



US00D744965S

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

(10) **Patent No.:** **US D744,965 S**  
(45) **Date of Patent:** **\*\* Dec. 8, 2015**

(54) **LIGHT EMITTING DIODE**

(56) **References Cited**

(71) Applicant: **EPISTAR CORPORATION**, Hsinchu (TW)

U.S. PATENT DOCUMENTS

(72) Inventors: **Hsing-Chao Chen**, Hsinchu (TW);  
**Hung-Hsuan Chen**, Hsinchu (TW);  
**Masafumi Sano**, Hsinchu (TW);  
**Cheng-Nan Han**, Hsinchu (TW);  
**Chien-Liang Liu**, Hsinchu (TW)

5,760,422 A	6/1998	Ishinaga	
6,392,342 B1 *	5/2002	Parikka	313/512
6,657,238 B2	12/2003	Ueda	
D514,074 S	1/2006	Kamidoi et al.	
D574,791 S *	8/2008	Shimozawa	D13/180
D576,571 S *	9/2008	Itai	D13/180
D578,083 S *	10/2008	Shimonishi et al.	D13/180
D580,891 S *	11/2008	Sung et al.	D13/180
D590,357 S *	4/2009	Miyashita	D13/180
7,696,522 B2	4/2010	Ono et al.	
7,714,334 B2 *	5/2010	Lin	257/81
7,750,361 B2	7/2010	Watanabe	

(73) Assignee: **Epistar Corporation**, Hsinchu (TW)

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

(Continued)

(21) Appl. No.: **29/496,938**

FOREIGN PATENT DOCUMENTS

(22) Filed: **Jul. 18, 2014**

KR 3001843110000 9/1996

**Related U.S. Application Data**

*Primary Examiner* — Selina Sikder

(63) Continuation of application No. 29/462,785, filed on Aug. 8, 2013, now Pat. No. Des. 710,811.

(74) *Attorney, Agent, or Firm* — Muncy, Geissler, Olds & Lowe, P.C.

(30) **Foreign Application Priority Data**

(57) **CLAIM**

Feb. 8, 2013 (TW) ..... 102301220

The ornamental design for a light-emitting diode, as shown and described.

**DESCRIPTION**

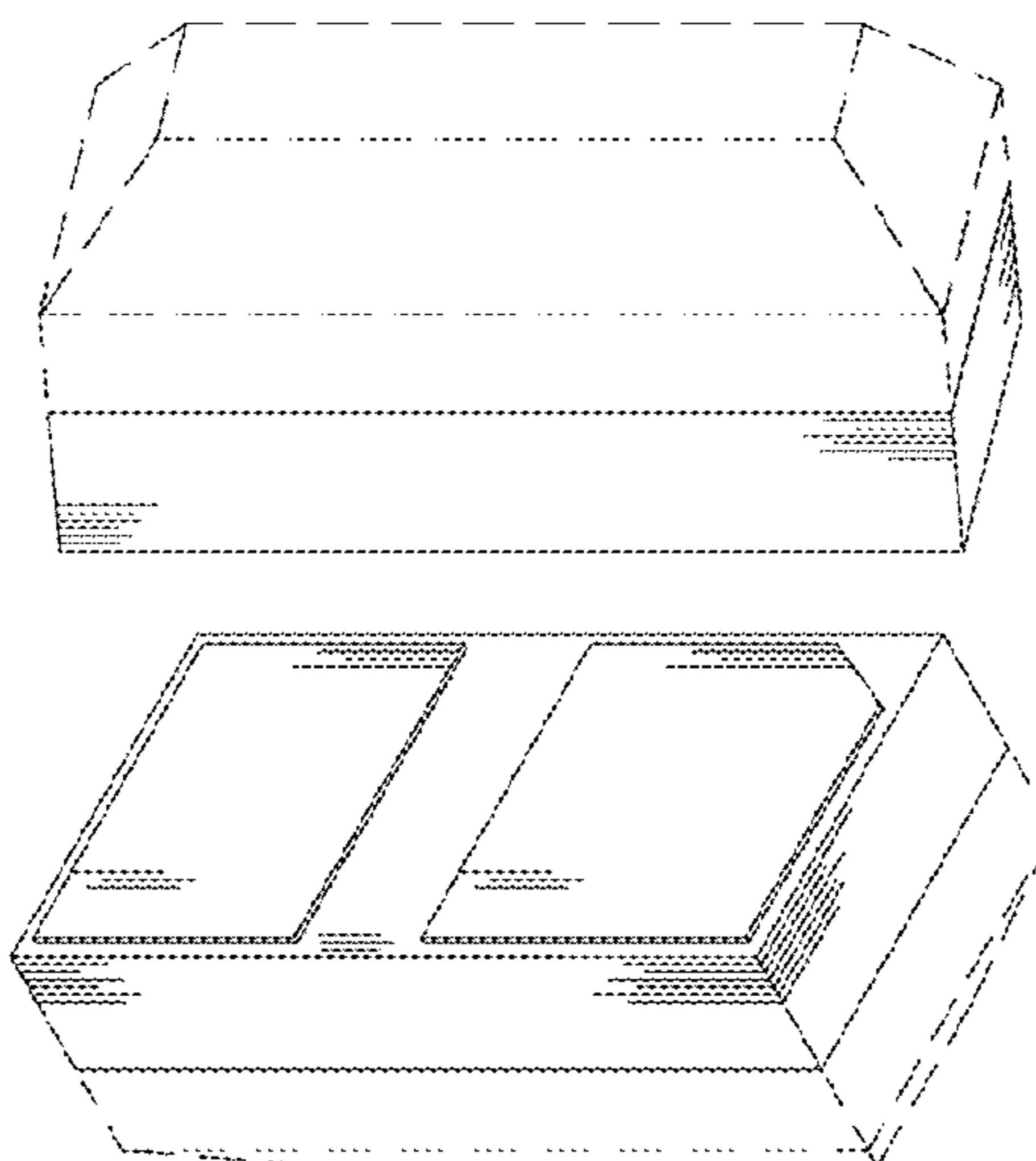
(51) **LOC (10) Cl.** ..... **13-03**

FIG. 1 is a top perspective view of a light-emitting diode showing our new design;  
FIG. 2 is a bottom perspective view thereof;  
FIG. 3 is a front elevational view thereof;  
FIG. 4 is a rear elevational view thereof;  
FIG. 5 is a left side view thereof;  
FIG. 6 is a right side view thereof;  
FIG. 7 is a top plan view thereof;  
FIG. 8 is a bottom plan view thereof; and,  
FIG. 9 is the bottom perspective view of FIG. 2, with the environmental structure removed for ease of view.  
The broken line showing is for the purpose of illustrating environmental structure, and forms no part of the claimed design.

(52) **U.S. Cl.**  
USPC ..... **D13/180**

(58) **Field of Classification Search**  
USPC ..... D13/180; D26/1  
CPC ... H01L 25/167; H01L 25/0753; H01L 27/15;  
H01L 27/156; H01L 31/02; H01L 33/00;  
H01L 33/04; H01L 33/08; H01L 33/10;  
H01L 33/20; H01L 33/38; H01L 33/42;  
H01L 33/48; H01L 33/483; H01L 33/486;  
F21K 9/00; F21K 9/30; F21K 9/54; F21V  
15/01  
See application file for complete search history.

**1 Claim, 6 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

7,781,888 B2	8/2010	Kobayakawa et al.				
D653,629 S	2/2012	Miyashita				
8,242,514 B2	8/2012	Joung				
D672,731 S	12/2012	Bergmann et al.				
D676,002 S	2/2013	Watanabe				
D682,225 S	5/2013	Bergmann et al.				
D689,830 S	9/2013	Bergmann et al.				
D694,201 S	11/2013	Iino				
8,648,360 B2	2/2014	Chen				
D710,811 S *	8/2014	Chen et al. ....	D13/180			
D719,535 S *	12/2014	Iino et al. ....	D13/180			
				D724,039 S *	3/2015	Iino et al. .... D13/180
				D724,548 S *	3/2015	Iino et al. .... D13/180
				2003/0107045 A1	6/2003	Eisert et al.
				2006/0163602 A1*	7/2006	Isokawa ..... 257/100
				2007/0075323 A1	4/2007	Kanazawa et al.
				2007/0096114 A1*	5/2007	Aoki et al. .... 257/79
				2008/0151557 A1*	6/2008	Su et al. .... 362/362
				2008/0165539 A1	7/2008	Hsu et al.
				2010/0096644 A1	4/2010	Kong
				2012/0032203 A1	2/2012	Urano
				2013/0134472 A1	5/2013	Zhang
				2013/0193474 A1	8/2013	Kim et al.
				2013/0240922 A1	9/2013	Yamamoto

\* cited by examiner

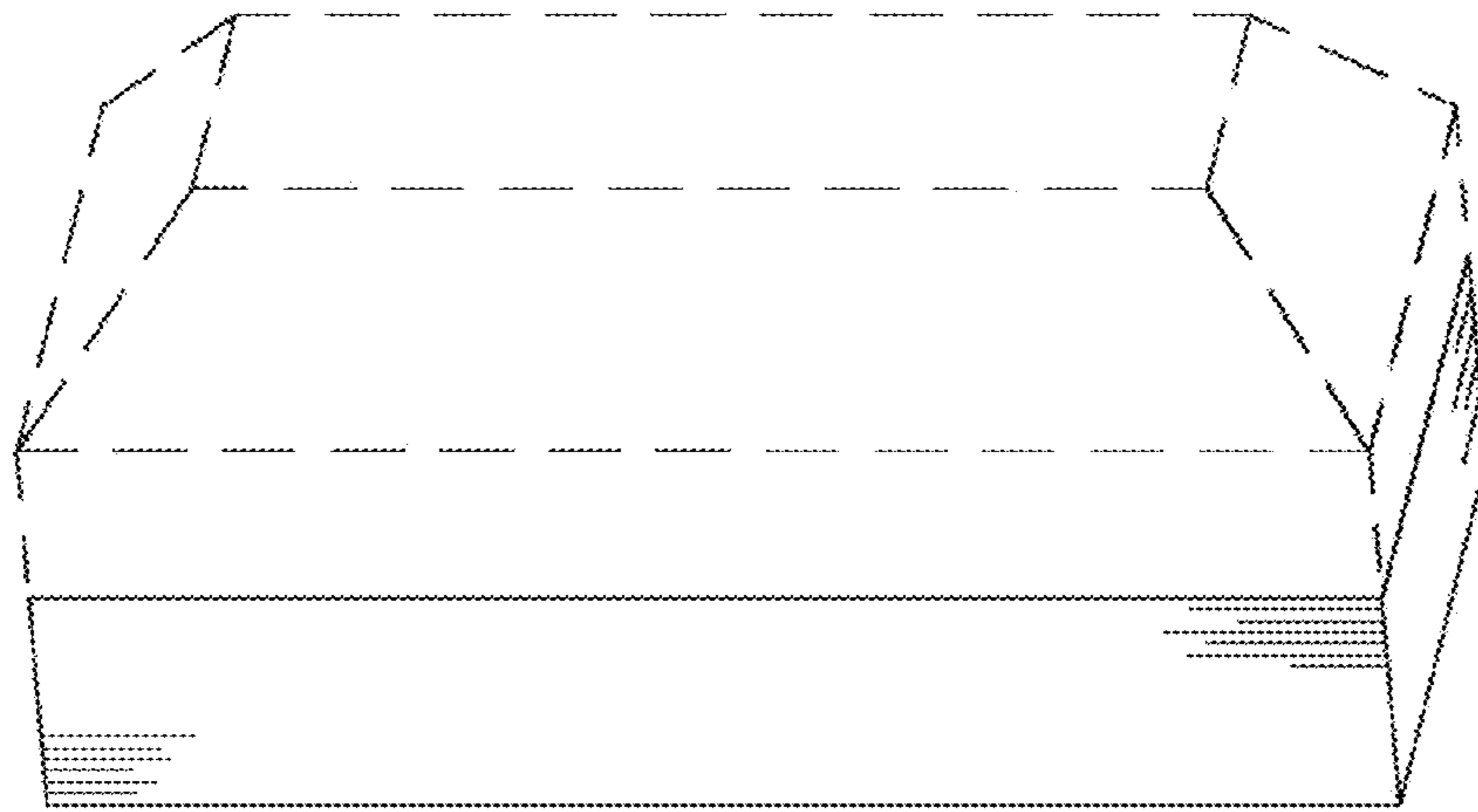


FIG. 1

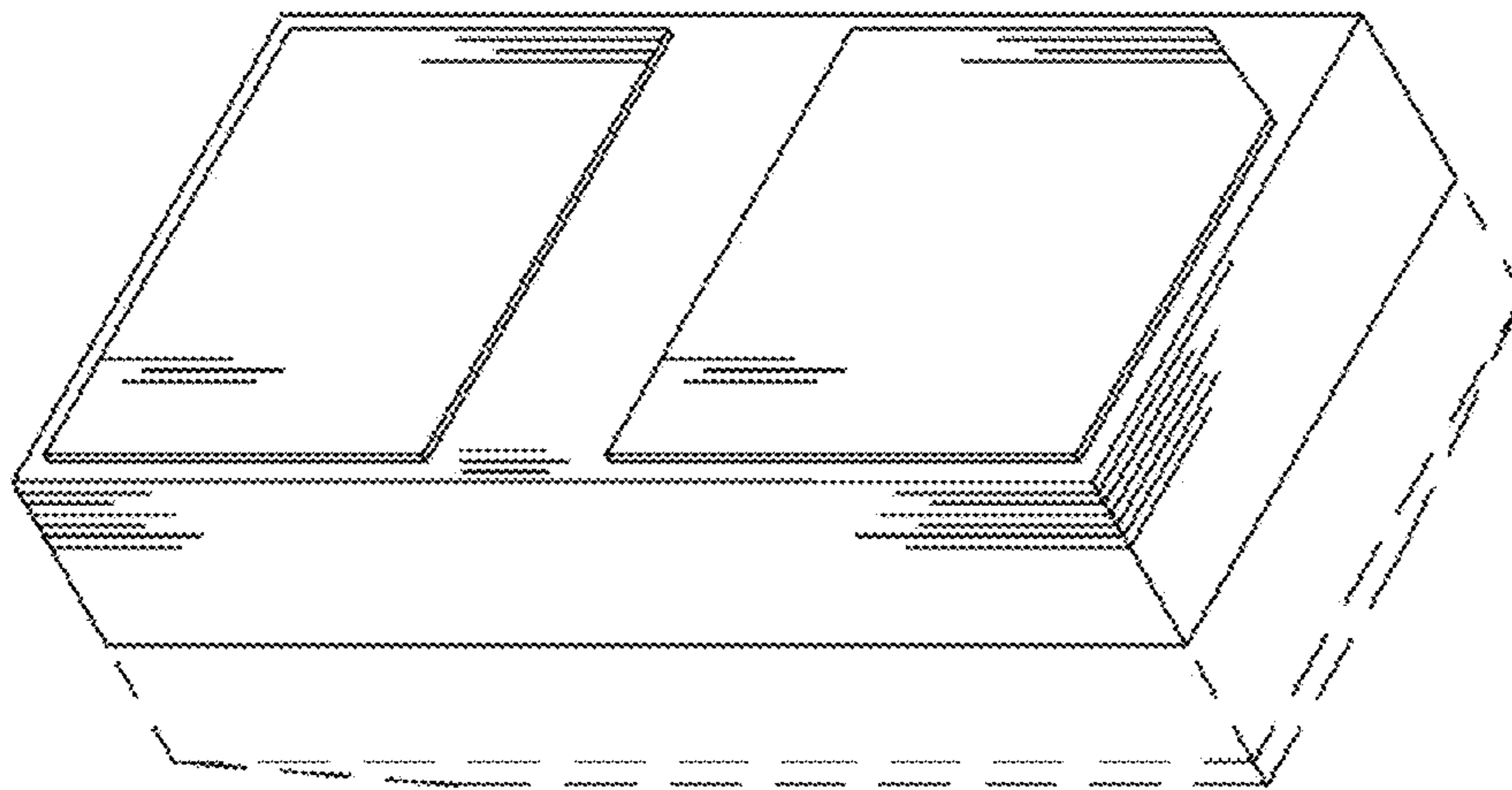


FIG. 2



FIG. 3

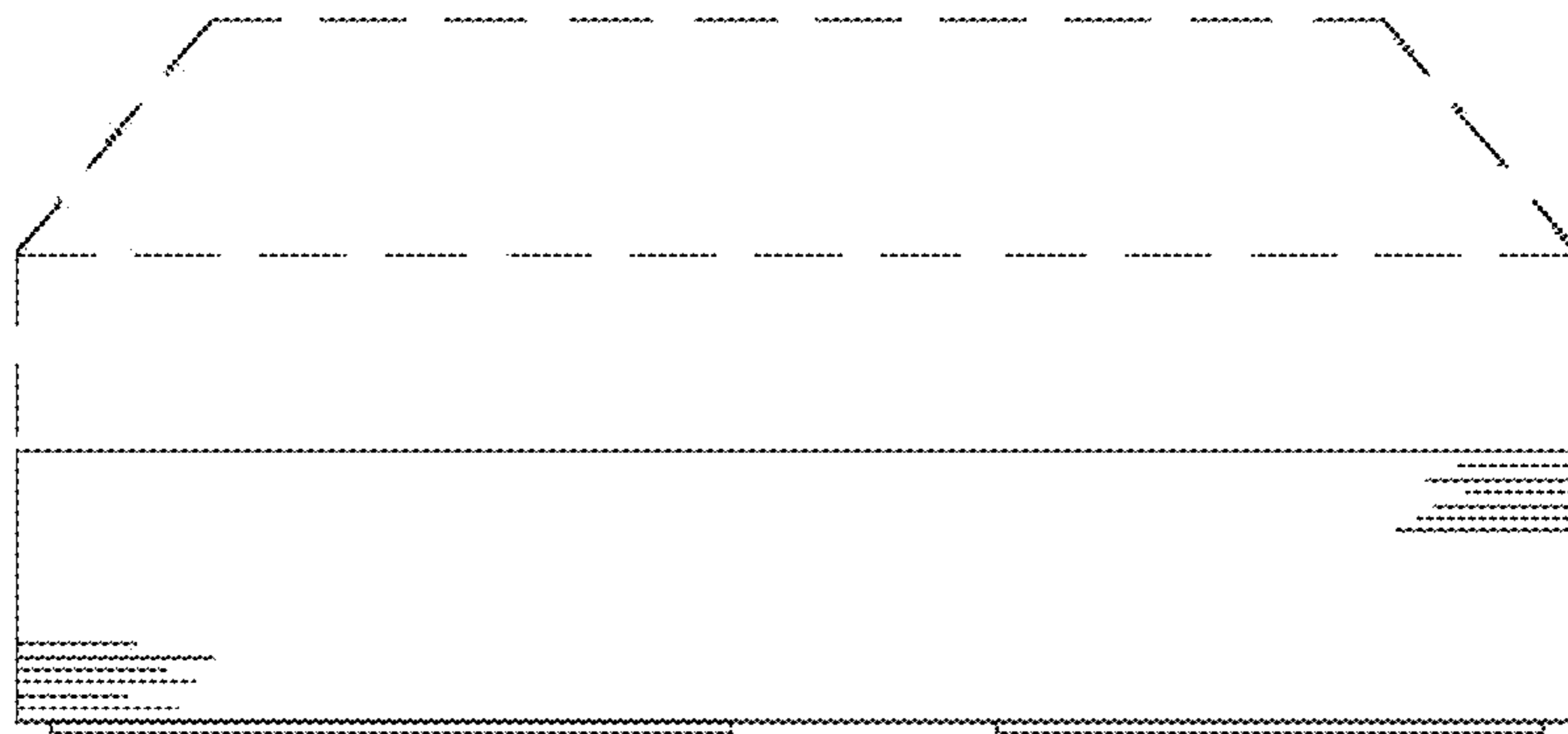


FIG. 4

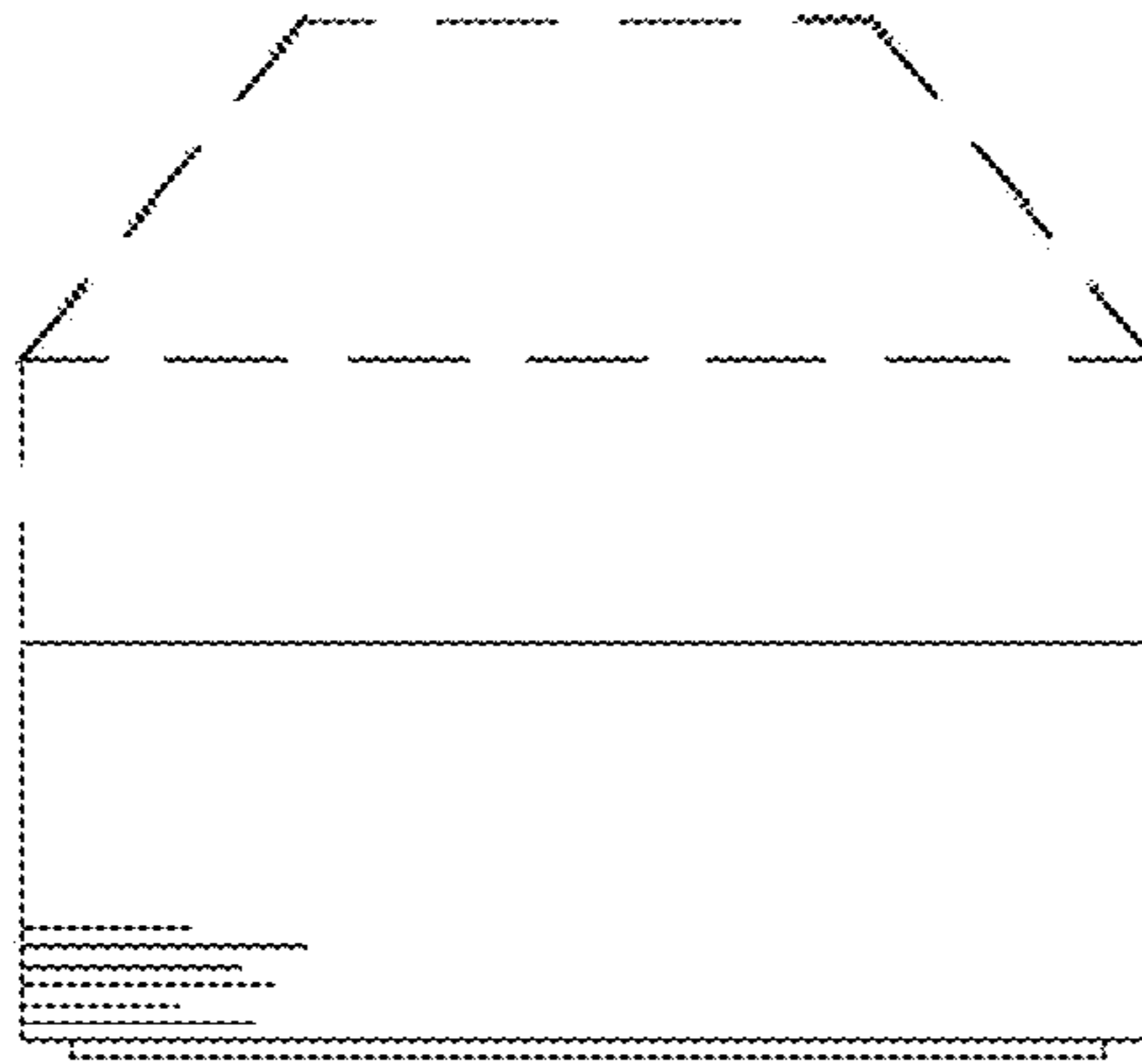


FIG. 5

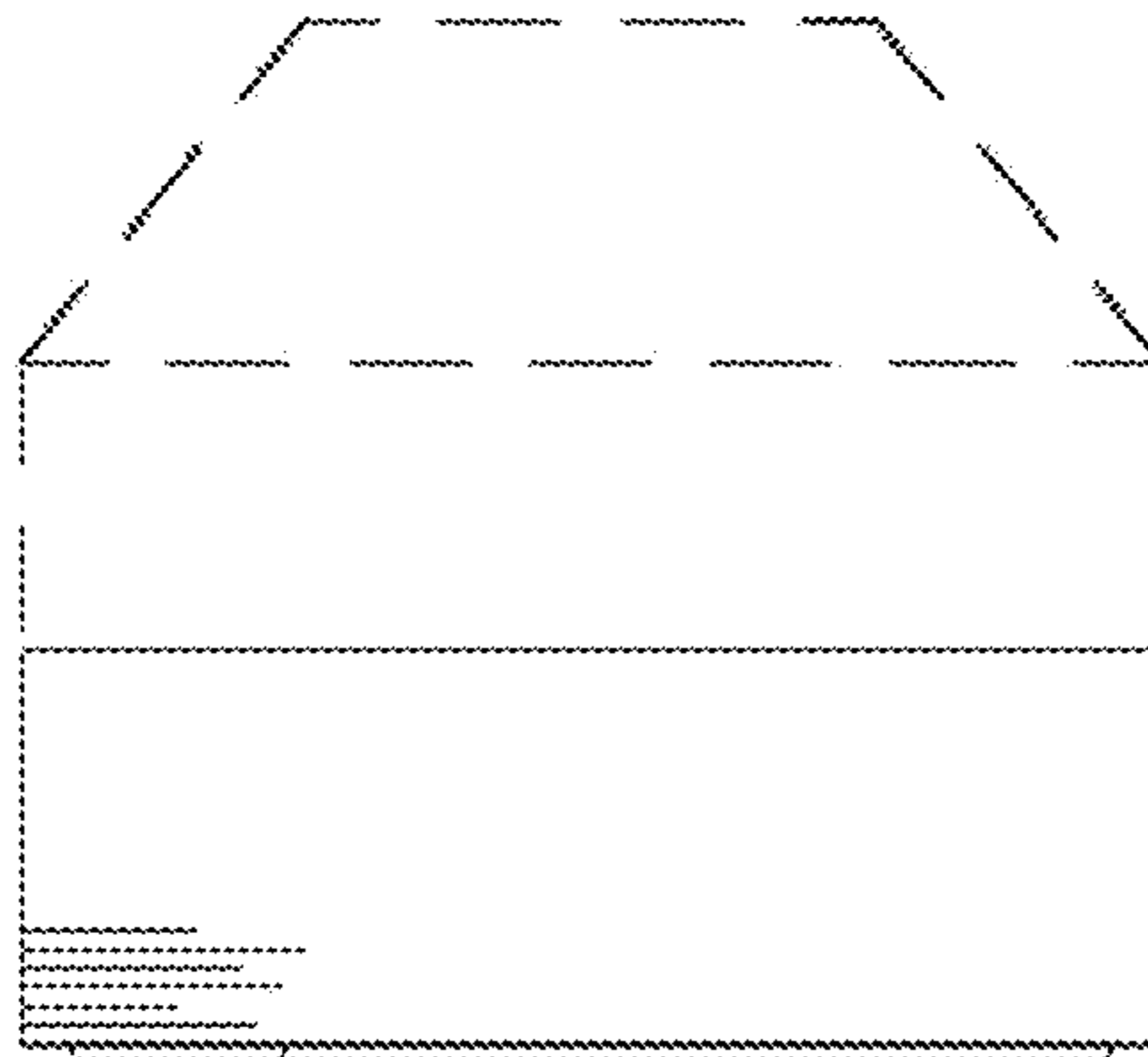


FIG. 6

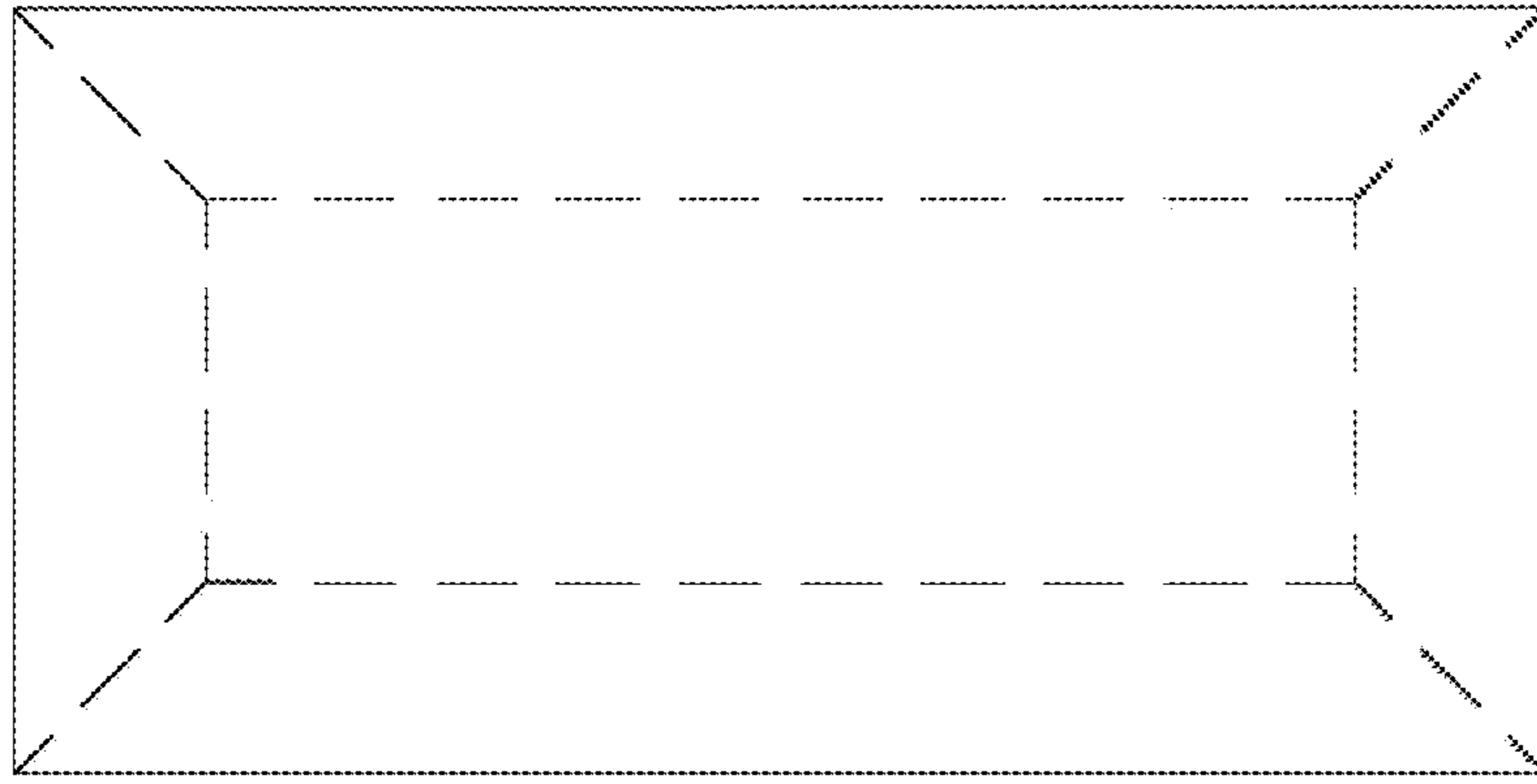


FIG. 7

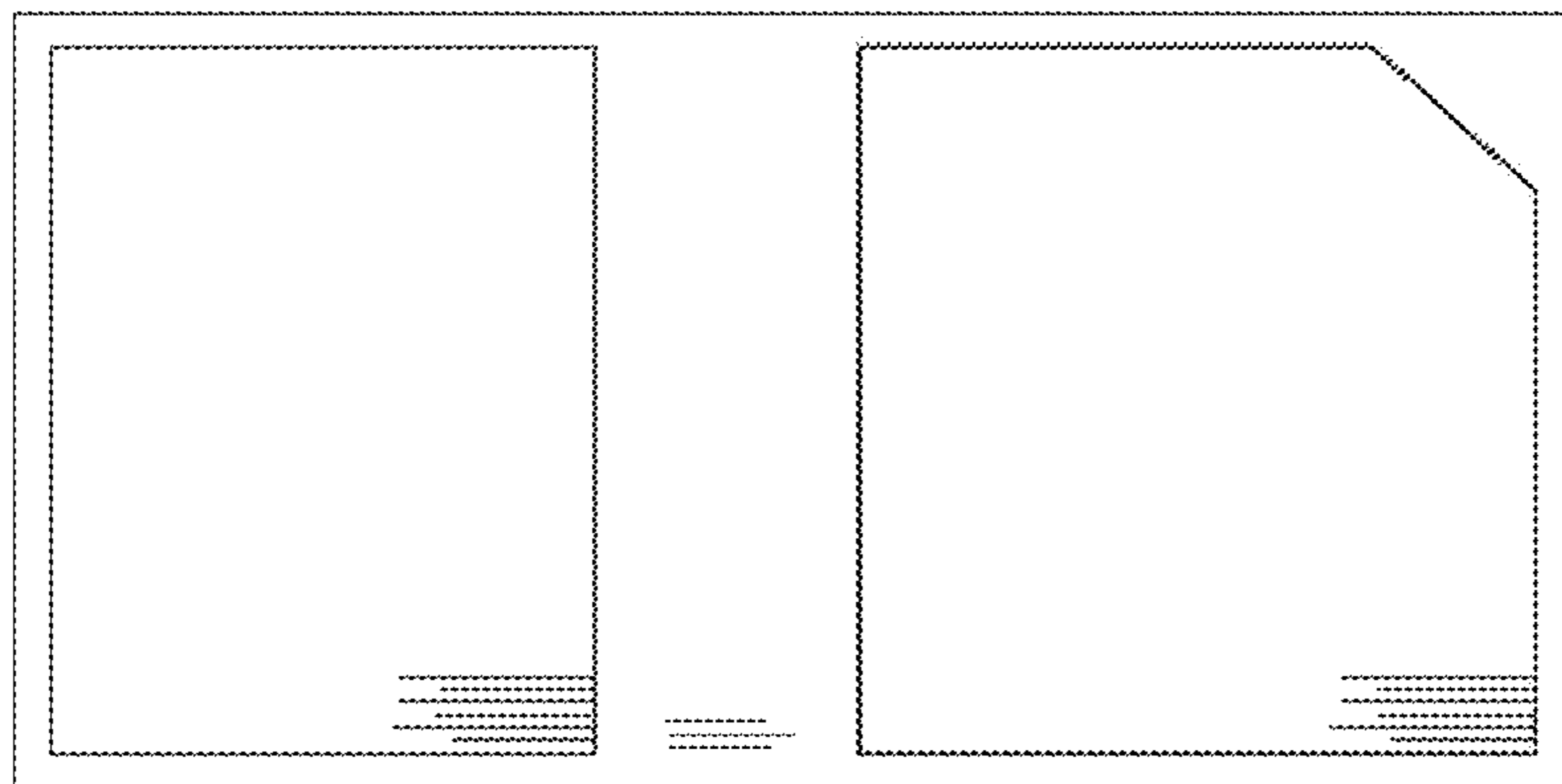


FIG. 8

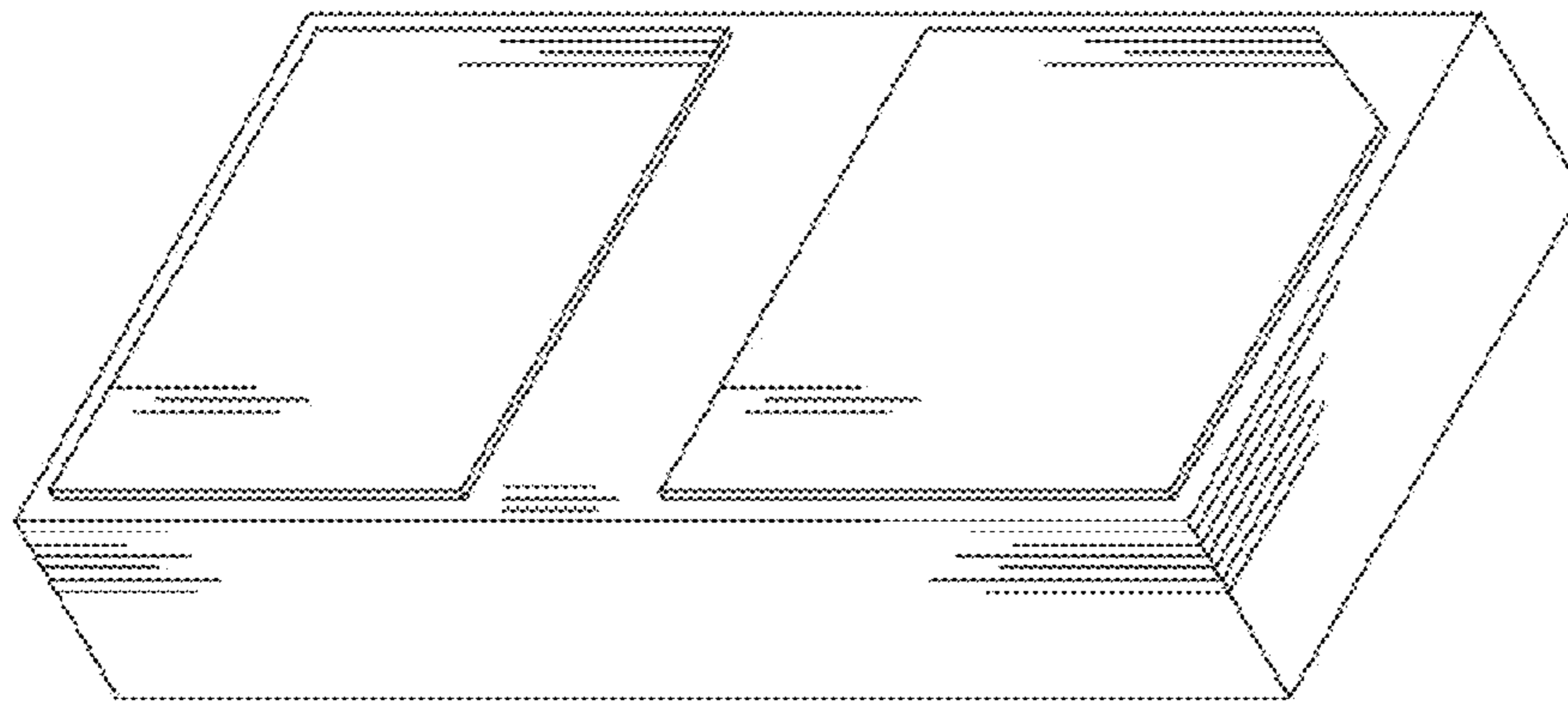


FIG. 9