



US00D767505S

(12) **United States Design Patent** (10) **Patent No.:** **US D767,505 S**  
**Buck et al.** (45) **Date of Patent:** **\*\* Sep. 27, 2016**

(54) **VERTICAL ELECTRICAL CONNECTOR HOUSING**

- (71) Applicant: **FCI Americas Technology LLC**,  
Carson City, NV (US)
- (72) Inventors: **Jonathan E. Buck**, Hershey, PA (US);  
**Stuart C. Stoner**, Lewisberry, PA (US);  
**Steven E. Minich**, York, PA (US);  
**Douglas M. Johnescu**, York, PA (US);  
**Stephen B. Smith**, Mechanicsburg, PA (US)
- (73) Assignee: **FCI Americas Technology LLC**,  
Carson City, NV (US)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/551,176**
- (22) Filed: **Jan. 11, 2016**

**Related U.S. Application Data**

- (60) Continuation of application No. 29/526,301, filed on May 7, 2015, now Pat. No. Des. 751,992, which is a continuation of application No. 29/496,690, filed on Jul. 16, 2014, now Pat. No. Des. 731,437, which is a division of application No. 29/443,206, filed on Jan. 14, 2013, now Pat. No. Des. 713,346.

- (51) **LOC (10) Cl.** ..... **13-03**
- (52) **U.S. Cl.**  
USPC ..... **D13/154; D13/147**

- (58) **Field of Classification Search**  
USPC ..... D13/120, 133, 147, 154, 184, 199  
CPC .. H01R 9/031; H01R 9/0518; H01R 9/0524;  
H01R 9/0527; H01R 9/075; H01R 9/09;  
H01R 9/091; H01R 9/098; H01R 9/223;  
H01R 9/24; H01R 9/28; H01R 12/52; H01R  
12/526; H01R 12/57; H01R 12/59; H01R  
12/592; H01R 12/61; H01R 12/62; H01R  
12/7076; H01R 12/71; H01R 12/73; H01R  
12/732; H01R 12/79; H01R 12/89; H01R  
12/91; H01R 13/6595; H01R 24/40; H01R  
24/50; H01R 24/52; H01R 24/58; H01R  
24/66; H01R 24/86

See application file for complete search history.

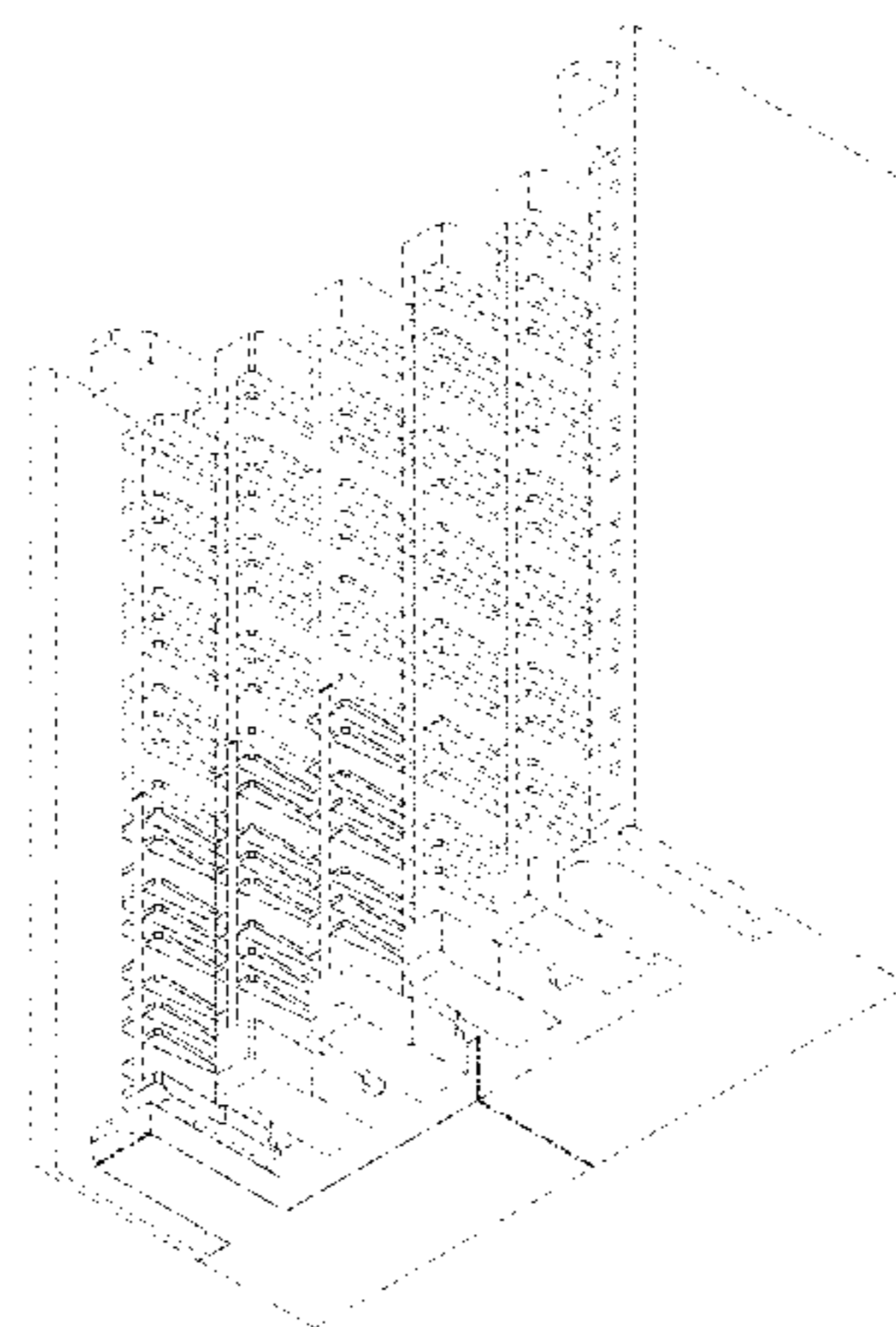
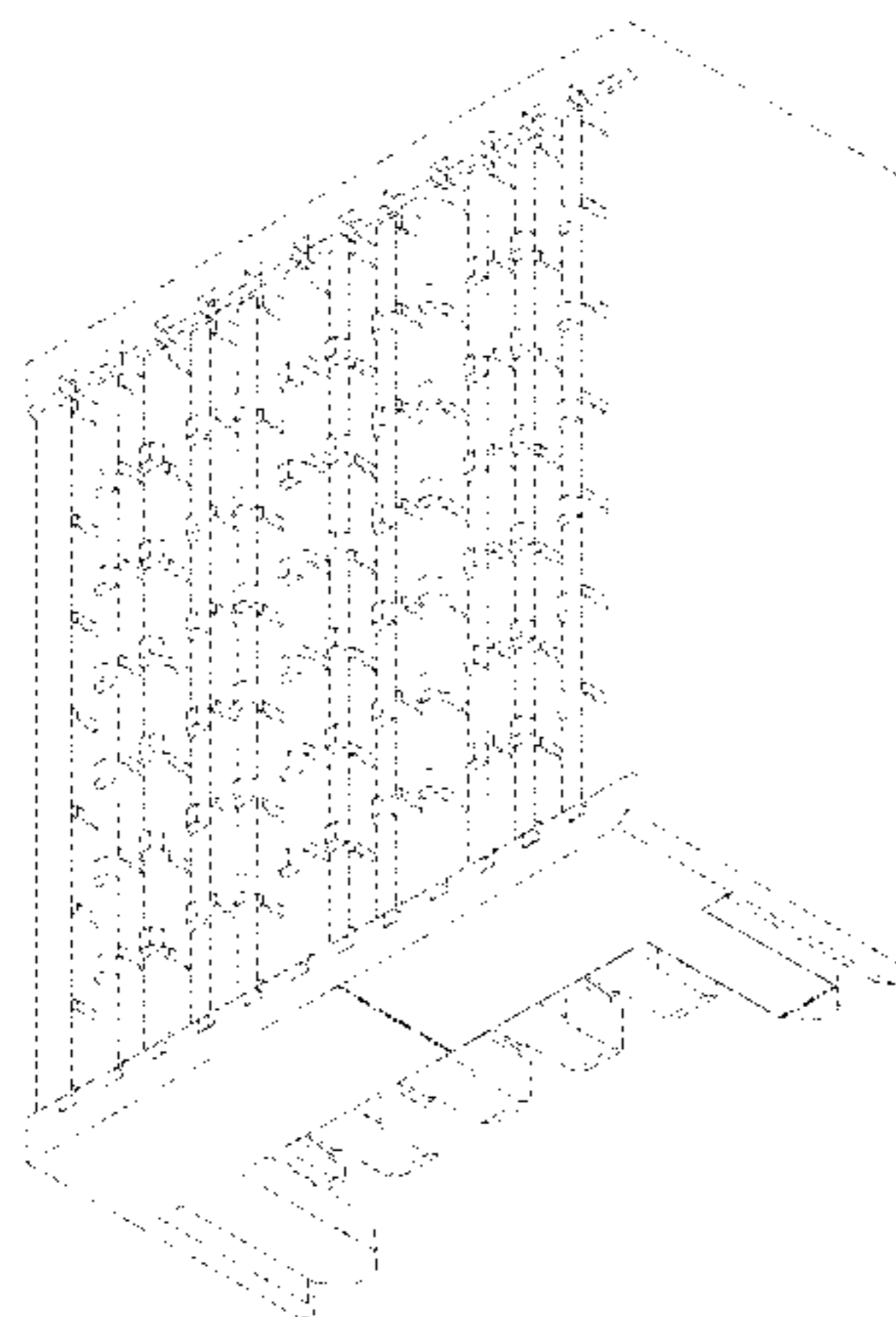
(56) **References Cited**

U.S. PATENT DOCUMENTS

D210,829 S	4/1968	Hanlon et al.	
D213,697 S	4/1969	Oxley	
5,181,855 A	1/1993	Mosquera et al.	
D402,637 S	12/1998	Carpenter, Jr.	
6,461,202 B2	10/2002	Kline	
6,960,103 B2	11/2005	Tokunaga	
6,994,569 B2	2/2006	Minich et al.	
7,118,391 B2	10/2006	Minich et al.	
D550,628 S	9/2007	Whiteman, Jr. et al.	
7,278,856 B2	10/2007	Minich	
7,338,321 B2	3/2008	Laurx	
7,549,897 B2	6/2009	Fedder et al.	
D611,420 S	3/2010	Takada et al.	
D611,421 S	3/2010	Takada et al.	
D611,905 S	3/2010	Takada et al.	
D611,906 S	3/2010	Takada et al.	
8,408,939 B2	4/2013	Davis et al.	
D712,841 S	9/2014	Buck et al.	
D712,842 S	9/2014	Buck et al.	
D712,843 S	9/2014	Buck et al.	
D712,844 S	9/2014	Buck et al.	
D713,356 S	9/2014	Buck et al.	
D713,799 S	9/2014	Buck et al.	
D724,032 S	3/2015	Buck et al.	
8,998,645 B2	4/2015	Vanaleck et al.	
D751,992 S *	3/2016	Buck et al. ....	D13/154
2004/0259420 A1	12/2004	Wu	
2007/0190825 A1	8/2007	Shuey et al.	
2009/0068902 A1	3/2009	Nagata	
2012/0214343 A1	8/2012	Buck et al.	
2014/0248794 A1	9/2014	Khazen et al.	

OTHER PUBLICATIONS

- U.S. Appl. No. 29/497,094, filed Jul. 21, 2014, Buck et al.  
U.S. Appl. No. 29/498,817, filed Aug. 8, 2014, Buck et al.  
U.S. Appl. No. 29/498,823, filed Aug. 8, 2014, Buck et al.  
U.S. Appl. No. 29/498,828, filed Aug. 8, 2014, Buck et al.  
U.S. Appl. No. 29/517,078, filed Jan. 14, 2013, Buck et al.  
U.S. Appl. No. 29/526,541, filed May 11, 2015, Buck et al.  
U.S. Appl. No. 29/526,298, filed May 7, 2015, Buck et al.  
U.S. Appl. No. 29/526,295, filed May 7, 2015, Buck et al.  
U.S. Appl. No. 29/526,296, filed May 7, 2015, Buck et al.  
U.S. Appl. No. 29/533,779, filed Jul. 22, 2015, Buck et al.  
U.S. Appl. No. 29/533,910, filed Jul. 23, 2015, Buck et al.  
U.S. Appl. No. 29/550,810, filed Jan. 7, 2016, Buck et al.  
U.S. Appl. No. 29/550,831, filed Jan. 7, 2016, Buck et al.  
U.S. Appl. No. 29/550,825, filed Jan. 7, 2016, Buck et al.



U.S. Appl. No. 29/551,127, filed Jan. 11, 2016, Buck et al.  
U.S. Appl. No. 29/553,377, filed Feb. 1, 2016, Buck et al.

\* cited by examiner

*Primary Examiner* — Daniel Bui  
(74) *Attorney, Agent, or Firm* — Wolf, Greenfield & Sacks,  
P.C.

(57) **CLAIM**  
The ornamental design for a vertical electrical connector housing, as shown and described.

**DESCRIPTION**

FIG. 1 is a top, left, rear perspective view of a vertical electrical connector housing according to one embodiment of our design;  
FIG. 2 is a bottom, left, rear perspective view thereof;  
FIG. 3 is a top, left, front perspective view thereof;  
FIG. 4 is a bottom, right, front perspective view thereof;  
FIG. 5 is another top, left, rear perspective view thereof;  
FIG. 6 is another bottom, right, front perspective view thereof;  
FIG. 7 is a rear elevation view thereof;  
FIG. 8 is a front elevation view thereof;  
FIG. 9 is a bottom plan view thereof;

FIG. 10 is a top plan view thereof;  
FIG. 11 is a left side elevation view thereof;  
FIG. 12 is a right side elevation view thereof;  
FIG. 13 is a top, left, rear perspective view of a vertical electrical connector housing according to another embodiment of our design;  
FIG. 14 is a bottom, left, rear perspective view thereof;  
FIG. 15 is a top, left, front perspective view thereof;  
FIG. 16 is a bottom, right, front perspective view thereof;  
FIG. 17 is another top, left, rear perspective view thereof;  
FIG. 18 is another bottom, right, front perspective view thereof;  
FIG. 19 is a rear elevation view thereof;  
FIG. 20 is a front elevation view thereof;  
FIG. 21 is a bottom plan view thereof;  
FIG. 22 is a top plan view thereof;  
FIG. 23 is a left side elevation view thereof; and,  
FIG. 24 is a right side elevation view thereof.  
The broken line in the figure drawing view represents unclaimed environment only and forms no part of the claimed design. The dash-dot line represents the boundary of the claimed design.  
In a preferred embodiment, the nature of this product is an electrical component that can take the form of a vertical electrical connector housing.

**1 Claim, 10 Drawing Sheets**

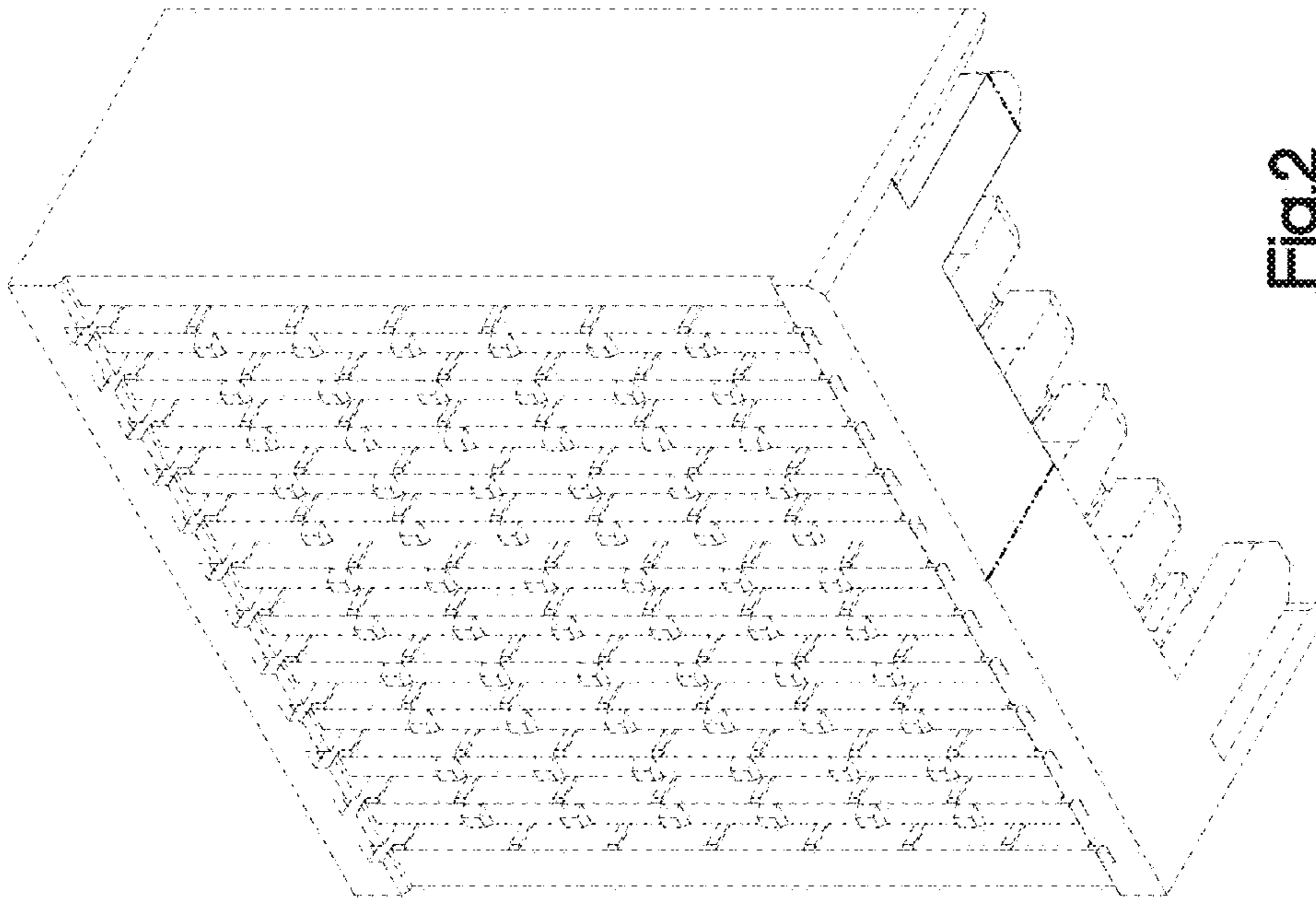


Fig.2

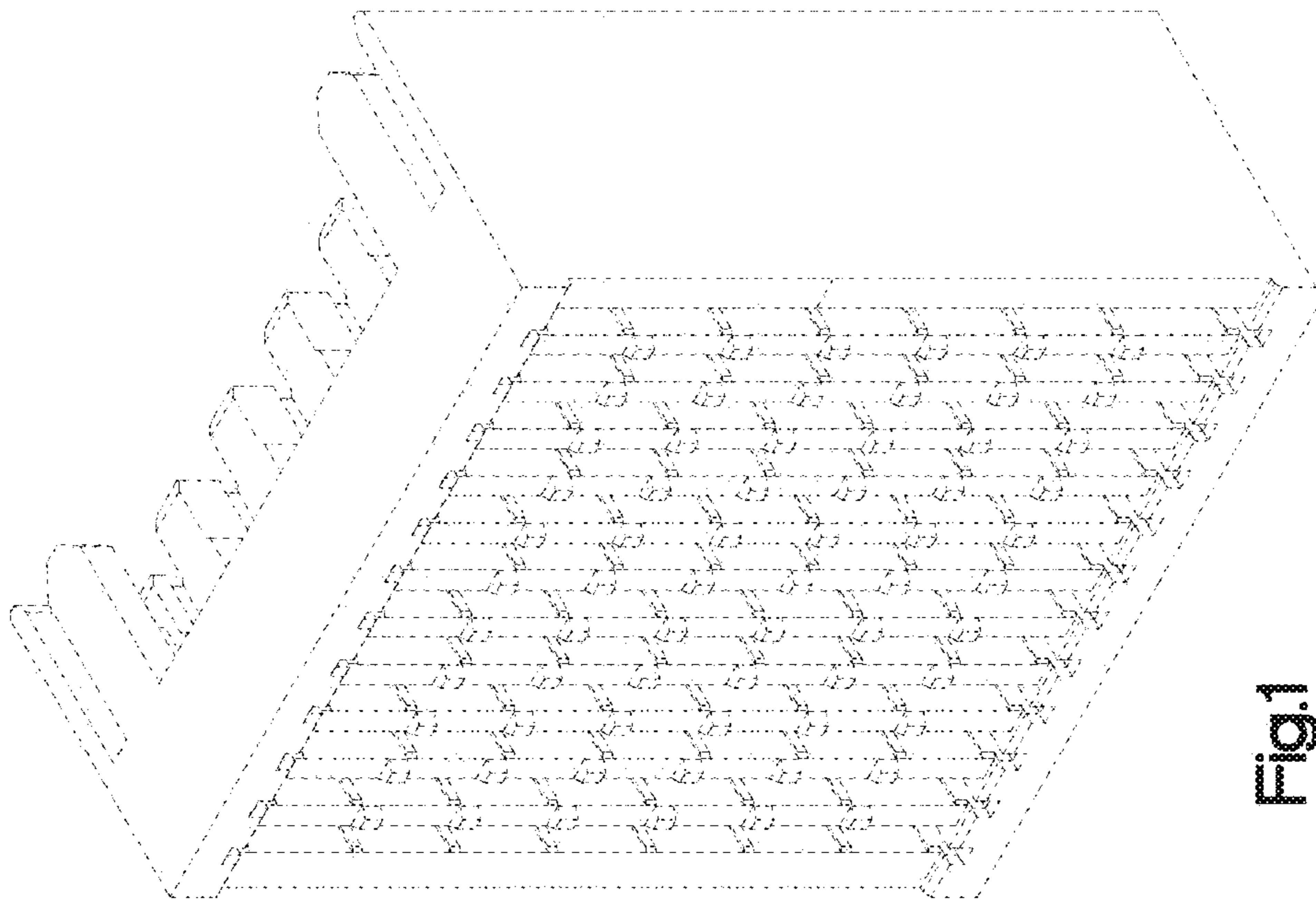


Fig.1

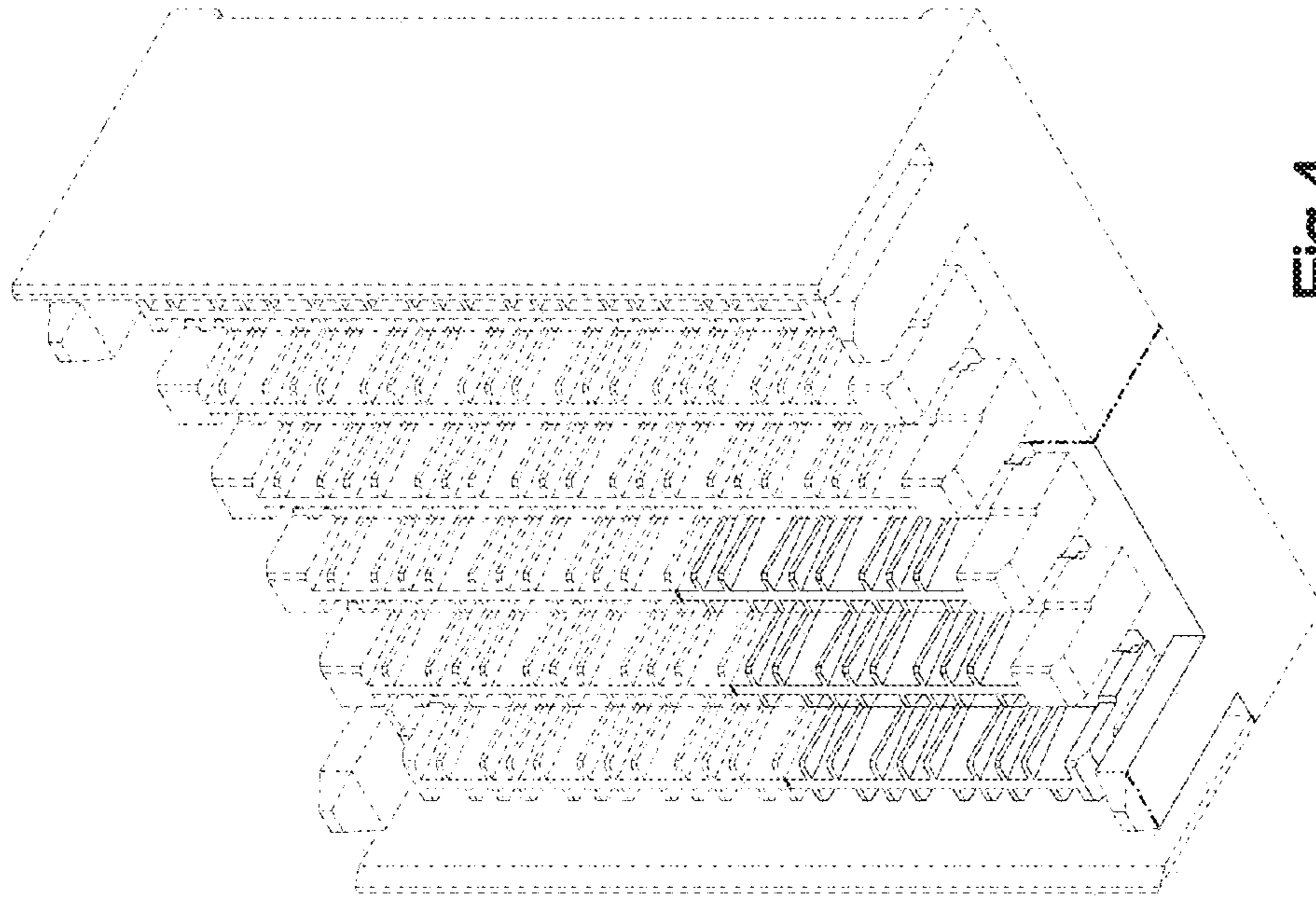


Fig.4

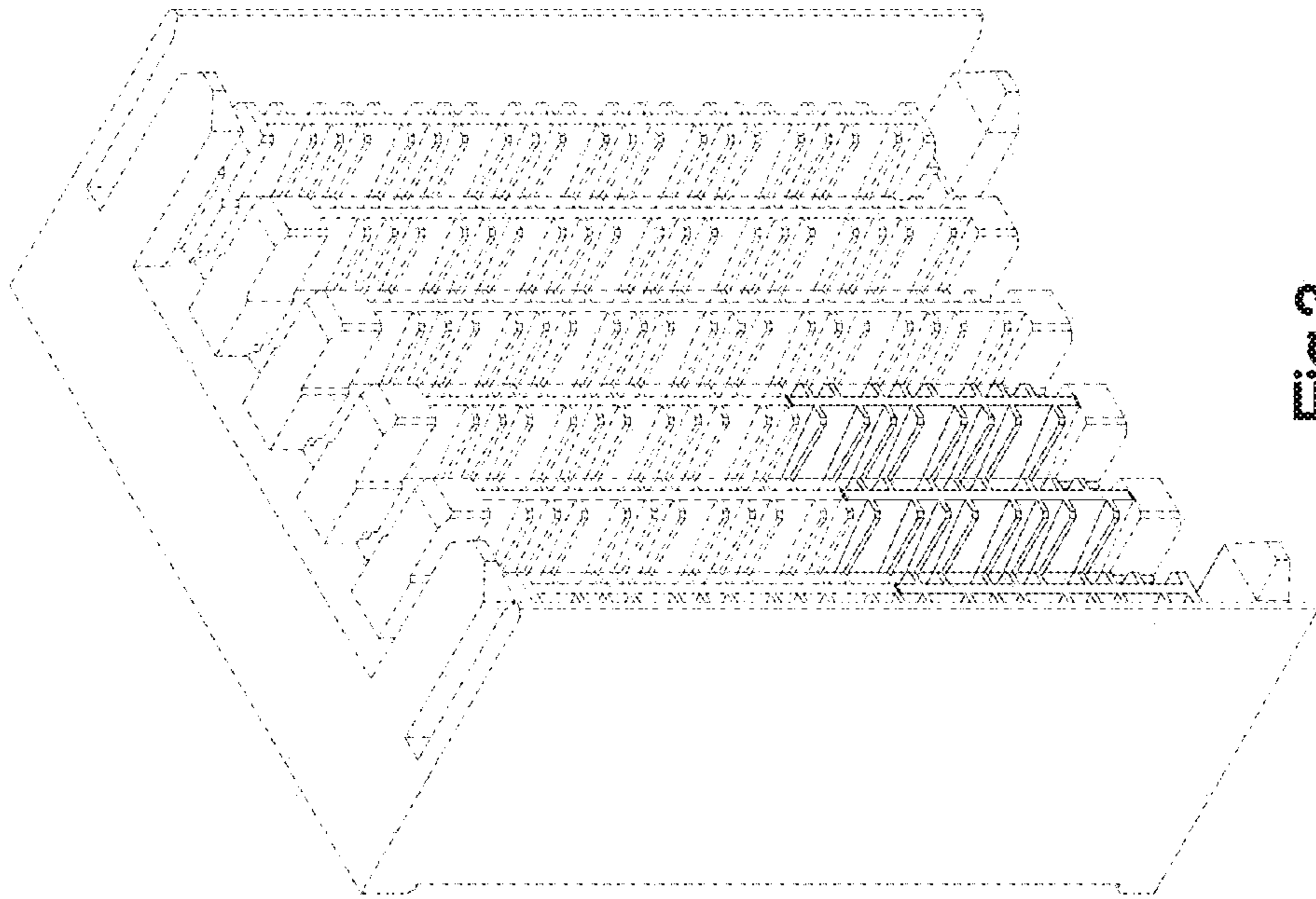


Fig.3

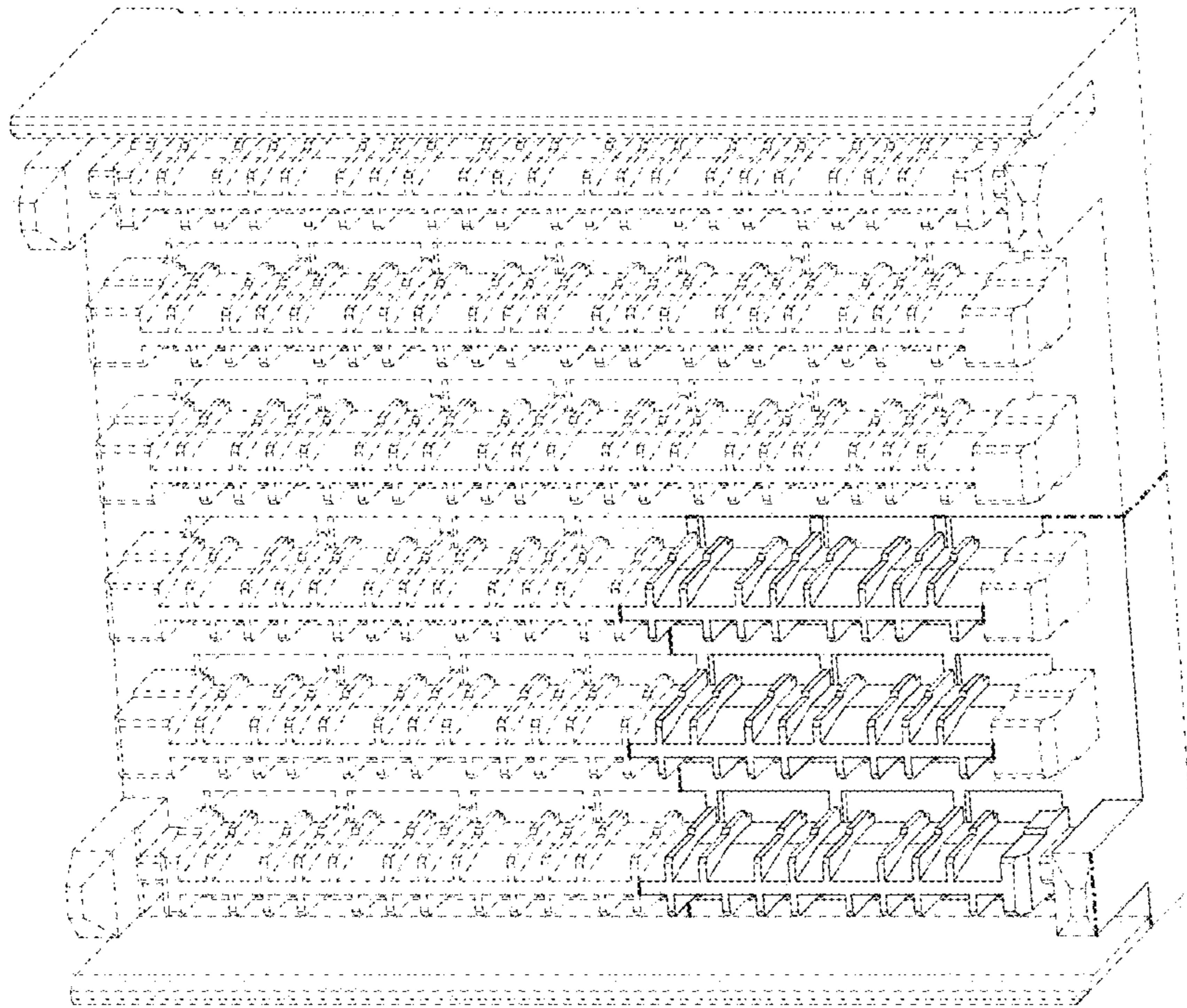


Fig. 6

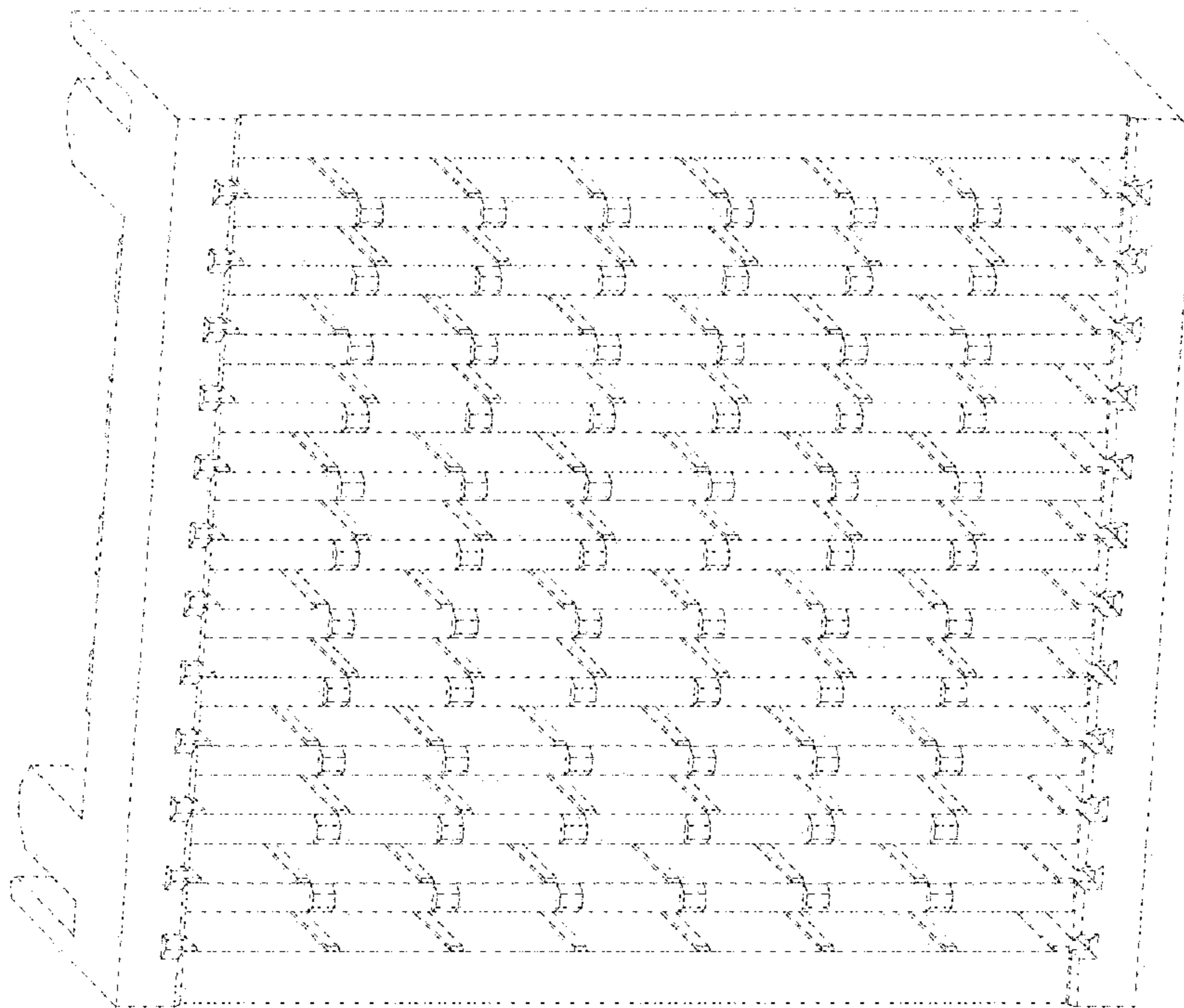


Fig. 5

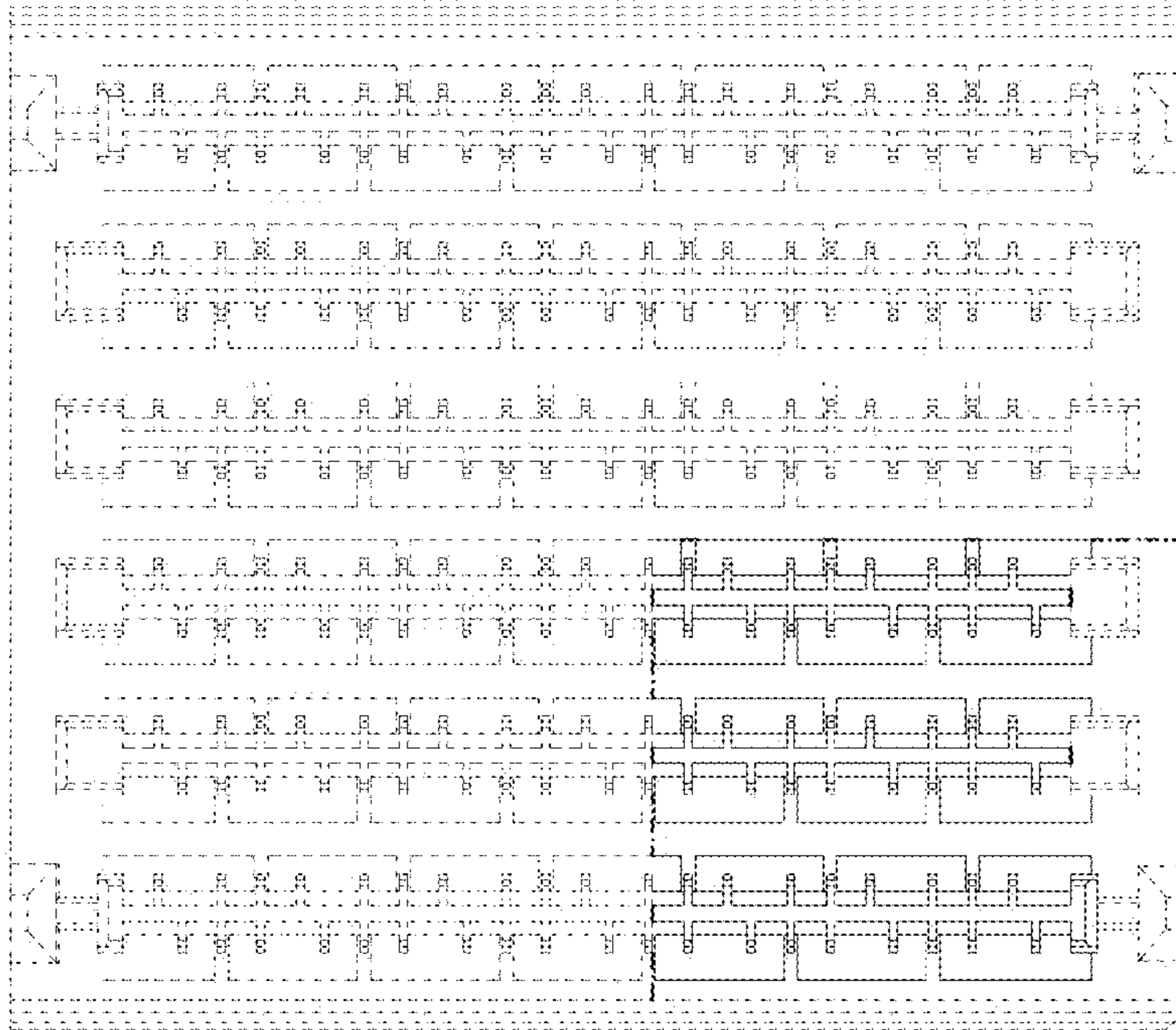


Fig. 8

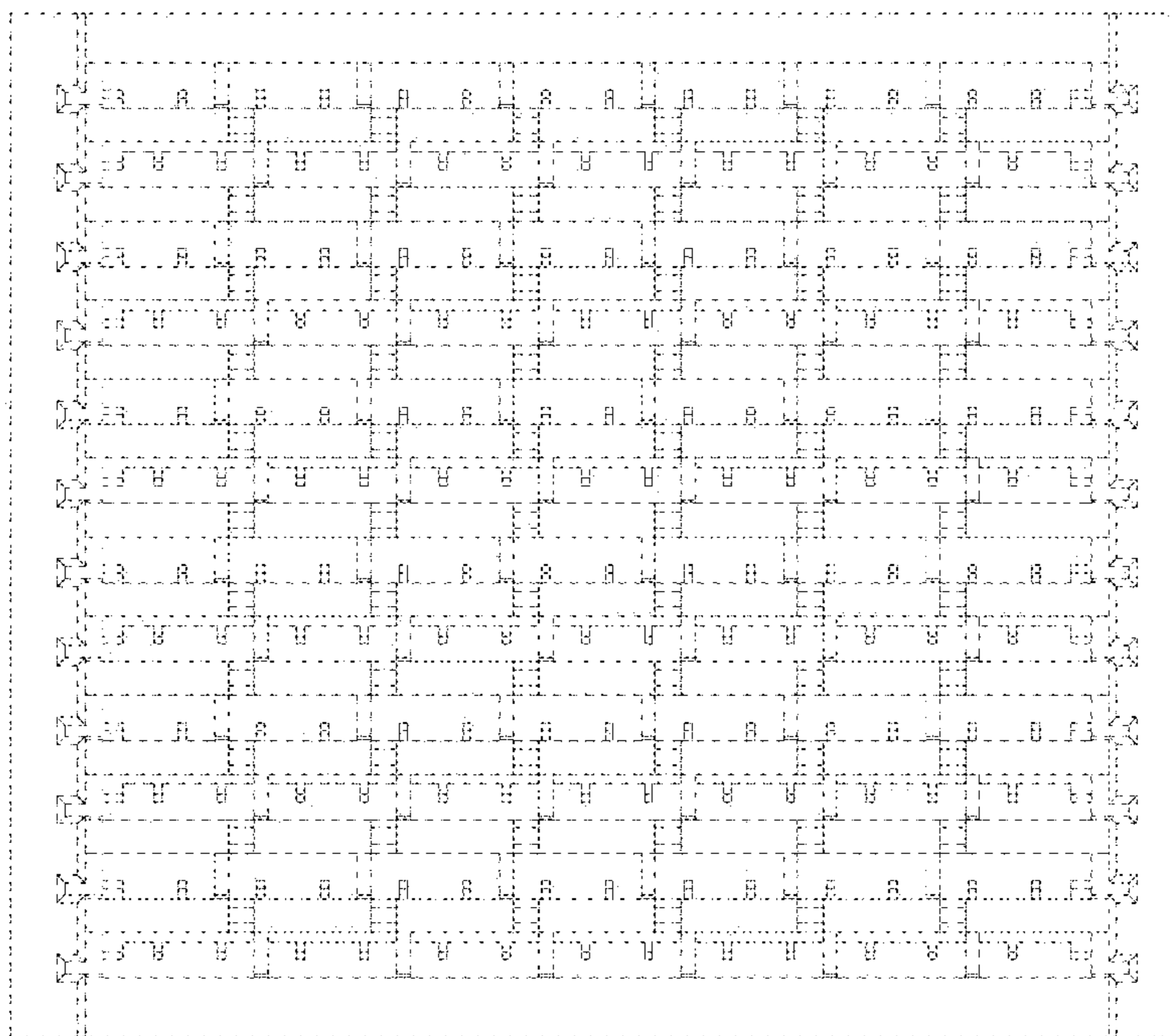


Fig. 7

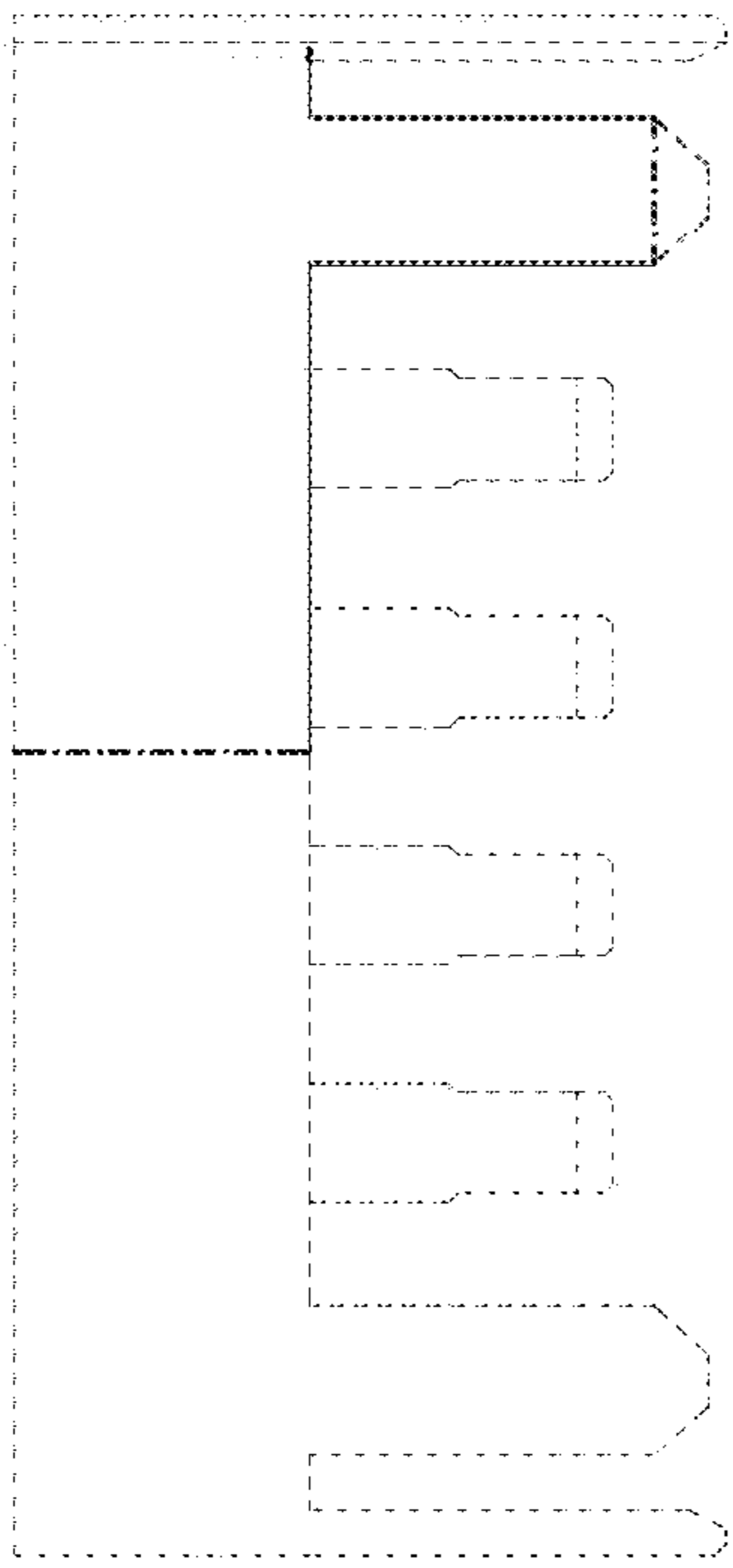


Fig.9

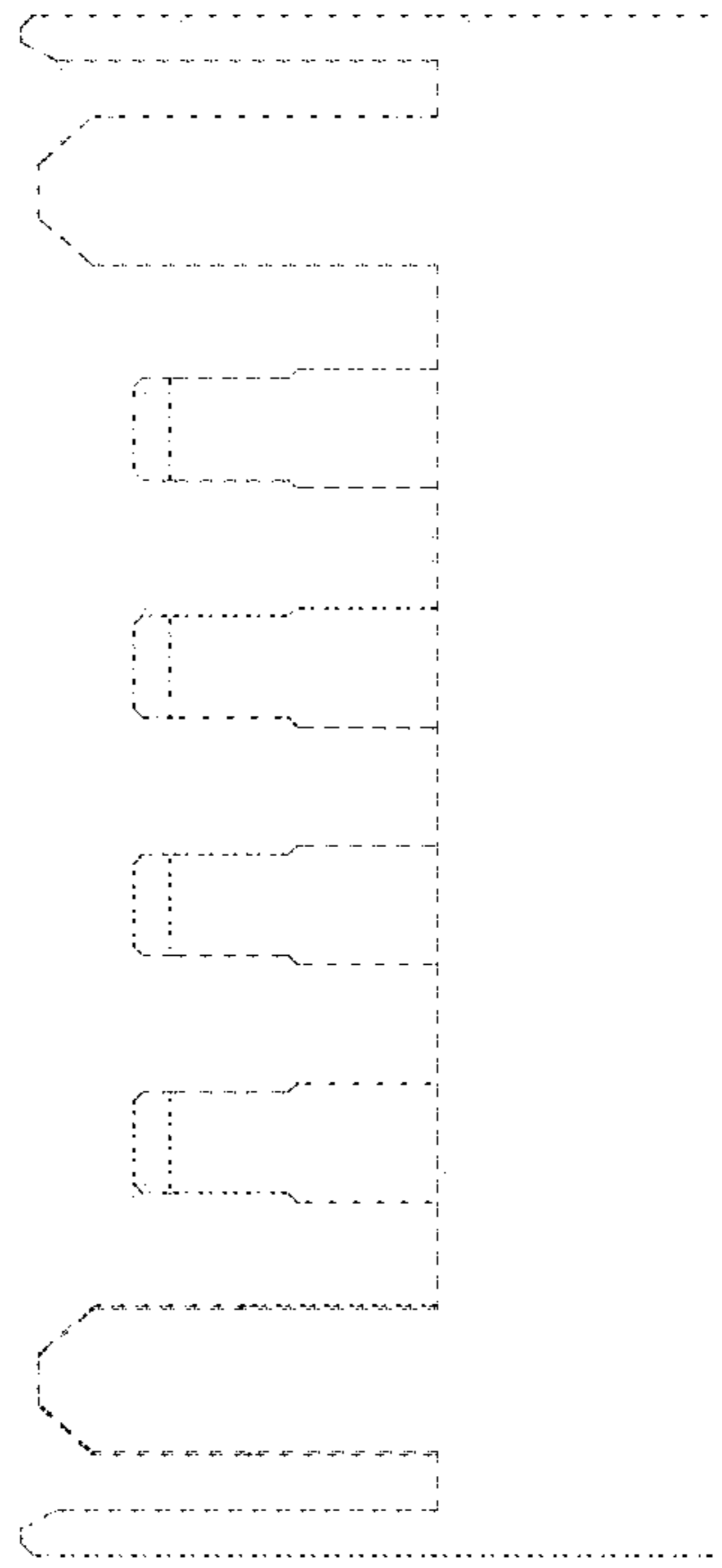


Fig.10

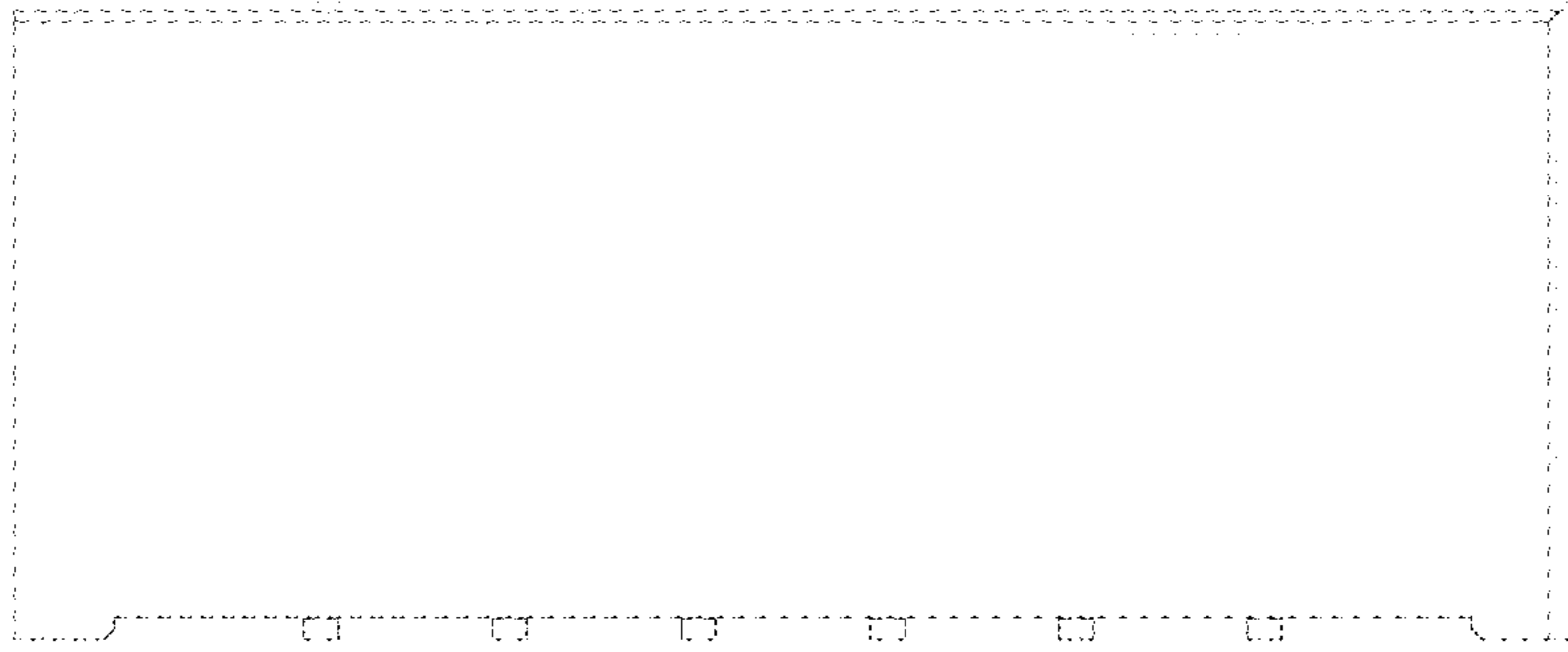


Fig.11

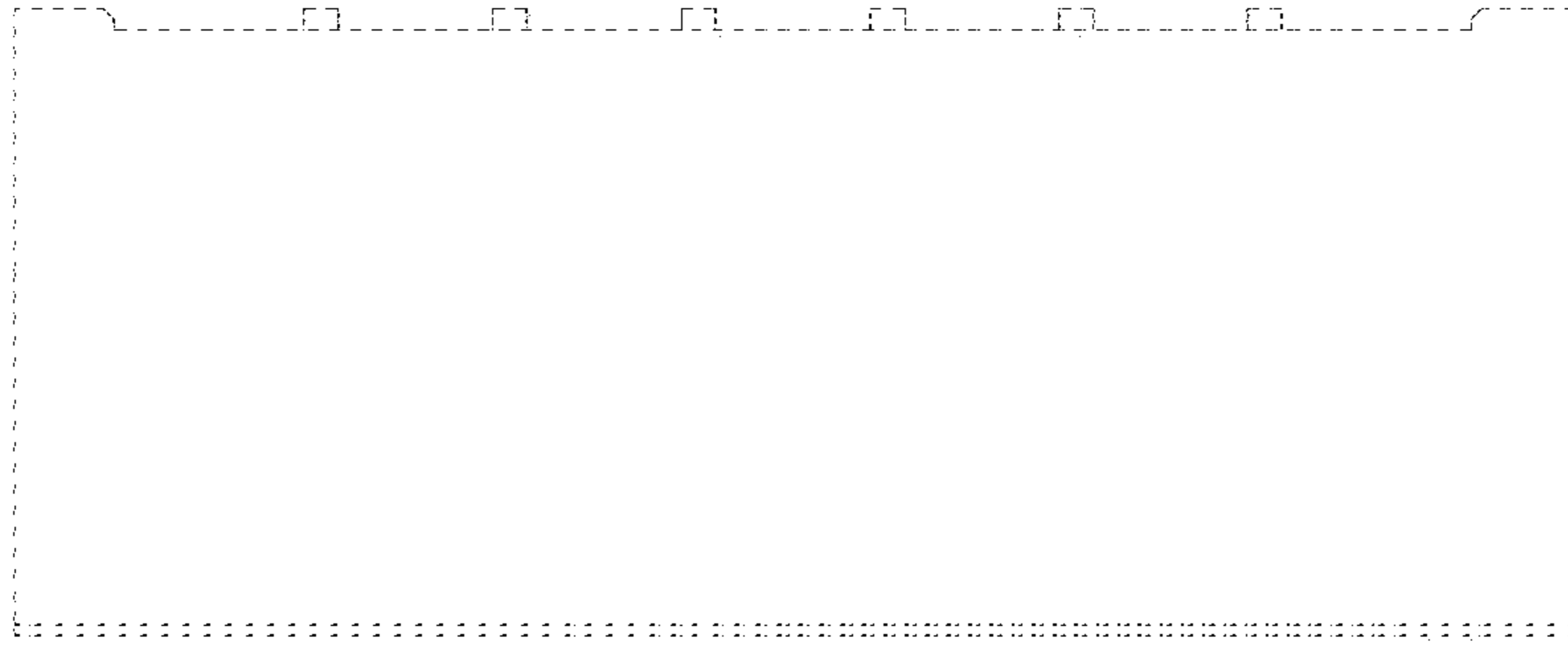


Fig.12

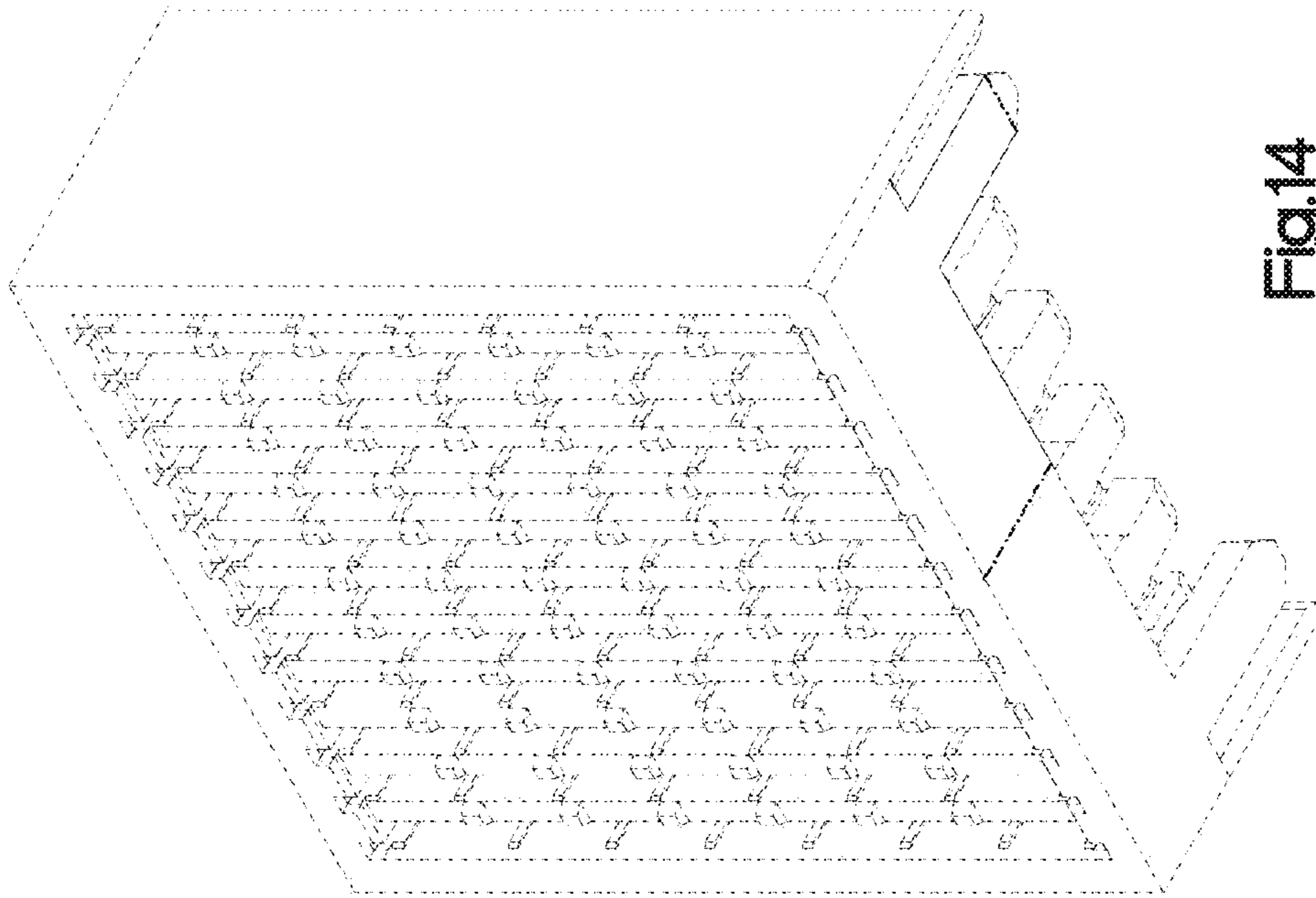


Fig.14

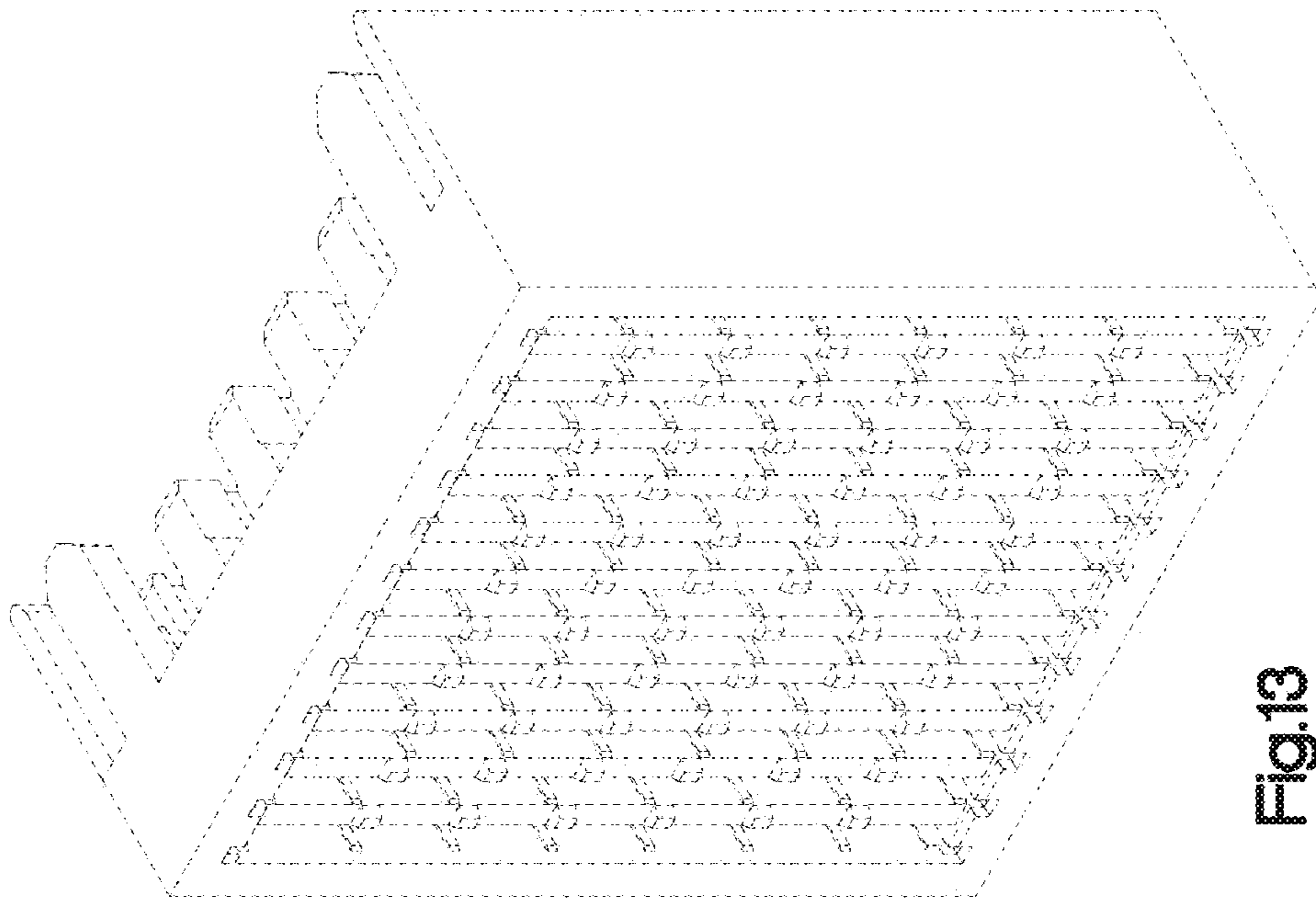


Fig.13



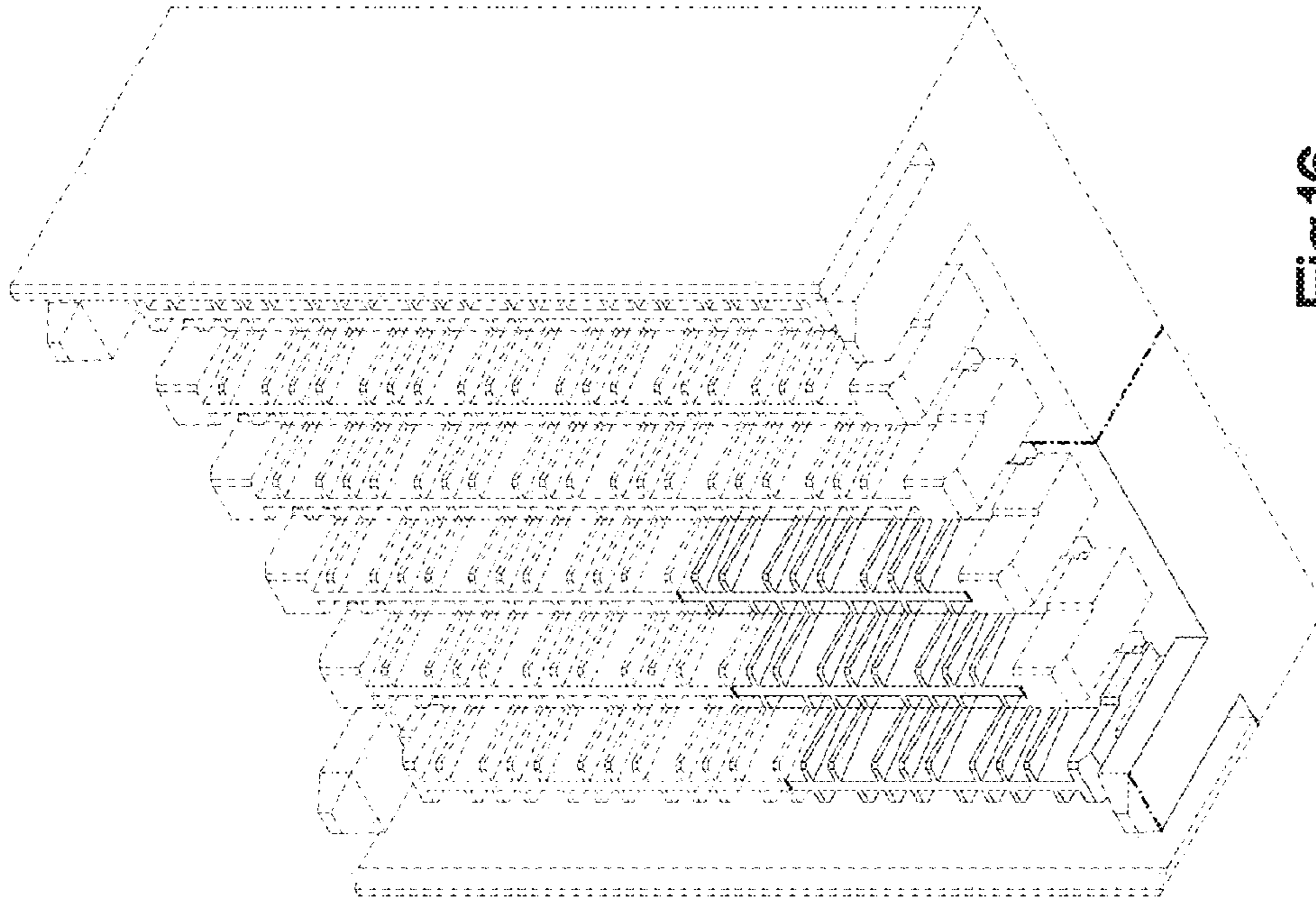


Fig.16

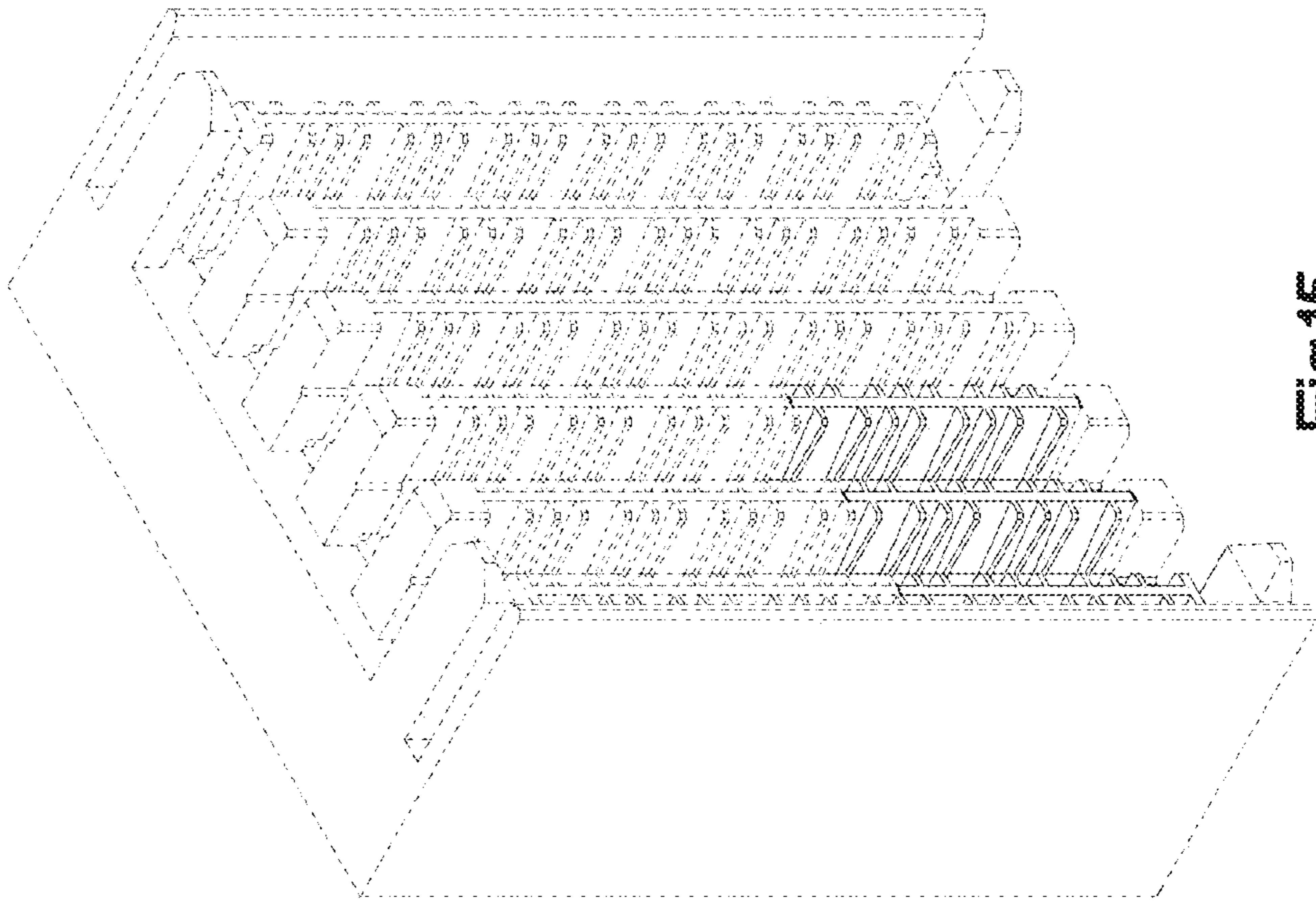


Fig.15

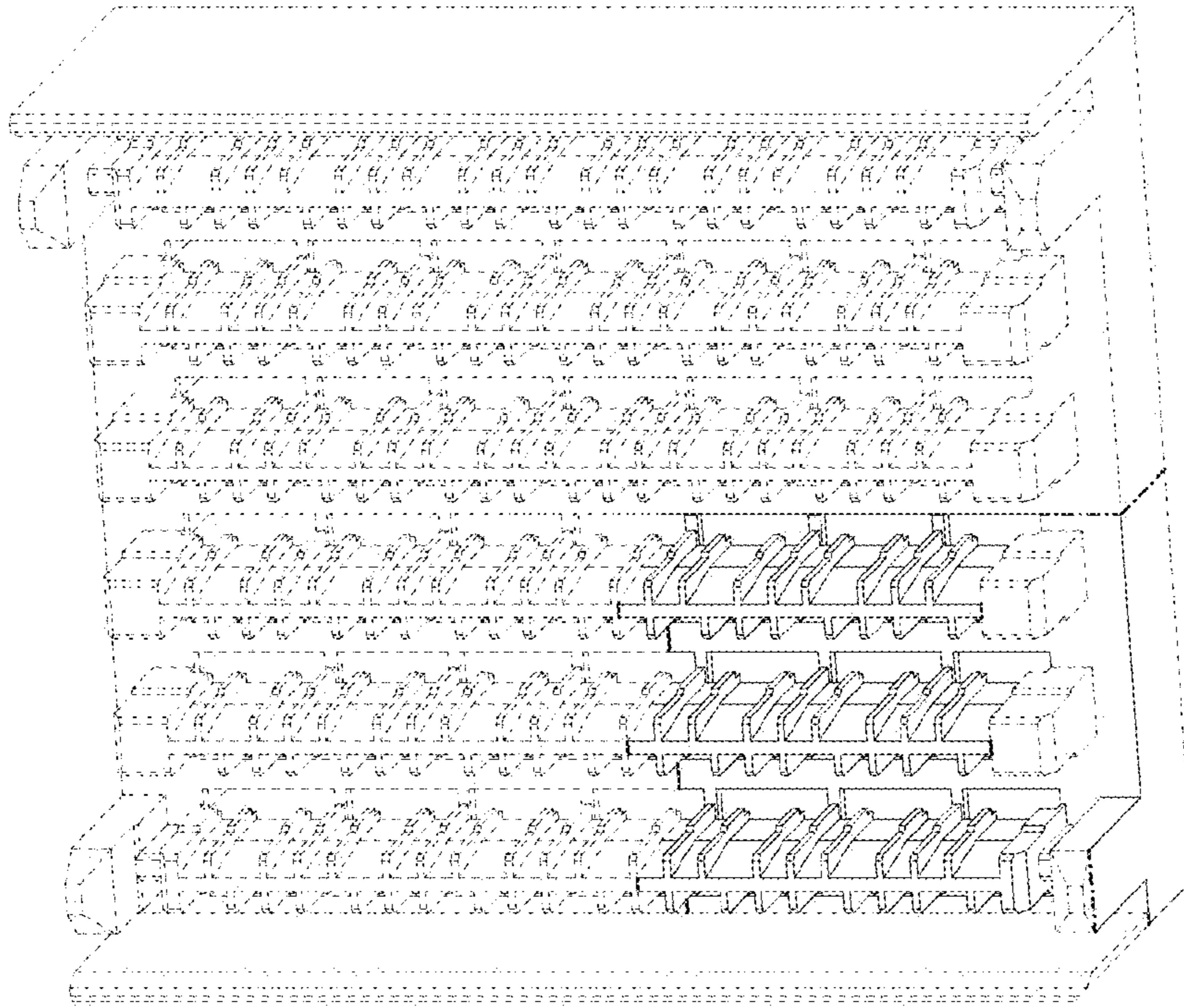


Fig.18

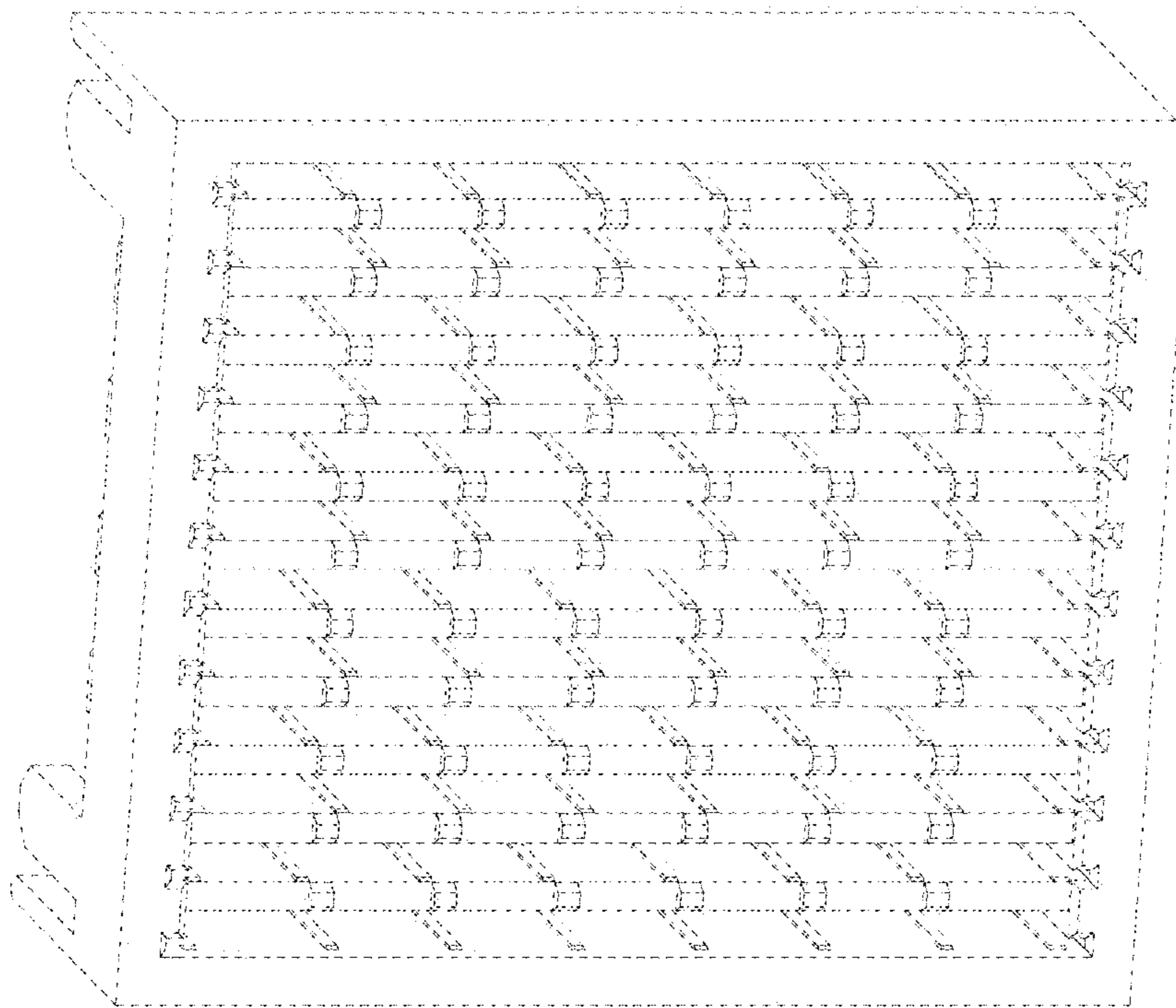


Fig.17

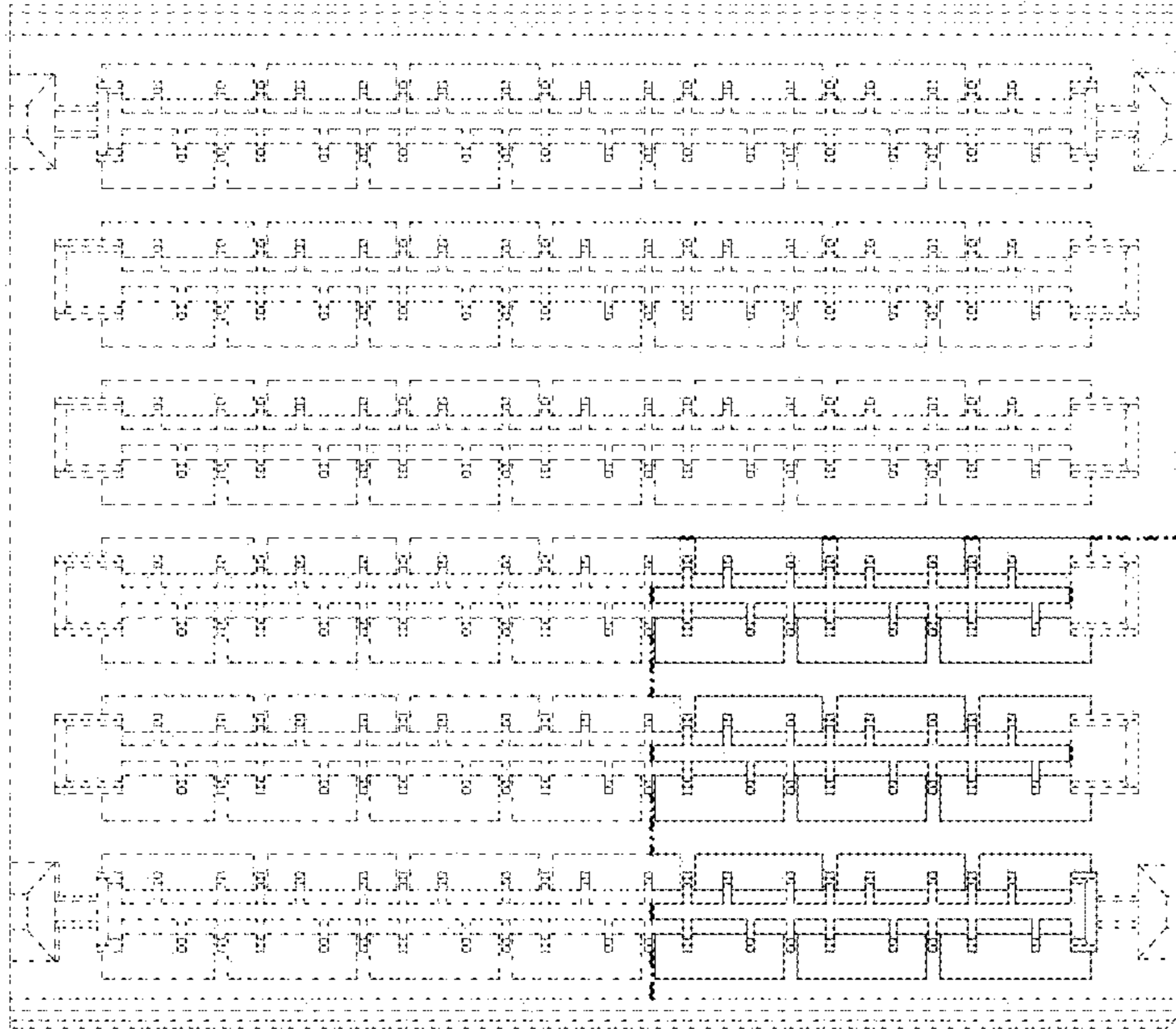


Fig. 20

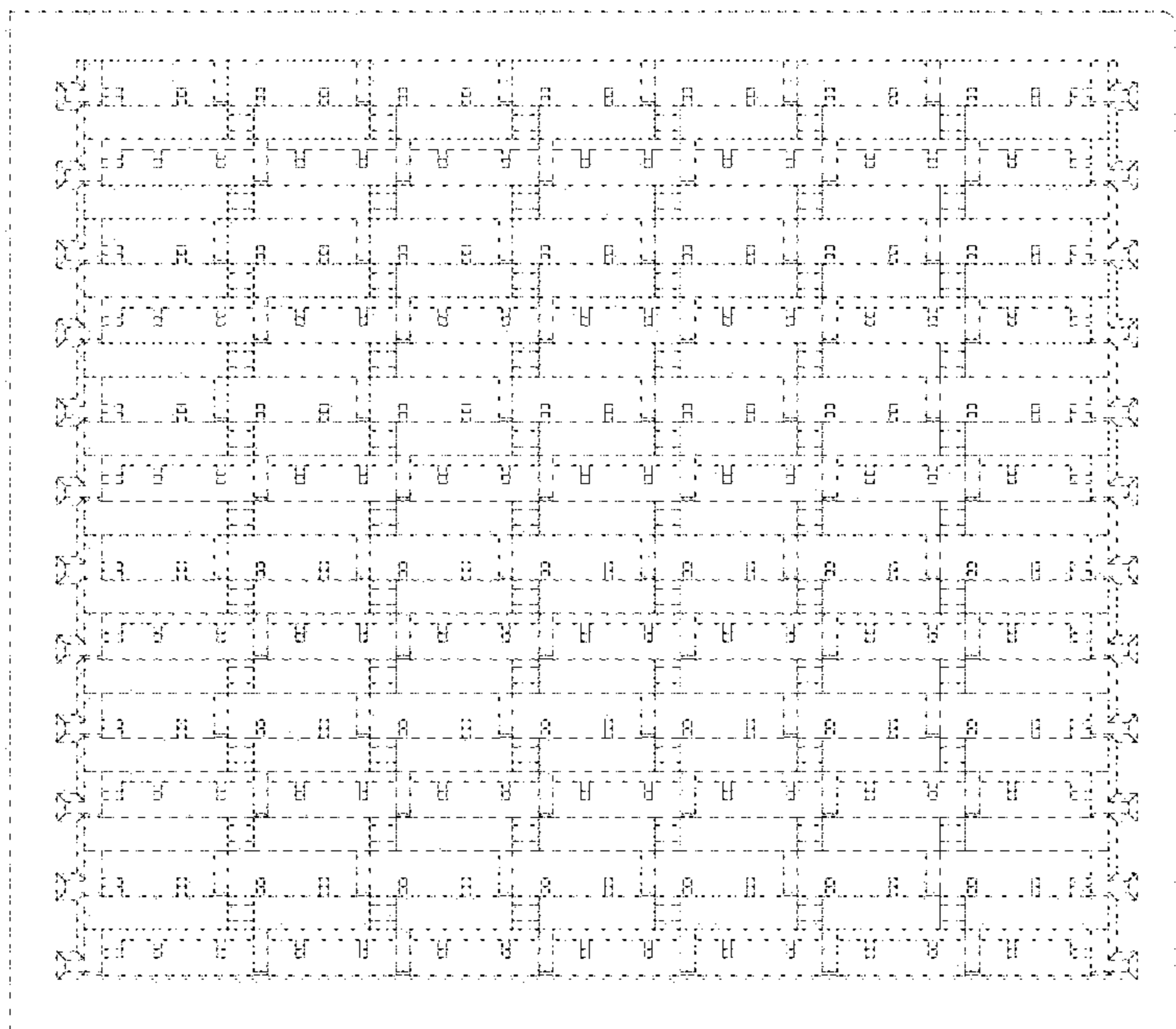


Fig. 19

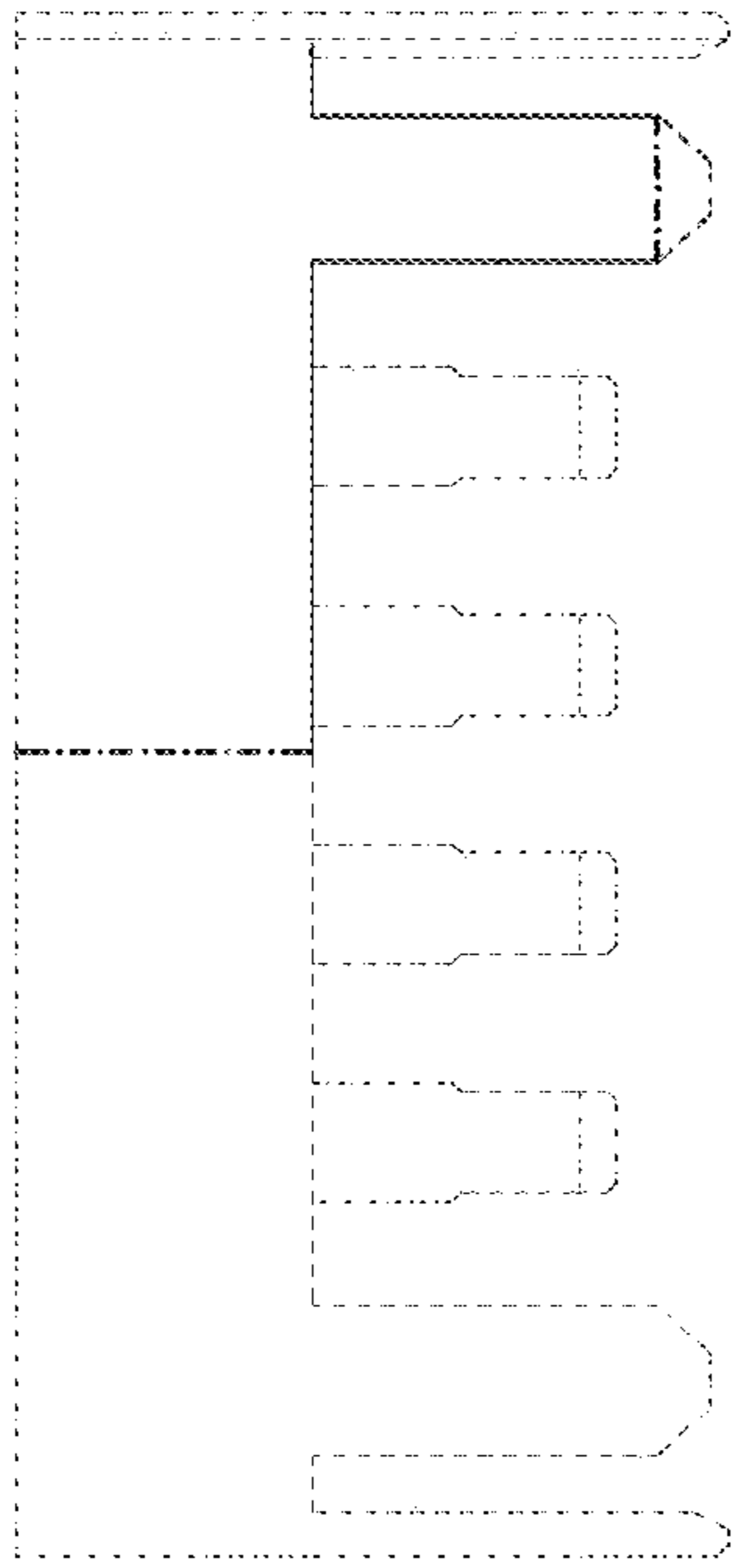


Fig. 21

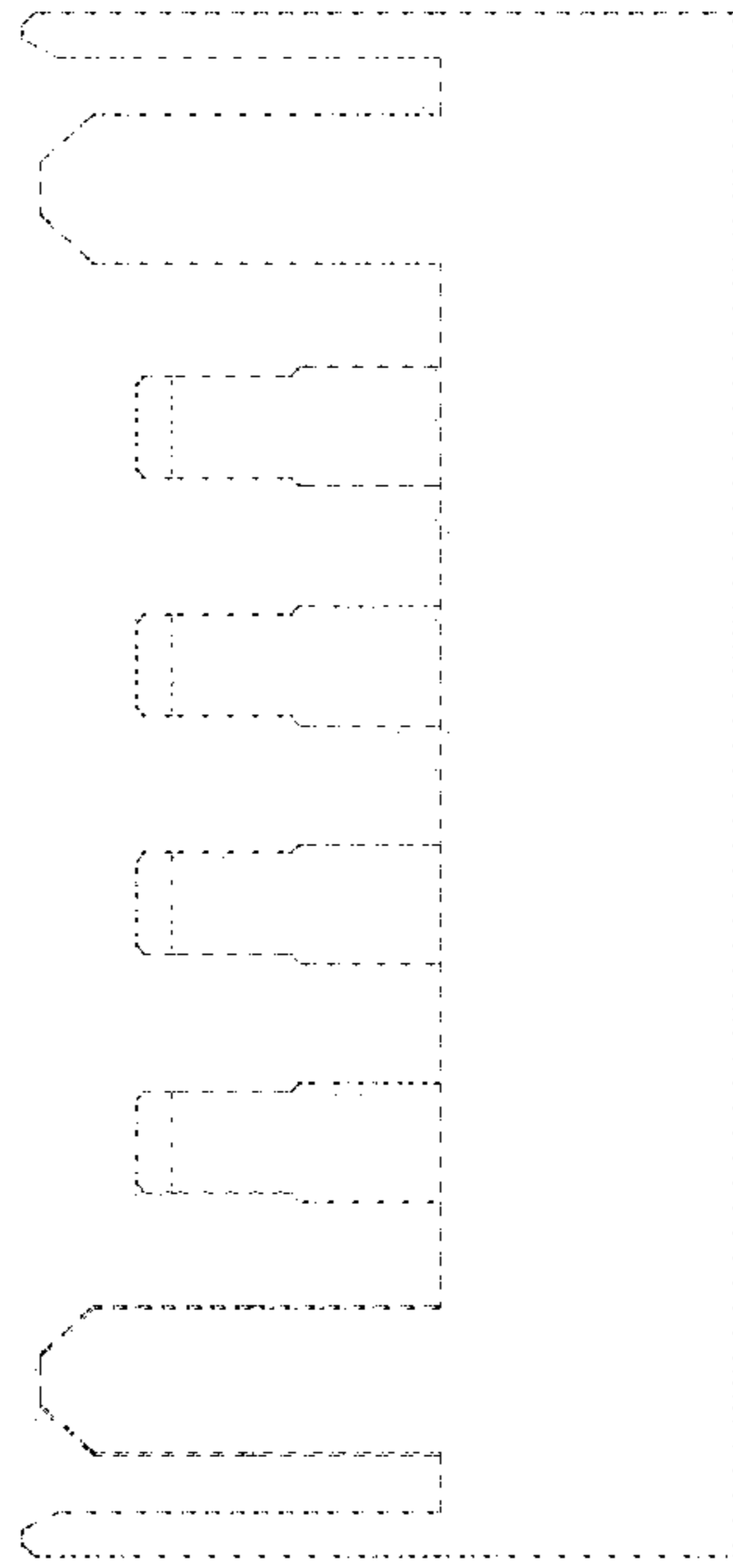


Fig. 22



Fig. 23



Fig. 24