



US00D593585S

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

(10) **Patent No.:** **US D593,585 S**  
(45) **Date of Patent:** **\*\* Jun. 2, 2009**

(54) **TOP PANEL FOR MICROWAVE INTRODUCTION WINDOW OF A PLASMA PROCESSING APPARATUS**  
(75) Inventors: **Kinya Ota**, Amagasaki (JP); **Cai Zhong Tian**, Amagasaki (JP); **Junichi Kitagawa**, Amagasaki (JP)  
(73) Assignee: **Tokyo Electron Limited**, Tokyo (JP)  
(\*\*) Term: **14 Years**  
(21) Appl. No.: **29/252,839**  
(22) Filed: **Jan. 30, 2006**  
(30) **Foreign Application Priority Data**  
Jul. 29, 2005 (JP) ..... 2005-022103

(51) **LOC (9) Cl.** ..... **15-09**  
(52) **U.S. Cl.** ..... **D15/138**  
(58) **Field of Classification Search** ..... D7/586, D7/587, 501, 553.6, 600.4; D8/70, 74; D9/445, D9/454, 456; D15/133, 144.1, 199, 122, D15/138, 139; 117/103; 118/723 AN, 723 ME, 118/723 MP, 723 MW, 723 E, 723 ER; 216/69, 216/67; 219/420-424, 523, 530, 541, 544; 257/E21.252, 252, 629, 631, E39.001; 427/562, 427/571, 575; D1/126, 128; D6/455; D13/122, D13/138, 139, 158-177, 182; D18/17; 156/242, 156/345; 175/374, 434; 204/298.38; 264/328.14, 264/328.15, 328.16; 313/231.31; 315/111.21; 407/113-118; 408/145; 425/547-550, 564, 425/566, 570; 451/540-548; 700/121, 123  
See application file for complete search history.

(56) **References Cited**  
**U.S. PATENT DOCUMENTS**  
3,700,938 A \* 10/1972 Bryant ..... 310/334  
4,213,537 A \* 7/1980 Caccavale ..... 220/215  
4,858,590 A \* 8/1989 Bailey ..... 126/39 H  
5,335,801 A \* 8/1994 Lee ..... 215/249  
5,486,131 A \* 1/1996 Cesna et al. .... 451/56  
D386,792 S \* 11/1997 Miller ..... D20/21

6,108,190 A \* 8/2000 Nagasaki ..... 361/234  
6,403,933 B1 \* 6/2002 Strodtbeck et al. .... 219/502  
6,578,853 B1 \* 6/2003 Treur et al. .... 279/121  
7,153,199 B1 \* 12/2006 Decker ..... 451/343  
2005/0194337 A1 \* 9/2005 McDaniel ..... 211/165  
2005/0199159 A1 \* 9/2005 Searer ..... 108/94

**FOREIGN PATENT DOCUMENTS**

EP 0592017 A2 \* 4/1994

**OTHER PUBLICATIONS**

Asian Sources Hardwares for World Markets, High Quality Ductile and Grey Iron OEM Products From One of Taiwan's Leading Manufacturers, Nov. 1990, 1 cover Page and p. 251.

\* cited by examiner

*Primary Examiner*—Sandra Snapp  
*Assistant Examiner*—Patricia Palasik

(74) *Attorney, Agent, or Firm*—Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

(57) **CLAIM**

The ornamental design for a top panel for microwave introduction window of a plasma processing apparatus, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a top panel for microwave introduction window of a plasma processing apparatus showing our new design;

FIG. 2 is a rear view thereof;

FIG. 3 is a right side view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a top plan view thereof;

FIG. 6 is a bottom plan view thereof;

FIG. 7 is a sectional view taken along line 7—7 of FIG. 5;

FIG. 8 is an enlarged view taken along line 8—8 of FIG. 7;

FIG. 9 is an enlarged view taken along line 9—9 of FIG. 7; and,

FIG. 10 is a perspective view thereof.

**1 Claim, 4 Drawing Sheets**

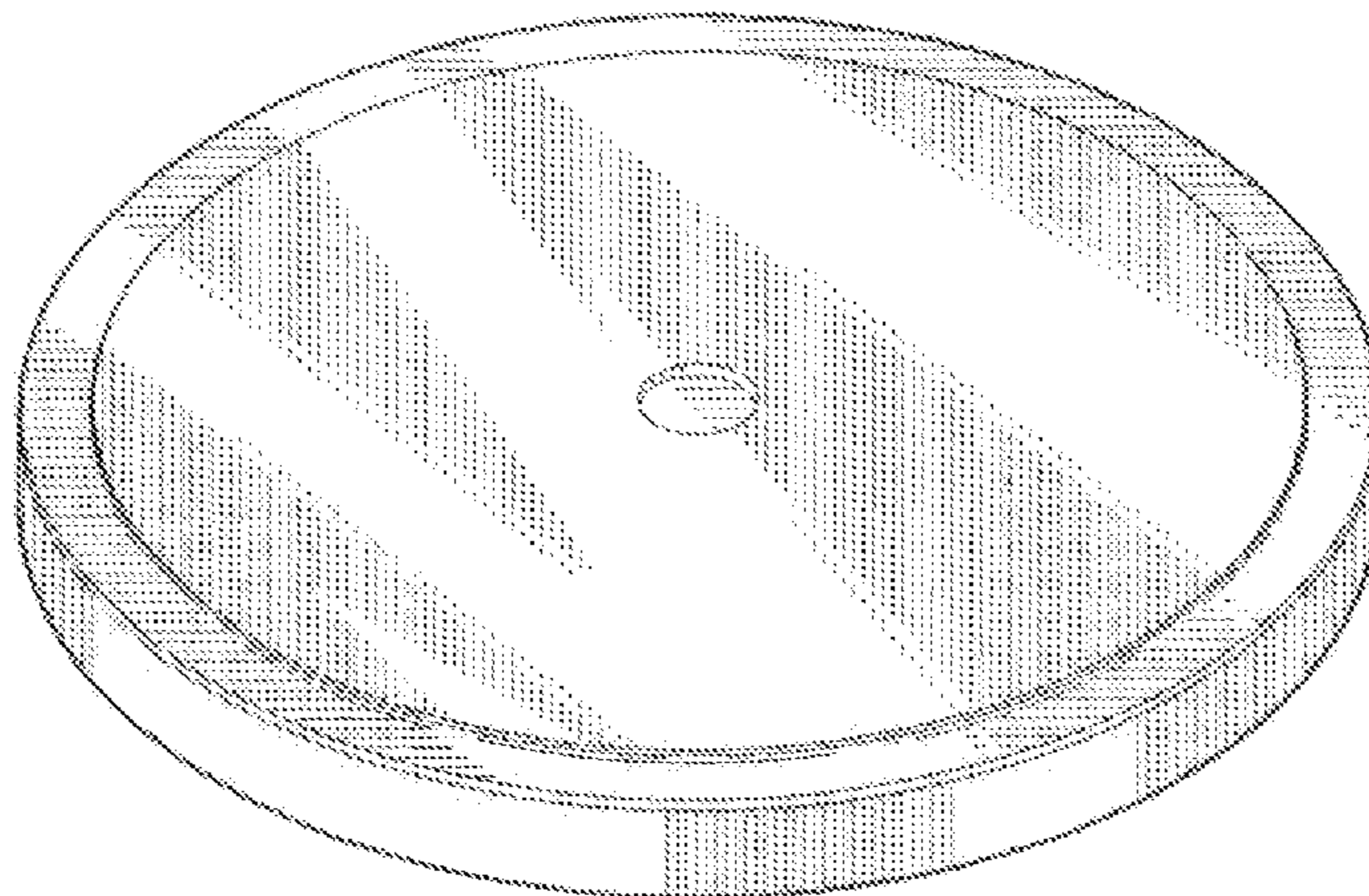


FIG.1



FIG.2



FIG.3



FIG.4



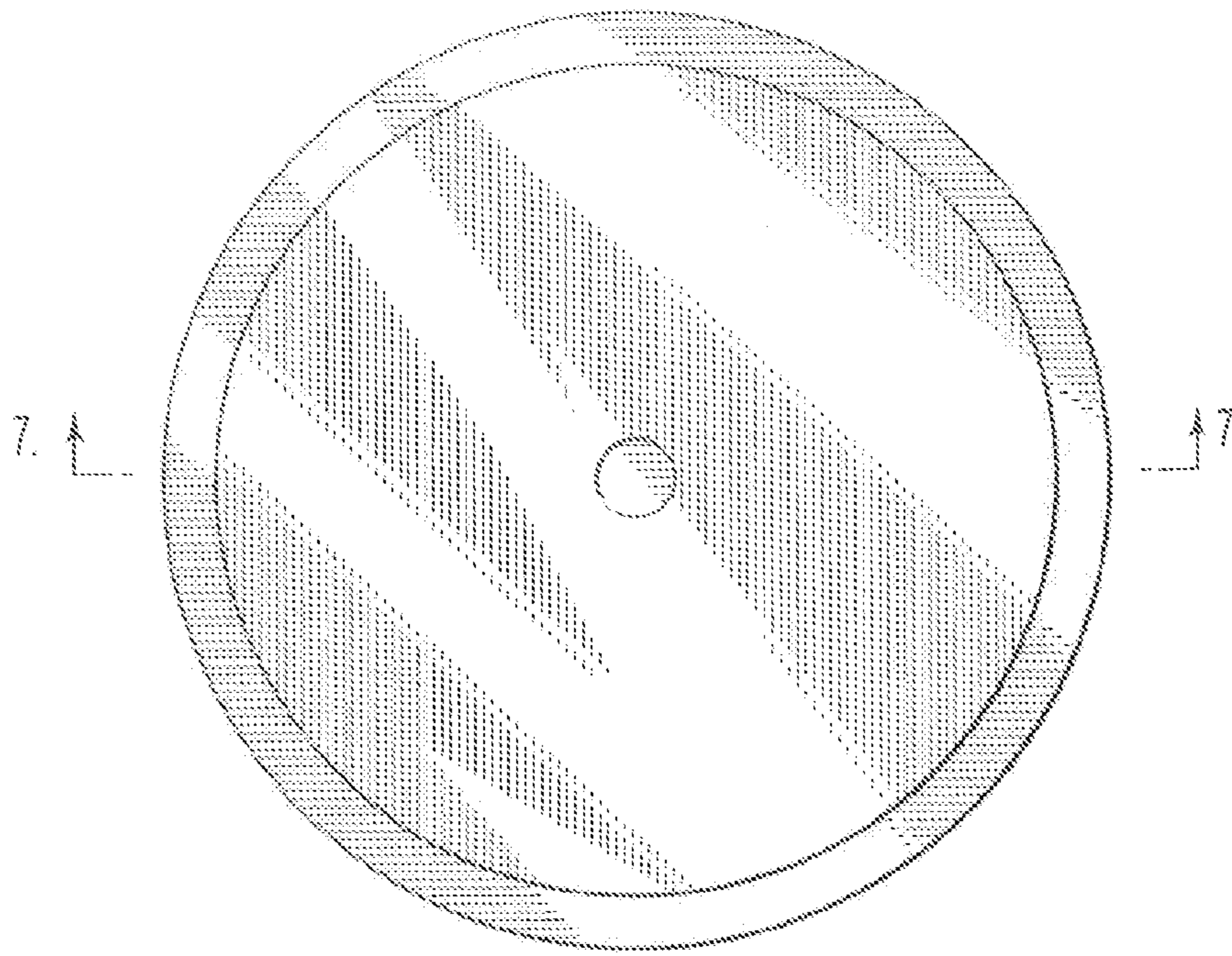


FIG. 5

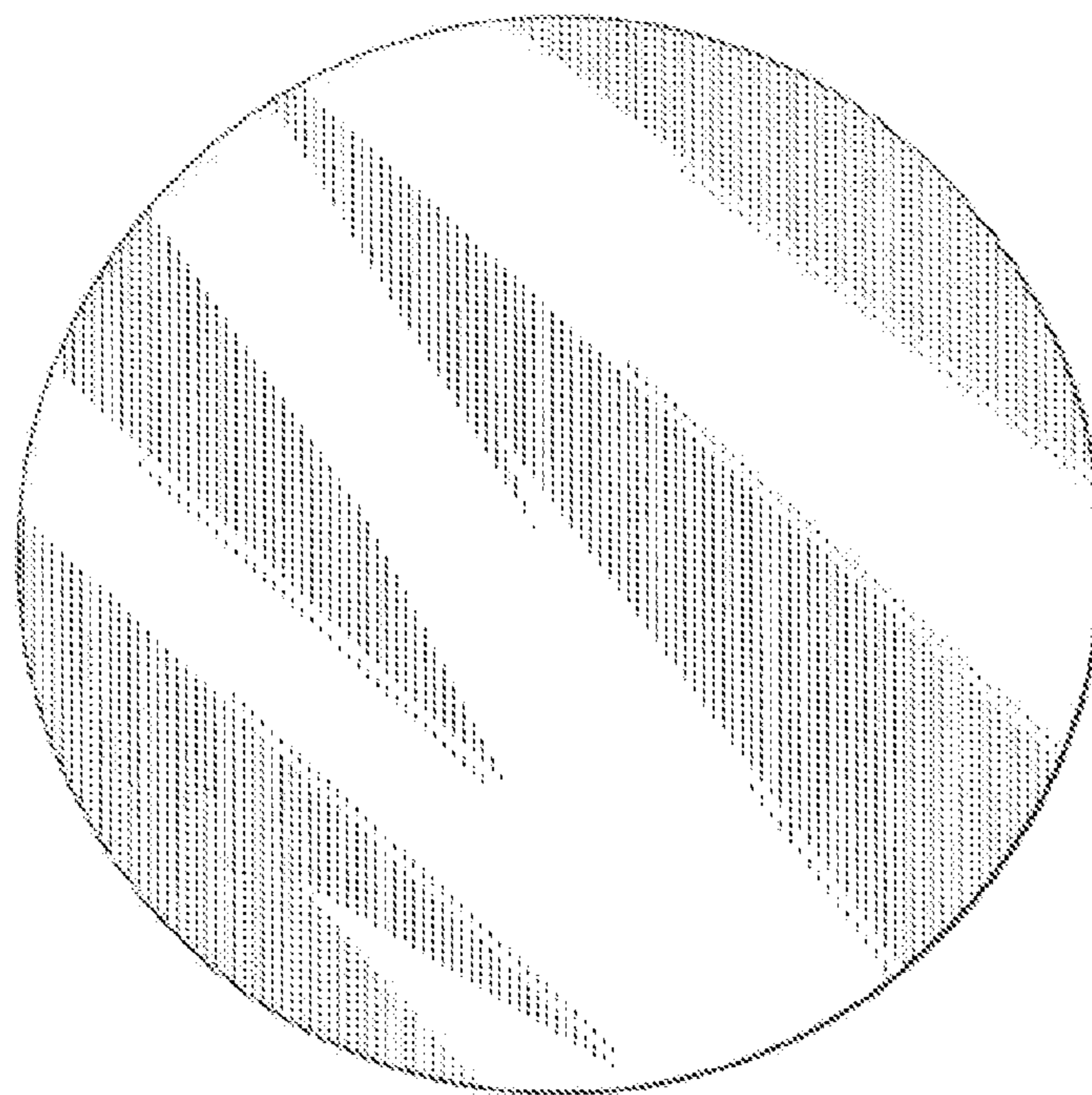


FIG. 6

FIG. 7

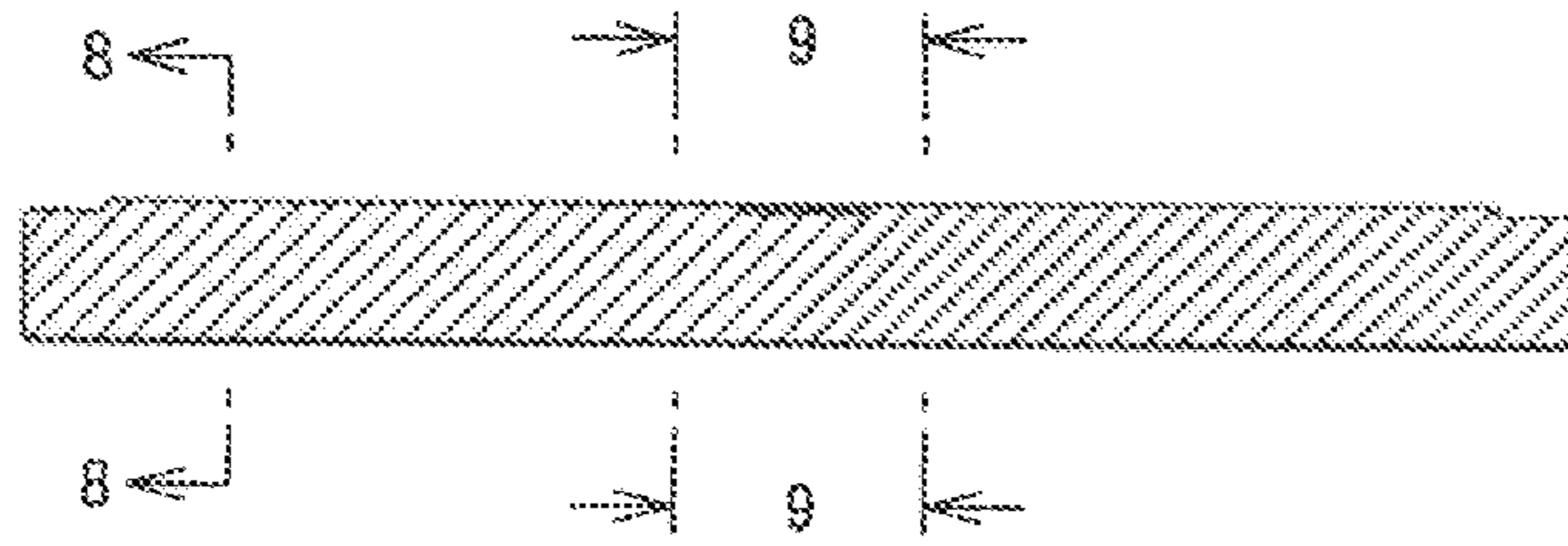


FIG. 8

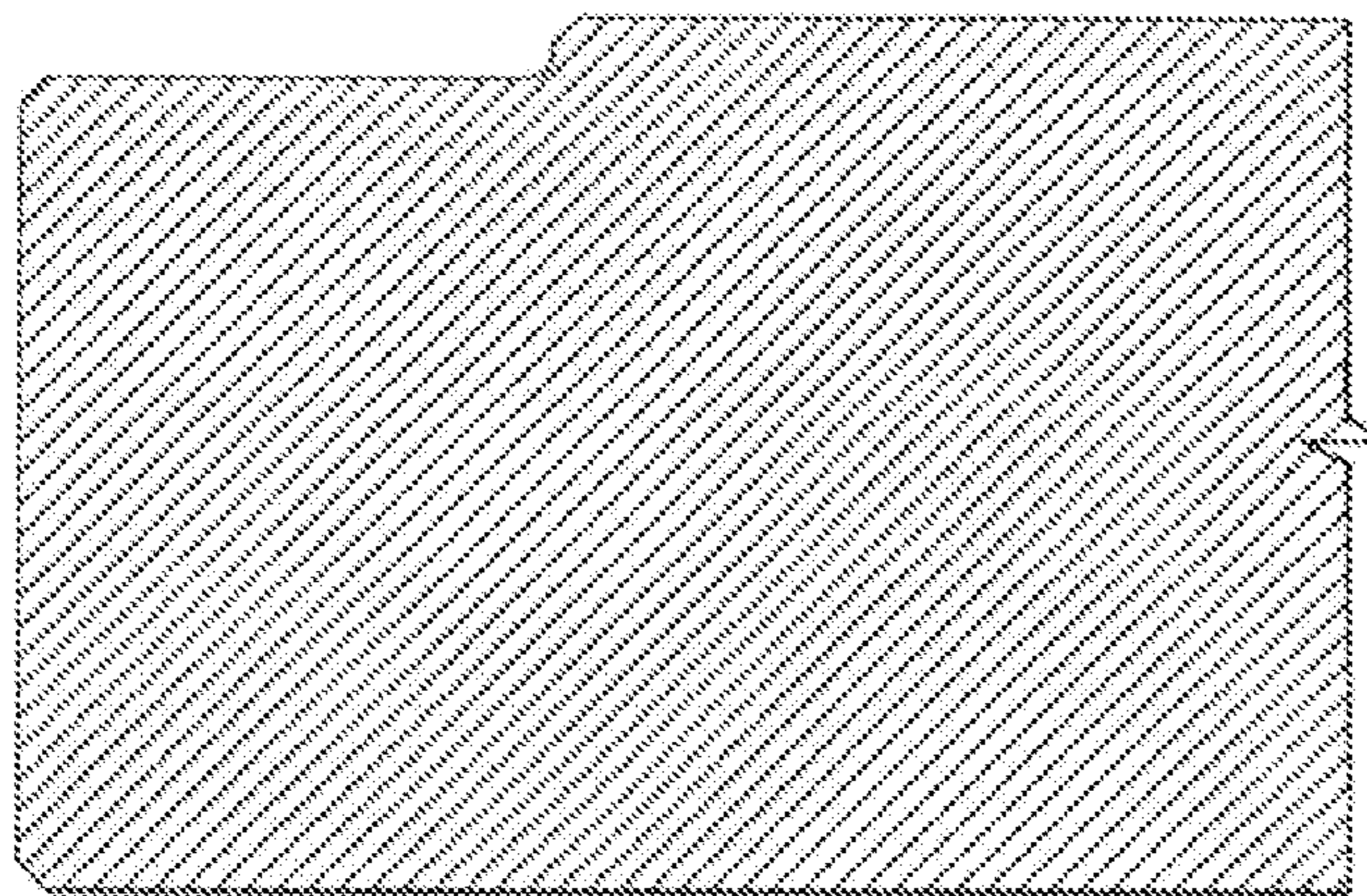
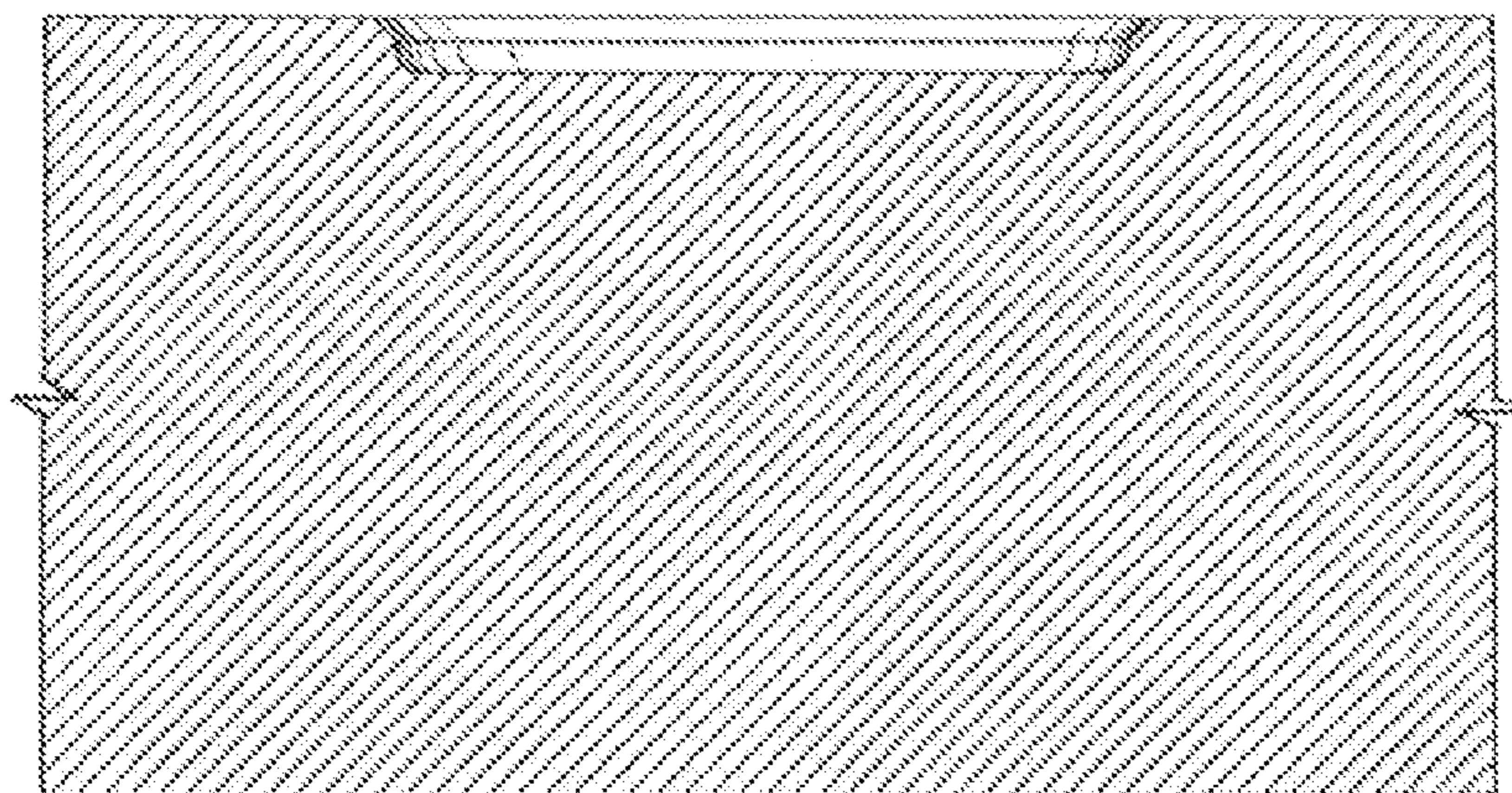


FIG. 9



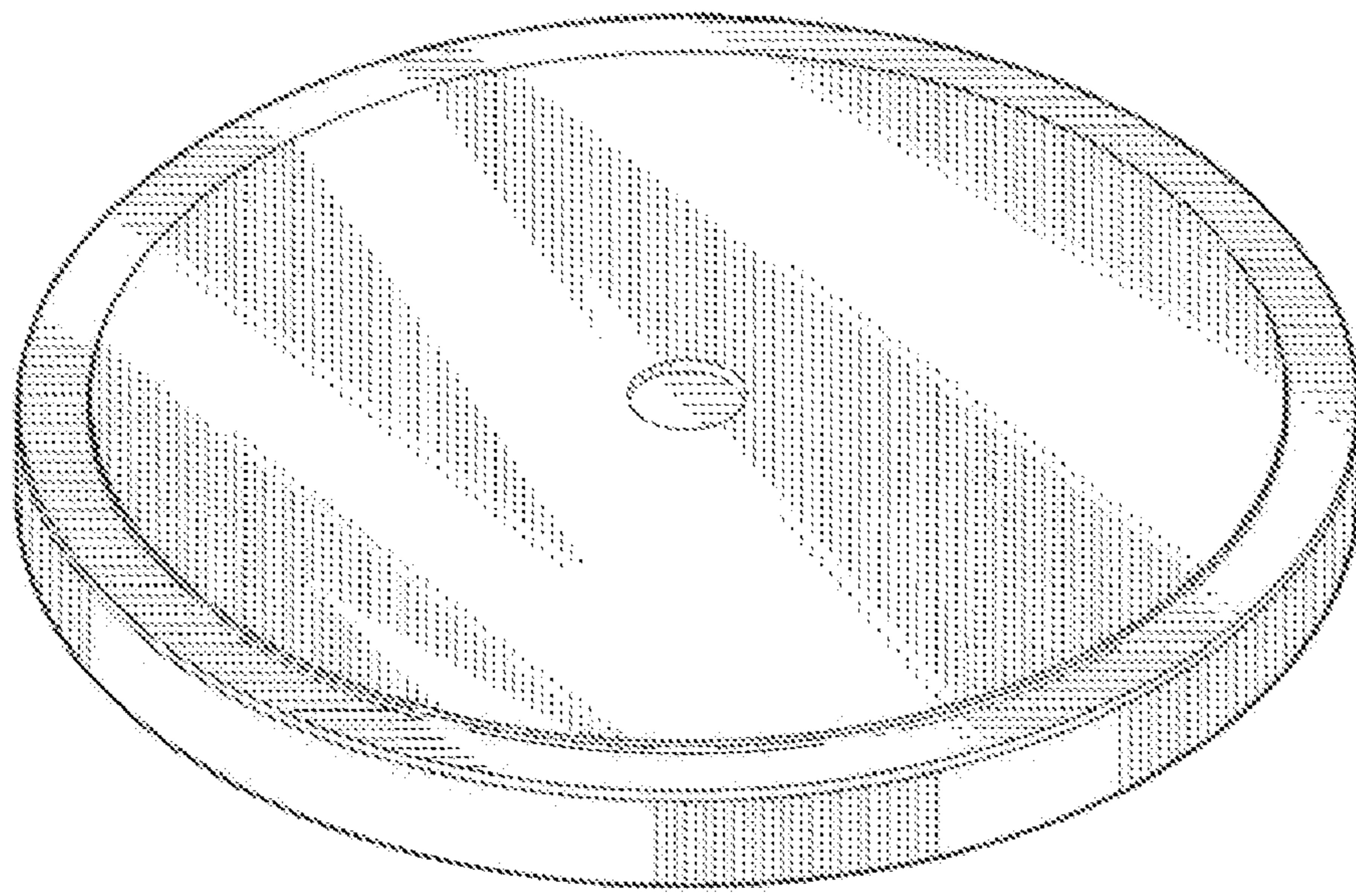


FIG.10

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

PATENT NO. : Des. 593,585 S  
APPLICATION NO. : 29/252839  
DATED : June 2, 2009  
INVENTOR(S) : Ota et al.

Page 1 of 1

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

On the title page, the Terminal Disclaimer information has been omitted. Item (45) and the Notice information should read as follows:

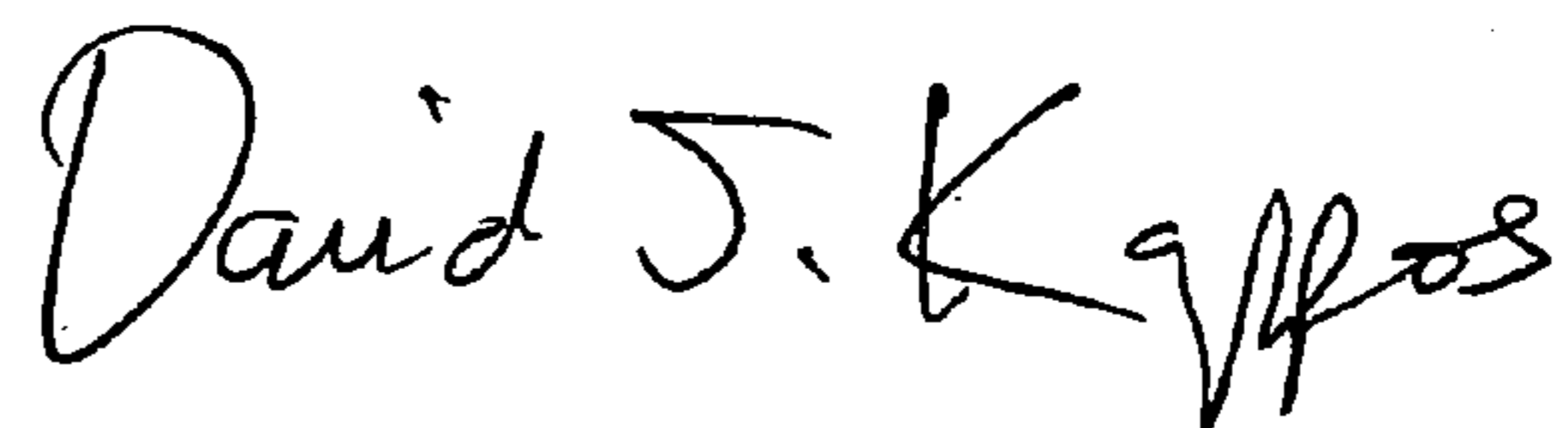
-- (45) **Date of Patent: \*\* \* Jun. 2, 2009**

(\*) Notice: This patent is subject to a terminal disclaimer.

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

Signed and Sealed this

Twenty-fifth Day of August, 2009



David J. Kappos  
*Director of the United States Patent and Trademark Office*