

Fun IP

Prof. Roger Ford
Class 5 – February 17, 2016
Patents: Introduction, disclosure
requirements, & the patent bargain

**(post-AIA) 35 U.S.C. § 101 — Inventions
patentable**

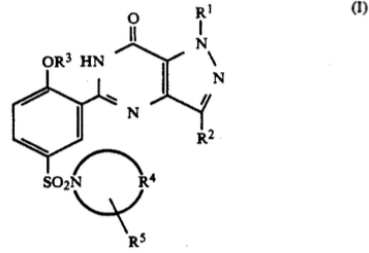
Whoever **invents or discovers** any **new and
useful process, machine, manufacture, or
composition of matter**, or any new and useful
improvement thereof, may obtain a patent
therefor, subject to the conditions and
requirements of this title.

Sildenafil citrate

Claim 1 of U.S. patent no. 5,250,534

We claim:

1. A compound of the formula:



wherein

- R¹ is H, C₁-C₃ alkyl, C₃-C₅ cycloalkyl or C₁-C₃ perfluoroalkyl;
 - R² is H, C₁-C₆ alkyl optionally substituted by OH, C₁-C₃ alkoxy or C₃-C₆ cycloalkyl, or C₁-C₃ perfluoroalkyl;
 - R³ is C₁-C₆ alkyl, C₃-C₆ alkenyl, C₃-C₆ alkynyl, C₃-C₇ cycloalkyl, C₁-C₆ perfluoroalkyl or (C₃-C₆ cycloalkyl)C₁-C₆ alkyl;
 - R⁴ taken together with the nitrogen atom to which it is attached completes a 4-N-(R⁶)-piperazinyl group;
 - R⁵ is H, C₁-C₄ alkyl, C₁-C₃ alkoxy, NR⁷R⁸, or CONR⁷R⁸;
 - R⁶ is H, C₁-C₆ alkyl, (C₁-C₃ alkoxy) C₂-C₆ alkyl hydroxy C₂-C₆ alkyl, (R⁷R⁸N)C₂-C₆ alkyl, (R⁷R⁸NCO)C₁-C₆ alkyl, CONR⁷R⁸, CSNR⁷R⁸ or C(NH)NR⁷R⁸;
 - R⁷ and R⁸ are each independently H, C₁-C₄ alkyl, (C₁-C₃ alkoxy)C₂-C₄ alkyl or hydroxy C₂-C₄ alkyl; and
- pharmaceutically acceptable salts thereof.

(12) **United States Patent**
Hoeting et al.

(10) Patent No.: **US 6,263,732 B1**
(45) Date of Patent: **Jul. 24, 2001**

(54) MEASURING CUP	D. 321,328	11/1991	Doguet	.....	D1046.2
(75) Inventors: Michael G. Hoeting, Stephen C. Hoeting, both of Cincinnati, OH (US)	D. 330,863	11/1992	Gozen	.....	D1046.2
(73) Assignee: Bang Zoom Design, Cincinnati, OH (US)	423,018 *	3/1980	Young	.....	73427
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.	1,507,968 *	9/1924	Johnson	.....	73427
(21) Appl. No.: 09/313,686	1,564,670 *	12/1925	Climent	.....	73427
(22) Filed: May 18, 1999	1,722,101 *	7/1929	Little	.....	73427
(51) Int. Cl. ⁷ G01F 19/00	2,165,045 *	7/1939	Ganside	.....	73426
(52) U.S. Cl. 73427, 331 V, D1046.2	3,526,138	9/1970	Scott et al.	.....	73426
(58) Field of Search 331 V, 1 F, 522, 33479.1, 73426, 427, 215365, 366, D1046.2, 222,23, 25, 26	3,527,270	9/1970	Well	.....	73429
References Cited	4,073,192	2/1978	Dowstead	.....	73426
U.S. PATENT DOCUMENTS	4,283,951	8/1981	Vinop	.....	73426
153,459 *	4,566,509	1/1980	Saraja	.....	73427
71874 Dismick	4,634,251	5/1980	Ye	.....	73427
61879 Pfizenmister	5,397,036 *	3/1995	Mairwald	.....	73427
31977 Casper	5,588,747	12/1996	Bivens	.....	73427
61980 Daena et al.	5,662,249	9/1997	Grise	.....
61981 Daena et al.					
61981 Daena et al.					
61981 Daena et al.					
31983 Doyl					
21984 Smith					
101987 Kowalik et al.					
101987 Row et al.					
11988 Row et al.					
21988 Chassa					
81989 Ancon et al.					
81989 Prindle					
101989 Neff et al.					
101989 Moss et al.					

OTHER PUBLICATIONS

"Jigger Photographs: Having four (4) semi-columns formed in relief on inside wall, of four (4) different heights. Information concerning origin and (date is unknown)."

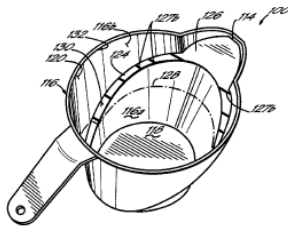
* cited by examiner

Primary Examiner—Christopher W. Fulton
(79) Attorney, Agent, or Firm—Wood, Harro & Evans, L.L.P.

ABSTRACT

(57) A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup of eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

1 Claim, 2 Drawing Sheets

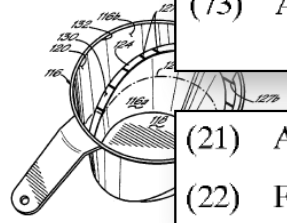


(12) **United States Patent**
Hoeting et al.

(54) **MEASURING CUP**
(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)
(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/313,686**
(22) Filed: **May 18, 1999**
(51) Int. Cl.⁷ **G01F 19/00**
(52) U.S. Cl. **73/427; 33/1 V; D10/46.2**
(58) **Field of Search** 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26

(56) **References Cited**
U.S. PATENT DOCUMENTS
153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizenmeier 73/427
D. 243,500 3/1977 Cooper
D. 255,530 6/1980 Daenen et al.
D. 259,460 6/1981 Daenen et al.
D. 259,461 6/1981 Daenen et al.
D. 259,462 6/1981 Daenen et al.
D. 268,158 3/1983 Doyle
D. 272,704 2/1984 Smith
D. 292,381 10/1987 Kowalik et al.
D. 292,492 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chason
D. 302,920 8/1989 Ancona et al.
D. 303,055 8/1989 Prindle
D. 304,277 10/1989 Neff et al.
D. 304,301 10/1989 Moss et al.



(12) **United States Patent**
Hoeting et al.

(10) **Patent No.:** **US 6,263,732 B1**
(45) **Date of Patent:** **Jul. 24, 2001**

(54) **MEASURING CUP**
(75) Inventors: **Michael G. Hoeting; Stephen C. Hoeting**, both of Cincinnati, OH (US)
(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**

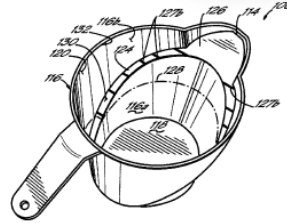
(21) Appl. No.: **09/313,686**
(22) Filed: **May 18, 1999**

(12) **United States Patent**
Hoeting et al.

(54) **MEASURING CUP**
(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)
(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/313,686**
(22) Filed: **May 18, 1999**
(51) Int. Cl.⁷ **G01F 19/00**
(52) U.S. Cl. **73/427; 33/1 V; D10/46.2**
(58) **Field of Search** 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26

(56) **References Cited**
U.S. PATENT DOCUMENTS
153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizenmeier 73/427
D. 243,500 3/1977 Cooper
D. 255,530 6/1980 Daenen et al.
D. 259,460 6/1981 Daenen et al.
D. 259,461 6/1981 Daenen et al.
D. 259,462 6/1981 Daenen et al.
D. 268,158 3/1983 Doyle
D. 272,704 2/1984 Smith
D. 292,381 10/1987 Kowalik et al.
D. 292,492 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chason
D. 302,920 8/1989 Ancona et al.
D. 303,055 8/1989 Prindle
D. 304,277 10/1989 Neff et al.
D. 304,301 10/1989 Moss et al.



(56) **References Cited**
U.S. PATENT DOCUMENTS

153,159	*	7/1874	Dinwiddie	.....	73/427
216,530	*	6/1879	Pfizenmeier	.....	73/427
D. 243,500		3/1977	Cooper	.....
D. 255,530		6/1980	Daenen et al.	.....
D. 259,460	6/1	6/1981	Daenen et al.	.....
D. 259,461	6/1	6/1981	Daenen et al.	.....
D. 259,462	6/1	6/1981	Daenen et al.	.....
D. 268,158	3/1		Doyle	.....
D. 272,704	2/1		Smith	.....
D. 292,381	10/1		Kowalik et al.	.....
D. 292,492	10/1		Ross et al.	.....
D. 293,770	1/1		Ross et al.	.....
D. 294,213	2/1		Chason	.....
D. 302,920	8/1		Ancona et al.	.....
D. 303,055	8/1		Prindle	.....
D. 304,277	10/1		Neff et al.	.....
D. 304,301	10/1		Moss et al.	.....
D. 321,328	11/1	11/1991	Duquet	.....	D10/46.2
D. 330,863	11/1	11/1992	Green	.....	D10/46.2
423,018	*	3/1890	Young	.....	73/427
1,507,968	*	9/1924	Johnson	.....	73/427
1,564,470	*	12/1925	Crimmel	.....	73/427
1,722,101	*	7/1929	Little	.....	73/427
2,165,045	*	7/1939	Garside	.....	73/426
3,526,138		9/1970	Swett et al.	.....
3,527,270		9/1970	Weil	.....
4,073,192		2/1978	Townsend	.....	73/429
4,283,951		8/1981	Varpio	.....	73/426
4,566,509		1/1986	Szajna	.....
4,834,251		5/1989	Yu	.....
5,397,036	*	3/1995	Mainwald	.....	73/427
5,588,747		12/1996	Blevins	.....	73/427
5,662,249		9/1997	Grosse	.....

OTHER PUBLICATIONS

"Jigger Photographs: Having four (4) semi-columns formed in relief on inside wall, of four (4) different heights. Information concerning origin and (date is unknown)."

* cited by examiner



US 6,263,732 B1

(12) United States Patent
Hoeting et al.

(10) Patent No.: US 6,263,732 B1
(45) Date of Patent: Jul. 24, 2001

(54) MEASURING CUP
(75) Inventors: Michael G. Hoeting, Stephen C. Hoeting, both of Cincinnati, OH (US)
(73) Assignee: Bang Zoom Design, Cincinnati, OH (US)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
(21) Appl. No.: 09/313,686
(22) Filed: May 18, 1999

D. 321,328 11/1991
D. 330,863 11/1992
423,018 * 3/1990
1,507,968 * 9/1924
1,564,670 * 12/1925
1,722,103 * 7/1929
2,165,045 * 7/1939
3,526,138 9/1970
3,527,270 9/1970
4,074,672 2/1978
4,283,951 8/1981
4,566,559 1/1986
4,834,251 5/1989
5,397,026 * 3/1995
5,588,747 12/1998
5,662,249 9/1997

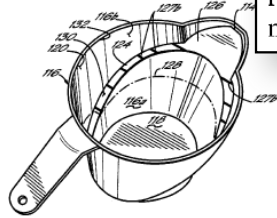
Primary Examiner—Christopher W. Fulton
(74) Attorney, Agent, or Firm—Wood, Herron & Evans, L.L.P.

(57) ABSTRACT

A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup at eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

(51) Int. Cl.⁷ G01F 19/00
(52) U.S. Cl. 73/427; 33/1 V; D10/46.2
(58) Field of Search 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26
(56) References Cited
U.S. PATENT DOCUMENTS
153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizenmister 73/427
D. 243,500 3/1977 Casper
D. 255,530 6/1980 Daanes et al.
D. 259,460 6/1981 Daanes et al.
D. 259,461 6/1981 Daanes et al.
D. 259,462 6/1981 Daanes et al.
D. 268,158 3/1983 Doyle
D. 272,704 2/1984 Smith
D. 292,381 10/1987 Kowalik et al.
D. 292,492 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chason
D. 302,520 8/1989 Ancon et al.
D. 303,055 8/1989 Pindole
D. 304,277 10/1989 Wolff et al.
D. 304,301 10/1989 Moss et al.

OTHER
*Jigger Photographs: Has in relief on inside wall, measurement concerning origin * cited by examiner
Primary Examiner—Christopher W. Fulton
(74) Attorney, Agent, or Firm—Wood, Herron & Evans, L.L.P.
(57) A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup at eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

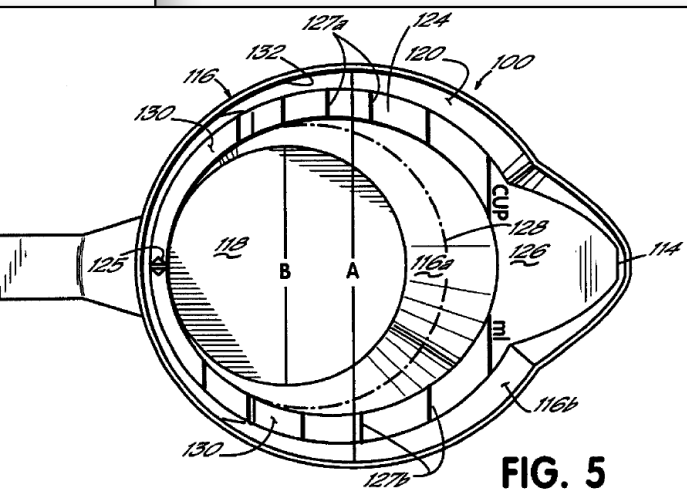


(12) United States Patent
Hoeting et al.

(10) Patent No.: US 6,263,732 B1
(45) Date of Patent: Jul. 24, 2001

(54) MEASURING CUP
(75) Inventors: Michael G. Hoeting, Stephen C. Hoeting, both of Cincinnati, OH (US)
(73) Assignee: Bang Zoom Design, Cincinnati, OH (US)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
(21) Appl. No.: 09/313,686
(22) Filed: May 18, 1999

D. 321,328 11/1991
D. 330,863 11/1992
423,018 * 3/1990
1,507,968 * 9/1924
1,564,670 * 12/1925
1,722,103 * 7/1929
2,165,045 * 7/1939
3,526,138 9/1970
3,527,270 9/1970
4,074,672 2/1978
4,283,951 8/1981
4,566,559 1/1986
4,834,251 5/1989
5,397,026 * 3/1995
5,588,747 12/1998
5,662,249 9/1997



(51) Int. Cl.⁷ G01F 19/00
(52) U.S. Cl. 73/427; 33/1 V; D10/46.2
(58) Field of Search 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26
(56) References Cited
U.S. PATENT DOCUMENTS
153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizenmister 73/427
D. 243,500 3/1977 Casper
D. 255,530 6/1980 Daanes et al.
D. 259,460 6/1981 Daanes et al.
D. 259,461 6/1981 Daanes et al.
D. 259,462 6/1981 Daanes et al.
D. 268,158 3/1983 Doyle
D. 272,704 2/1984 Smith
D. 292,381 10/1987 Kowalik et al.
D. 292,492 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chason
D. 302,520 8/1989 Ancon et al.
D. 303,055 8/1989 Pindole
D. 304,277 10/1989 Wolff et al.
D. 304,301 10/1989 Moss et al.

*Jigger Photographs: Has in relief on inside wall, measurement concerning origin * cited by examiner
Primary Examiner—Christopher W. Fulton
(74) Attorney, Agent, or Firm—Wood, Herron & Evans, L.L.P.
(57) A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup at eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

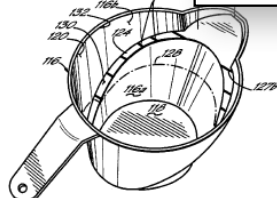


FIG. 5

US06263732B1

(12) **United States Patent**
Hoeting et al.

(10) Patent No.: **US 6,263,732 B1**
(45) Date of Patent: **Jul. 24, 2001**

(54) **MEASURING CUP**
(75) Inventors: **Michael G. Hoeting, Stephen G. Hoeting**, both of Cincinnati, OH
(73) Assignee: **Bang Zoom Design, Cincinnati, OH**
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
(21) Appl. No.: **09/313,686**
(22) Filed: **May 18, 1999**
(51) Int. Cl. 7: **G01V 1/00**
(52) U.S. Cl. 7: **73/427**
(58) Field of Search: **336/79.1, 73/426, 427, 215/365, 366, 1110/96.2, 222/23, 25, 26**

FIELD OF THE INVENTIONS

This invention relates to measuring cups. More specifically, this invention relates to a measuring cup having indicia viewable from above.

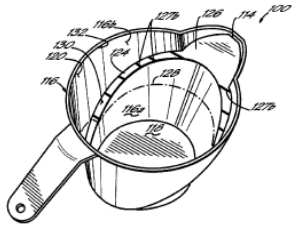
(56) **References Cited**
U.S. PATENT DOCUMENTS
153,159 * 7/18/74 Dinwiddie 73/427
216,530 * 6/18/79 Pfizenmeyer 73/427
D. 243,500 3/19/77 Cooper
D. 255,530 6/19/81 Daanes et al.
D. 259,460 6/19/81 Daanes et al.
D. 259,461 6/19/81 Daanes et al.
D. 259,462 6/19/81 Daanes et al.
D. 268,158 3/19/83 Doyle
D. 272,704 2/19/84 Smith
D. 292,881 10/19/87 Kowolik et al.
D. 292,892 10/19/87 Ross et al.
D. 293,770 1/19/88 Ross et al.
D. 294,213 2/19/88 Chassa
D. 302,920 8/19/89 Ancon et al.
D. 303,055 8/19/89 Prindle
D. 304,277 10/19/89 Wolff et al.
D. 304,301 10/19/89 Moss et al.

Foreign Patent Documents:
1,110,962 (France) 1987
222/23, 25, 26 (U.S.) 1999
* cited by examiner

Primary Examiner—Christopher W. Fulton
(74) Attorney, Agent, or Firm—Wood, Heron & Evans, L.L.P.

ABSTRACT
(57) A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring-cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup at eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

1 Claim, 2 Drawing Sheets



US06263732B1

(12) **United States Patent**
Hoeting et al.

(54) **MEASURING CUP**
(75) Inventors: **Michael G. Hoeting, Stephen G. Hoeting**, both of Cincinnati, OH
(73) Assignee: **Bang Zoom Design, Cincinnati, OH**
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
(21) Appl. No.: **09/313,686**
(22) Filed: **May 18, 1999**
(51) Int. Cl. 7: **G01V 1/00**
(52) U.S. Cl. 7: **73/427, 33/1 V, 1**
(58) Field of Search: **336/79.1, 73/426, 427, 215/365, 366, 1110/96.2, 222/23, 25, 26**

BACKGROUND OF THE INVENTION

Measuring cups are known. Measuring cups can be made from a variety of materials, including plastic, metal and glass. One of the most common materials used is Pyrex® which is a type of glass. While the above-described methods for determining the volume of contents in a measuring cup may seem simple enough for most users, these methods can prove to be difficult for others. Users with bad knees, a bad back, or arthritis, for example, may not only have substantial difficulty in stooping over to accurately read the volume of contents in a measuring cup placed on a level surface, but may also have just as much difficulty in lifting a measuring cup to eye level and holding the cup steady to read the volume of contents held therein. When precise measurement of the volume of contents within a measuring cup is critical to a task, the simple actions of bending over or lifting a measuring cup to eye level, which seem easy to some users, may become difficult and uncomfortable for others. Measuring the volume of cooking ingredients using prior art measuring cups can also be frustrating. As mentioned above, it can be difficult for a user to stoop over to read the level of contents when placed on a level surface or when lifted to eye level. An unsteady hand not only makes the

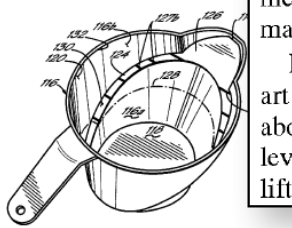
While the above-described methods for determining the volume of contents in a measuring cup may seem simple enough for most users, these methods can prove to be difficult for others. Users with bad knees, a bad back, or arthritis, for example, may not only have substantial difficulty in stooping over to accurately read the volume of contents in a measuring cup placed on a level surface, but may also have just as much difficulty in lifting a measuring cup to eye level and holding the cup steady to read the volume of contents held therein. When precise measurement of the volume of contents within a measuring cup is critical to a task, the simple actions of bending over or lifting a measuring cup to eye level, which seem easy to some users, may become difficult and uncomfortable for others. Measuring the volume of cooking ingredients using prior art measuring cups can also be frustrating. As mentioned above, it can be difficult for a user to stoop over to read the level of contents when placed on a level surface or when lifted to eye level. An unsteady hand not only makes the

Foreign Patent Documents:
1,110,962 (France) 1987
222/23, 25, 26 (U.S.) 1999
* cited by examiner

Primary Examiner—Christopher W. Fulton
(74) Attorney, Agent, or Firm—Wood, Heron & Evans, L.L.P.

ABSTRACT
(57) A measuring cup has at least one ramp formed in relief radially inwardly on the inside surface of the measuring-cup sidewall. At least one ramp rises from about the bottom edge of the sidewall to about the top edge of the sidewall. The indicia on an upwardly directed surface of the at least one ramp allows a user to look downwardly into the measuring cup to visually detect the volume level of the contents in the measuring cup, thereby eliminating the need to look horizontally at the cup at eye level. Preferably the cup has two ramps, with at least one of standard units, and another with metric units.

1 Claim



US06263732B1

(12) **United States Patent**
Hoeting et al.

(10) Patent No.:
(45) Date of Patent:

(54) **MEASURING CUP**

(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)

(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/313,686**

(22) Filed: **May 18, 1999**

(51) Int. Cl.⁷ **G01F 19/00**

(52) **U.S. Cl.** **73/427; 33/1 V; D10/46.2**

(58) **Field of Search** **33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26**

(56) **References Cited**

U.S. PATENT DOCUMENTS

153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizemister 73/427
D. 243,500 3/1977 Casper
D. 255,530 6/1980 Daanes et al.
D. 259,460 6/1981 Daanes et al.
D. 259,461 6/1981 Daanes et al.
D. 259,462 6/1981 Daanes et al.
D. 288,158 3/1983 Doyl
D. 272,704 2/1984 Smith
D. 292,981 10/1987 Kowalik et al.
D. 292,992 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chassa
D. 302,920 8/1989 Alconon et al.
D. 303,055 8/1989 Prindle
D. 304,277 10/1989 Wolff et al.
D. 304,301 10/1989 Moss et al.

D. 321,528 11/1991 Dogot D10/46.2
D. 330,863 11/1992 Green D10/46.2
423,018 * 3/1980 Young 73/427
1,507,968 * 9/1924 Johnson 73/427
1,564,670 * 12/1925 C
1,722,101 * 7/1929 J
2,165,045 * 7/1949
3,526,138 9/1970 S
3,527,270 9/1970 M
4,073,192 2/1978 J
4,283,951 8/1981 Y
4,566,509 1/1986 S
4,834,251 5/1989 Y
5,397,036 * 3/11
5,588,747 12/1990 B
5,662,249 9/1997 G

OTHER P
* Jigger Photographs. Havin
in relief on inside wall, of
mation concerning origin
* cited by examiner
Primary Examiner—Chris
(74) Attorney, Agent, or
L.L.P.

(57)

A measuring cup has at
radially inwardly on the int
sidewall. At least one ramp
of the sidewall to about th
indicia on an upwardly dir
ramp allows a user to look
cup to visually detect the v
measuring cups, thereby cil
zonality at the cup at eye
ramps, with at least one o
metric units.

1 Claim, 2

SUMMARY OF THE INVENTION

The present invention achieves the above-stated objectives by including with a measuring cup at least one sloped ramp having an upwardly directed surface having indicia which is readily observable by an observer looking downwardly into the open end of the cup.

The structure simplifies volume determination because there is no need for the observer to move relative to the cup in order to look in a horizontal direction at the cup indicia. Thus, the possibility of spilling is reduced. Also, since the ramp preferably rises continuously and gradually from the bottom of the cup, a user who is filling the cup from above can actually see the volume indicia on the upwardly directed surface of the ramp while the cup is being filled, looking along the same line of sight generally used during filling. These advantages result from the ability to visually determine the volume of the cup by simply looking into the open upper end, and the gradual slope of the ramp.

According to a first preferred embodiment of the invention, the cup has a bottom wall and an encircling vertical sidewall, so that the cup is cylindrical in shape with an open upper end. Inside the cup, at least one ramp slopes

US06263732B1

(12) **United States Patent**
Hoeting et al.

(10) Patent No.: **US 6,263,732 B1**
(45) Date of Patent: **Jul. 24, 2001**

(54) **MEASURING CUP**

(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)

(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/313,686**

(22) Filed: **May 18, 1999**

(51) Int. Cl.⁷ **G01F 19/00**

(52) **U.S. Cl.** **73/427; 33/1 V; D10/46.2**

(58) **Field of Search** **33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26**

(56) **References Cited**

U.S. PATENT DOCUMENTS

153,159 * 7/1874 Dinwiddie 73/427
216,530 * 6/1879 Pfizemister 73/427
D. 243,500 3/1977 Casper
D. 255,530 6/1980 Daanes et al.
D. 259,460 6/1981 Daanes et al.
D. 259,461 6/1981 Daanes et al.
D. 259,462 6/1981 Daanes et al.
D. 288,158 3/1983 Doyl
D. 272,704 2/1984 Smith
D. 292,981 10/1987 Kowalik et al.
D. 292,992 10/1987 Ross et al.
D. 293,770 1/1988 Ross et al.
D. 294,213 2/1988 Chassa
D. 302,920 8/1989 Alconon et al.
D. 303,055 8/1989 Prindle
D. 304,277 10/1989 Wolff et al.
D. 304,301 10/1989 Moss et al.

D. 321,528 11/1991 Dogot D10/46.2
D. 330,863 11/1992 Green D10/46.2
423,018 * 3/1980 Young 73/427
1,507,968 * 9/1924 Johnson 73/427
1,564,670 * 12/1925 C
1,722,101 * 7/1929 J
2,165,045 * 7/1949
3,526,138 9/1970 S
3,527,270 9/1970 M
4,073,192 2/1978 J
4,283,951 8/1981 Y
4,566,509 1/1986 S
4,834,251 5/1989 Y
5,397,036 * 3/11
5,588,747 12/1990 B
5,662,249 9/1997 G

OTHER P
* Jigger Photographs. Havin
in relief on inside wall, of
mation concerning origin
* cited by examiner
Primary Examiner—Chris
(74) Attorney, Agent, or
L.L.P.

(57)

A measuring cup has at
radially inwardly on the int
sidewall. At least one ramp
of the sidewall to about th
indicia on an upwardly dir
ramp allows a user to look
cup to visually detect the v
measuring cups, thereby cil
zonality at the cup at eye
ramps, with at least one o
metric units.

1 Clm, 2

3

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a measuring cup according to a first preferred embodiment of the invention

FIG. 2 is a top plan view of the measuring cup of FIG. 1

FIG. 3 is a cross-sectional view of the measuring cup of FIG. 2 taken along 3—3

FIG. 4 is a perspective view of a second preferred embodiment of the inventive measuring cup

FIG. 5 is a top plan view of the measuring cup of FIG. 4

FIG. 6 is side view of the measuring cup and nesting feature of a second preferred embodiment of the present inventive measuring cup.

US006372201

(12) **United States Patent**
Hoeting et al.

(10) Patent No.
(45) Date of Pat.

(54) **MEASURING CUP**

(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)

(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09313,686**

(22) Filed: **May 18, 1999**

(51) Int. Cl.⁷ **G01F 19/00**

(52) U.S. Cl. **73/427; 33/1 V; D10/46.2**

(58) **Field of Search** 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26

(56) **References Cited**

U.S. PATENT DOCUMENTS

153,159 * 7/1874 Dinwiddie 73/427

216,530 * 6/1879 Pfizenmeyer 73/427

D. 243,500 3/1977 Cooper

D. 255,530 6/1980 Daues et al.

D. 259,460 6/1981 Daues et al.

D. 259,461 6/1981 Daues et al.

D. 259,462 6/1981 Daues et al.

D. 268,158 3/1983 Doyal

D. 272,704 2/1984 Smith

D. 292,881 10/1987 Kowalik et al.

D. 292,892 10/1987 Ross et al.

D. 293,770 1/1988 Ross et al.

D. 294,213 2/1988 Chason

D. 302,920 8/1989 Ancon et al.

D. 303,055 8/1989 Prindle

D. 304,277 10/1989 Wolff et al.

D. 304,301 10/1989 Moss et al.

D. 321,528 11/1991

D. 330,863 11/1991

423,018 * 3/1989

1,207,908 * 9/1993

1,264,470 * 12/1993

1,722,103 * 7/1992

2,165,045 * 7/1993

3,526,138 9/1979

3,527,270 9/1979

4,073,672 2/1979

4,283,951 8/1984

4,266,509 1/1986

4,834,251 5/1988

5,397,036 3/1995

5,588,747 12/1996

5,662,249 9/1997

OTHER

*Jigger Photographs: H in relief on inside wall, main concerning orig

* cited by examiner

Primary Examiner—C
(74) Attorney, Agent, L.L.P.

(57)

A measuring cup has radially inwardly on the sidewall. At least one of the sidewall to about indicia on an upwardly ramp allows a user to cup to visually detect the measuring cups, thereby zonally at the cup of ramps, with at least one metric units.

1 Claim

**DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT**

FIGS. 1–3 show a first preferred embodiment of the present inventive measuring cup 10. Generally, the measuring cup 10 is integrally formed out of a suitable material and has a handle 12 and a spout 14 integrally attached to a substantially vertical sidewall 16. The measuring cup 10 has a base or bottom wall 18 integrally attached around its perimeter to the bottom edge of the sidewall 16. The cup 10 has an open upper end.

The wall 16 has an inside surface 20 and an outside surface 22 from which ramps 24a, 24b are formed in relief. The measuring cup 10 is molded from any suitable food grade plastic known in the art, however, it will be understood that the measuring cup 10 may be manufactured by any suitable process. It will also be understood that the measuring cup 10 may be made of any other suitable material known in the art, e.g., Pyrex®, metal.

The ramps 24a, 24b are located on opposite sides of the cup 10 but are identical in construction. Therefore, only one such ramp is described. Each ramp has a ramp base, or

US006263722B1

(12) **United States Patent**
Hoeting et al.

(10) Patent No.
(45) Date of Pat.

(54) **MEASURING CUP**

(75) Inventors: **Michael G. Hoeting, Stephen C. Hoeting**, both of Cincinnati, OH (US)

(73) Assignee: **Bang Zoom Design, Cincinnati, OH (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09313,686**

(22) Filed: **May 18, 1999**

(51) Int. Cl.⁷ **G01F 19/00**

(52) U.S. Cl. **73/427; 33/1 V; D10/46.2**

(58) **Field of Search** 33/1 V; 1 E; 522; 33/679.1; 73/426, 427; 215/365, 366; D10/46.2; 222/23, 25, 26

(56) **References Cited**

U.S. PATENT DOCUMENTS

153,159 * 7/1874 Dinwiddie 73/427

216,530 * 6/1879 Pfizenmeyer 73/427

D. 243,500 3/1977 Cooper

D. 255,530 6/1980 Daues et al.

D. 259,460 6/1981 Daues et al.

D. 259,461 6/1981 Daues et al.

D. 259,462 6/1981 Daues et al.

D. 268,158 3/1983 Doyal

D. 272,704 2/1984 Smith

D. 292,881 10/1987 Kowalik et al.

D. 292,892 10/1987 Ross et al.

D. 293,770 1/1988 Ross et al.

D. 294,213 2/1988 Chason

D. 302,920 8/1989 Ancon et al.

D. 303,055 8/1989 Prindle

D. 304,277 10/1989 Wolff et al.

D. 304,301 10/1989 Moss et al.

D. 321,528 11/1991

D. 330,863 11/1991

423,018 * 3/1989

1,207,908 * 9/1993

1,264,470 * 12/1993

1,722,103 * 7/1992

2,165,045 * 7/1993

3,526,138 9/1979

3,527,270 9/1979

4,073,672 2/1979

4,283,951 8/1984

4,266,509 1/1986

4,834,251 5/1988

5,397,036 3/1995

5,588,747 12/1996

5,662,249 9/1997

OTHER

*Jigger Photographs: H in relief on inside wall, main concerning orig

* cited by examiner

Primary Examiner—C
(74) Attorney, Agent, L.L.P.

(57)

A measuring cup has radially inwardly on the sidewall. At least one of the sidewall to about indicia on an upwardly ramp allows a user to cup to visually detect the measuring cups, thereby zonally at the cup of ramps, with at least one metric units.

1 Claim

What is claimed is:

1. A measuring device, comprising:
 - a bottom wall and a generally vertical and encircling side wall having a lower edge and an upper edge, said sidewall defining an upwardly opening cup with an upper end;
 - a spout attached integrally to said sidewall; and
 - a pair of continuously sloping ramps formed integrally with and radially inward in relief from said sidewall, said ramps extending from about said bottom wall generally opposite said spout toward said open upper end generally adjacent said spout, wherein said ramp is coextensive with said spout, said ramp having an upwardly directed surface and indicia located on said upwardly directed surface being at least one of standard and metric units of measurement providing a readily observable indication of the volume of the contents contained within said cup.

(post-AIA) 35 U.S.C. § 112 — Specification

(a) In General.— The specification shall contain a **written description of the invention**, and of the **manner and process of making and using it**, in such full, clear, concise, and exact terms as to **enable any person skilled in the art** to which it pertains, or with which it is most nearly connected, **to make and use the same**, and shall set forth the **best mode** contemplated by the inventor or joint inventor of carrying out the invention.

(b) Conclusion.— The specification shall conclude with **one or more claims particularly pointing out and distinctly claiming** the subject matter which the inventor or a joint inventor regards as the invention.

* * *