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

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(54) **LIGHT EMITTING DIODE**

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

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(30) **Foreign Application Priority Data**

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(51) **LOC (8) Cl.** ..... **13-03**

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

(58) **Field of Classification Search** ..... D13/180;  
D26/2; 257/79, 80, 81, 88, 89, 95, 98, 99,  
257/100; 313/483, 498, 500; 362/555, 800  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,727,457 A \* 2/1988 Thillays ..... 362/582  
6,297,598 B1 \* 10/2001 Wang et al. .... 315/169.3  
D497,883 S \* 11/2004 Wedig et al. .... D13/180  
D499,075 S \* 11/2004 Yoon et al. .... D13/180  
6,834,977 B2 \* 12/2004 Suehiro et al. .... 362/187  
D506,732 S \* 6/2005 Wang et al. .... D13/180  
6,919,624 B2 \* 7/2005 Tani et al. .... 257/684  
2003/0234431 A1 \* 12/2003 Huang et al. .... 257/433  
2005/0128767 A1 \* 6/2005 Wang et al. .... 362/555

2006/0113906 A1 \* 6/2006 Ogawa ..... 313/512  
2006/0214273 A1 \* 9/2006 Wang et al. .... 257/678  
2007/0096114 A1 \* 5/2007 Aoki et al. .... 257/79  
2007/0295970 A1 \* 12/2007 Chang ..... 257/79

**FOREIGN PATENT DOCUMENTS**

JP 1170089 4/2003  
JP 1224965 12/2004  
JP 1258611 11/2006  
KR 30-0294490-06 2/2003  
KR 30-0377782 3/2005

\* cited by examiner

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PLLC

(57) **CLAIM**

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

**DESCRIPTION**

FIG. 1 is a top perspective view of a light emitting diode showing the new design;

FIG. 2 is a bottom perspective view thereof;

FIG. 3 is a top plan view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a front view thereof;

FIG. 6 is a right side view thereof;

FIG. 7 is a cross-sectional view taken along line 7—7 in FIG. 3; and,

FIG. 8 is a cross-sectional view taken along line 8—8 in FIG. 3.

The broken lines represent unclaimed subject matter.

**1 Claim, 8 Drawing Sheets**

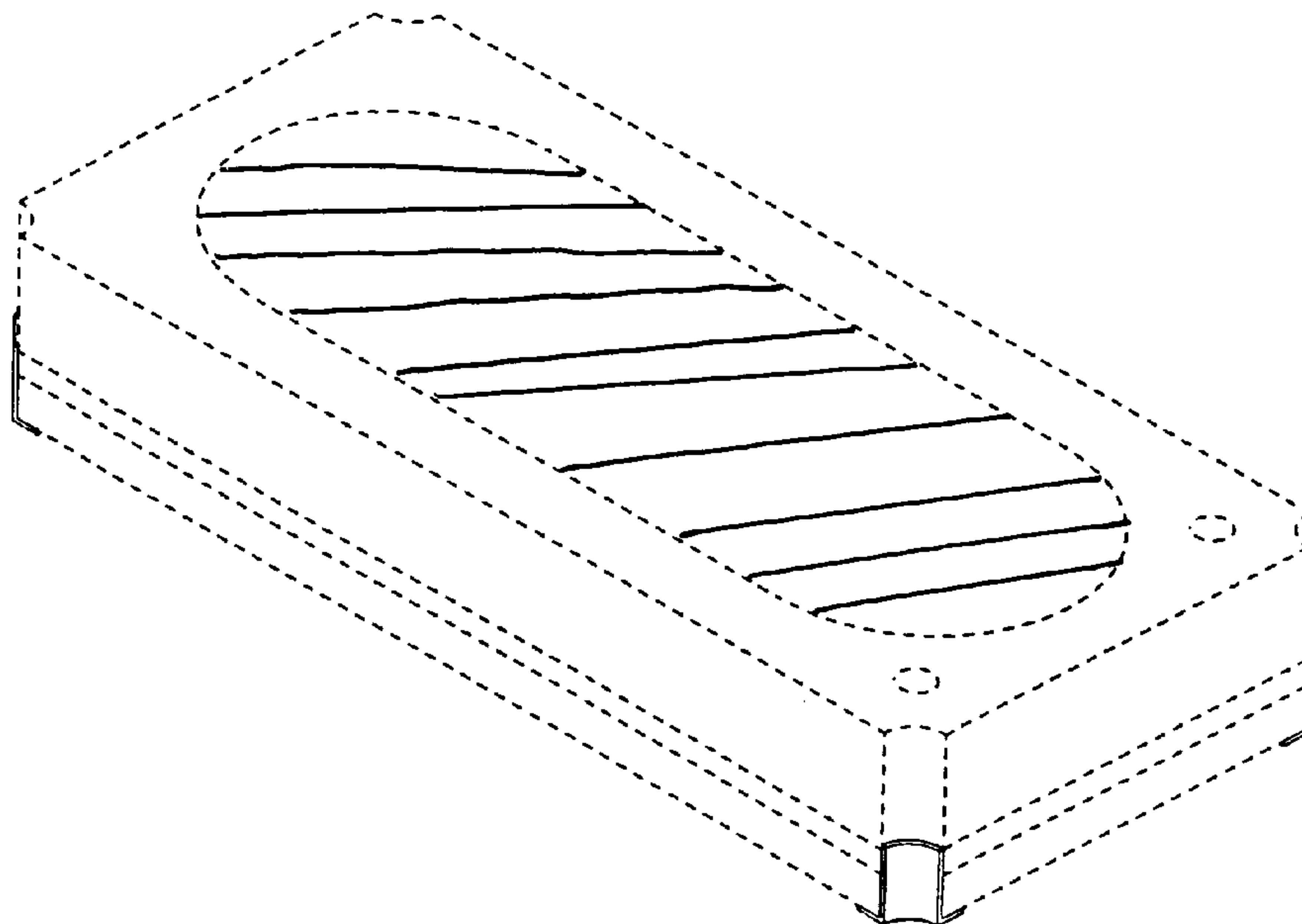


FIG. 1

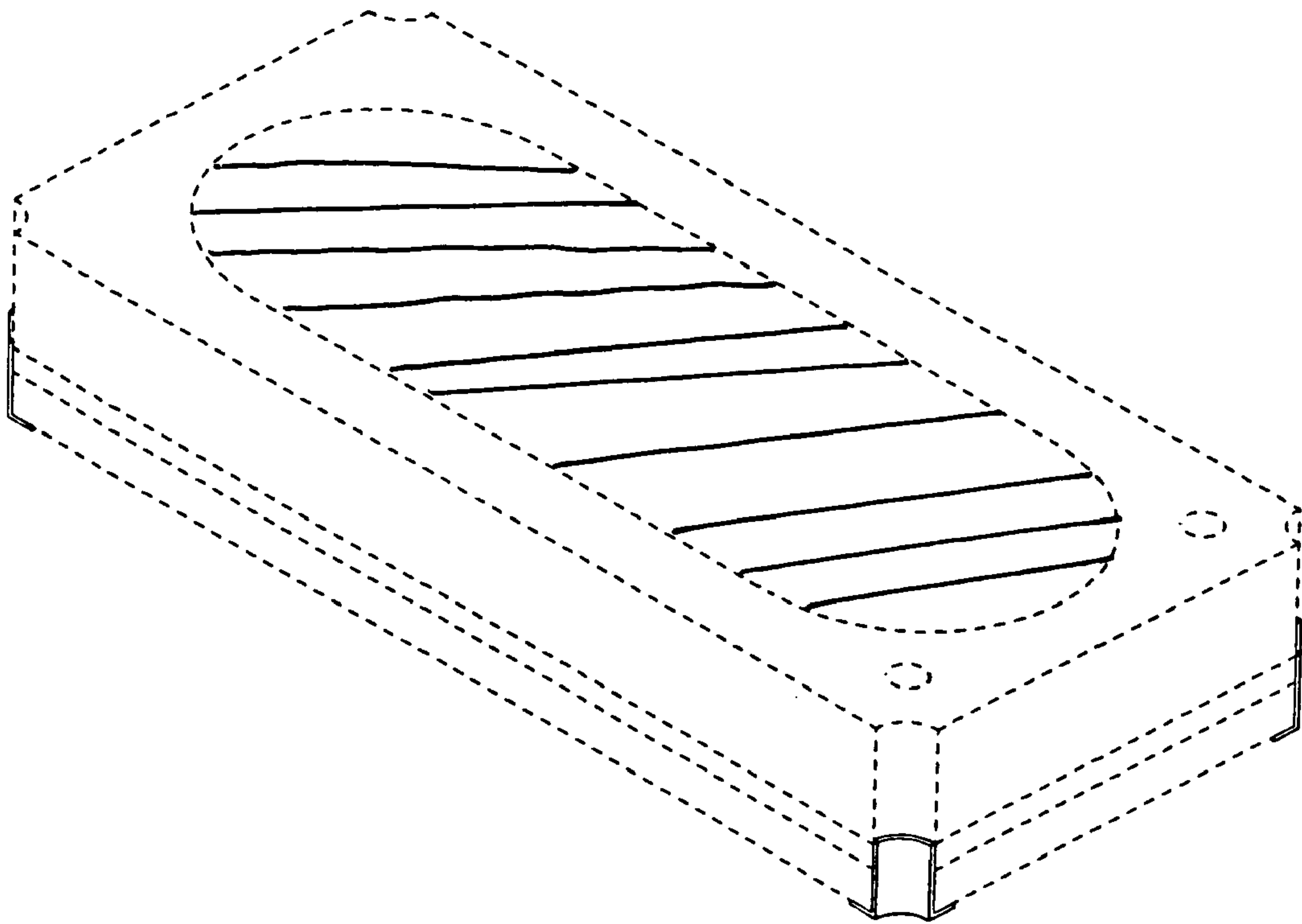


FIG. 2

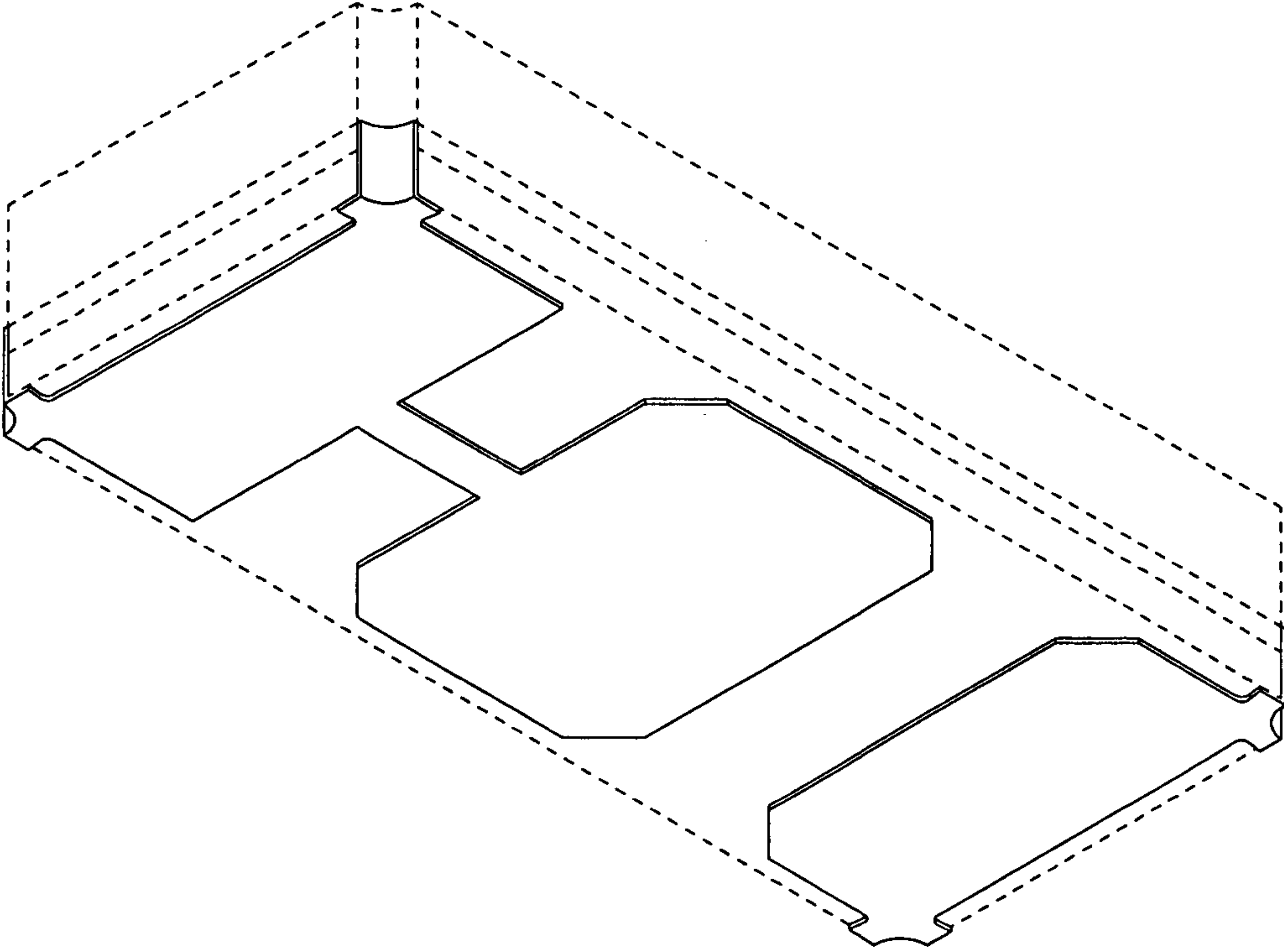


FIG. 3

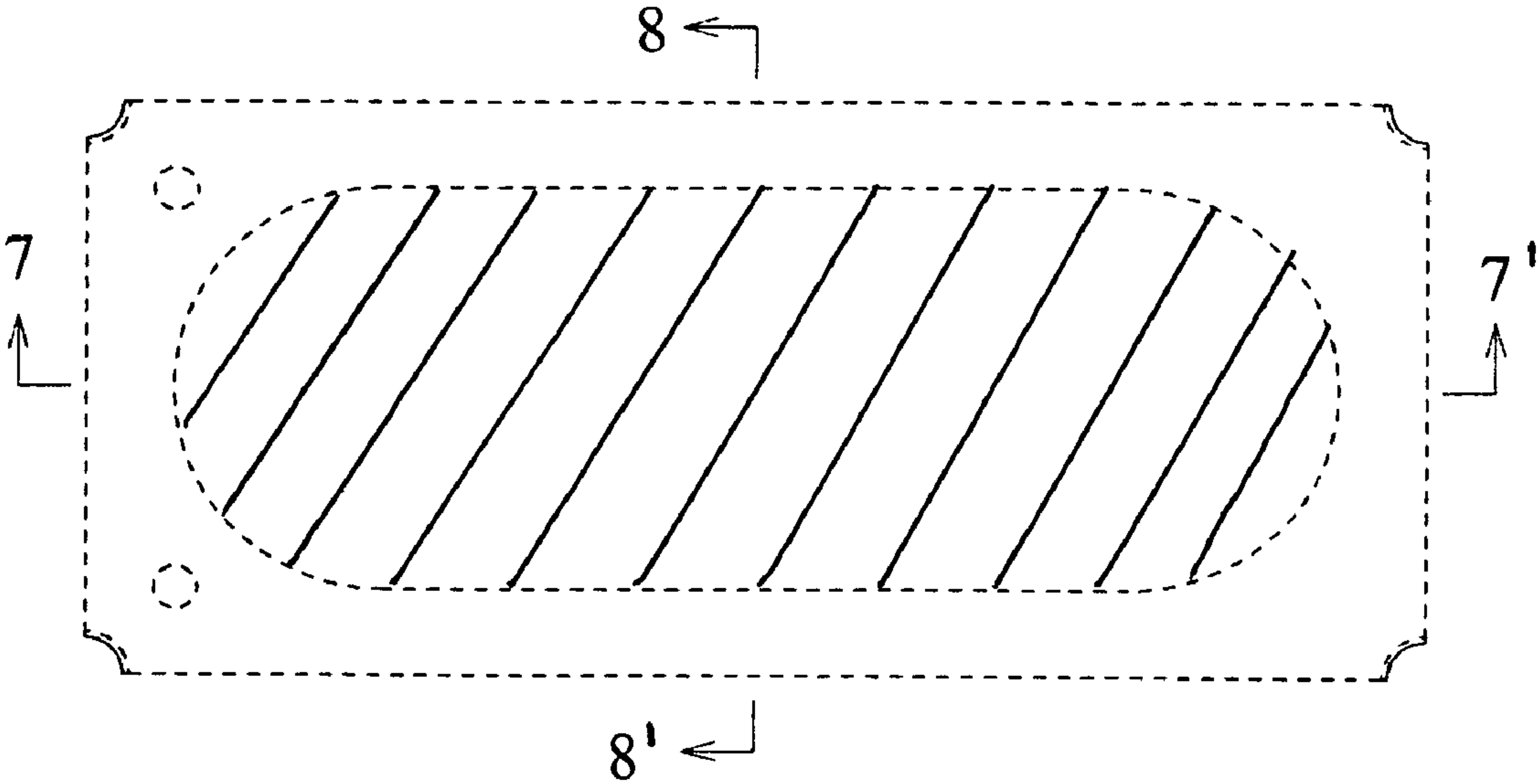


FIG. 4

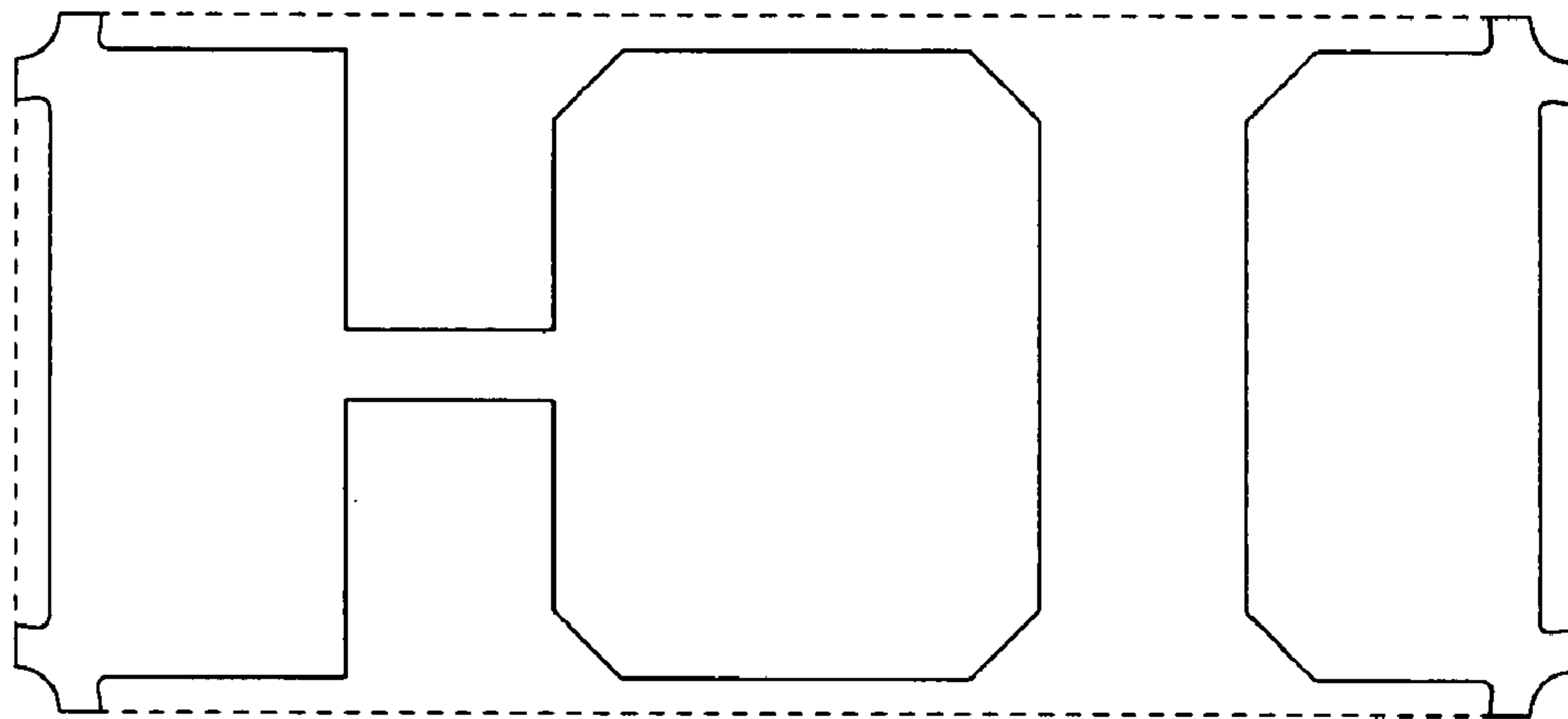


FIG. 5

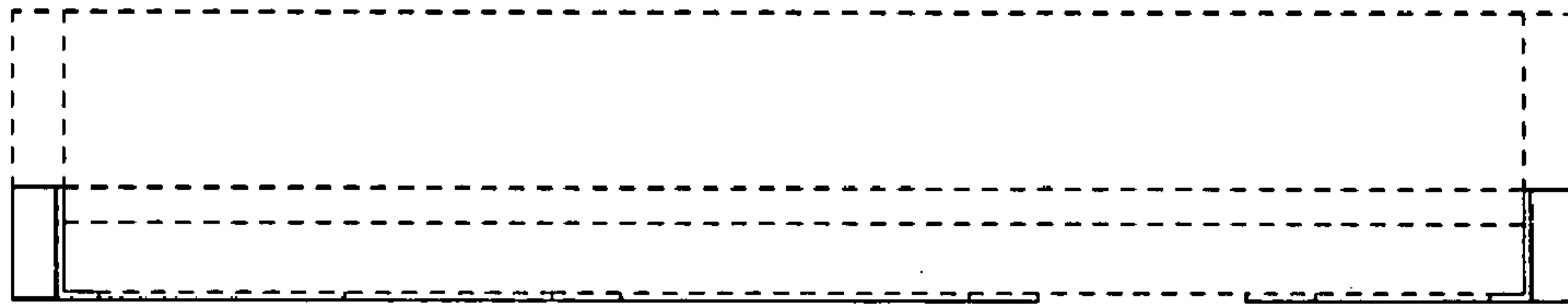


FIG. 6

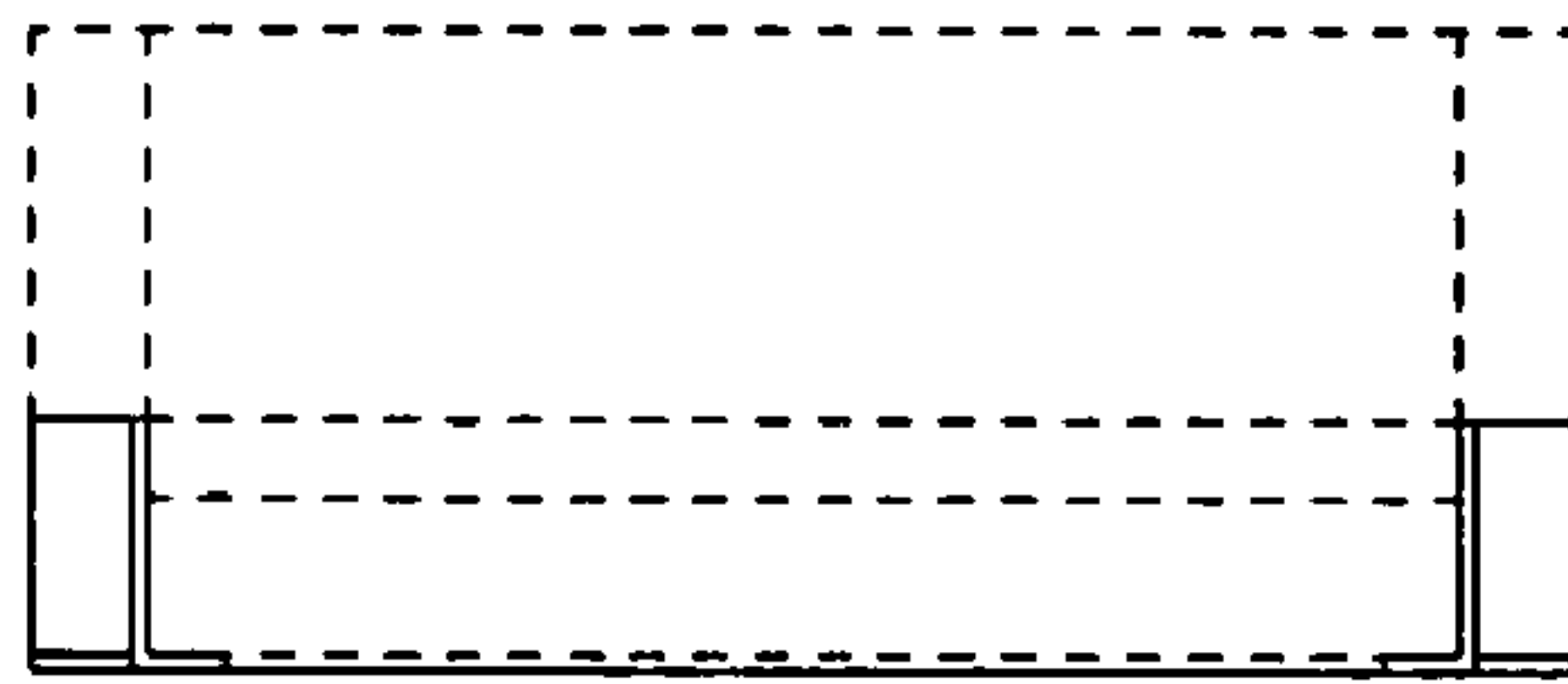


FIG. 7

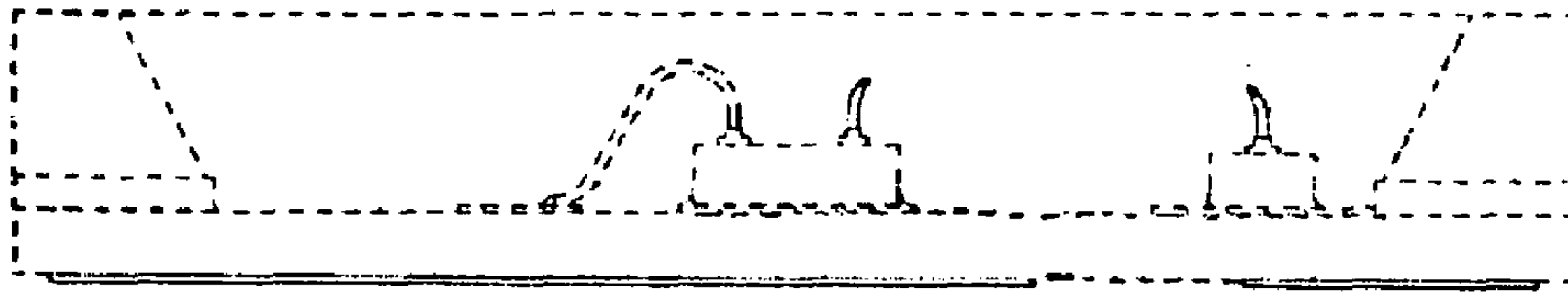




FIG. 8

