



US00D371825S

**United States Patent** [19]  
**Yoshihara**

[11] **Patent Number: Des. 371,825**

[45] **Date of Patent: \*\*Jul. 16, 1996**

[54] **FLOW RATE ADJUSTING PLATE FOR A ROTARY NOZZLE TYPE MOLTEN METAL POURING UNIT**

1028343 8/1989 Japan .  
1028344 8/1989 Japan .  
1028345 8/1989 Japan .  
3024301 4/1991 Japan .  
411298 4/1992 Japan .  
1028342 4/1992 Japan .

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[73] Assignees: **NKK Corporation; Tokyo Yogyo Kabushiki Kaisha**, both of Tokyo; **Nippon Rotary Nozzle Co., Ltd.; Kokan Kikai Kogyo Kabushiki Kaisha**, both of Kawasaki, all of Japan

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*Attorney, Agent, or Firm*—Ladas & Parry

[\*\*] Term: **14 Years**

[57] **CLAIM**

[21] Appl. No.: **32,456**

The ornamental design for a flow rate adjusting plate for a rotary nozzle type molten metal pouring unit, as shown and described.

[22] Filed: **Dec. 19, 1994**

**DESCRIPTION**

**Related U.S. Application Data**

[63] Continuation of Ser. No. 846,393, Mar. 4, 1992.

FIG. 1 is a front view of a flow rate adjusting plate for a rotary nozzle type molten metal pouring unit showing my new design;

[30] **Foreign Application Priority Data**

Sep. 5, 1991 [JP] Japan ..... 3-26602  
Sep. 5, 1991 [JP] Japan ..... 3-26603

FIG. 2 is a left side view thereof;

FIG. 3 is a right side view thereof;

[52] U.S. Cl. .... **D23/237**

FIG. 4 is a rear view thereof;

FIG. 5 is a top view thereof;

[58] Field of Search ..... D23/233-237,  
D23/244-249; 138/40, 41, 43, 44, 45, 46

FIG. 6 is a bottom view thereof; and,

FIG. 7 is a cross-sectional view taken along line VII—VII of FIG. 5.

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

2,042,462 6/1936 Hahn ..... 138/43  
2,180,622 11/1939 Vincent ..... 138/46  
2,508,793 5/1950 Miller ..... 138/43  
2,948,296 8/1960 Thorburn ..... 138/46 X  
4,354,932 10/1982 McNeil ..... 138/41 X  
4,431,028 2/1984 Hendrick ..... 138/46 X

The characteristic feature of my design is the octagonal body shape wherein one side of the octagon is of curvilinear form and merges into adjacent linear sides of the hexagon to form a parabola and wherein a circular hole is provided which is essentially coaxial with the curvilinear side, the hole being generally aligned with the axes at which the parabola merges with the sides which bracket the aforementioned hole, the hole being spaced from the parabola by distance no less than the hole's diameter.

**FOREIGN PATENT DOCUMENTS**

128346 8/1989 Japan .

**1 Claim, 2 Drawing Sheets**

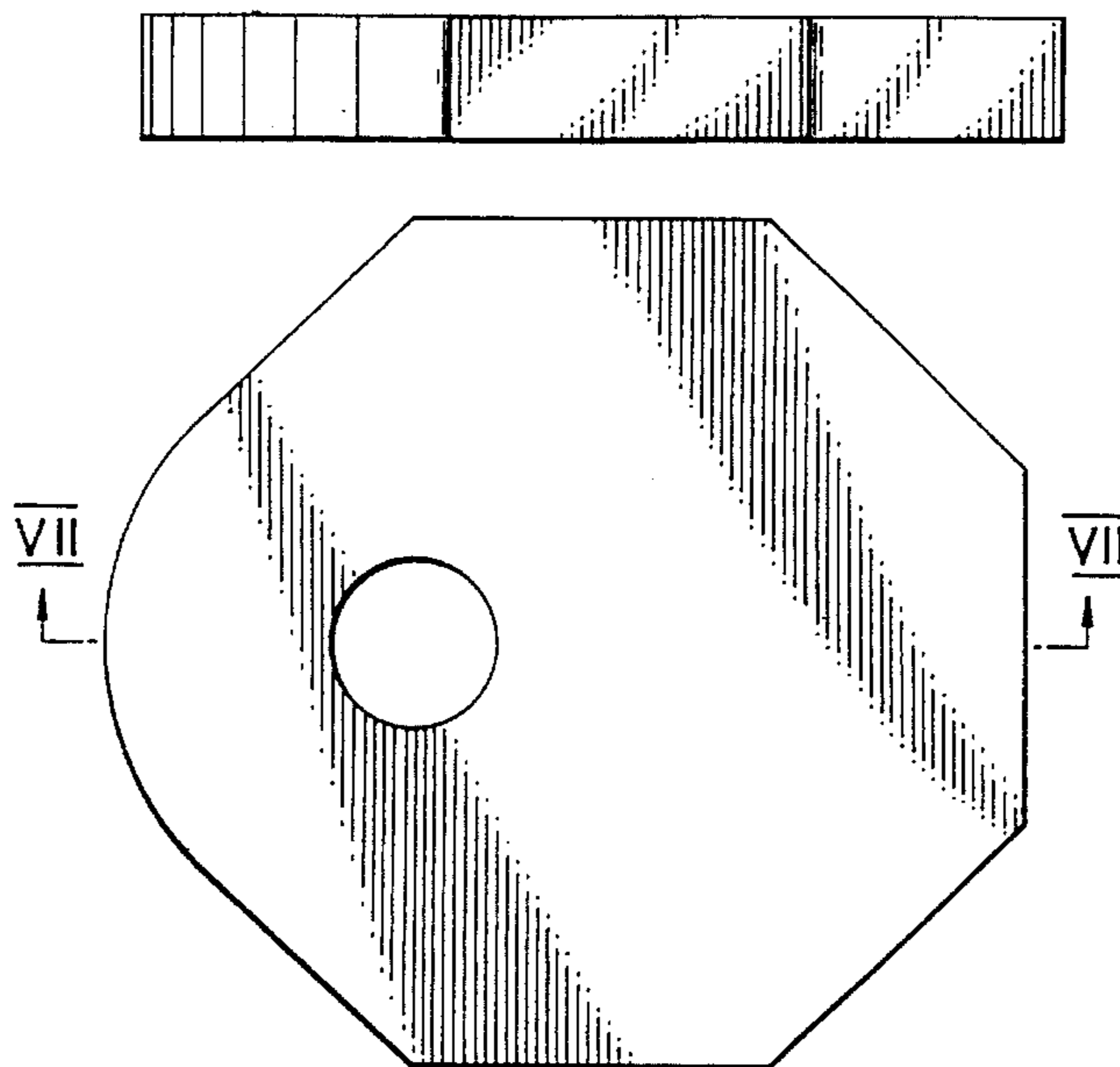


FIG. 1

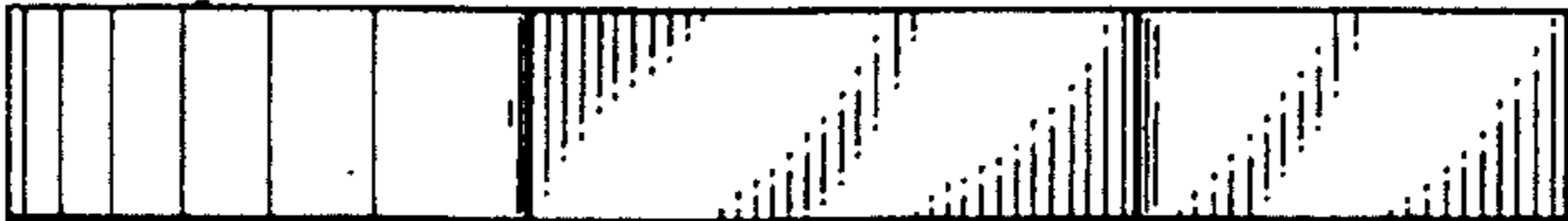


FIG. 2

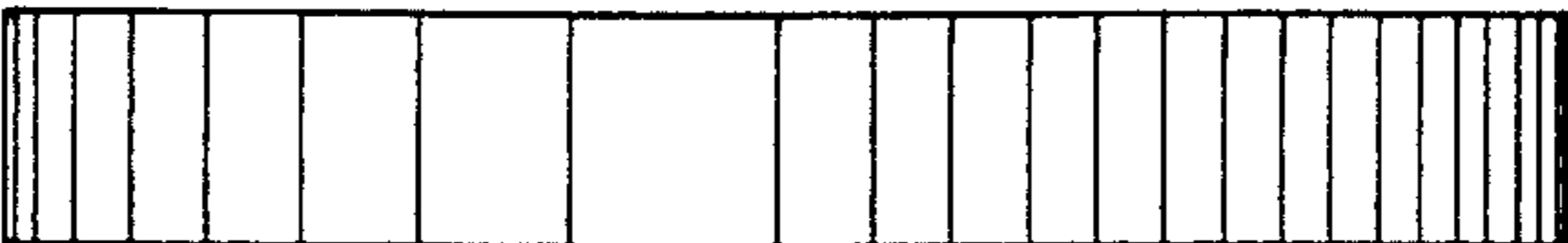


FIG. 3

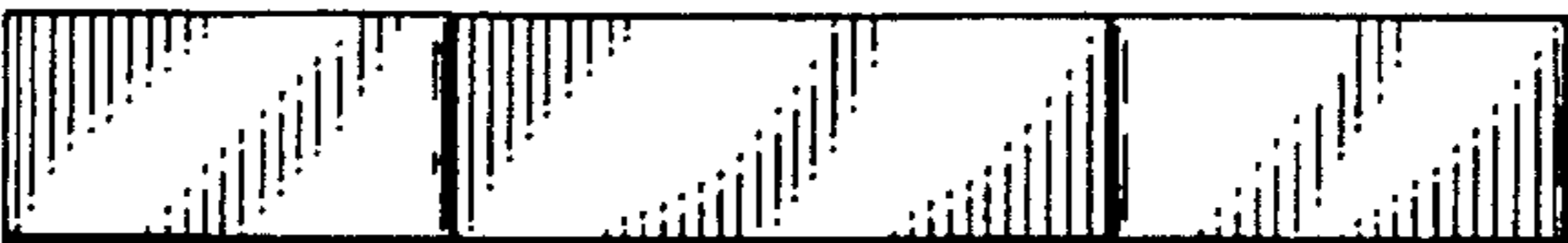


FIG. 4

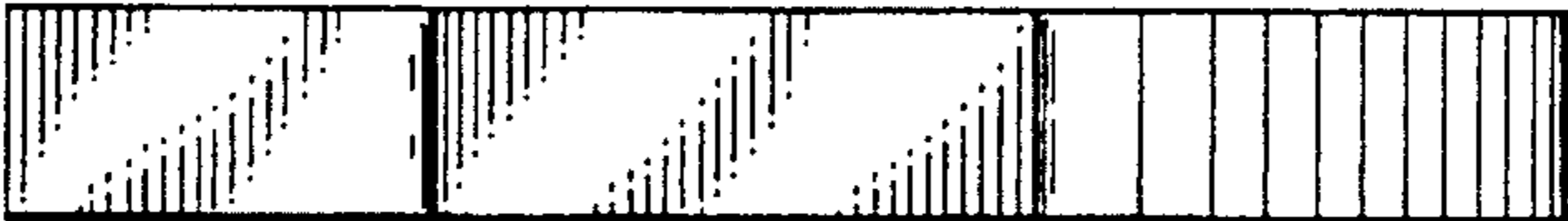


FIG. 5

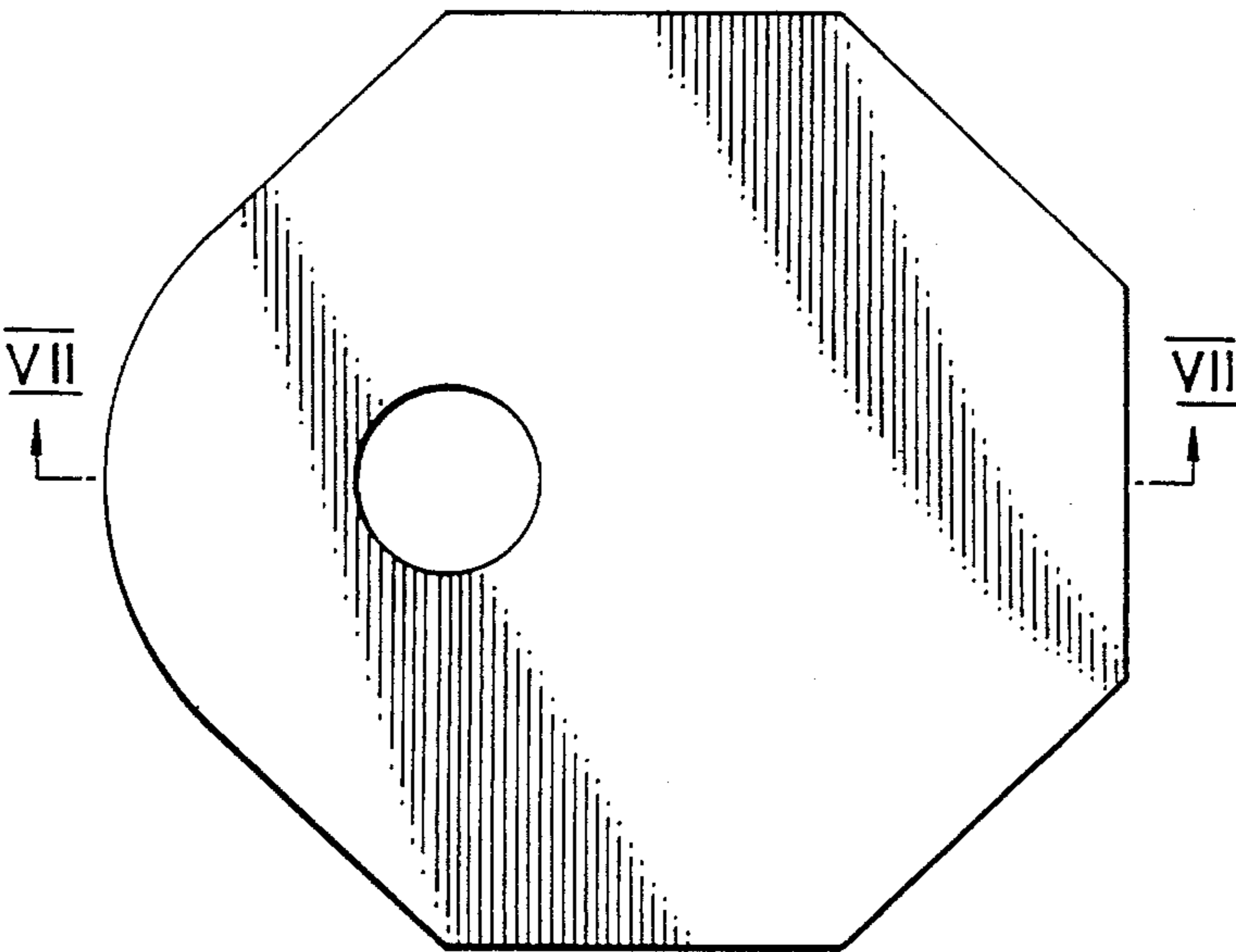


FIG. 6

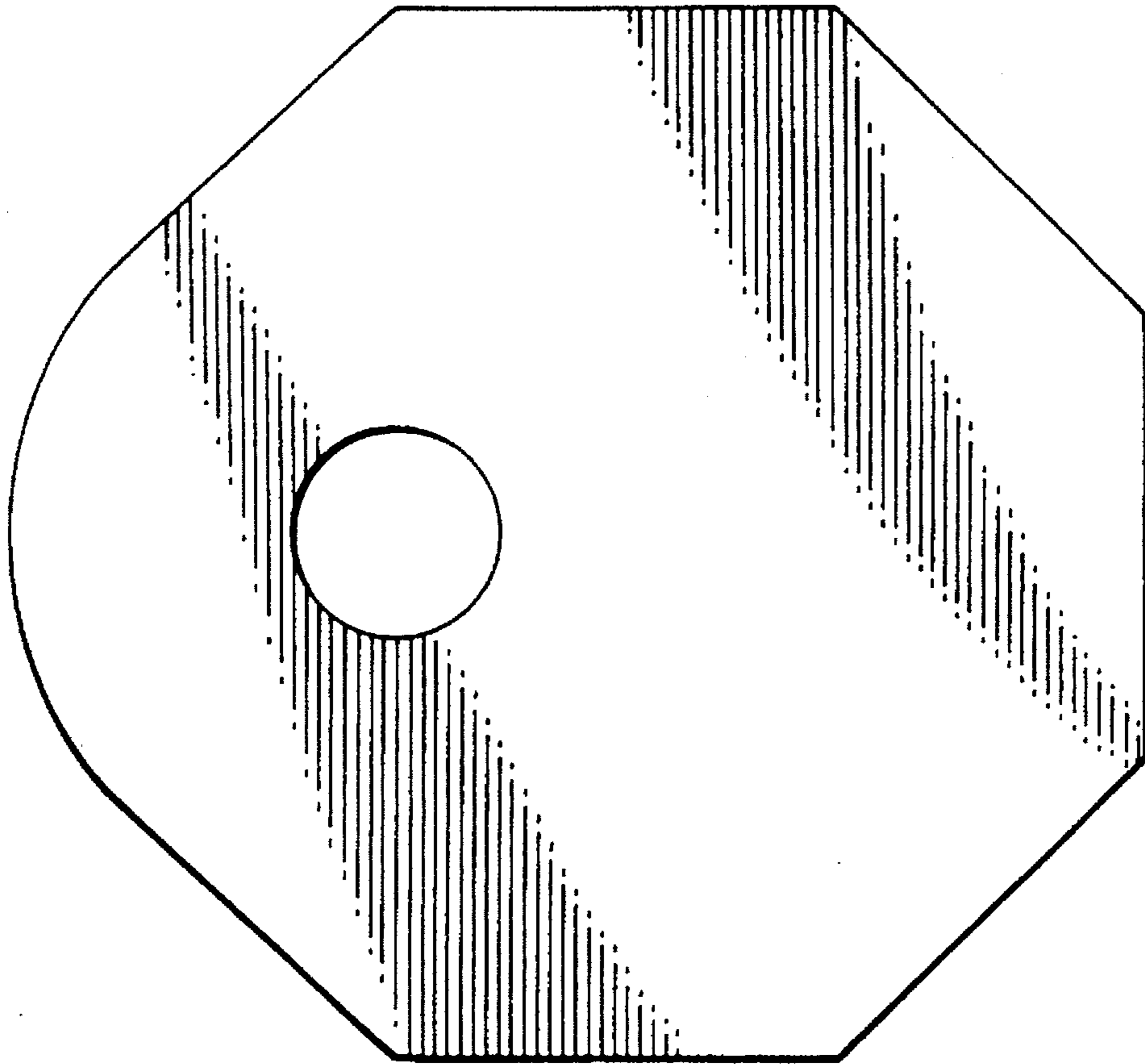
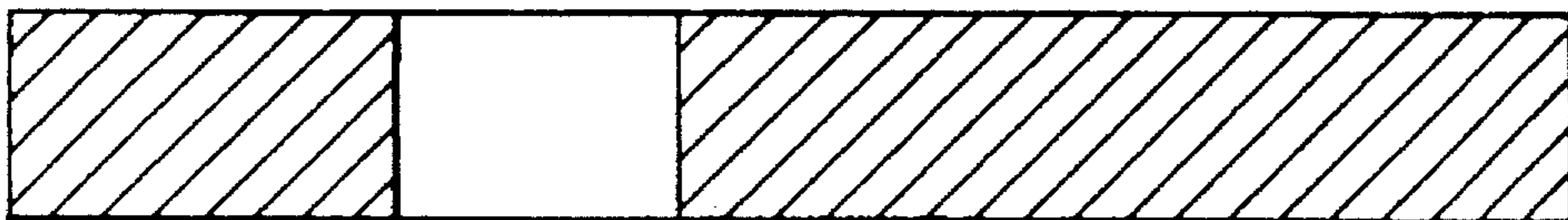


FIG. 7



UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : D371,825  
DATED : July 16, 1996  
INVENTOR(S) : Tetsuya Yoshihara

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 2 (right side), line 74 "hexagon" should be "octagon".

Signed and Sealed this  
Twenty-third Day of September, 1997

*Attest:*



BRUCE LEHMAN

*Attesting Officer*

*Commissioner of Patents and Trademarks*