



US00D614593S

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

(10) **Patent No.:** **US D614,593 S**
(45) **Date of Patent:** **** *Apr. 27, 2010**

(54) **SUBSTRATE SUPPORT FOR A SEMICONDUCTOR DEPOSITION APPARATUS**

(75) Inventors: **Jeong Ho Lee**, Seoul (KR); **Sang Jin Jeong**, Daejeon-si (KR); **Dong Rak Jung**, Cheonan-si (KR)

(73) Assignee: **ASM Genitech Korea Ltd**, Chungcheongnam-Do (KR)

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

(21) Appl. No.: **29/331,023**

(22) Filed: **Jan. 16, 2009**

(30) **Foreign Application Priority Data**

Jul. 21, 2008 (KR) 30-2008-0031461

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

(52) **U.S. Cl.** **D13/182**

(58) **Field of Classification Search** D13/182;
118/715; 156/345.53; 279/128; 361/234
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,098,501 A * 3/1992 Nishiguchi 156/275.5
- 5,403,401 A * 4/1995 Haafkens et al. 118/728
- 6,053,982 A * 4/2000 Halpin et al. 118/728
- 6,203,622 B1 * 3/2001 Halpin et al. 118/730
- 6,893,507 B2 * 5/2005 Goodman et al. 118/725
- D552,565 S * 10/2007 Nakamura et al. D13/182
- D587,222 S * 2/2009 Sasaki et al. D13/182
- 7,582,166 B2 * 9/2009 Lampe et al. 118/728
- 2003/0168174 A1 9/2003 Foree
- 2005/0152089 A1 * 7/2005 Matsuda et al. 361/234
- 2005/0193952 A1 9/2005 Goodman et al.

2007/0076345 A1 * 4/2007 Bang et al. 361/234
OTHER PUBLICATIONS

Givens et al., Substrate Holder With Varying Density, U.S. Appl. No. 12/266,317, filed on Nov. 6, 2008.

* cited by examiner

Primary Examiner—Selina Sikder

(74) *Attorney, Agent, or Firm*—Knobbe, Martens, Olson & Bear LLP

(57) **CLAIM**

The ornamental design for a substrate support for a semiconductor deposition apparatus, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a substrate support that may be positioned in a reaction space of a chamber in a semiconductor deposition apparatus, showing our new design, wherein the four small circles on the top surface of the support represent through-holes;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

FIG. 4 is a left-side view thereof;

FIG. 5 is a right-side view thereof;

FIG. 6 is a top plan view thereof;

FIG. 7 is a bottom plan view thereof;

FIG. 8 is a perspective view of the substrate support cut along a line passing through the center of the support with a partial enlarged view showing a transition from a center recess on the top surface of the support and an outer shoulder at the outer portion of the support; and,

FIG. 9 is a cross-sectional view thereof, along a line passing through the center of the support.

The ornamental design which is claimed is shown in solid lines in the drawings.

1 Claim, 5 Drawing Sheets

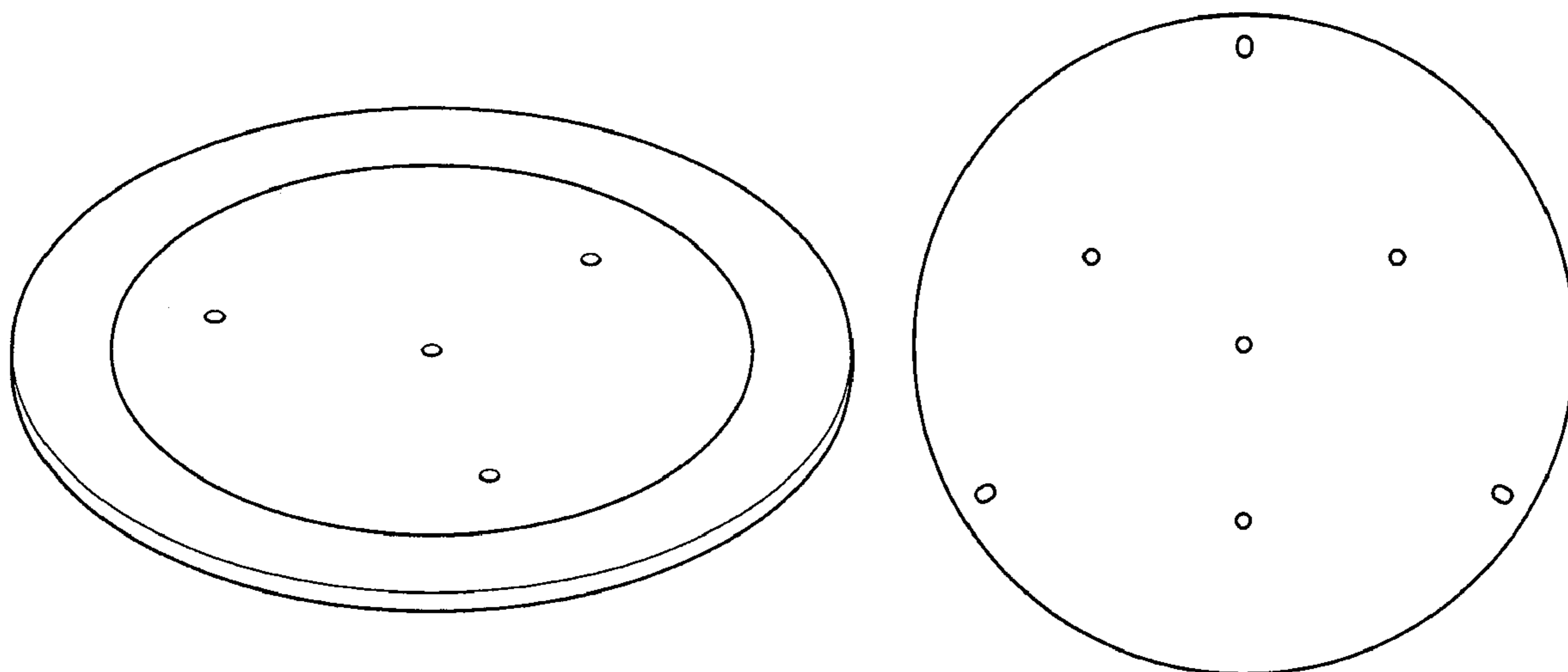


FIG.1

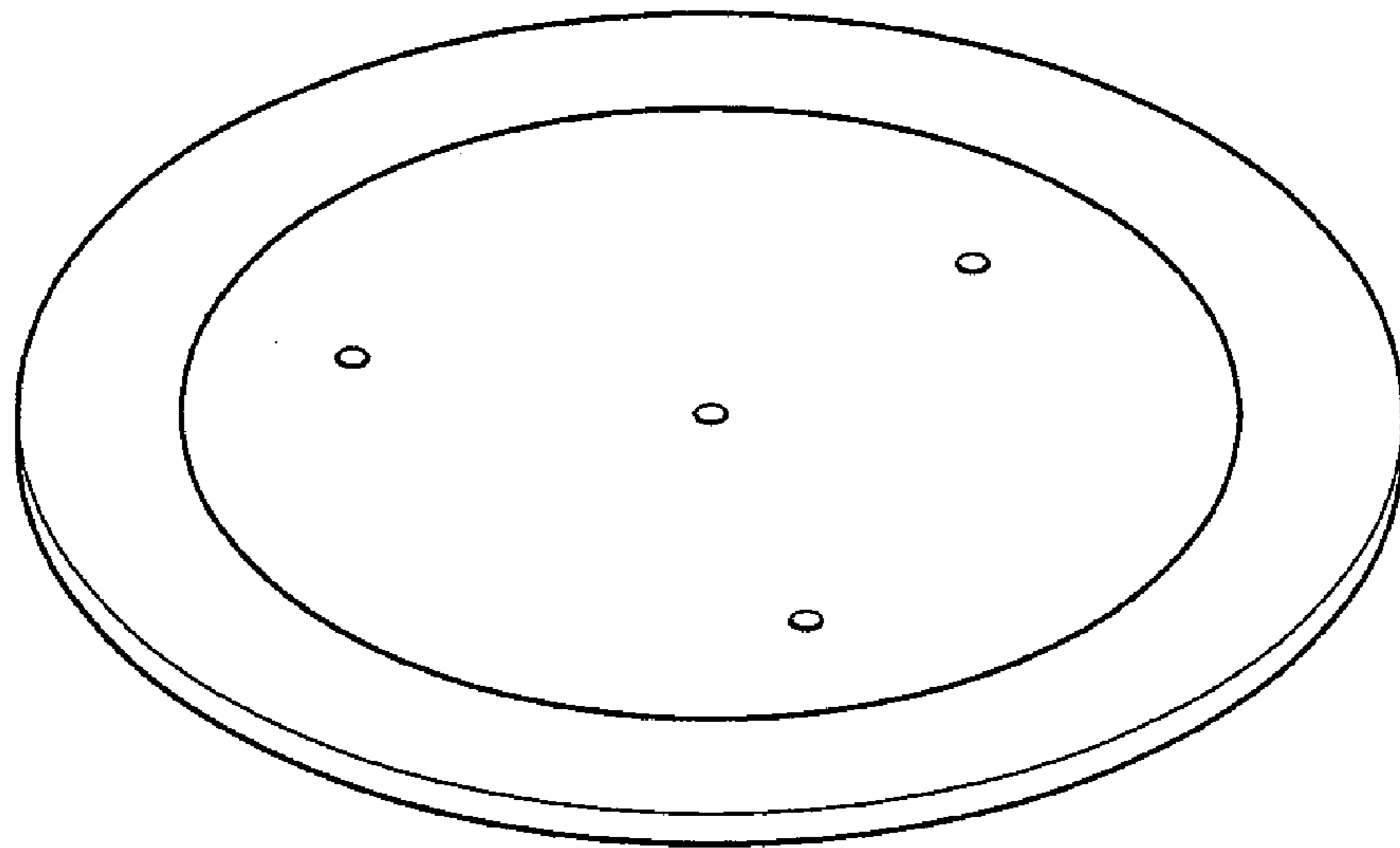


FIG.2

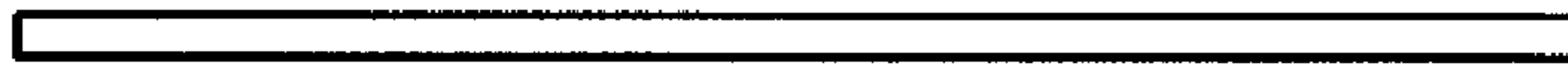


FIG.3



FIG.4



FIG.5



FIG.6

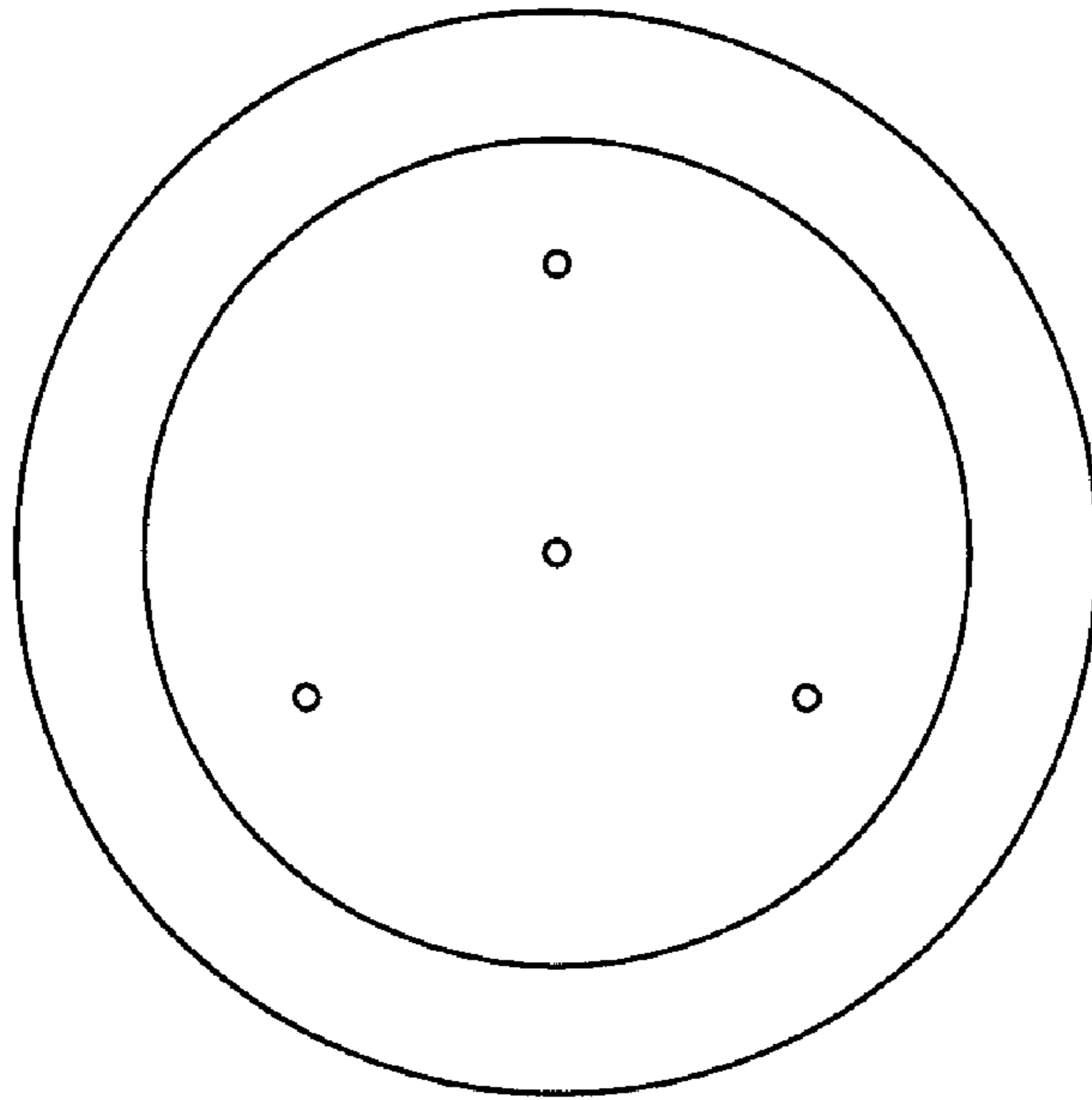


FIG.7

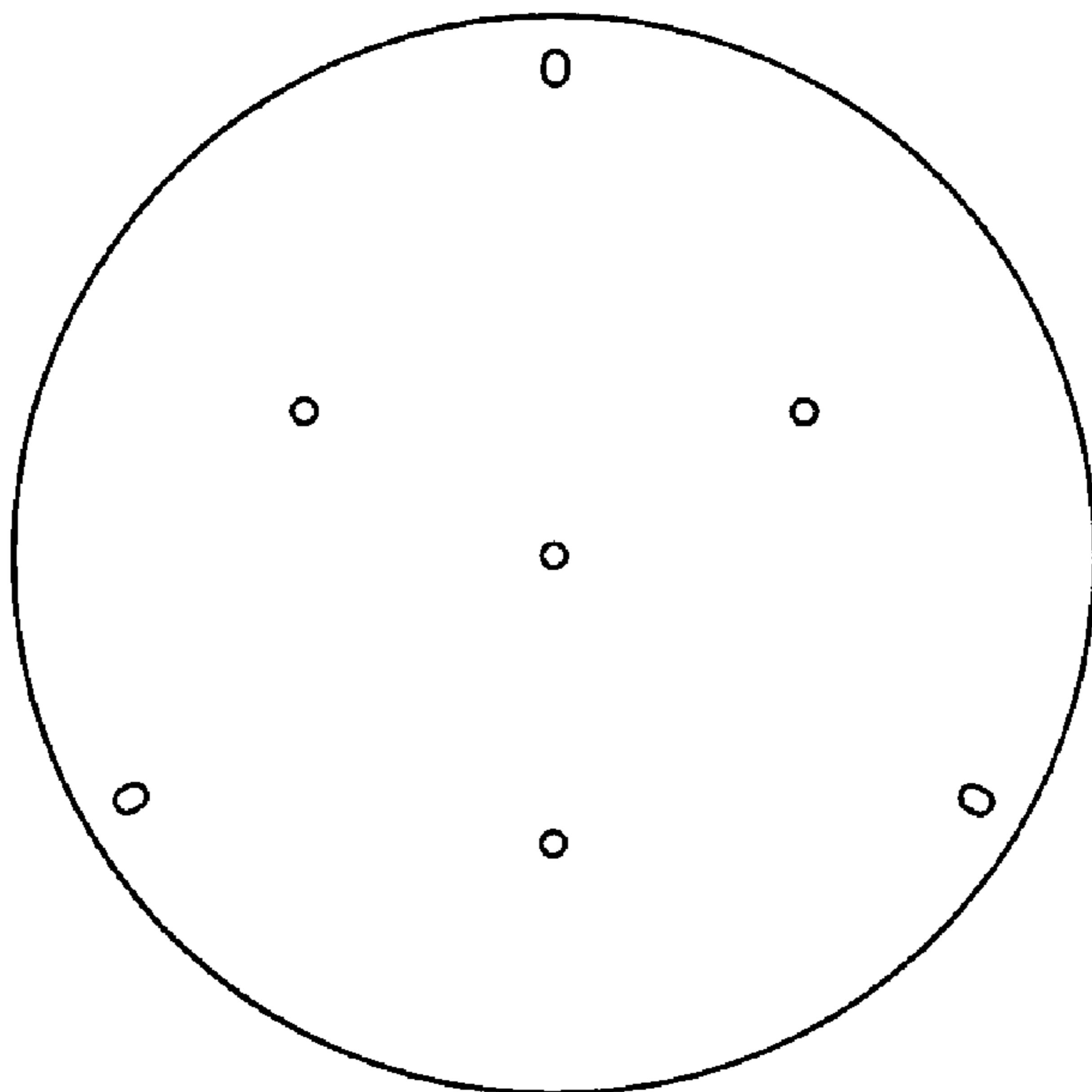


FIG. 8

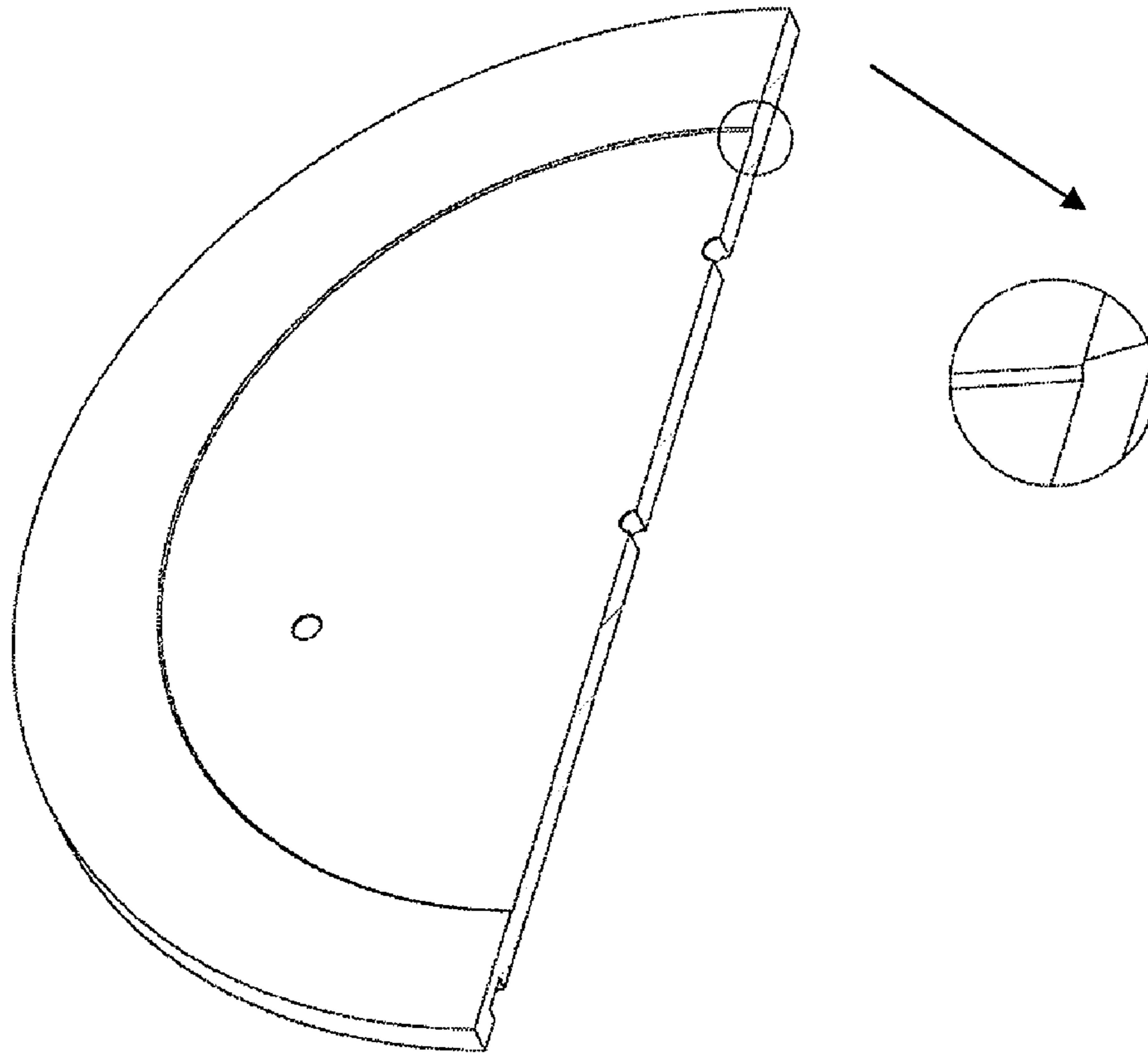


FIG. 9

