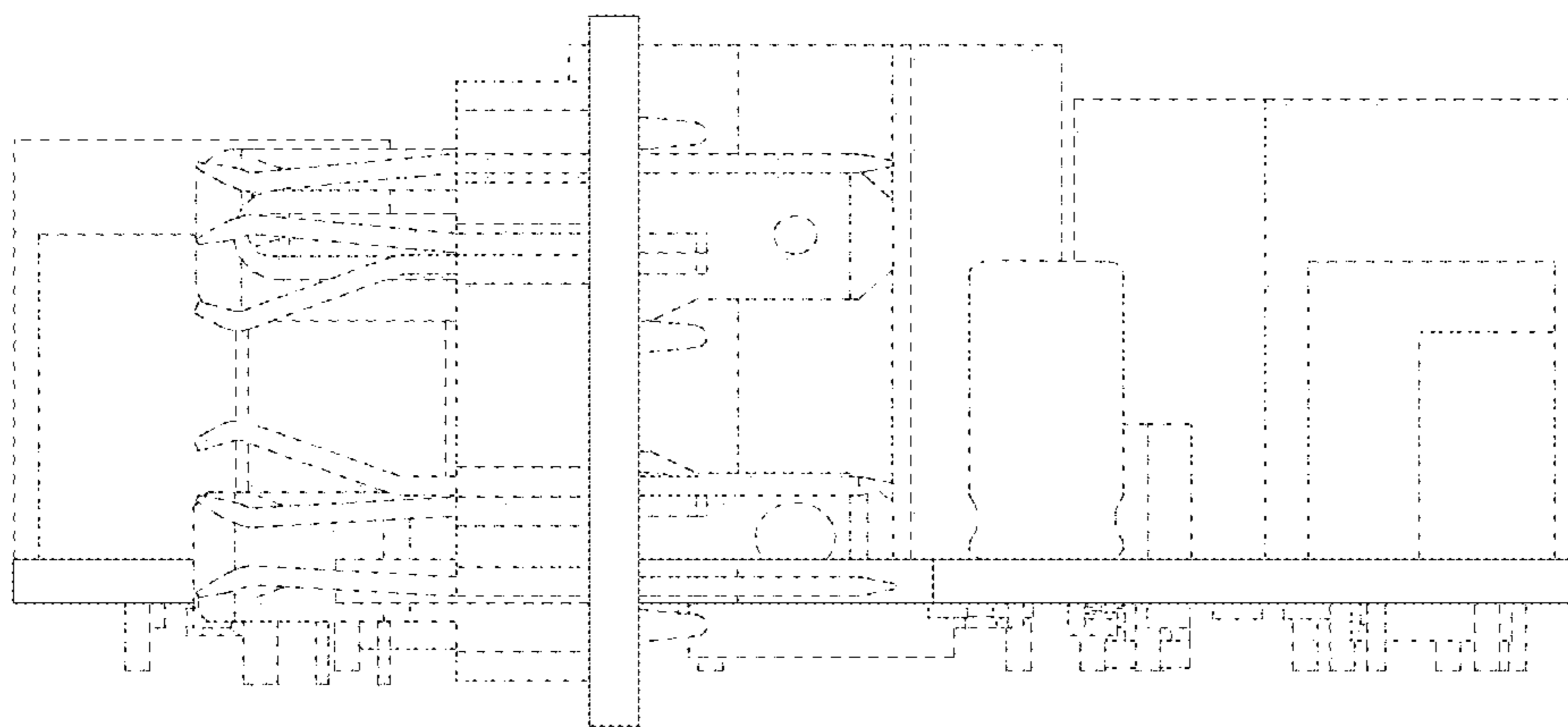


Fig. 11

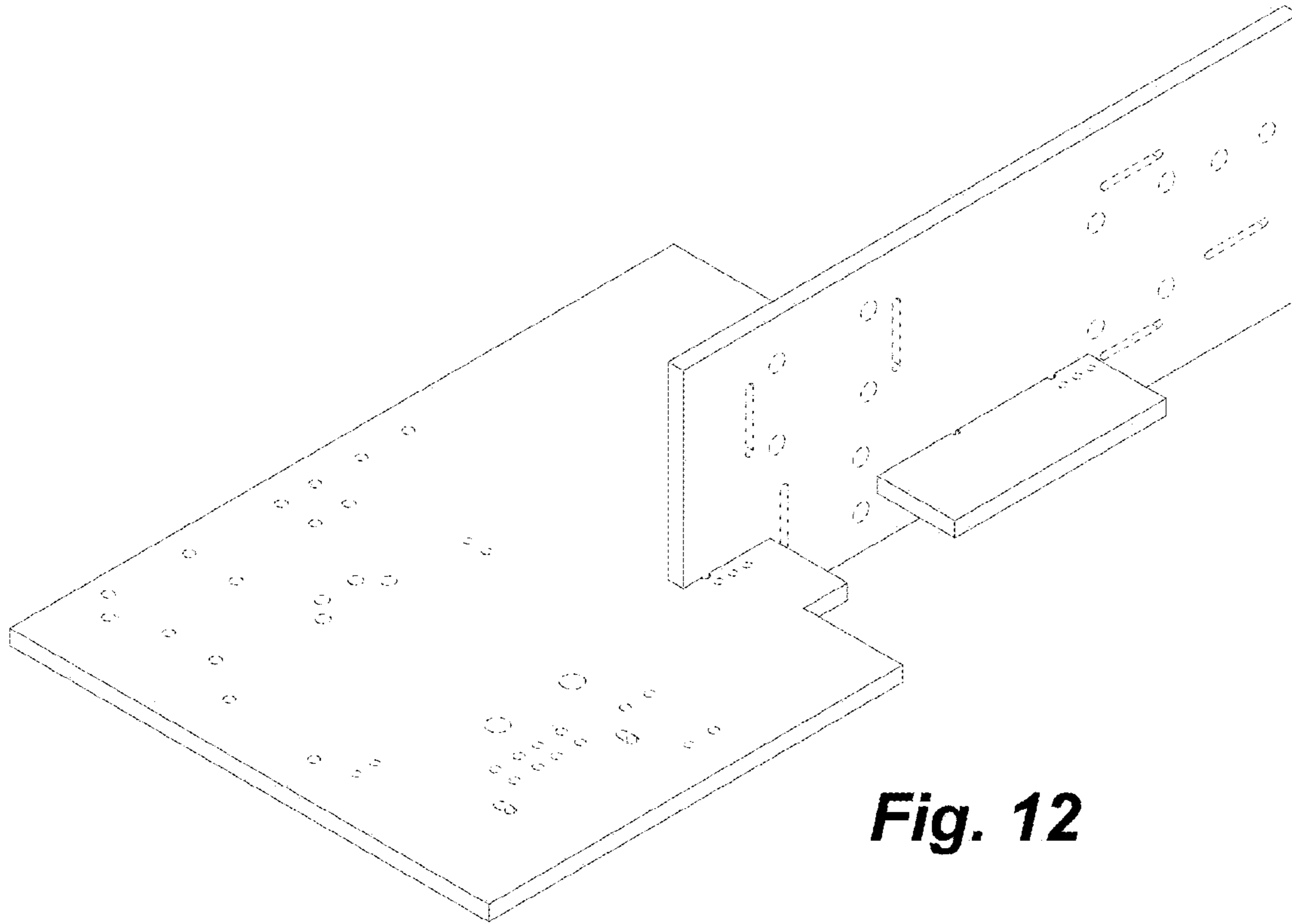


Fig. 12

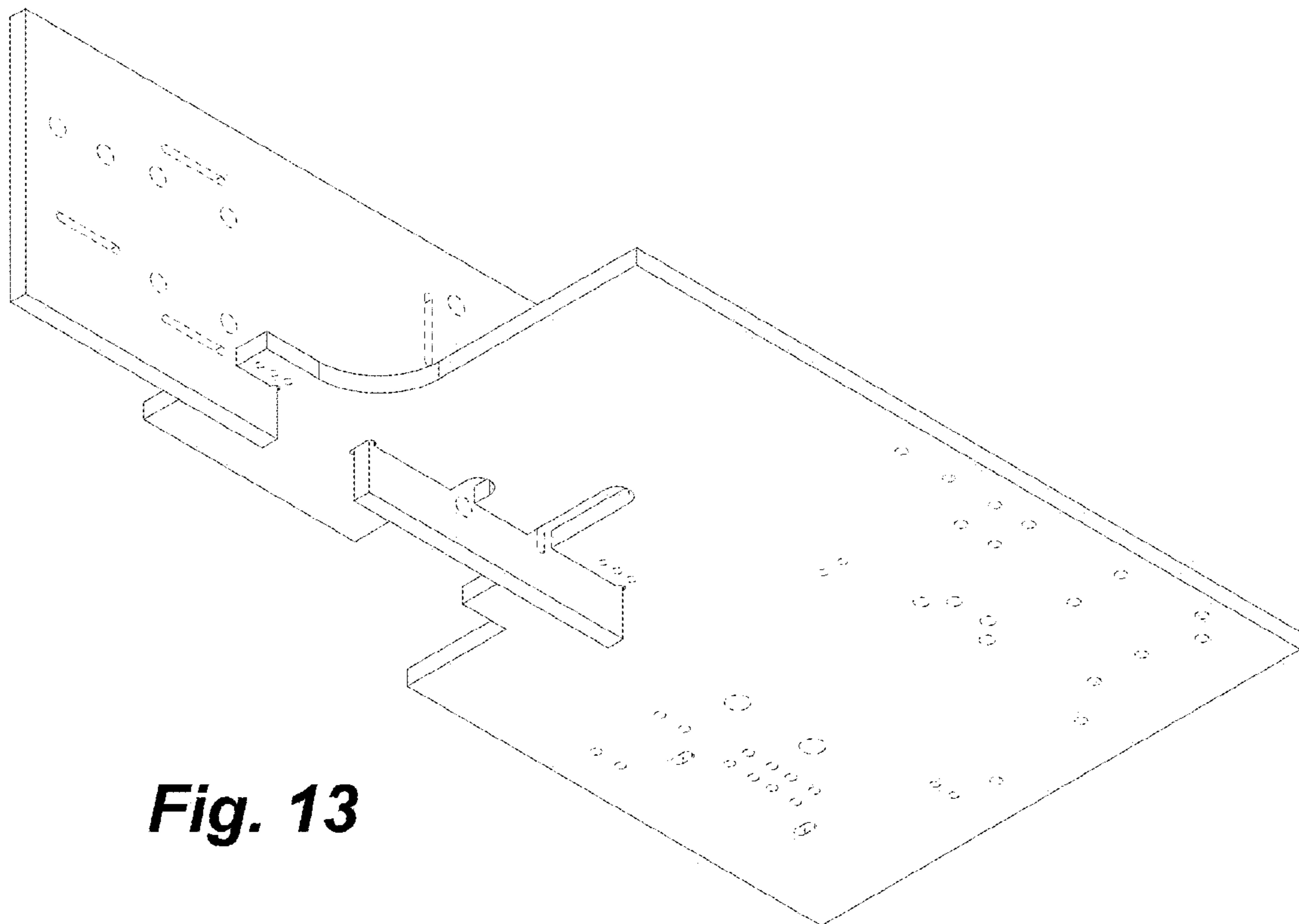


Fig. 13

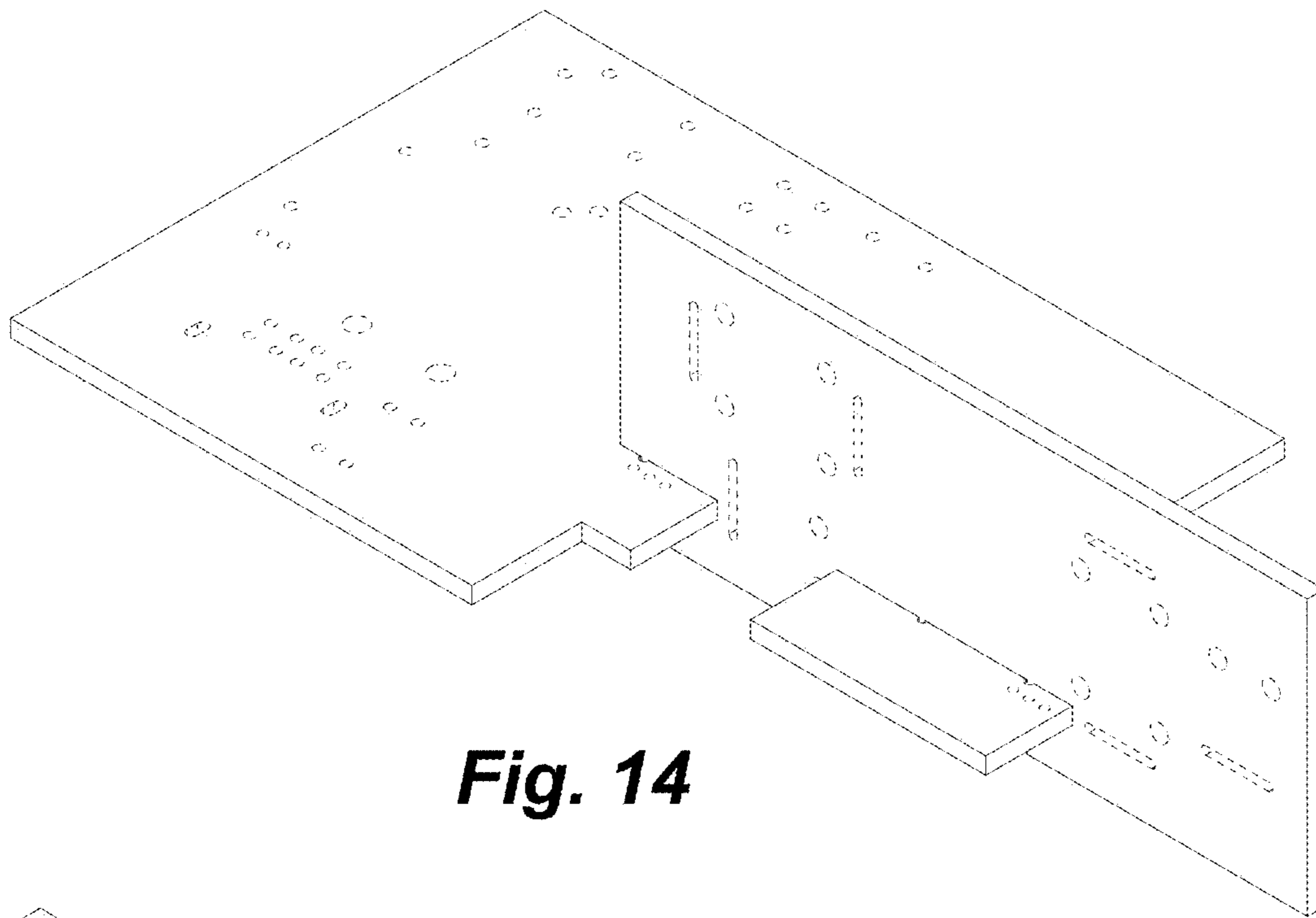


Fig. 14

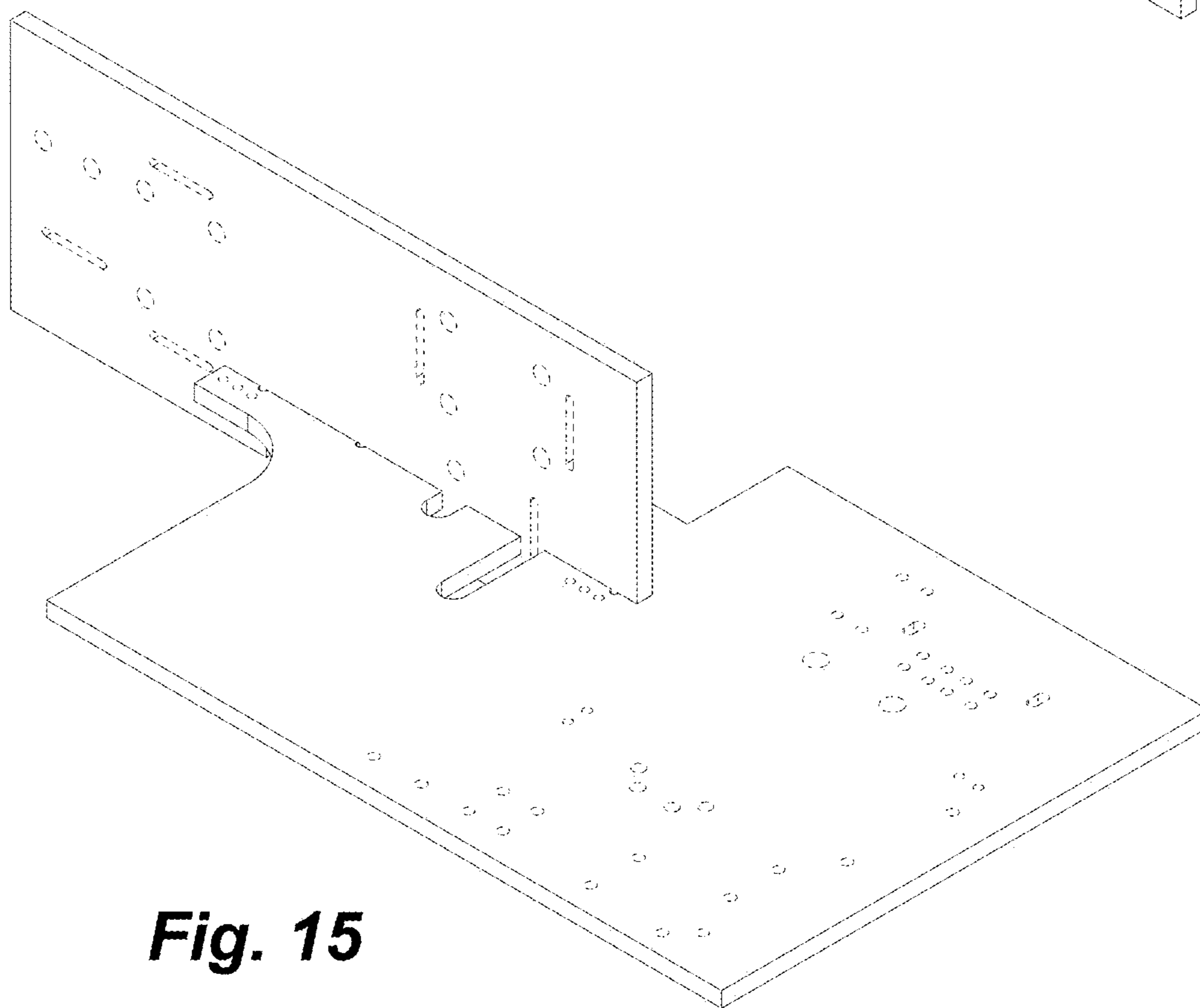


Fig. 15

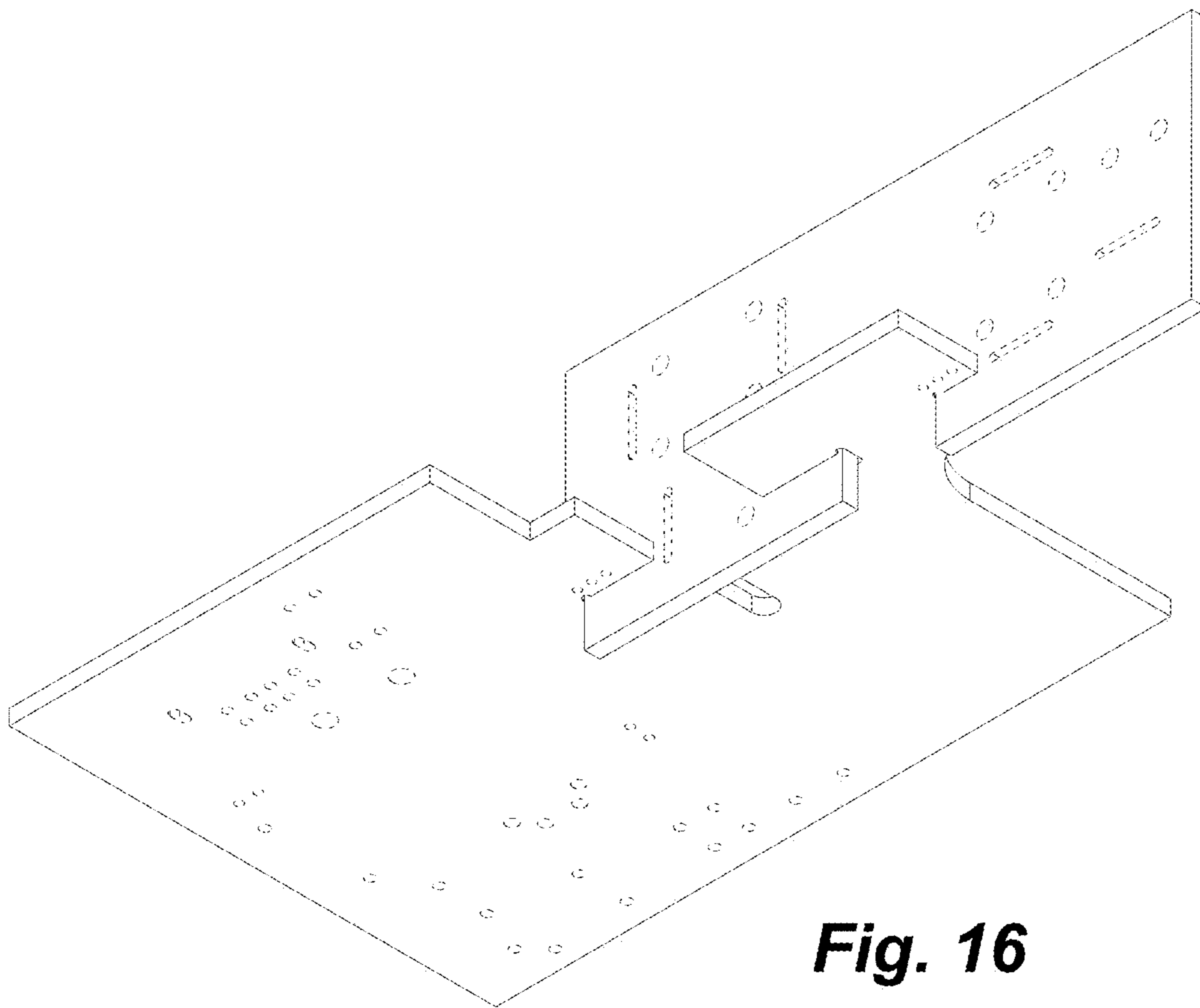


Fig. 16

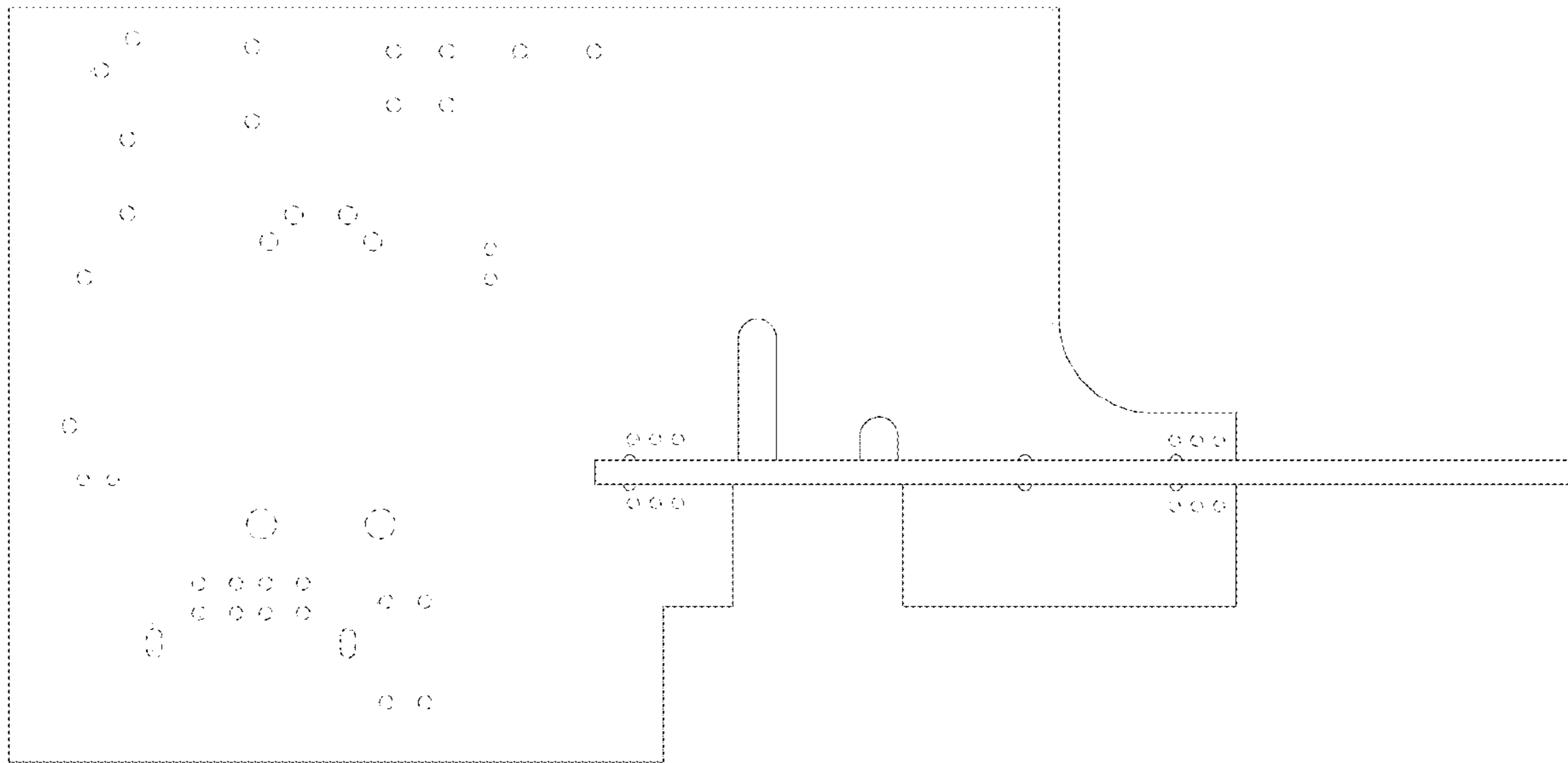


Fig. 17

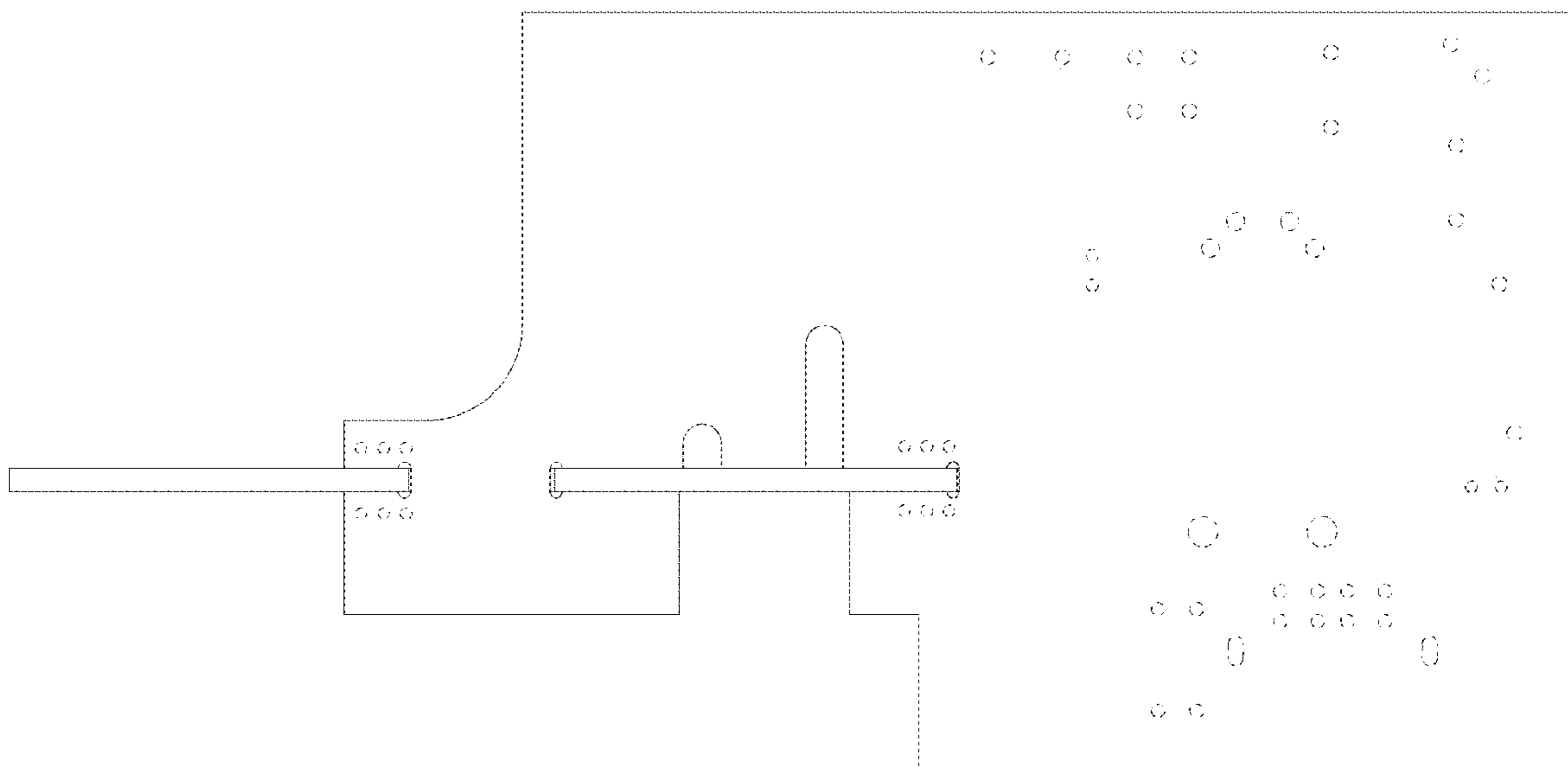


Fig. 18

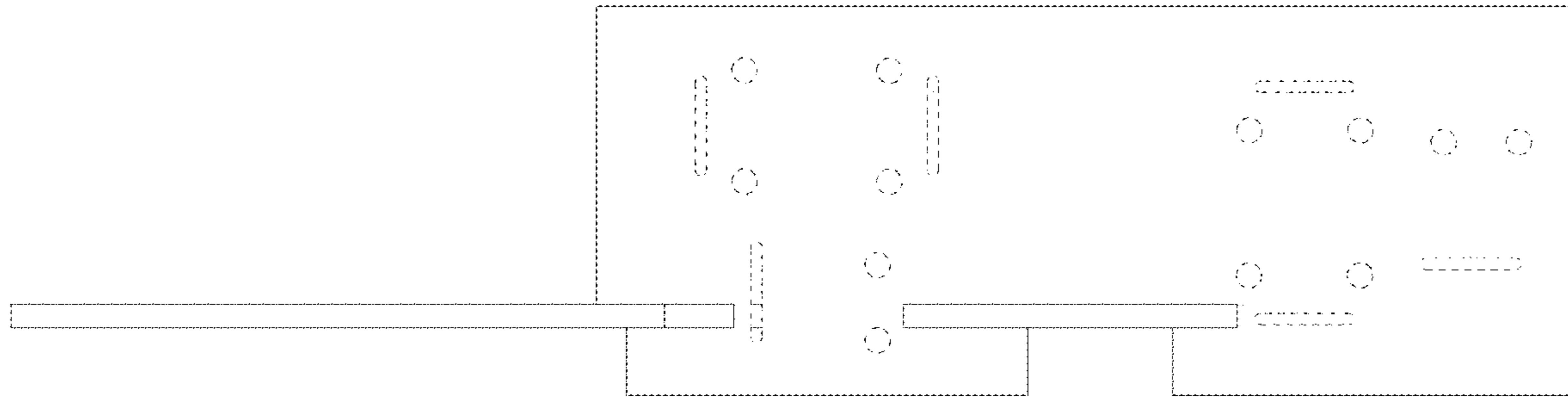


Fig. 19

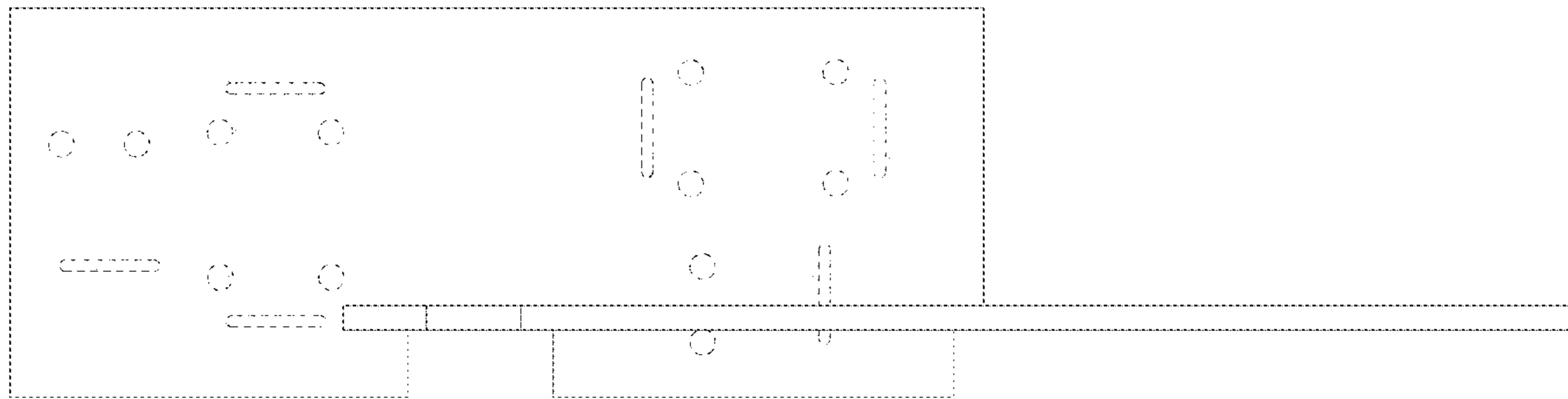


Fig. 20