



US00D644615S

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

(10) **Patent No.:** **US D644,615 S**

(45) **Date of Patent:** **\*\* Sep. 6, 2011**

(54) **TWO PART HEAT SPREADER**

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(73) Assignee: **Canon U.S. Life Sciences, Inc.**, Rockville, MD (US)

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

(21) Appl. No.: **29/368,874**

(22) Filed: **Aug. 31, 2010**

(51) **LOC (9) Cl.** ..... **13-03**

(52) **U.S. Cl.** ..... **D13/179**

(58) **Field of Classification Search** ..... D13/179;  
165/80.3, 104.33, 122, 151, 185; 257/706,  
257/707, 718-722; 361/695, 697, 700, 702,  
361/704, 709, 710, 711, 719

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D367,469	S *	2/1996	Widmayer et al. ....	D13/179
5,582,240	A *	12/1996	Widmayer .....	165/80.3
5,947,191	A *	9/1999	Hiteshew et al. ....	165/80.3
5,969,949	A *	10/1999	Kim et al. ....	361/704
6,053,240	A *	4/2000	Johnston et al. ....	165/80.3
6,829,144	B1 *	12/2004	Stutzman et al. ....	361/704
7,385,822	B1 *	6/2008	Li et al. ....	361/709
7,477,517	B2 *	1/2009	Khanna et al. ....	361/704
7,678,616	B2 *	3/2010	Sir et al. ....	438/122

D618,183	S *	6/2010	Chang et al. ....	D13/179
D618,184	S *	6/2010	Chang et al. ....	D13/179
D618,185	S *	6/2010	Chang et al. ....	D13/179
2003/0106670	A1 *	6/2003	Lee et al. ....	165/80.3

\* cited by examiner

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(57) **CLAIM**

The ornamental design for a two-part heat spreader, as shown and described.

**DESCRIPTION**

FIG. 1 is an enlarged top plan view of a two-part heat spreader in conjunction with a compound microheater chip; the compound microheater chip forms no part of the claimed design. FIG. 2 is a side view of a first part heat spreader shown separately for ease of illustration.

FIG. 3 is front view of a first part heat spreader.

FIG. 4 is a top view of a first part heat spreader.

FIG. 5 is an isometric perspective view of the bottom of a first part heat spreader.

FIG. 6 is a side view of a second part heat spreader shown separately for ease of illustration.

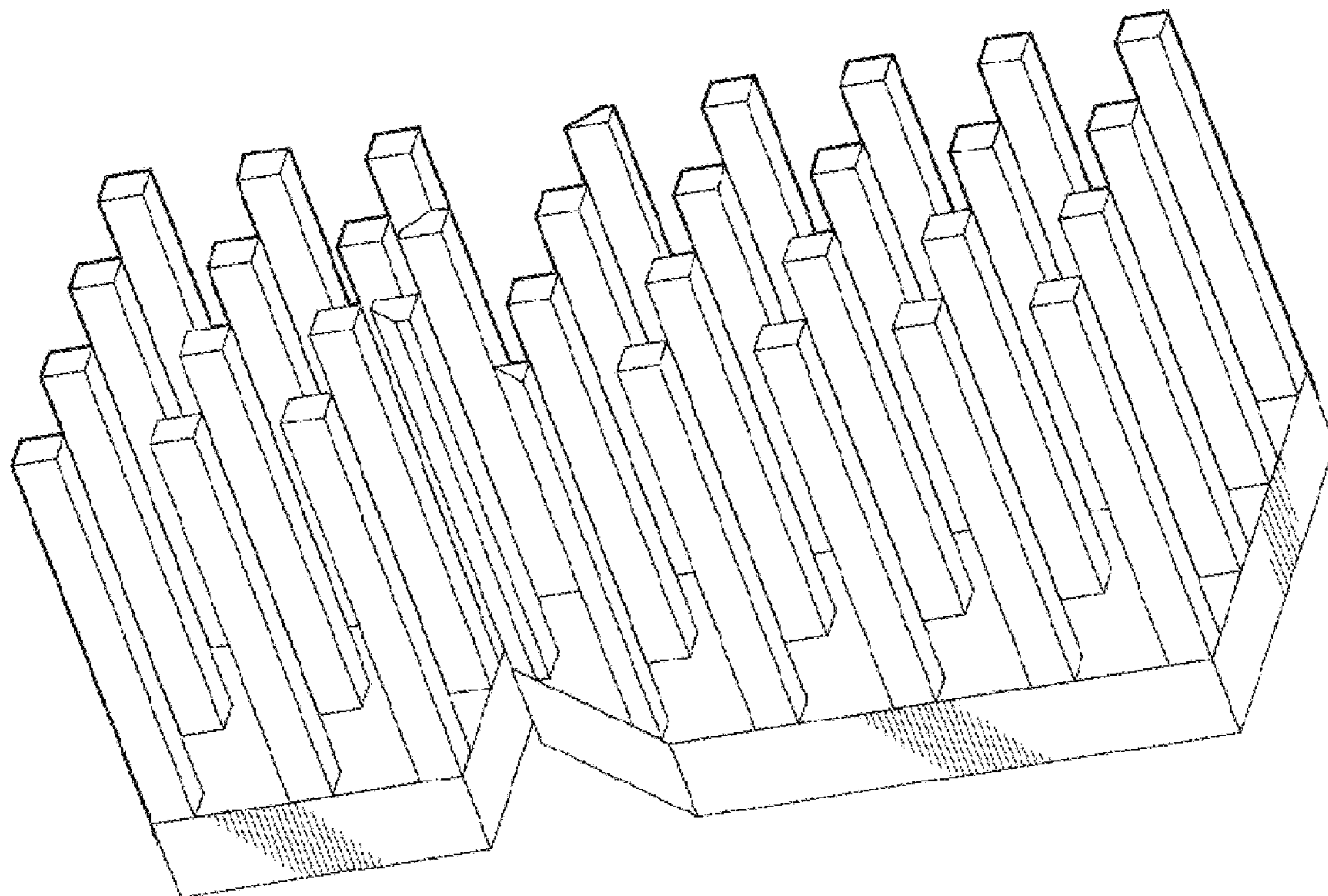
FIG. 7 is front view of a second part heat spreader.

FIG. 8 is a top view of a second part heat spreader.

FIG. 9 is an isometric perspective view of the bottom of a second part heat spreader; and,

FIG. 10 is a perspective view of a two-part heat spreader.

**1 Claim, 4 Drawing Sheets**



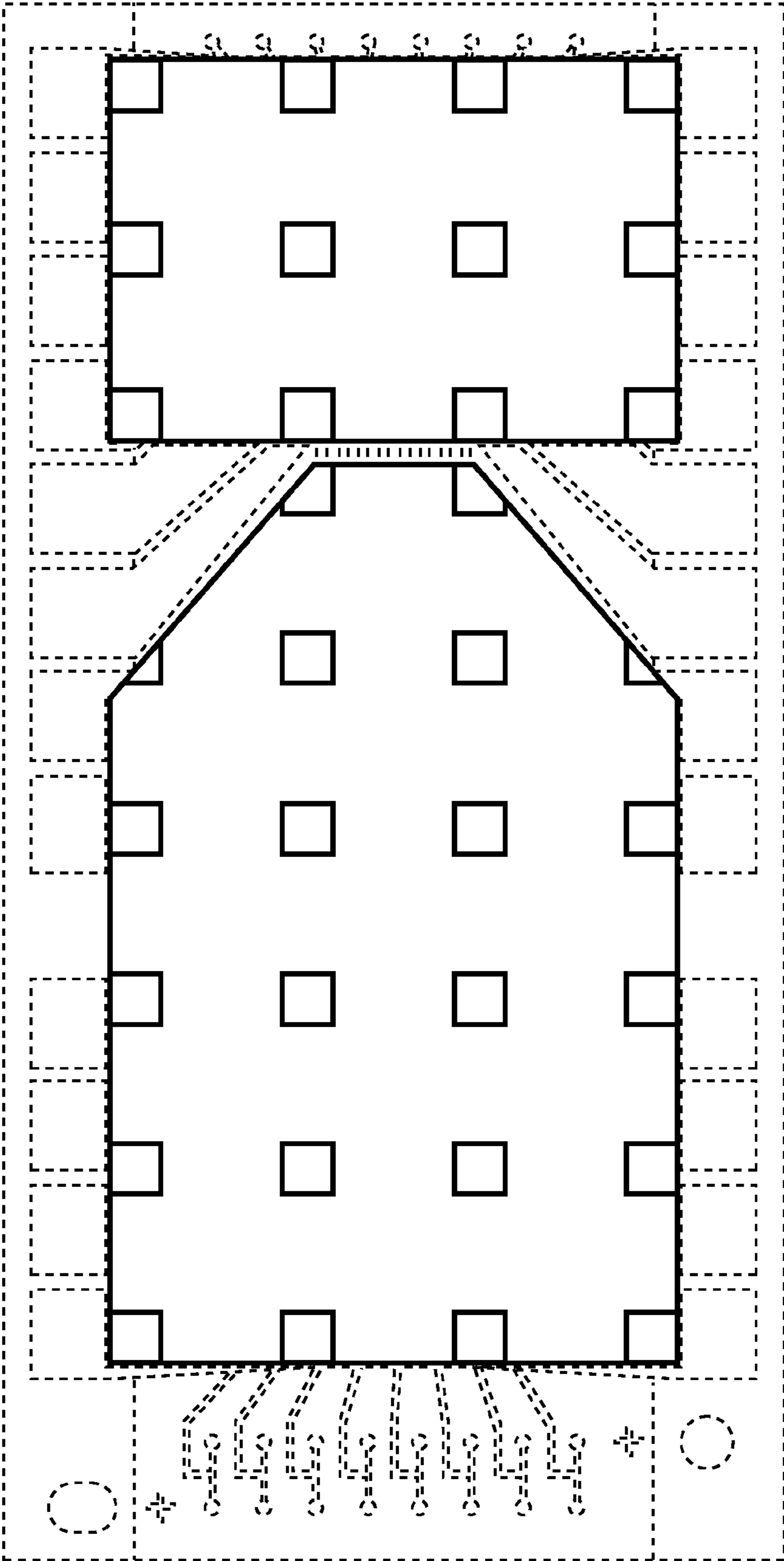


FIG. 1

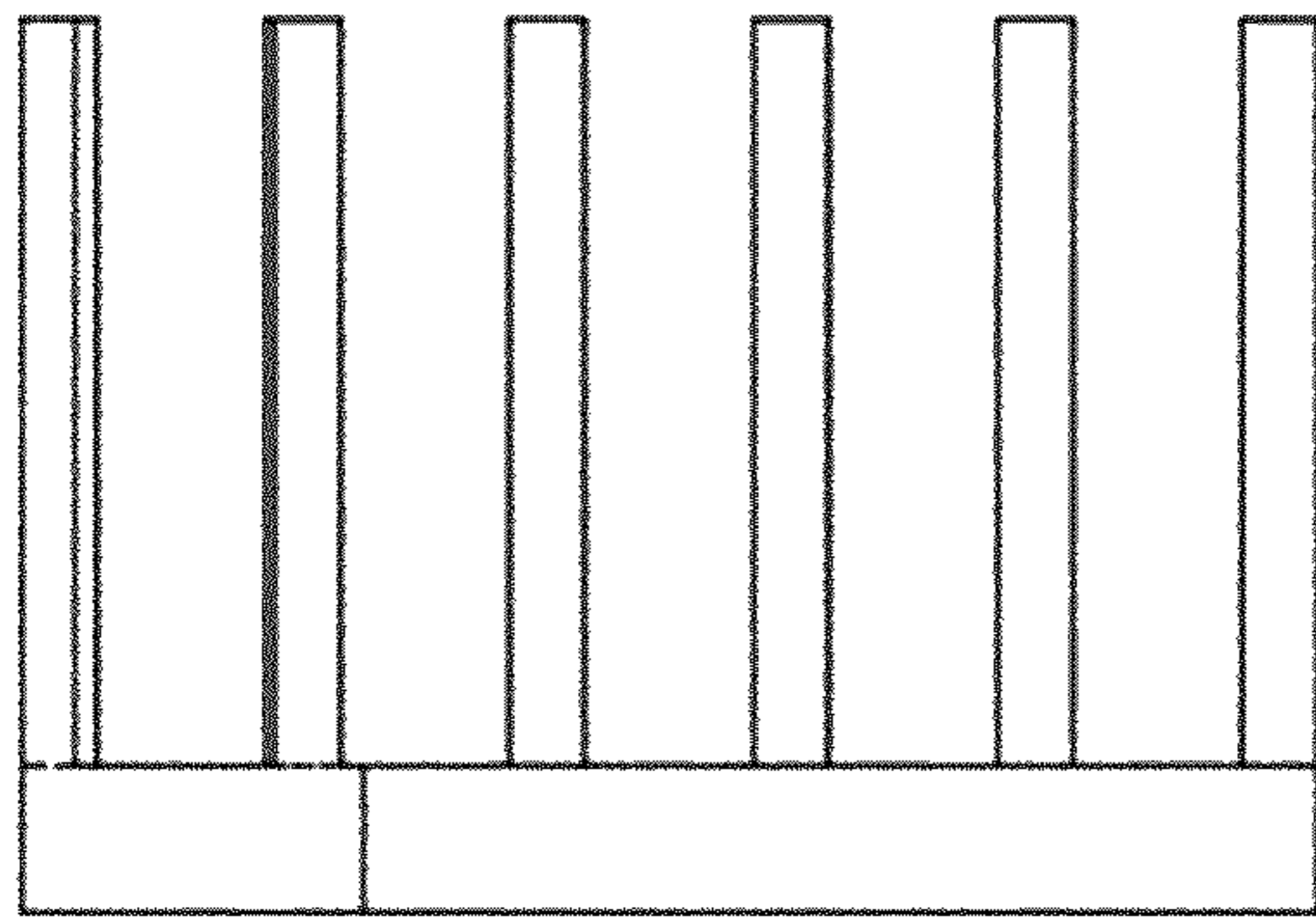


FIG. 2

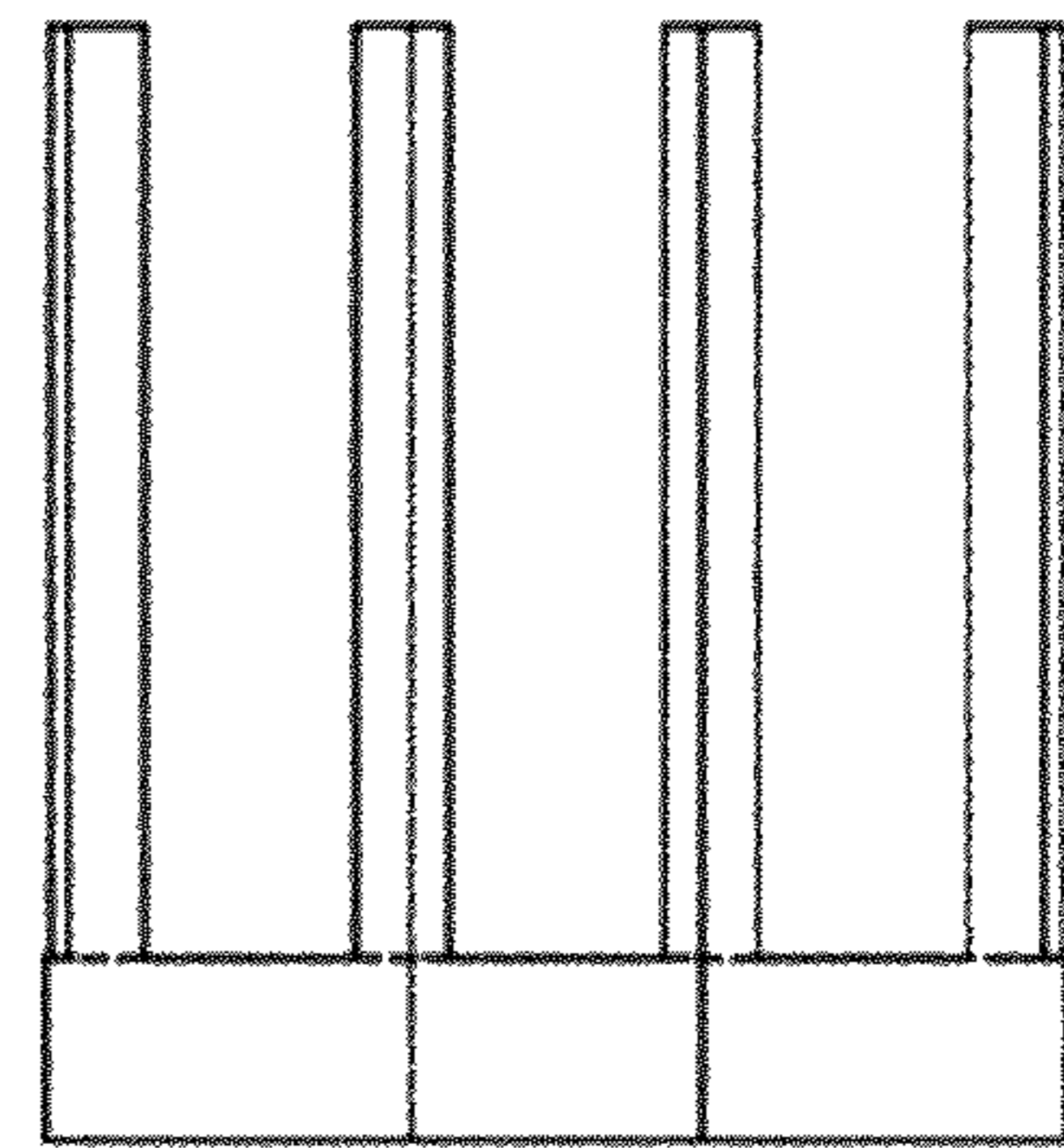


FIG. 3

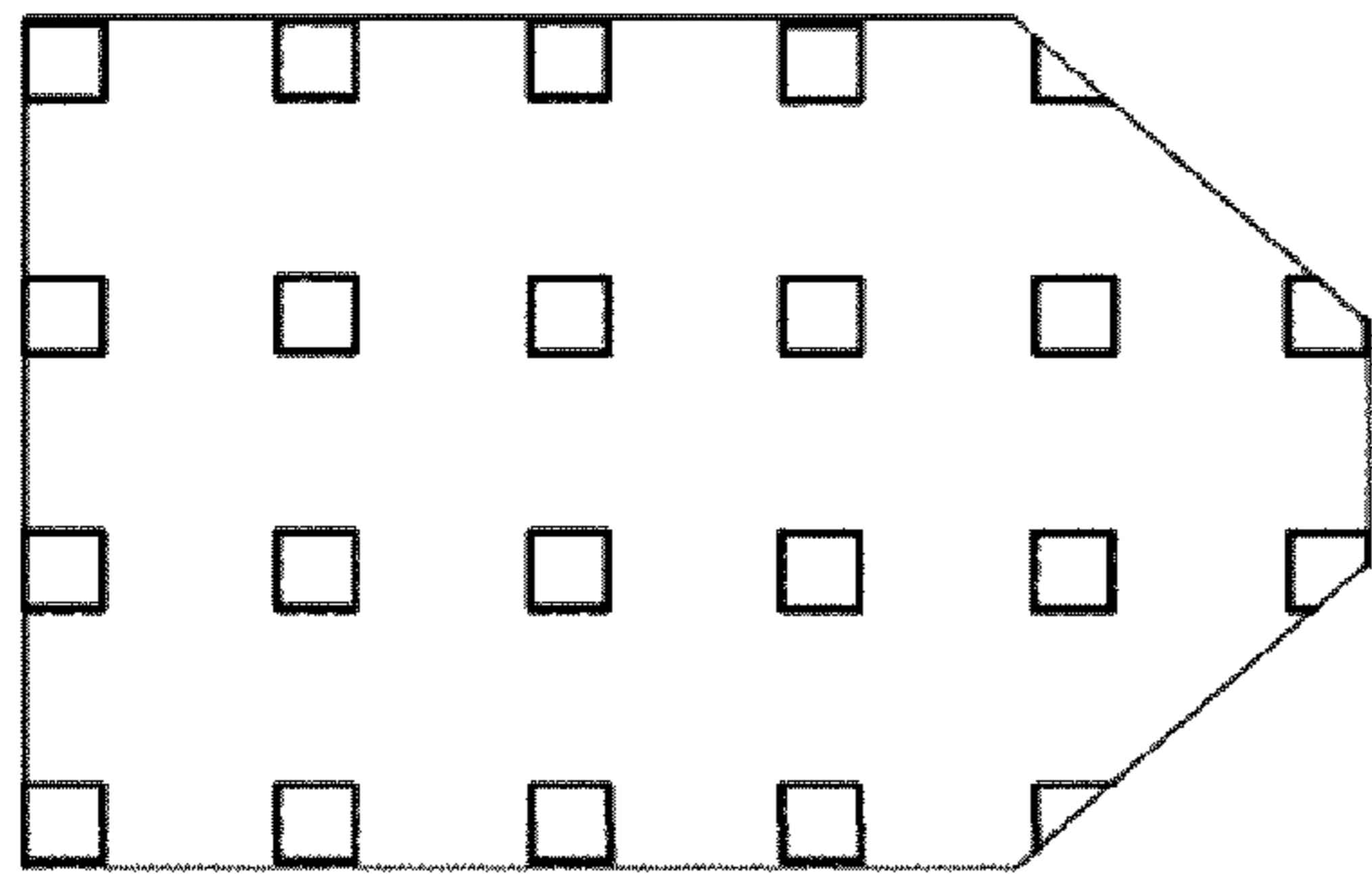


FIG. 4

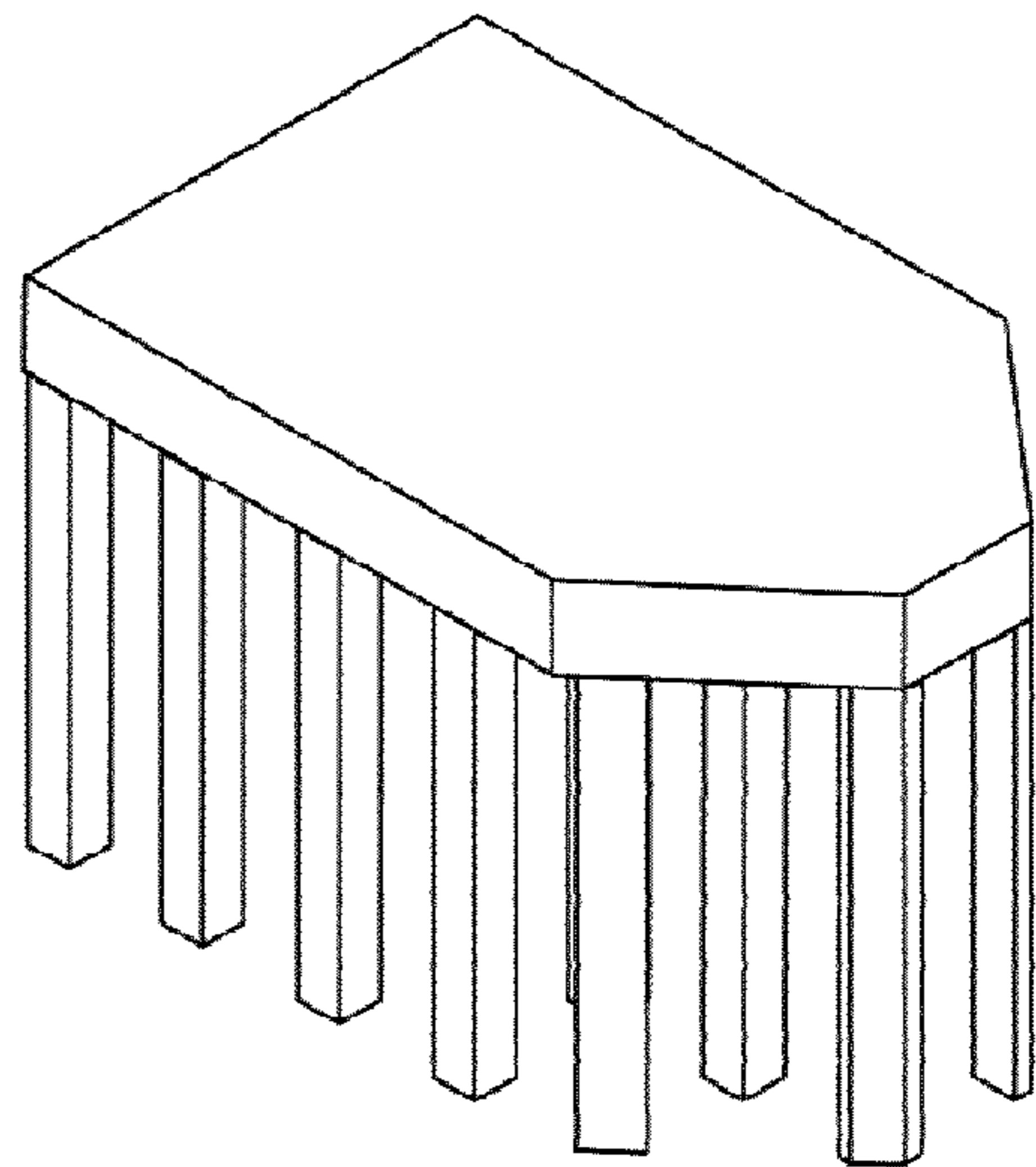


FIG. 5

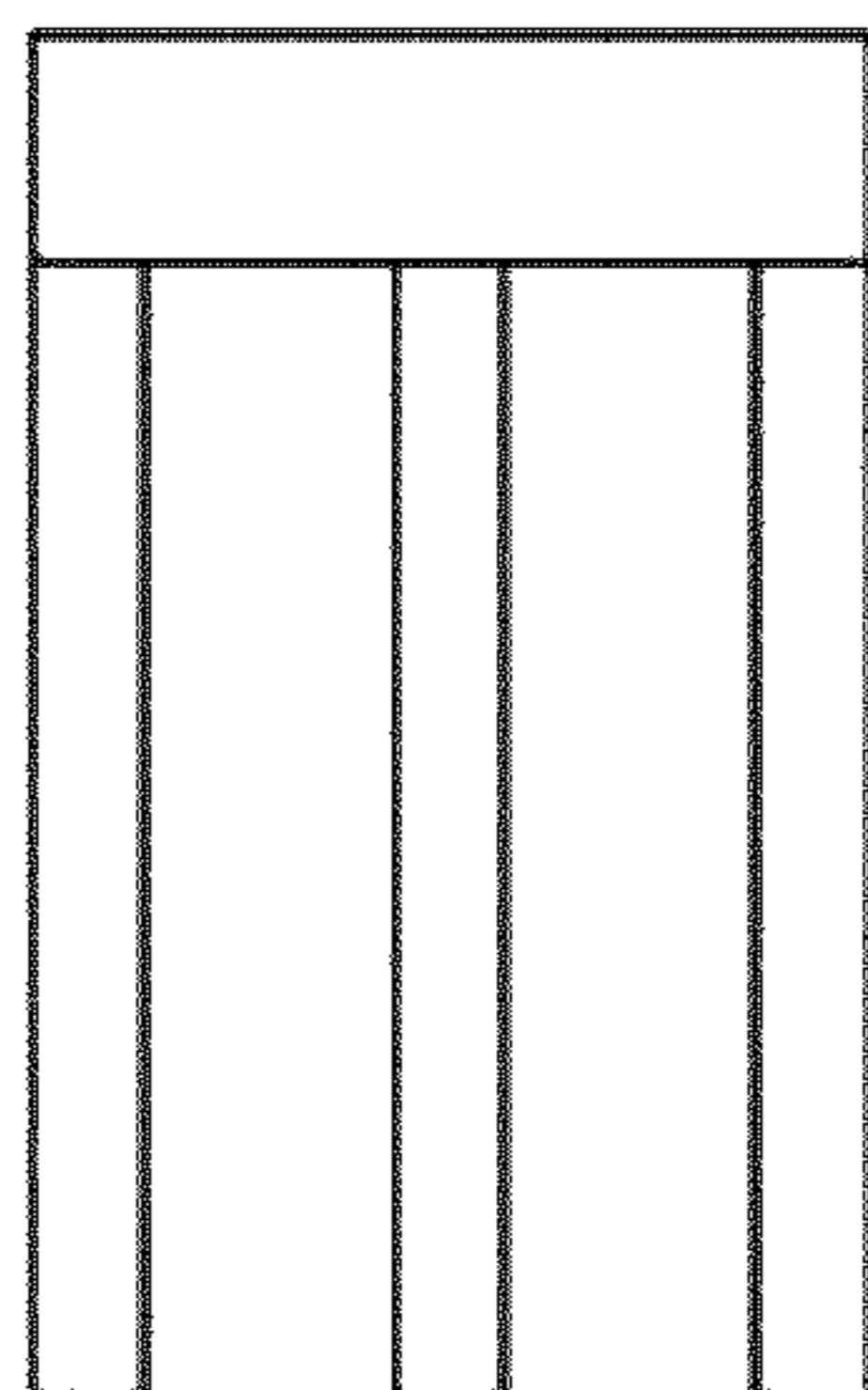


FIG. 6

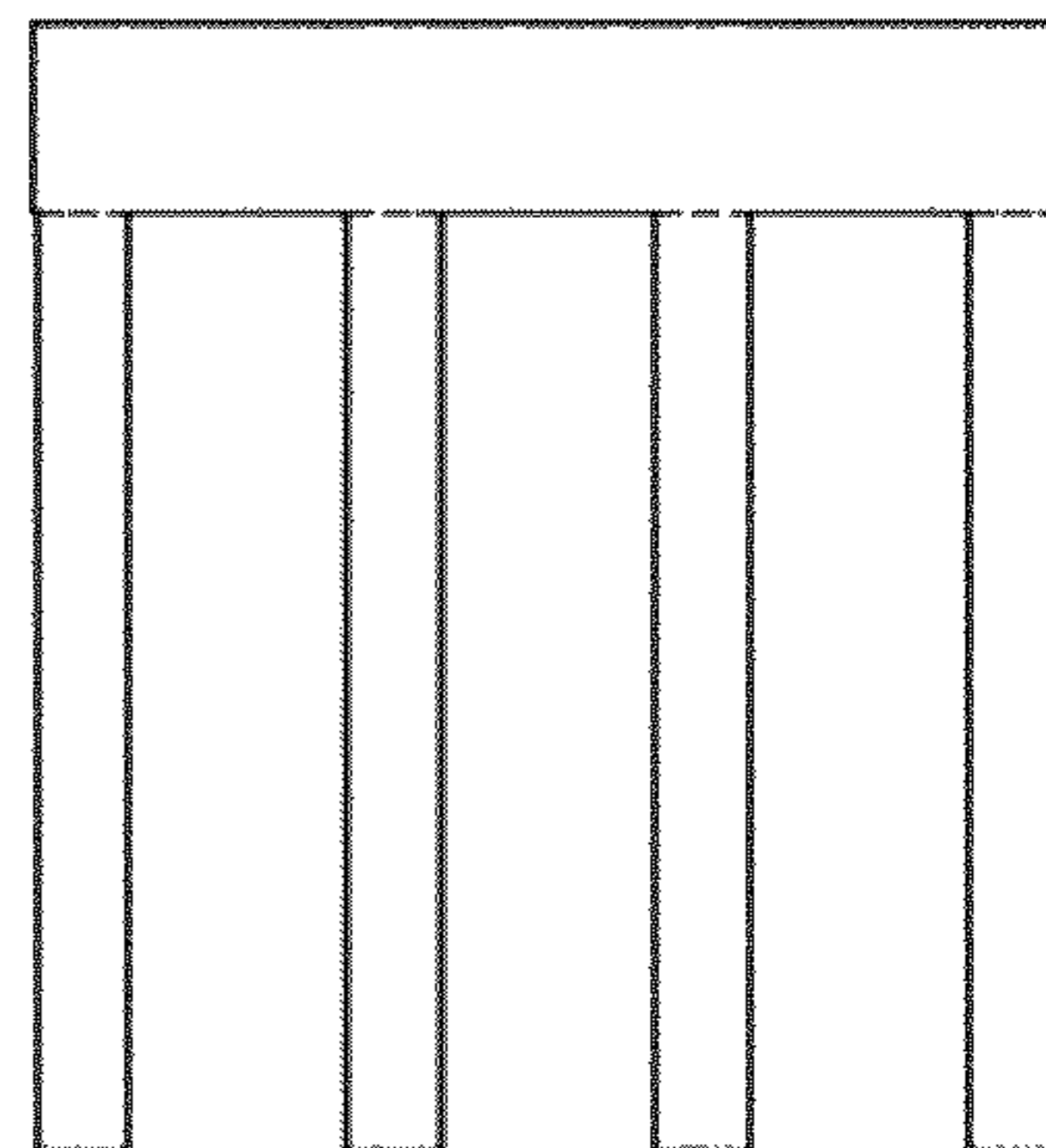


FIG. 7

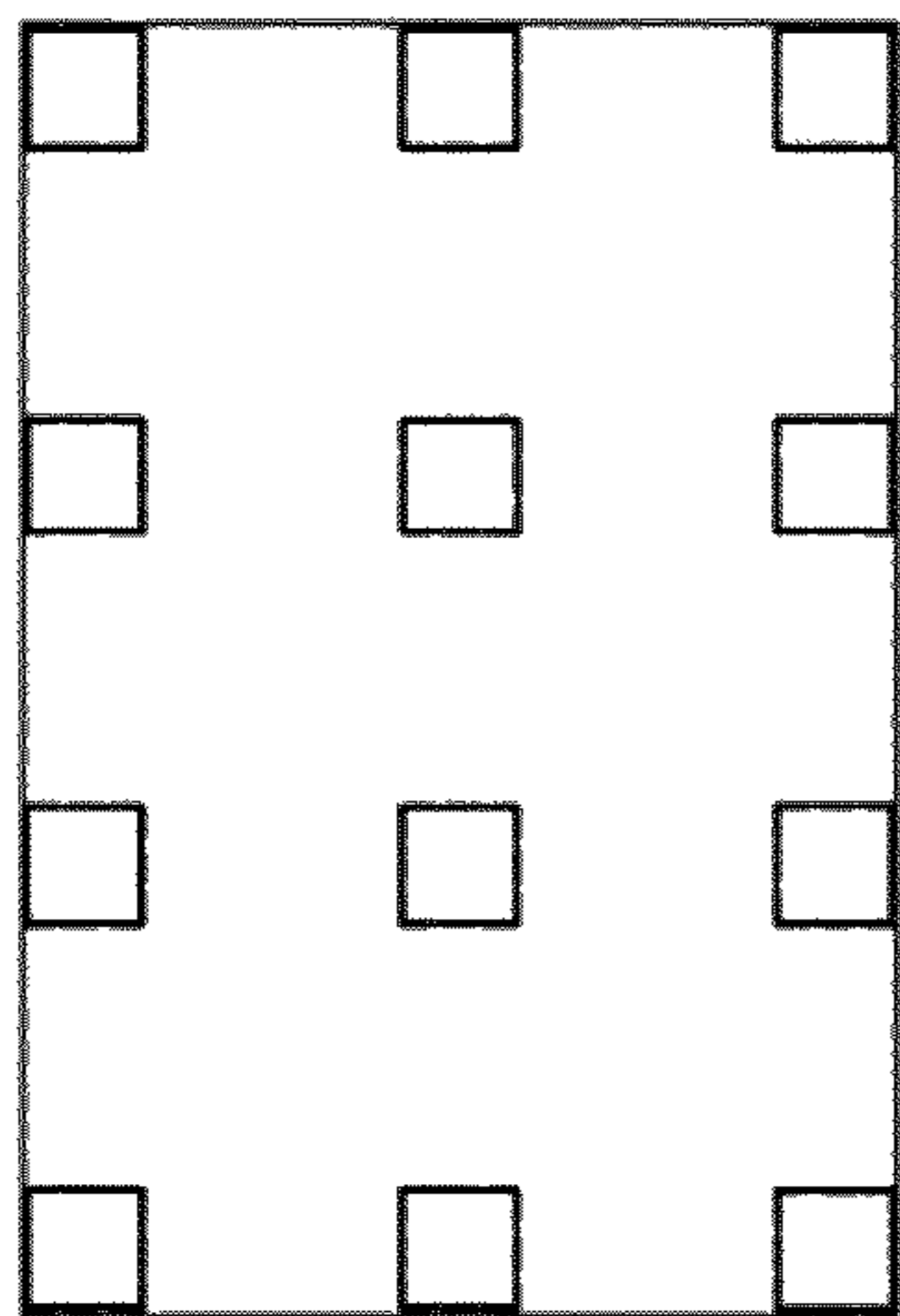


FIG. 8

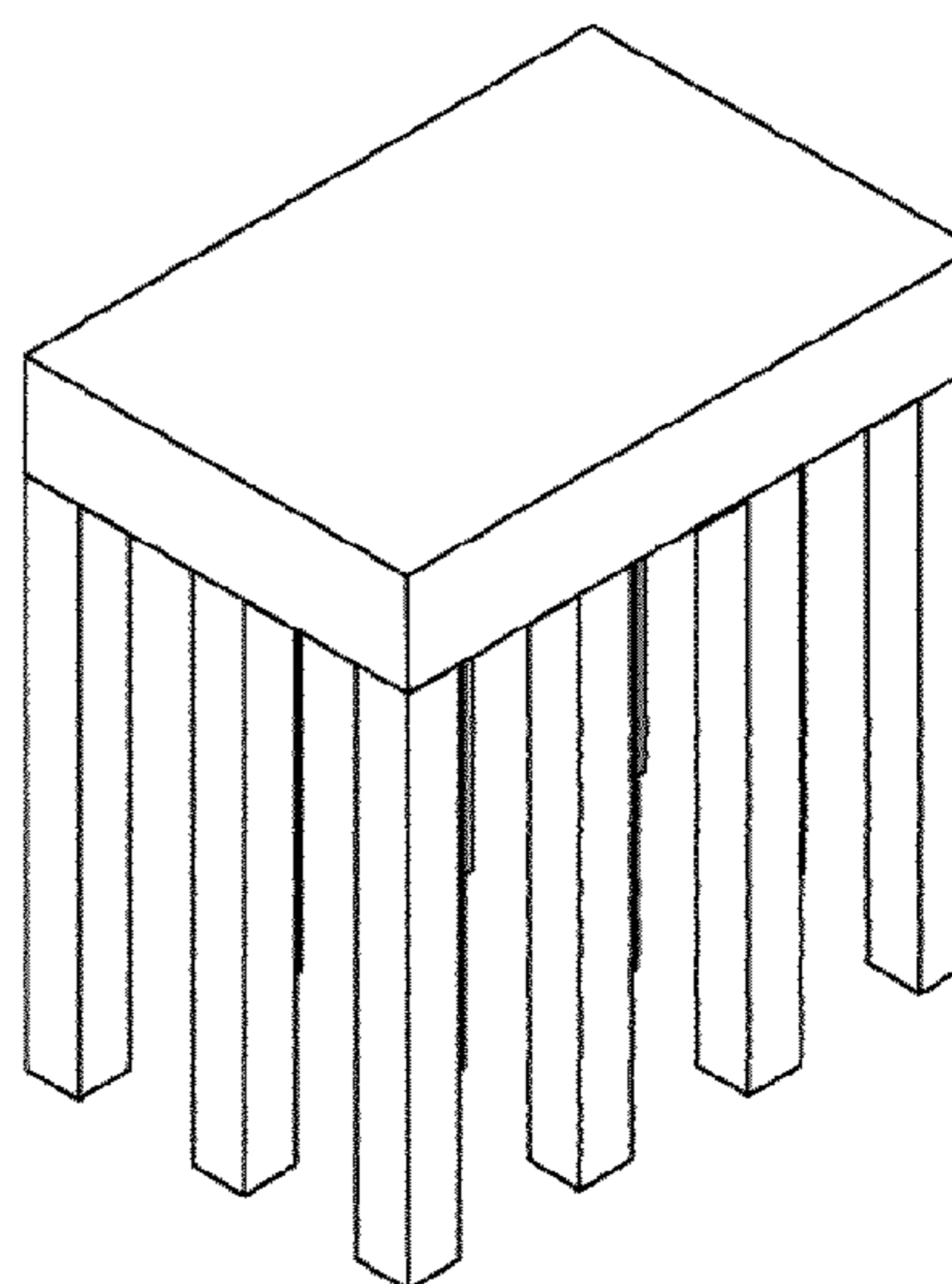


FIG. 9

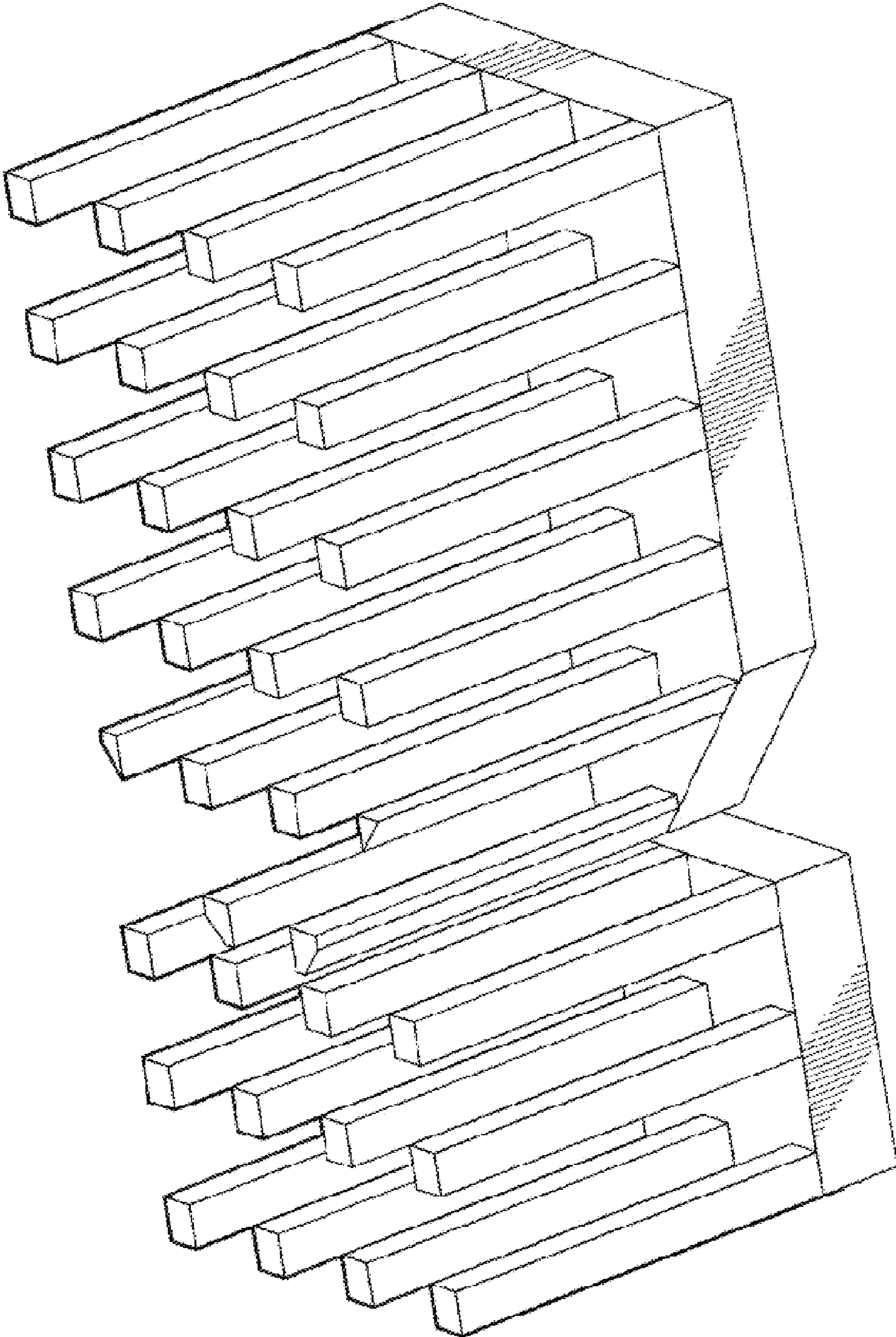


FIG. 10