

US00D664170S

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

(10) **Patent No.:** **US D664,170 S**
(45) **Date of Patent:** **** Jul. 24, 2012**

(54) **CLEANING PLATE FOR INDUCING
TURBULENT FLOW OF A PROCESSING
CHAMBER CLEANING GLASS**

6,277,235 B1 8/2001 Wing et al.
6,652,712 B2 * 11/2003 Wang et al. 156/345.48
D528,407 S * 9/2006 Schwab D8/399
7,431,772 B2 10/2008 Muruges et al.

(Continued)

(75) Inventors: **Hua Chung**, San Jose, CA (US); **Xizi Dong**, Sunnyvale, CA (US); **Kyawwin Jason Maung**, Daly City, CA (US); **Hiroji Hanawa**, Sunnyvale, CA (US); **Sang Won Kang**, San Jose, CA (US); **David H. Quach**, San Jose, CA (US); **Donald J. K. Olgado**, Palo Alto, CA (US); **David Bour**, Cupertino, CA (US); **Wei-Yung Hsu**, San Jose, CA (US); **Alexander Tam**, Union City, CA (US); **Anzhong Chang**, San Jose, CA (US); **Sumedh Acharya**, Pune (IN)

FOREIGN PATENT DOCUMENTS

JP 2005-072291 A 3/2005

OTHER PUBLICATIONS

International Search Report dated Feb. 9, 2012 for International Application No. PCT/US2011/040197.
Taiwan Office Action dated Feb. 17, 2012 for Taiwan Design Patent Application No. 100304292.

(Continued)

Primary Examiner — Patricia Palasik

(74) *Attorney, Agent, or Firm* — Patterson & Sheridan, LLP

(73) Assignee: **Applied Materials, Inc.**, Santa Clara, CA (US)

(57) **CLAIM**

The ornamental design for a cleaning plate for inducing turbulent flow of a processing chamber cleaning glass, as shown.

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

DESCRIPTION

(21) Appl. No.: **29/386,850**

This invention was made with Government support under DE-EE0003331 awarded by DOE. The Government has certain rights in this invention.

(22) Filed: **Mar. 4, 2011**

FIG. 1 is a cleaning plate for inducing turbulent flow of a processing chamber cleaning gas.

(51) **LOC (9) Cl.** **15-09**

(52) **U.S. Cl.** **D15/144**

(58) **Field of Classification Search** D15/144

See application file for complete search history.

FIG. 2 is a top plan view of the cleaning plate of FIG. 1.

FIG. 3 is a bottom isometric view of the cleaning plate of FIG. 1.

(56) **References Cited**

U.S. PATENT DOCUMENTS

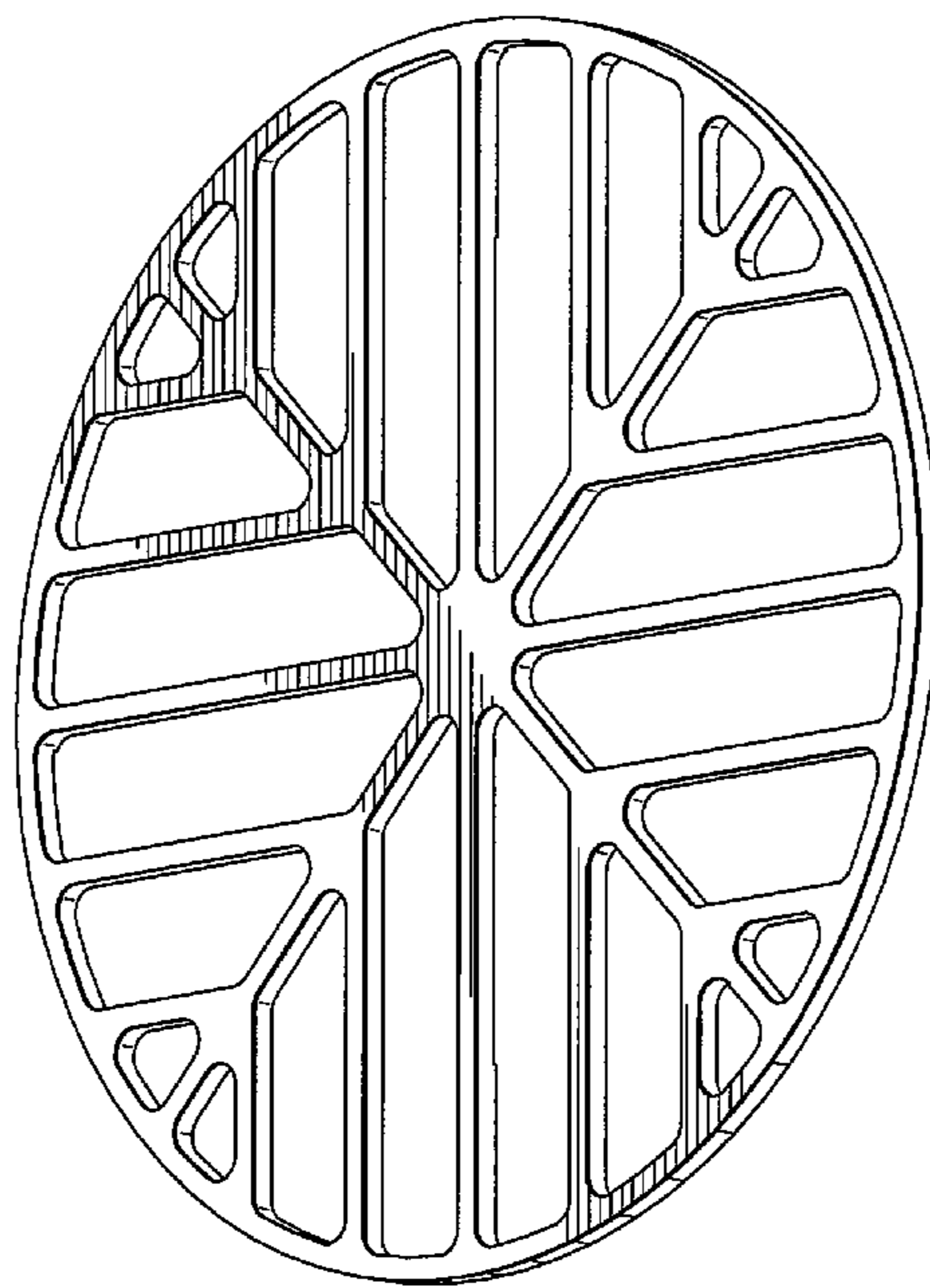
D263,678 S * 4/1982 Dewey D8/399
D320,361 S 10/1991 Karasawa
D327,111 S * 6/1992 Hemming D22/140
D414,406 S * 9/1999 Meyer D8/399
6,155,203 A * 12/2000 Kennedy et al. 118/723 I

FIG. 4 is a bottom plan view of the cleaning plate of FIG. 1.
FIG. 5 is a side perspective view of the cleaning plate of 1; and,

FIG. 6 is an enlarged partial view of FIG. 3.

The broken lines in the figures form no part of the claimed design.

1 Claim, 5 Drawing Sheets



US D664,170 S

Page 2

U.S. PATENT DOCUMENTS

D619,152 S * 7/2010 Evatt et al. D15/138
D651,062 S * 12/2011 Wackwitz D8/70
2002/0020429 A1 2/2002 Selbrede et al.
2006/0254519 A1* 11/2006 Brcka 118/723 I
2011/0308551 A1* 12/2011 Chung et al. 134/22.1
2012/0000490 A1* 1/2012 Chung et al. 134/22.12
2012/0037190 A1* 2/2012 Jakob et al. 134/22.18

OTHER PUBLICATIONS

International Search Report dated Feb. 9, 2012, Application No.
PCT/US2011/040197.

Japanese Office Action issued Feb. 21, 2012 for Japanese Application
No. 2011-019695.

* cited by examiner

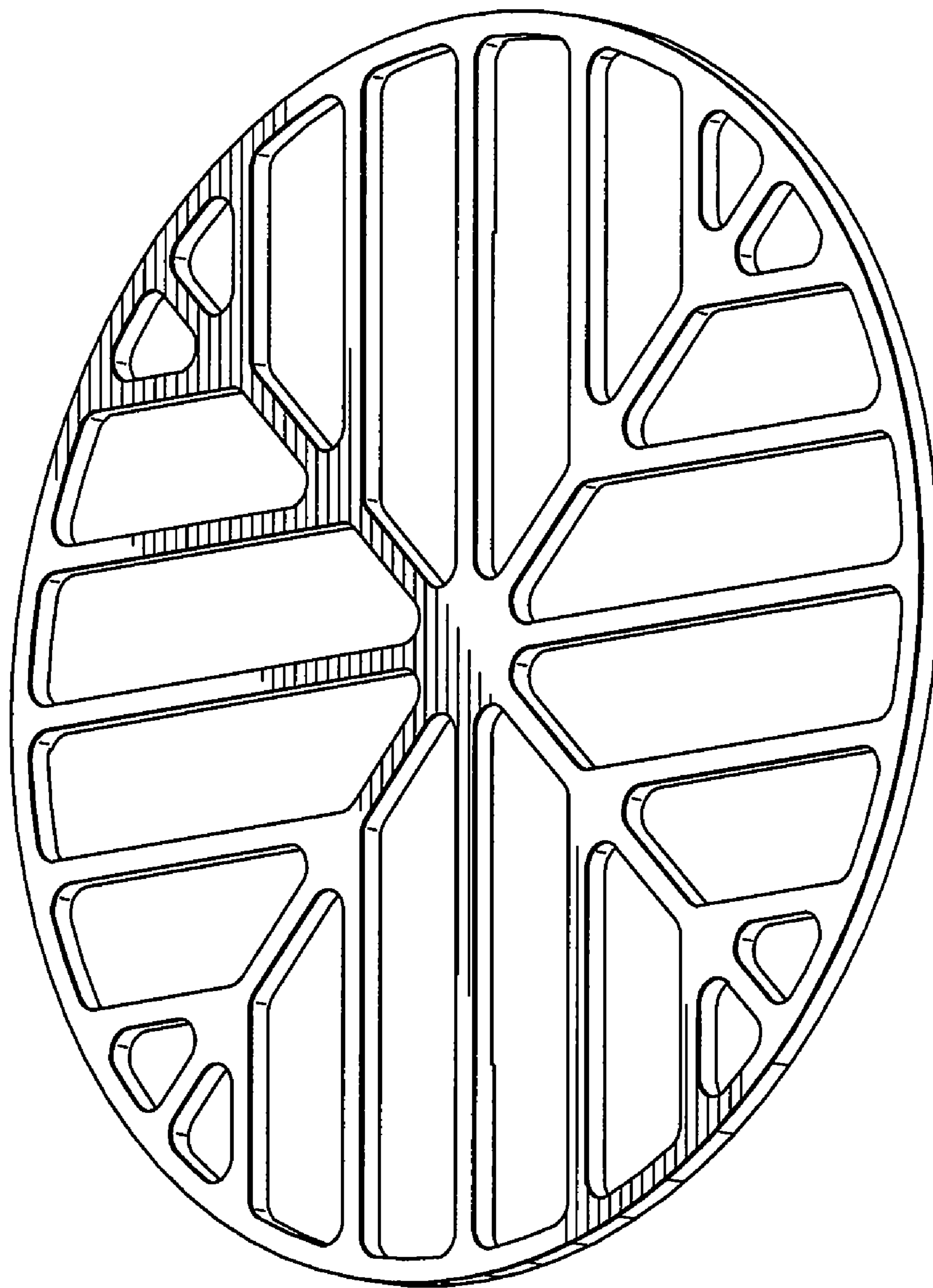


Fig. 1

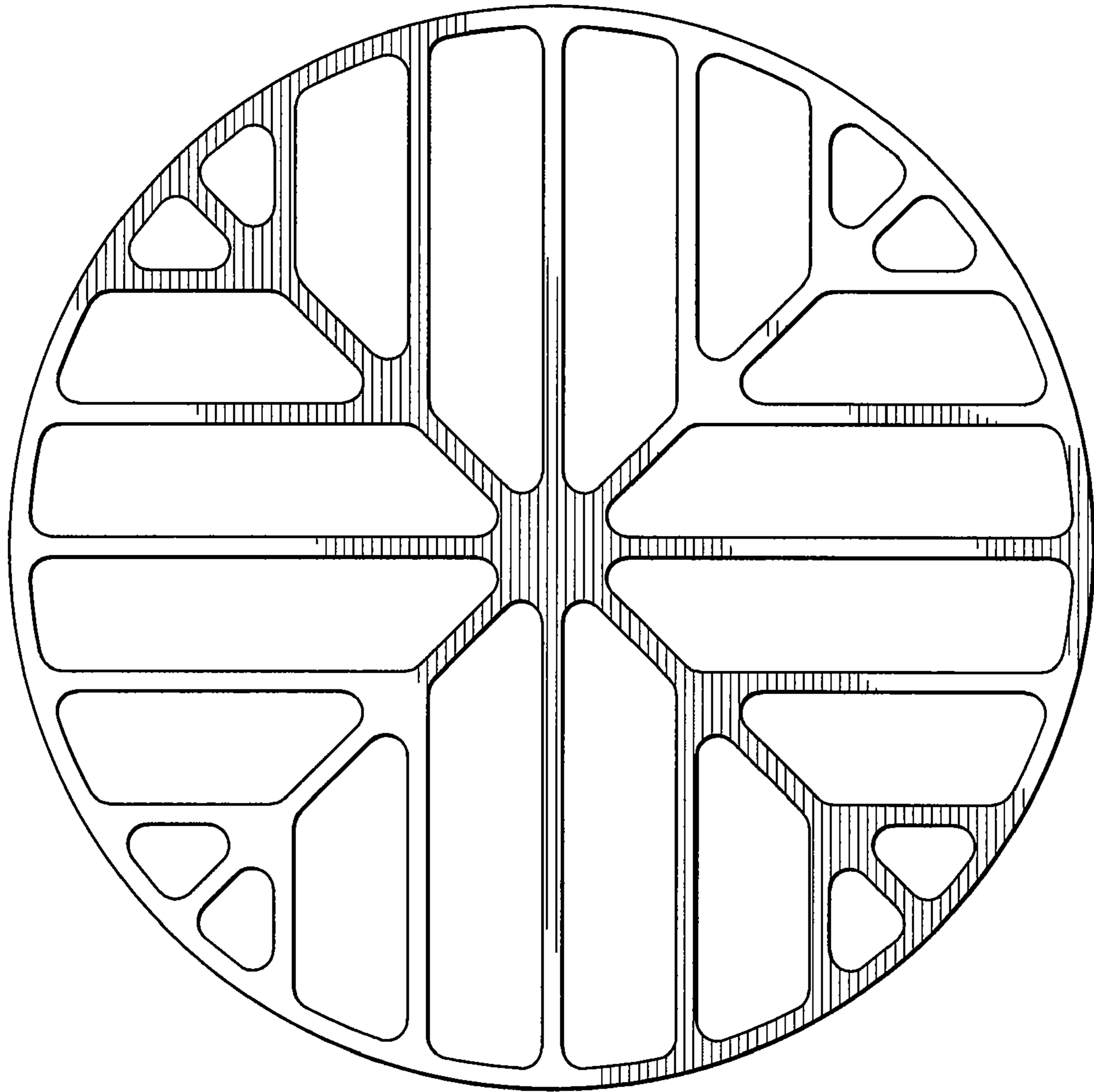


Fig. 2

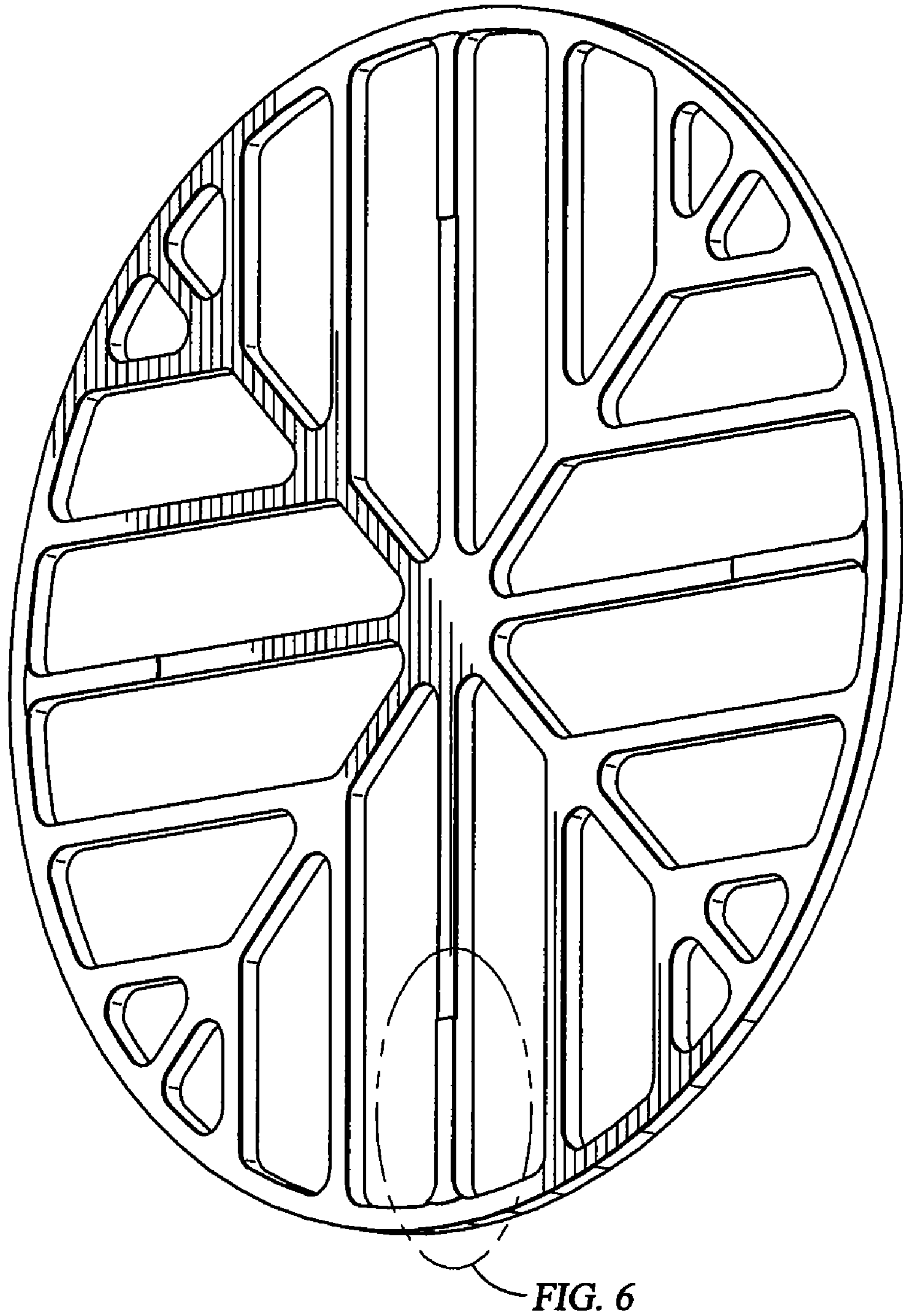


Fig. 3

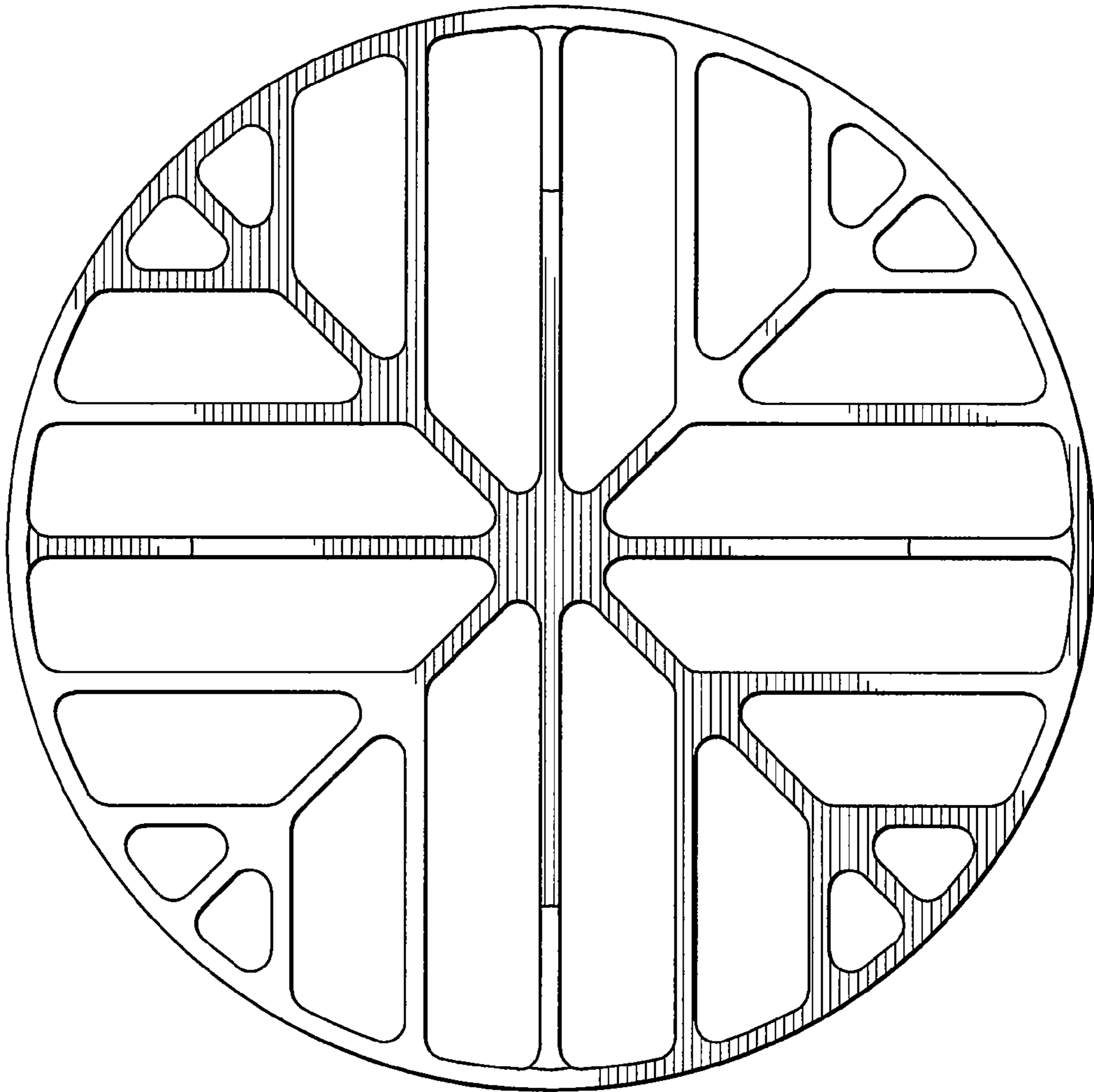


Fig. 4



Fig. 5

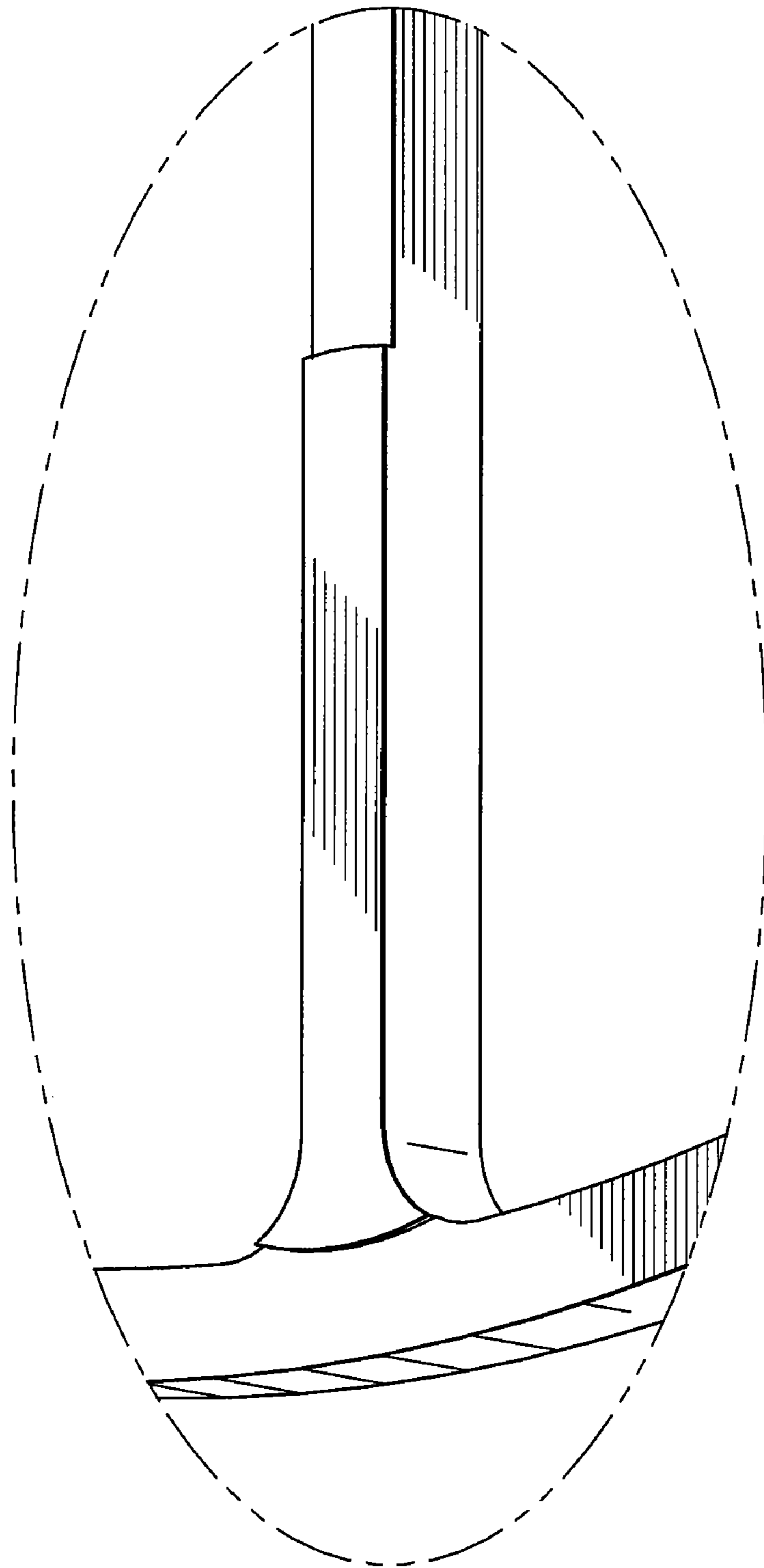


Fig. 6