

US00D924142S

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

(10) **Patent No.:** **US D924,142 S**
(45) **Date of Patent:** **** Jul. 6, 2021**

(54) **CONNECTOR**

(71) Applicant: **Molex, LLC**, Lisle, IL (US)

(72) Inventors: **Harsha Thyagaraj**, Lisle, IL (US);
Pierre Perez, Aurora, IL (US)

(73) Assignee: **Molex, LLC**, Lisle, IL (US)

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

(21) Appl. No.: **29/678,989**

(22) Filed: **Jan. 31, 2019**

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

(52) **U.S. Cl.**
USPC **D13/133; D13/147**

(58) **Field of Classification Search**
USPC D13/133, 146, 147, 153, 154, 155, 160
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,169,336 A * 12/1992 Taguchi H01R 13/64
439/354
5,876,230 A * 3/1999 Nishide H01R 13/6272
439/352

(Continued)

FOREIGN PATENT DOCUMENTS

CN 304716804 7/2018
JP D1524813 6/2015

(Continued)

Primary Examiner — Brandon M Rosati
(74) *Attorney, Agent, or Firm* — Banner & Witcoff, Ltd.

(57) **CLAIM**

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

DESCRIPTION

FIG. 1 is a front right perspective view of a connector showing our new design;

FIG. 2 is a front left perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a rear view thereof;
FIG. 5 is a right side view thereof;
FIG. 6 is a left side view thereof;
FIG. 7 is a top view thereof;
FIG. 8 is a bottom view thereof;
FIG. 9 is a front right perspective view of an alternate embodiment of the connector showing our new design;
FIG. 10 is a front left perspective view thereof;
FIG. 11 is a front view thereof;
FIG. 12 is a rear view thereof;
FIG. 13 is a right side view thereof;
FIG. 14 is a left side view thereof;
FIG. 15 is a top view thereof;
FIG. 16 is a bottom view thereof;
FIG. 17 is a front right perspective view of an alternate embodiment of the connector showing our new design;
FIG. 18 is a front left perspective view thereof;
FIG. 19 is a front view thereof;
FIG. 20 is a rear view thereof;
FIG. 21 is a right side view thereof;
FIG. 22 is a left side view thereof;
FIG. 23 is a top view thereof;
FIG. 24 is a bottom view thereof;
FIG. 25 is a front right perspective view of an alternate embodiment of the connector showing our new design;
FIG. 26 is a front left perspective view thereof;
FIG. 27 is a front view thereof;
FIG. 28 is a rear view thereof;
FIG. 29 is a right side view thereof;
FIG. 30 is a left side view thereof;
FIG. 31 is a top view thereof;
FIG. 32 is a bottom view thereof;
FIG. 33 is a front right perspective view of an alternate embodiment of the connector showing our new design;
FIG. 34 is a front left perspective view thereof;
FIG. 35 is a front view thereof;
FIG. 36 is a rear view thereof;
FIG. 37 is a right side view thereof;
FIG. 38 is a left side view thereof;
FIG. 39 is a top view thereof;
FIG. 40 is a bottom view thereof;

(Continued)

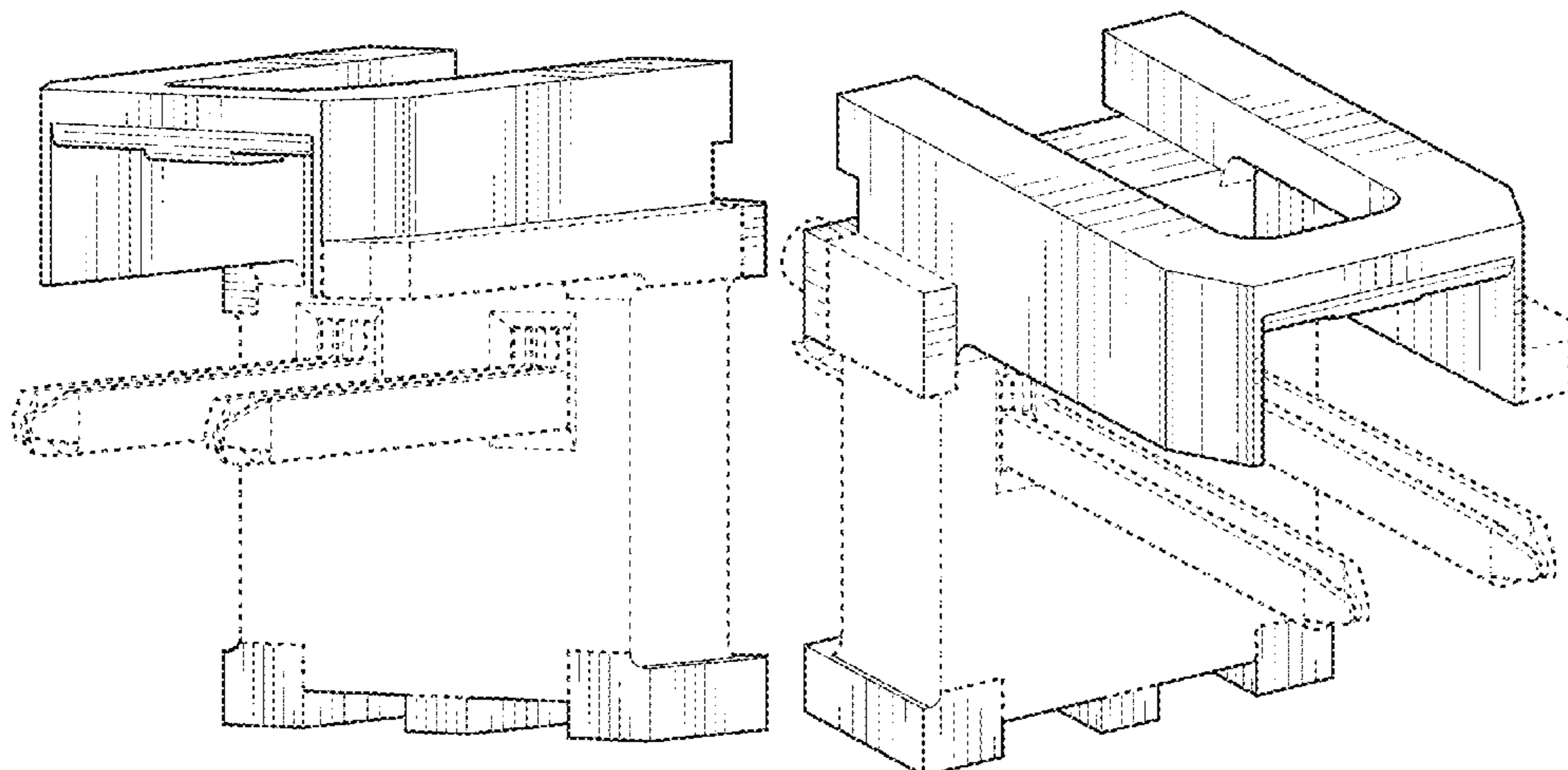


FIG. 41 is a front right perspective view of an alternate embodiment of the connector which is a mirror image of the connector of FIGS. 1-8;
 FIG. 42 is a front left perspective view thereof;
 FIG. 43 is a front view thereof;
 FIG. 44 is a rear view thereof;
 FIG. 45 is a right side view thereof;
 FIG. 46 is a left side view thereof;
 FIG. 47 is a top view thereof;
 FIG. 48 is a bottom view thereof;
 FIG. 49 is a front right perspective view of an alternate embodiment of the connector which is a mirror image of the connector of FIGS. 9-16;
 FIG. 50 is a front left perspective view thereof;
 FIG. 51 is a front view thereof;
 FIG. 52 is a rear view thereof;
 FIG. 53 is a right side view thereof;
 FIG. 54 is a left side view thereof;
 FIG. 55 is a top view thereof;
 FIG. 56 is a bottom view thereof;
 FIG. 57 is a front right perspective view of an alternate embodiment of the connector which is a mirror image of the connector of FIGS. 17-24;
 FIG. 58 is a front left perspective view thereof;
 FIG. 59 is a front view thereof;
 FIG. 60 is a rear view thereof;
 FIG. 61 is a right side view thereof;
 FIG. 62 is a left side view thereof;
 FIG. 63 is a top view thereof;
 FIG. 64 is a bottom view thereof;
 FIG. 65 is a front right perspective view of an alternate embodiment of the connector which is a mirror image of the connector of FIGS. 25-32;
 FIG. 66 is a front left perspective view thereof;
 FIG. 67 is a front view thereof;
 FIG. 68 is a rear view thereof;
 FIG. 69 is a right side view thereof;
 FIG. 70 is a left side view thereof;
 FIG. 71 is a top view thereof;
 FIG. 72 is a bottom view thereof;
 FIG. 73 is a front right perspective view of an alternate embodiment of the connector which is a mirror image of the connector of FIGS. 25-32;
 FIG. 74 is a front left perspective view thereof;
 FIG. 75 is a front view thereof;
 FIG. 76 is a rear view thereof;

FIG. 77 is a right side view thereof;
 FIG. 78 is a left side view thereof;
 FIG. 79 is a top view thereof; and,
 FIG. 80 is a bottom view thereof.

The broken lines immediately adjacent to the shaded areas represent the bounds of the claimed design and form no part thereof. The broken lines depicting the remainder of the connector show features that form no part of the claimed design.

1 Claim, 48 Drawing Sheets

(58) **Field of Classification Search**

CPC H01R 13/02; H01R 13/436; H01R 13/502;
 H01R 13/504; H01R 13/506; H01R
 13/58; H01R 13/627; H01R 13/6315;
 H01R 13/6586; H01R 13/62; H01R
 13/64; H01R 13/641

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,241,547	B1 *	6/2001	Fukuda	H01R 13/641 439/352
D645,405	S	9/2011	Huss, Jr. et al.	
D791,704	S	7/2017	Li et al.	
D791,705	S *	7/2017	Li	D13/147
D791,706	S *	7/2017	Li	D13/147
D791,707	S *	7/2017	Li	D13/147
D792,851	S *	7/2017	Li	D13/147
D792,852	S *	7/2017	Li	D13/147
D792,853	S *	7/2017	Li	D13/147
D802,538	S *	11/2017	Li	D13/147
10,461,458	B2 *	10/2019	Kim	H01R 13/4362
10,741,967	B2 *	8/2020	Zheng	H01R 13/6272
10,777,934	B2 *	9/2020	Yi	H01R 13/5219
2020/0251857	A1 *	8/2020	Takeuchi	H01R 13/629
2020/0274285	A1 *	8/2020	Kawashima	H01R 13/6272

FOREIGN PATENT DOCUMENTS

TW	D183852	6/2017
WO	D205298-007	* 3/2020
WO	D205298-008	* 3/2020
WO	D205298-018	* 3/2020

* cited by examiner

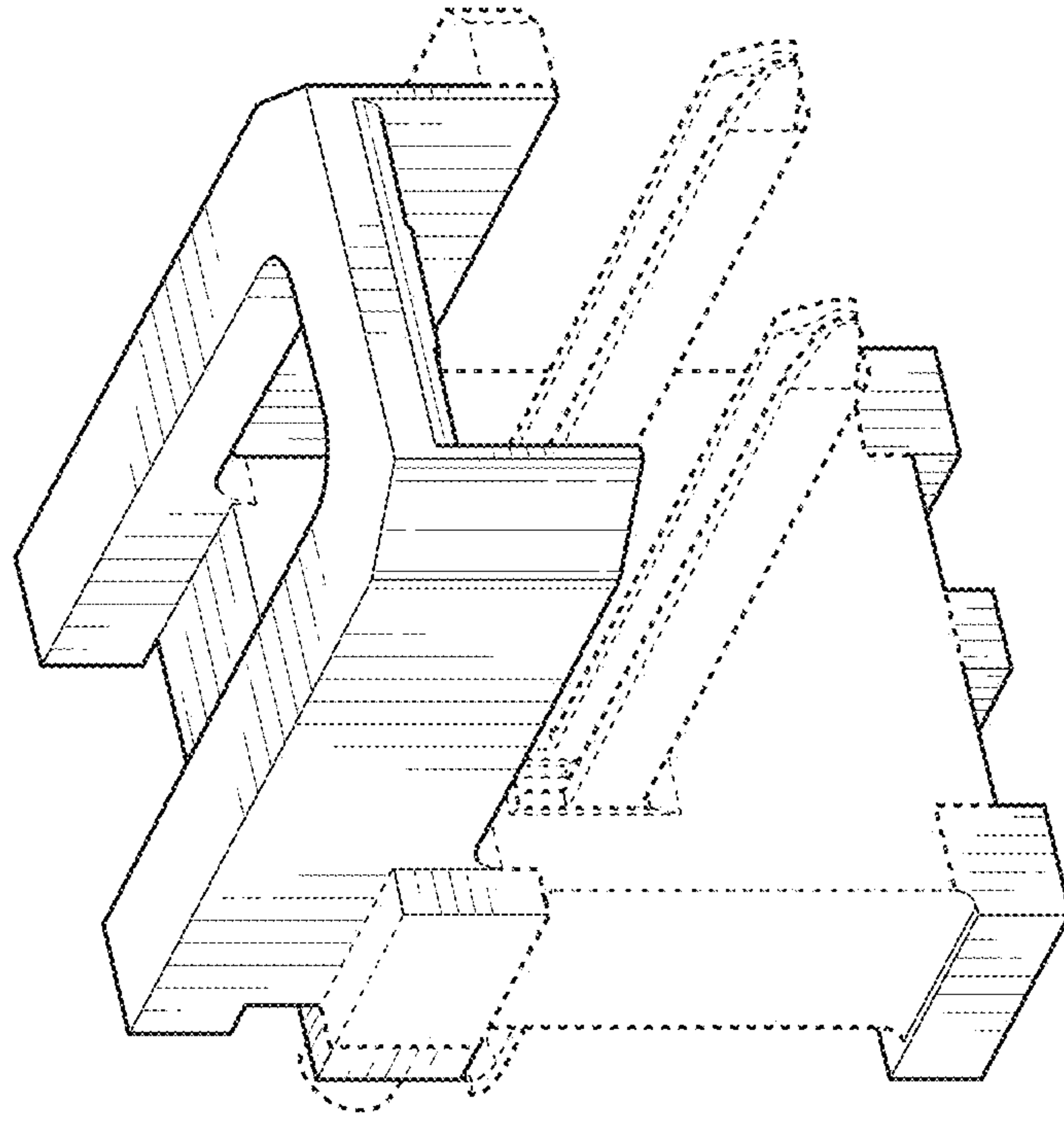


FIG. 2

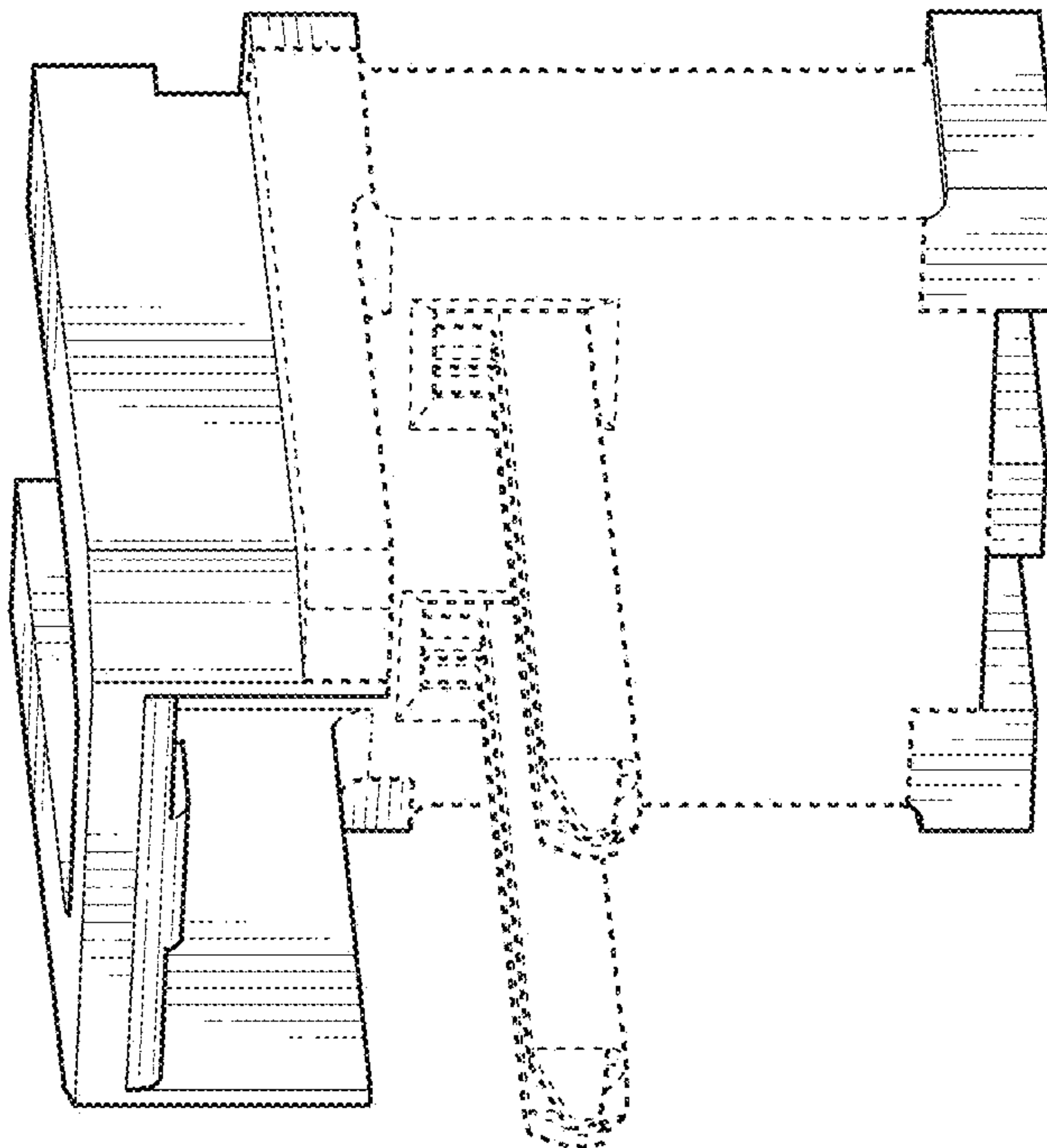


FIG. 1

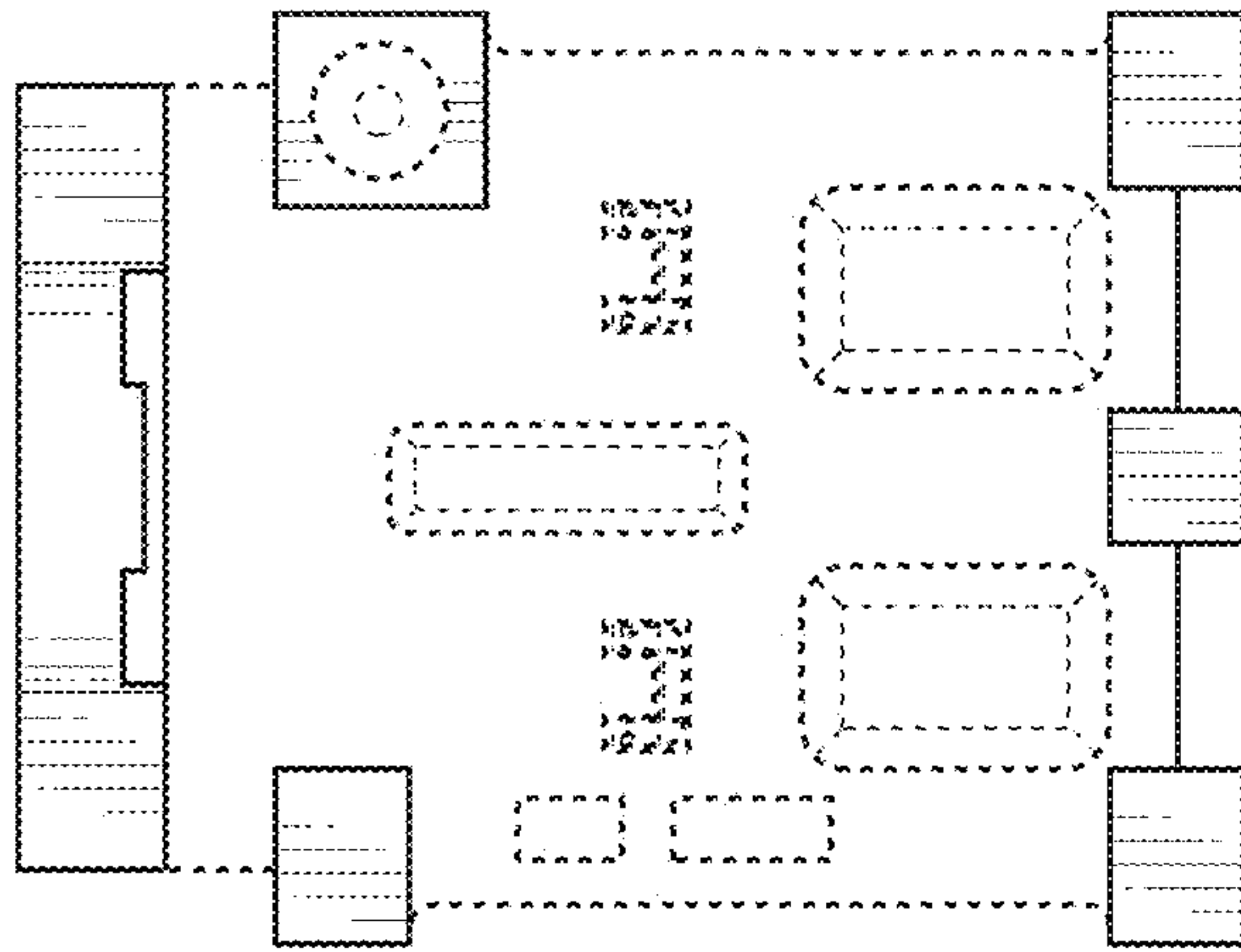


FIG. 3

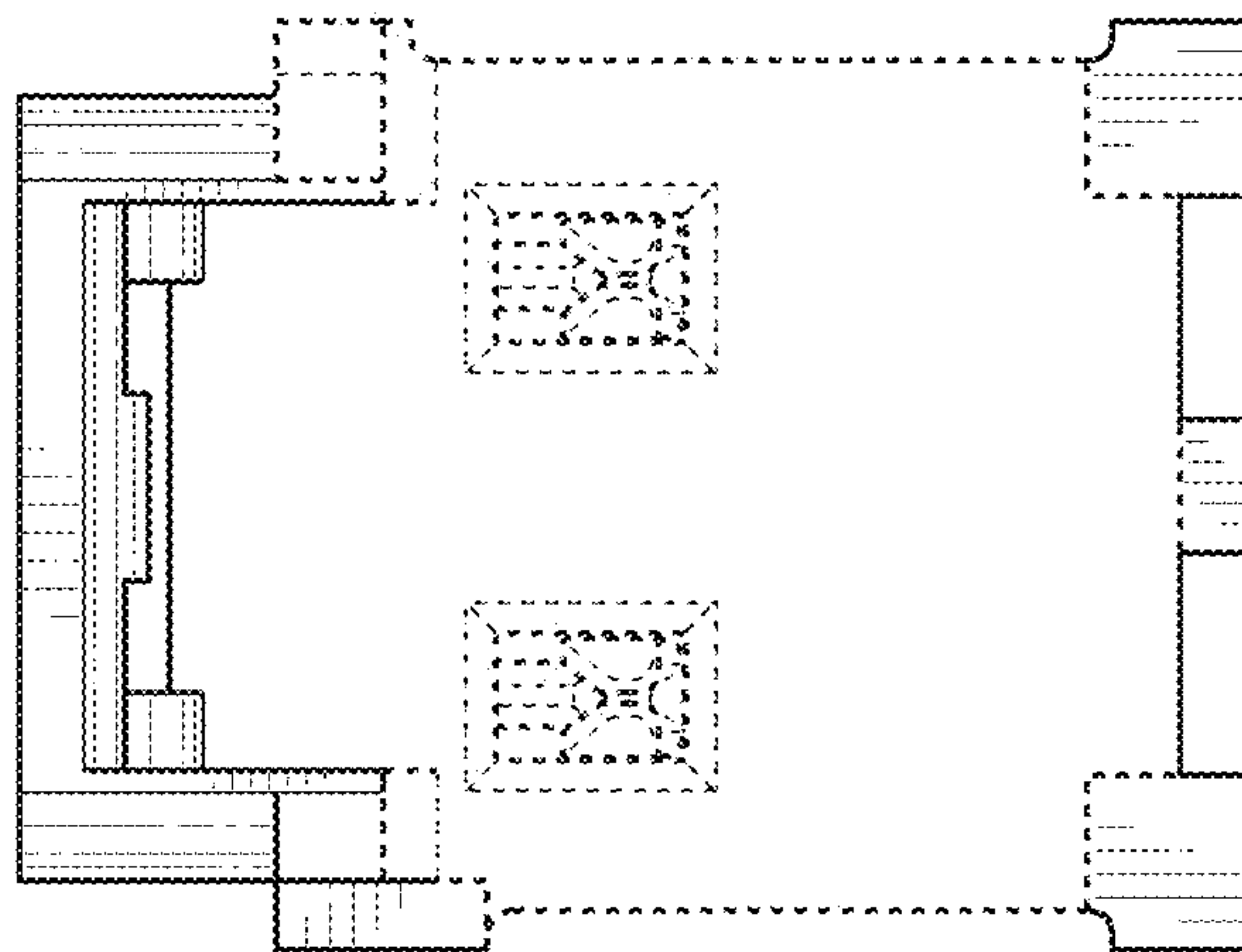


FIG. 4

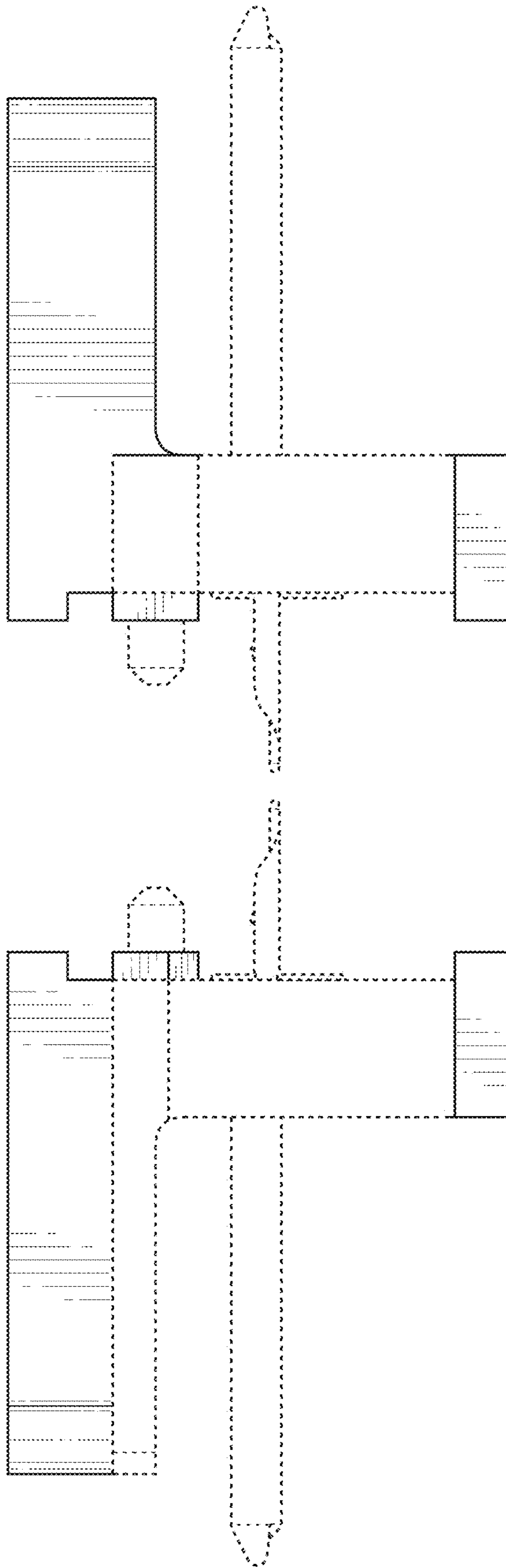


FIG. 5

FIG. 6

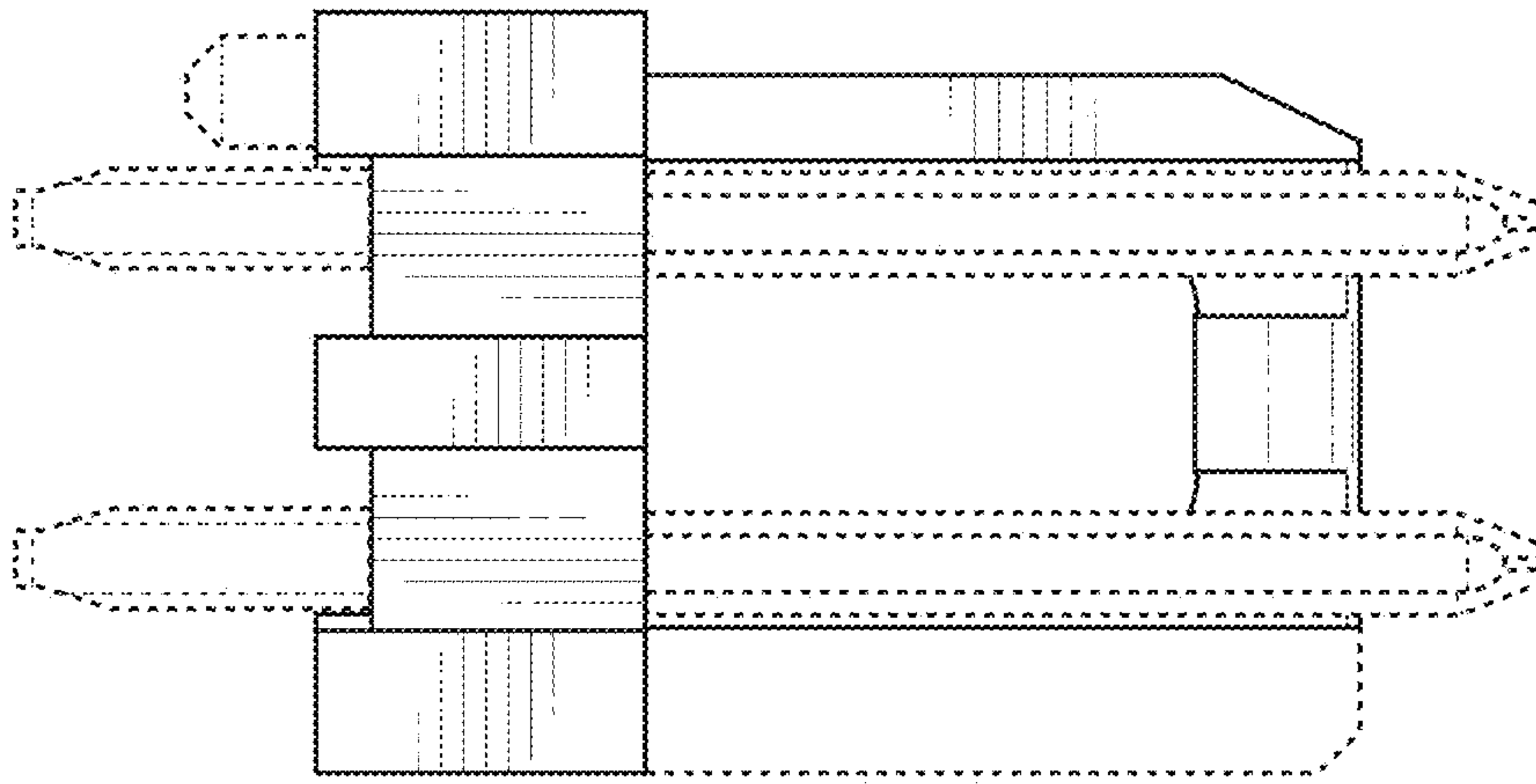


FIG. 8

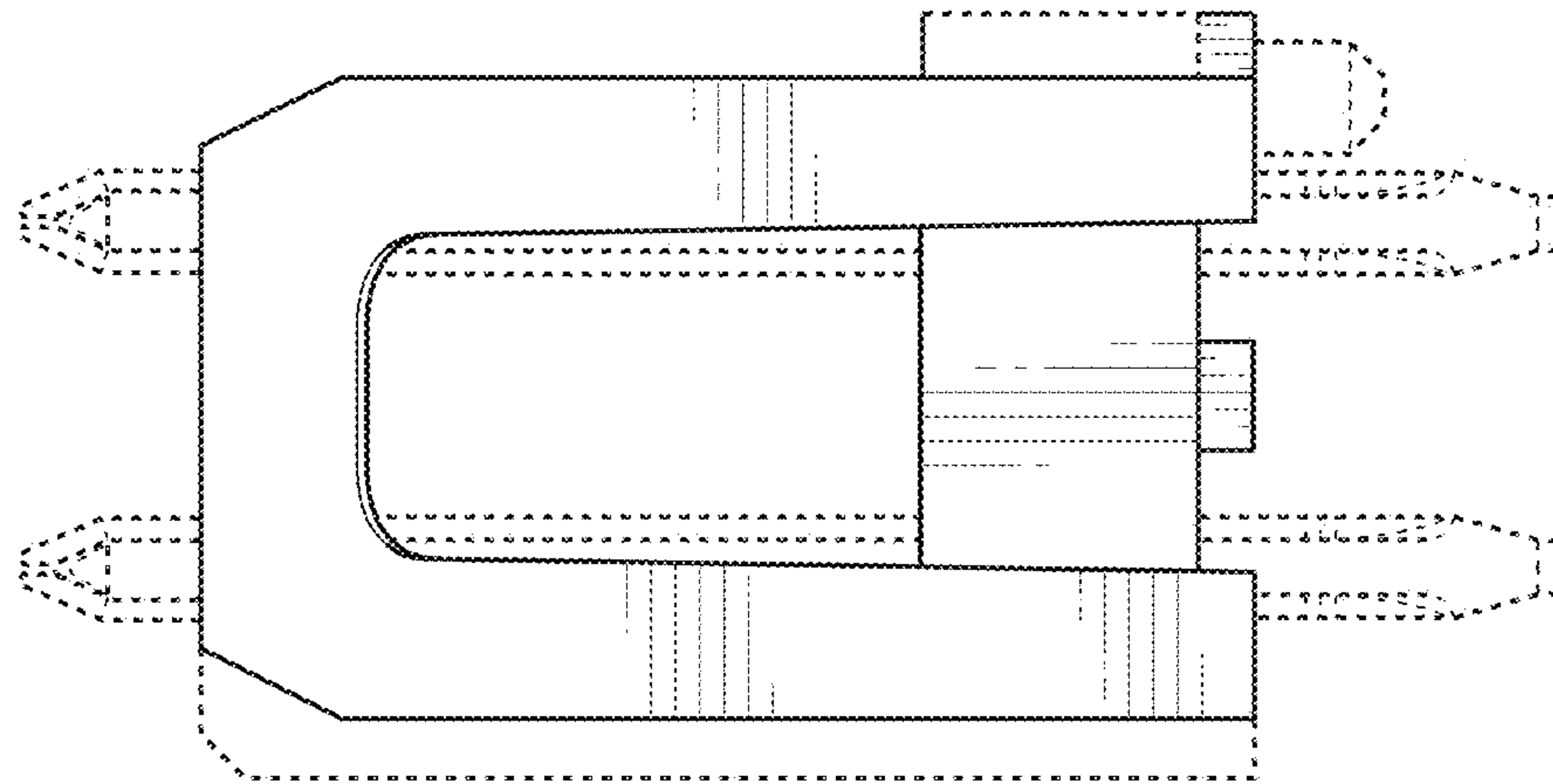


FIG. 7

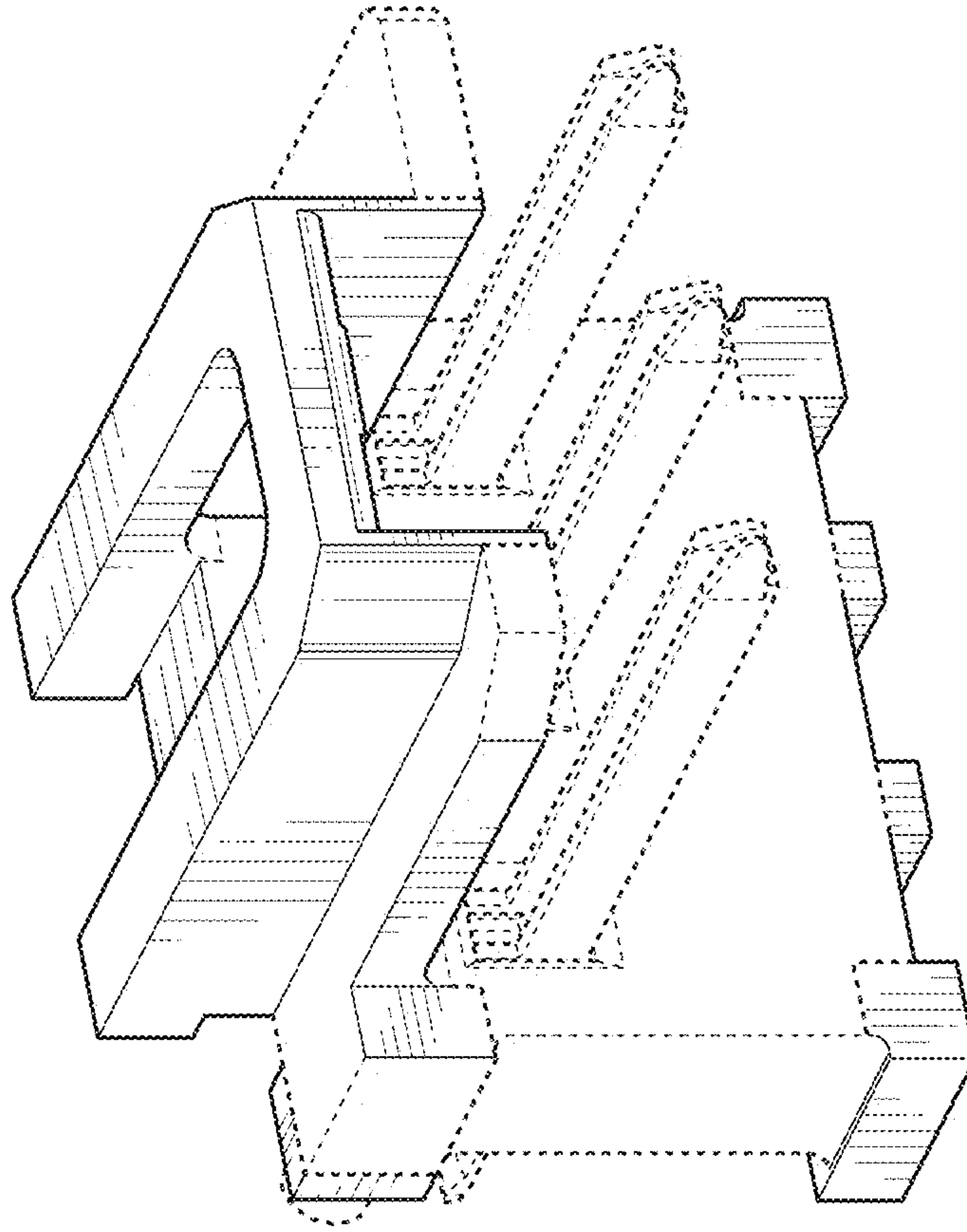


FIG. 10

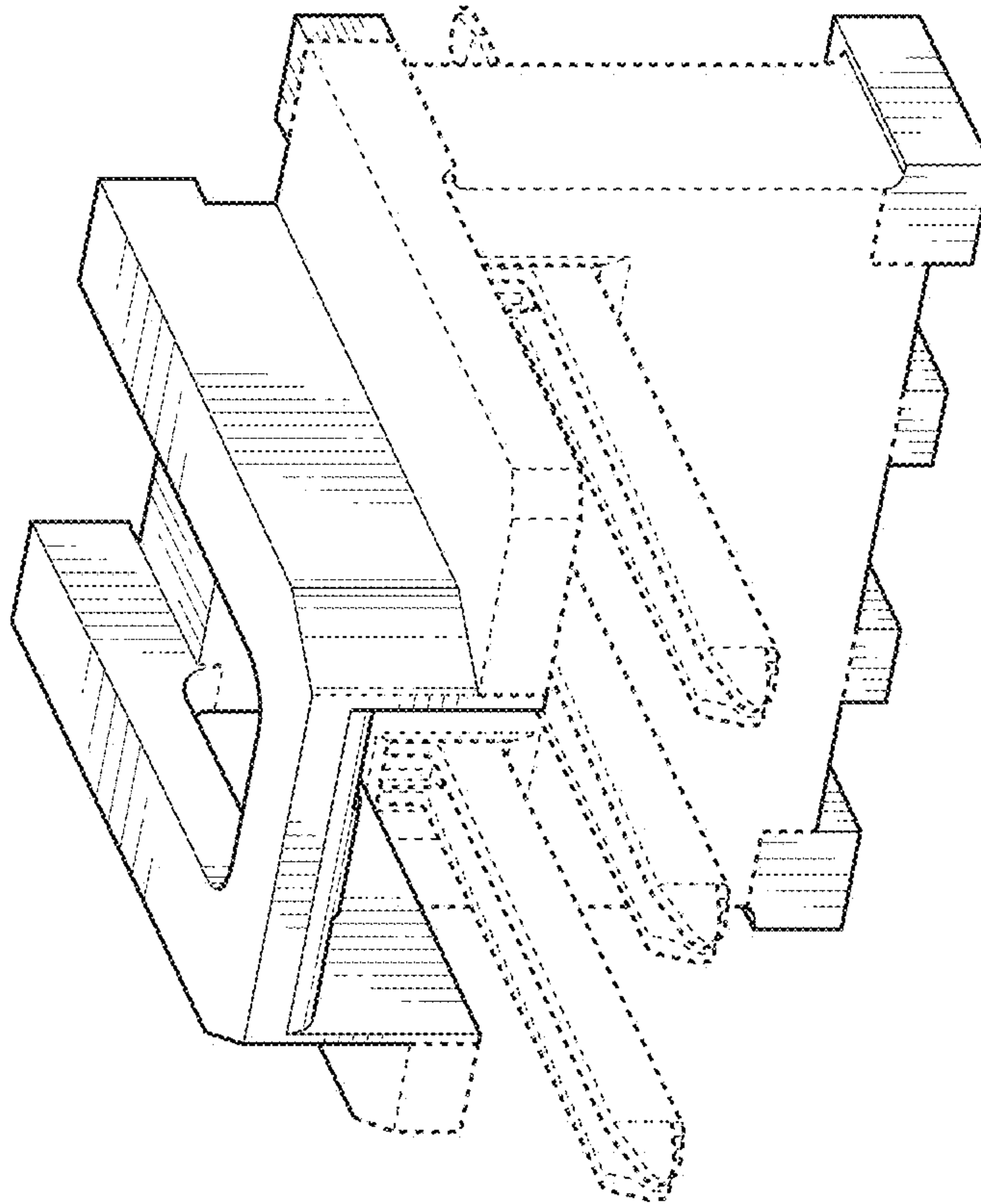


FIG. 9

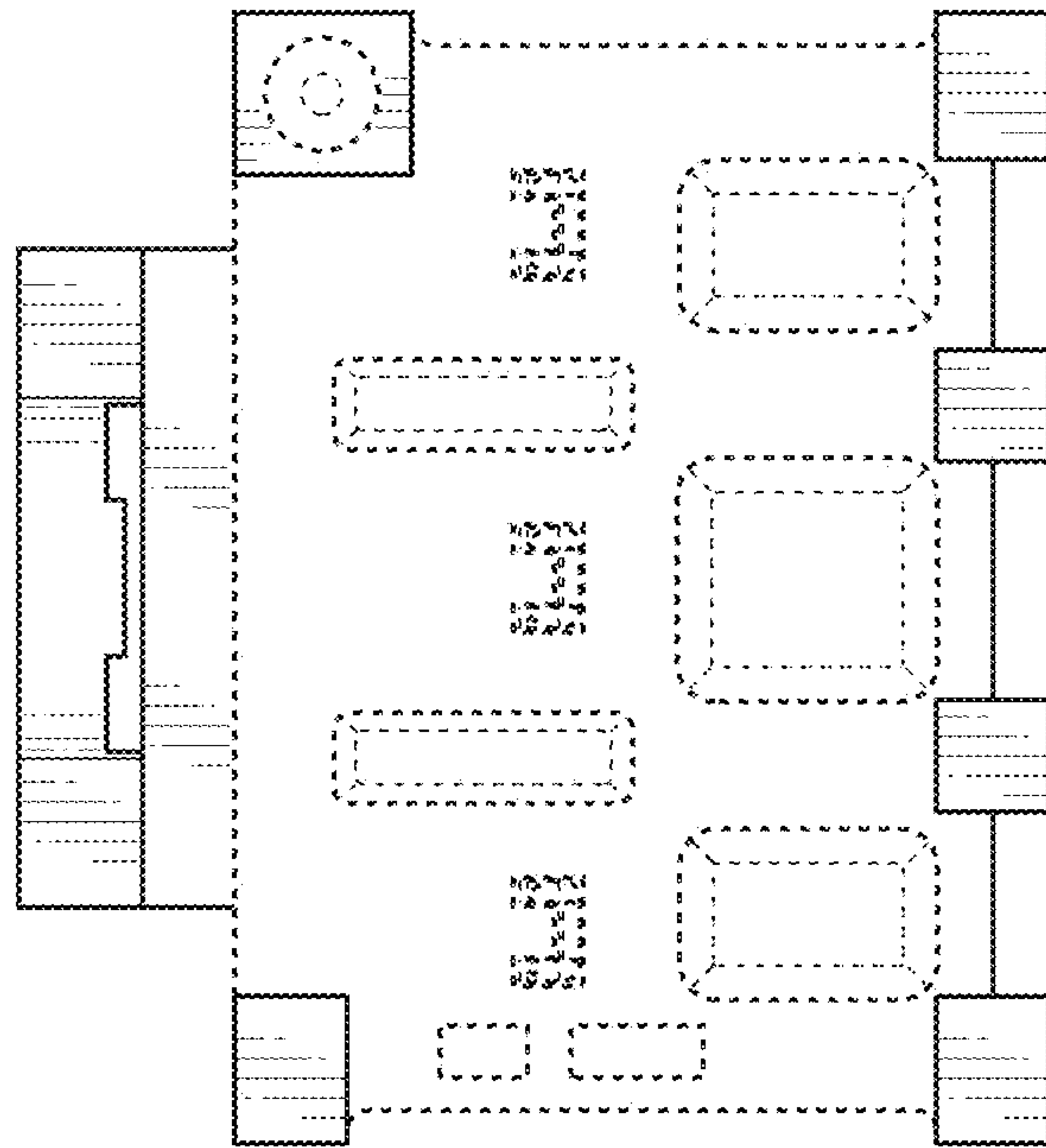


FIG. 12

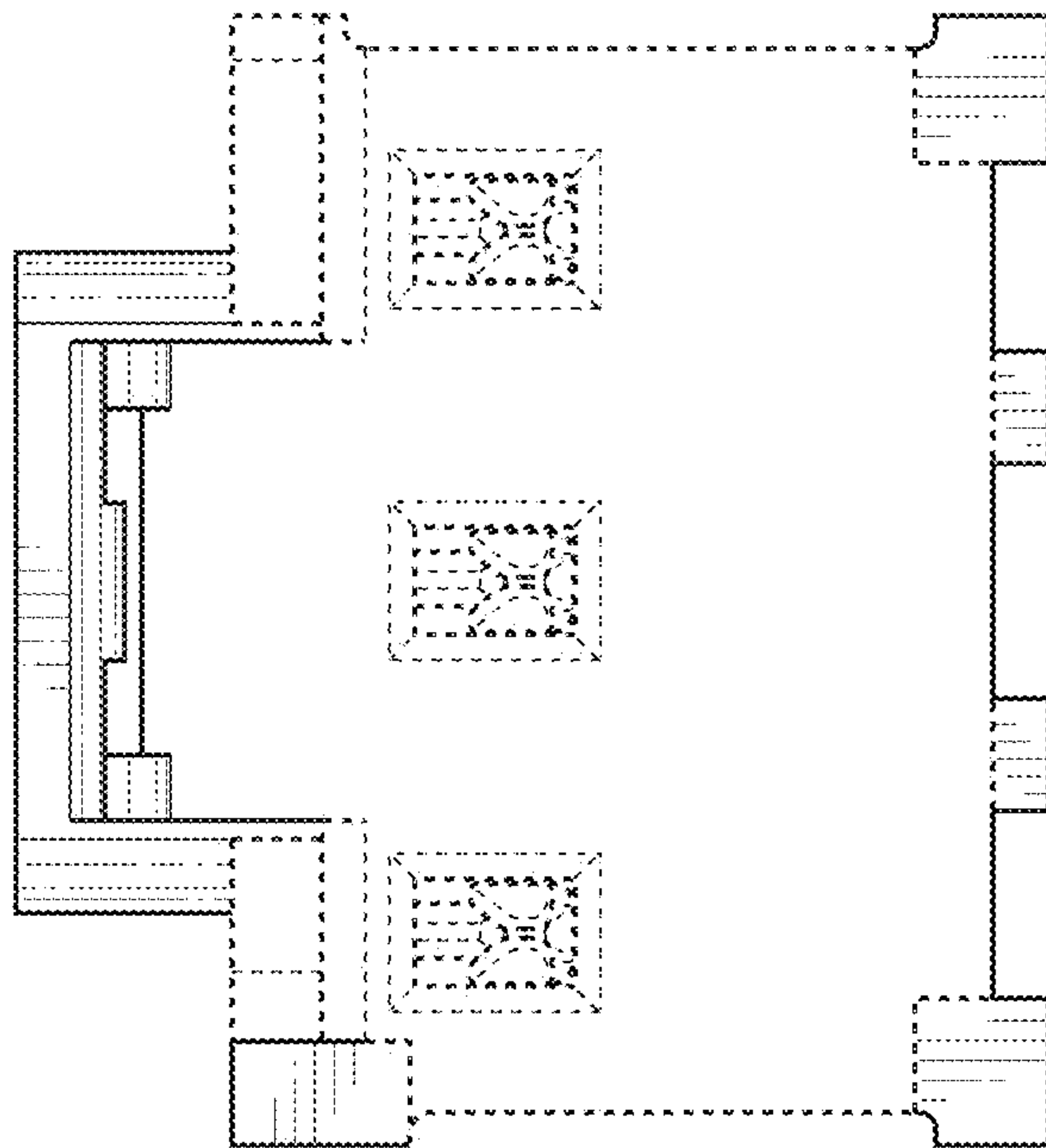


FIG. 11

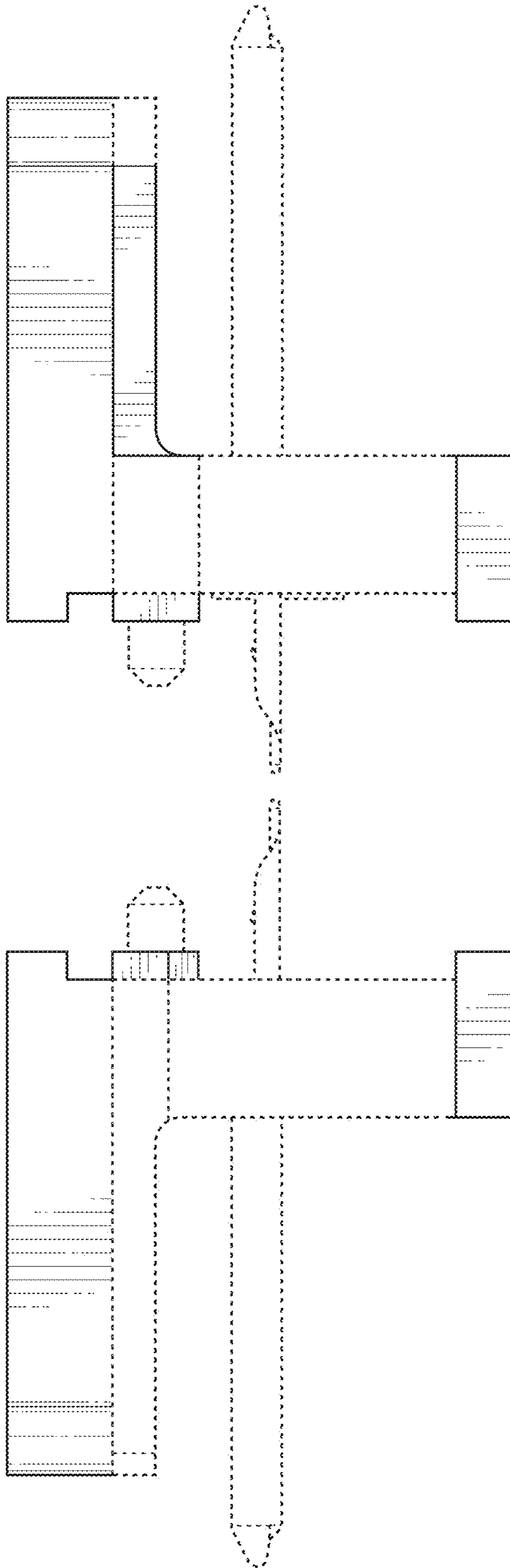


FIG. 14

FIG. 13

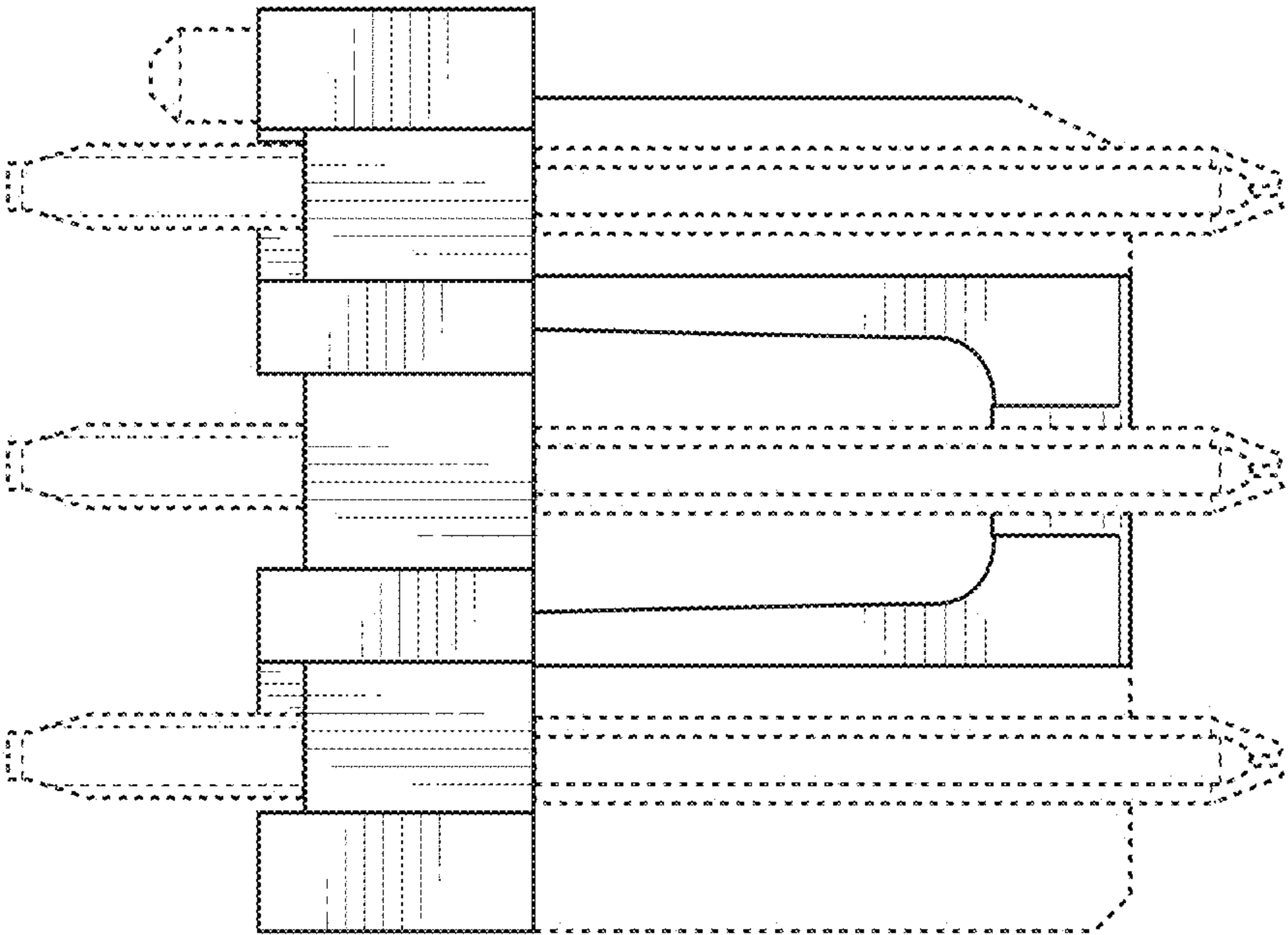


FIG. 16

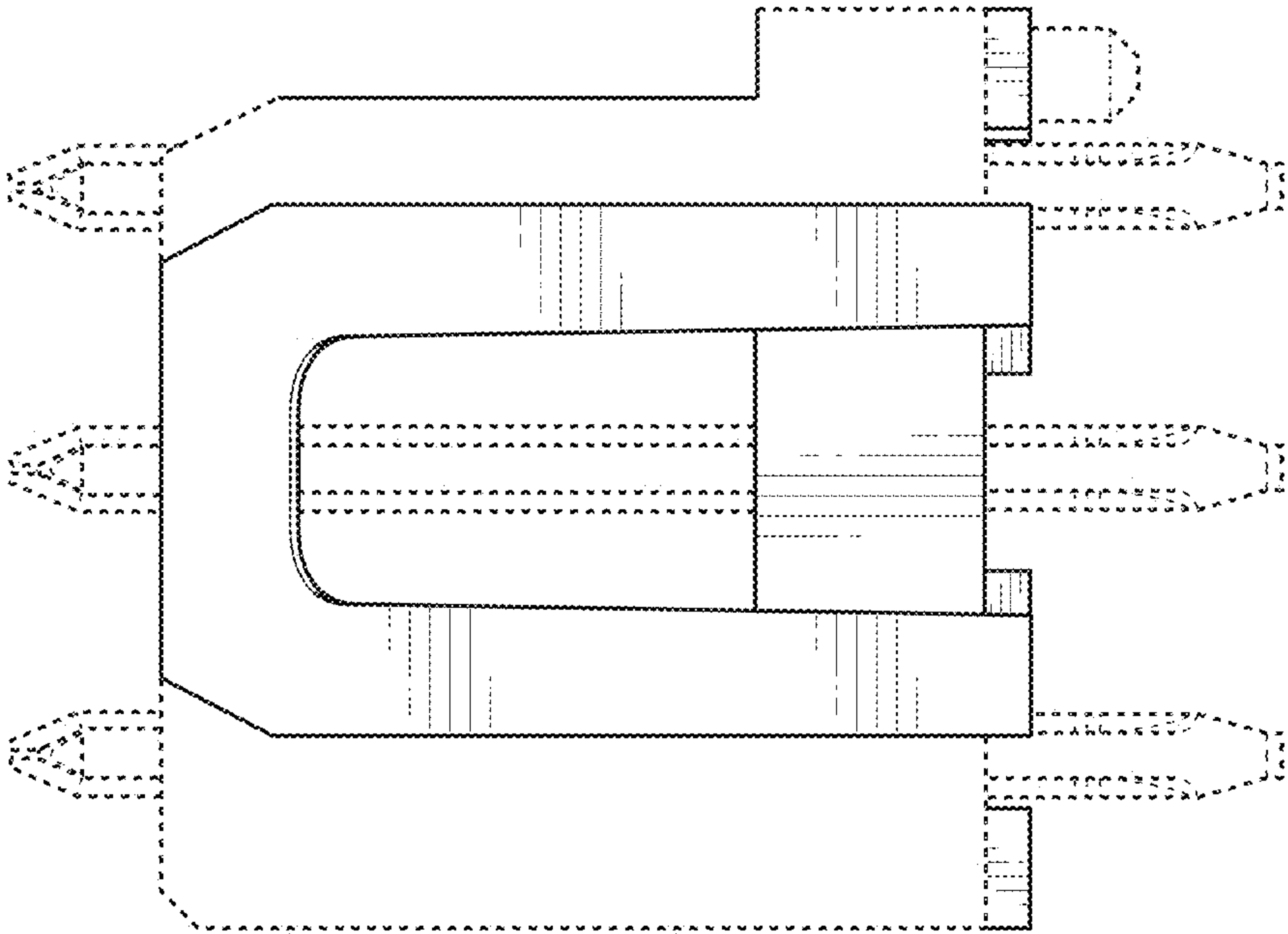


FIG. 15

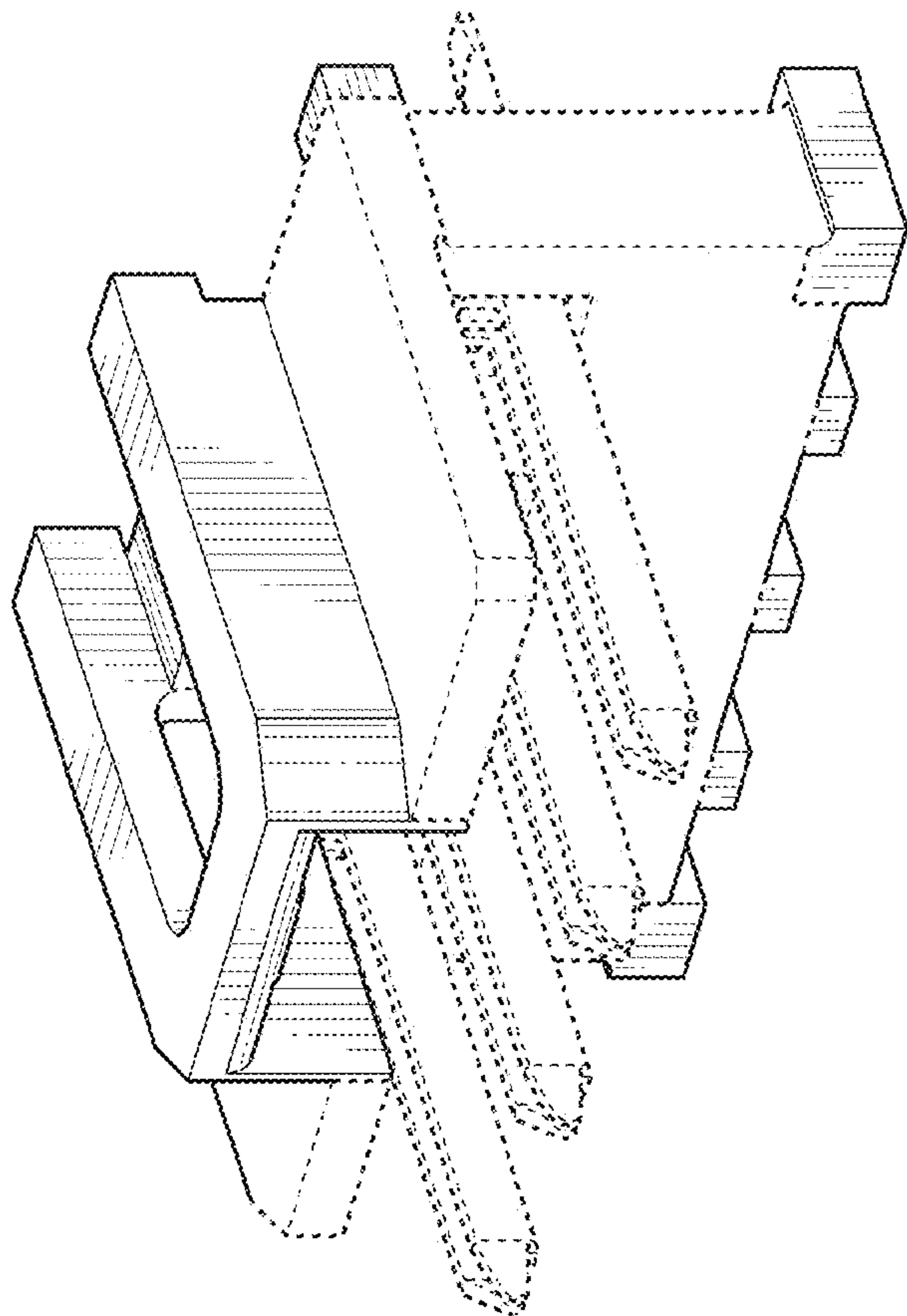


FIG. 17

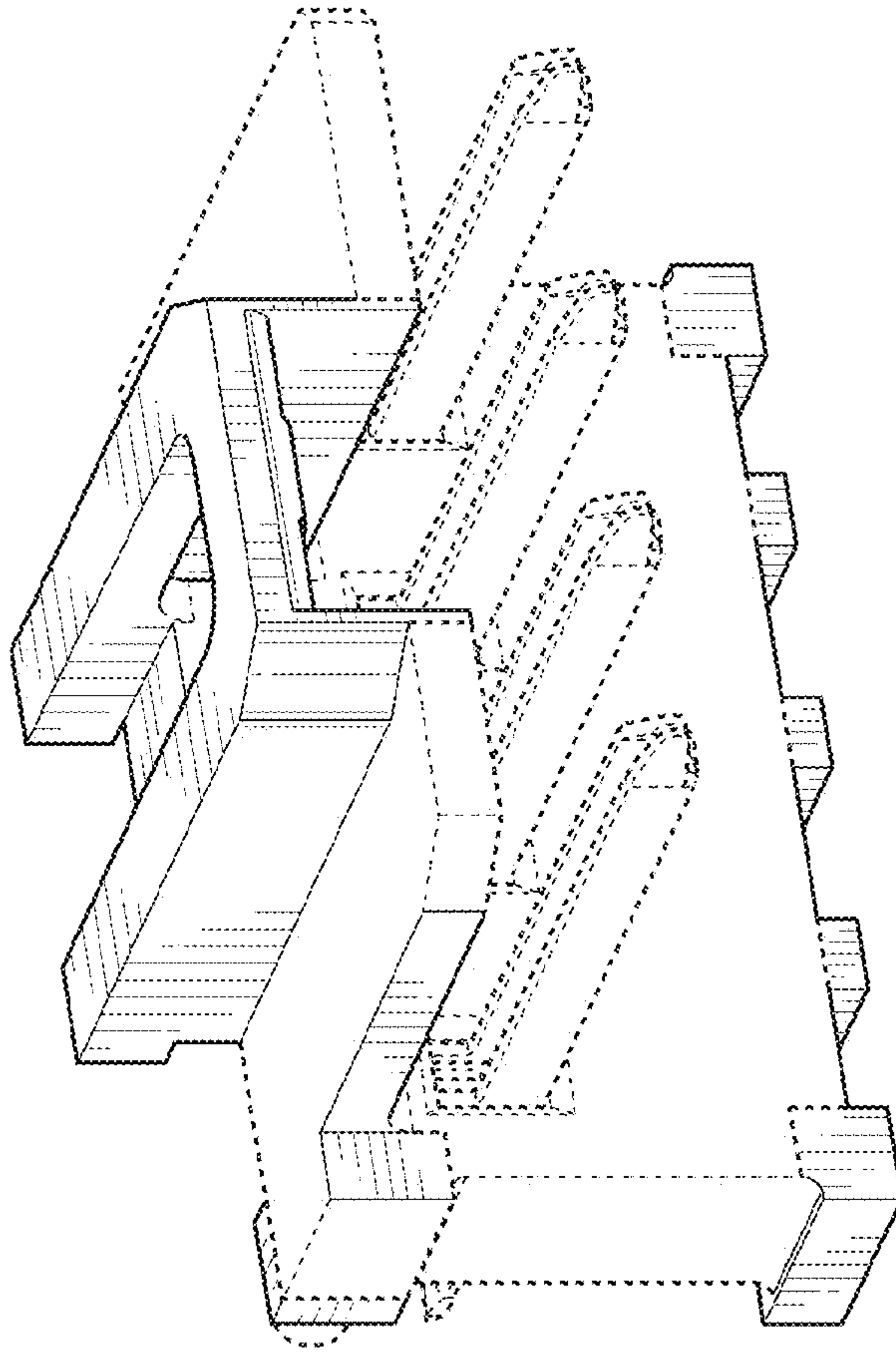


FIG. 18

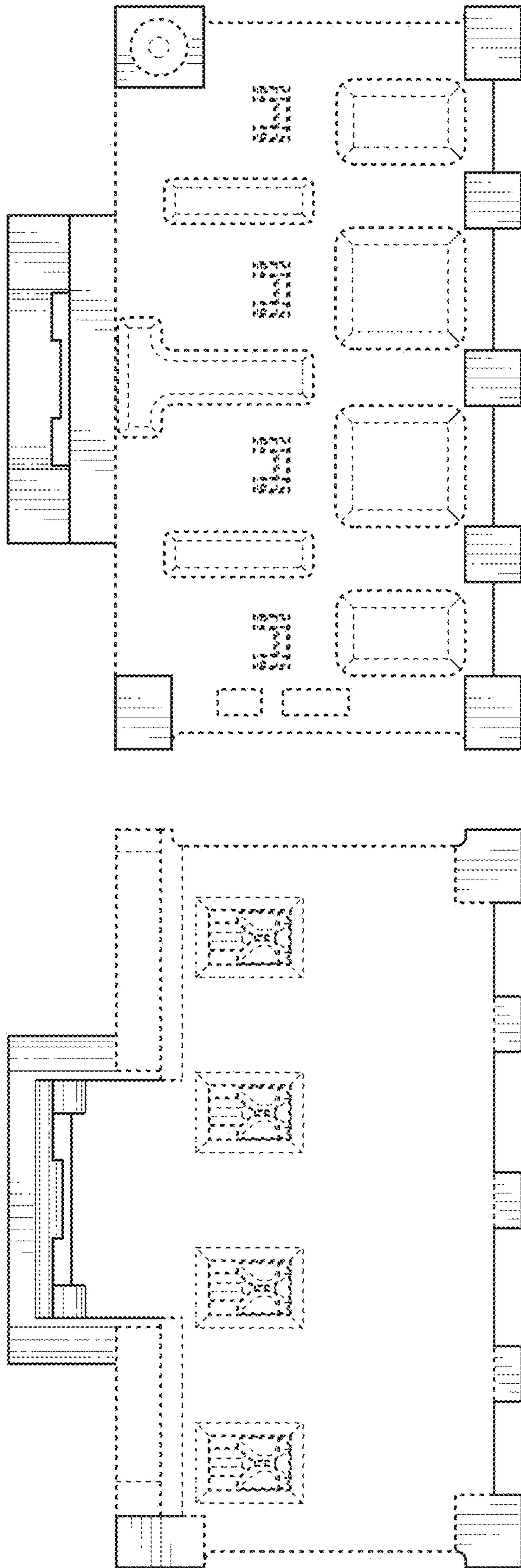


FIG. 20

FIG. 19

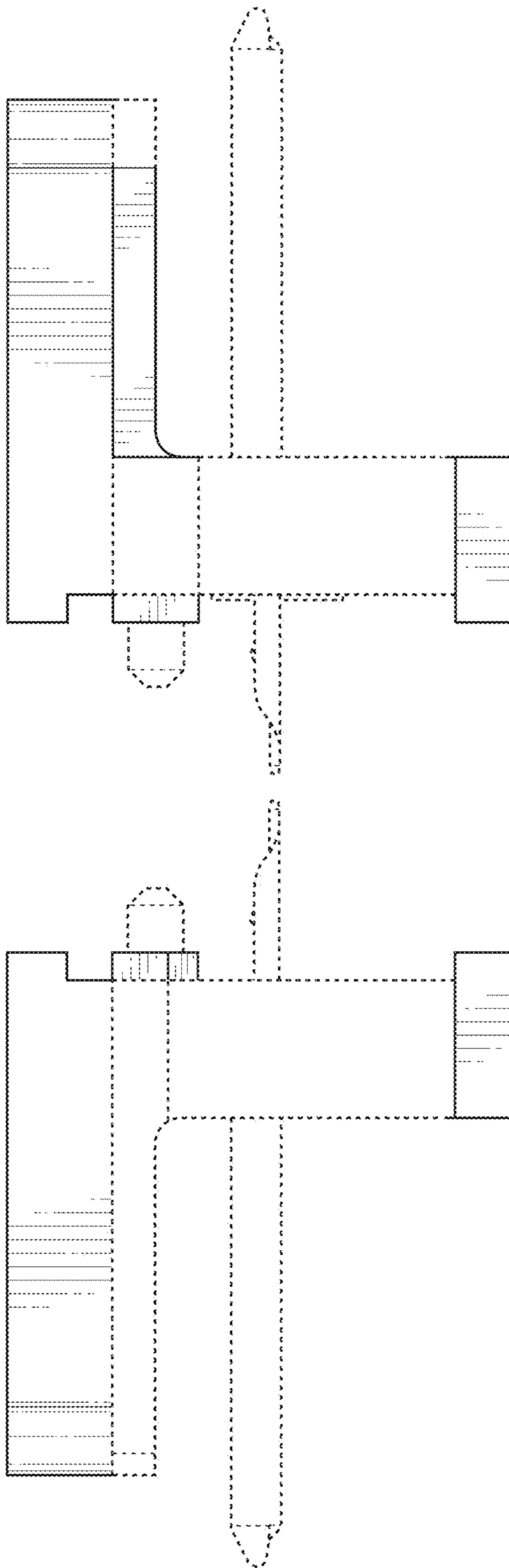


FIG. 22

FIG. 21

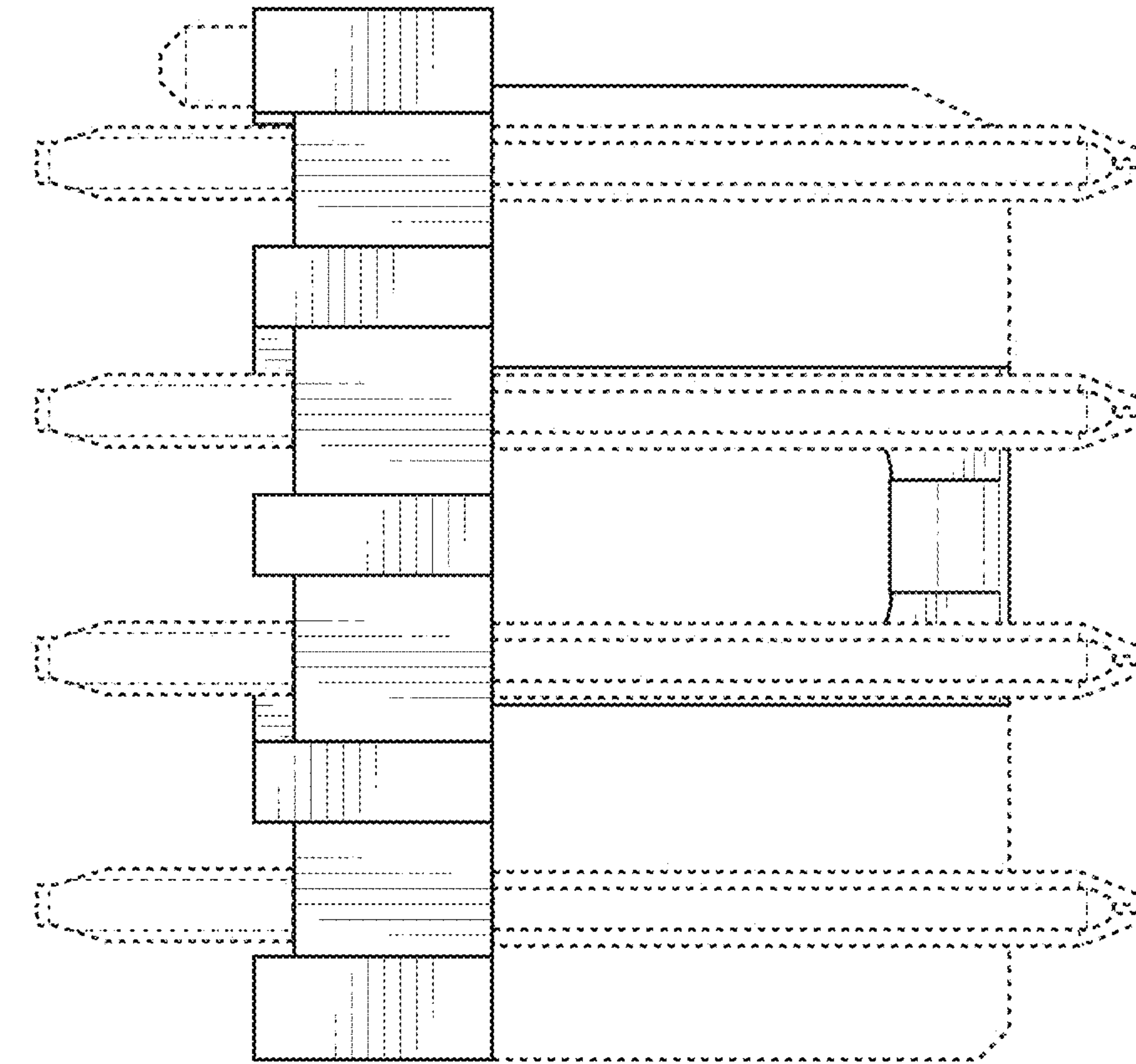


FIG. 24

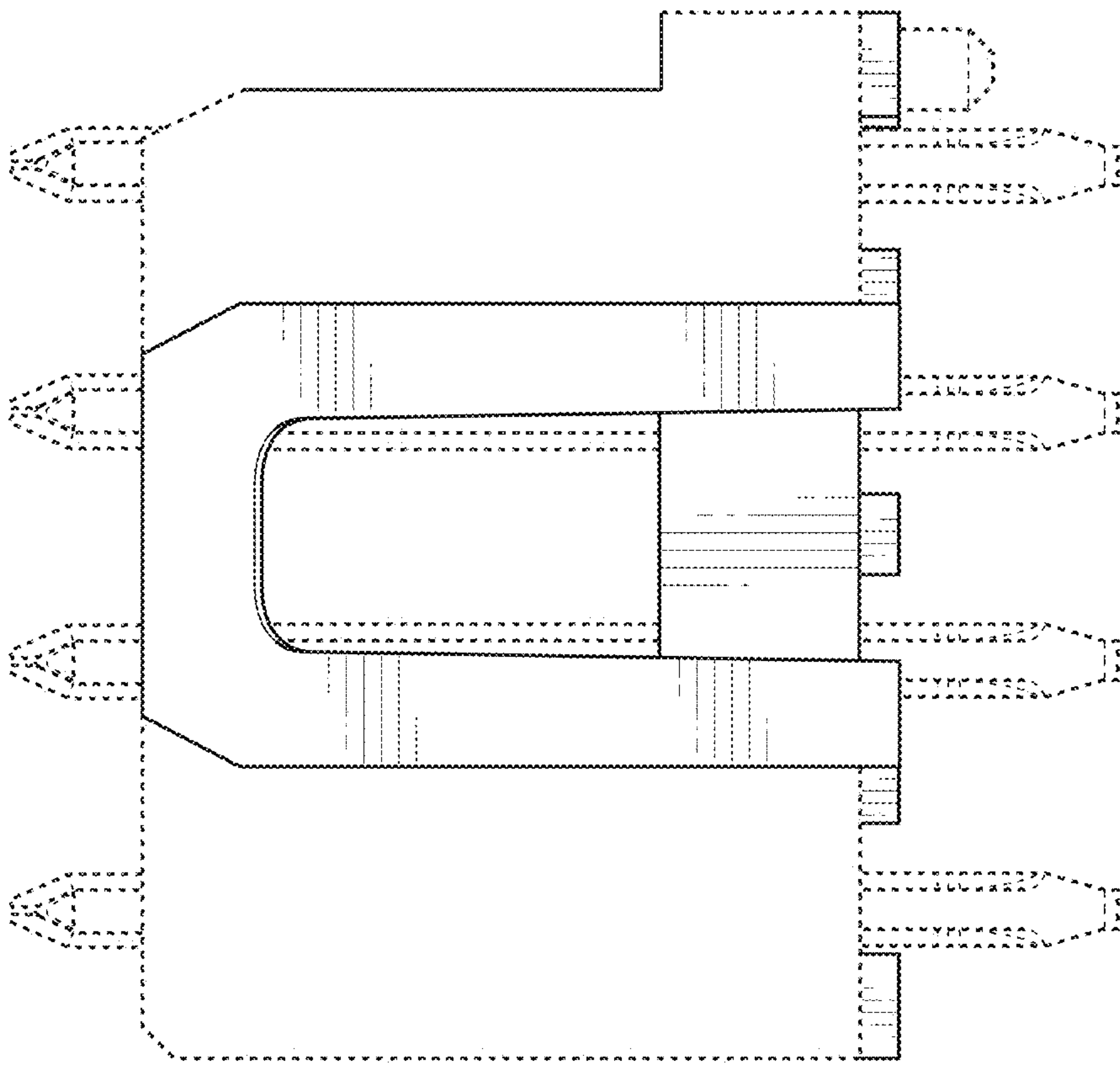


FIG. 23

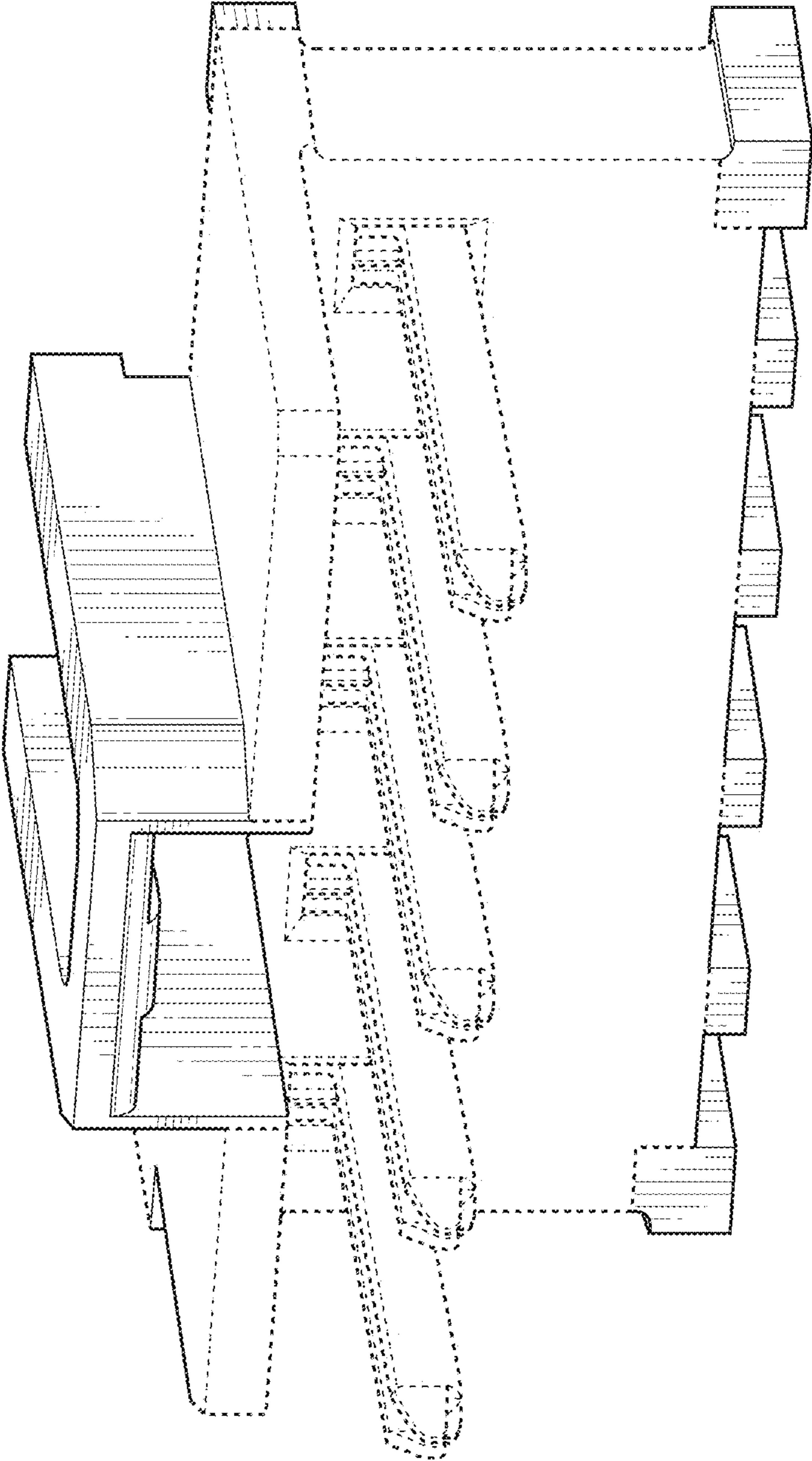


FIG. 25

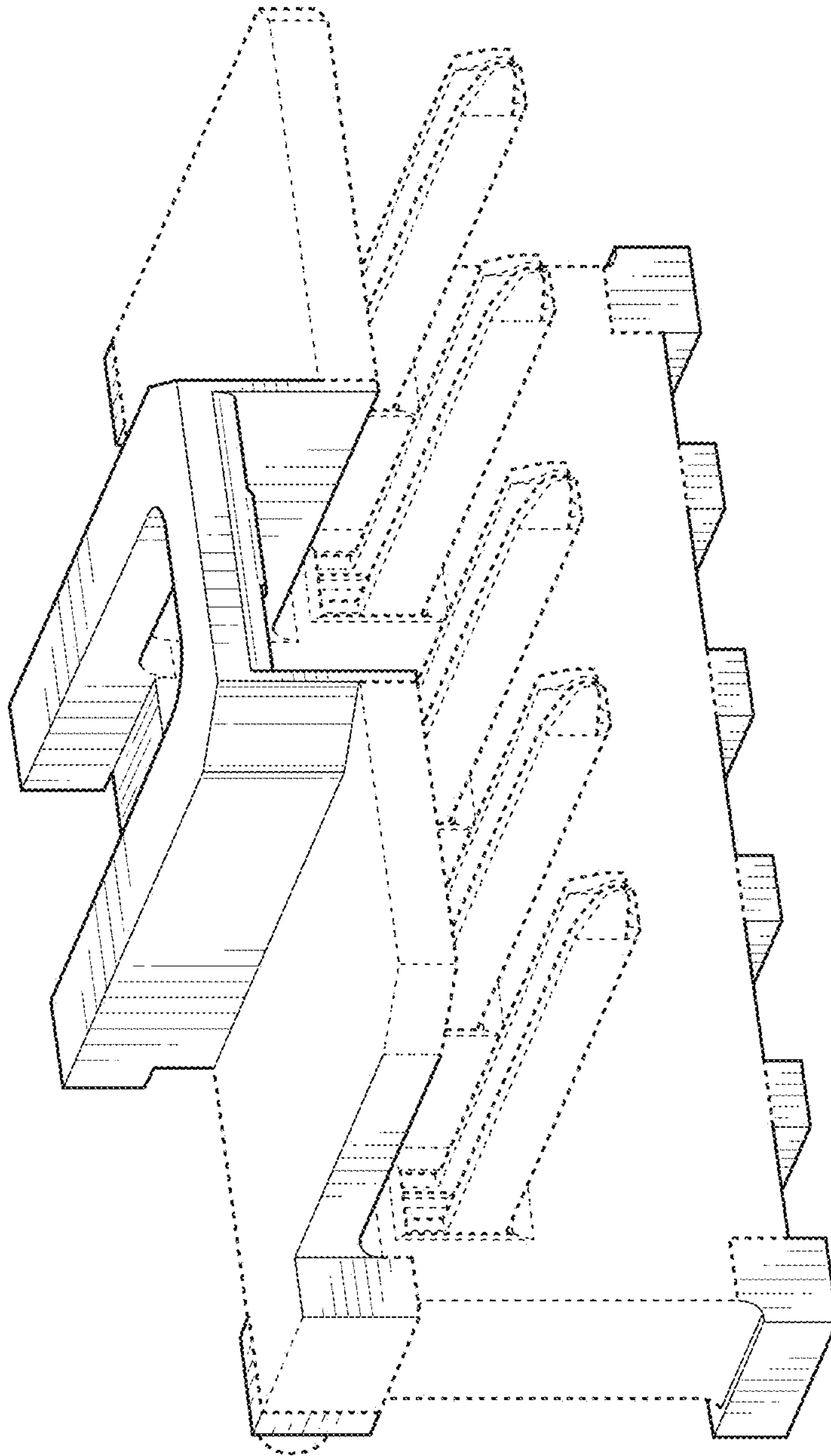


FIG. 26

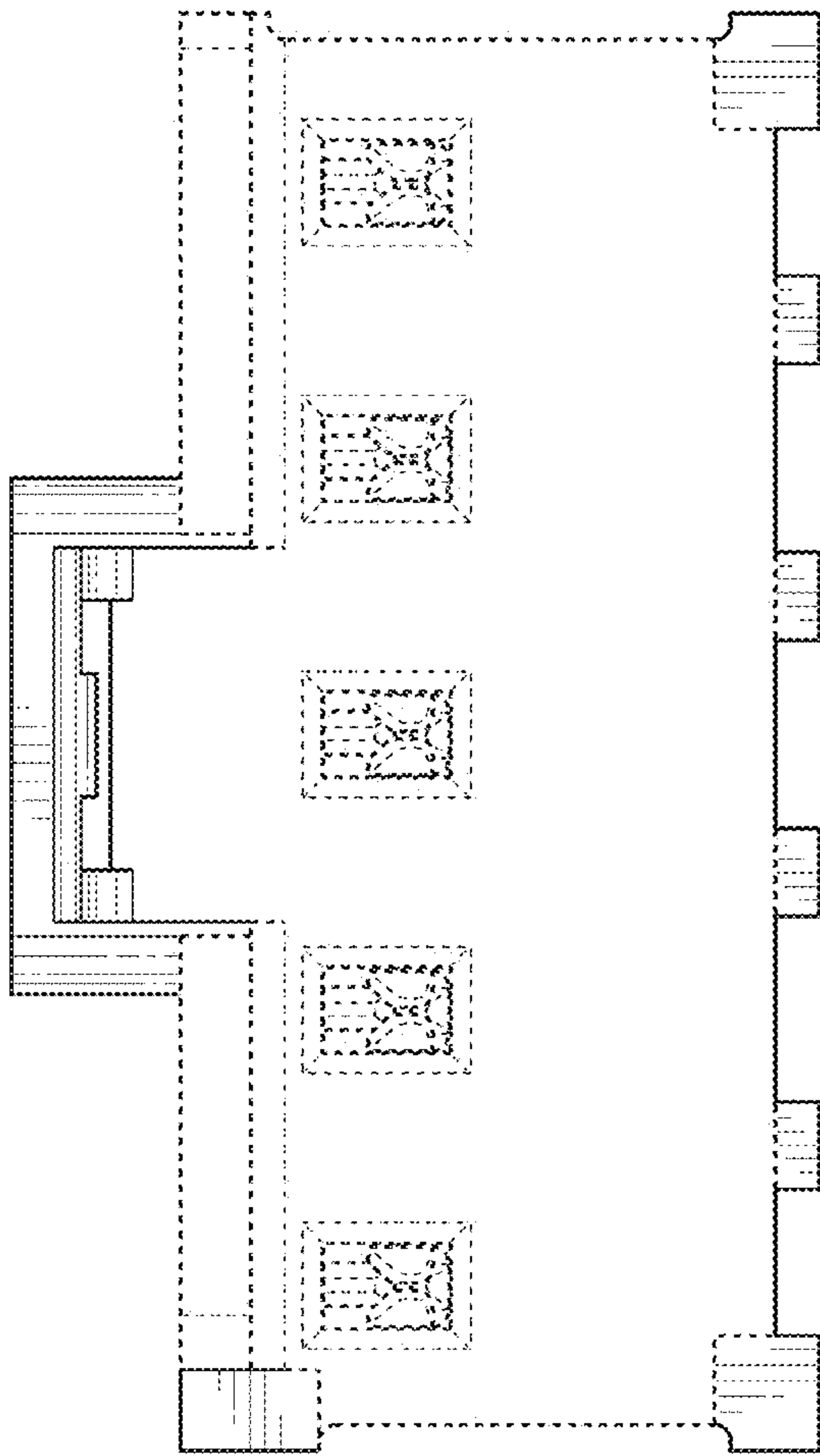


FIG. 27

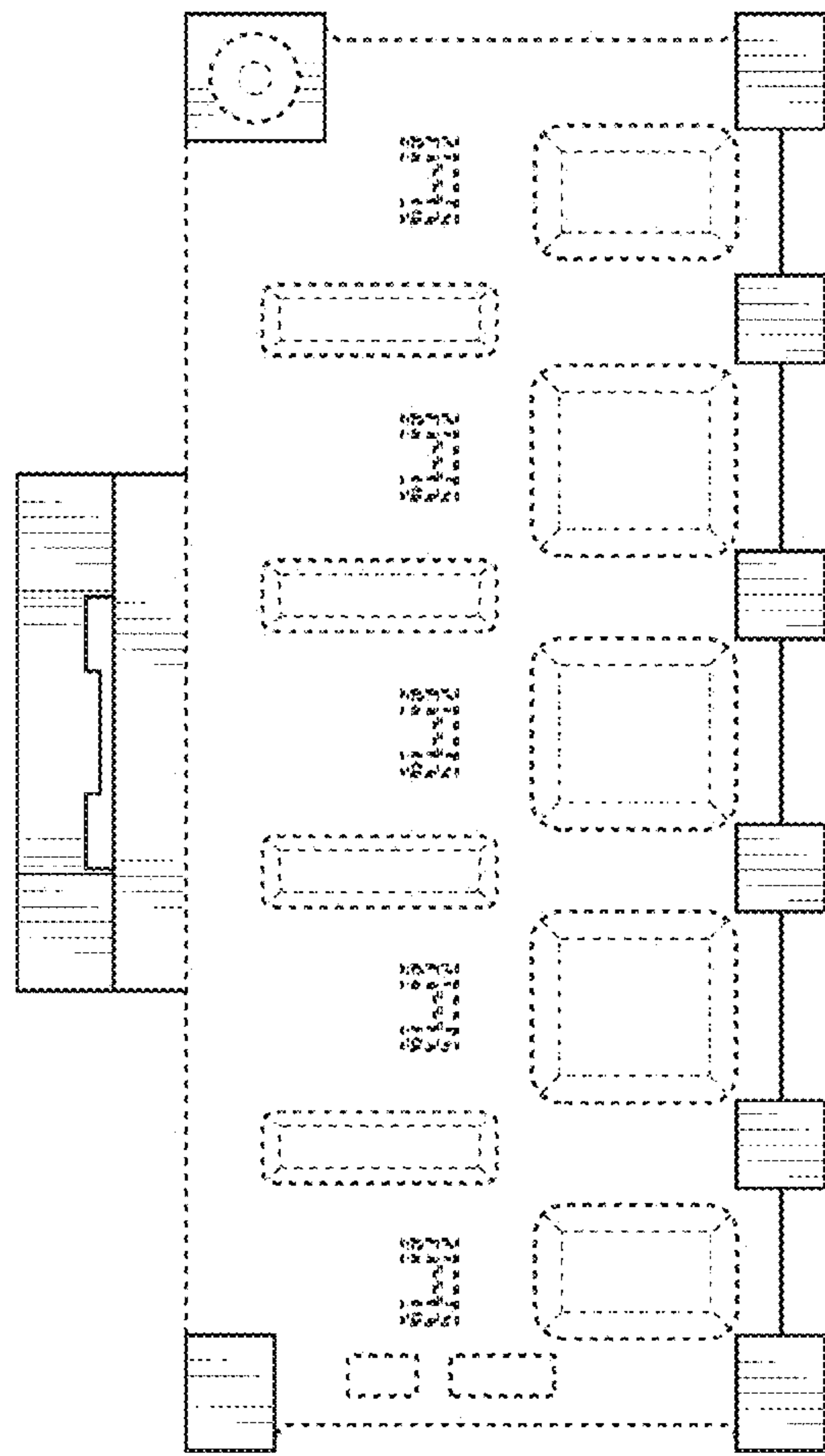


FIG. 28

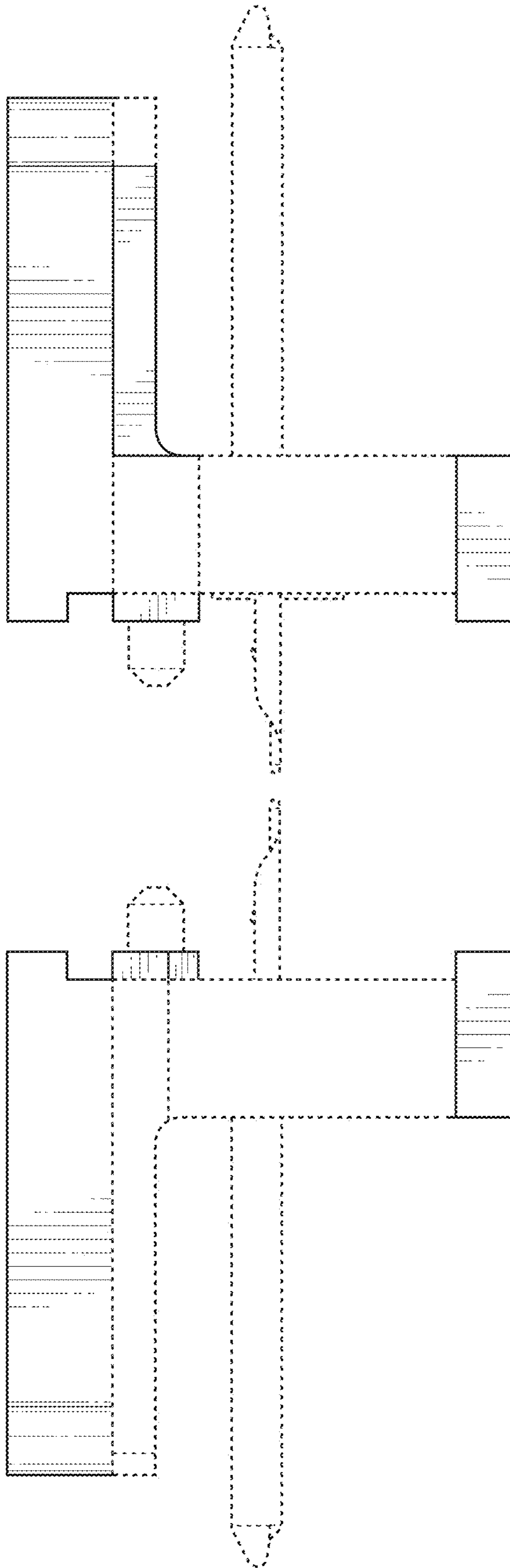


FIG. 30

FIG. 29

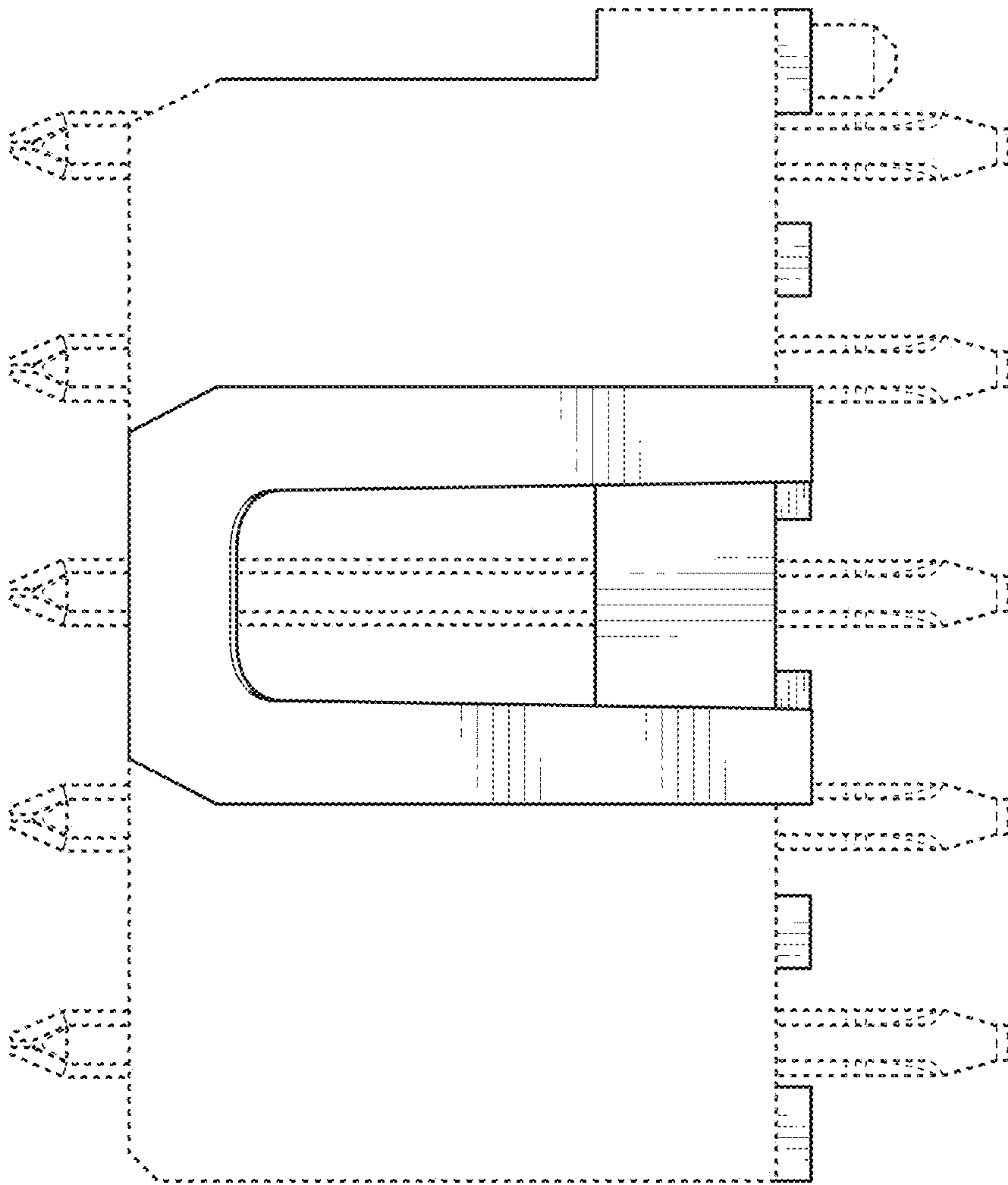


FIG. 31

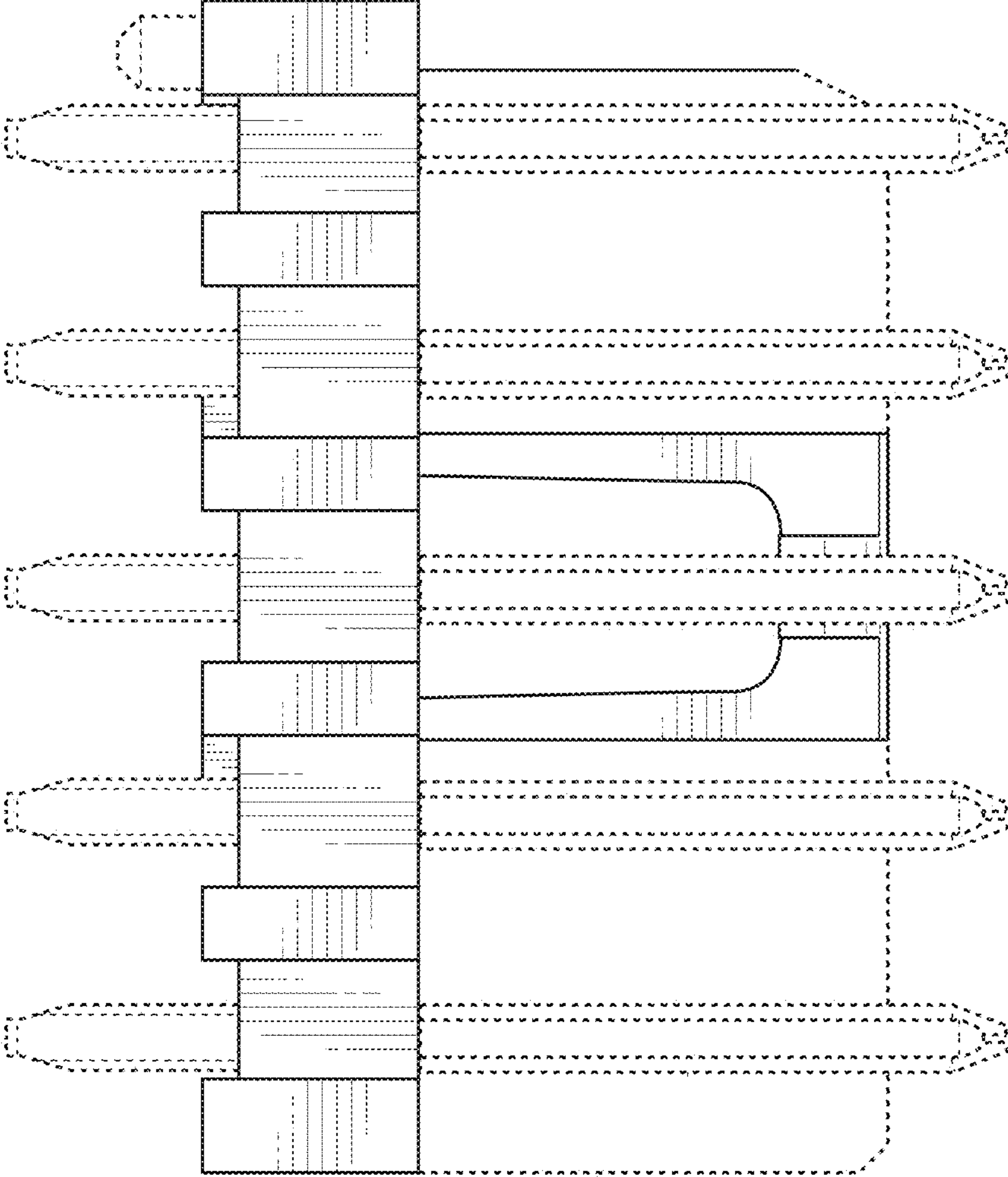


FIG. 32

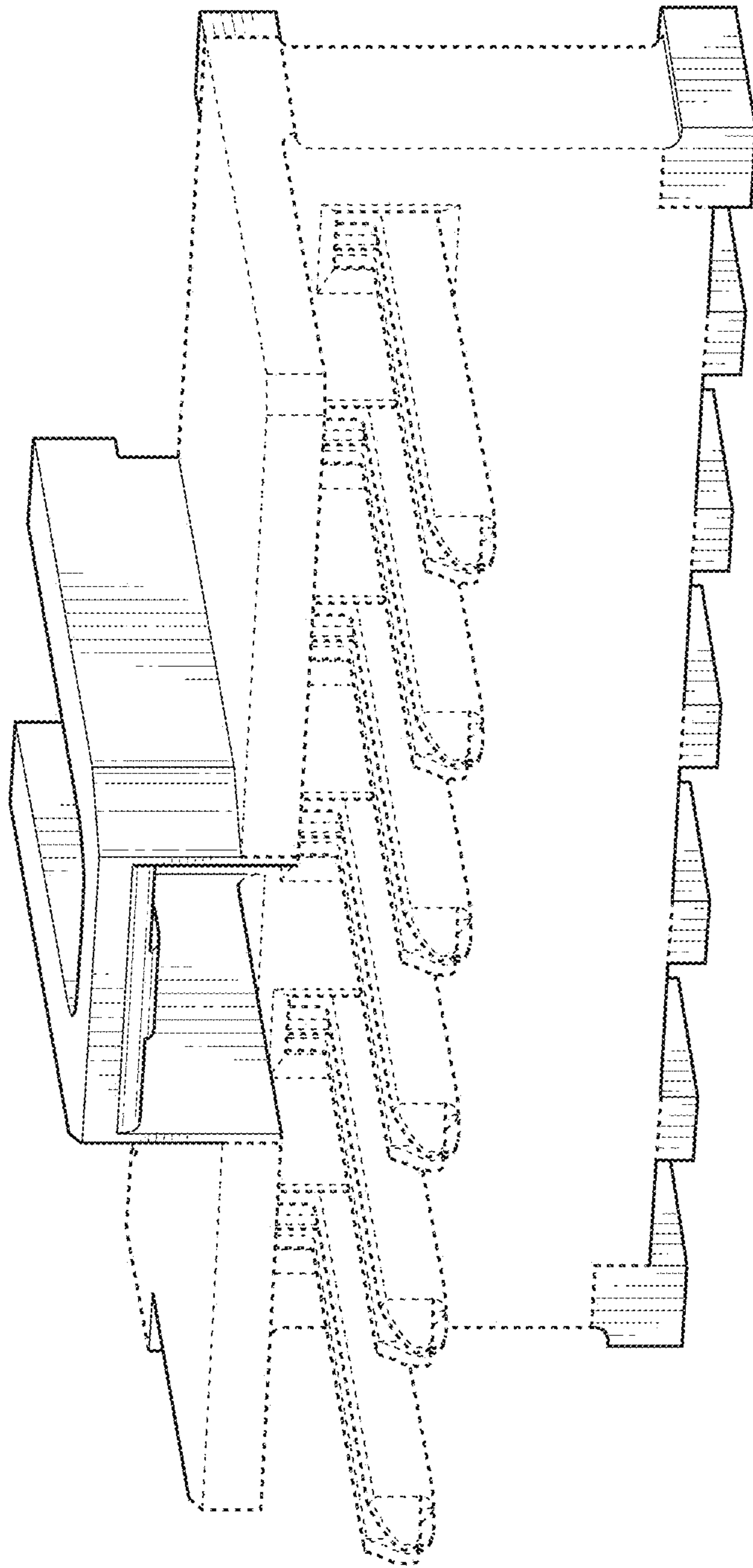


FIG. 33

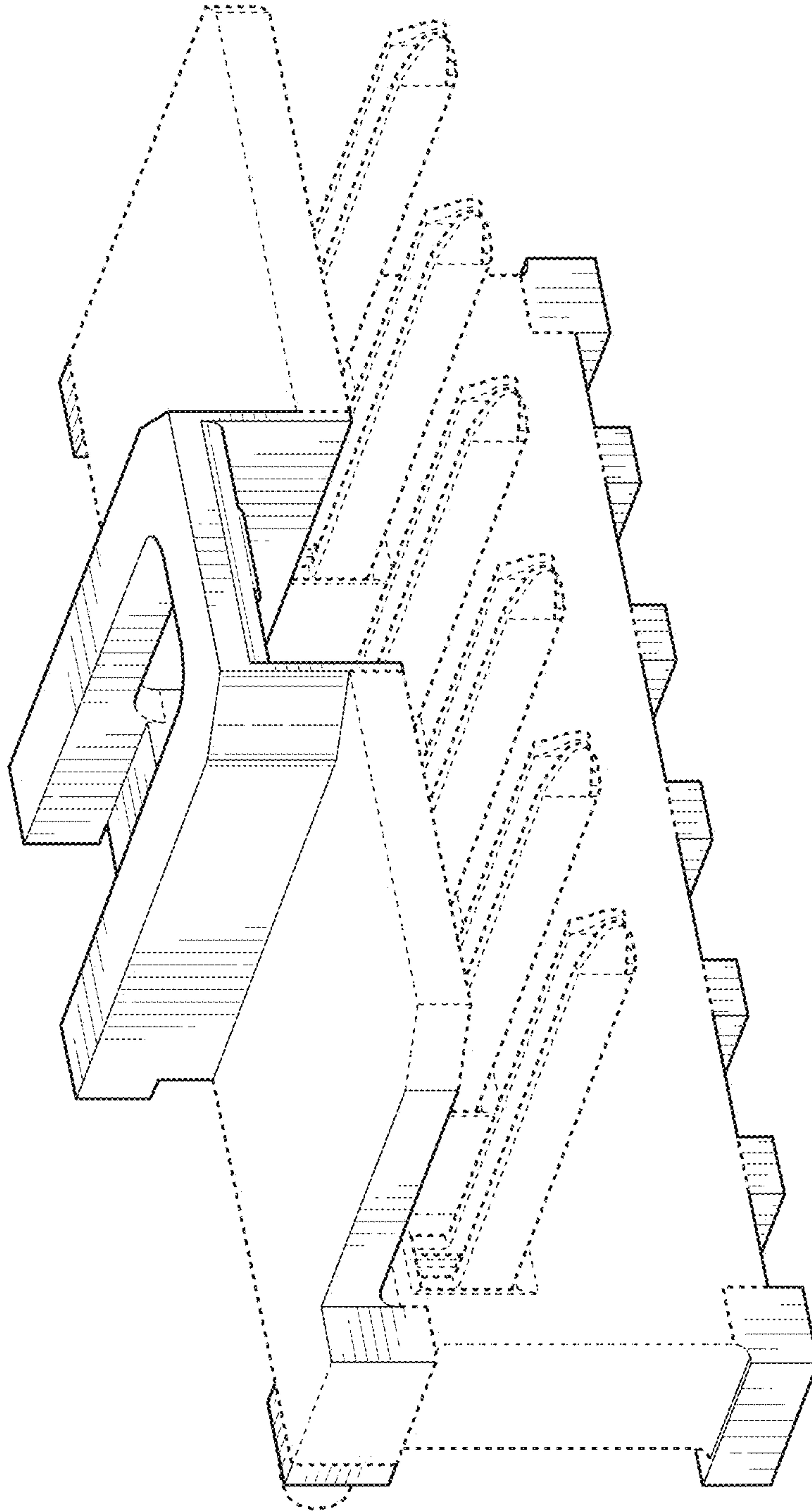


FIG. 34

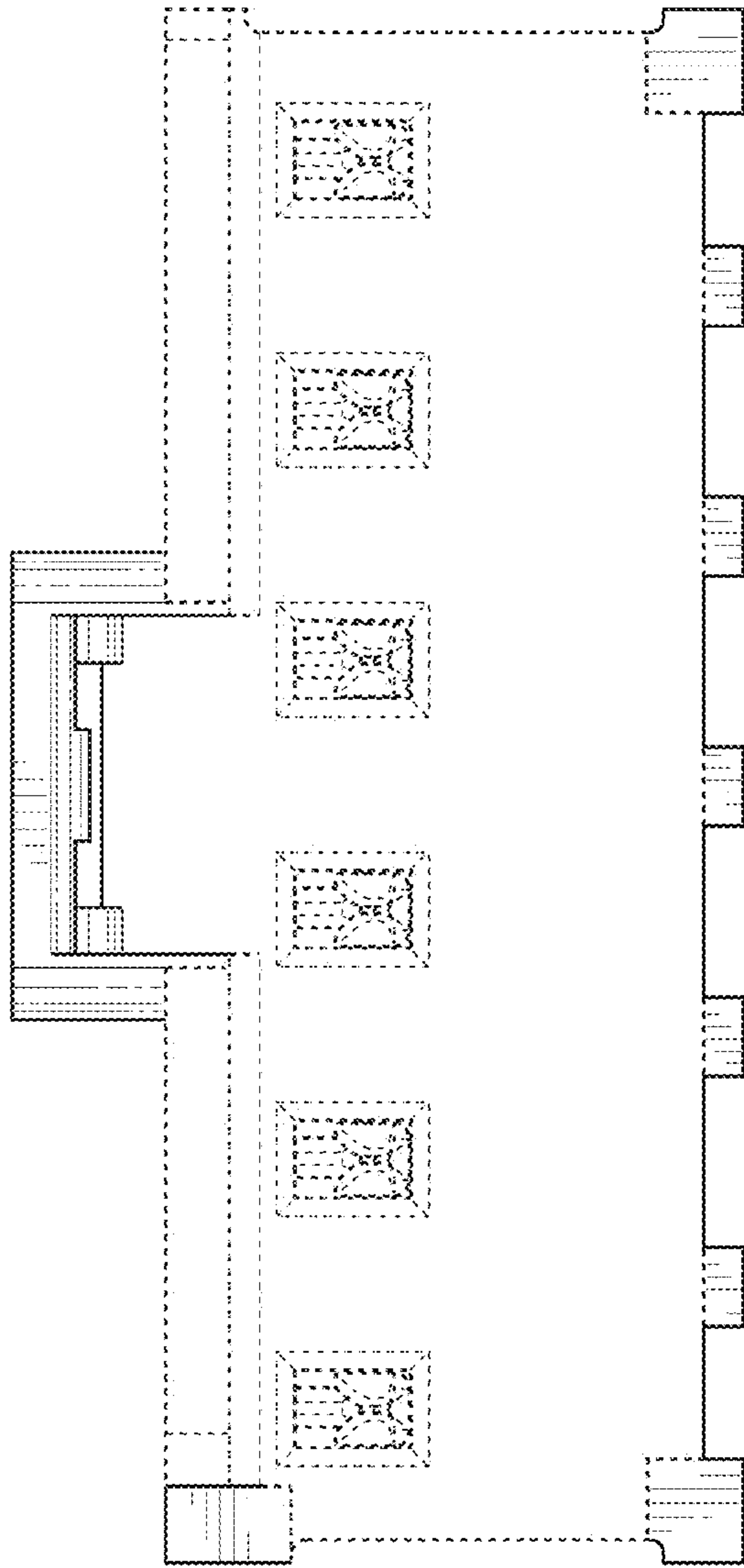


FIG. 35

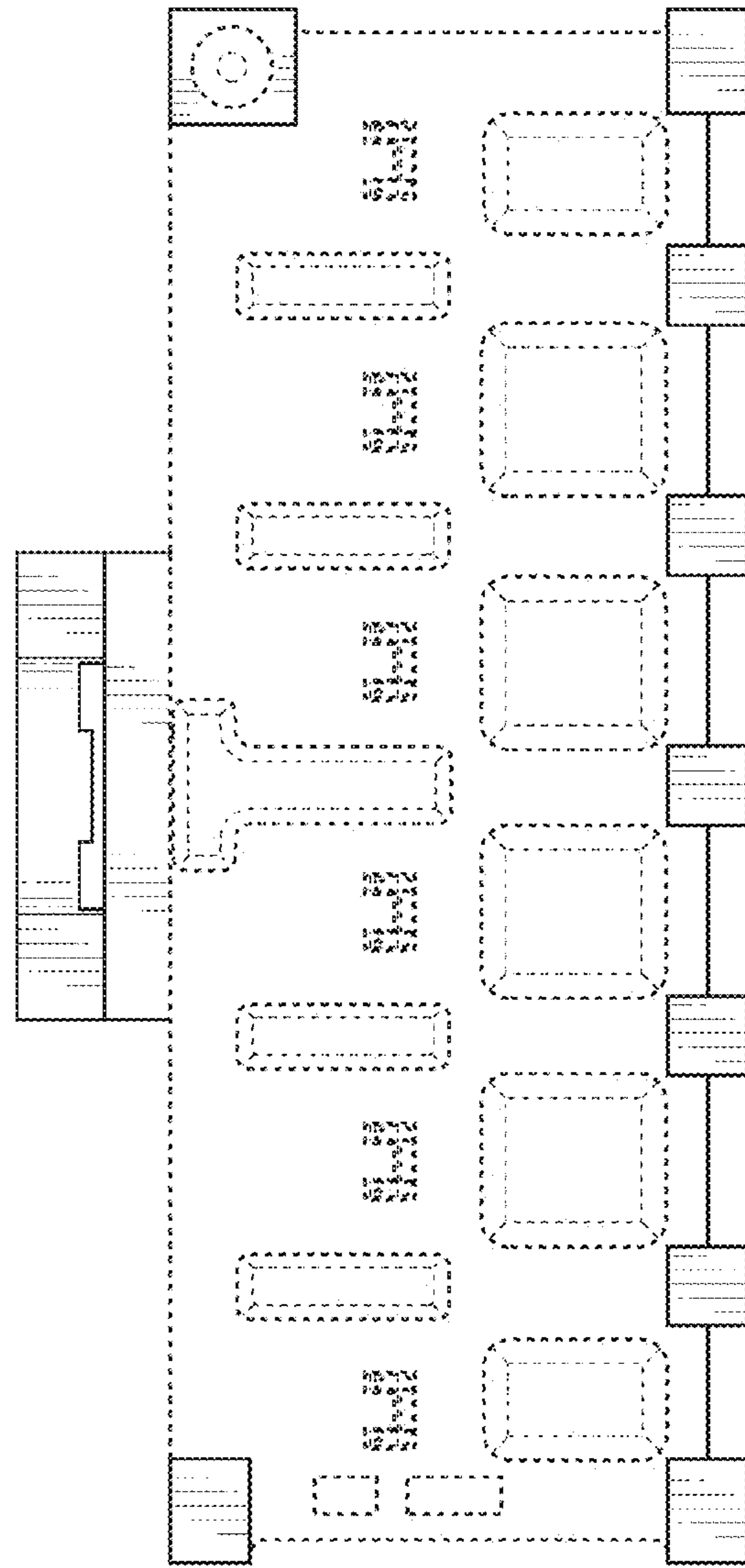


FIG. 36

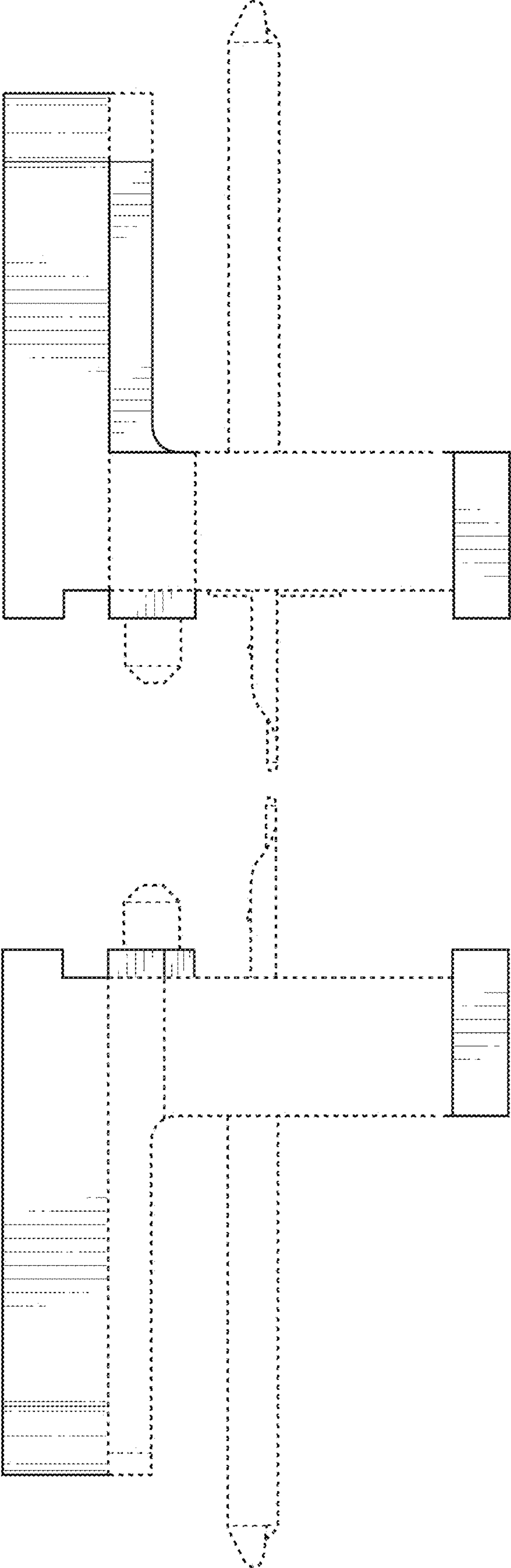


FIG. 38

FIG. 37

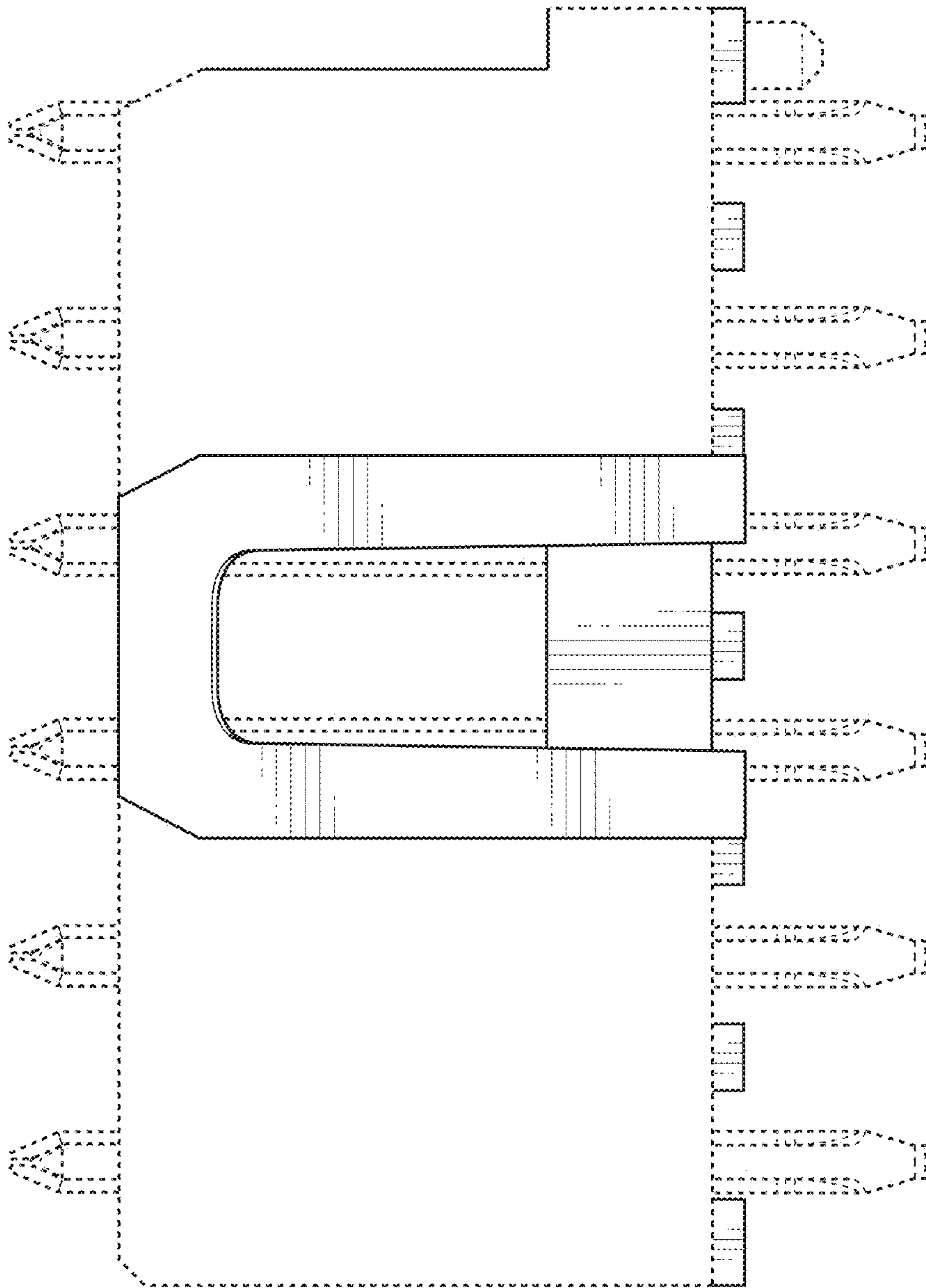


FIG. 39

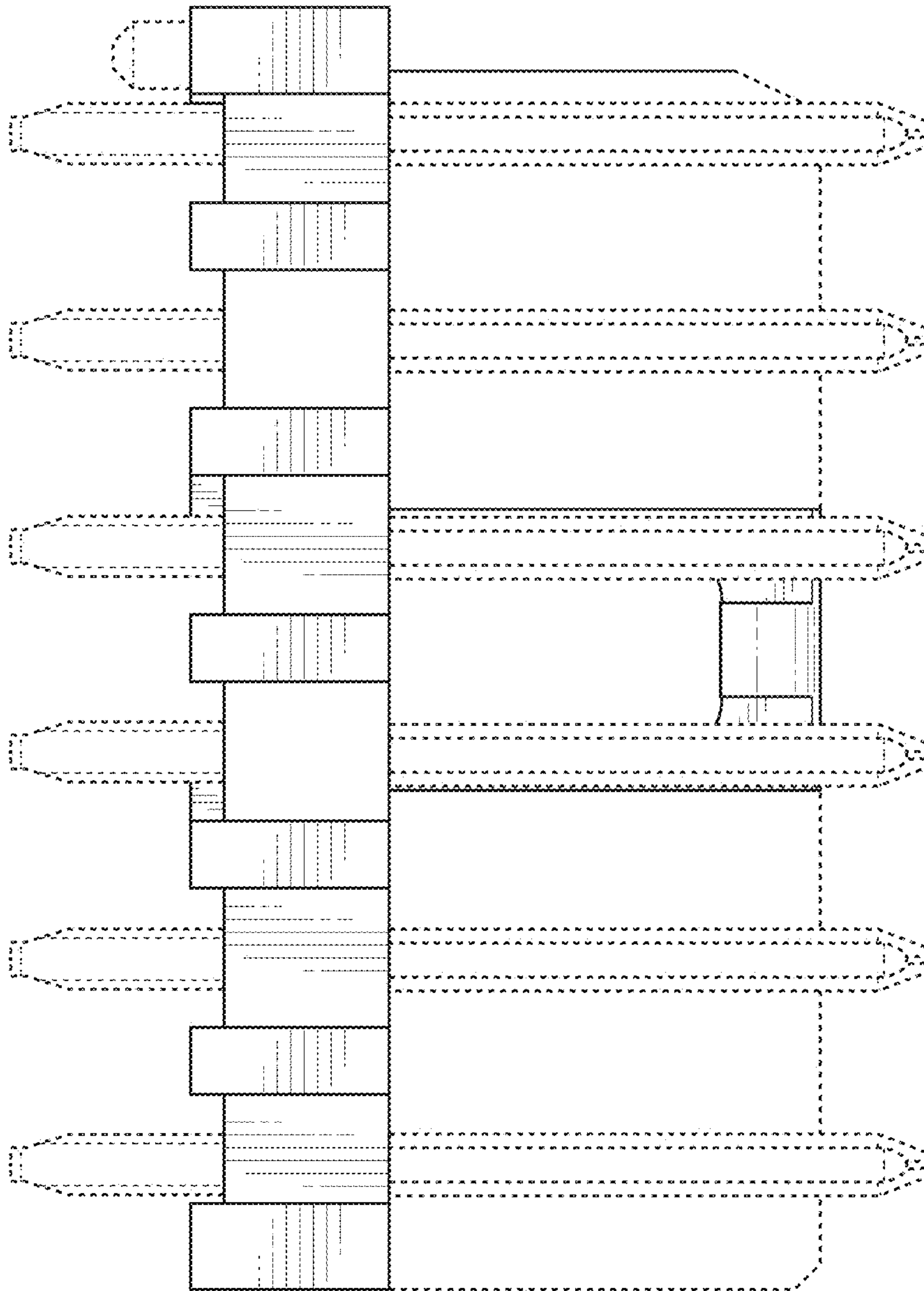


FIG. 40

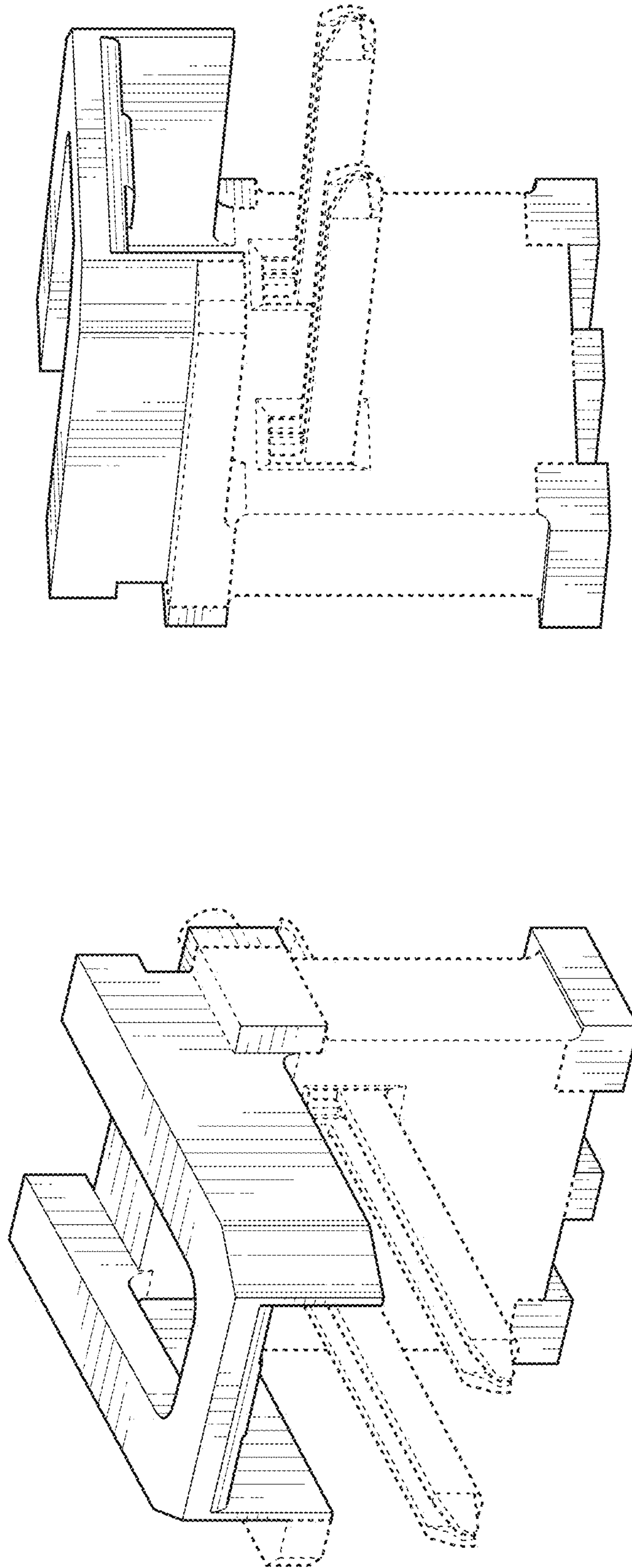


FIG. 42

FIG. 41

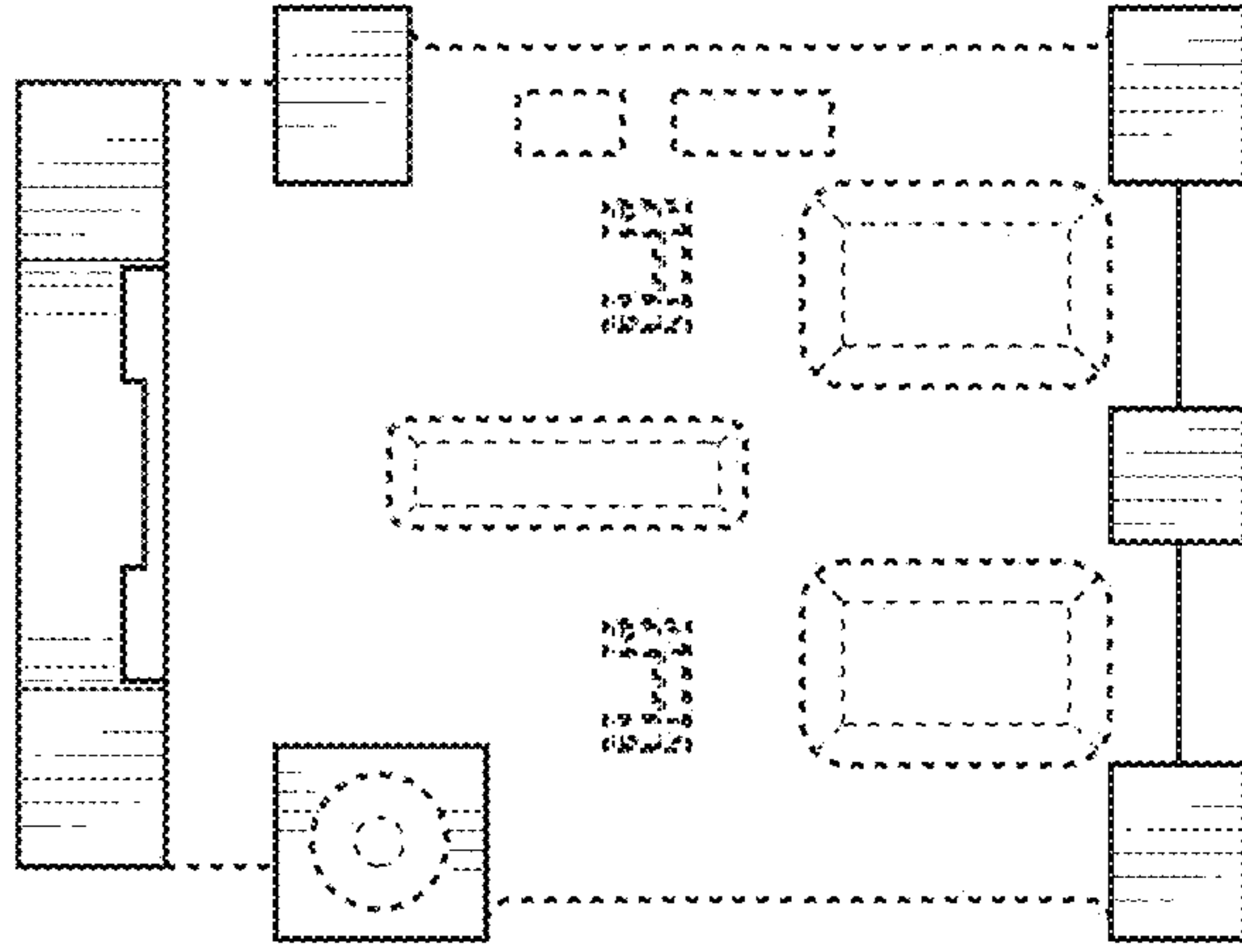


FIG. 44

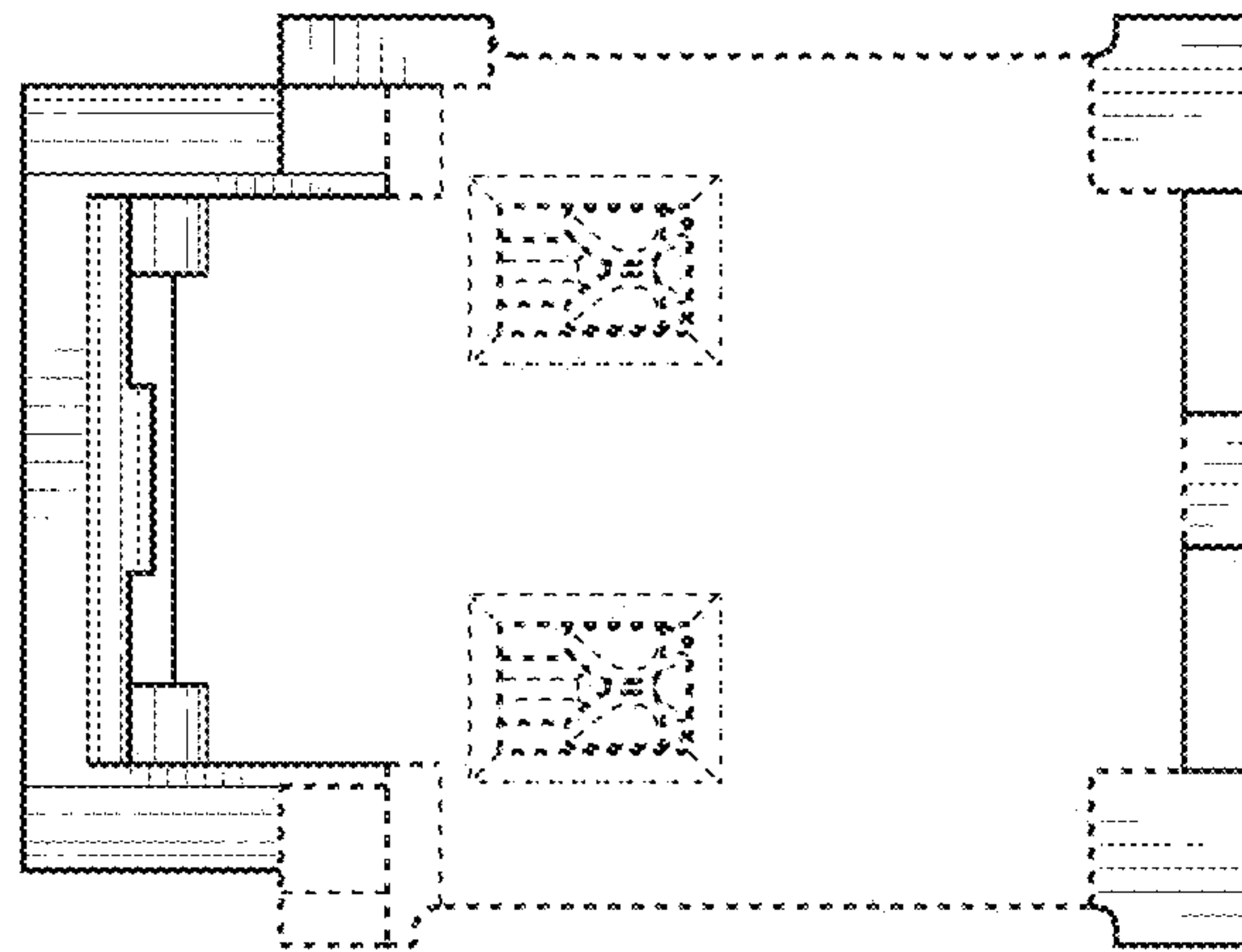


FIG. 43

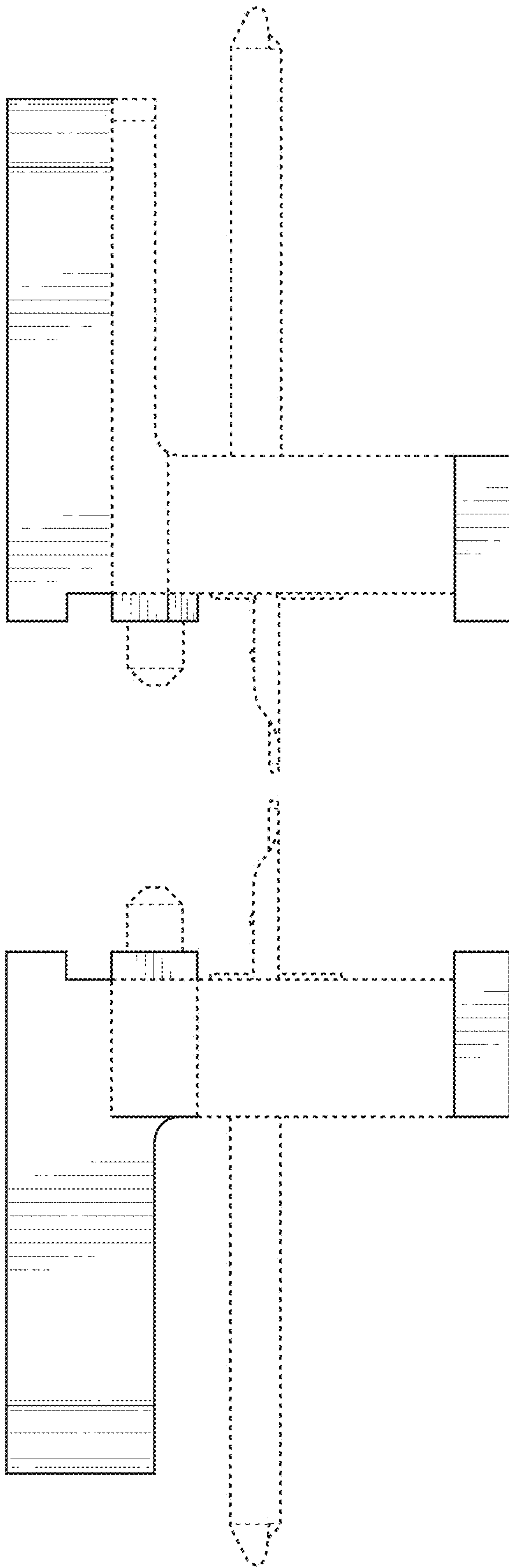


FIG. 46

FIG. 45

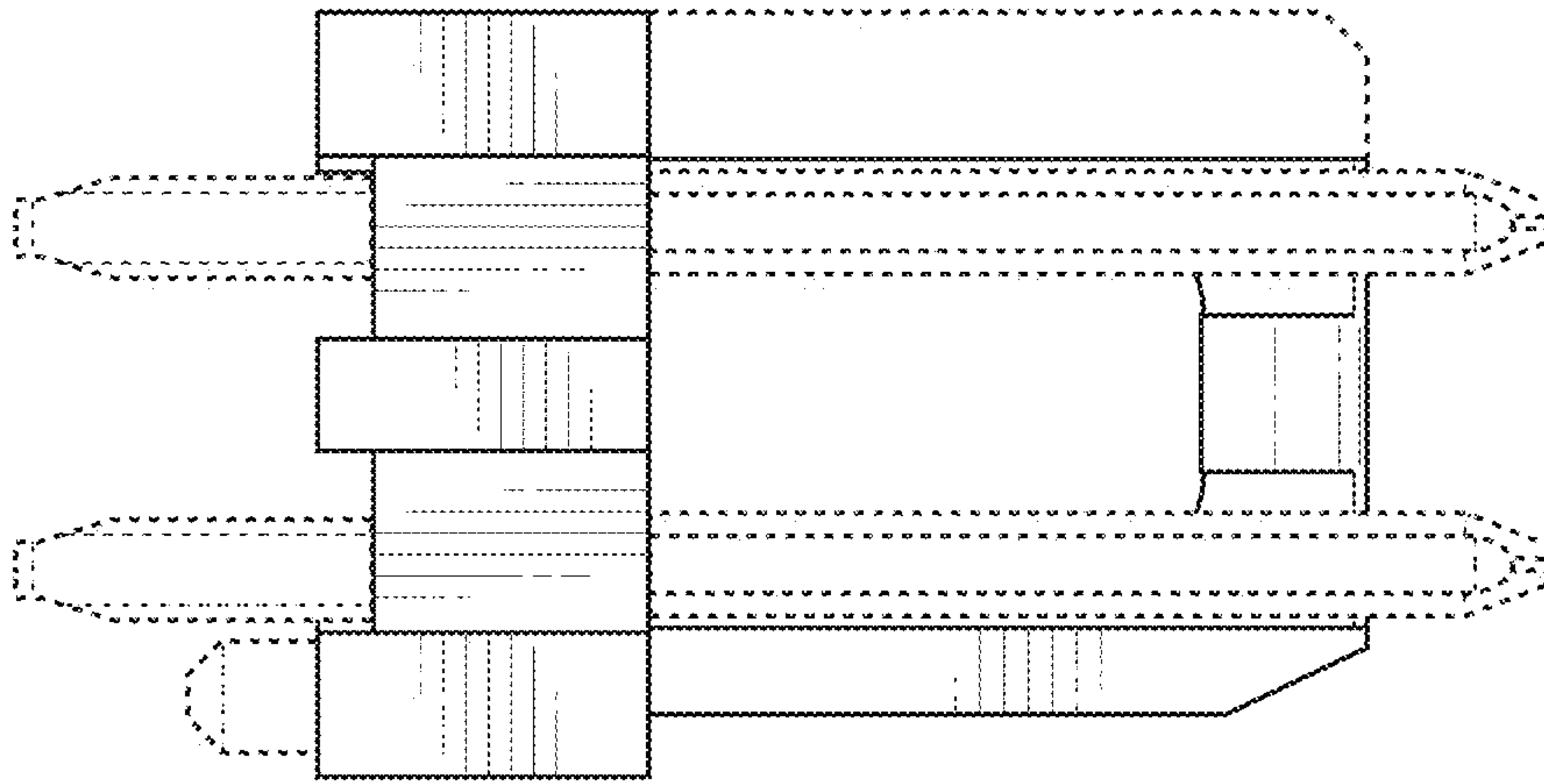


FIG. 47

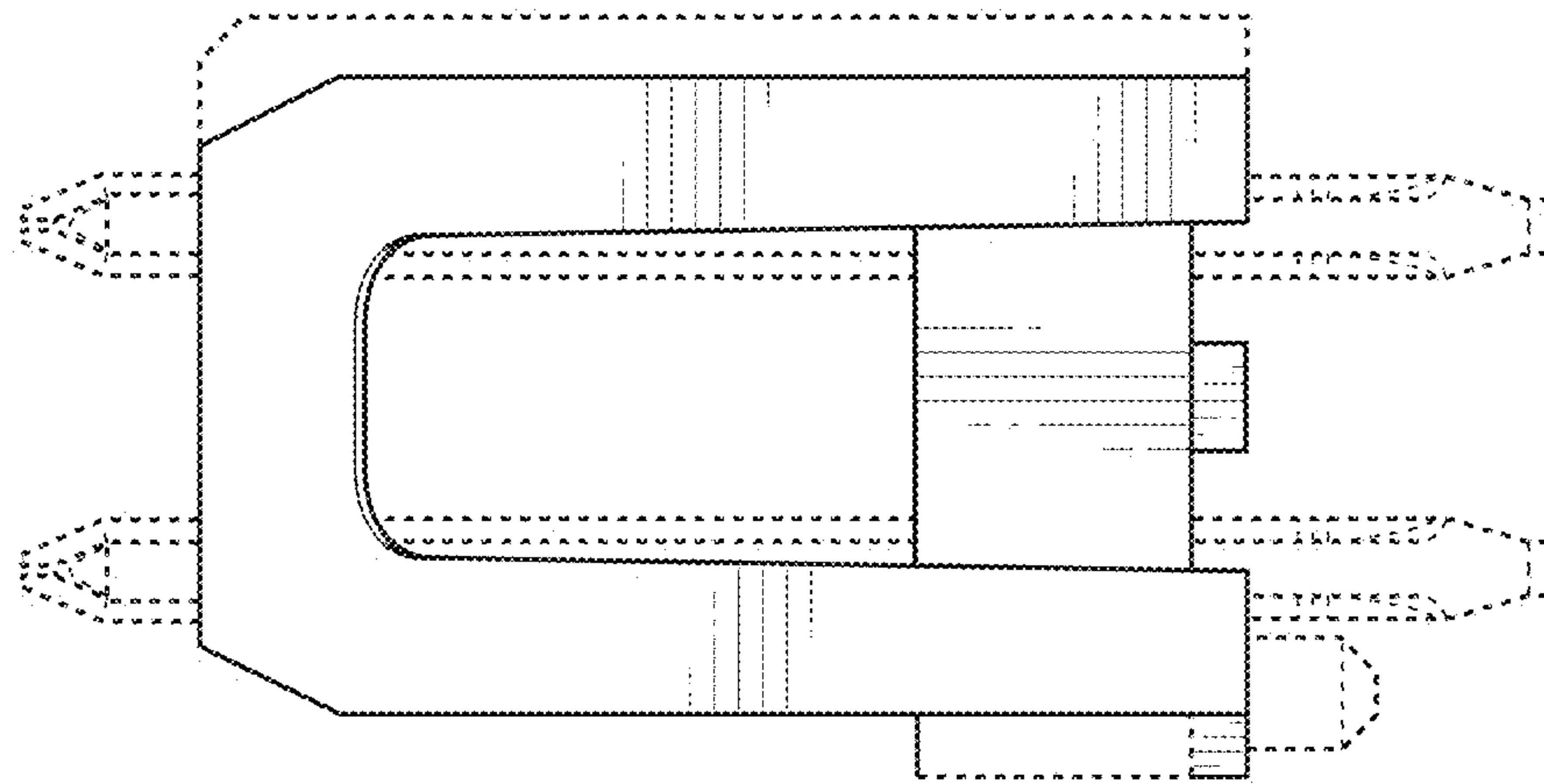


FIG. 48

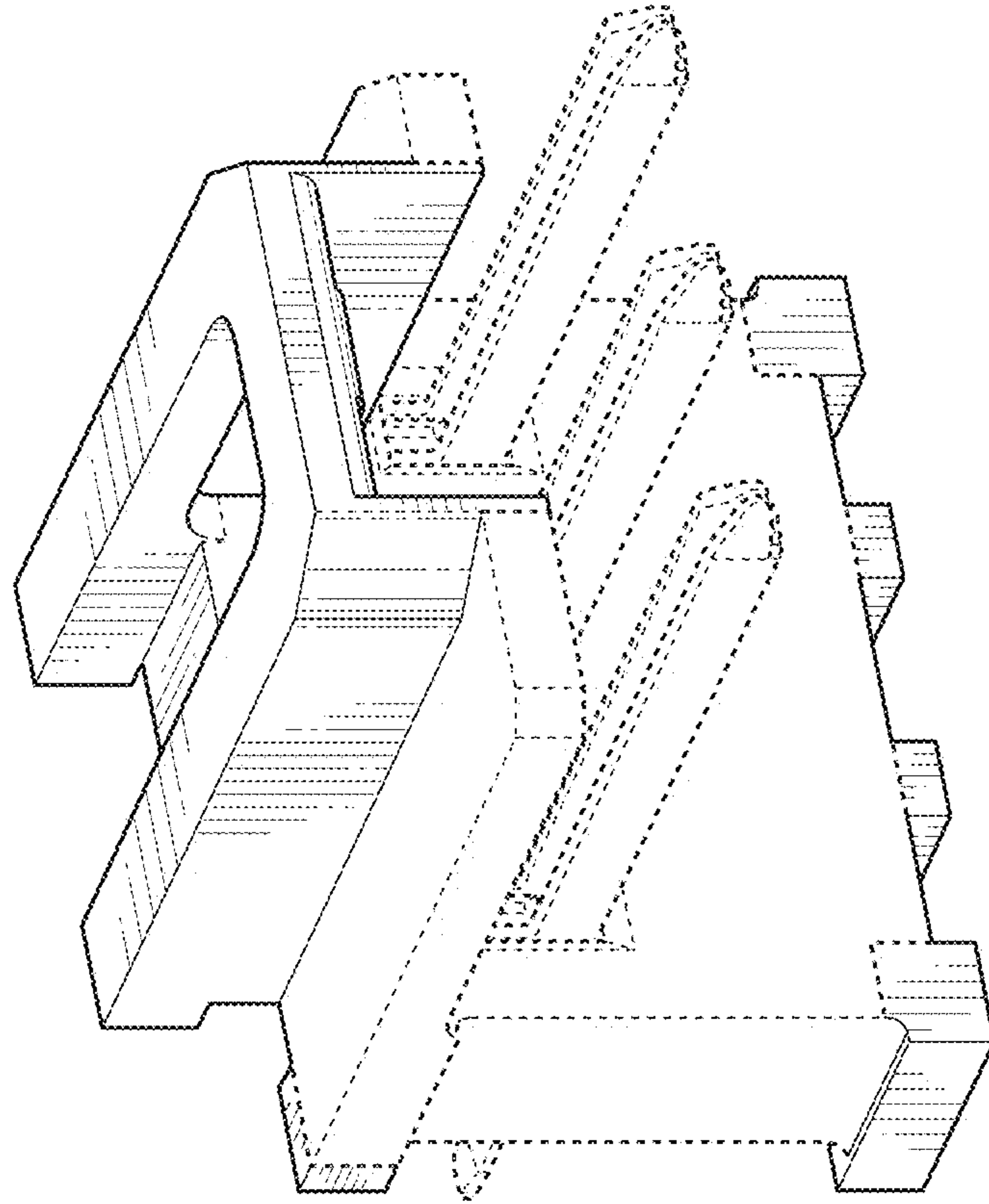


FIG. 50

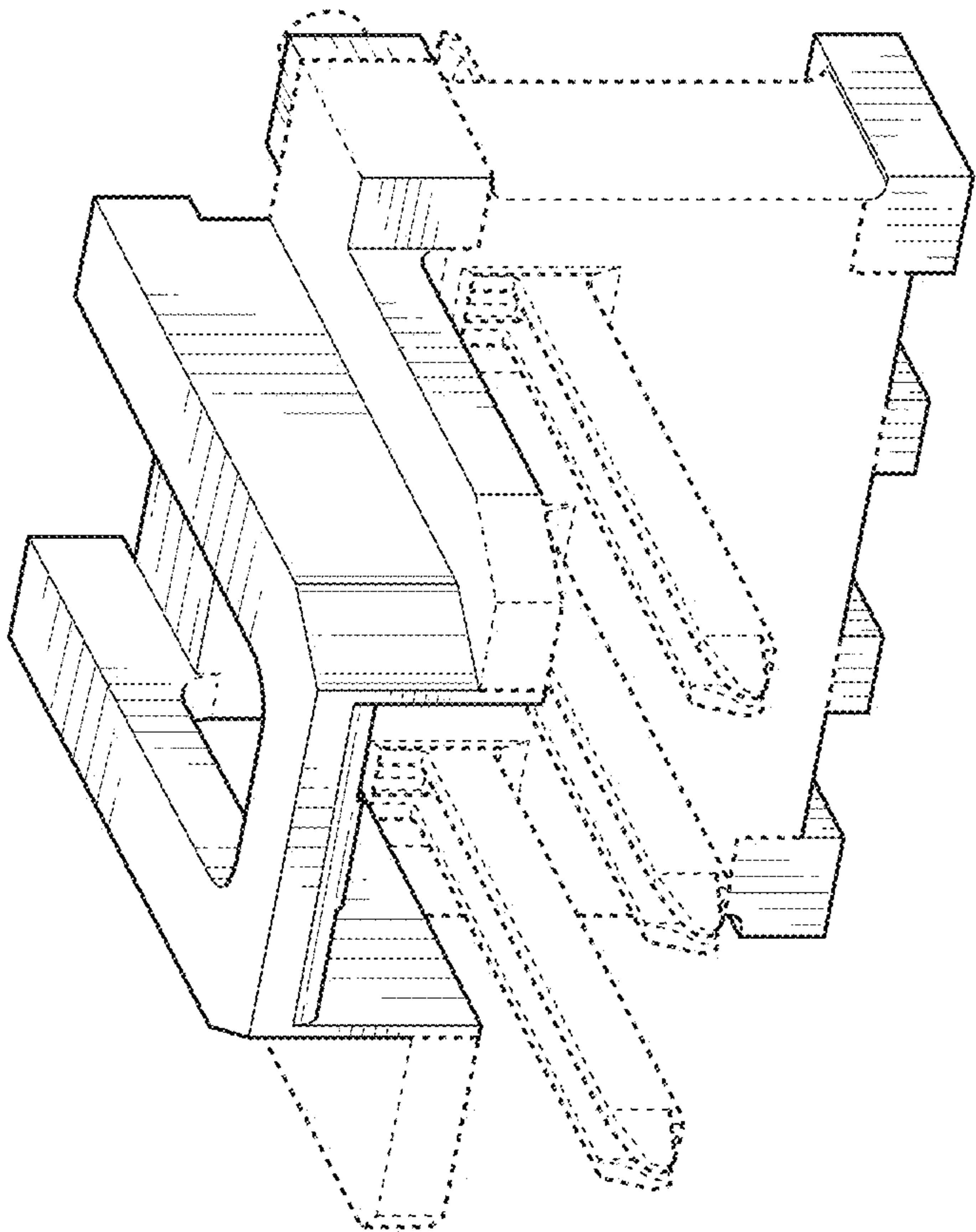


FIG. 49

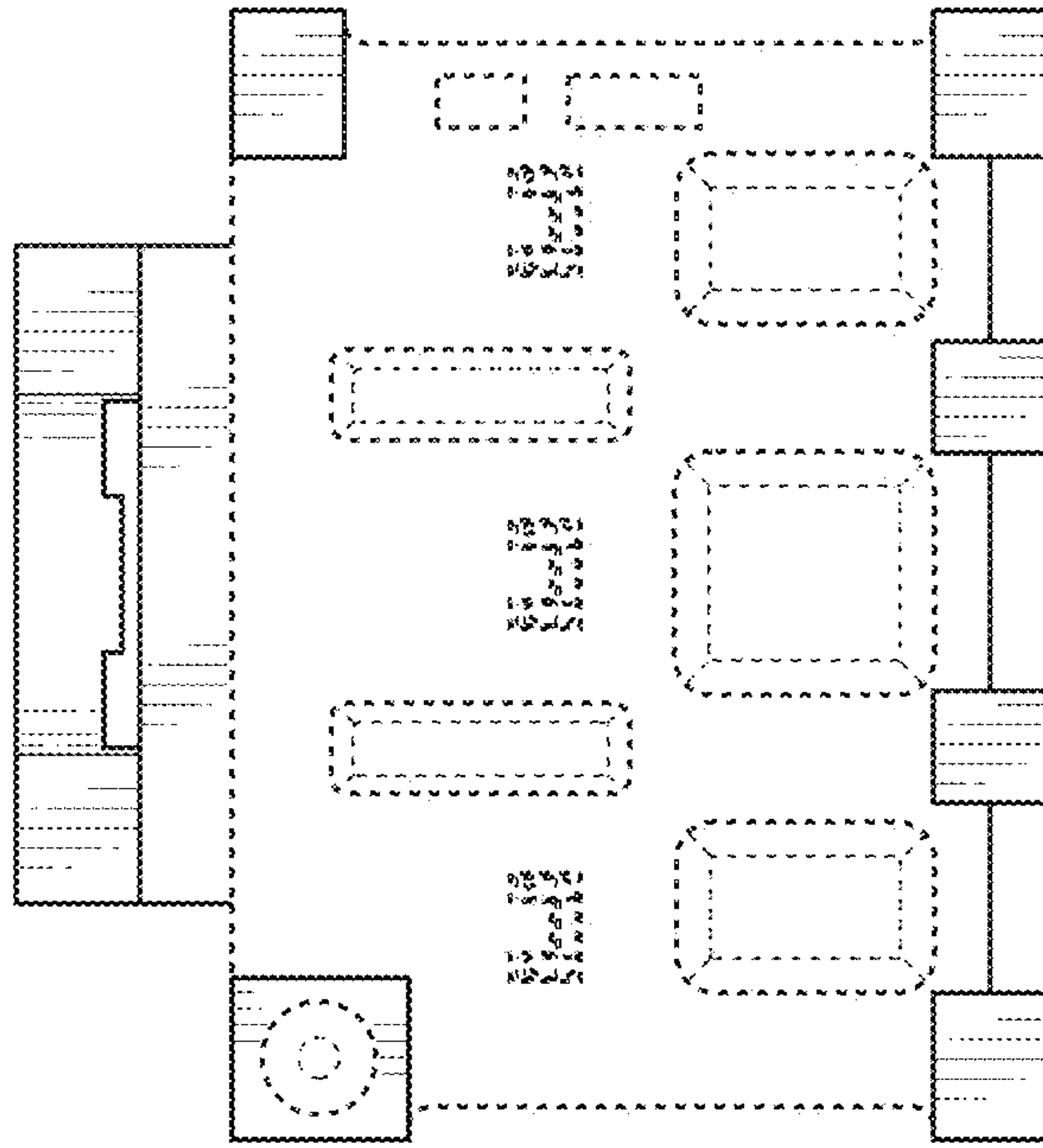


FIG. 52

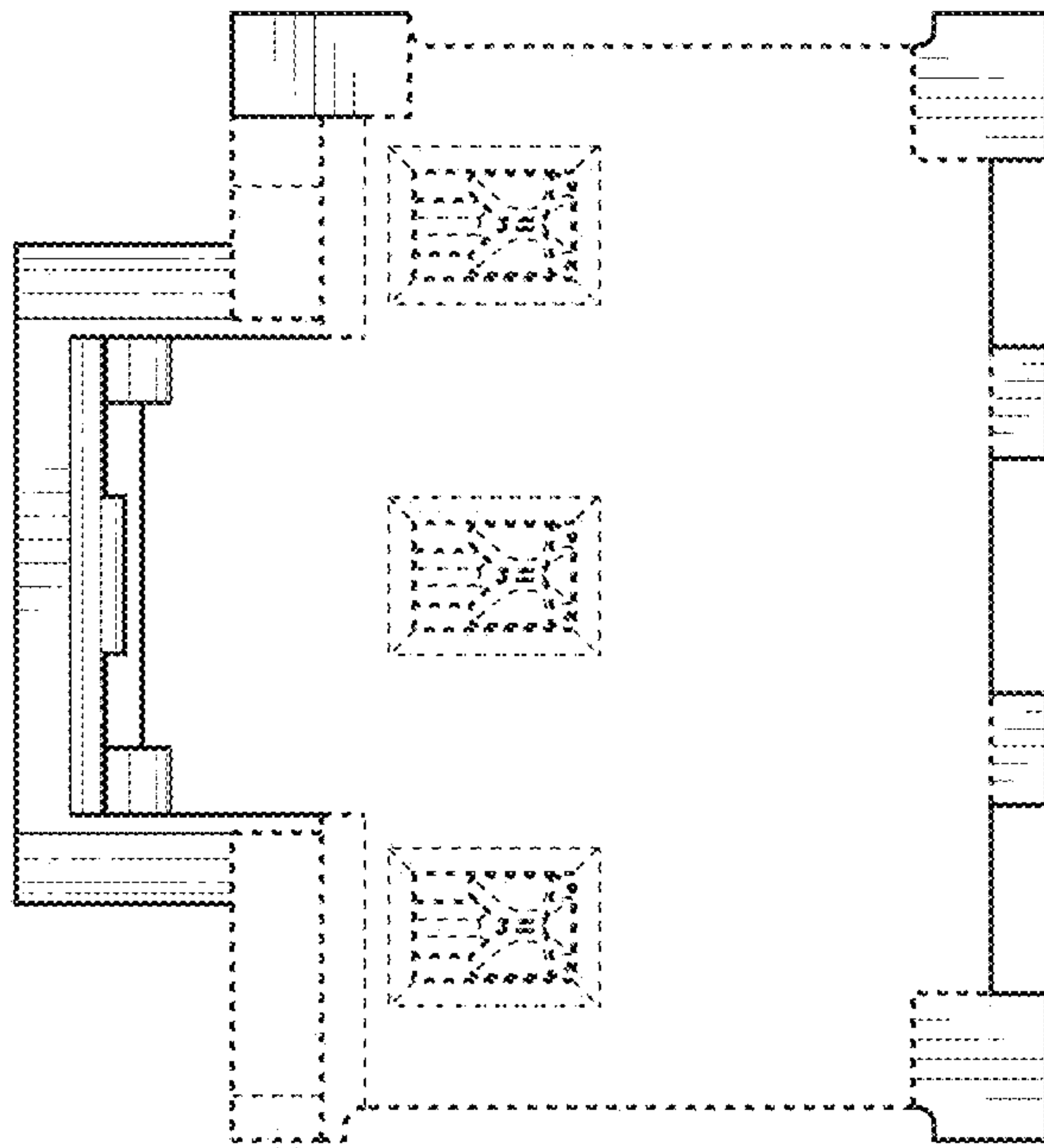


FIG. 51

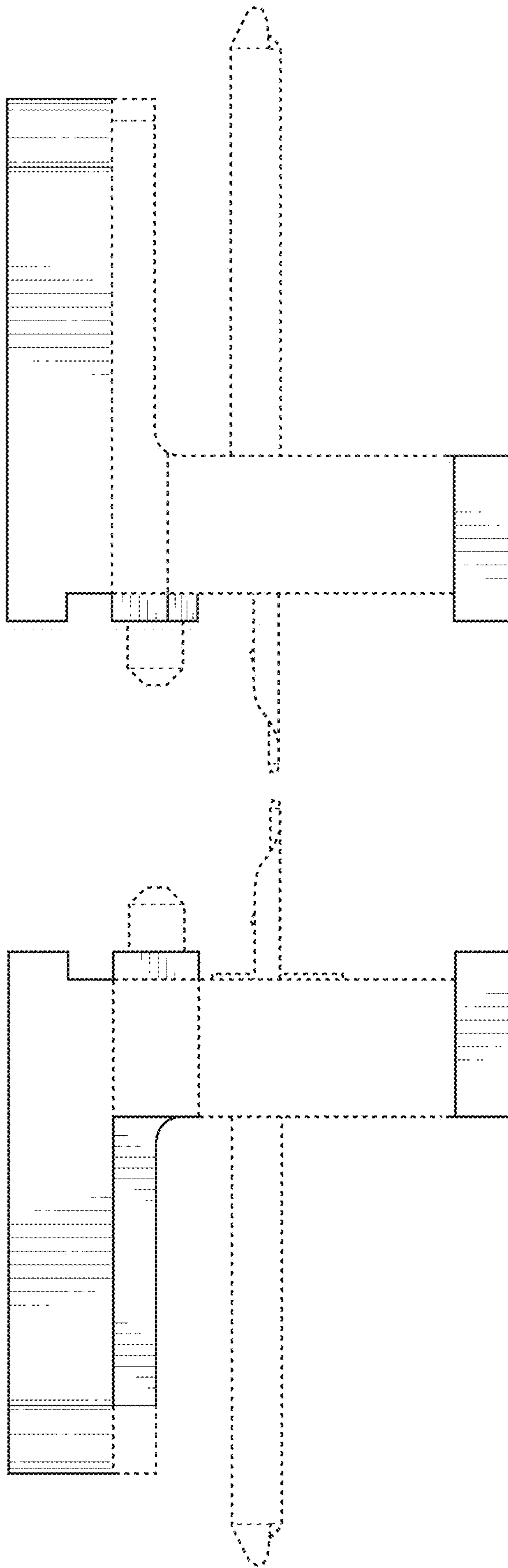


FIG. 54

FIG. 53

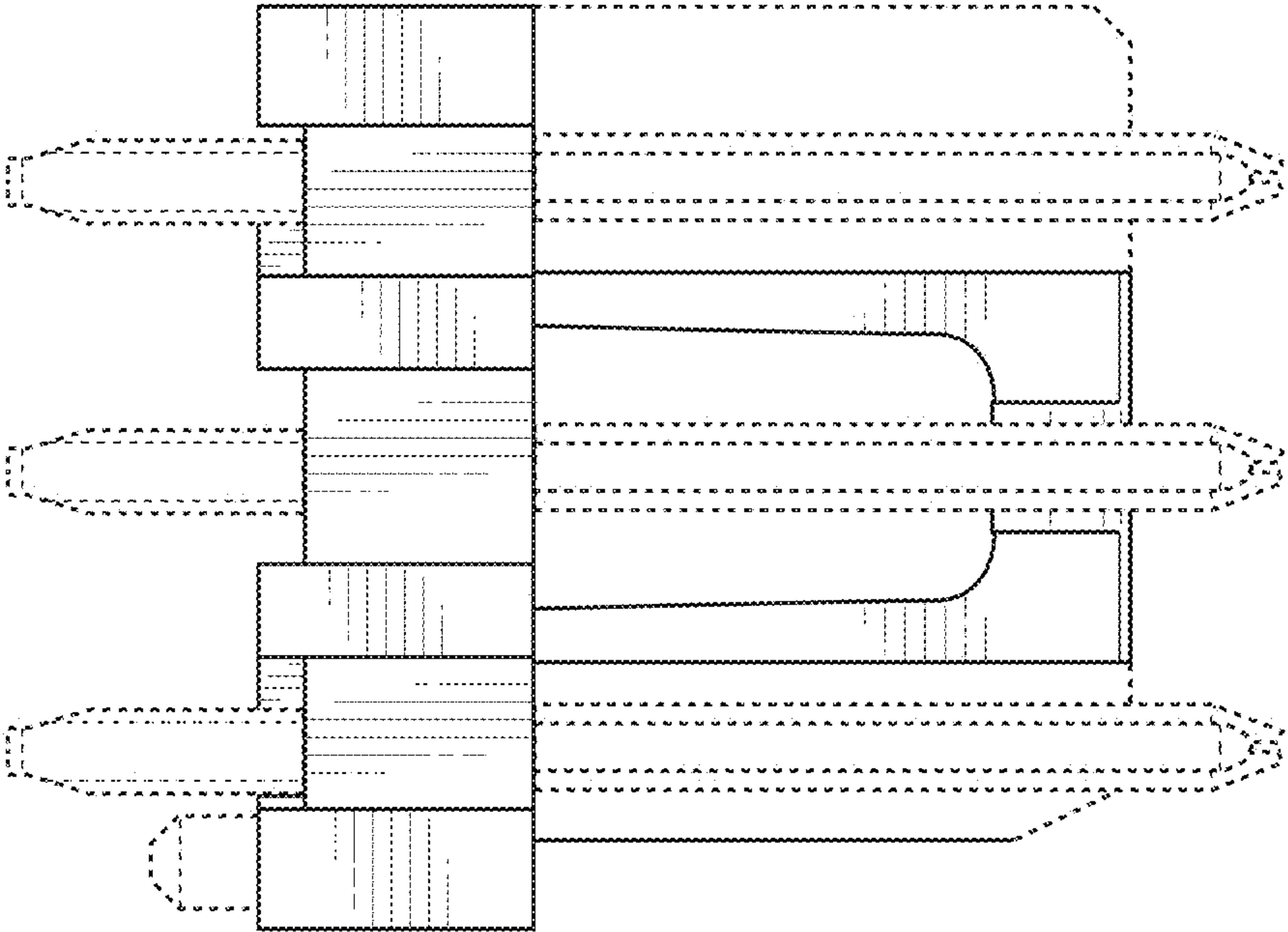


FIG. 56

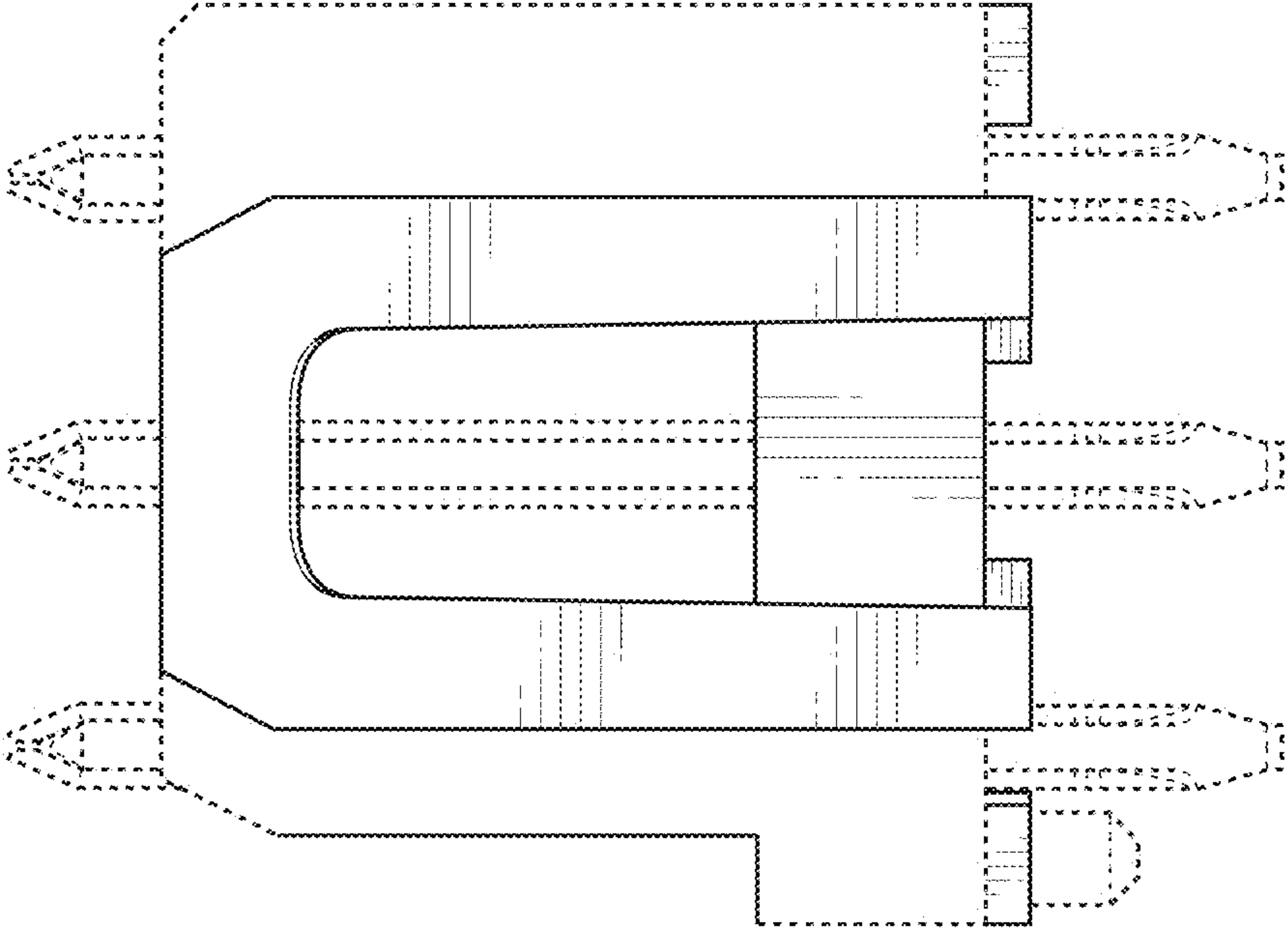


FIG. 55

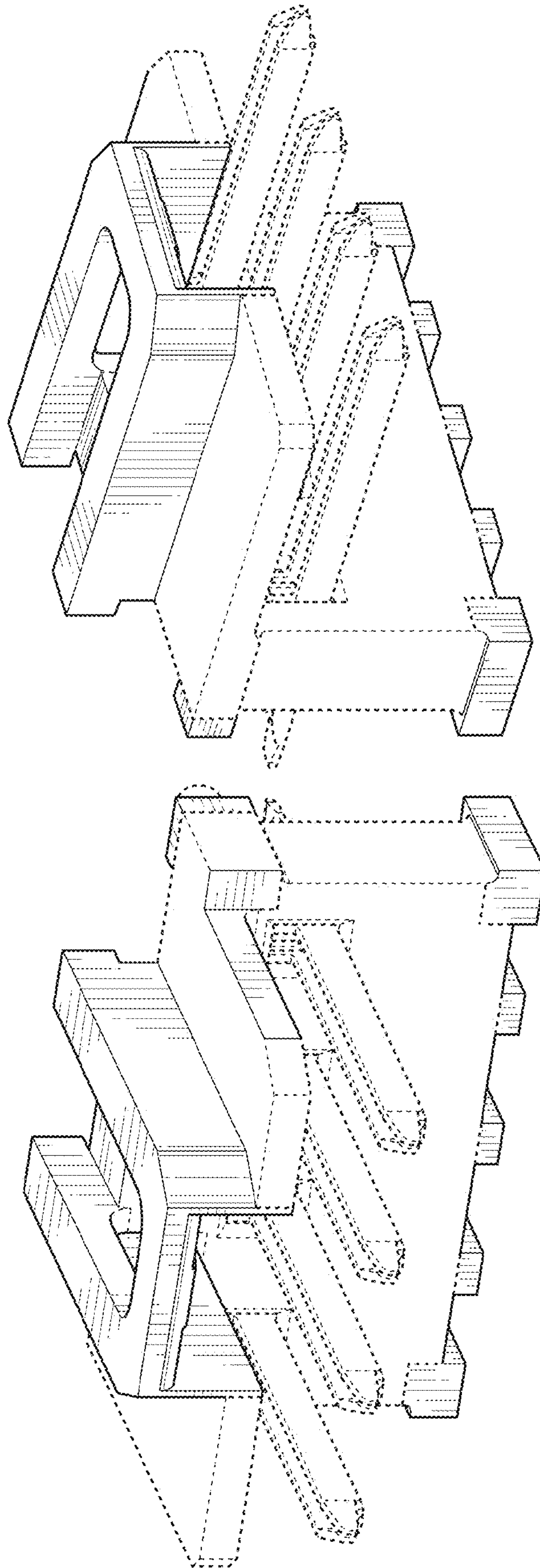


FIG. 58

FIG. 57

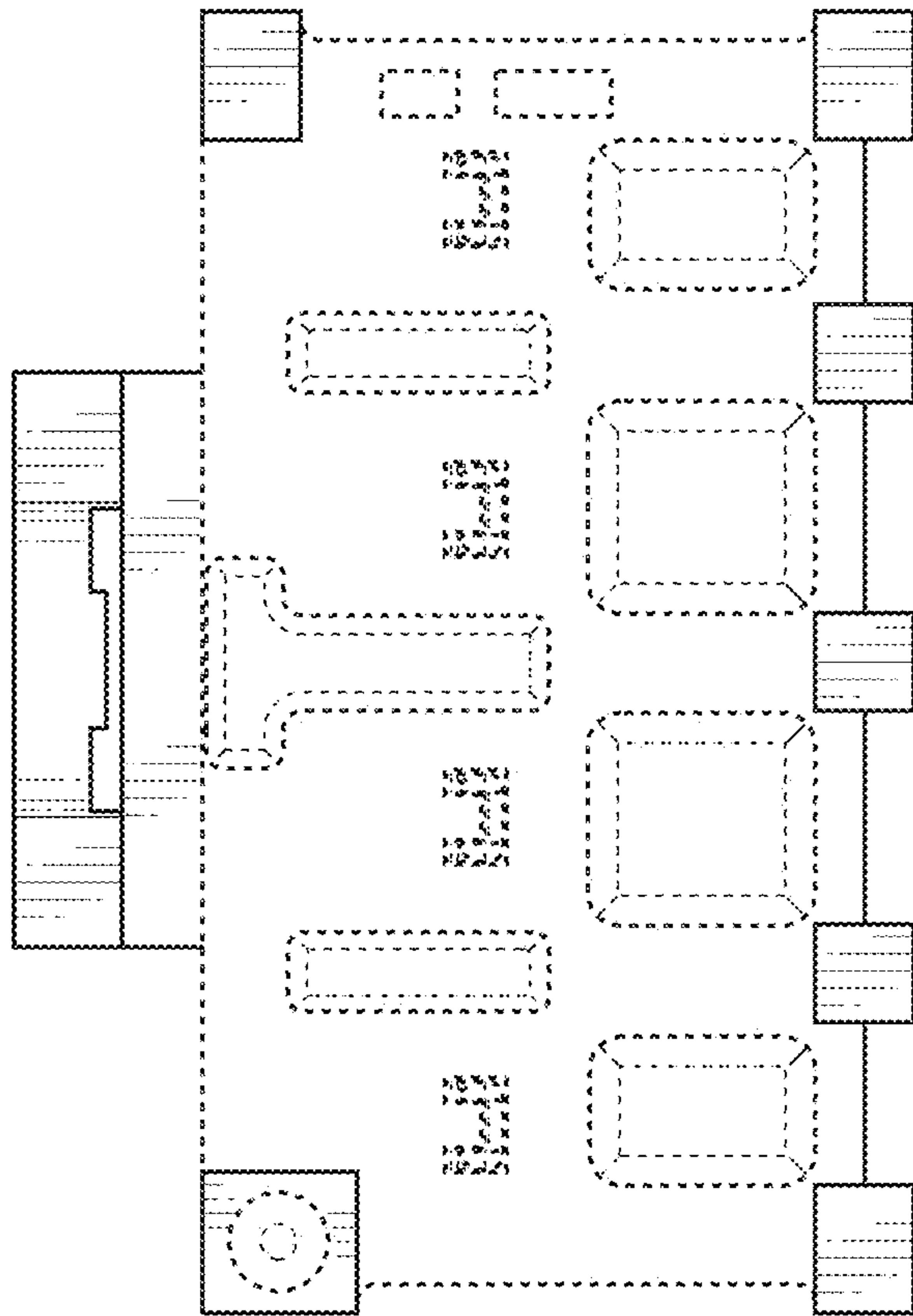


FIG. 59

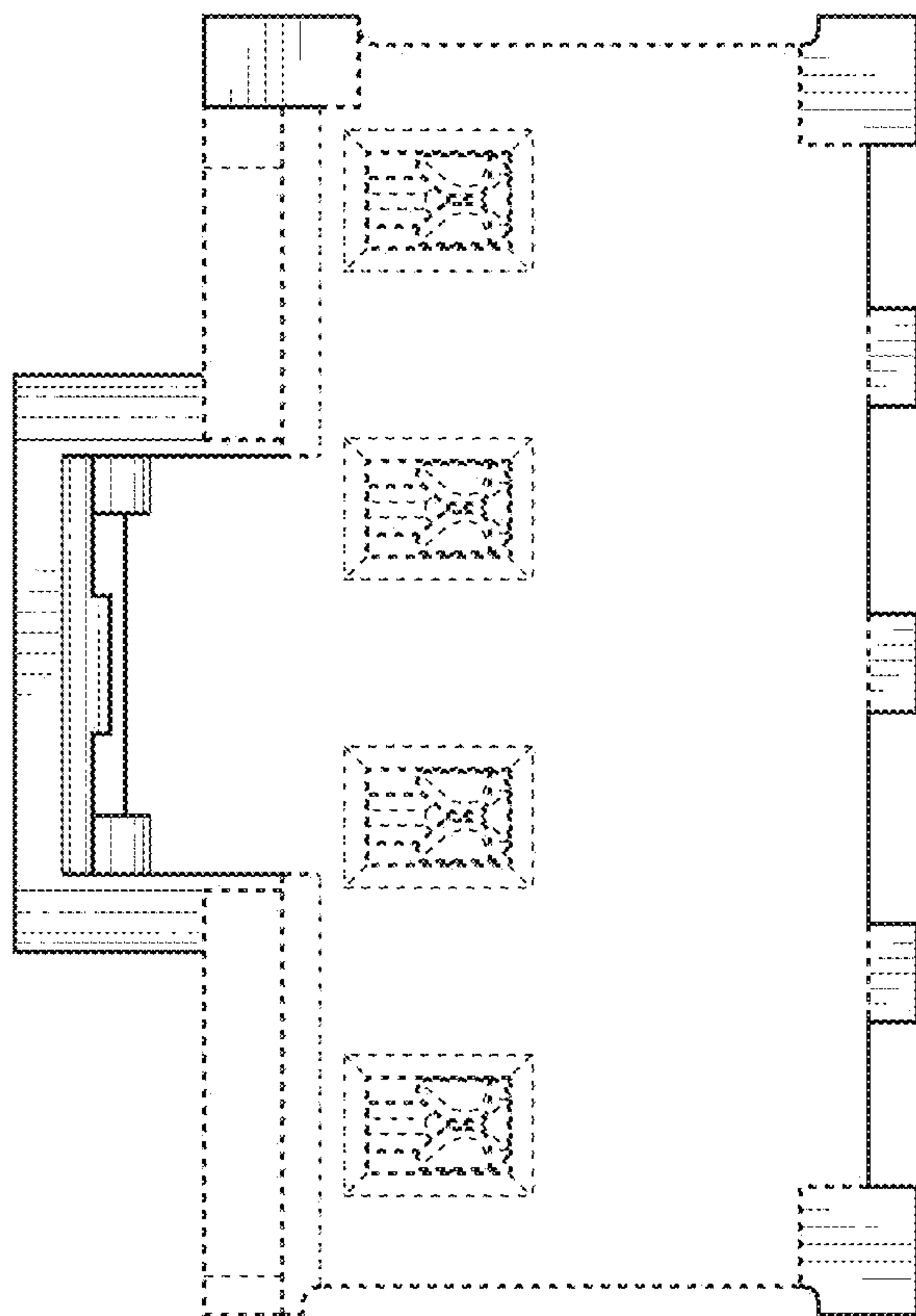


FIG. 60

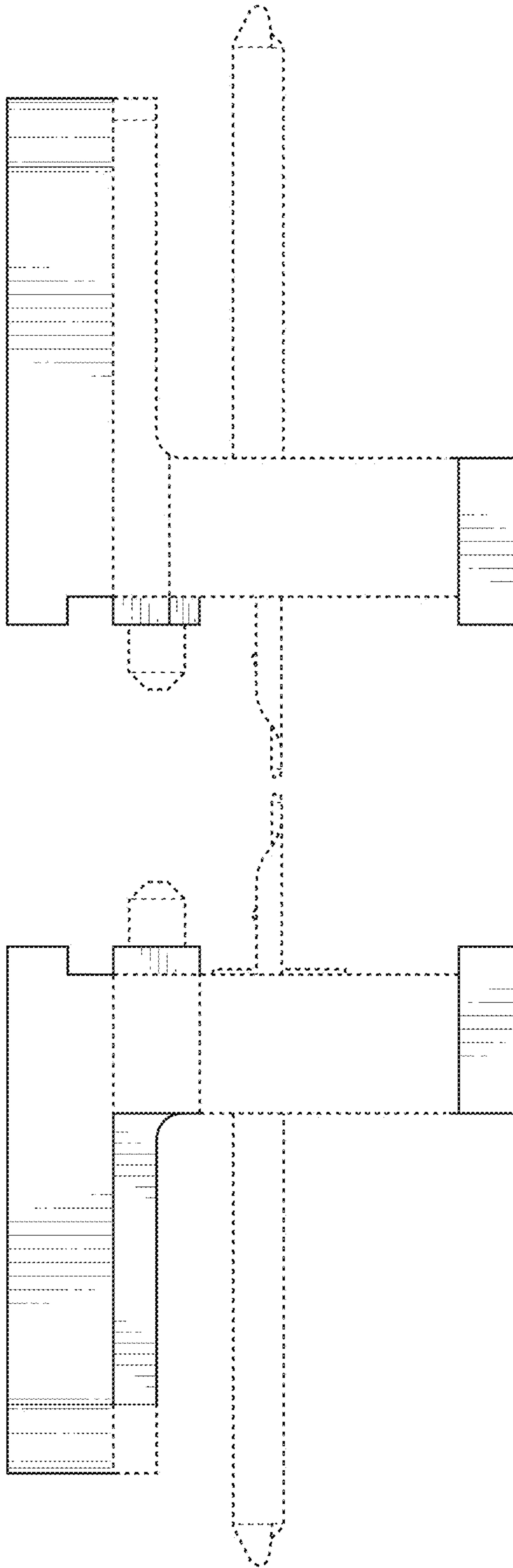


FIG. 61

FIG. 62

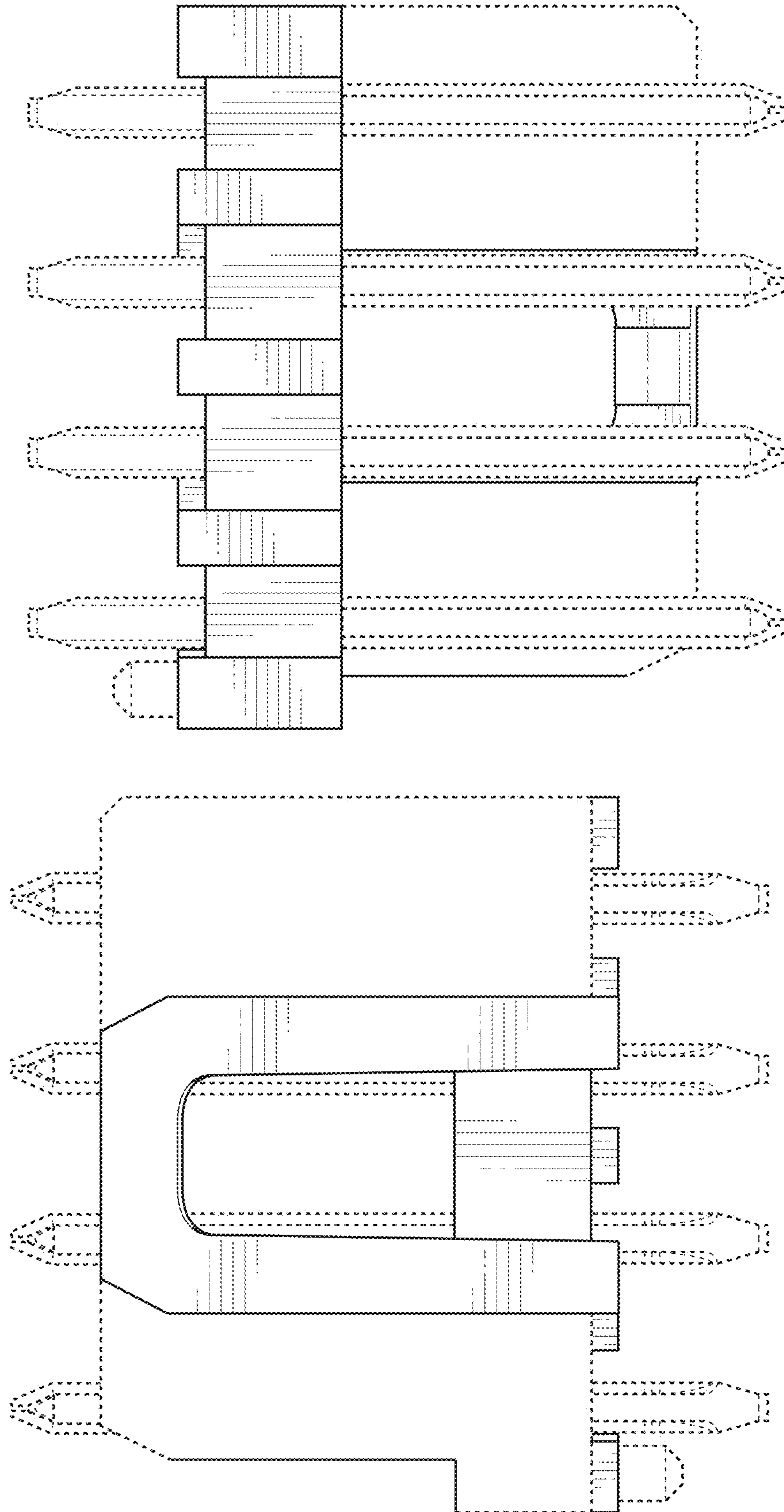


FIG. 63

FIG. 64

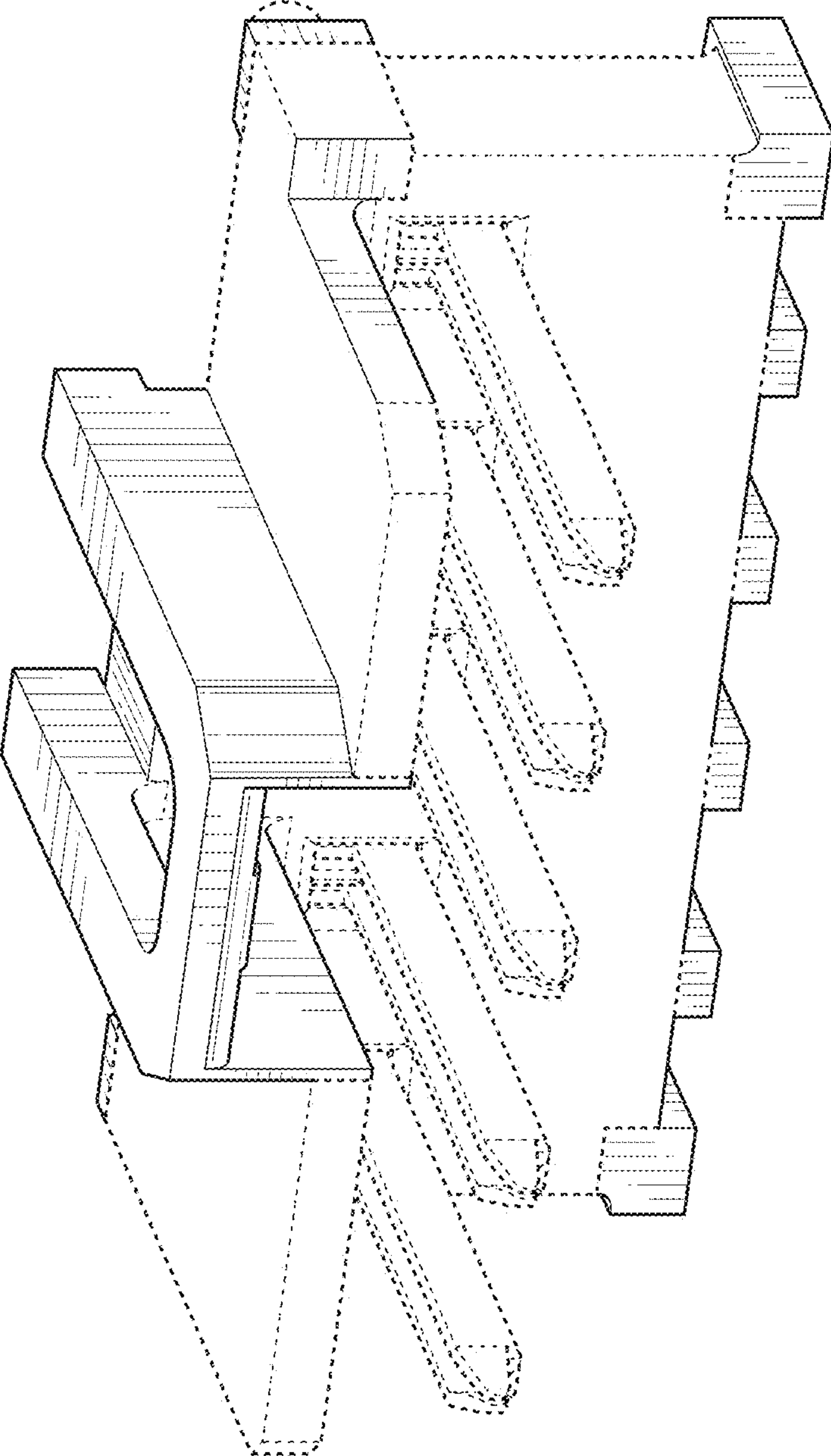


FIG. 65

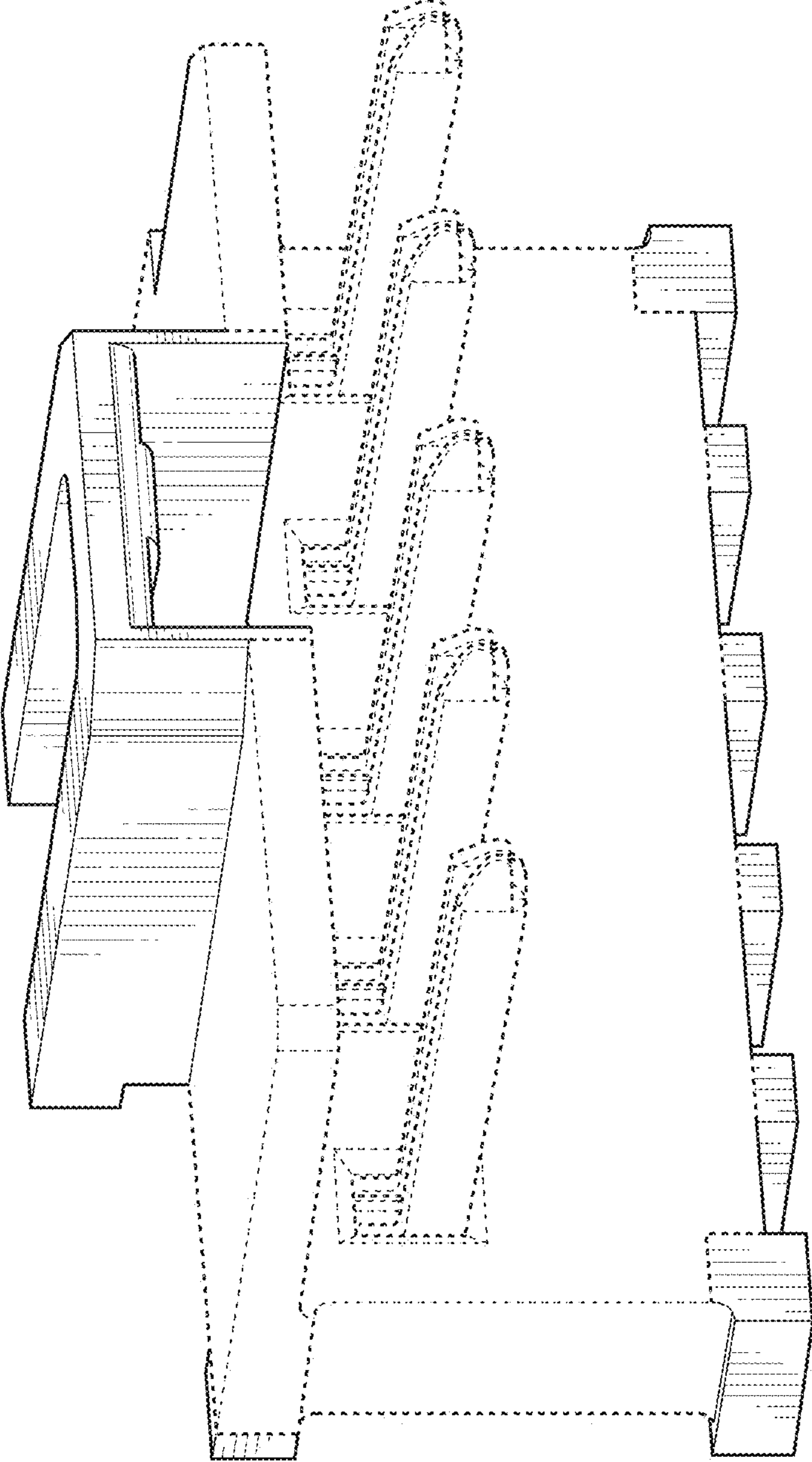


FIG. 66

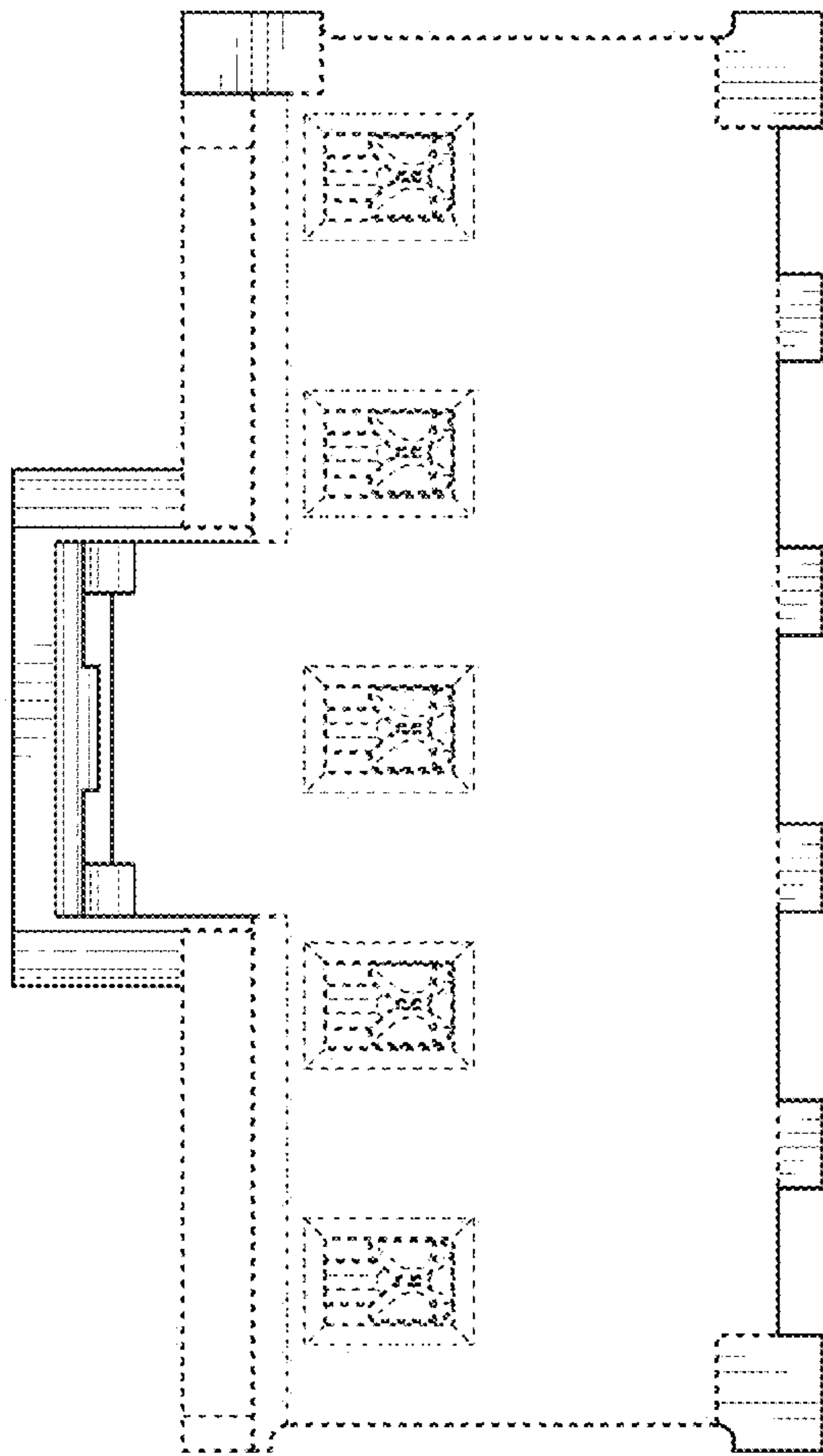


FIG. 67

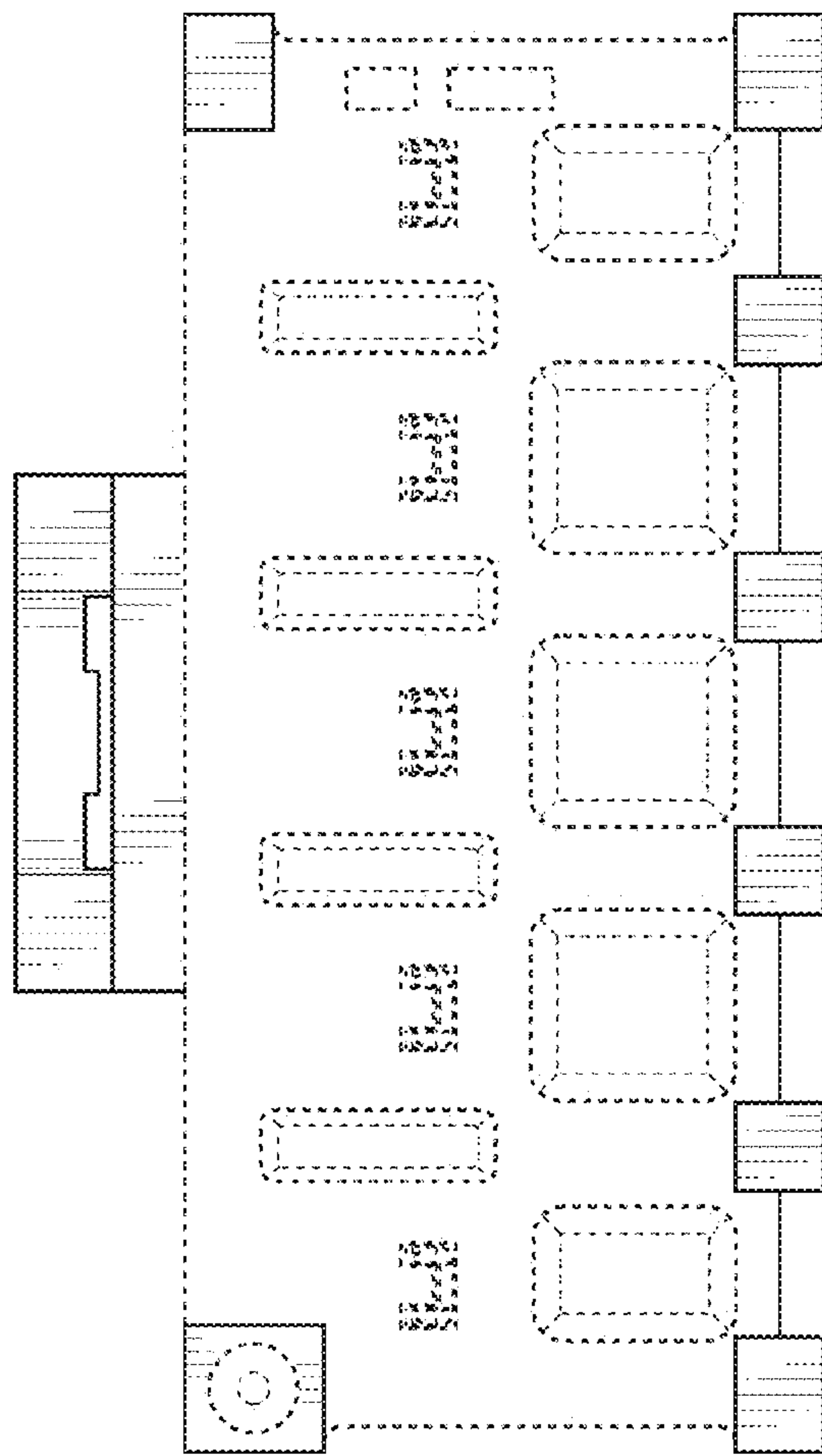


FIG. 68

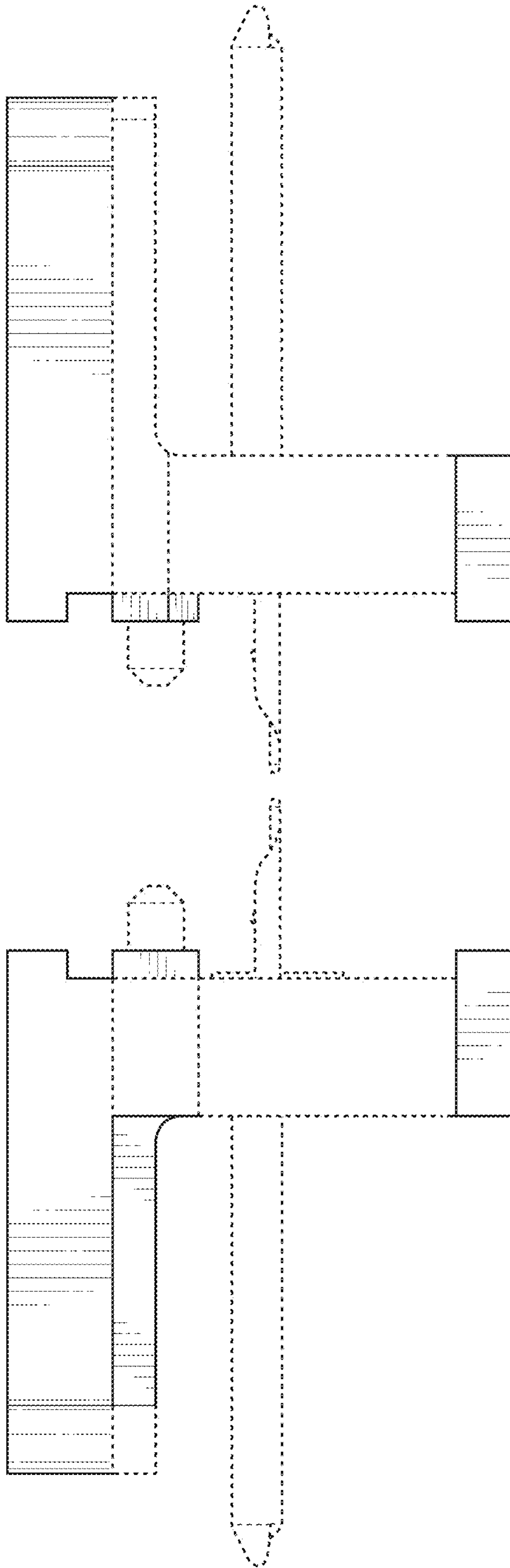


FIG. 70

FIG. 69

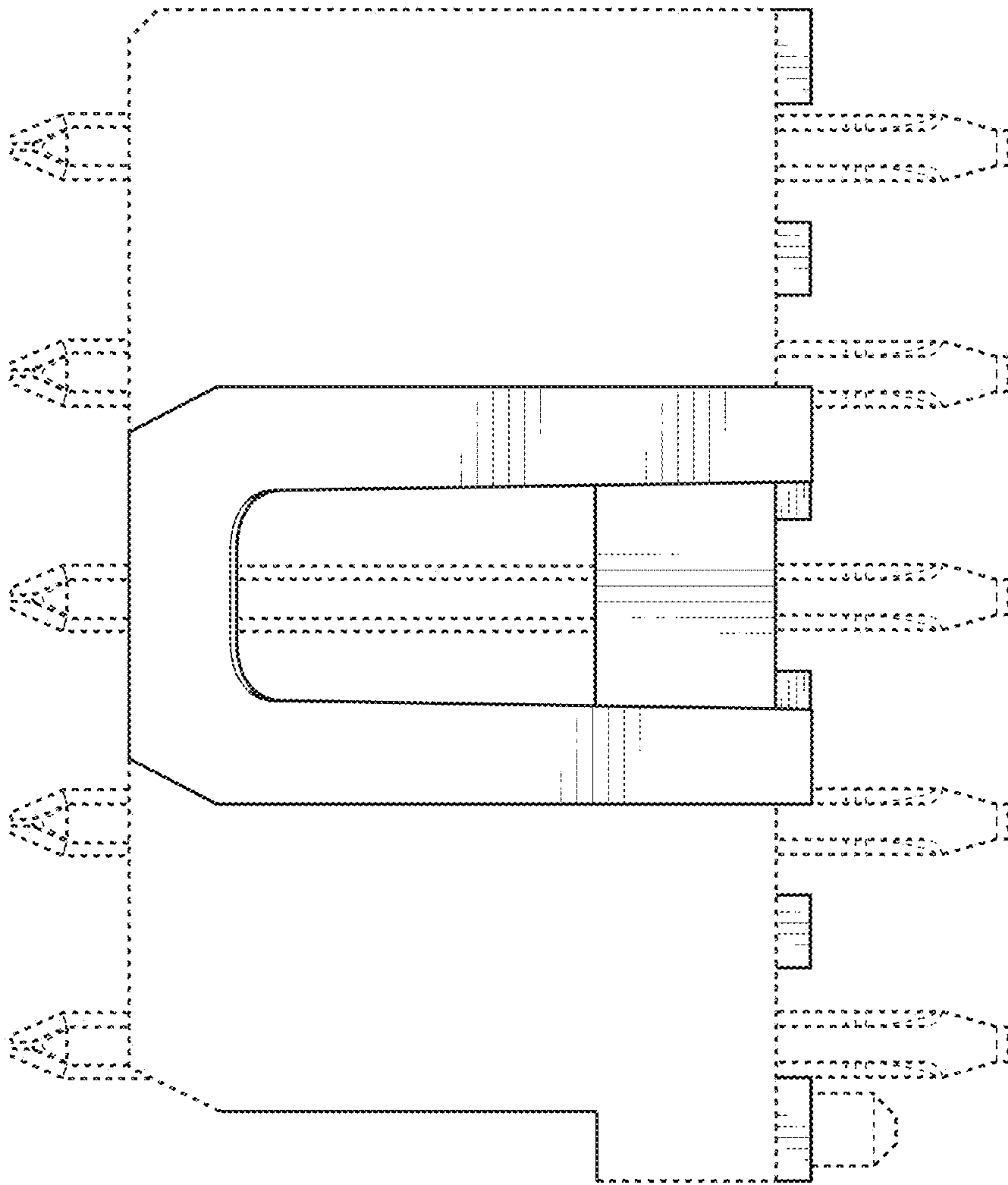


FIG. 71

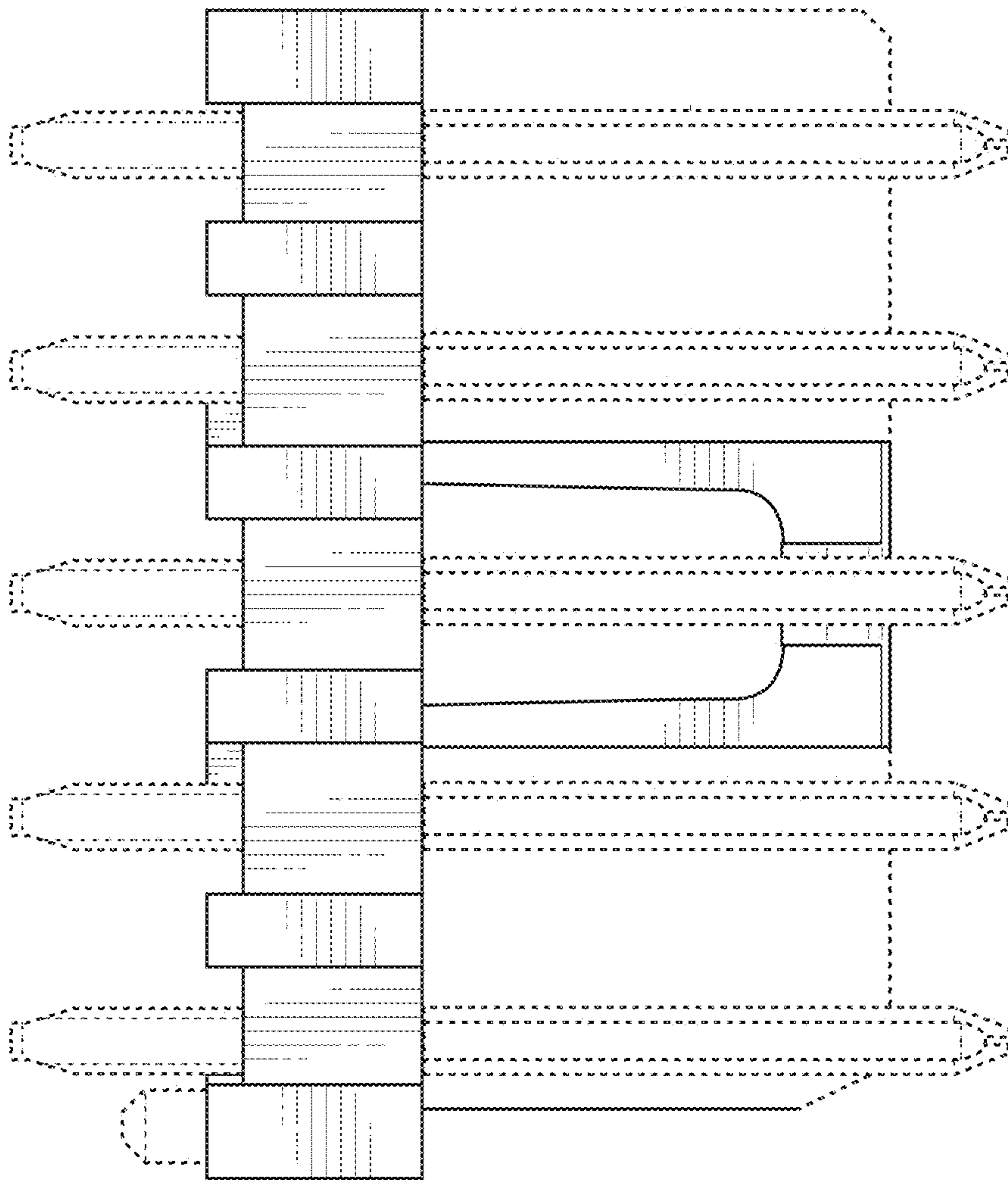


FIG. 72

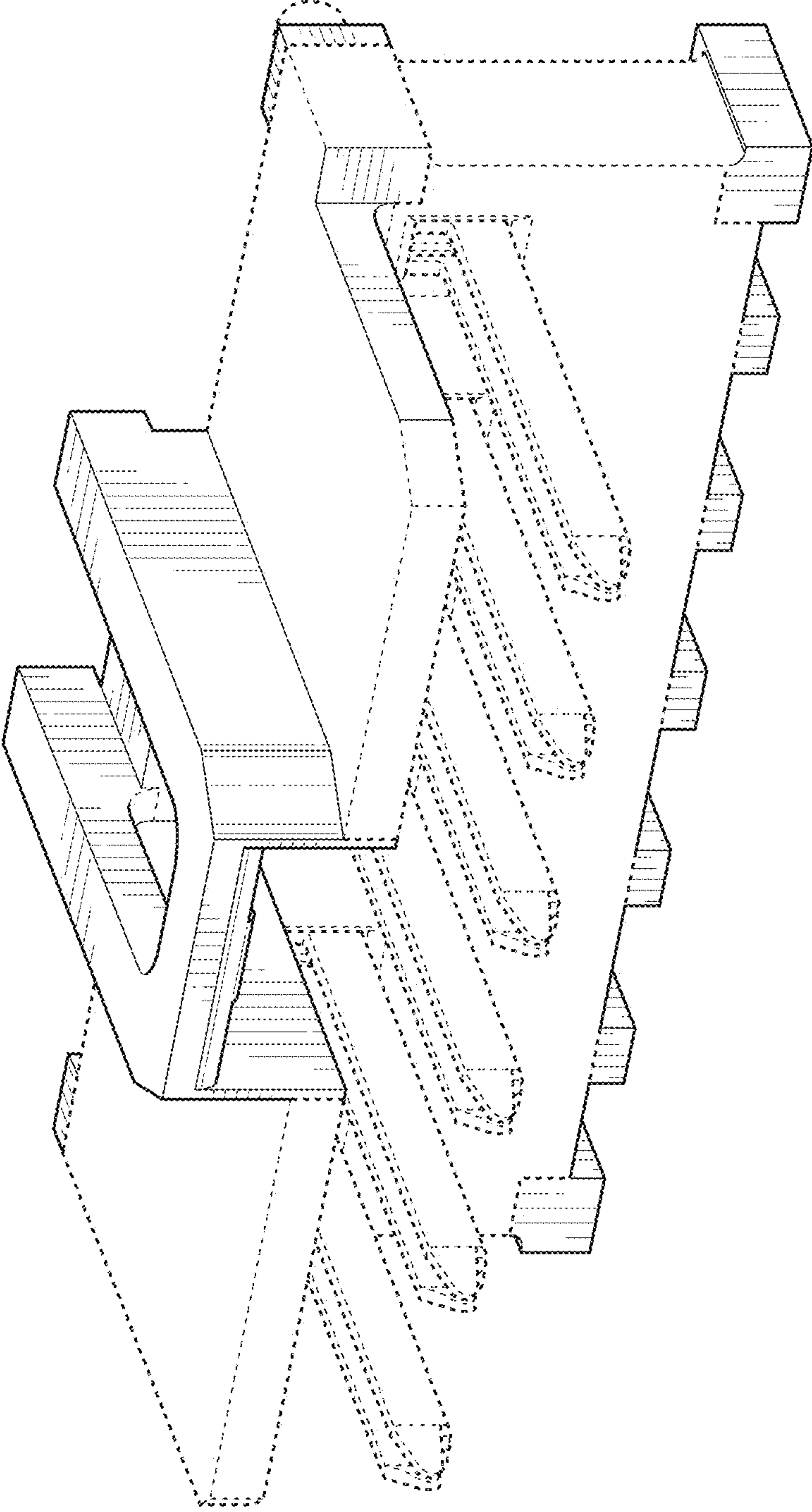


FIG. 73

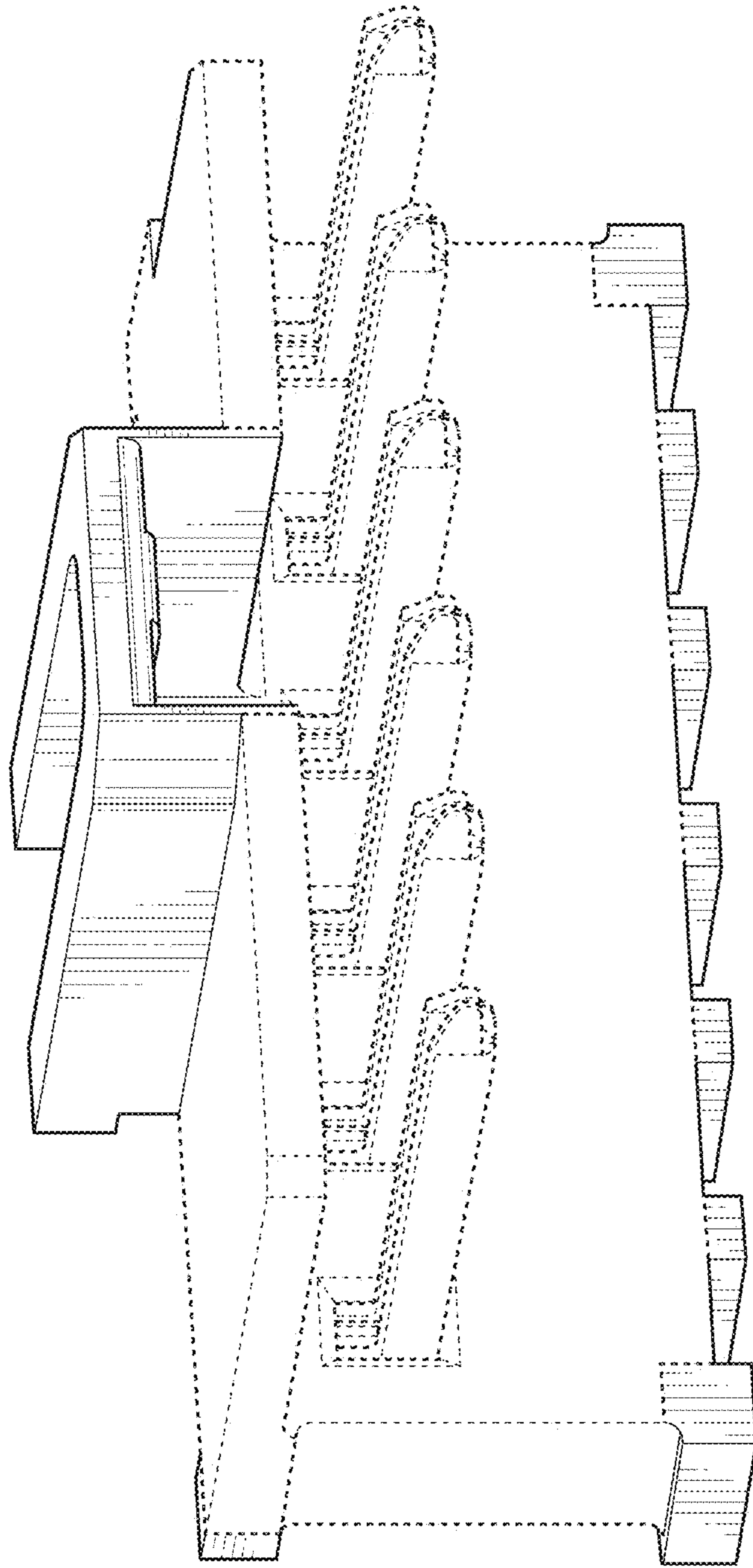


FIG. 74

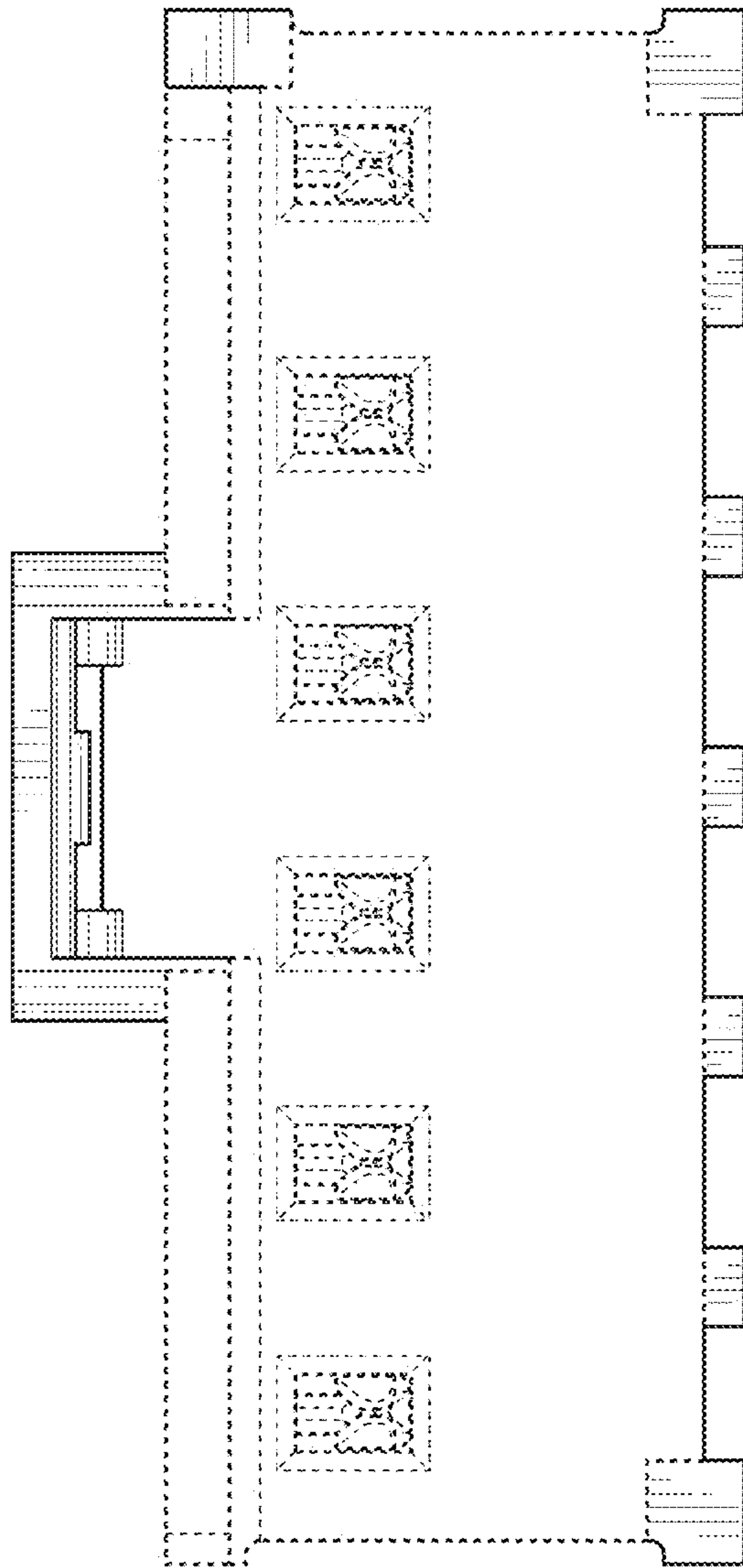


FIG. 75

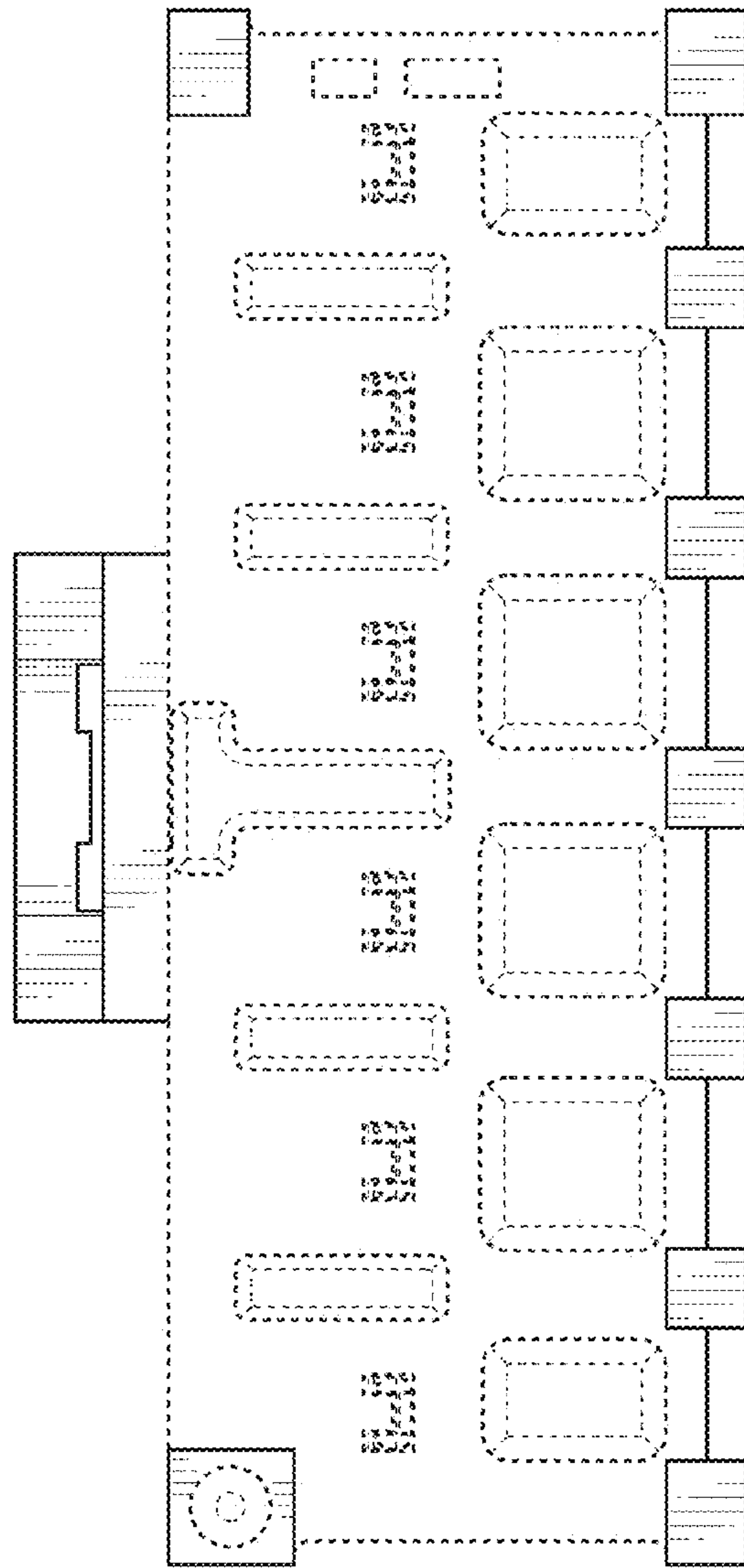


FIG. 76

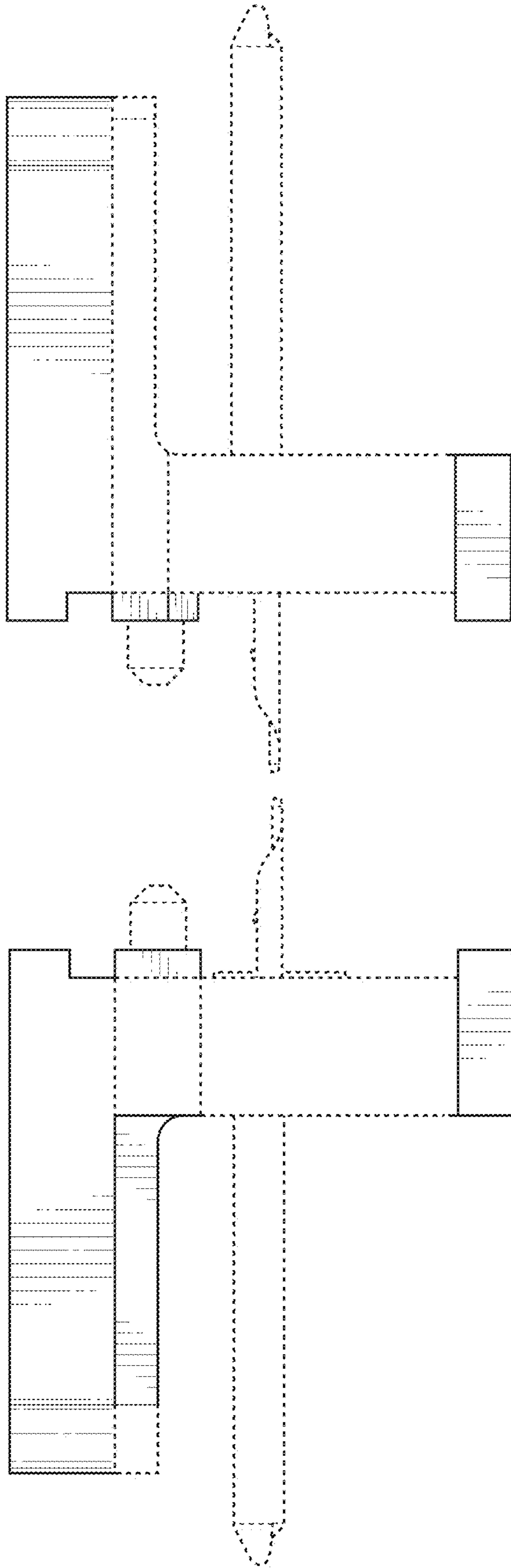


FIG. 78

FIG. 77

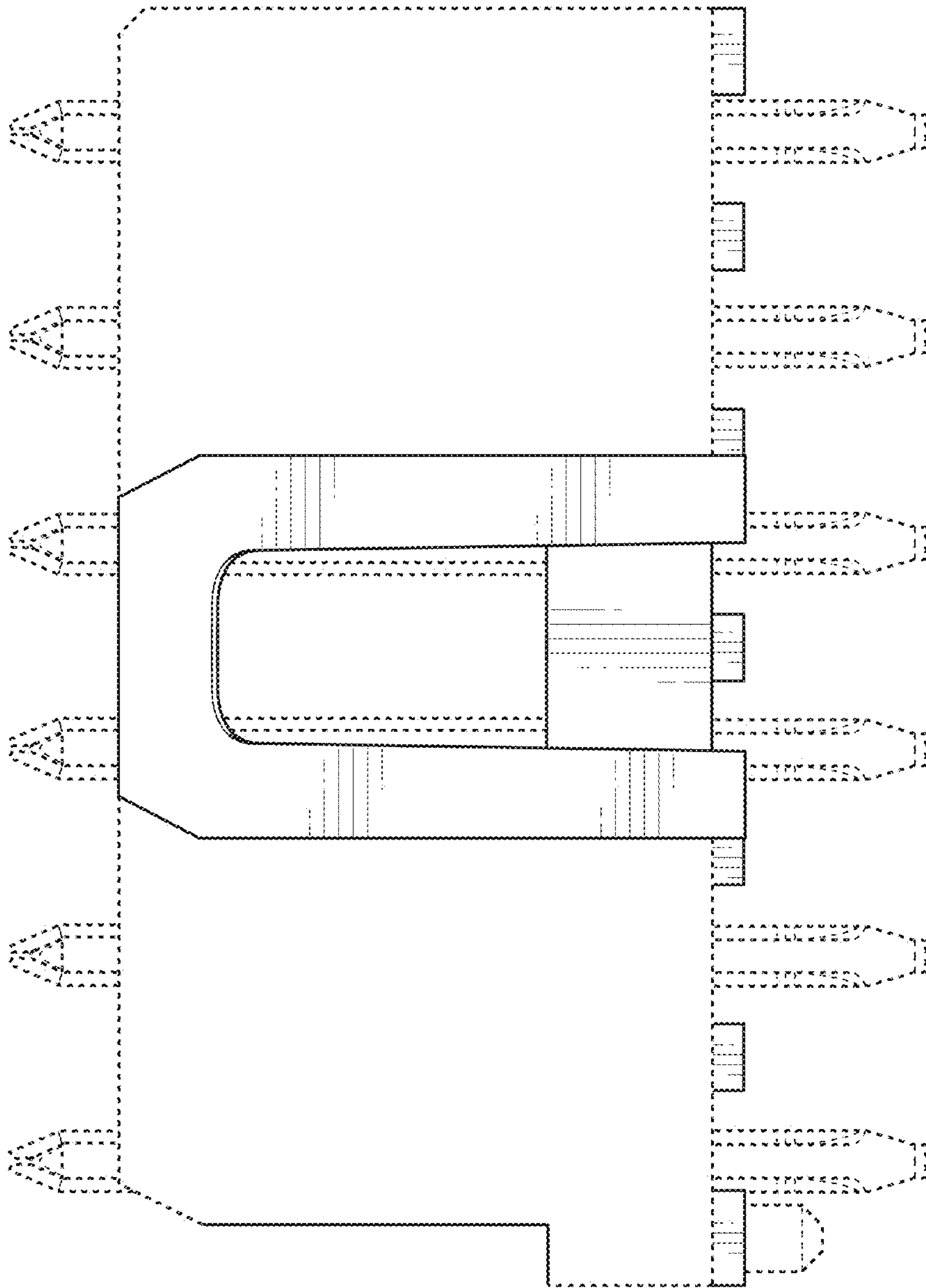


FIG. 79

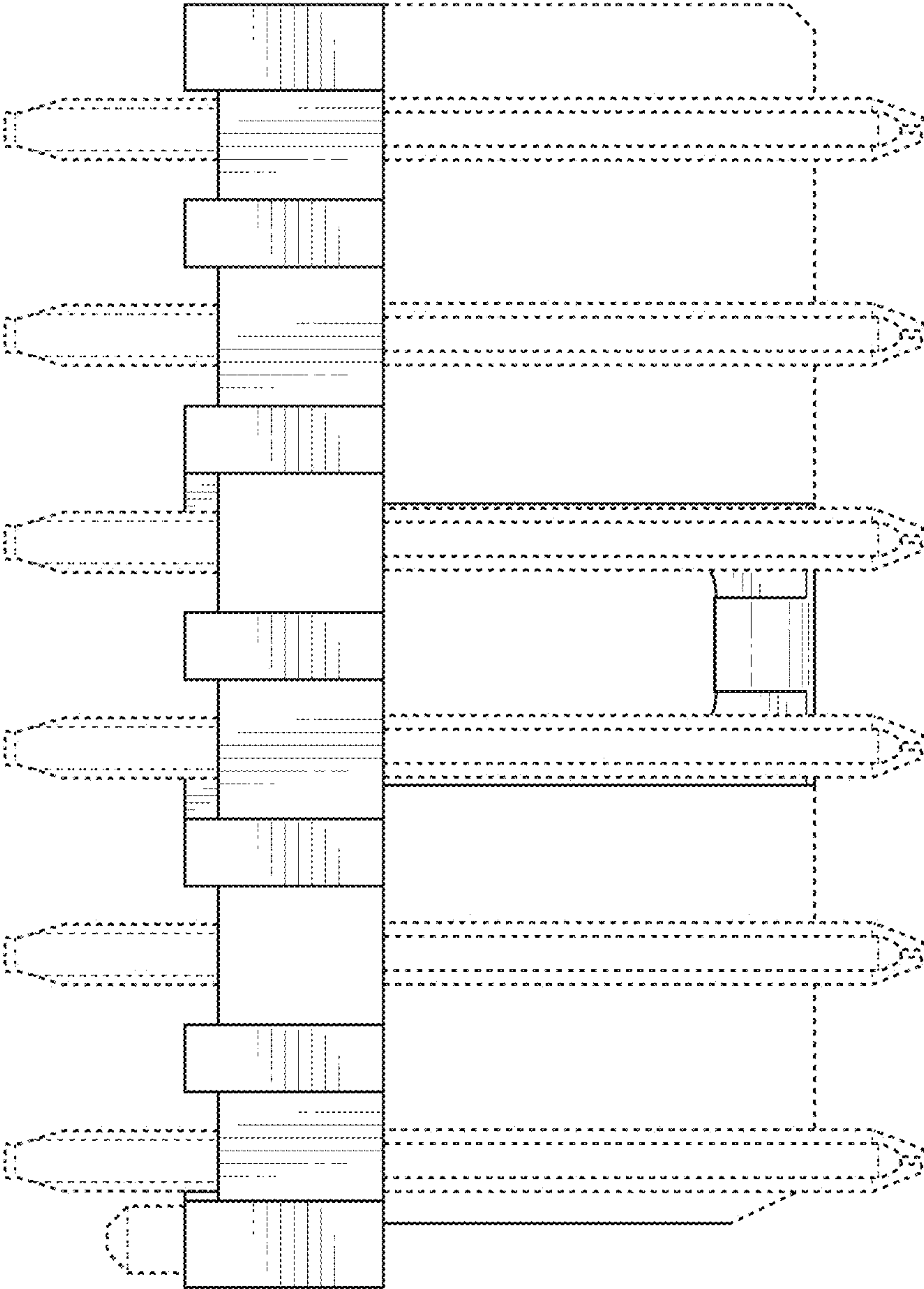


FIG. 80