



US00D557332S

(12) **United States Design Patent**  
**Nakamura et al.**

(10) **Patent No.:** **US D557,332 S**  
(45) **Date of Patent:** **\*\* Dec. 11, 2007**

(54) **INK JET LIQUID INJECTOR**

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(\*\*) Term: **14 Years**

(21) Appl. No.: **29/222,350**

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**Related U.S. Application Data**

(62) Division of application No. 29/177,390, filed on Mar. 11, 2003, now Pat. No. Des. 514,618.

(30) **Foreign Application Priority Data**

Sep. 12, 2002 (JP) ..... 2002-024869  
Sep. 12, 2002 (JP) ..... 2002-024870  
Sep. 12, 2002 (JP) ..... 2002-024871  
Sep. 12, 2002 (JP) ..... 2002-024872

(51) **LOC (8) Cl.** ..... **18-02**

(52) **U.S. Cl.** ..... **D18/56; 347/86**

(58) **Field of Classification Search** ..... D18/12,  
D18/18, 40, 43, 56; 347/33, 37, 40, 42, 70,  
347/85-87, 256; 399/110

See application file for complete search history.

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(74) *Attorney, Agent, or Firm*—Oliff & Berridge, PLC

(57) **CLAIM**

The ornamental design for an ink jet liquid injector, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view showing an ink jet liquid injector according to a first embodiment of the present invention;

FIG. 2 is a rear view thereof;

FIG. 3 is a top plan view thereof;

FIG. 4 is a bottom plan view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a left side view thereof;

FIG. 7 is an enlarged view showing a portion of FIG. 1 defined by crop lines 7-7;

FIG. 8 is an enlarged view showing a portion of FIG. 3 defined by crop lines 8-8;

FIG. 9 is an enlarged view showing a portion of FIG. 6 defined by crop lines 9-9;

FIG. 10 is a perspective view thereof;

FIG. 11 is a front view showing an ink jet liquid injector according to a second embodiment of the present invention;

FIG. 12 is a rear view of FIG. 11;

FIG. 13 is a top plan view of FIG. 11;

FIG. 14 is a bottom plan view of FIG. 11;

FIG. 15 is a right side view of FIG. 11;

FIG. 16 is a left side view of FIG. 11;

FIG. 17 is an enlarged view showing a portion of FIG. 11 defined by crop lines 17-17;

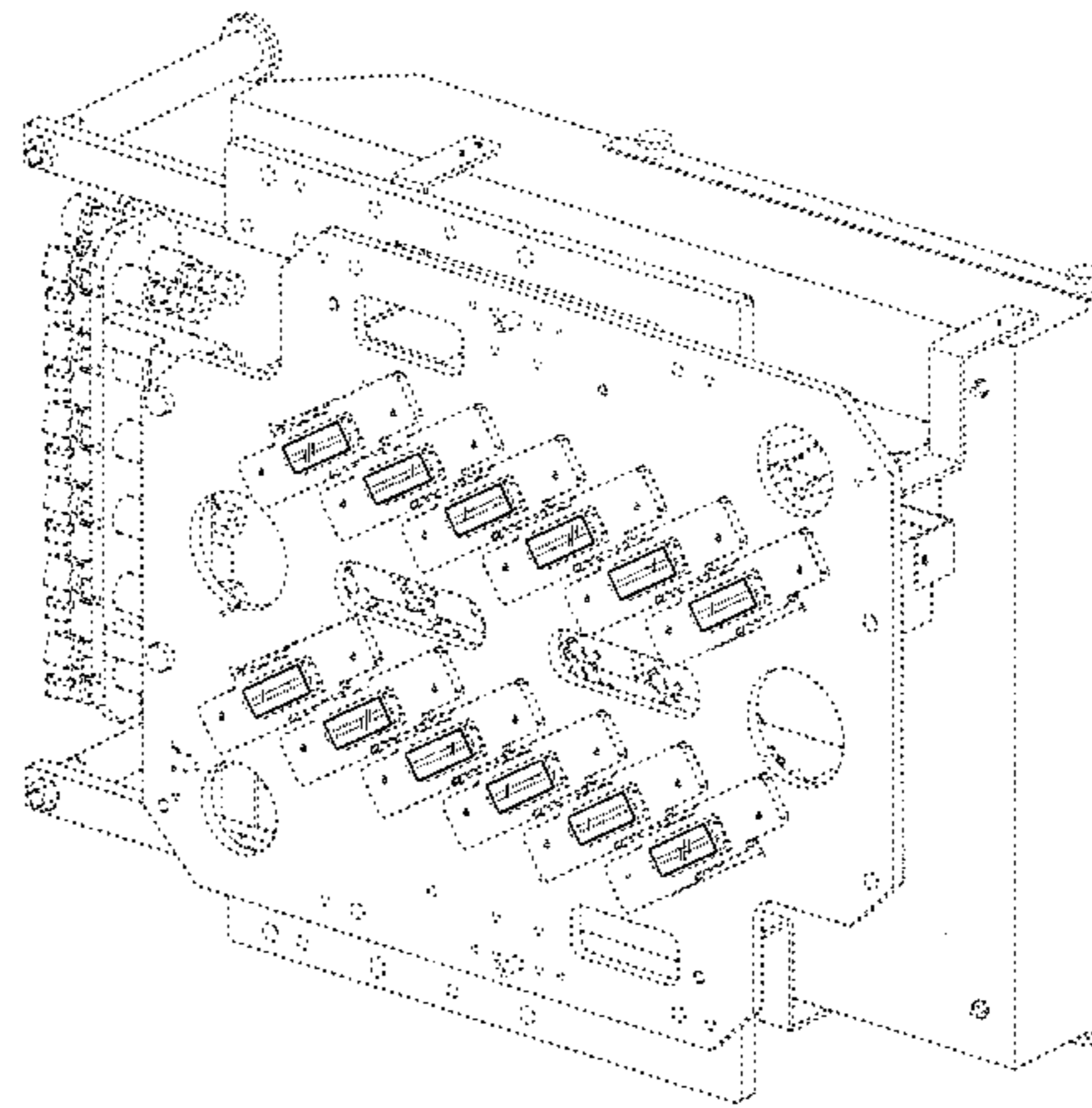
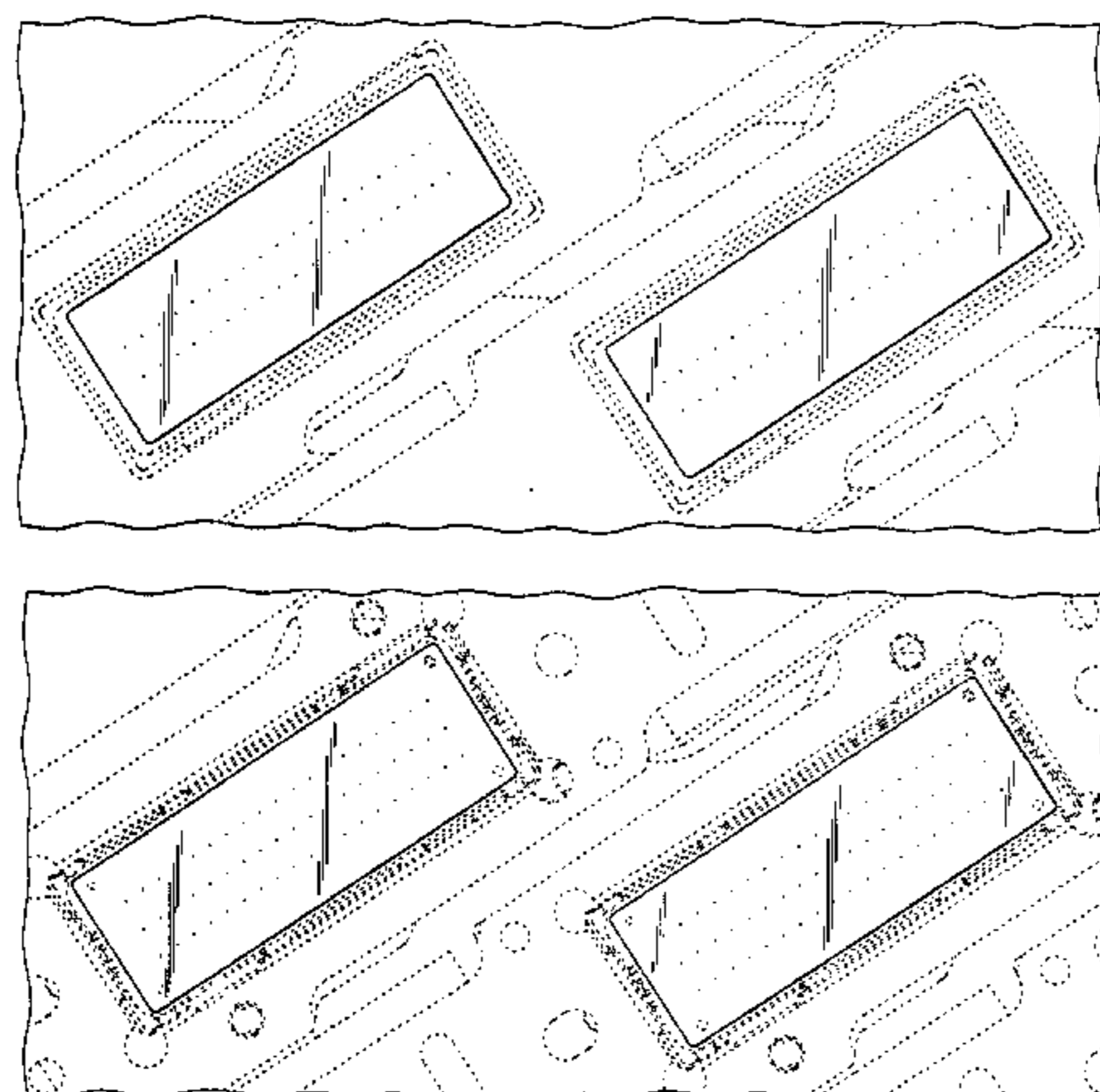
FIG. 18 is an enlarged view showing a portion of FIG. 13 defined by crop lines 18-18;

FIG. 19 is an enlarged view showing a portion of FIG. 16 defined by crop lines 19-19; and,

FIG. 20 is a perspective view of FIG. 11.

The broken lines in each drawing are shown for illustrative purposes only and form no part of the claimed design. More specifically, the claimed designs are directed to the liquid injection heads. Further, the dots shown in each head represent liquid injection ports and do not form part of the claimed design.

**1 Claim, 12 Drawing Sheets**



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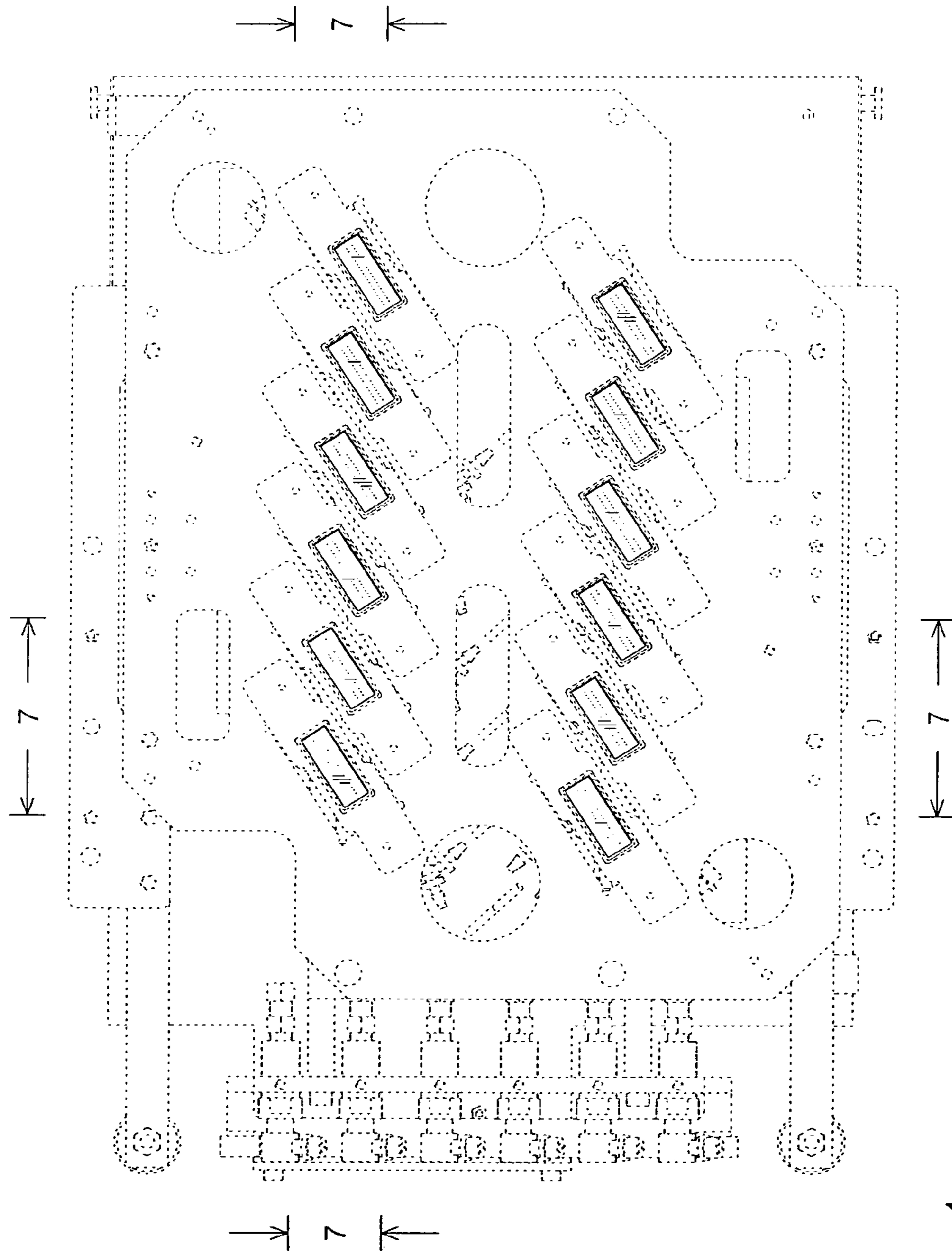


Fig. 1

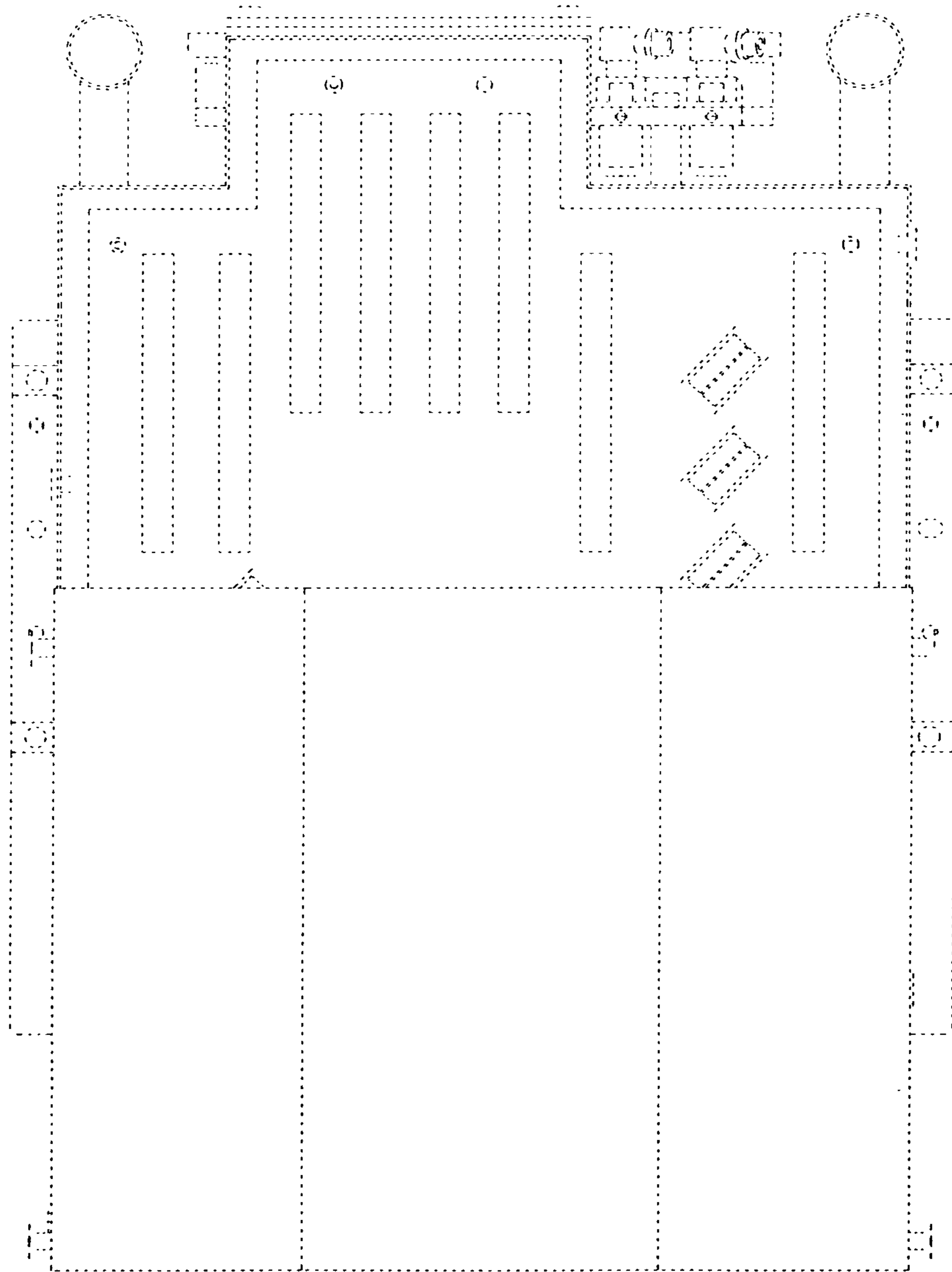


Fig. 2

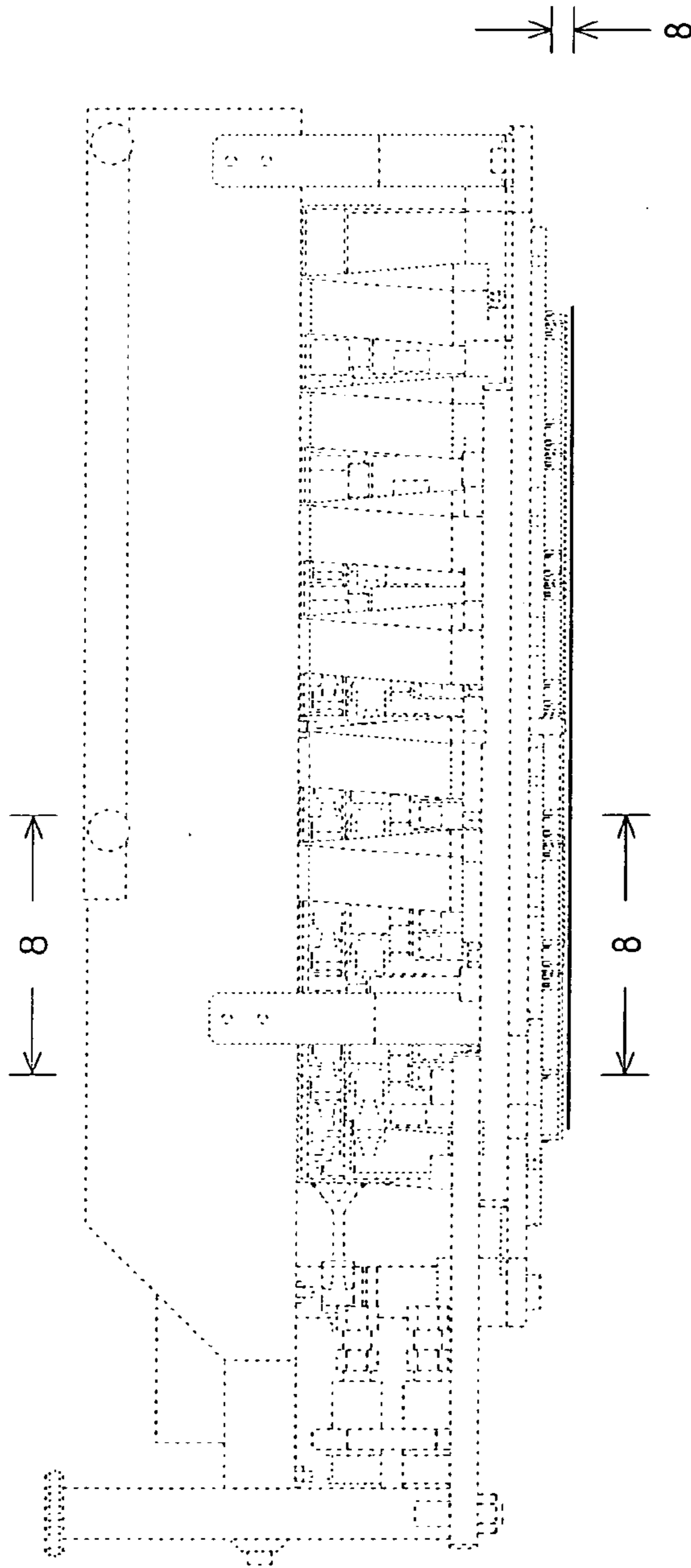


Fig. 3

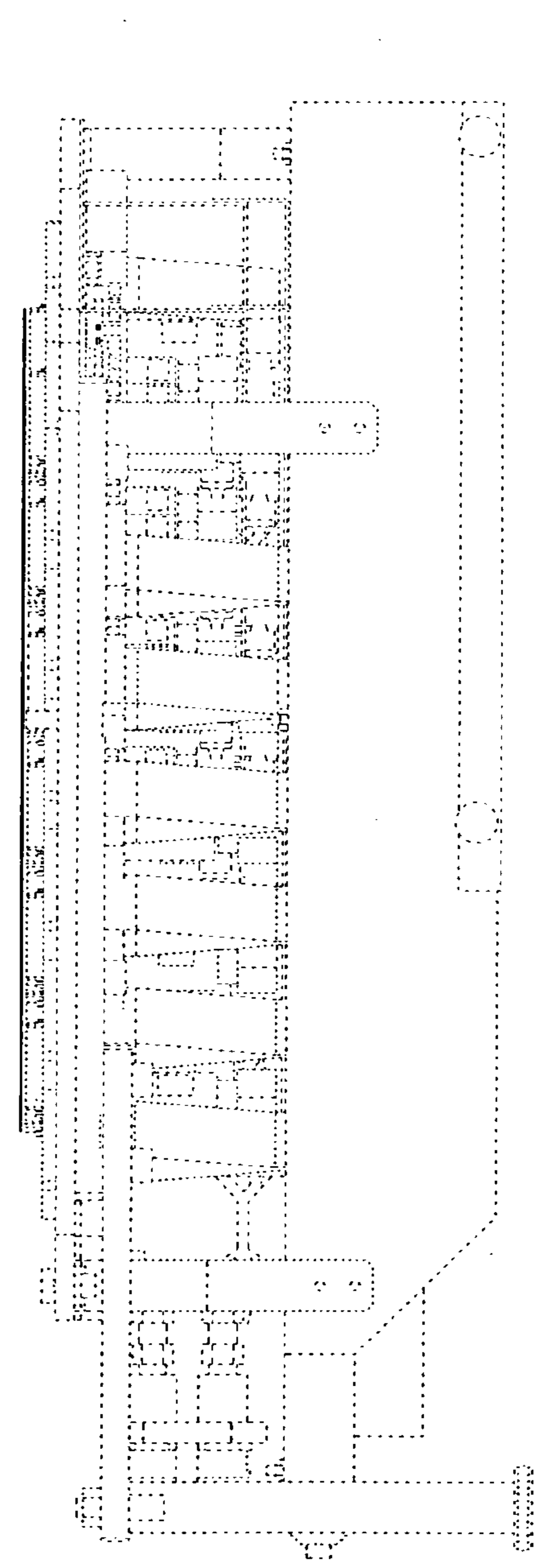


Fig. 4

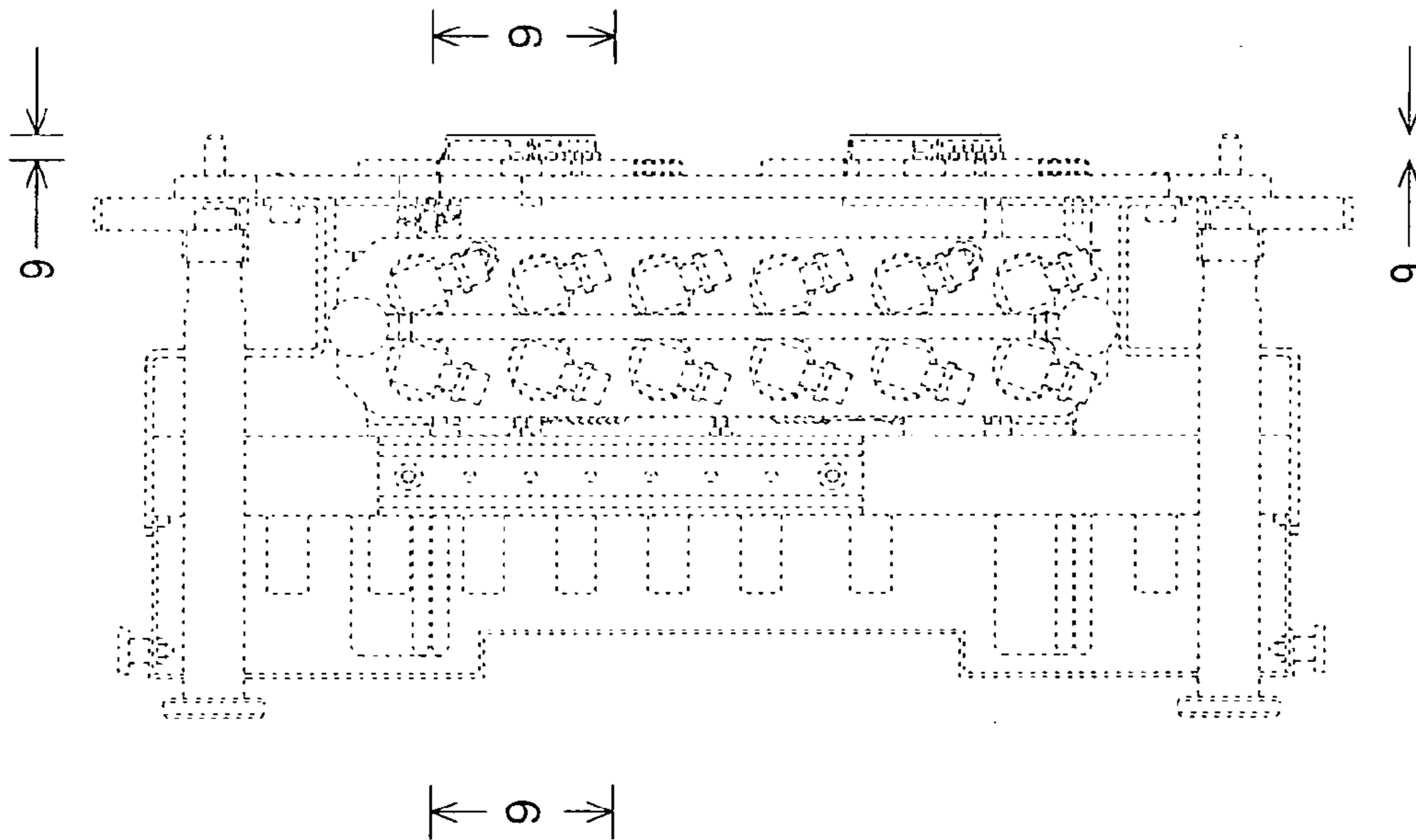


Fig. 6

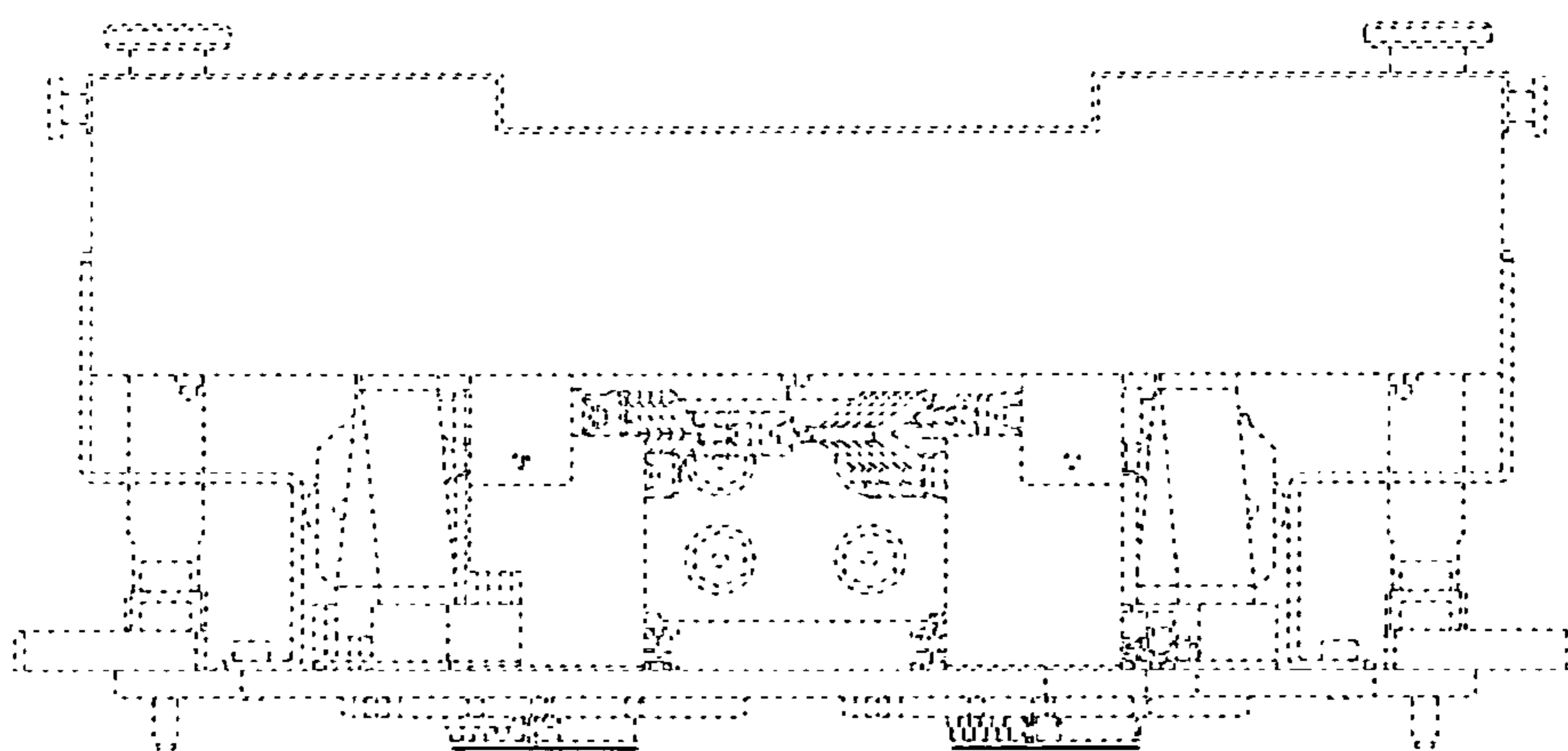


Fig. 5

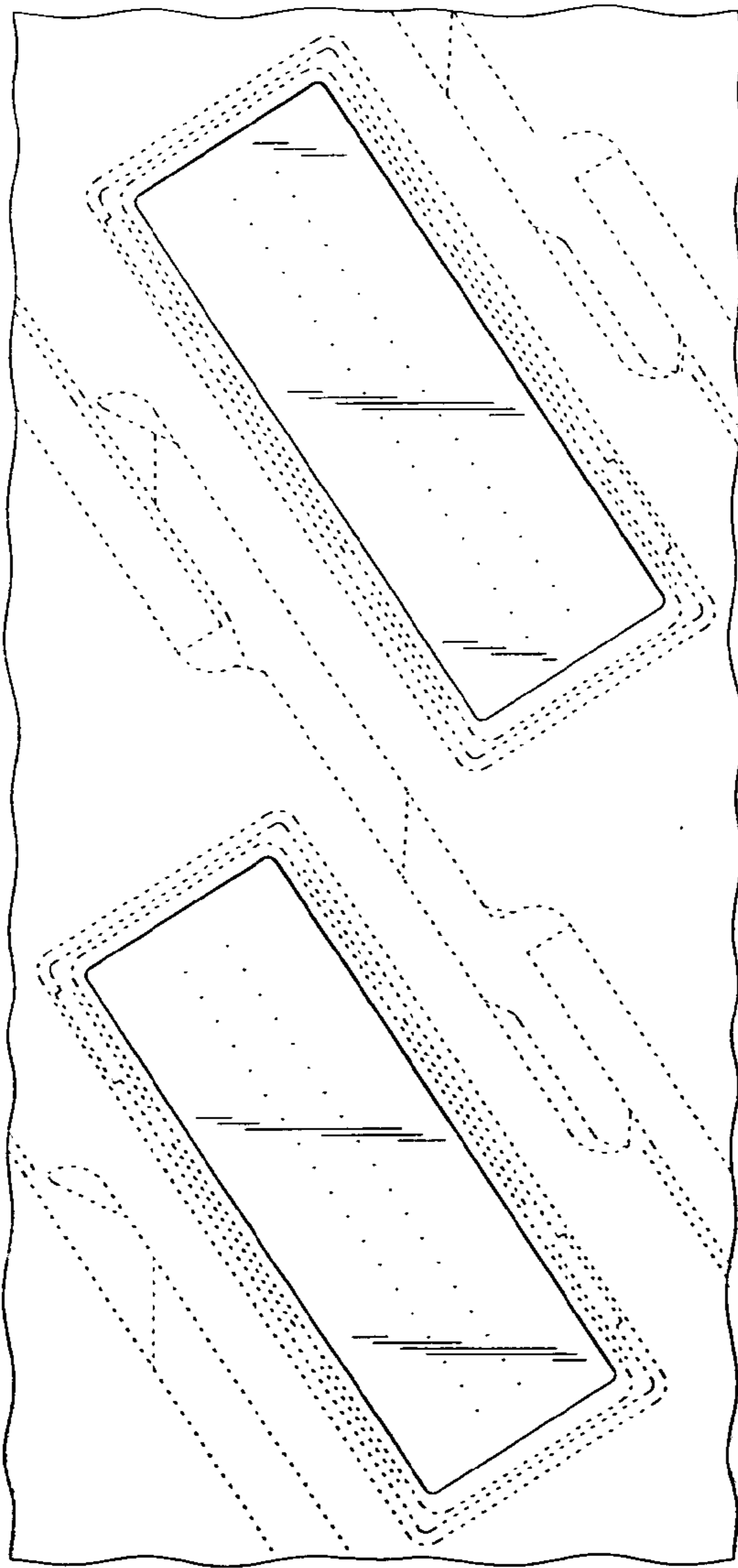


Fig. 7

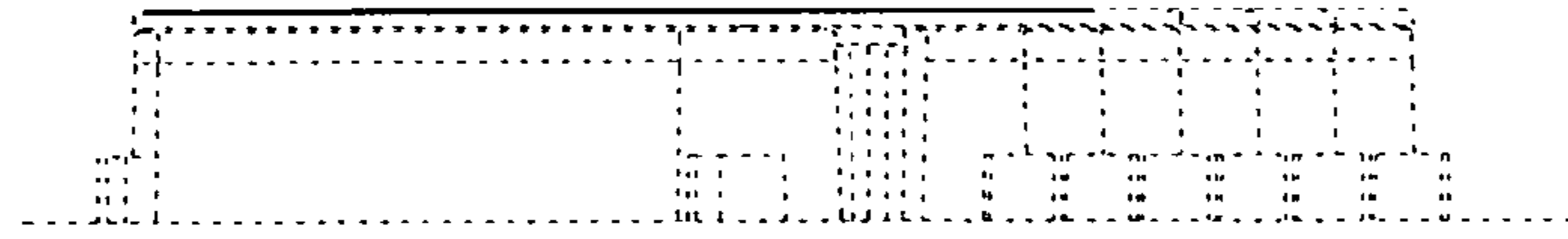


Fig. 9

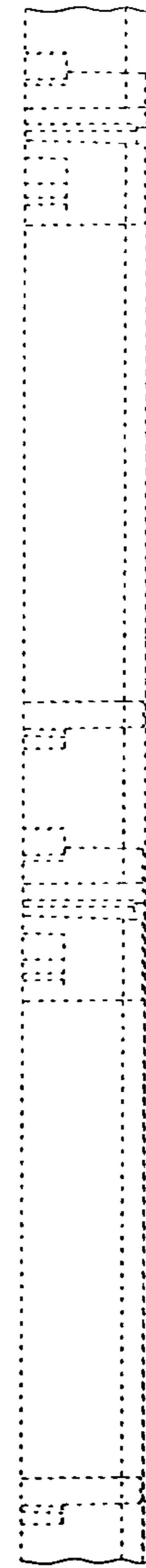


Fig. 8

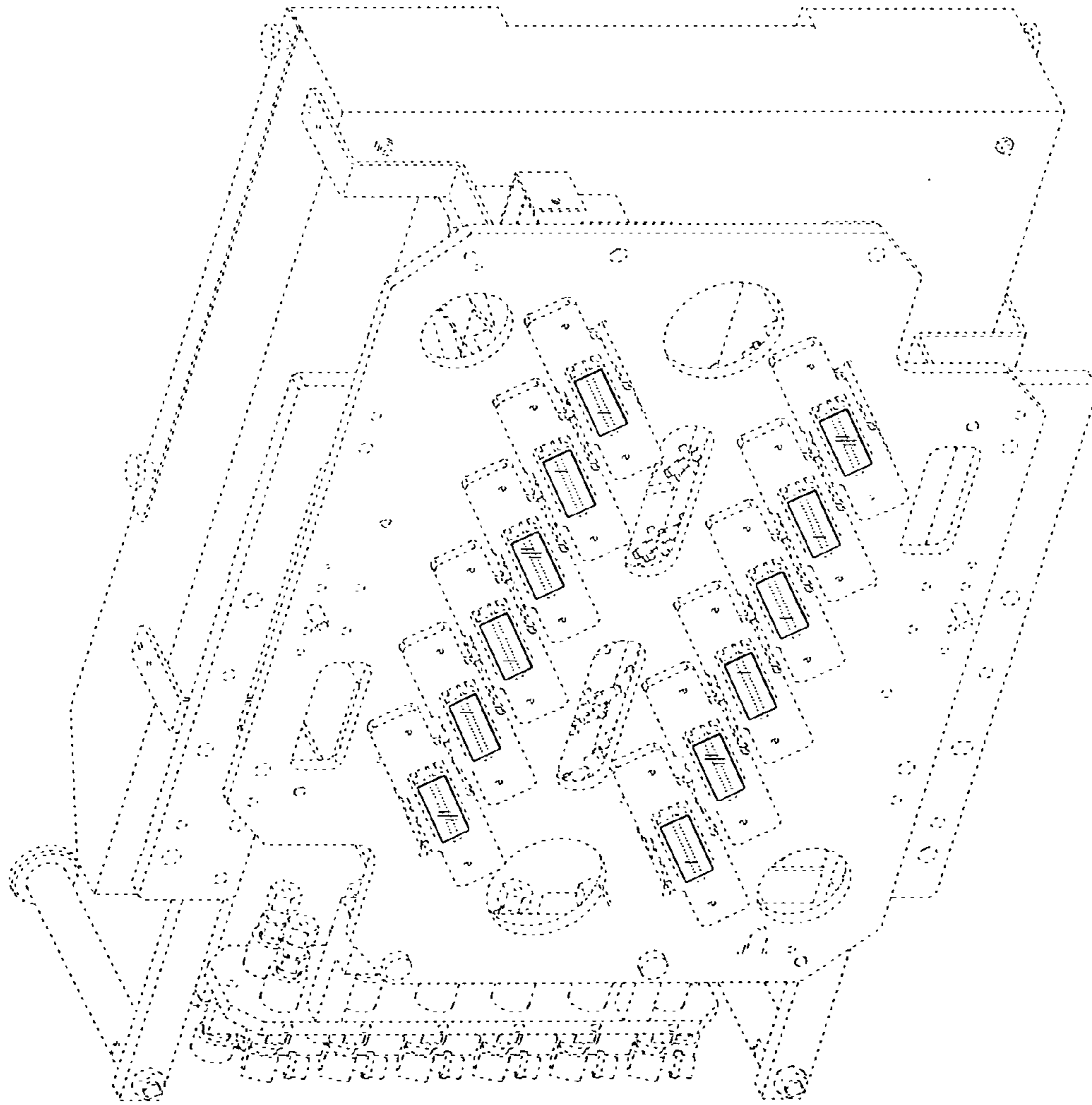


Fig. 10



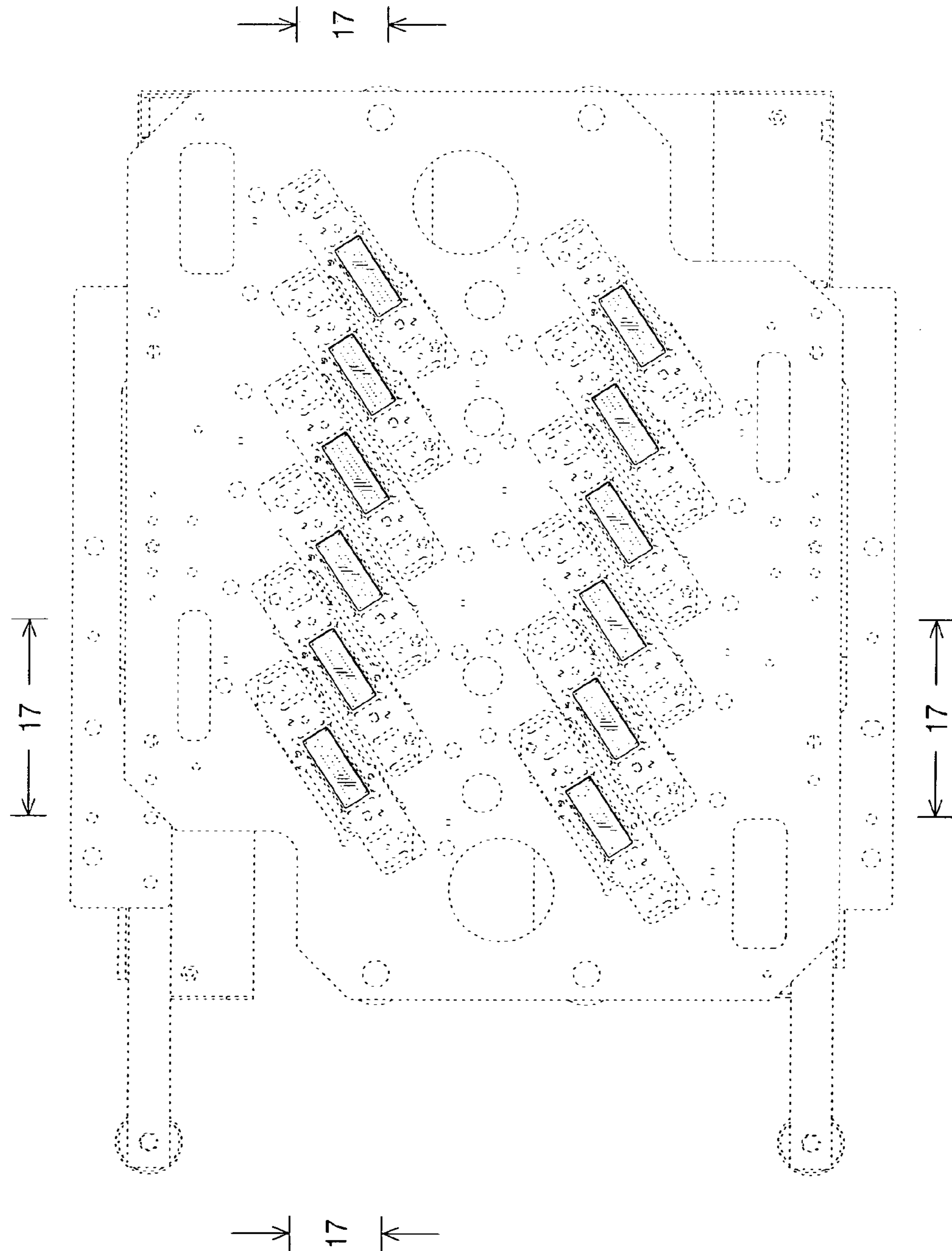


Fig. 11

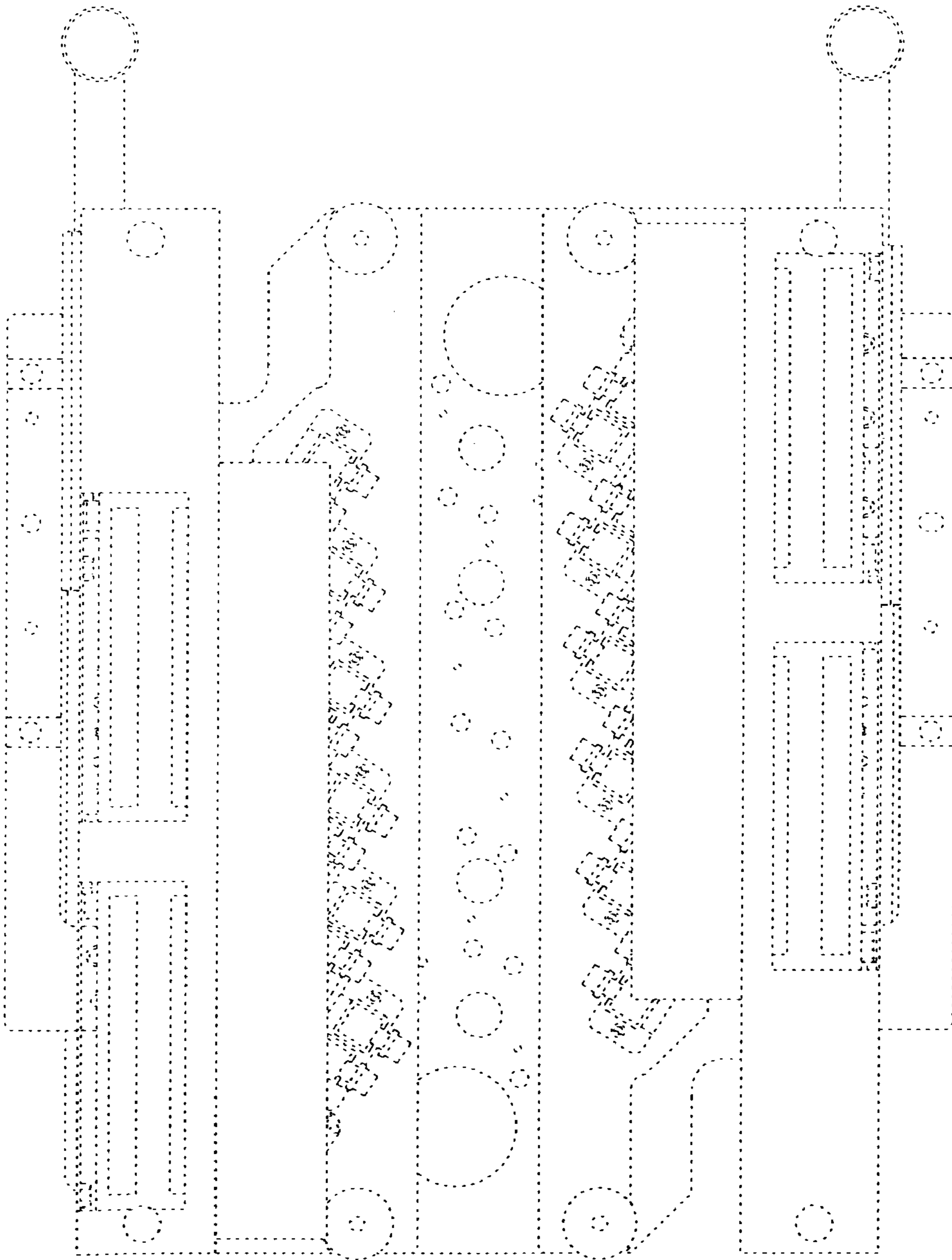


Fig. 12

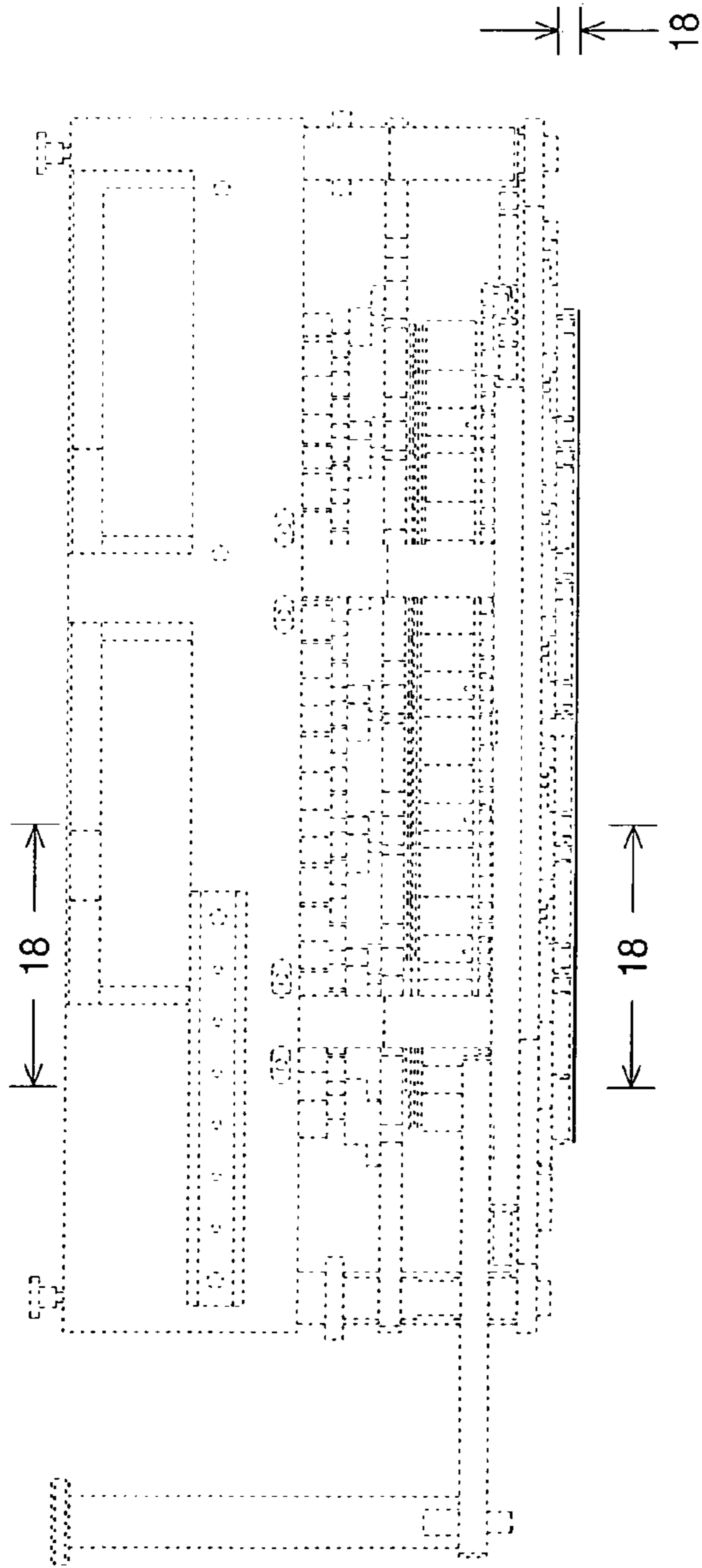


Fig. 13

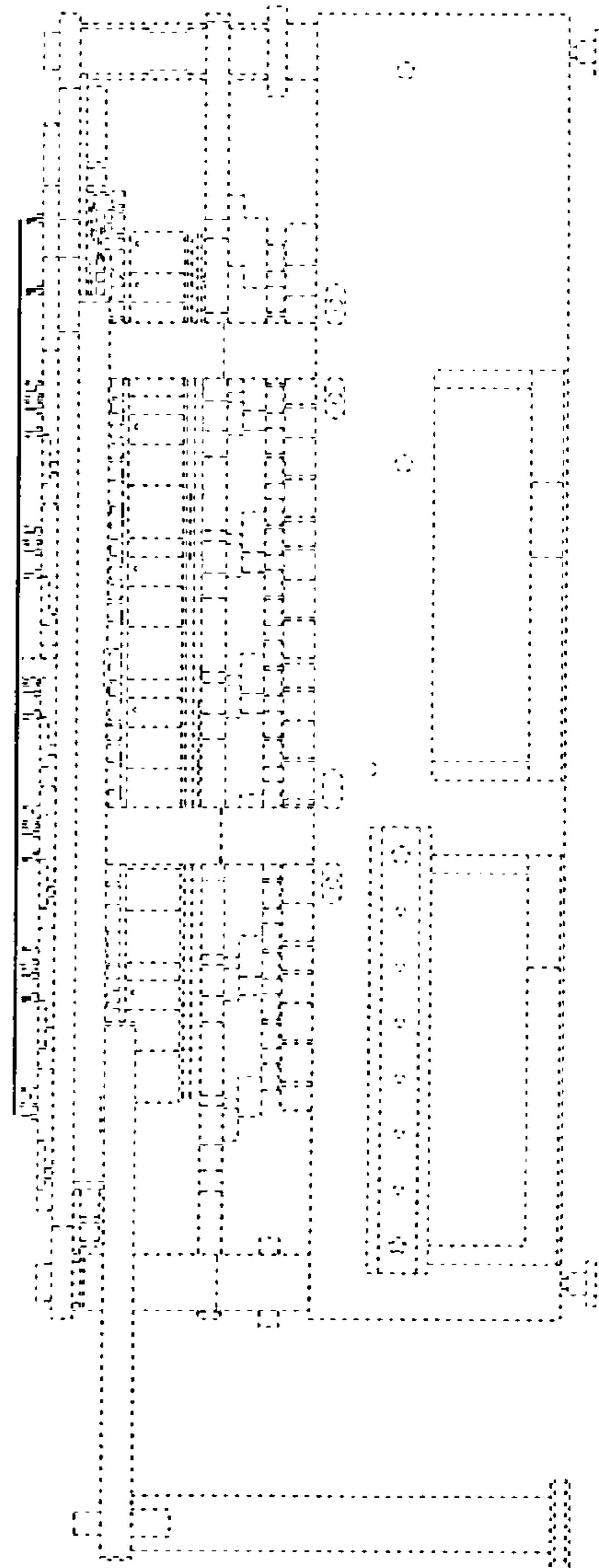


Fig. 14

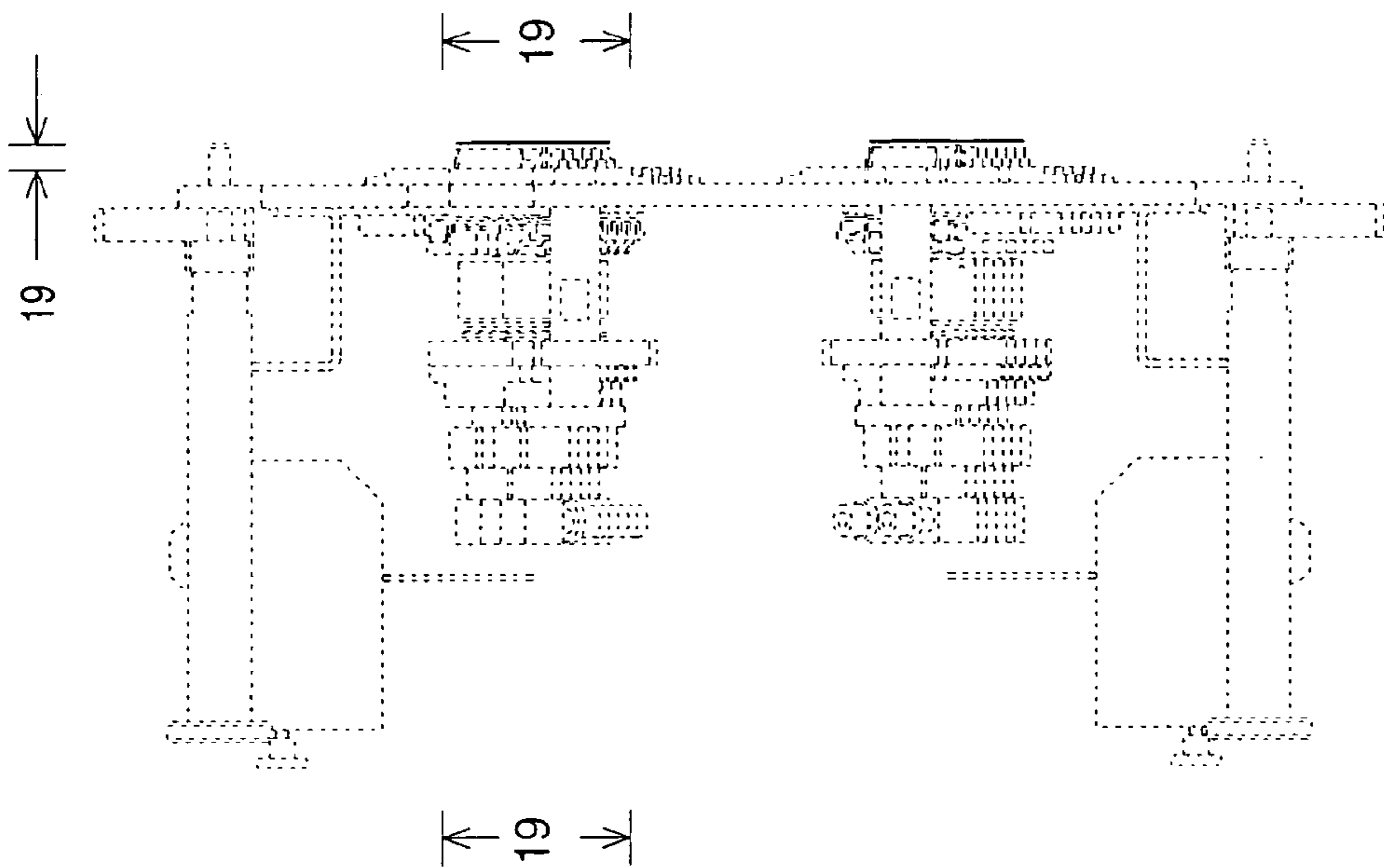


Fig. 16

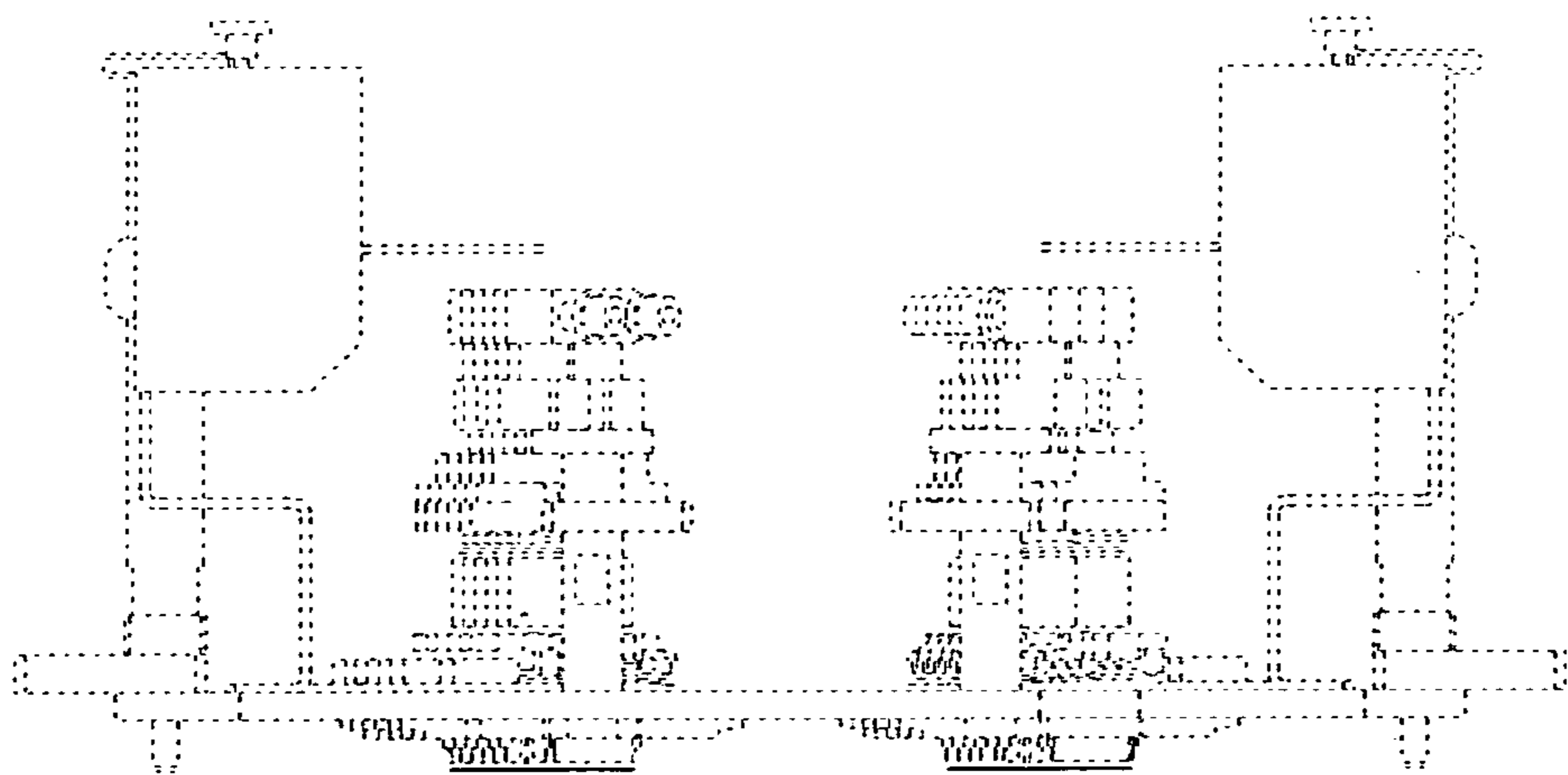


Fig. 15

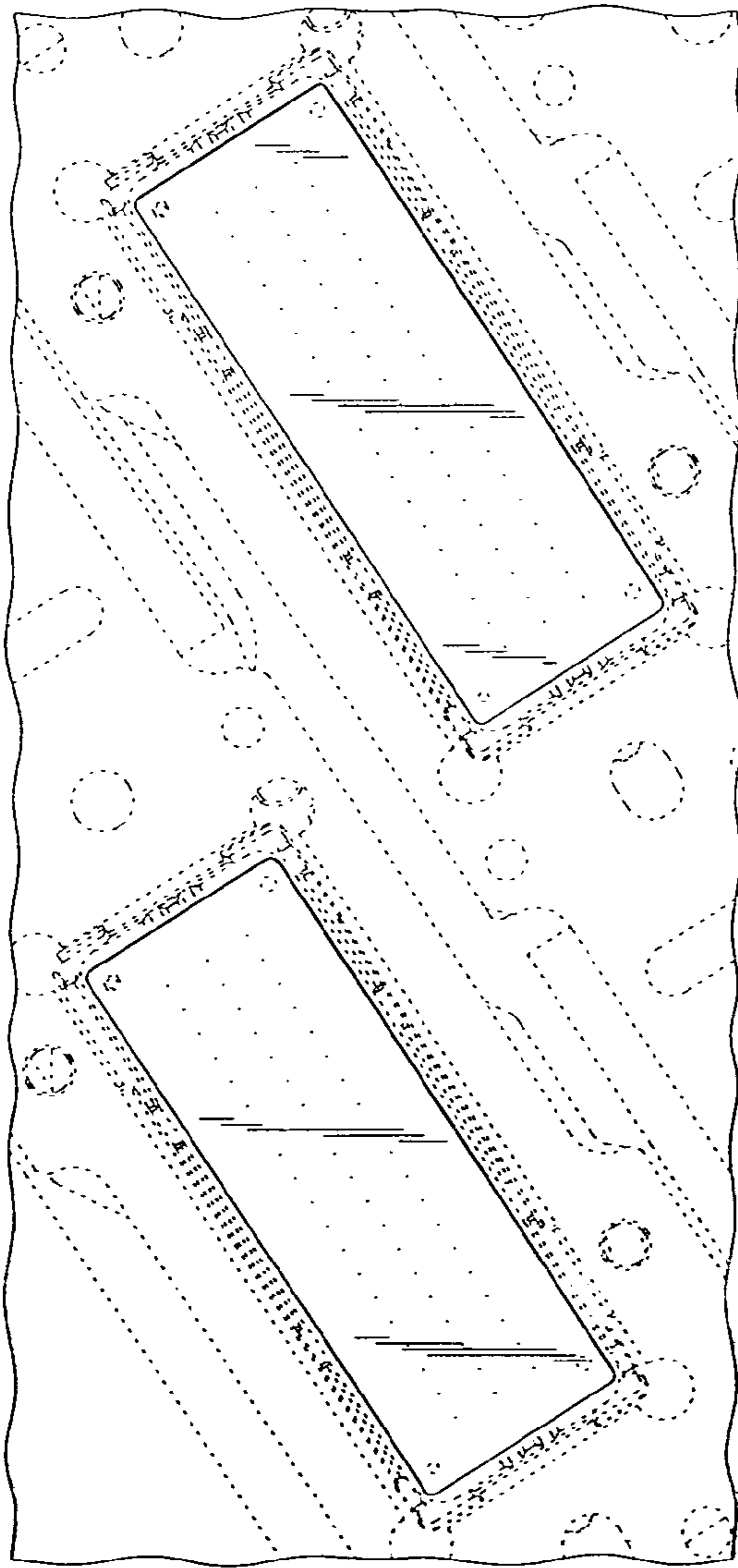


Fig. 17

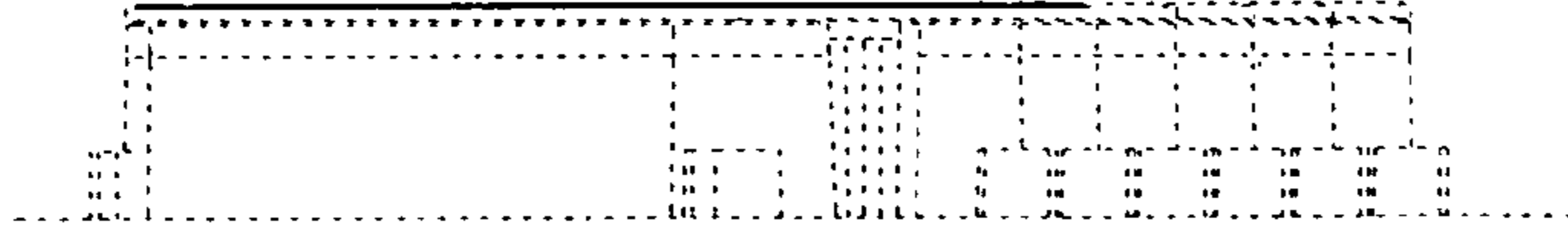


Fig. 19

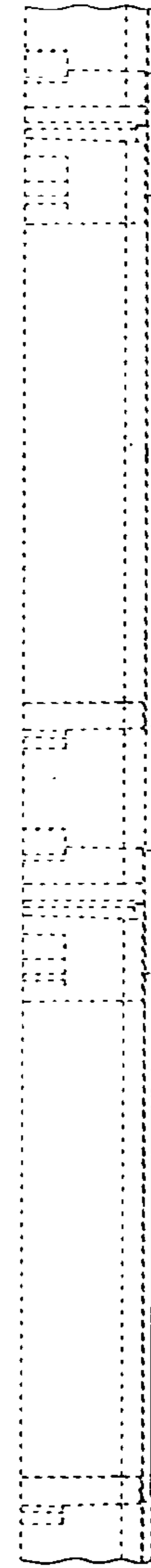


Fig. 18

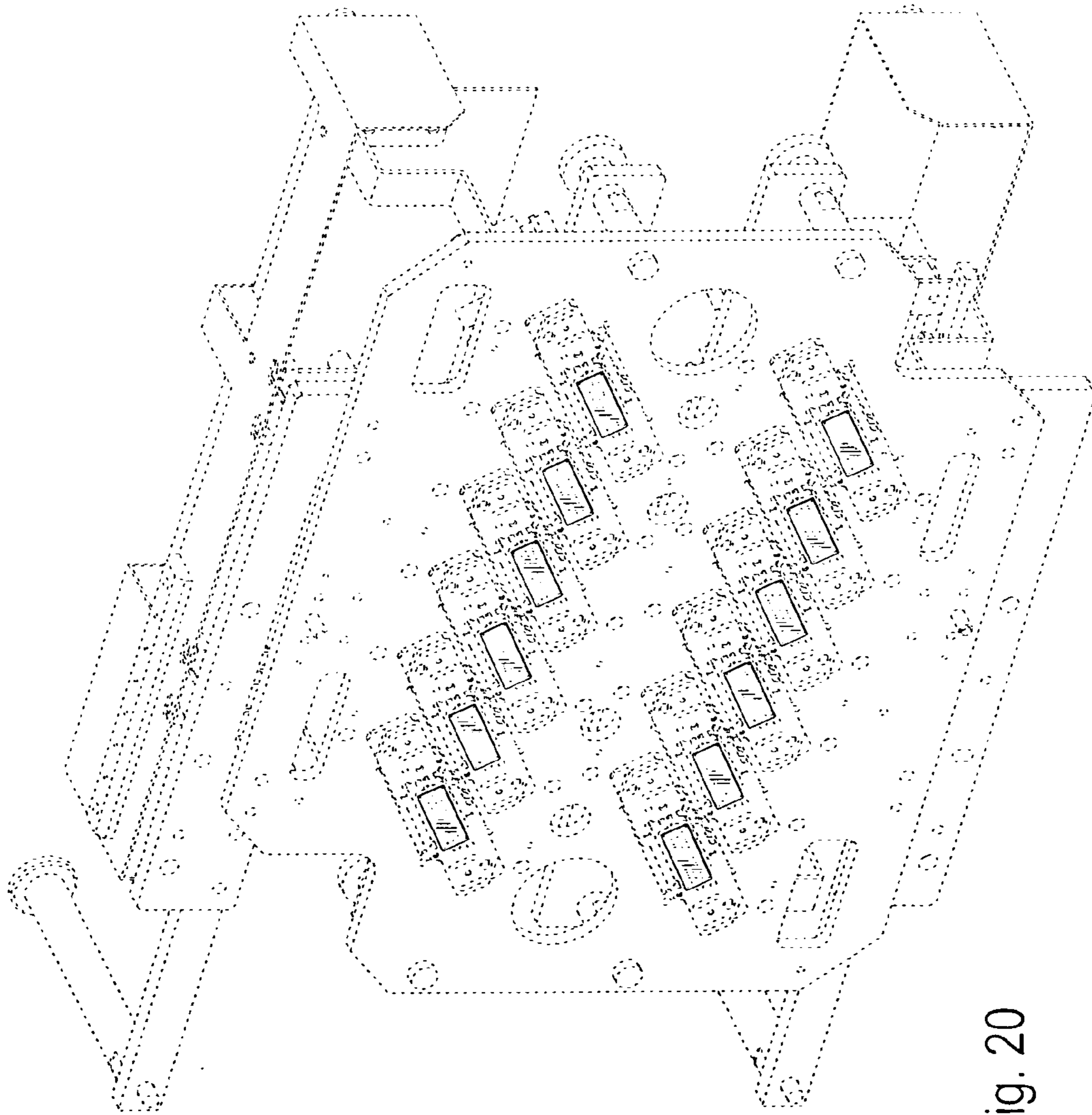


Fig. 20