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(12) **United States Design Patent**
Nakamura

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(45) **Date of Patent:** **** Jul. 5, 2011**

(54) **SHAFT PORTION OF AN APPARATUS FOR HOLDING AND HEATING SEMICONDUCTOR WAFERS OR THE LIKE**

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(73) Assignee: **NGK Insulators, Ltd.**, Nagoya (JP)

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

(21) Appl. No.: **29/323,533**

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(30) **Foreign Application Priority Data**

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

(52) **U.S. Cl.** **D15/144.1**

(58) **Field of Classification Search** D15/138,
D15/140, 144.1, 199; 438/584, 689, 692;
451/288, 289, 388; D6/524, 551; D32/14,
D32/25

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D71,201	S *	10/1926	Neuwirth et al.	D15/144.1
2,336,592	A *	12/1943	Brown	4/255.05
D193,891	S *	10/1962	Liptay	D15/144.1
4,300,190	A *	11/1981	Mershon	362/404
4,432,451	A *	2/1984	Hooser	206/216
D288,651	S *	3/1987	Rimmeir	D7/700
D292,631	S *	11/1987	Tash	D32/14
4,768,237	A *	9/1988	Torti	4/255.05
5,168,908	A *	12/1992	Boyum	141/340
5,384,918	A *	1/1995	Leighton et al.	4/255.05
D356,893	S *	4/1995	Conmy	D4/116
D364,251	S *	11/1995	Novak	D32/35
D376,667	S *	12/1996	Lucluze	D26/119
D406,930	S *	3/1999	Epps	D32/35
6,160,244	A	12/2000	Ohashi	
D465,888	S *	11/2002	Wang	D32/35
6,662,381	B1 *	12/2003	Powell et al.	4/255.01

D495,841	S *	9/2004	Smith et al.	D32/35
D514,760	S *	2/2006	Schoolcraft et al.	D32/35
7,089,605	B2 *	8/2006	Jiang	4/255.11
D535,073	S *	1/2007	Leaphart et al.	D32/35
D535,422	S *	1/2007	Mier-Langner et al.	D26/63
D547,894	S *	7/2007	Hu	D26/63
D547,896	S *	7/2007	Yifei	D26/63
D570,531	S *	6/2008	Rashidi	D26/118
D574,116	S *	7/2008	Yang et al.	D32/14
2005/0028258	A1 *	2/2005	Nasco	4/255.01
2005/0132481	A1 *	6/2005	Walsh	4/255.11

(Continued)

FOREIGN PATENT DOCUMENTS

JP 11-343571 12/1999

(Continued)

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(57) **CLAIM**

The ornamental design for a shaft portion of an apparatus for holding and heating semiconductor wafers or the like, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a shaft portion of an apparatus for holding and heating semiconductor wafers or the like;

FIG. 2 is a front view thereof, a rear view being the same image of a front view;

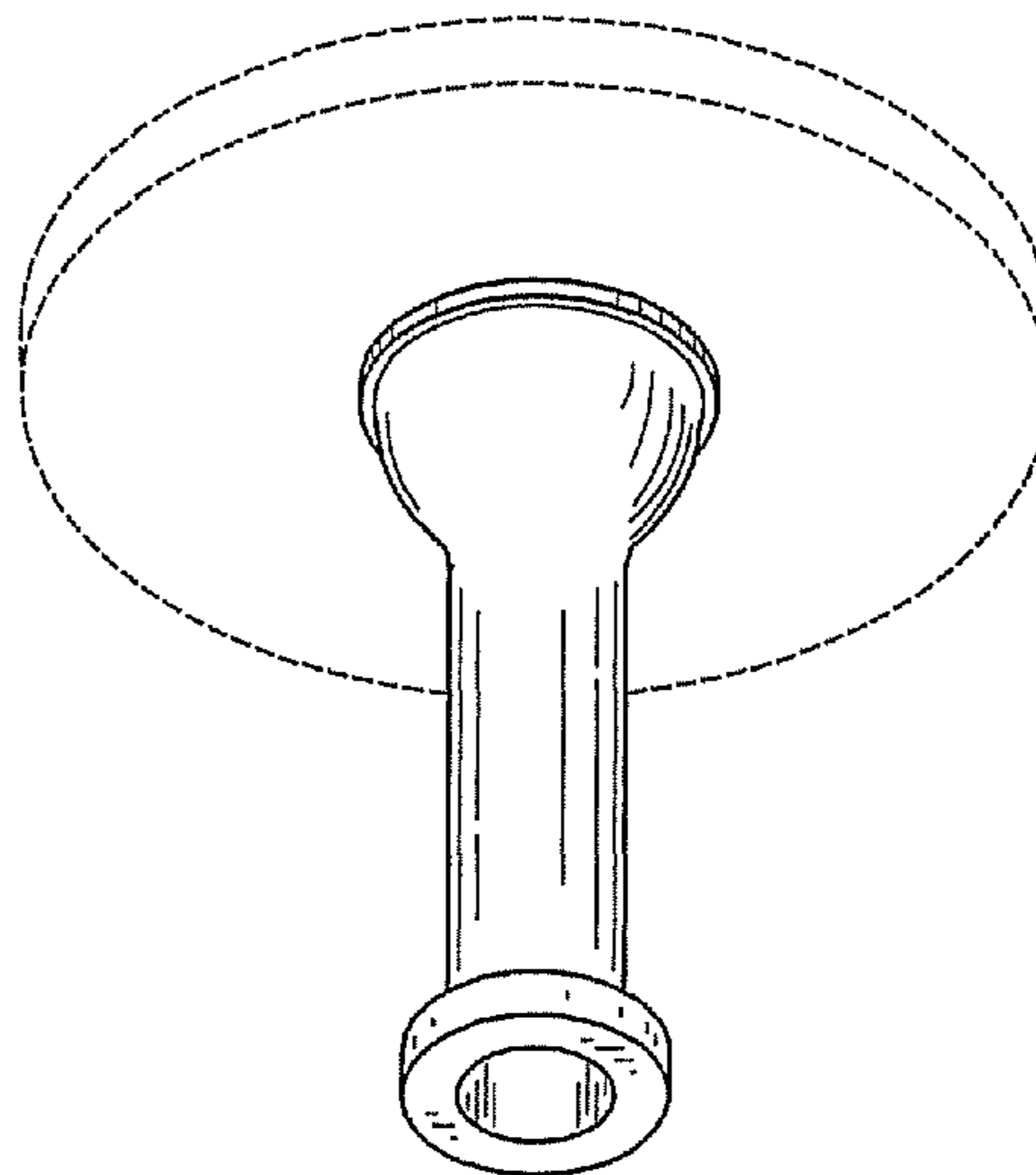
FIG. 3 is a right side view thereof, a left side view being the same image of a right side view;

FIG. 4 is a bottom plan view thereof; and,

FIG. 5 is a sectional view taken vertically at the center of the portion shown by 5—5 in FIG. 2.

The broken lines showing on the drawing disclosure are for illustrative purposes only and form no part of the claimed design. The lines consisting of long lines end dots indicate conceptual border lines between the claimed portions and the disclaimed portions.

1 Claim, 3 Drawing Sheets



US D641,031 S

Page 2

U.S. PATENT DOCUMENTS

2007/0192950	A1 *	8/2007	Anderson	4/255.11
2008/0250588	A1 *	10/2008	Robinson et al.	15/104.05
2010/0000010	A1 *	1/2010	Martinisko	4/255.11
2010/0024110	A1 *	2/2010	St. John	4/300.3
2010/0077541	A1 *	4/2010	Stein	4/255.11

FOREIGN PATENT DOCUMENTS

JP	D1345656	10/2008
TW	M298774	10/2006
TW	D118408	8/2007

* cited by examiner

Fig.1

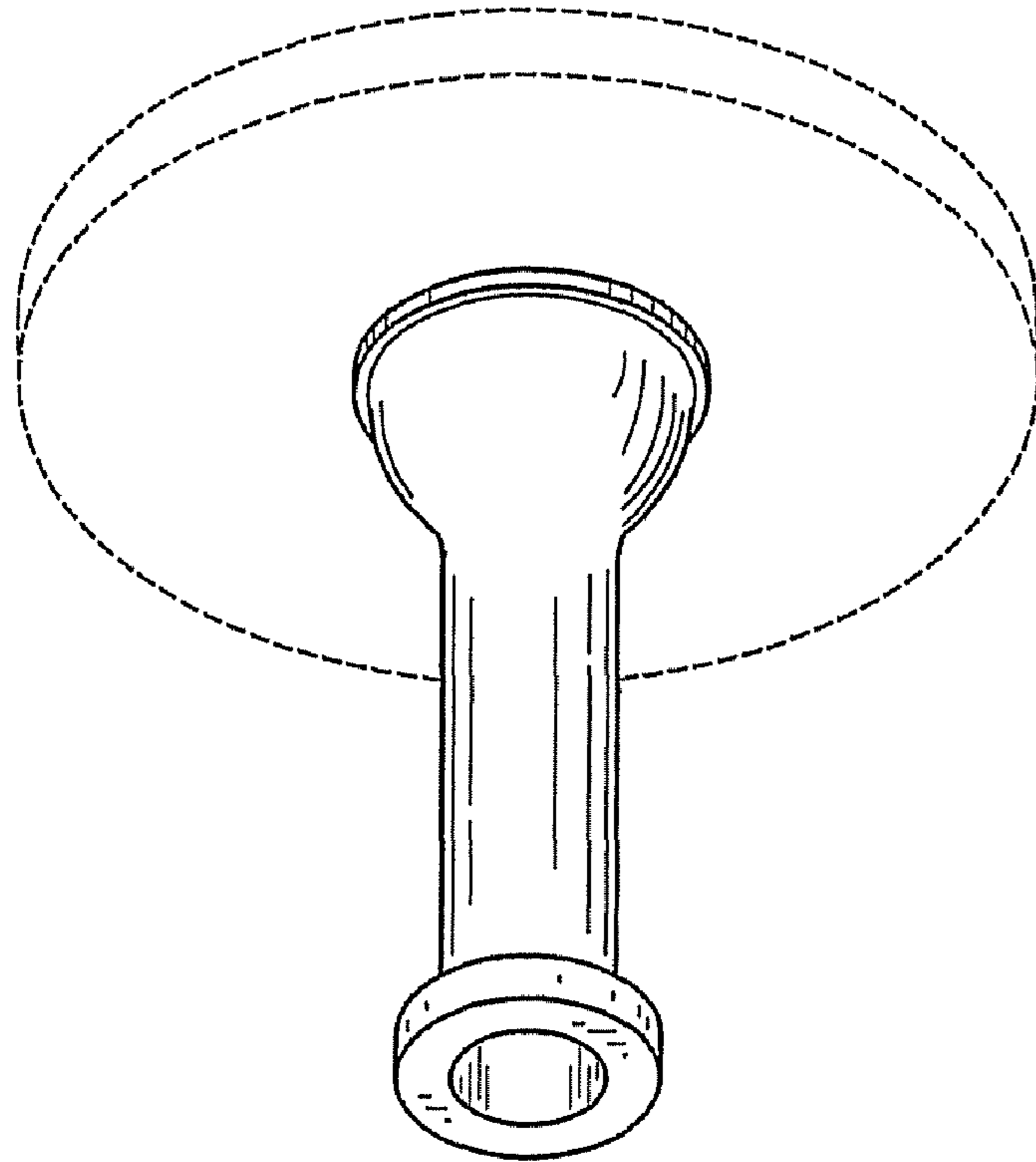


Fig.2

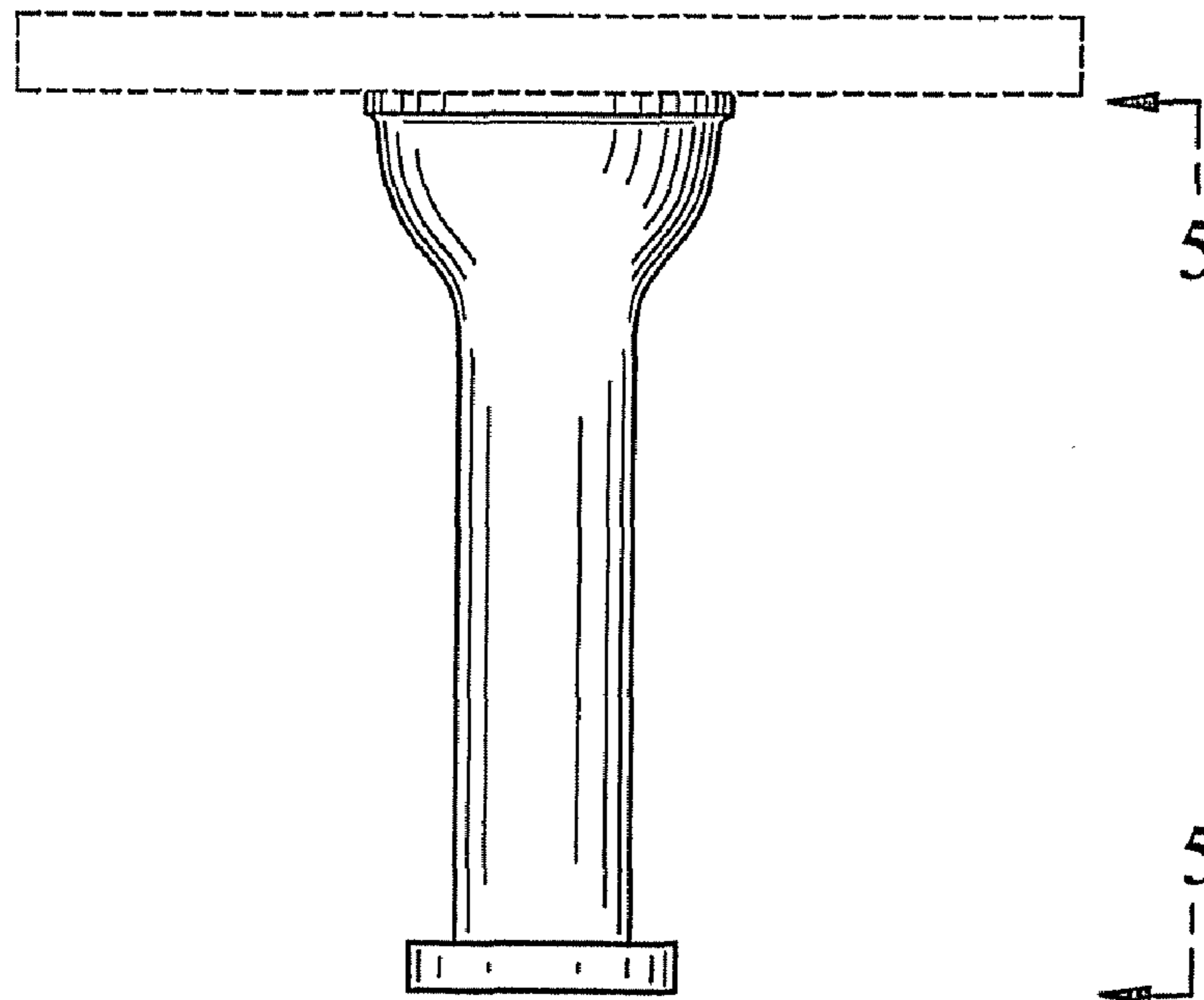


Fig.3

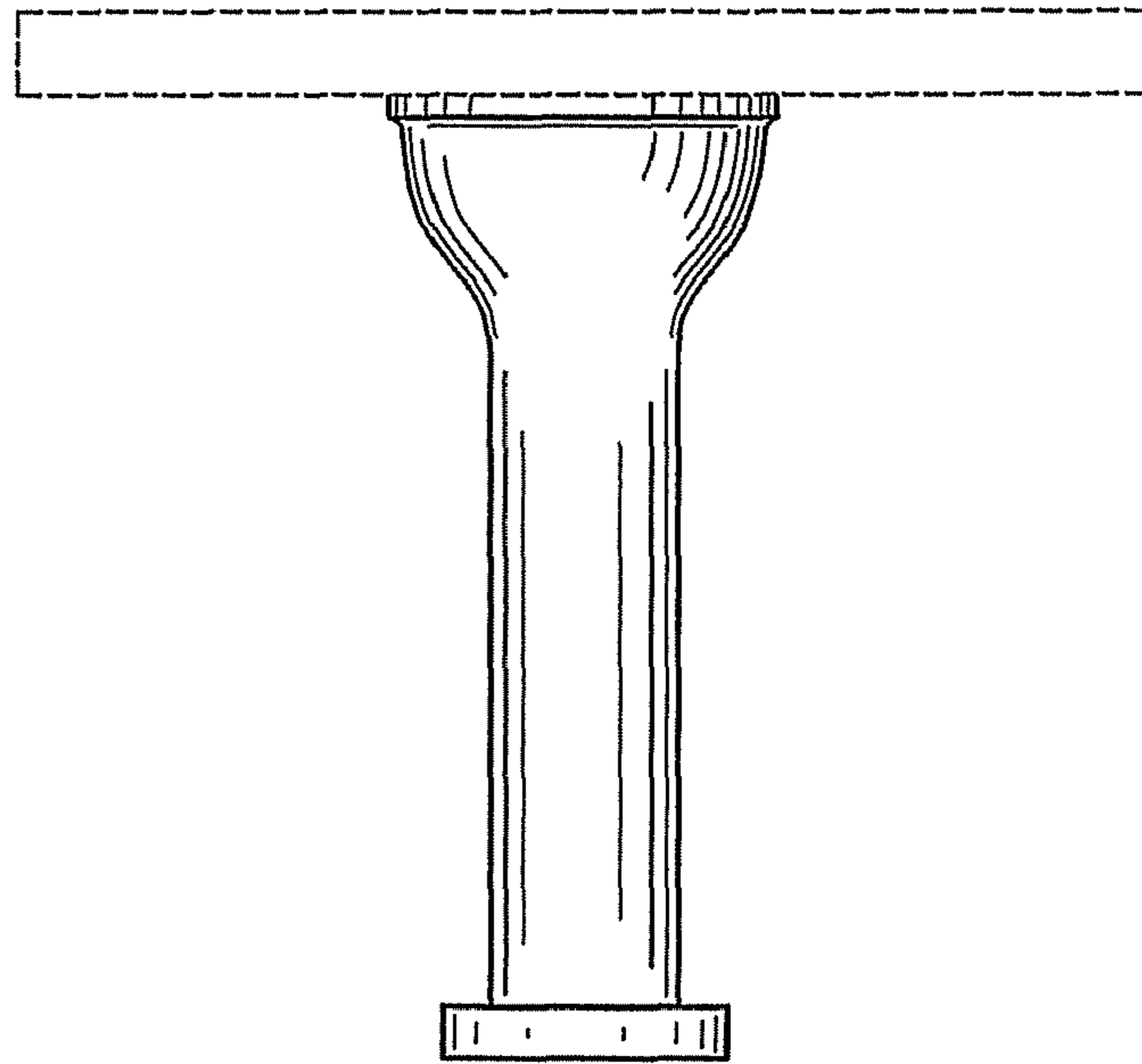


Fig.4

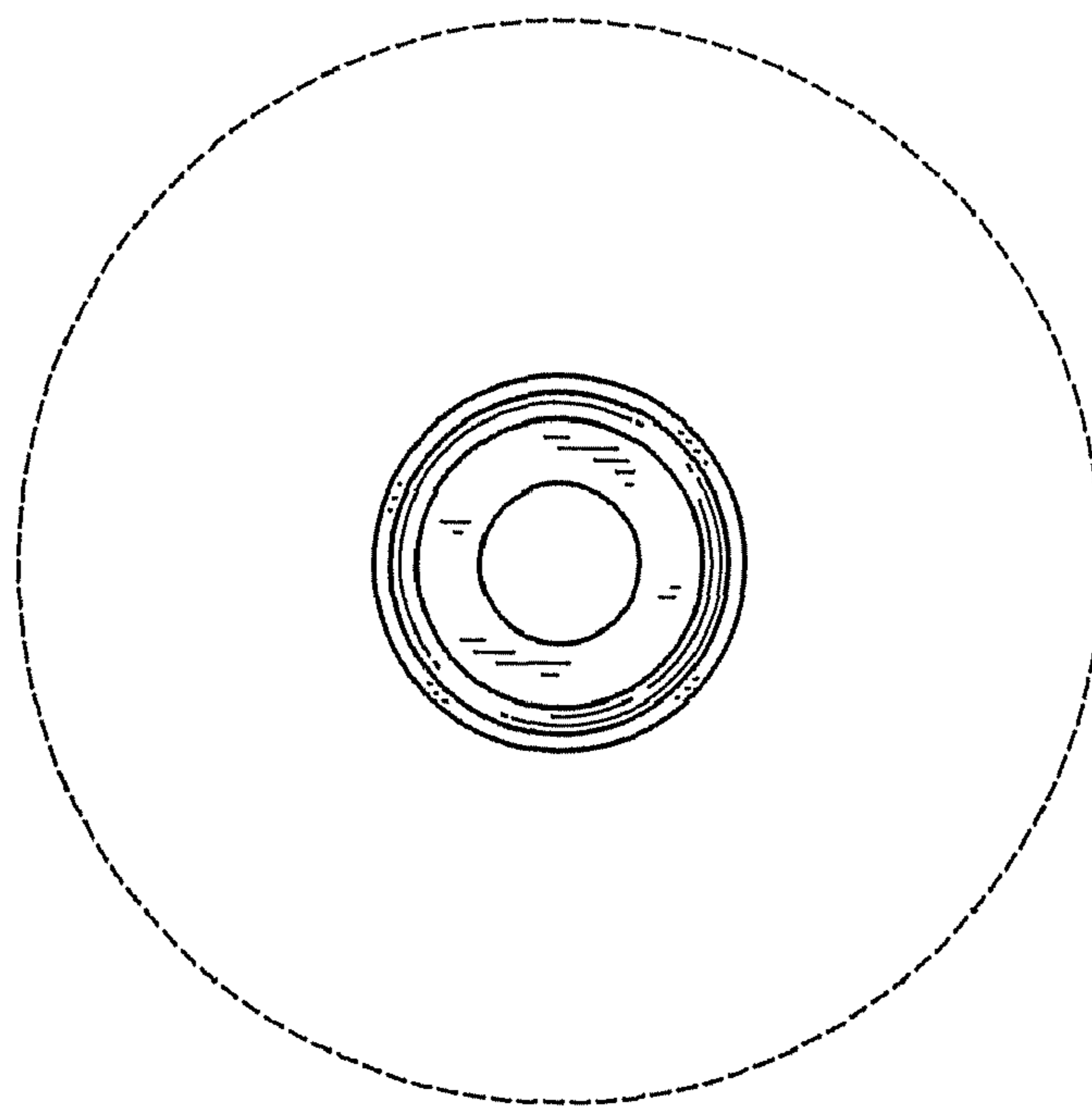
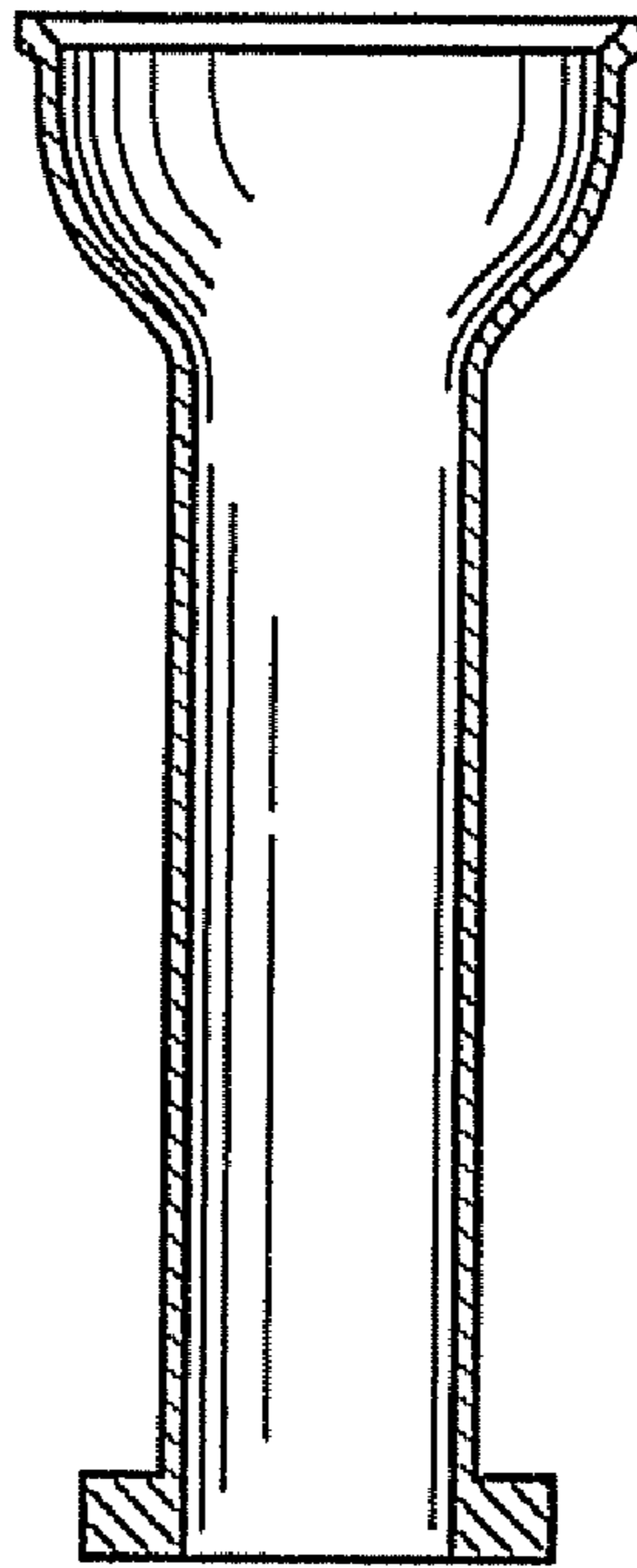


Fig.5



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : D641,031 S
APPLICATION NO. : 29/323533
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INVENTOR(S) : Nakamura

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:

Title Page, Item (57)

Description

Line 7: please delete “,” after “and”

Line 12: please change “end” to --and--

Signed and Sealed this
Fourth Day of October, 2011

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, slightly slanted style.

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