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

(10) **Patent No.:** **US D685,461 S**

(45) **Date of Patent:** **** Jul. 2, 2013**

(54) **DOSE DISK FOR A DRY POWDER INHALER**

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5,388,572 A 2/1995 Mulhauser et al.
5,388,573 A * 2/1995 Mulhauser et al. 128/203.15
5,460,173 A * 10/1995 Mulhauser et al. 128/203.15
5,529,059 A 6/1996 Armstrong et al.
5,533,502 A 7/1996 Piper
D377,215 S 1/1997 Rand

(Continued)

FOREIGN PATENT DOCUMENTS

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DE 19500764 7/1996
EP 1106196 3/2001

(Continued)

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

OTHER PUBLICATIONS

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Hickey et al., A new millennium for inhaler technology, 21 Pharm.
Tech., n. 6, pp. 116-125 (1997).

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(Continued)

Related U.S. Application Data

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26, 2010, now Pat. No. Des. 635,246.

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Assistant Examiner — Charles Hanson

(51) **LOC (9) Cl.** **24-01**

(74) *Attorney, Agent, or Firm* — Myers Bigel Sibley &
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(52) **U.S. Cl.**

USPC **D24/110**

(58) **Field of Classification Search**

USPC D24/108-110.5, 112-114, 181;
128/200.14-200.23, 203.12-203.24; 222/36-38,
222/144, 129, 160, 167

See application file for complete search history.

(57) **CLAIM**

The ornamental design for a dose disk for a dry powder
inhaler, as shown and described.

DESCRIPTION

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,307,734 A * 12/1981 Blankenship 131/329
4,627,432 A 12/1986 Newell et al.
4,778,054 A 10/1988 Newell et al.
4,811,731 A 3/1989 Newell et al.
5,035,237 A 7/1991 Newell et al.
5,138,138 A 8/1992 Theilacker et al.
D342,994 S 1/1994 Rand et al.
5,327,883 A 7/1994 Williams et al.
5,337,740 A 8/1994 Armstrong et al.

FIG. 1 is a top perspective view of a dose disk for a dry powder
inhaler showing our design;

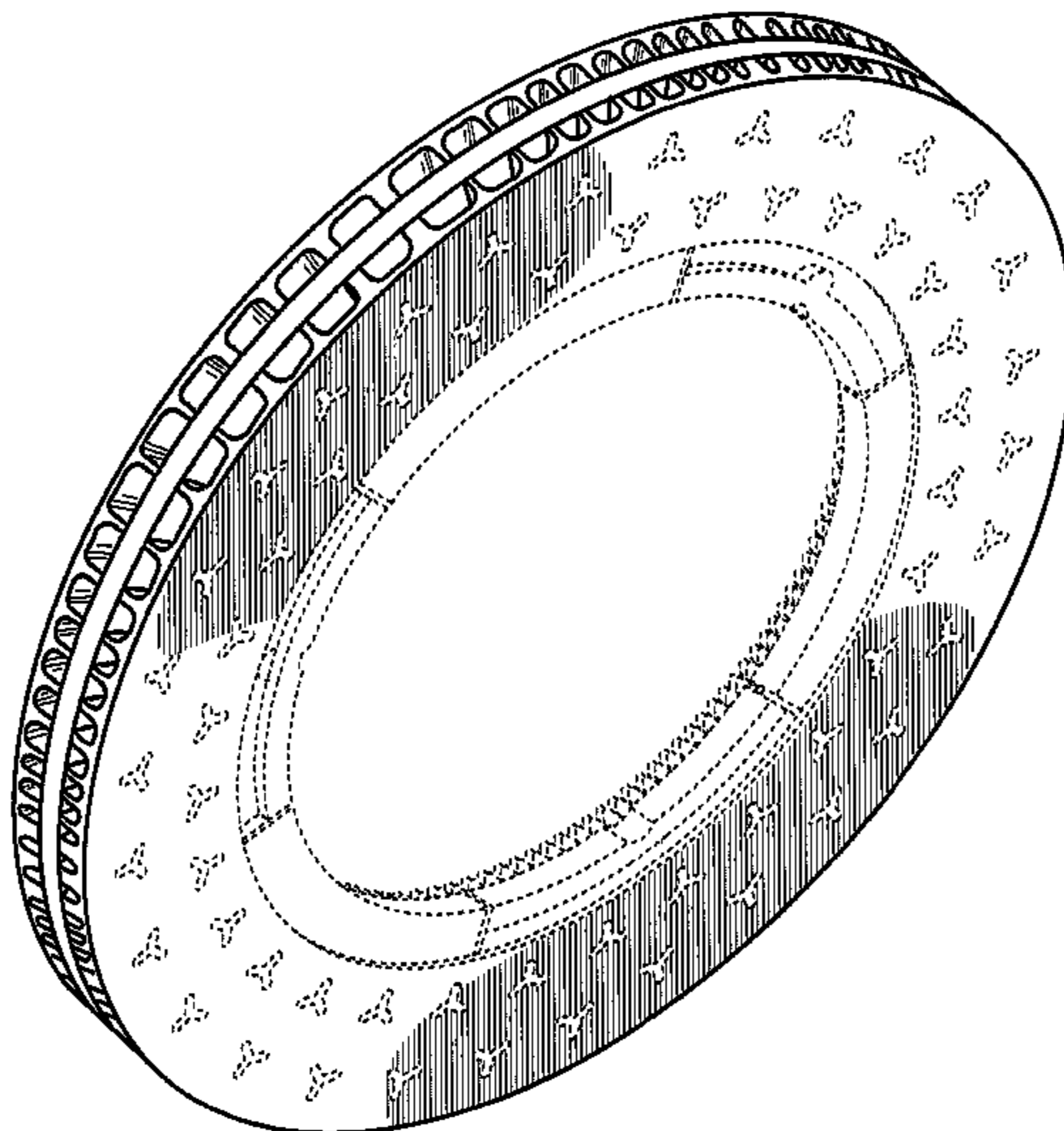
FIG. 2 is a top view thereof;

FIG. 3 is a side view thereof (for clarity it is noted that all side
and end views are the same when taken with the disk in the
same orientation); and,

FIG. 4 is a bottom view thereof.

The broken lines shown herein are for illustrative purposes
only and form no part of the claimed design.

1 Claim, 3 Drawing Sheets



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U.S. PATENT DOCUMENTS

5,622,166 A 4/1997 Eisele et al.
D379,506 S 5/1997 Maher
D384,283 S * 9/1997 Davies et al. D9/731
D391,369 S 2/1998 Anderson
5,715,810 A 2/1998 Armstrong et al.
5,727,607 A 3/1998 Ichikawa et al.
D395,499 S * 6/1998 Eisele et al. D24/110
5,769,073 A 6/1998 Eason et al.
5,823,182 A * 10/1998 Van Oort 128/203.12
5,909,829 A 6/1999 Wegman et al.
5,921,237 A 7/1999 Eisele et al.
D412,978 S * 8/1999 Cameron D24/110
5,947,169 A 9/1999 Wegman et al.
6,029,663 A 2/2000 Eisele et al.
6,065,472 A * 5/2000 Anderson et al. 128/203.21
6,082,356 A 7/2000 Stradella
6,116,238 A 9/2000 Jackson et al.
D433,126 S 10/2000 McCurry
D433,634 S * 11/2000 Nicolas D9/520
D434,847 S * 12/2000 Baribeau et al. D24/110
D437,931 S 2/2001 Anderson
6,245,339 B1 * 6/2001 Van Oort et al. 424/400
D445,496 S 7/2001 Anderson
D450,117 S * 11/2001 Braithwaite et al. D24/110
6,328,033 B1 12/2001 Avrahami
6,328,034 B1 * 12/2001 Eisele et al. 128/203.15
6,367,473 B1 4/2002 Käfer
6,445,941 B1 9/2002 Hampton et al.
6,543,448 B1 4/2003 Smith et al.
6,550,477 B1 4/2003 Casper et al.
6,591,832 B1 7/2003 DeJonge
6,655,381 B2 12/2003 Keane et al.
6,668,827 B2 12/2003 Schuler et al.
6,679,254 B1 1/2004 Rand et al.
6,715,486 B2 * 4/2004 Gieschen et al. 128/203.15
6,752,148 B1 * 6/2004 McGinn et al. 128/203.15
D494,674 S 8/2004 King et al.
6,792,945 B2 9/2004 Davies et al.
D497,988 S 11/2004 King et al.
6,810,872 B1 11/2004 Ohki et al.
6,871,647 B2 3/2005 Allan et al.
6,880,555 B1 4/2005 Brunnberg et al.
D505,865 S * 6/2005 Seizer et al. D9/688
6,923,178 B2 8/2005 Snow
6,948,494 B1 9/2005 Snow
6,971,383 B2 * 12/2005 Hickey et al. 128/203.15
D514,222 S 1/2006 Anderson et al.
D518,171 S 3/2006 Anderson et al.
7,089,935 B1 8/2006 Rand
7,219,665 B1 5/2007 Braithwaite
7,275,538 B2 10/2007 Nakamura
7,318,436 B2 1/2008 Snow
7,377,277 B2 * 5/2008 Hickey et al. 128/203.21

7,503,324 B2 3/2009 Barney et al.
D590,495 S * 4/2009 Lulla et al. D24/110
7,571,723 B2 8/2009 Braithwaite
7,571,724 B2 8/2009 Braithwaite
D604,834 S * 11/2009 Ungar D24/110.1
D613,848 S 4/2010 Harvey et al.
D619,700 S * 7/2010 Kenyon et al. D24/110
7,766,188 B2 * 8/2010 Pocock et al. 222/36
2001/0007853 A1 7/2001 Dimarchi et al.
2001/0053761 A1 12/2001 Dimarchi et al.
2002/0040713 A1 4/2002 Eisele et al.
2004/0123864 A1 * 7/2004 Hickey et al. 128/203.12
2005/0161041 A1 7/2005 Schuler et al.
2005/0172963 A1 8/2005 Allan et al.
2006/0102511 A1 5/2006 Pasbrig et al.
2006/0157053 A1 7/2006 Barney et al.
2007/0137643 A1 6/2007 Bonney et al.
2007/0137645 A1 6/2007 Eason et al.
2007/0181124 A1 8/2007 Casper et al.
2007/0221218 A1 9/2007 Warden et al.
2007/0235029 A1 10/2007 Zhu et al.
2009/0114220 A1 5/2009 Wachtel et al.

FOREIGN PATENT DOCUMENTS

EP	1844805	10/2007
GB	873410	7/1961
GB	2340758	3/2000
WO	WO 94/020164	9/1994
WO	WO 98/41265	9/1998
WO	WO 99/36116	7/1999
WO	WO 00/45879	8/2000
WO	WO 01/28616	4/2001
WO	WO 01/34234	5/2001
WO	WO 02/053215	7/2002
WO	WO 02/053216	7/2002
WO	WO 03/011708	2/2003
WO	WO 2004/045487	6/2004
WO	WO 2005/002654	1/2005
WO	WO 2005/037353	4/2005
WO	WO 2005/044173	5/2005
WO	WO 2005/110519	11/2005
WO	WO 2006/031775	3/2006
WO	WO 2006/108877	10/2006
WO	WO 2007/007110	1/2007
WO	WO 2007/012871	2/2007

OTHER PUBLICATIONS

Prime et al., Review of Dry Powder Inhalers, 26 Adv. Drug Delivery Rev., pp. 51-58 (1997).
Wolff et al., Generation of Aerosolized Drugs, J. Aerosol. Med., pp. 88-106 (1994).

* cited by examiner

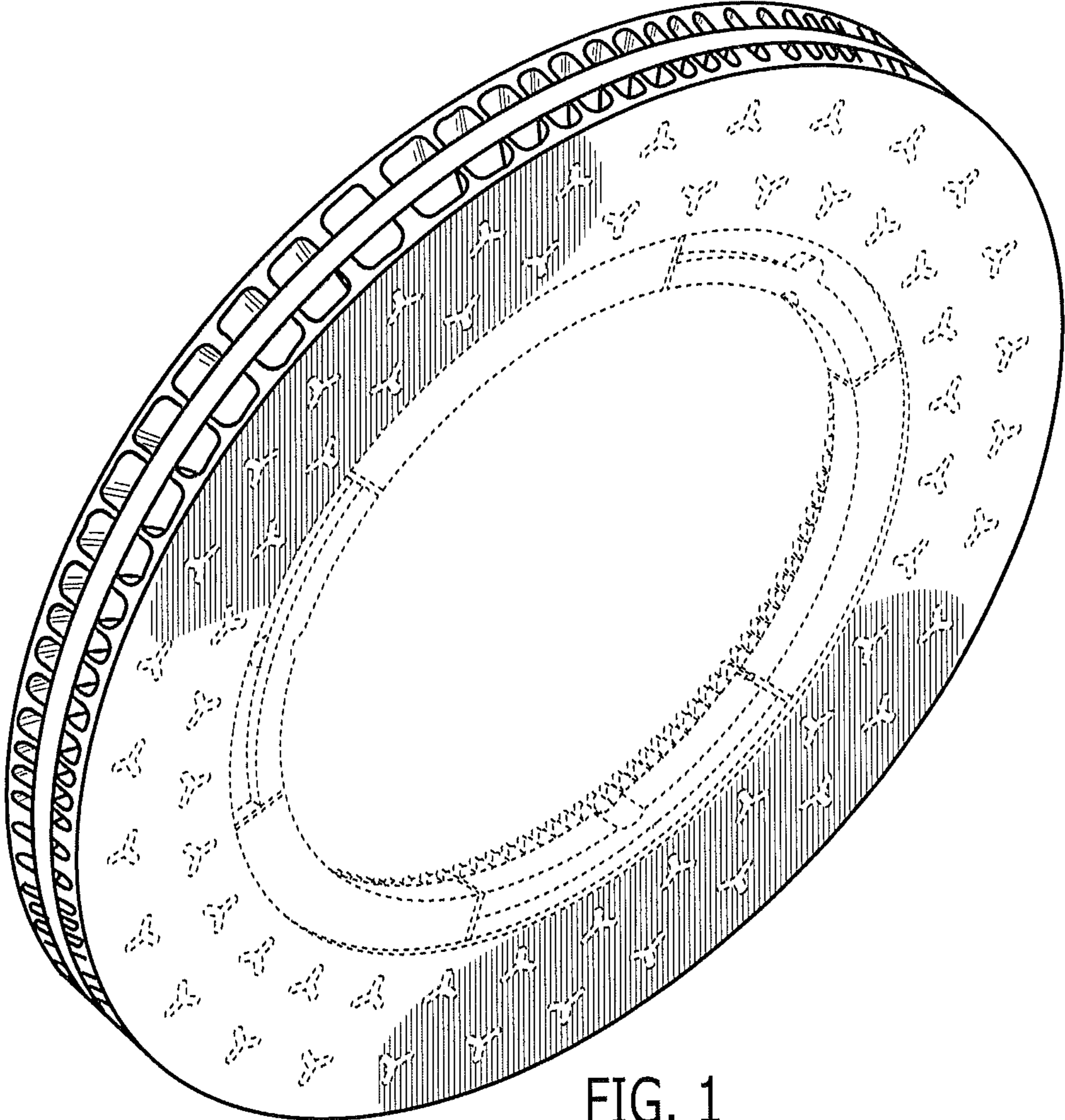


FIG. 1

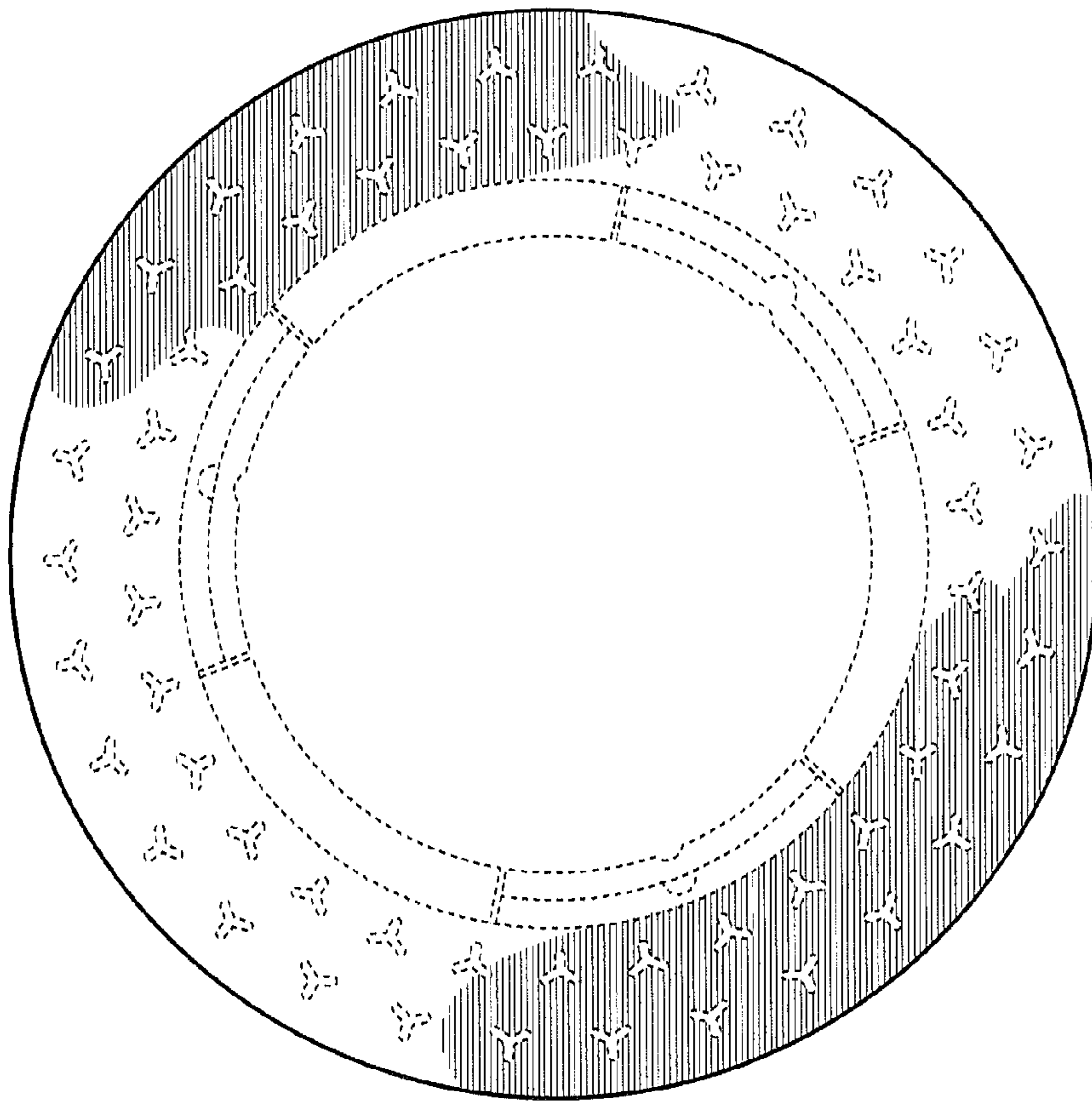


FIG. 2

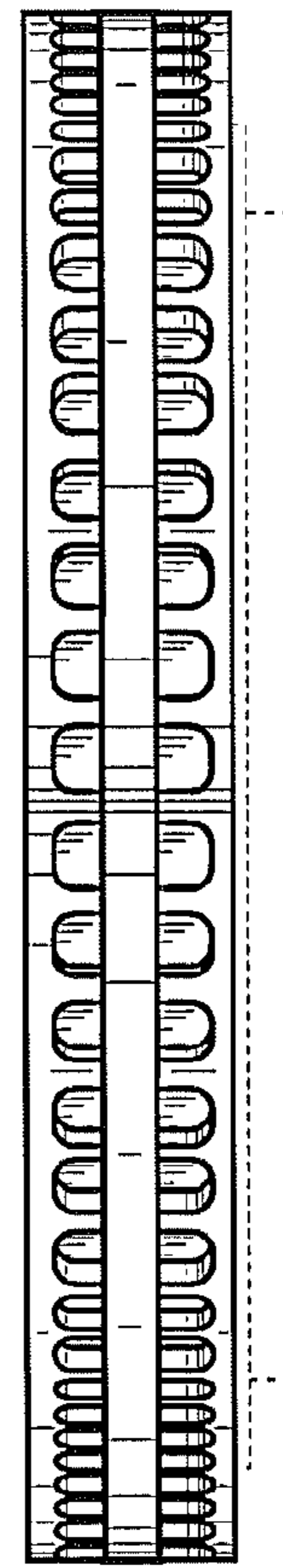


FIG. 3

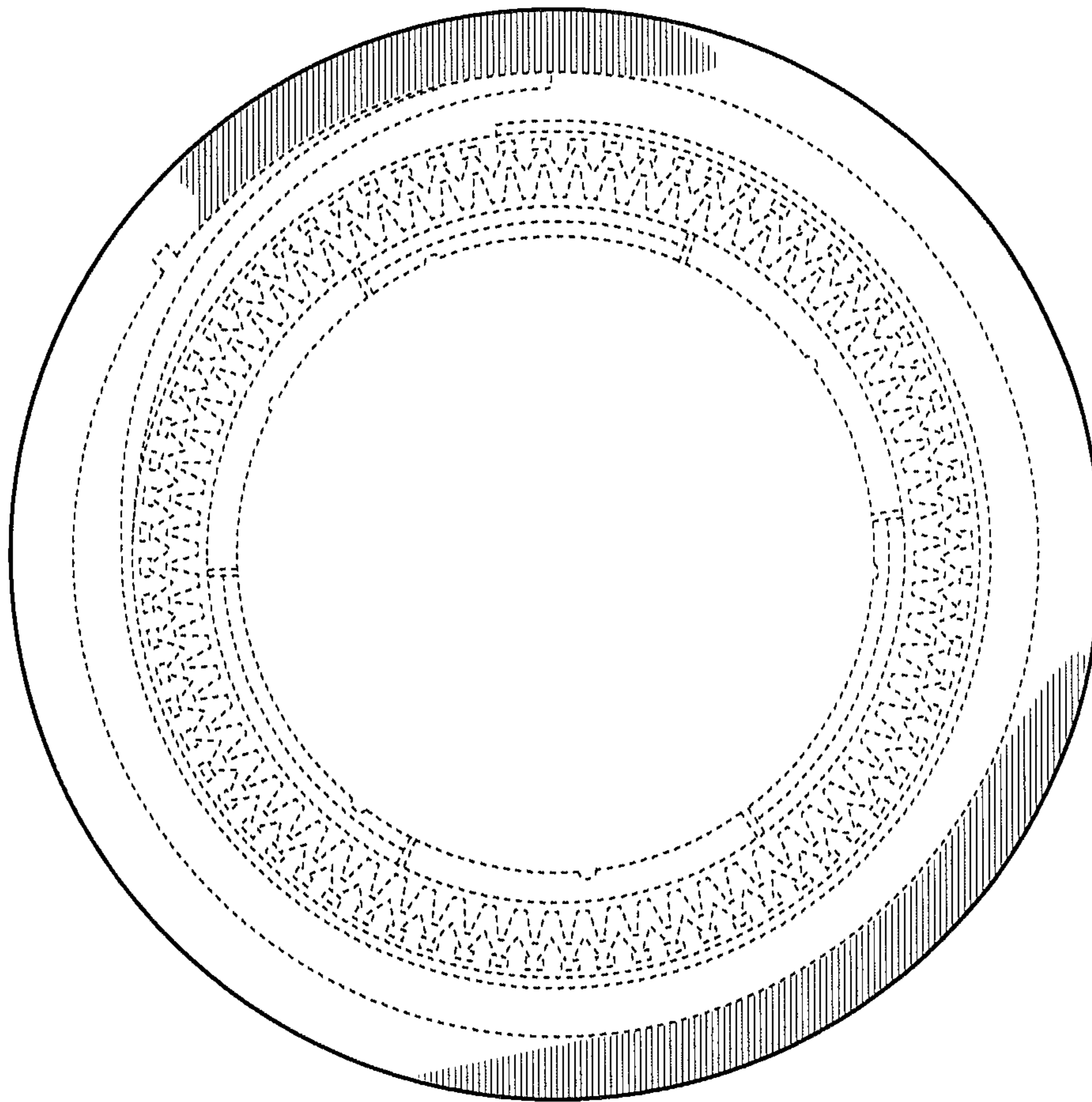


FIG. 4

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : D685,461 S
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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, Item (54), and in the Specification, Column 1, Line 1, Title,
Please correct: **“DOSE DISK FOR A DRY POWDER INHALER”**
to read -- **DOSE DISK FOR DRY POWDER INHALERS** --

Signed and Sealed this
Fifth Day of November, 2013



Teresa Stanek Rea
Deputy Director of the United States Patent and Trademark Office