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

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(54) **TROCAR**

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(**) Term: **15 Years**

(21) Appl. No.: **29/591,875**

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(30) **Foreign Application Priority Data**

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(51) **LOC (11) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/147**

(58) **Field of Classification Search**
USPC D24/146, 147, 148, 112, 113, 114, 115,
D24/133, 141; D19/35, 36, 41–51,
D19/53–58, 81–85, 174, 904, 908, 914;
D28/7, 8, 20, 21, 22, 30, 31, 76, 85, 99;
D22/115, 116; D11/24, 25, 26, 27, 28,
D11/29, 79; D8/378, 379, 300, 373, 376;
D6/550; 248/188.9, 261–262; D21/300,
D21/334, 335, 338, 339, 340, 341, 342,
D21/343, 345, 346, 347, 348, 349, 350,

D21/351, 355, 357, 359, 362, 363, 365,
D21/376, 378, 388, 389; D25/119, 120,
D25/121, 122, 126, 135; D12/110, 118,
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D320,857 S * 10/1991 Tompkins D24/146
D358,209 S * 5/1995 Petruschke D24/146
5,630,813 A 5/1997 Kieturakis
(Continued)

FOREIGN PATENT DOCUMENTS

DE 91 02 553 U1 5/1991
DE 101 56 312 B4 4/2004
(Continued)

OTHER PUBLICATIONS

Karl Storz, “Focused on the Essentials—The new trocar generation from Karl Storz” brochure, www.health-made-in-germany.com, pp. 1-4 (Oct. 1, 2015).

(Continued)

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(57) **CLAIM**

The ornamental design for a trocar, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a trocar according to the present invention.

FIG. 2 is a front view of the trocar of FIG. 1.

FIG. 3 is a rear view of the trocar of FIG. 1.

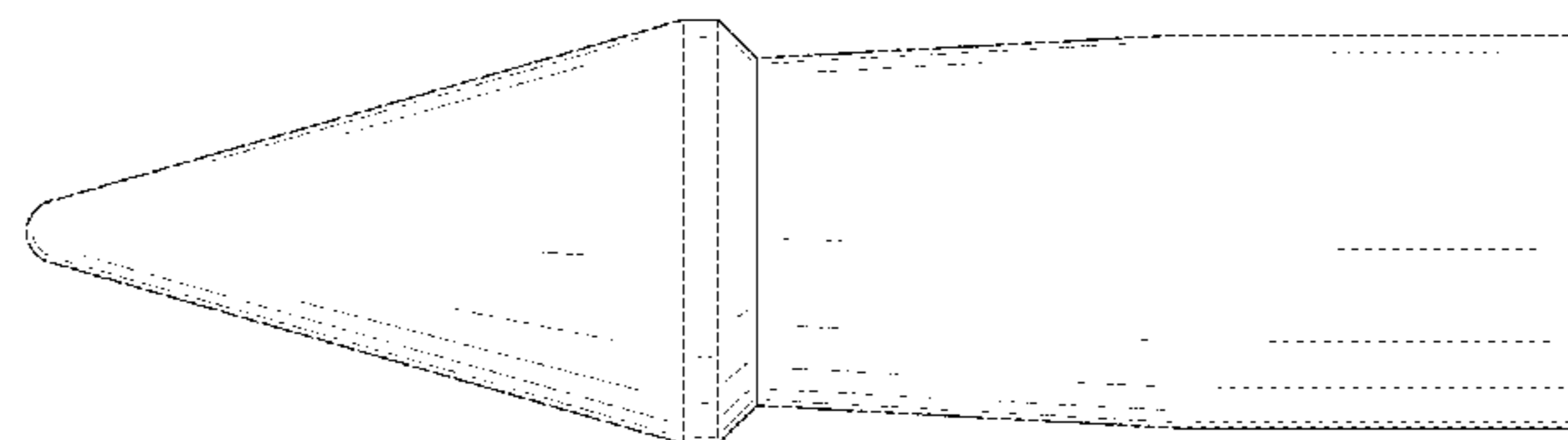
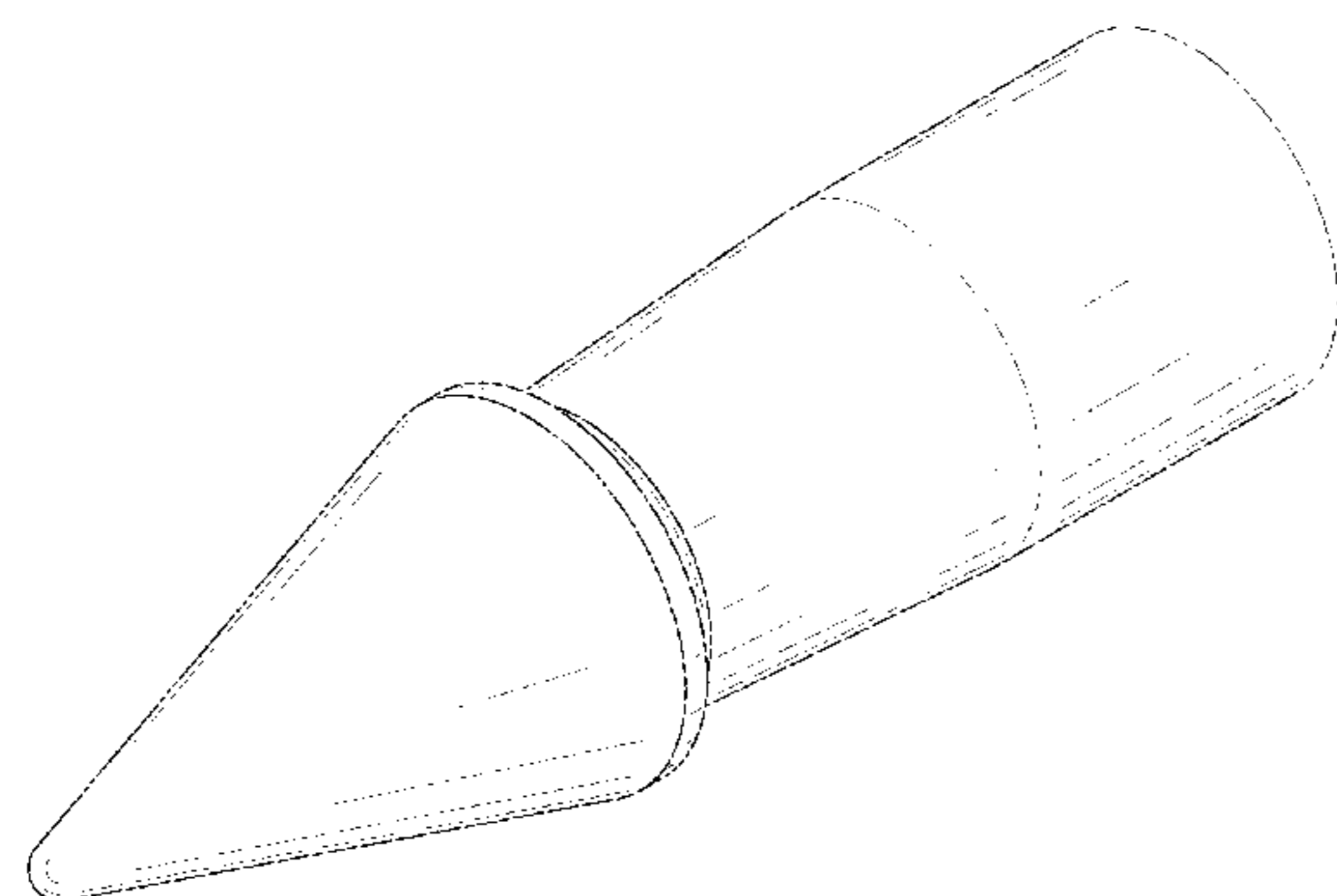
FIG. 4 is a left side view of the trocar of FIG. 1.

FIG. 5 is a right side view of the trocar of FIG. 1.

FIG. 6 is a top view of the trocar of FIG. 1; and,

FIG. 7 is a bottom view of the trocar of FIG. 1.

(Continued)



The broken lines shown in FIGS. 1 and 3-7 illustrate a boundary, and form no part of the claimed design.

1 Claim, 7 Drawing Sheets

(58) Field of Classification Search

USPC D12/126, 204, 213, 400; D14/205, 206,
D14/223
CPC A61B 1/018; A61B 2017/2939; A61B
17/089; A61B 17/1617; A61B 17/3211;
A61B 17/3417; A61B 5/1411; A61F
2210/0038; A61F 5/566; B26B 3/00;
B26B 1/10; B26B 5/005

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

D385,178 S * 10/1997 Poulin D8/376
5,895,351 A 4/1999 Nottage et al.
D451,363 S * 12/2001 Miller D6/549
D454,404 S * 3/2002 Merrick D25/135
D459,202 S * 6/2002 Dolan D8/378
D515,207 S * 2/2006 Tarumi D24/114
D540,469 S * 4/2007 Grabinsky D24/112
D550,356 S * 9/2007 Anderson D24/112
D571,009 S * 6/2008 Smith D24/146
D581,530 S * 11/2008 Thierfelder D24/133
D592,748 S * 5/2009 Boulton A61F 11/006
D24/108
D649,642 S * 11/2011 Johnson A61B 17/1322
D24/143

D654,168 S * 2/2012 Fischvogt D24/146
D694,951 S * 12/2013 Solomon, Jr. D28/7
D728,099 S * 4/2015 Schad D24/146
D733,301 S 6/2015 Mueller
D733,879 S 7/2015 Mueller
D733,880 S 7/2015 Mueller
D737,444 S 8/2015 Mueller
D738,265 S * 9/2015 McNeeley D12/118
D753,303 S * 4/2016 Dannaher D24/146
D775,416 S * 12/2016 Celia, Jr. D28/7
D788,109 S * 5/2017 Kuan-her D14/411
D790,130 S * 6/2017 Celia D28/7
D832,361 S * 10/2017 Findley D21/388
D814,035 S * 3/2018 Fuchs D24/147
D814,036 S * 3/2018 Fuchs D24/147
2003/0153926 A1 8/2003 Schmieding et al.
2012/0209205 A1 8/2012 Okihisa et al.

FOREIGN PATENT DOCUMENTS

EP 2 529 684 A2 12/2012
WO WO 2013/030682 A1 3/2013

OTHER PUBLICATIONS

Karl Storz, "Highlights 2016—Laparoscopy" brochure, www.karlstorz.com, pp. 1-20, 2016 Edition, Quarter 1 (Jan. 1, 2016).
Karl Storz, "Highlights 2016—Laparoscopy" brochure, www.karlstorz.com, pp. 1-24, 2016 Edition, Quarter 4 (Oct. 1, 2016).
U.S. Appl. No. 29/591,898, filed Jan. 25, 2017.
U.S. Appl. No. 29/591,887, filed Jan. 25, 2017.
U.S. Appl. No. 29/591,888, filed Jan. 25, 2017.
U.S. Appl. No. 29/591,903, filed Jan. 25, 2017.

* cited by examiner

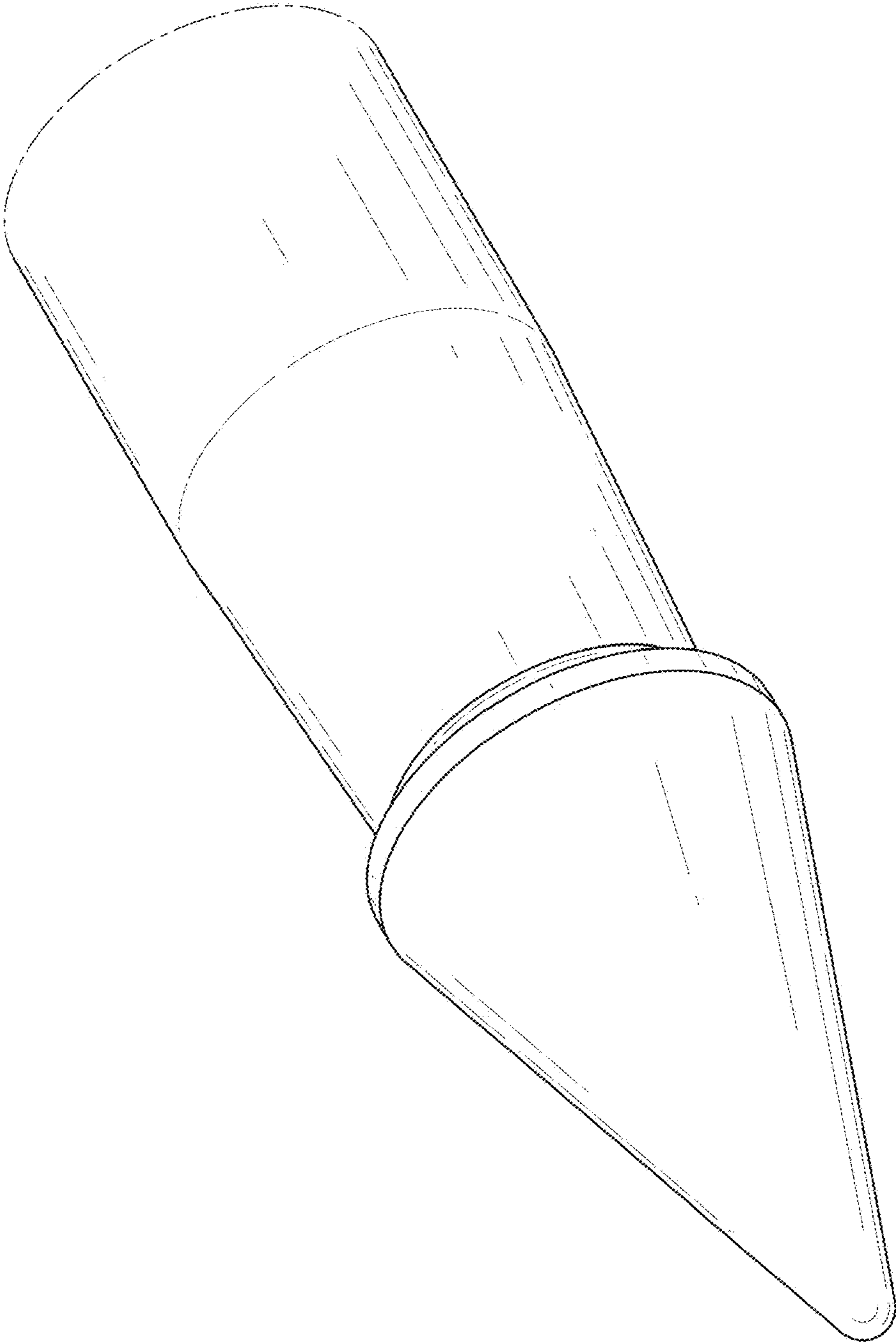


FIG.1

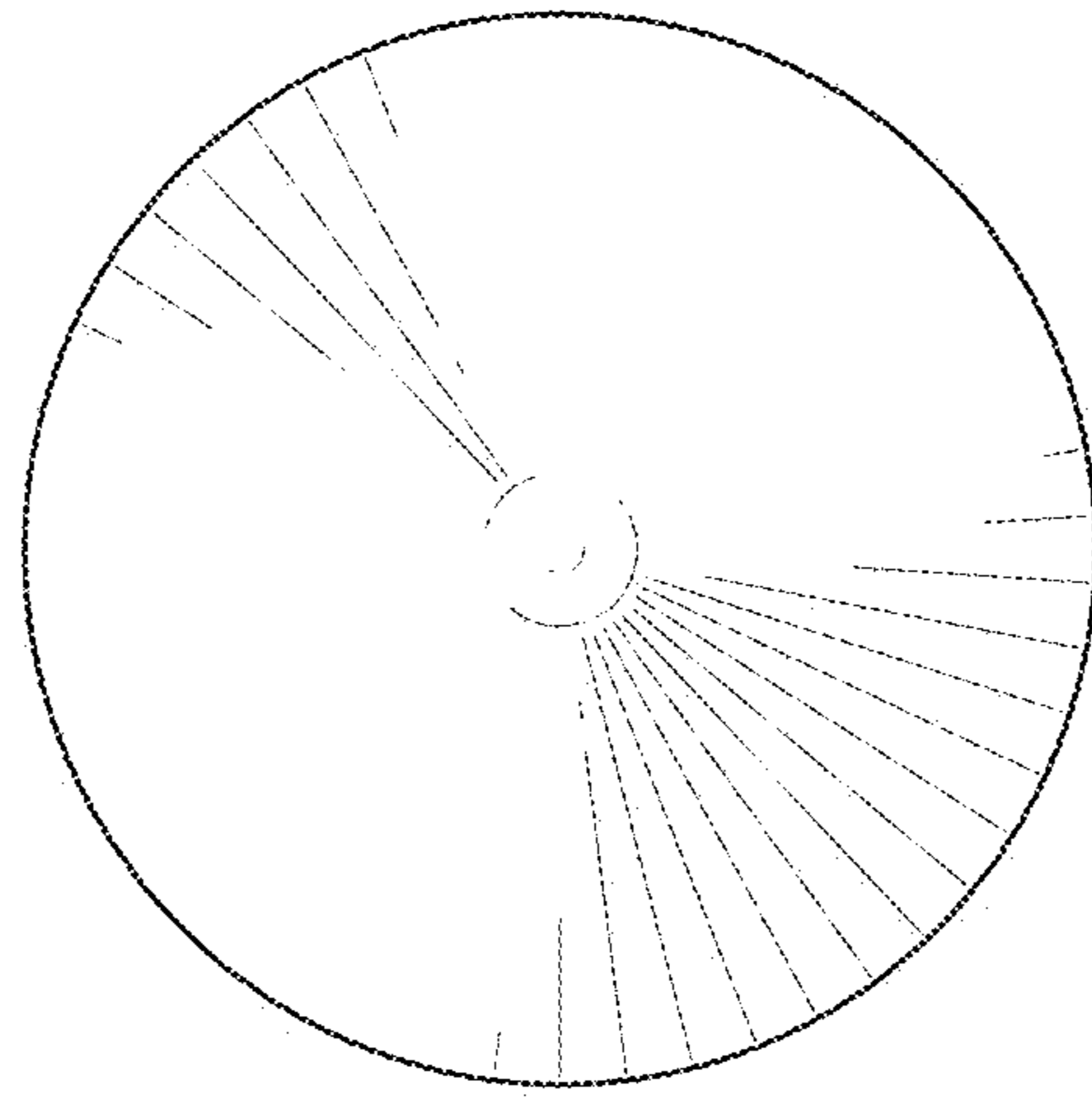


FIG.2

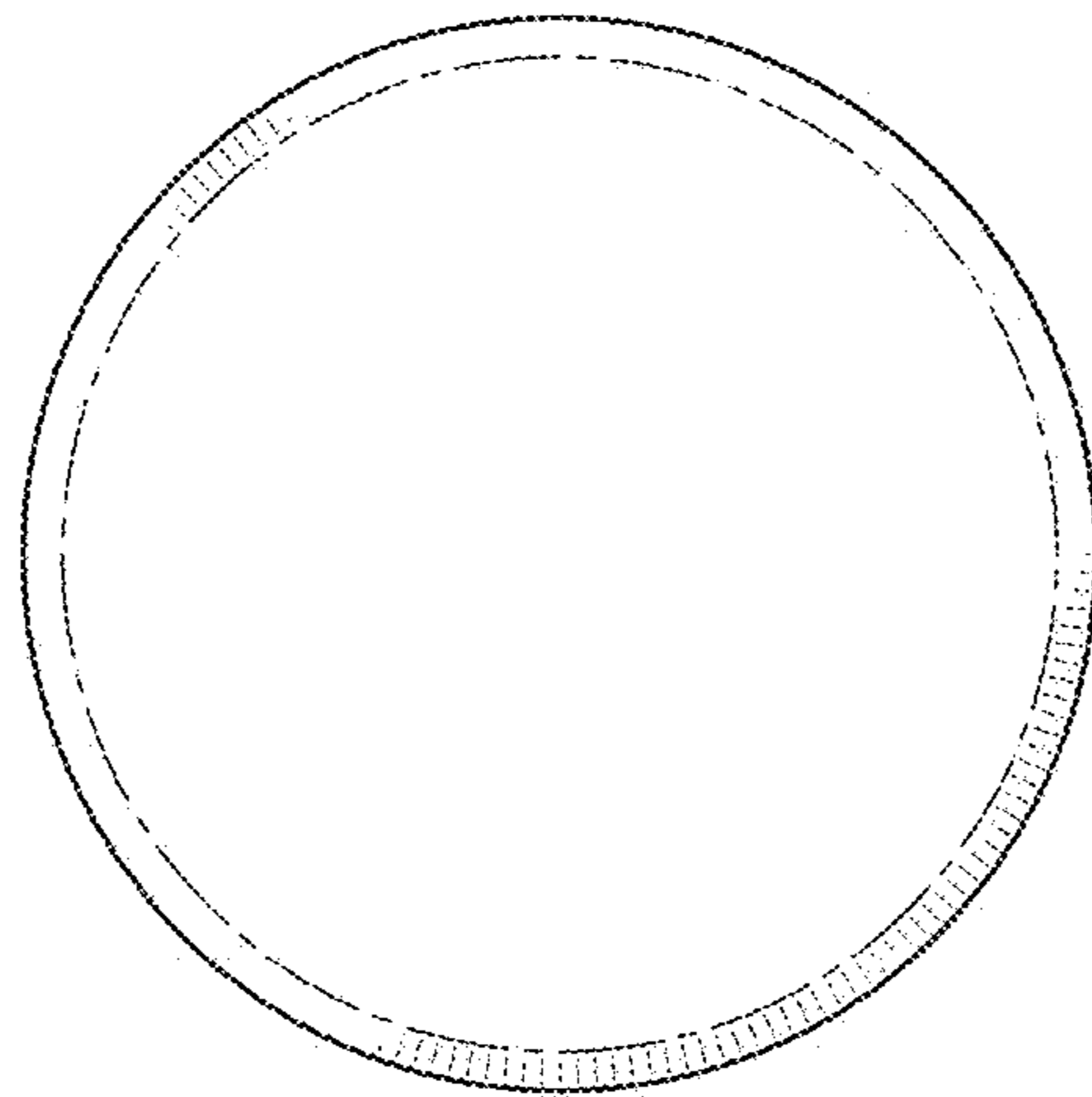


FIG.3

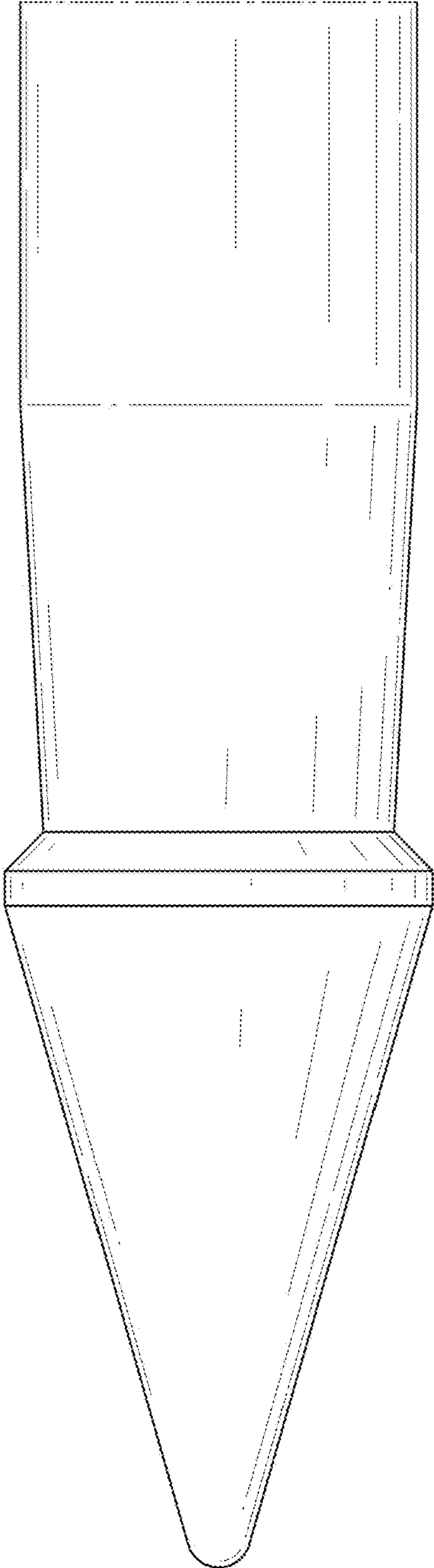


FIG.4

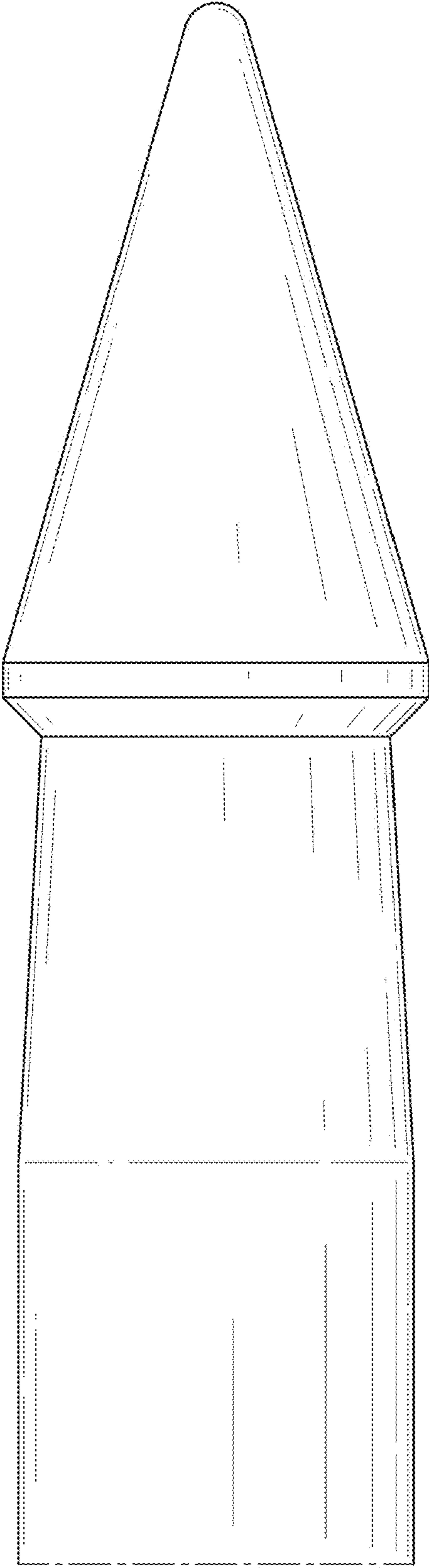


FIG.5

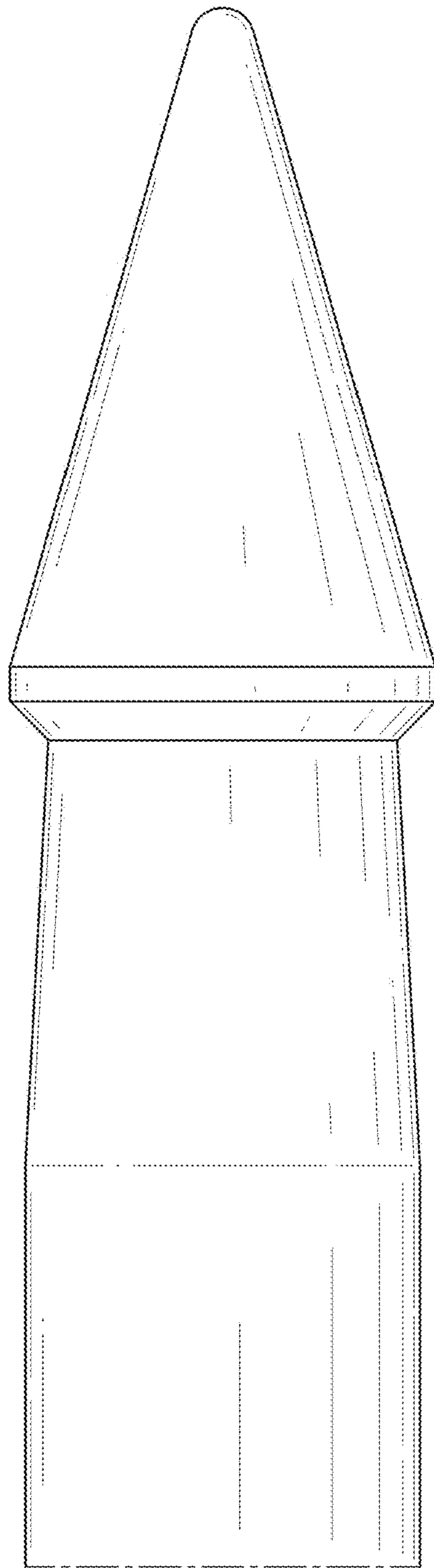


FIG.6

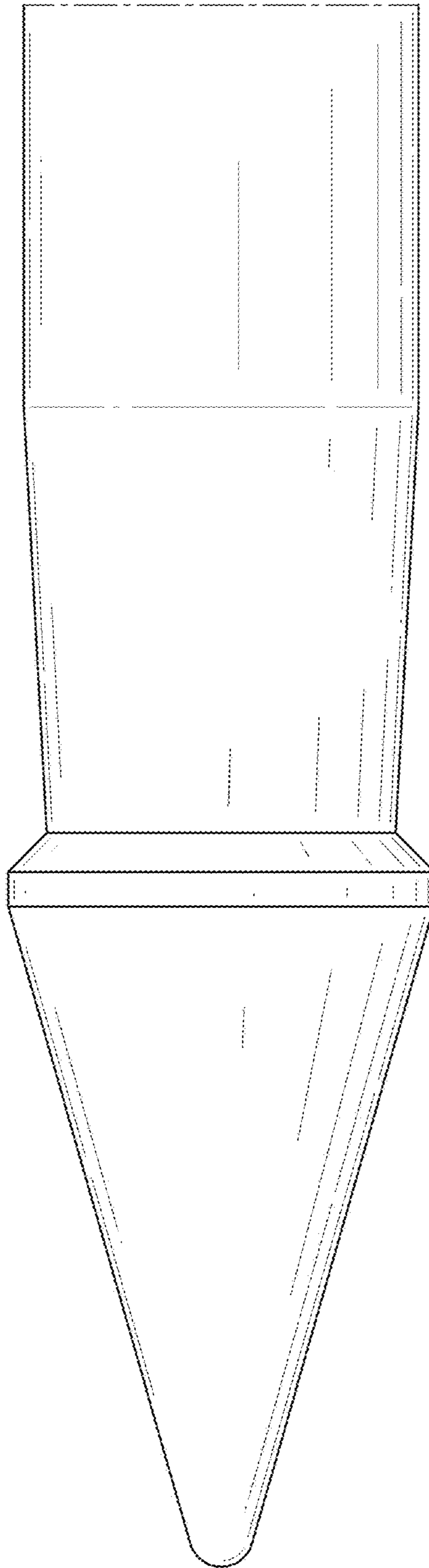


FIG. 7