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(12) **United States Design Patent** (10) **Patent No.:** **US D854,063 S**
Abe et al. (45) **Date of Patent:** **** Jul. 16, 2019**

(54) **CUTTING TOOL**

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

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(51) **LOC (11) Cl.** **15-09**

(52) **U.S. Cl.**
USPC **D15/139**

(58) **Field of Classification Search**
USPC D8/70, 71; D15/138, 139, 140
CPC .. B23C 5/06; B23C 5/22; B23C 5/109; B23C 5/207; B23C 2200/16; B23C 2200/165; B23C 2200/167; B23C 2200/0405; B23C 2200/0466; B23C 2210/168
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,691,998 A * 9/1987 Sakagaito G02B 26/121 359/216.1
D341,604 S * 11/1993 Hessman D15/139

(Continued)

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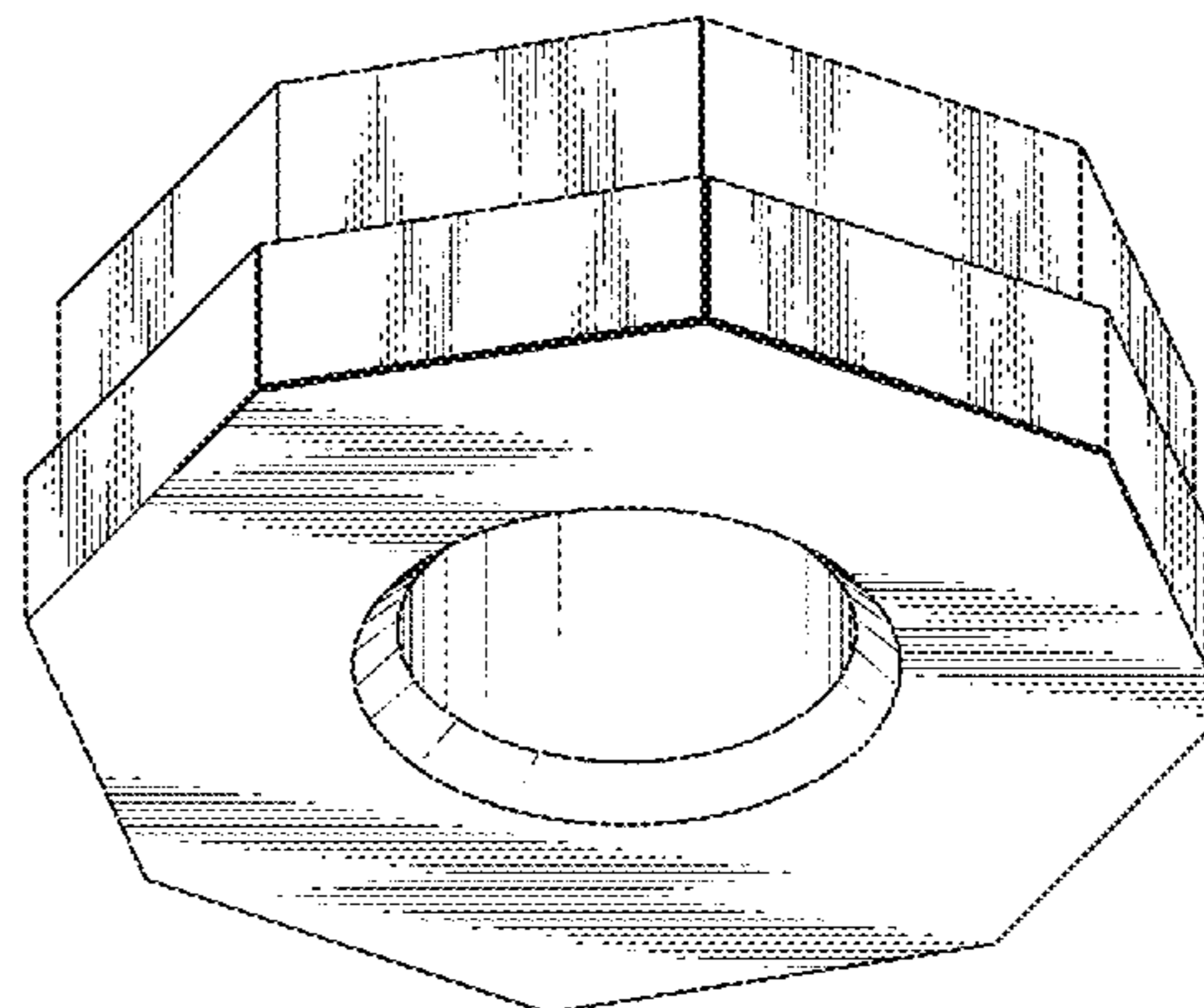
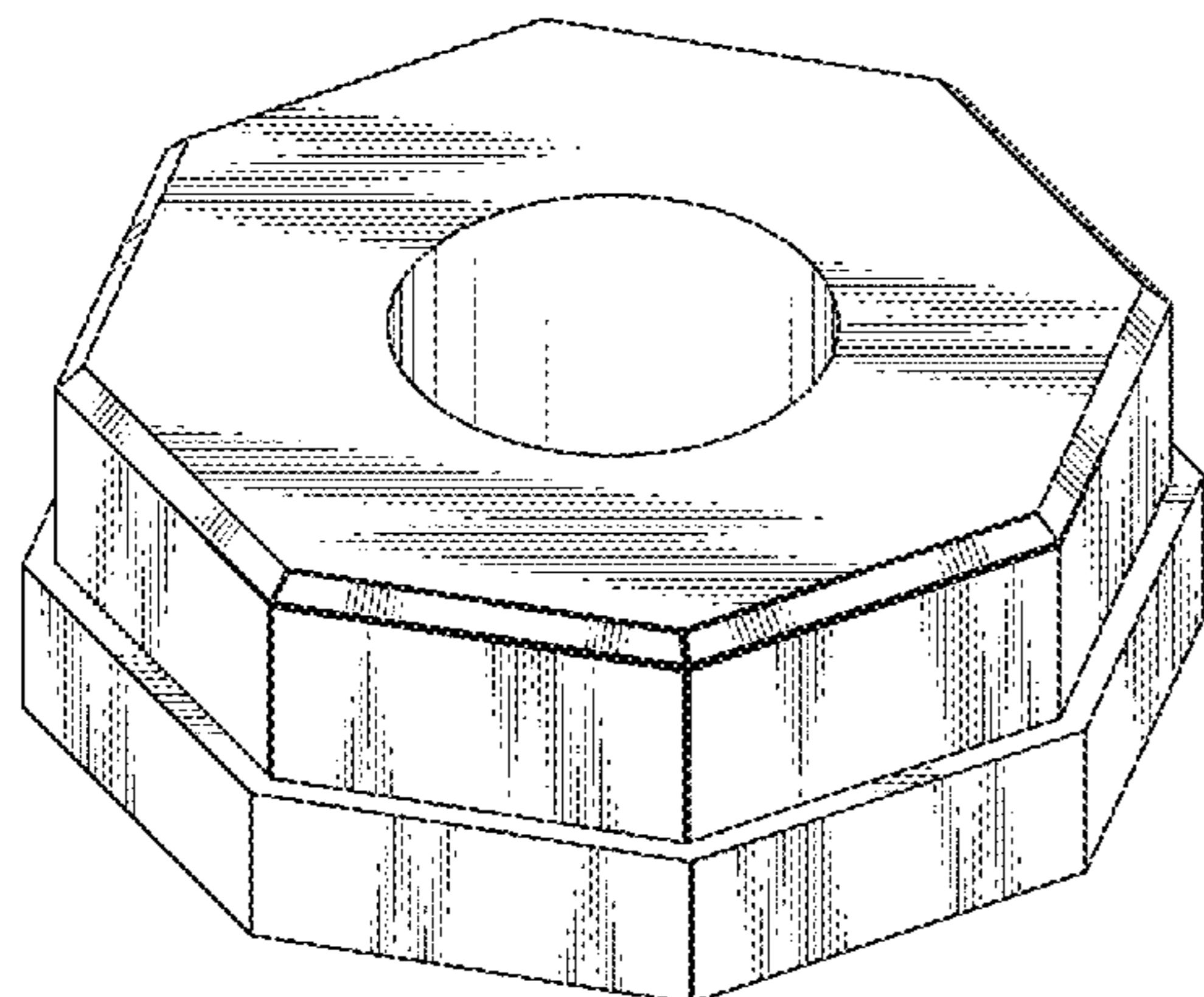
(57) **CLAIM**

The ornamental design for a cutting tool, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a cutting tool in accordance with Embodiment 1 of the present design; FIG. 2 is a rear view thereof; FIG. 3 is a top view thereof; FIG. 4 is a bottom view thereof; FIG. 5 is a right side view thereof; FIG. 6 is a left side view thereof; FIG. 7 is a first perspective view thereof; FIG. 8 is a second perspective view thereof; FIG. 9 is a cross sectional view taken along line 9-9 of FIG. 3; FIG. 10 is a referential perspective view showing the state in use of the cutting tool attached to the holder by a fixing member, for cutting a rotating workpiece; FIG. 11 is a front view of a cutting tool in accordance with Embodiment 2 of the present design; FIG. 12 is a rear view thereof; FIG. 13 is a top view thereof; FIG. 14 is a bottom view thereof; FIG. 15 is a right side view thereof; FIG. 16 is a left side view thereof; FIG. 17 is a first perspective view thereof; FIG. 18 is a second perspective view thereof; FIG. 19 is a cross sectional view taken along line 19-19 of FIG. 13; and, FIG. 20 is a referential perspective view showing the state in use of the cutting tool attached to the holder by a fixing member, for cutting a rotating workpiece. The broken lines shown in the referential perspective views represent portions that form no part of the claimed design.

1 Claim, 10 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,681,189 A * 10/1997 Dunham F16B 35/042
 439/271
 D390,854 S * 2/1998 Satran D15/139
 6,249,950 B1 * 6/2001 Brask B23B 27/04
 29/434
 6,857,831 B2 * 2/2005 Davis B23B 51/0433
 408/204
 D600,541 S * 9/2009 Steppat D6/606
 D602,510 S * 10/2009 Harpaz D15/139
 D640,716 S * 6/2011 Takahashi D15/139
 D649,987 S * 12/2011 Dunnahoe D15/139
 D651,224 S * 12/2011 Takahashi D15/139
 8,840,344 B2 * 9/2014 Stenman B23B 51/05
 408/186
 D760,308 S * 6/2016 Krishnegowda D15/139
 D815,164 S * 4/2018 Schleicher D15/139
 10,010,950 B2 * 7/2018 Matsumura B23C 5/207
 2013/0094913 A1 * 4/2013 Yoshida B23C 5/06
 407/42
 2013/0129430 A1 * 5/2013 Bhagath B23B 27/007
 407/33
 2015/0190867 A1 * 7/2015 Roman B23C 5/06
 407/42
 2015/0190869 A1 * 7/2015 Roman B23C 5/207
 407/42
 2017/0189972 A1 * 7/2017 Matsumura B23C 5/06
 2017/0225243 A1 * 8/2017 Matsumura B23C 5/06

* cited by examiner

FIG.1

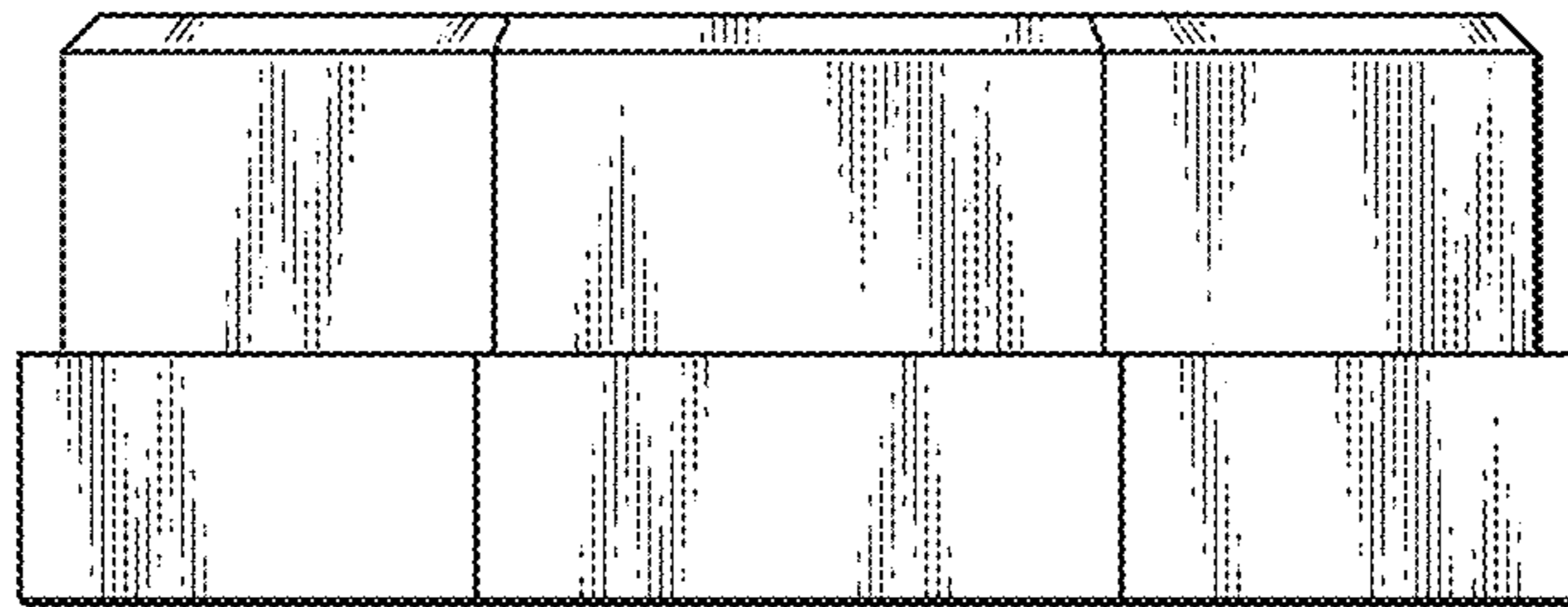


FIG.2

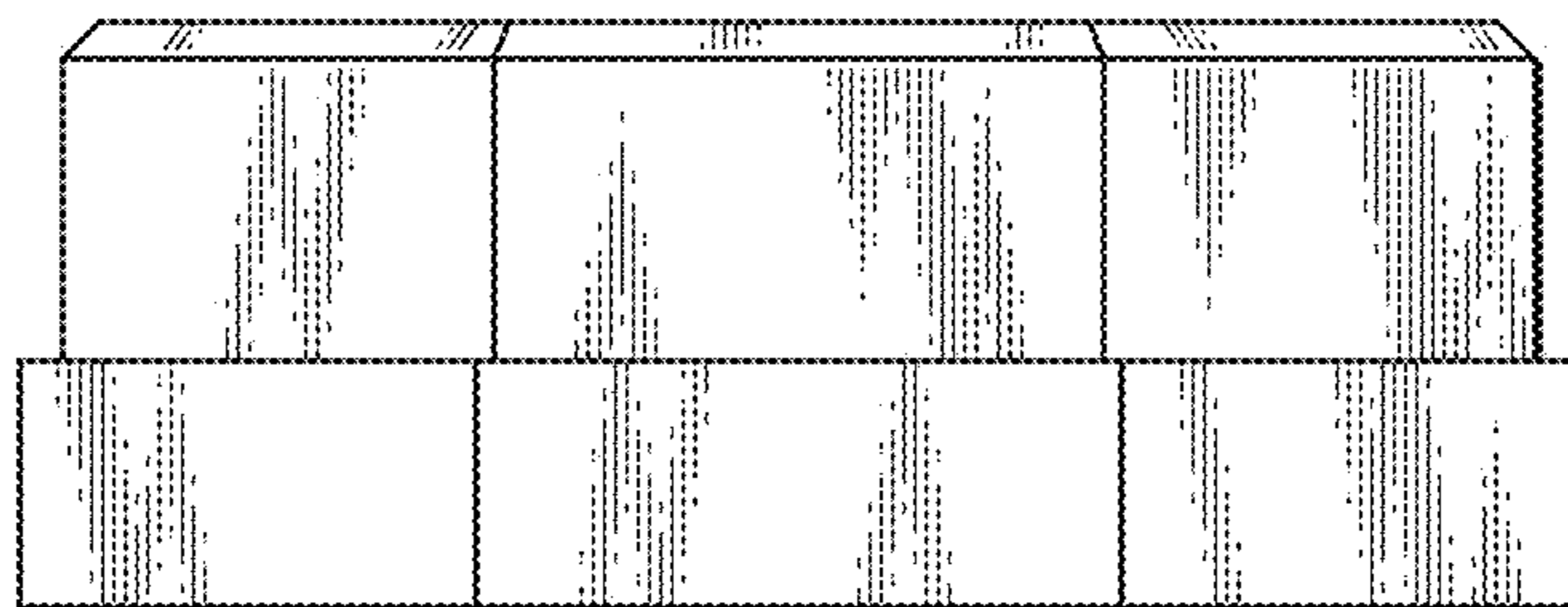


FIG.3

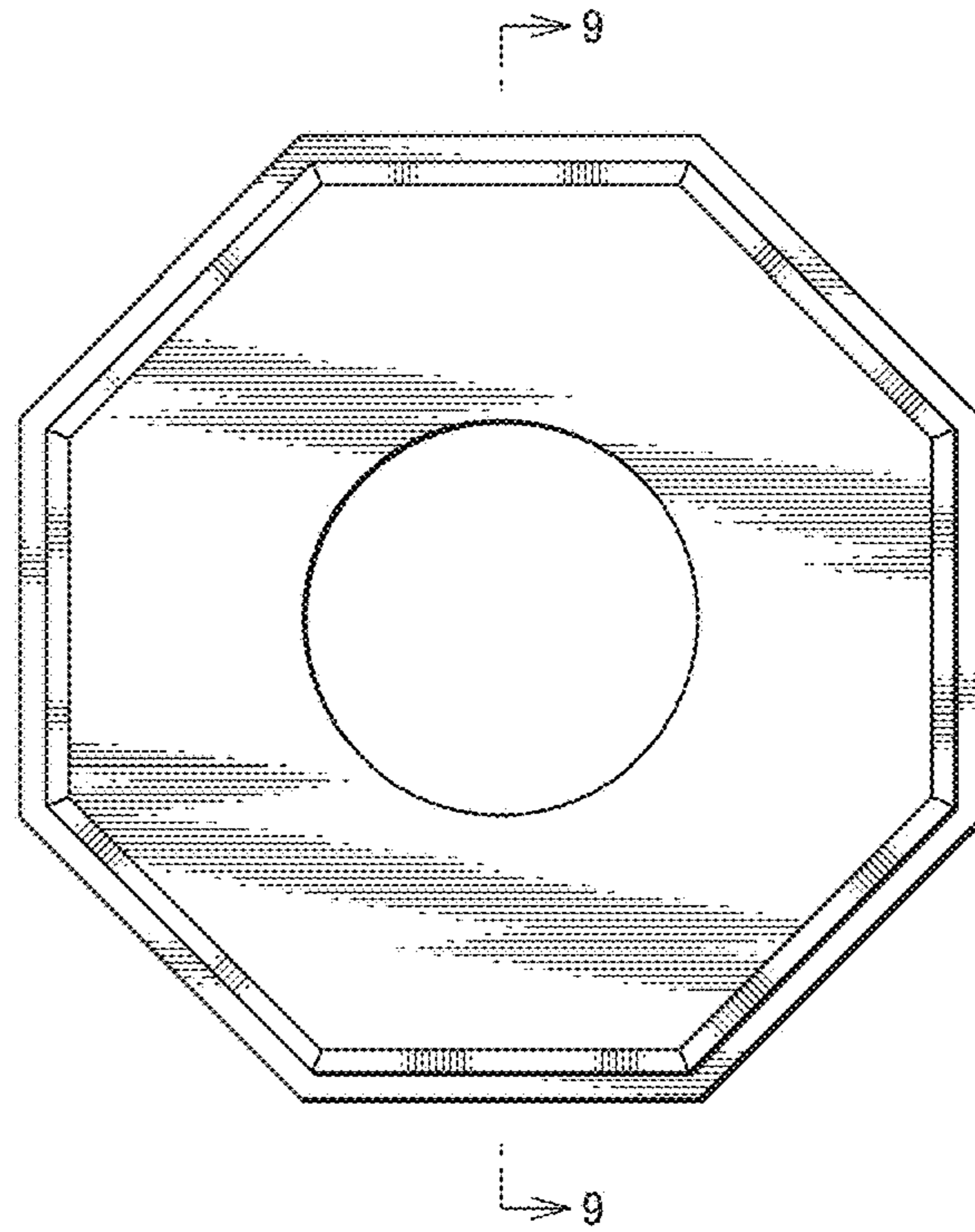


FIG.4

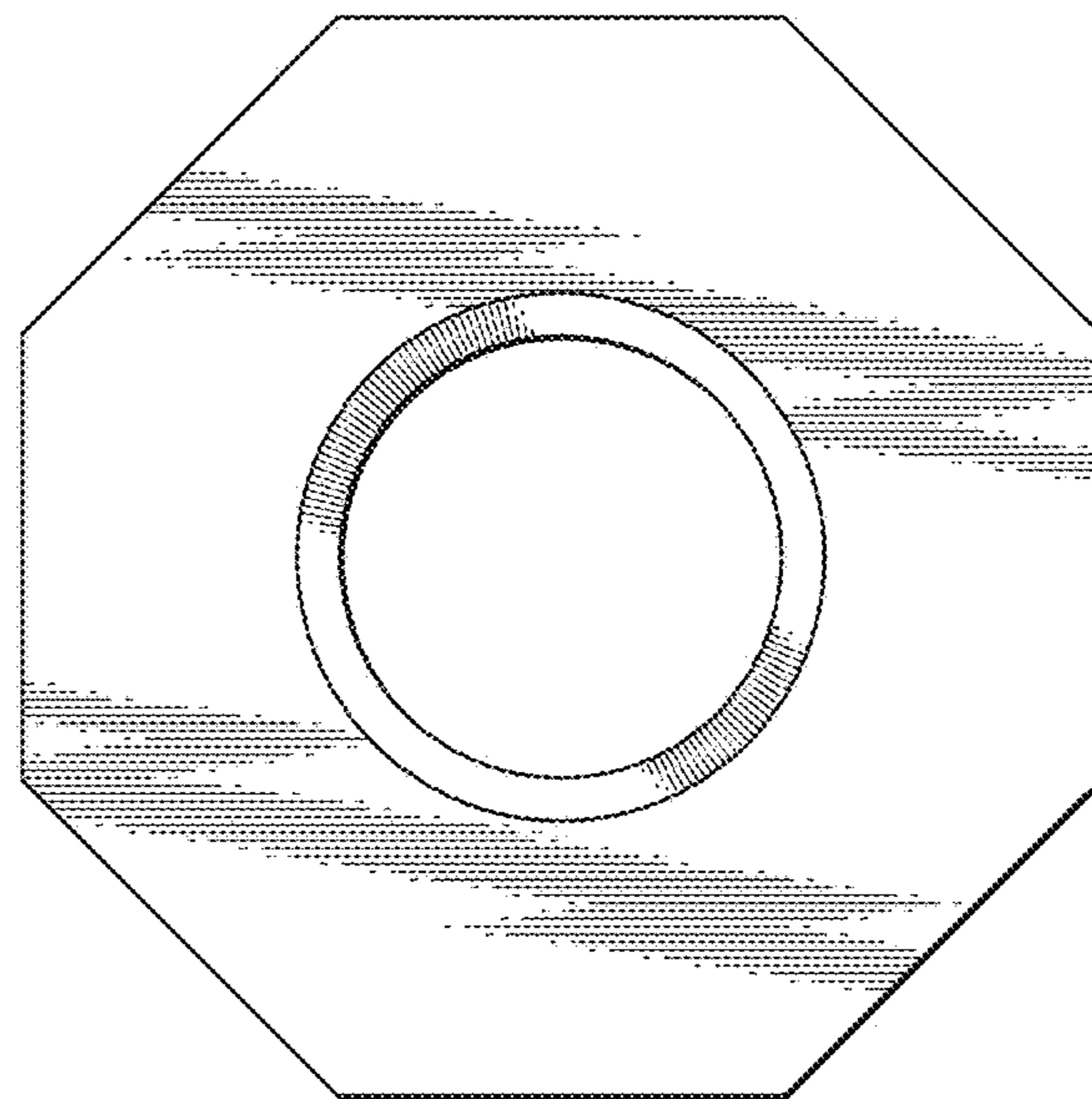


FIG.5

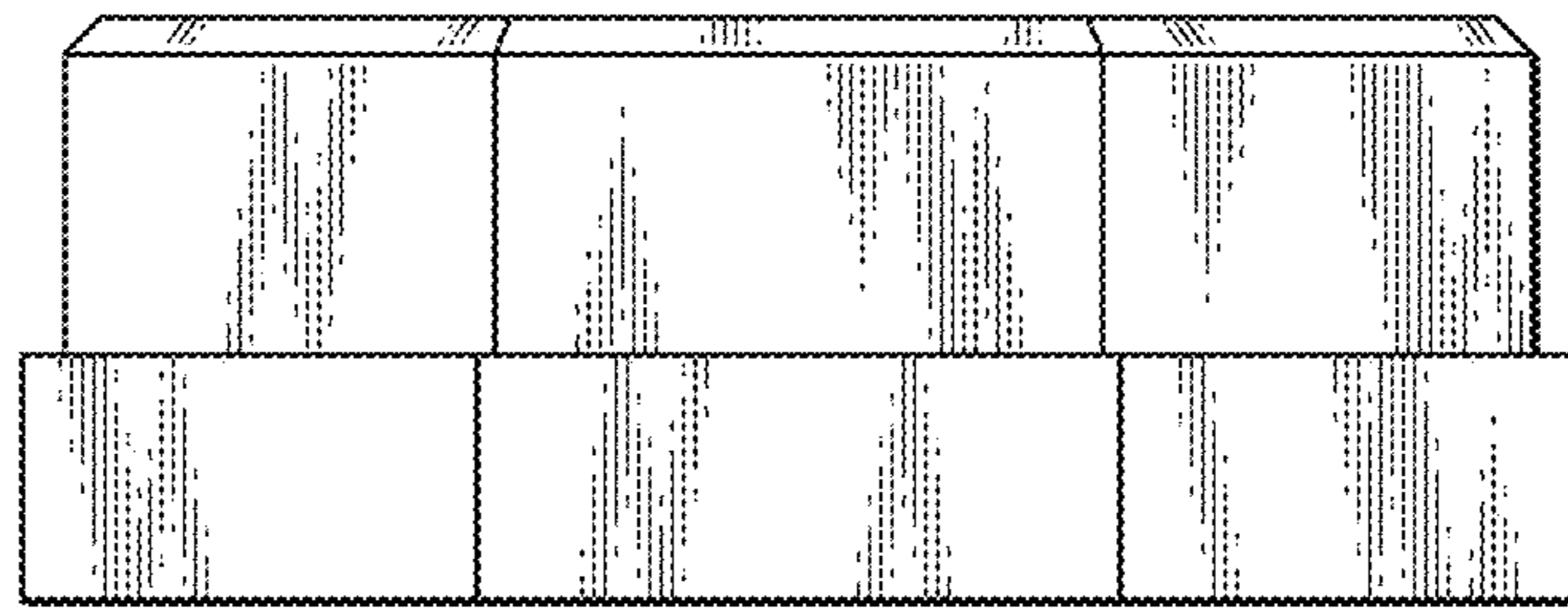


FIG.6

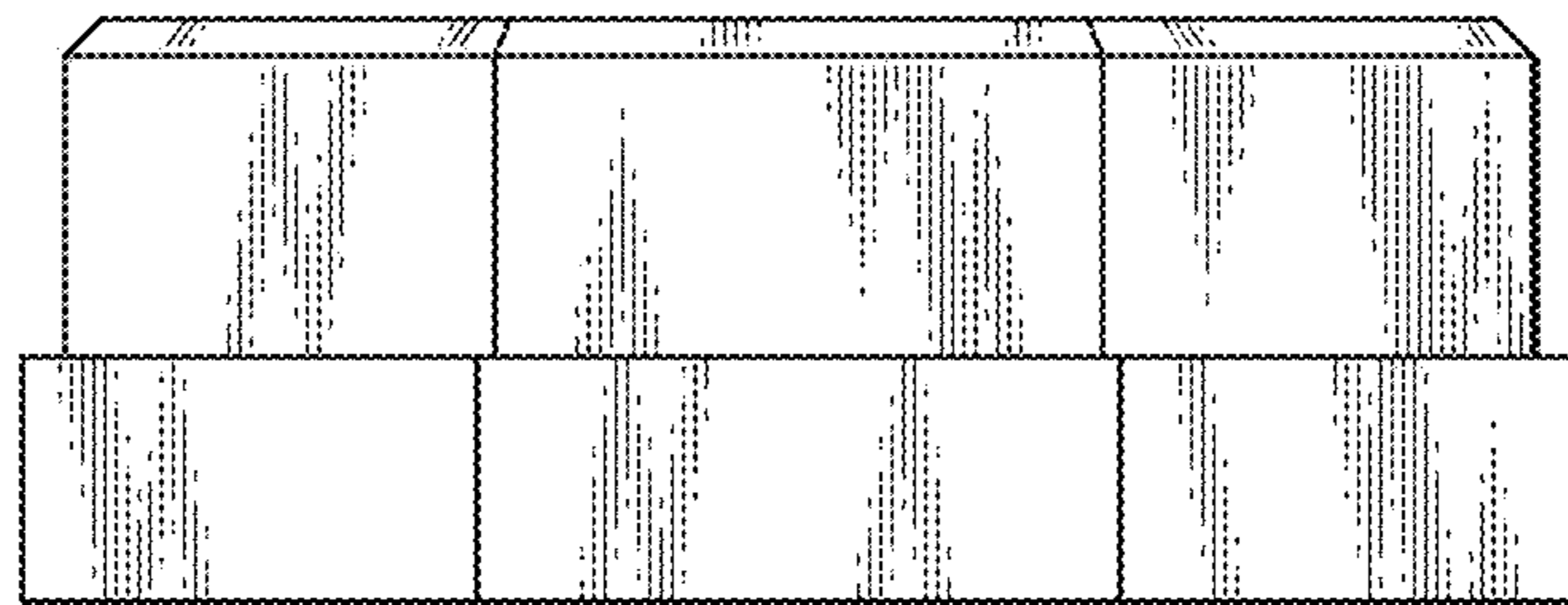


FIG.7

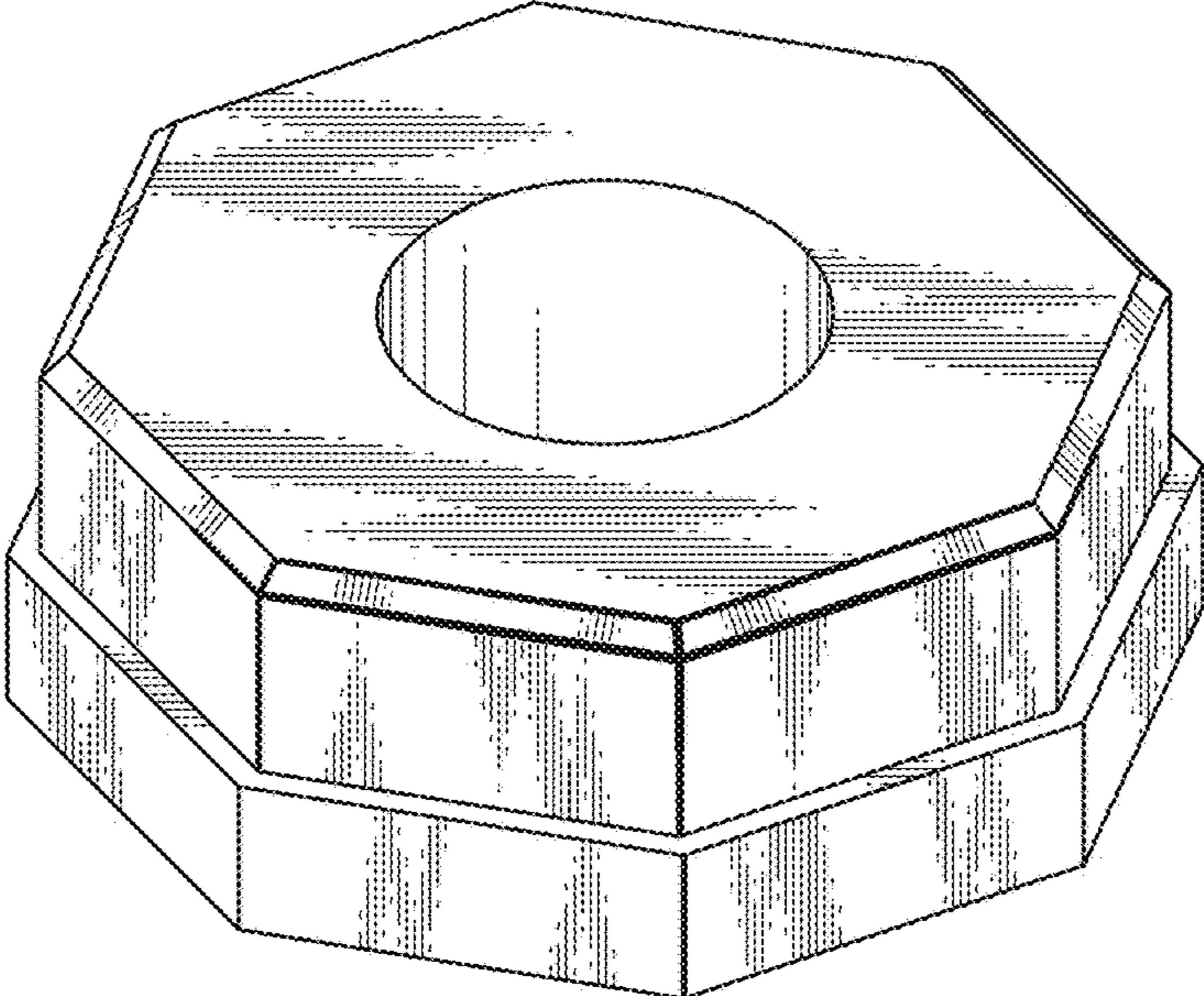


FIG.8

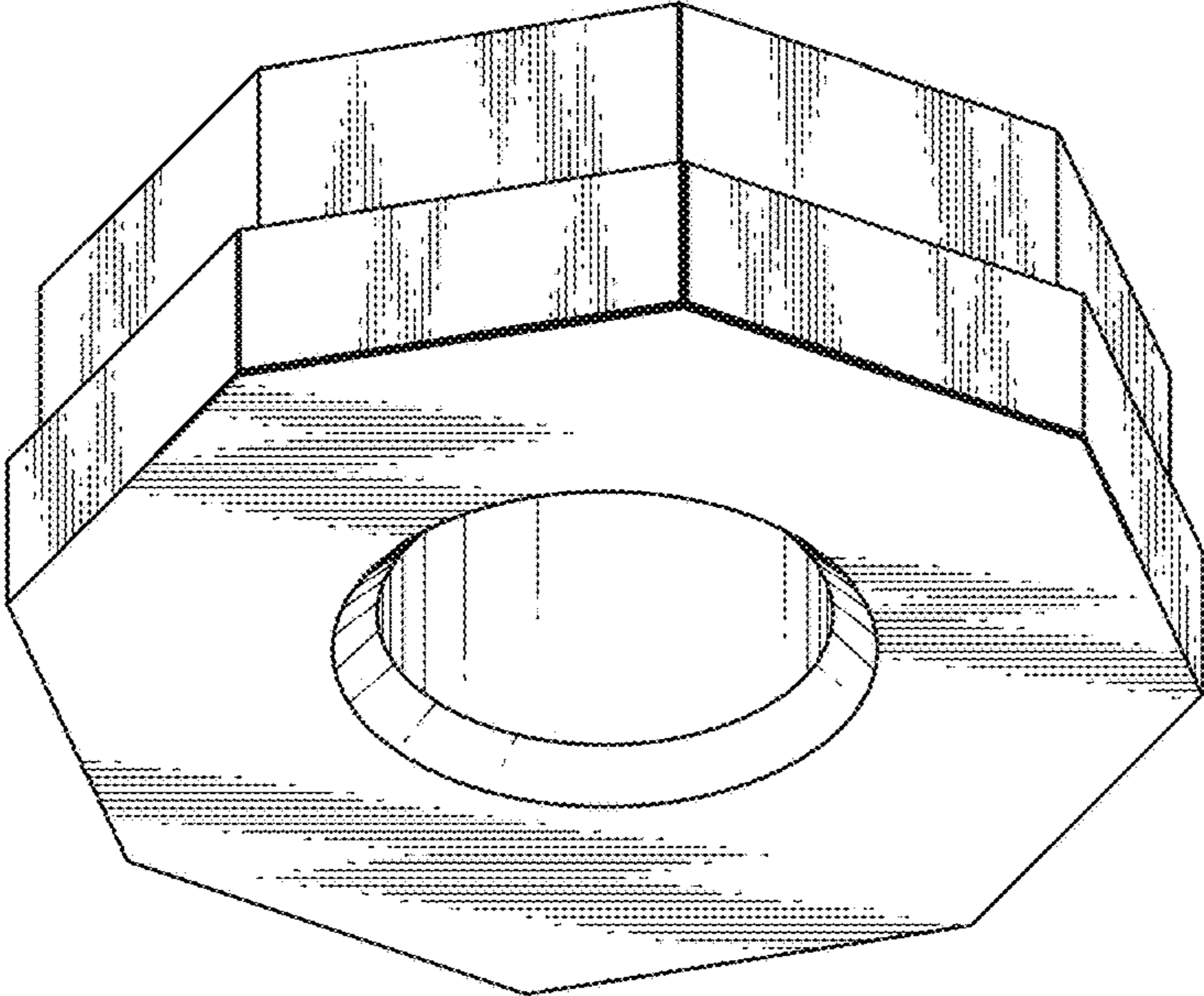


FIG.9

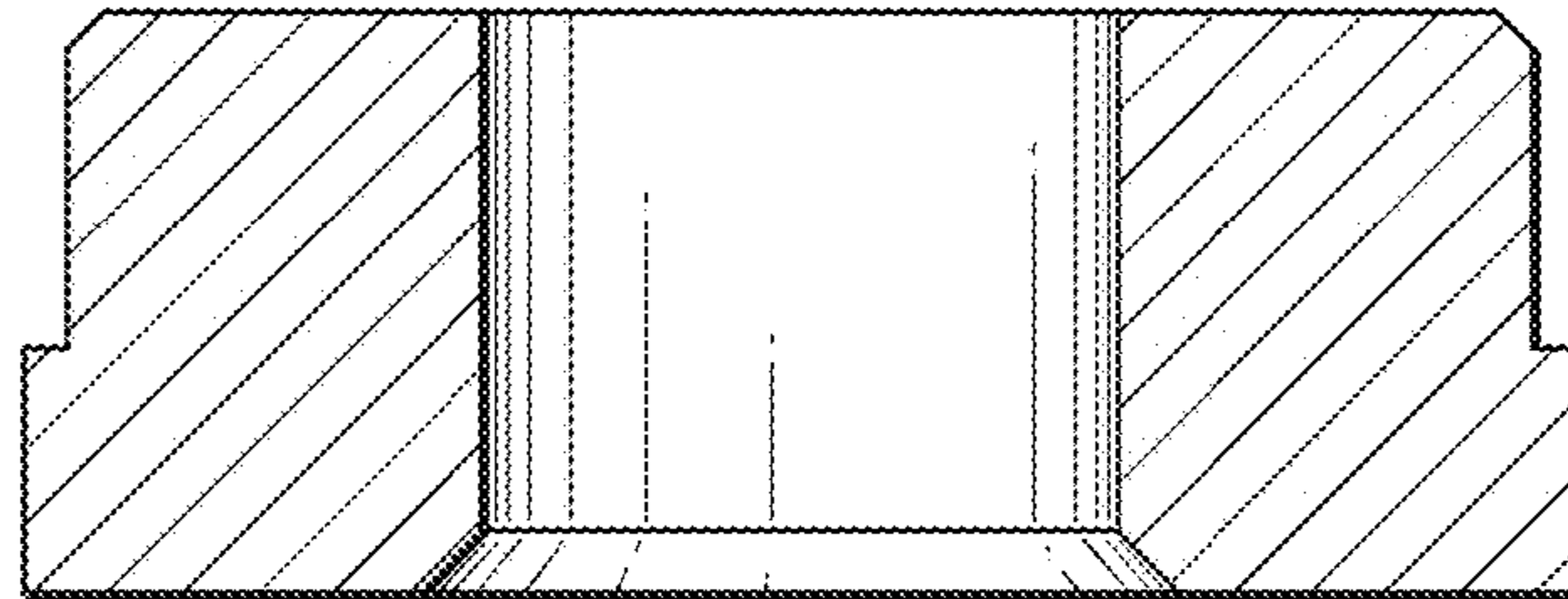


FIG.10

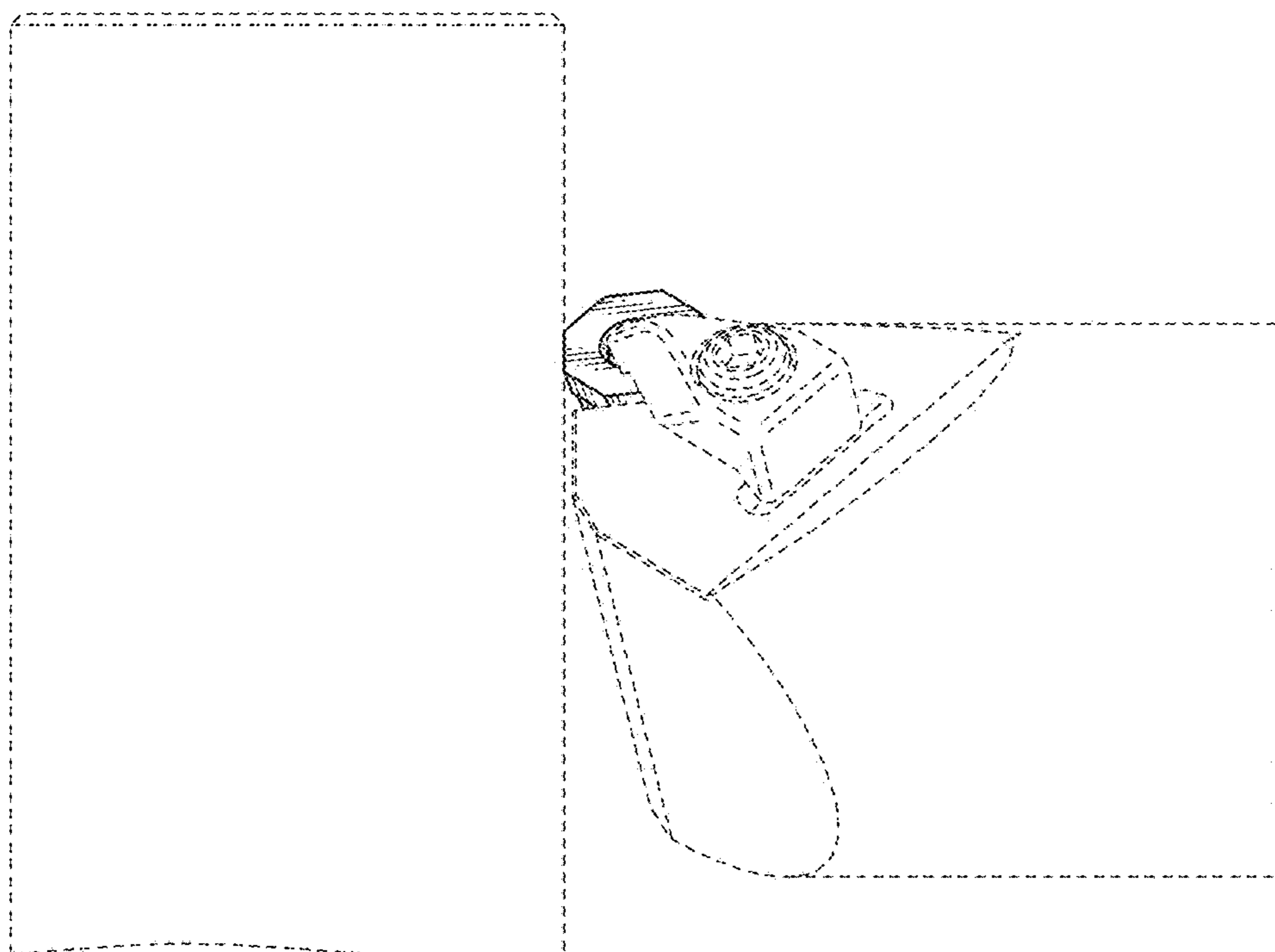


FIG.11

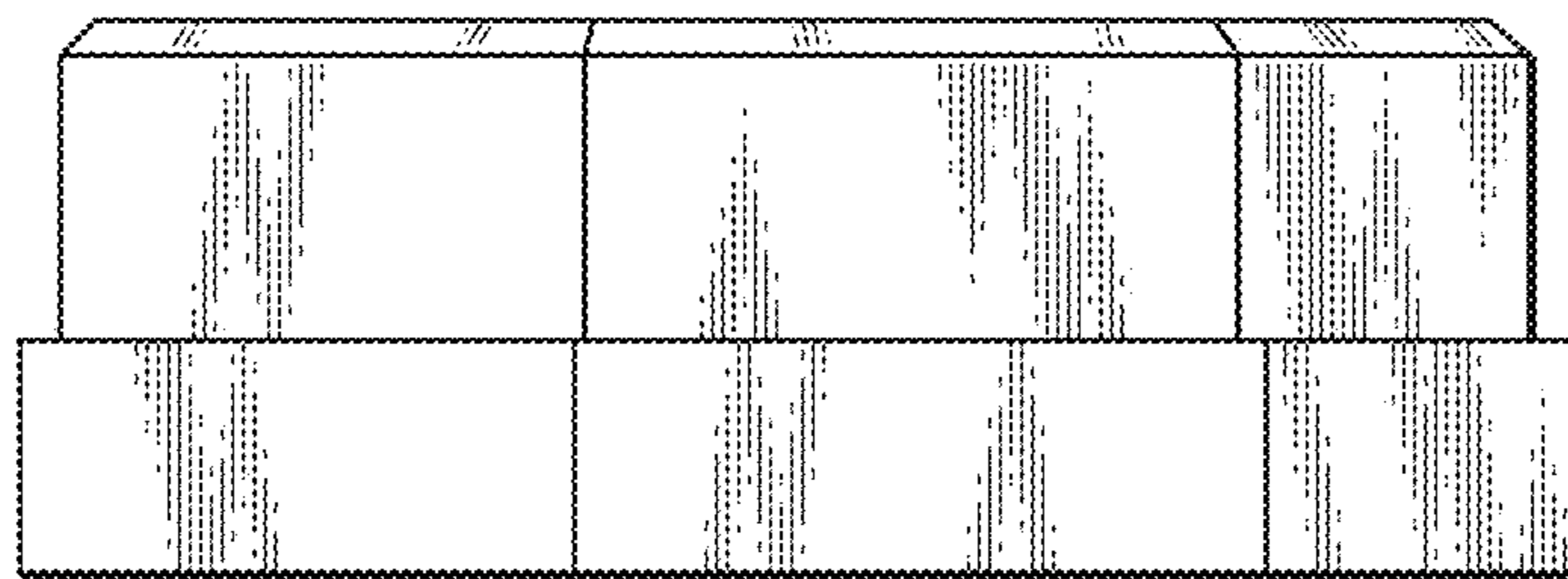


FIG.12

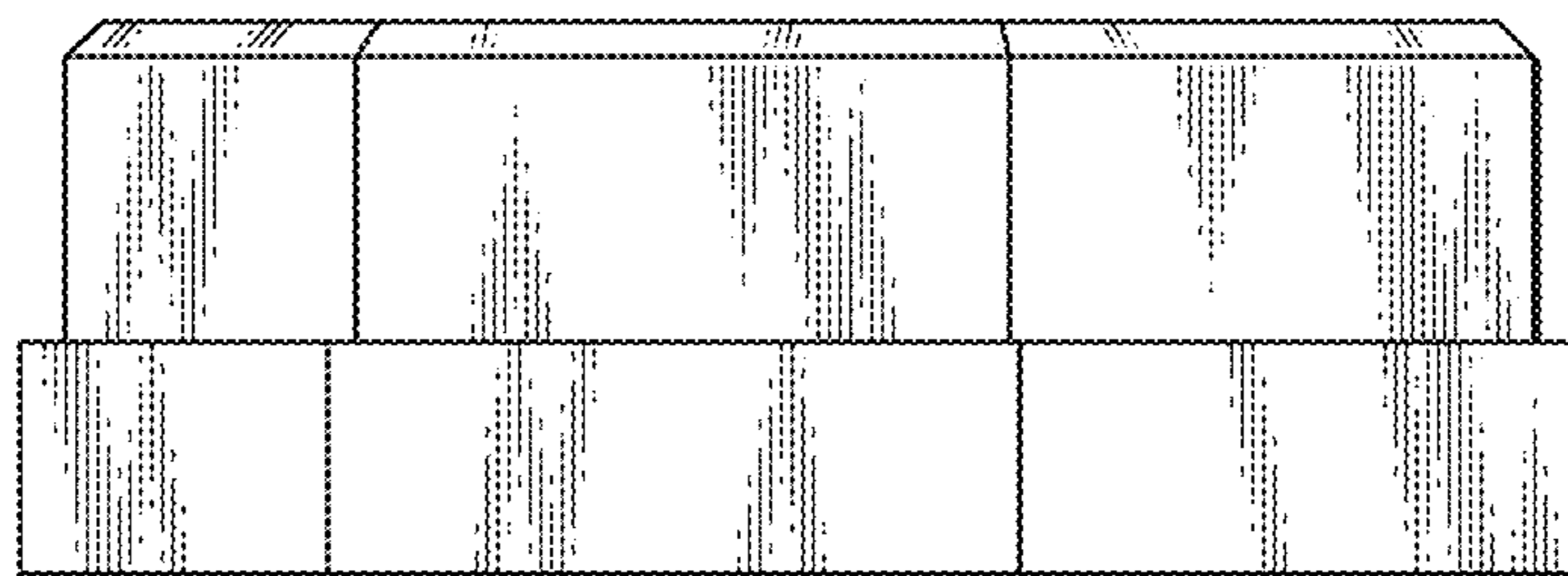


FIG.13

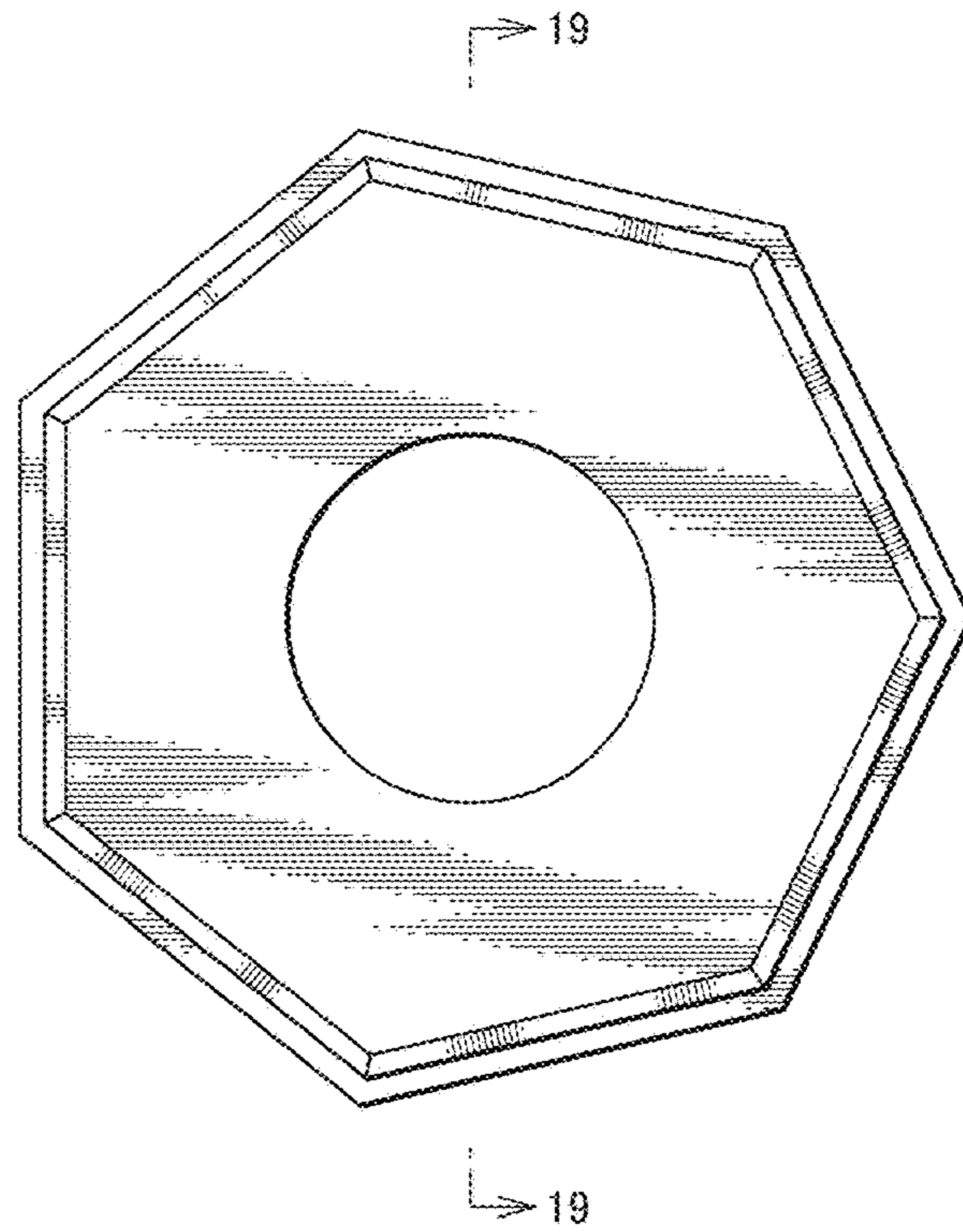


FIG.14

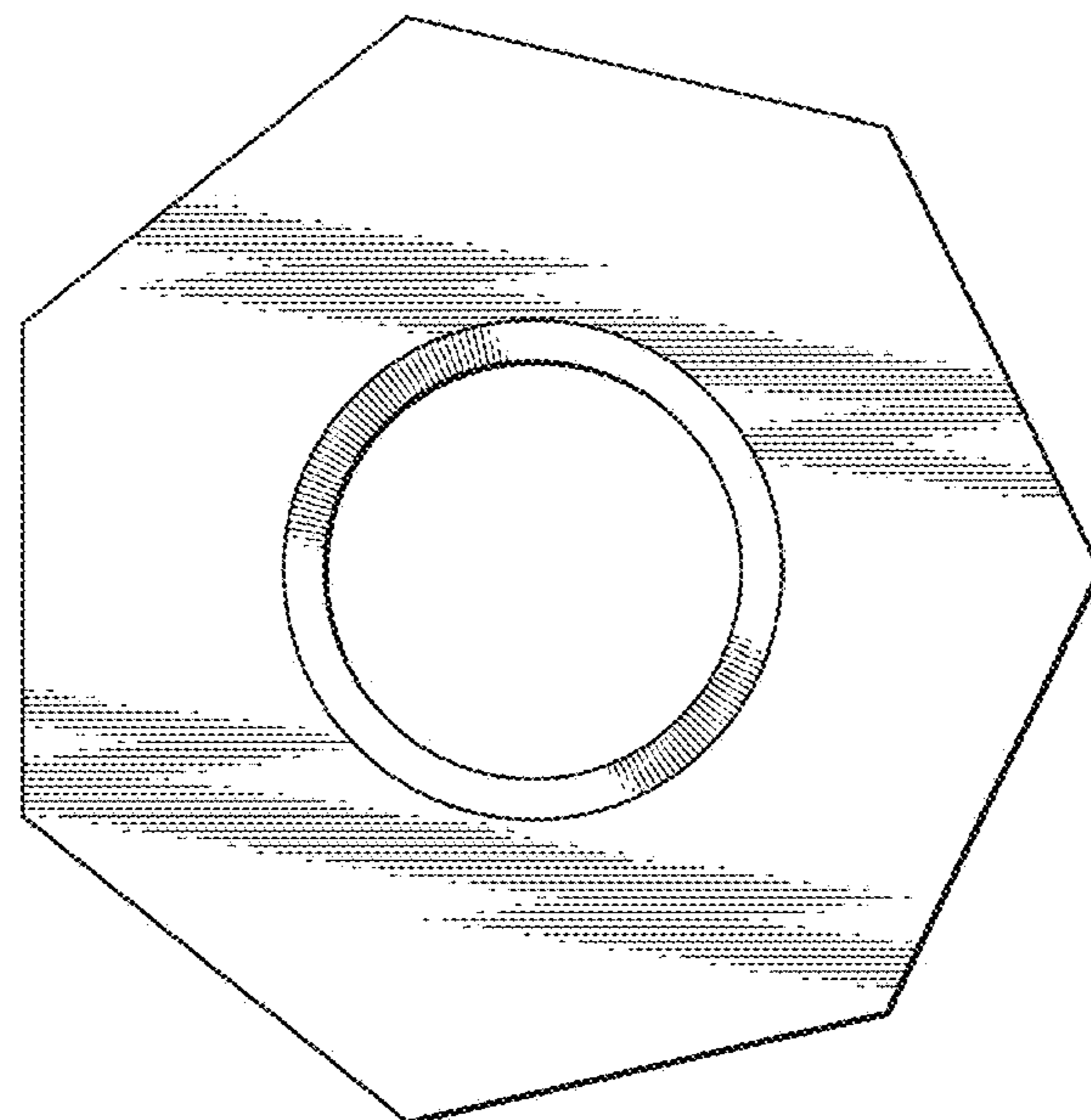


FIG. 15

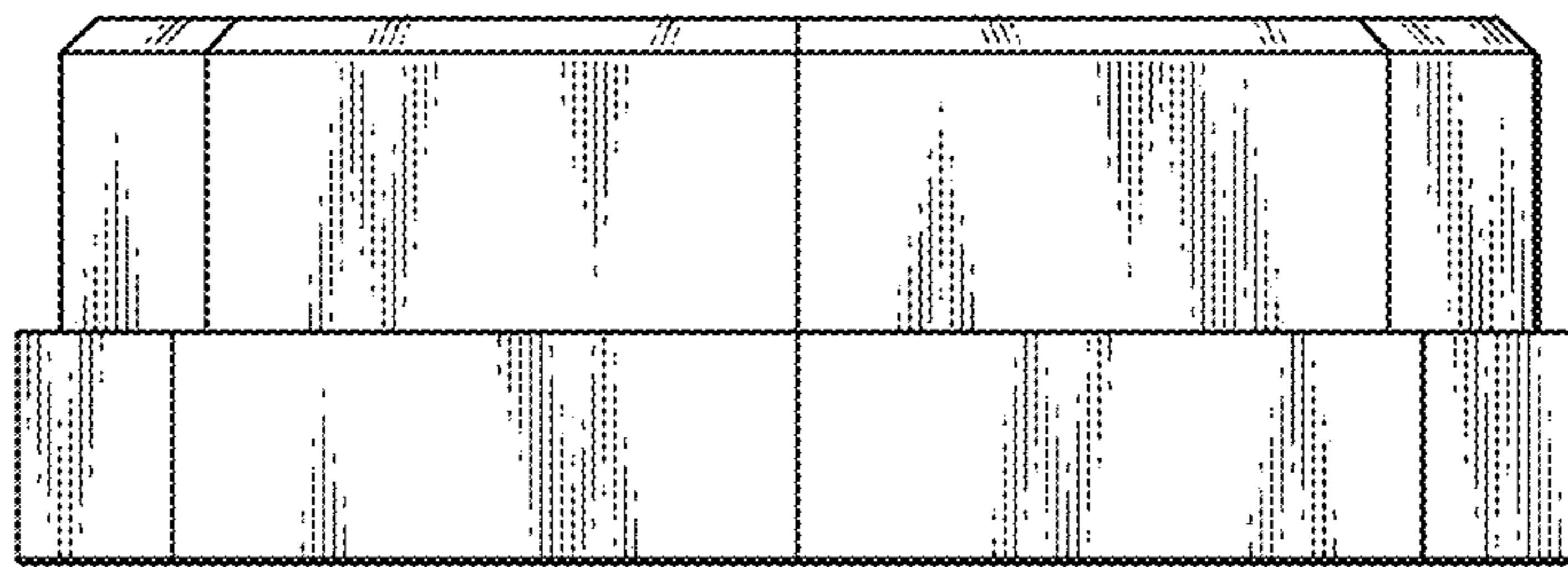


FIG. 16

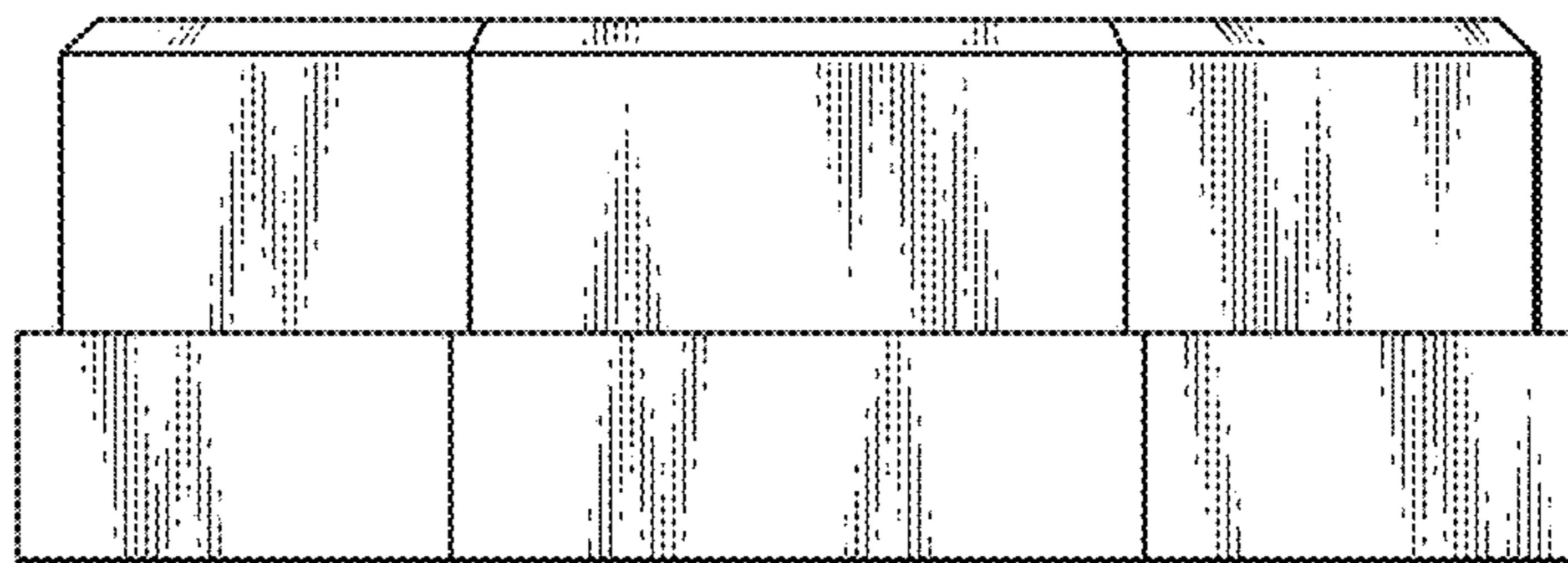


FIG.17

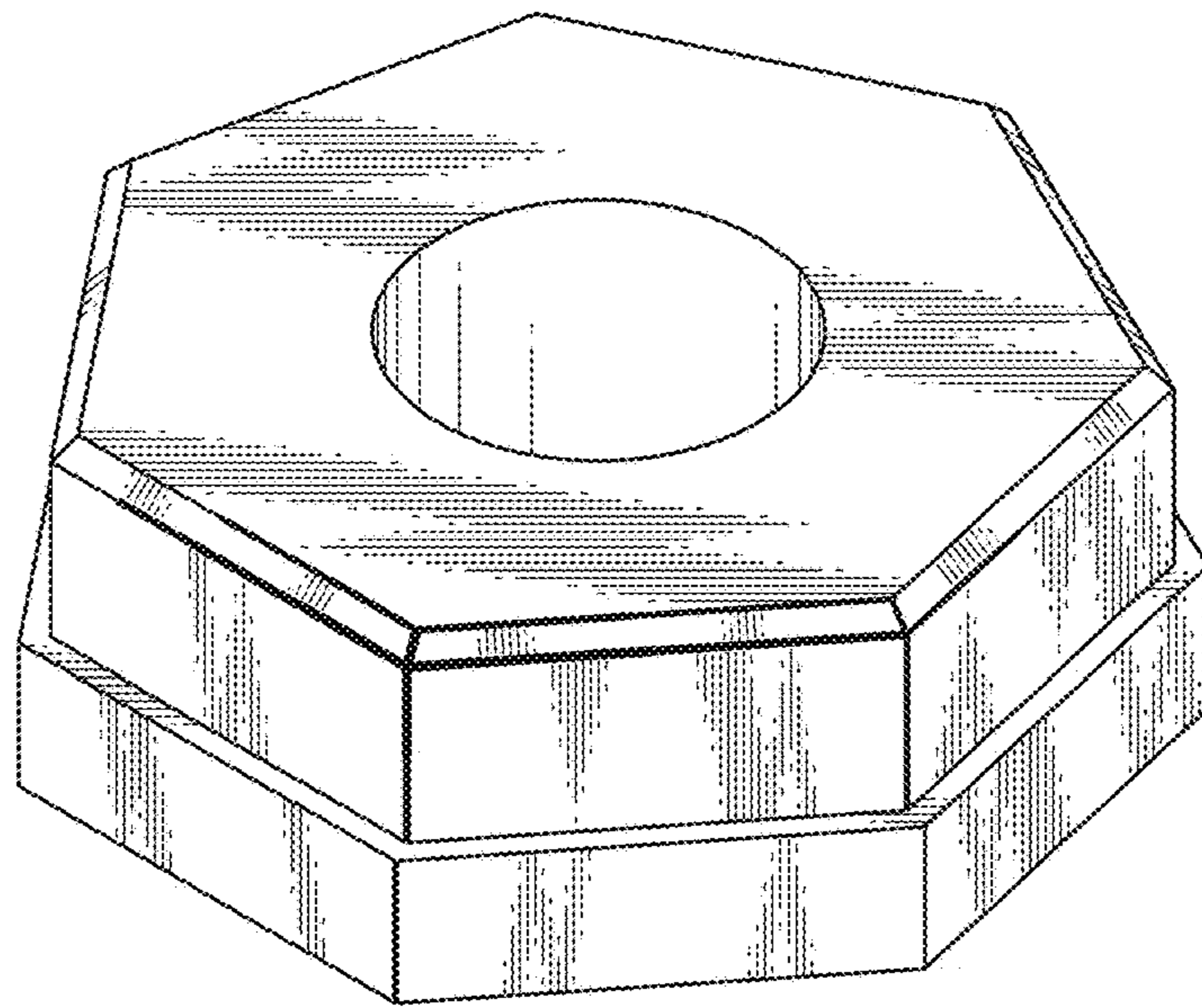


FIG.18

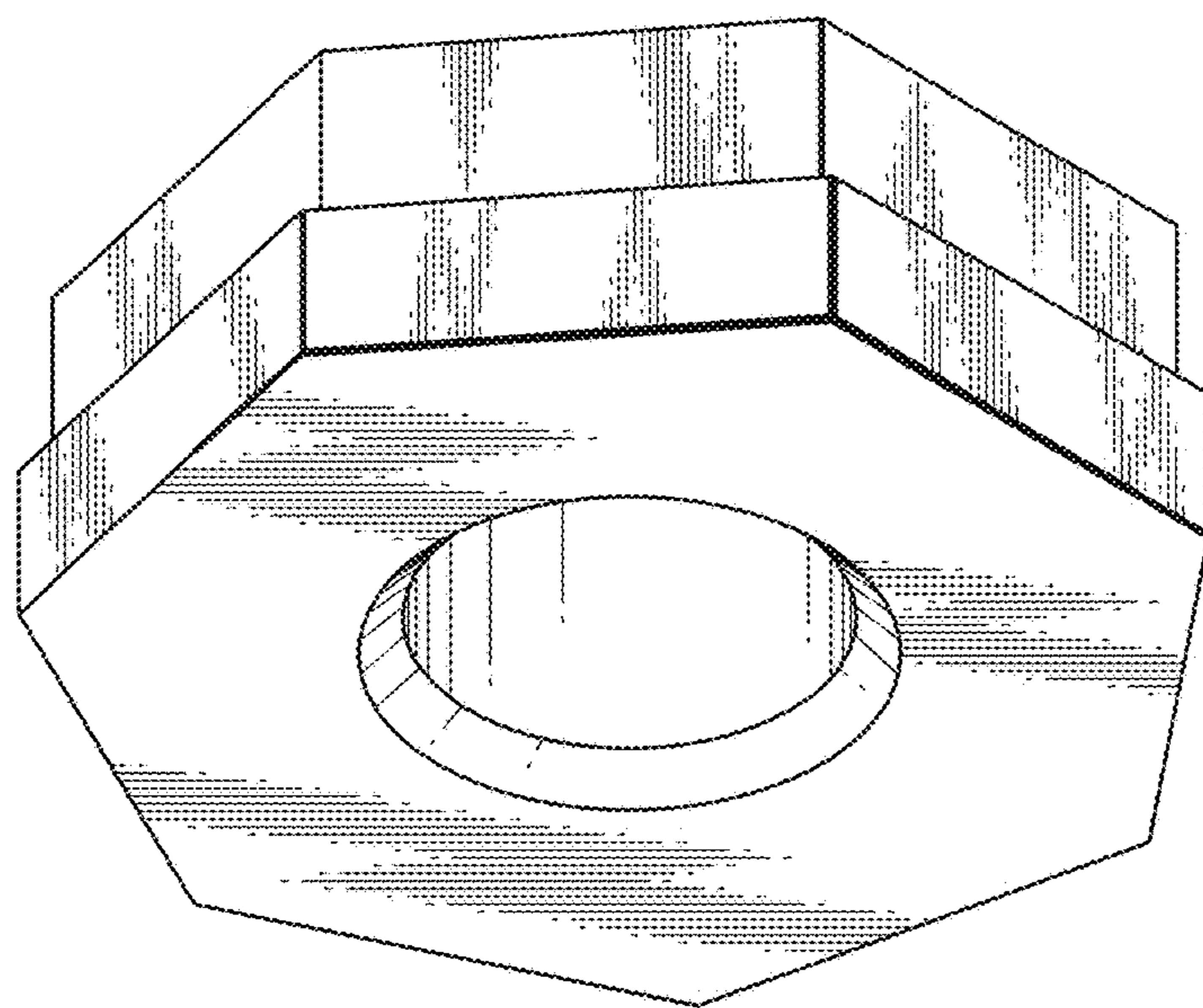


FIG.19

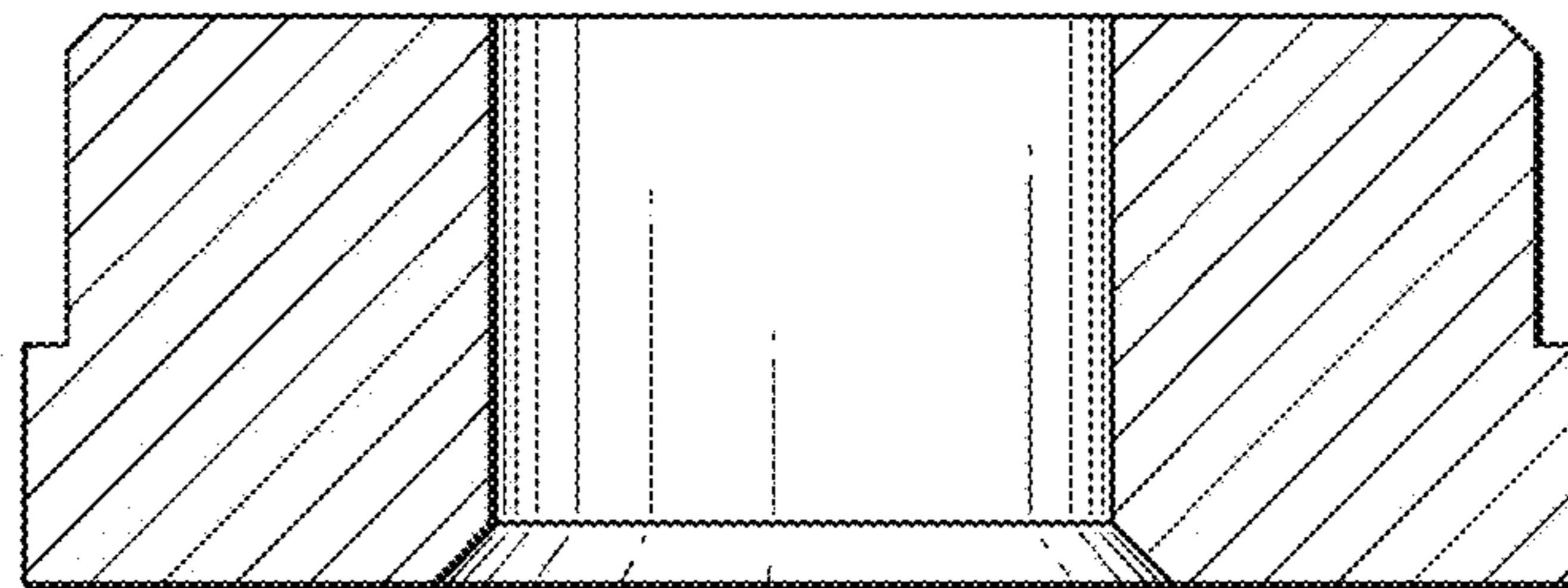


FIG.20

