



US00D954950S

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

(10) **Patent No.:** **US D954,950 S**
(45) **Date of Patent:** **** Jun. 14, 2022**

(54) **MEASUREMENT HEAD FOR A SURGICAL TOOL**

1/36; A61N 1/0456; A61N 1/36071;
A61N 1/37247; A61N 1/323

See application file for complete search history.

(71) Applicant: **Stryker Corporation**, Kalamazoo, MI (US)

(56) **References Cited**

(72) Inventors: **Dustin James Payne**, Kalamazoo, MI (US); **Stephen Frederick Peters**, Hickory Corners, MI (US); **Jerry Huber Adams, Jr.**, Leonidas, MI (US); **Steven J. Carusillo**, Kalamazoo, MI (US); **Trevor Jonathan Lambert**, Portage, MI (US)

U.S. PATENT DOCUMENTS

(73) Assignee: **Stryker Corporation**, Kalamazoo, MI (US)

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

(21) Appl. No.: **29/758,742**

(22) Filed: **Nov. 18, 2020**

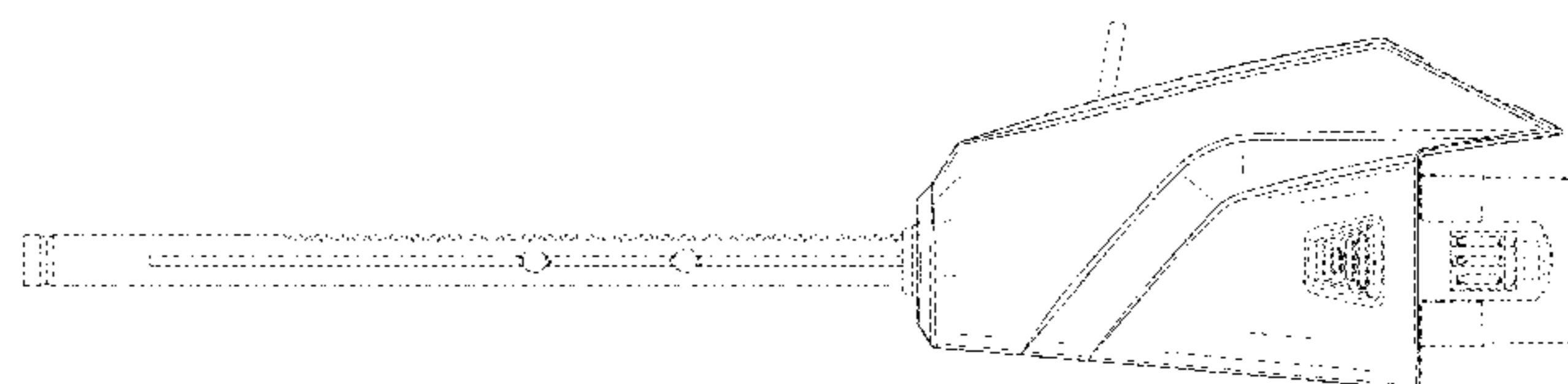
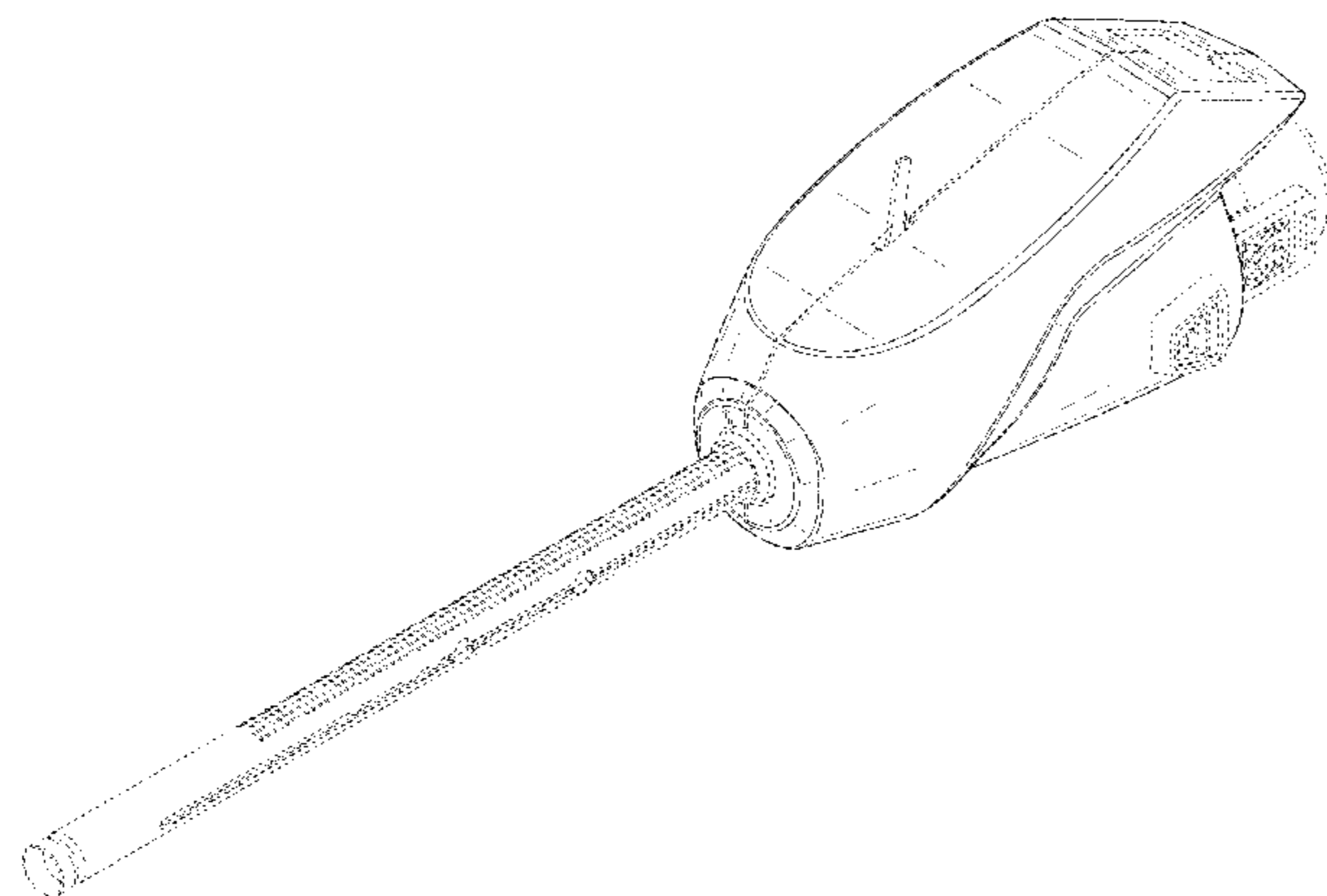
(51) **LOC (13) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/146**

(58) **Field of Classification Search**
USPC D13/110, 162, 164; D24/112-113, 127, D24/130, 133, 140, 144-147, 170, 200, D24/206, 209, 185-186, 165, 215; D28/56-59, 7; D8/61-62, 68-69, 71; D9/503-505

CPC . A61B 17/29; A61B 17/0218; A61B 17/2909; A61B 17/282; A61B 7/295; A61B 2017/2926; A61B 10/04; A61B 10/0096; A61B 10/025; A61M 37/0076; A61M 37/0084; A61M 37/00; A61M 5/46; A61M 5/48; A61M 37/0092; A61M 5/482; A61M 5/2466; Y10T 29/49826; A61H 19/30; A61H 19/32; A61H 19/34; A61H 19/40; A61H 19/44; A61H 19/50; A61H 19/00; A61H 2201/0153; A61H 2201/0207; A61H 2201/0263; A61H 2201/0111; A61H 2201/1253; A61H 2205/082; A61H 2205/085; A61H 15/0085; A61N 1/36003; A61N 1/36014; A61N 1/36017; A61N 1/36021; A61N

D168,215	S	*	11/1952	Doeden	D8/61
2,763,935	A		9/1956	Whaley et al.	
3,837,661	A		9/1974	Phillippi	
3,897,166	A		7/1975	Adams	
4,310,269	A		1/1982	Neu et al.	
4,359,906	A		11/1982	Cordey	
4,688,970	A		8/1987	Eckman	
4,752,161	A		6/1988	Hill	
5,071,293	A		12/1991	Wells	
5,200,747	A		4/1993	Betz et al.	
5,257,531	A		11/1993	Motosugi et al.	
5,499,984	A		3/1996	Steiner et al.	
5,667,509	A		9/1997	Westin	
5,838,222	A		11/1998	Al-Rawi	
5,895,389	A		4/1999	Schenk et al.	
D421,119	S	*	2/2000	Musgrave	D24/146
6,033,409	A		3/2000	Allotta	
6,096,042	A		8/2000	Herbert	
6,336,931	B1		1/2002	Hsu et al.	
6,382,977	B1		5/2002	Kumar	
6,391,005	B1		5/2002	Lum et al.	
6,394,806	B1		5/2002	Kumar	
6,514,258	B1		2/2003	Brown et al.	
6,562,055	B2		5/2003	Walen	
6,565,293	B2		5/2003	Desmoulins	
6,591,698	B1		7/2003	Carlsson et al.	
6,620,101	B2		9/2003	Azzam et al.	
6,665,948	B1		12/2003	Kozin et al.	
6,719,962	B2		4/2004	Day et al.	
6,748,273	B1		6/2004	Obel et al.	
6,783,533	B2		8/2004	Green et al.	
6,786,683	B2		9/2004	Schaer et al.	
6,863,136	B2		3/2005	Bar-Cohen et al.	
7,060,071	B2		6/2006	Steiger	
7,141,074	B2		11/2006	Fanger et al.	
7,163,542	B2		1/2007	Ryan	
7,188,431	B2		3/2007	Herrmann et al.	
7,482,819	B2		1/2009	Wuersch	
7,580,743	B2		8/2009	Bourlion et al.	
D605,289	S	*	12/2009	Horton	D24/140
D616,986	S	*	6/2010	Biegen	D24/144
7,748,273	B2		7/2010	Halevy-Politch et al.	
7,771,133	B2		8/2010	Oomura et al.	
7,771,143	B2		8/2010	Bharadwaj et al.	
7,848,799	B2		12/2010	Herndon	



US D954,950 S

Page 2

D646,638 S 10/2011 Peterson et al.
 8,092,457 B2 1/2012 Oettinger et al.
 8,241,229 B2 8/2012 Herndon
 8,249,696 B2 8/2012 Fisher et al.
 8,402,829 B2 3/2013 Halevy-Politch et al.
 8,419,746 B2 4/2013 Bourlion et al.
 8,460,297 B2 6/2013 Watlington et al.
 8,463,421 B2 6/2013 Brett et al.
 8,480,682 B2 7/2013 Howlett et al.
 8,486,119 B2 7/2013 Bourlion
 8,511,945 B2 8/2013 Apkarian et al.
 8,603,148 B2 12/2013 Raven, III et al.
 8,641,674 B2 2/2014 Bobroff et al.
 D710,410 S 8/2014 Liao
 8,821,493 B2 9/2014 Anderson
 8,876,444 B1 11/2014 Chanturidze
 8,894,654 B2 11/2014 Anderson
 D719,594 S 12/2014 Leugers
 8,926,614 B2 1/2015 Hsieh
 8,936,468 B2 1/2015 Ranck et al.
 D722,627 S 2/2015 Leugers
 8,970,207 B2 3/2015 Baumgartner
 8,974,227 B2 3/2015 Magnusson et al.
 D727,985 S 4/2015 Leugers
 9,017,371 B2 4/2015 Whitman et al.
 9,033,707 B2 5/2015 Dricot
 D732,364 S 6/2015 Rinaldis et al.
 9,204,885 B2 12/2015 McGinley et al.
 9,289,219 B2 3/2016 Kumar
 9,326,832 B2 5/2016 Zuker et al.
 9,345,487 B2 5/2016 Herndon et al.
 D759,244 S 6/2016 Leugers
 D759,245 S 6/2016 Leugers
 9,358,016 B2 6/2016 McGinley et al.
 9,370,372 B2 6/2016 McGinley et al.
 9,468,445 B2 10/2016 McGinley et al.
 9,492,181 B2 11/2016 McGinley et al.
 9,526,511 B2 12/2016 Anderson
 9,554,807 B2 1/2017 McGinley et al.
 9,566,121 B2 2/2017 Staunton et al.
 9,649,141 B2 5/2017 Raven, III et al.
 D791,941 S * 7/2017 Burachynsky D24/133
 D793,831 S 8/2017 Russell et al.
 D793,832 S 8/2017 Russell et al.
 D793,833 S 8/2017 Russell et al.
 D794,190 S 8/2017 Russell et al.
 D794,196 S 8/2017 Russell et al.
 D831,824 S 10/2018 Antalffy
 D832,436 S 10/2018 Loewe
 D836,200 S 12/2018 Parker et al.
 10,159,495 B1 12/2018 Lambert
 D846,122 S 4/2019 Pintor
 D850,616 S 6/2019 Asfora et al.
 10,695,074 B2 6/2020 Carusillo
 D893,027 S * 8/2020 Peters D24/140
 D906,518 S * 12/2020 Krammer D24/129
 D930,820 S * 9/2021 Jaoudeh D24/112
 D935,611 S * 11/2021 Eisenthal D24/146
 D936,218 S * 11/2021 McLean D24/129
 2002/0058958 A1 5/2002 Walen
 2004/0059317 A1 3/2004 Hermann
 2005/0116673 A1 6/2005 Carl et al.
 2005/0131416 A1 6/2005 Jansen et al.
 2005/0171553 A1 8/2005 Schwarz et al.
 2006/0074405 A1 4/2006 Malackowski et al.
 2007/0085496 A1 4/2007 Philipp et al.
 2007/0090788 A1 4/2007 Hansford et al.
 2007/0206996 A1 9/2007 Bharadwaj et al.
 2009/0221922 A1 9/2009 Lec et al.
 2009/0326537 A1 12/2009 Anderson
 2010/0034605 A1 2/2010 Huckins et al.
 2010/0167233 A1 7/2010 Dricot
 2011/0020084 A1 1/2011 Brett et al.
 2011/0230886 A1 9/2011 Gustilo et al.
 2011/0245833 A1 10/2011 Anderson
 2012/0123417 A1 5/2012 Smith
 2012/0310247 A1 12/2012 Hsieh
 2013/0138106 A1 5/2013 Kumar
 2013/0307529 A1 11/2013 Baumgartner

2013/0338669 A1 12/2013 Brianza et al.
 2014/0018810 A1 1/2014 Knape et al.
 2014/0046332 A1 2/2014 Premanathan et al.
 2014/0114316 A1 4/2014 Xu et al.
 2014/0148808 A1 5/2014 Inkpen et al.
 2014/0222003 A1 8/2014 Herndon et al.
 2014/0371751 A1 12/2014 Thomas
 2014/0371752 A1 12/2014 Anderson
 2015/0066030 A1 3/2015 McGinley et al.
 2015/0066035 A1 3/2015 McGinley et al.
 2015/0066036 A1 3/2015 McGinley et al.
 2015/0066037 A1 3/2015 McGinley et al.
 2015/0066038 A1 3/2015 McGinley et al.
 2015/0080966 A1 3/2015 Anderson
 2015/0134010 A1 5/2015 Zlotolow
 2015/0141999 A1 5/2015 McGinley et al.
 2015/0148805 A1 5/2015 McGinley et al.
 2015/0148806 A1 5/2015 McGinley et al.
 2016/0051265 A1 2/2016 Jones et al.
 2016/0120553 A1 5/2016 Xie
 2016/0128704 A1 5/2016 McGinley et al.
 2016/0192974 A1 7/2016 Clain
 2016/0206328 A1 7/2016 Lo et al.
 2016/0278802 A1 9/2016 Cihak et al.
 2017/0007289 A1 1/2017 McGinley et al.
 2017/0128081 A1 5/2017 McGinley
 2017/0143396 A1 5/2017 McGinley et al.
 2017/0143440 A1 5/2017 McGinley et al.
 2017/0181753 A1 6/2017 Langeland
 2017/0189037 A1 7/2017 McGinley et al.
 2017/0340374 A1 11/2017 Xie et al.
 2018/0250020 A1 9/2018 Carusillo

FOREIGN PATENT DOCUMENTS

AU 2015312037 A1 3/2017
 AU 2014346458 B2 11/2018
 AU 2014315652 B2 5/2019
 CN 101530341 A 9/2009
 CN 204394613 U 6/2015
 DE 102011111671 A1 2/2013
 EP 1330192 A2 7/2003
 EP 1374784 A1 1/2004
 EP 2800531 A1 11/2014
 EP 3041419 B1 1/2019
 EP 3065650 B1 1/2019
 JP D1061576 2/2000
 JP 5810524 B2 11/2015
 JP 1559620 S 9/2016
 KR 20100050763 A 5/2010
 WO 9724991 A1 7/1997
 WO 0166024 A1 9/2001
 WO 2007002230 A1 1/2007
 WO 2009158115 A1 12/2009
 WO 2010028046 A1 3/2010
 WO 2013029582 A1 3/2013
 WO 2013098555 A1 7/2013
 WO 2013173138 A1 11/2013
 WO 2015006296 A1 1/2015
 WO 2015034562 A1 3/2015
 WO 2015070159 A1 5/2015
 WO 2016036756 A1 3/2016
 WO 2016049467 A1 3/2016
 WO 2017040783 A1 3/2017
 WO 2017075044 A1 5/2017
 WO 2017075060 A1 5/2017
 WO 2017075224 A1 5/2017
 WO 2017078754 A1 5/2017
 WO 2017083992 A1 5/2017
 WO 2017172949 A1 10/2017
 WO 2019035096 A1 2/2019

OTHER PUBLICATIONS

Stryker F1 Small Bone Micro Power System, stryker.com, [online], [site visited Feb. 9, 2022], Available from internet URL: <https://www.stryker.com/us/en/orthopaedic-instruments/products/stryker-fl-system-cordless-small-bone-power-tool-system.html> (Year: 2022).*

Demsey, Daniel et al., “Feasibility of Using Optical Sensing to Measure Bore Depth in Surgical Bone Drilling”, 17th Annual Meeting of the International Society for Computer Assisted Orthopaedic Surgery, CAOS 2017, 7 pages.

Diaz, Inaki et al., “Bone Drilling Methodology and Tool Based on Position Measurements”, Computer Methods and Programs in Biomedicine 112, 2013, pp. 284-292.

English language abstract and machine-assisted English translation for CN 101530341 extracted from espacenet.com database on Mar. 29, 2018, 11 pages.

English language abstract and machine-assisted English translation for CN 204394613 extracted from espacenet.com database on Mar. 29, 2018, 12 pages.

English language abstract and machine-assisted English translation for JP 5810524 extracted from espacenet.com database on Aug. 13, 2020, 231 pages.

English language abstract and machine-assisted English translation for KR 20100050763 extracted from espacenet.com database on Mar. 29, 2018, 9 pages.

English language abstract and machine-assisted English translation for WO 2013/029582 extracted from espacenet.com database on Apr. 15, 2020, 10 pages.

English language abstract for EP 1 330 192 extracted from espacenet.com database on Apr. 15, 2020, 1 page.

English language abstract for WO 01/66024 extracted from espacenet.com database on Mar. 1, 2018, 2 pages.

English language abstract not found for JP 1559620; however, see English language equivalent U.S. Pat. No. D. 732,364. Original document unavailable, 1 page.

International Search Report for Application No. PCT/US2016/049899 dated Nov. 16, 2016, 4 pages.

International Search Report for Application No. PCT/IB2018/056251 dated Jan. 3, 2019, 4 pages.

Machine-assisted English language abstract and machine-assisted English translation for DE 10 2011 111 671 extracted from espacenet.com database on Mar. 29, 2018, 28 pages.

Mcginley Orthopaedic Innovations, “IntelliSense Drill Brochure”, 2015, 4 pages.

Mcginley Orthopaedic Innovations, “Revolutionary Intellisense Drill”, 2014, 4 pages.

Mcginley Orthopaedics, “IntelliSense Drill Technology”, 2016, 4 pages.

Stryker, “Cordless Driver 3 Accessories Brochure”, 2017, 2 pages.

* cited by examiner

Primary Examiner — Samantha Q Lawrence
Assistant Examiner — Holly M Rodriguez
 (74) *Attorney, Agent, or Firm* — Howard & Howard Attorneys PLLC

(57)

CLAIM

The ornamental design for a measurement head for a surgical tool, as shown and described.

DESCRIPTION

FIG. 1 is a front, top, right side perspective view of a measurement head for a surgical tool showing our new design;
 FIG. 2 is a right side view thereof;
 FIG. 3 is a left side view thereof;
 FIG. 4 is a front view thereof;
 FIG. 5 is a rear view thereof;
 FIG. 6 is a top view thereof; and,
 FIG. 7 is a bottom view thereof.
 The dotted broken lines in the drawings depict portions of the measurement head for a surgical tool that form no part of the claimed design.

1 Claim, 4 Drawing Sheets

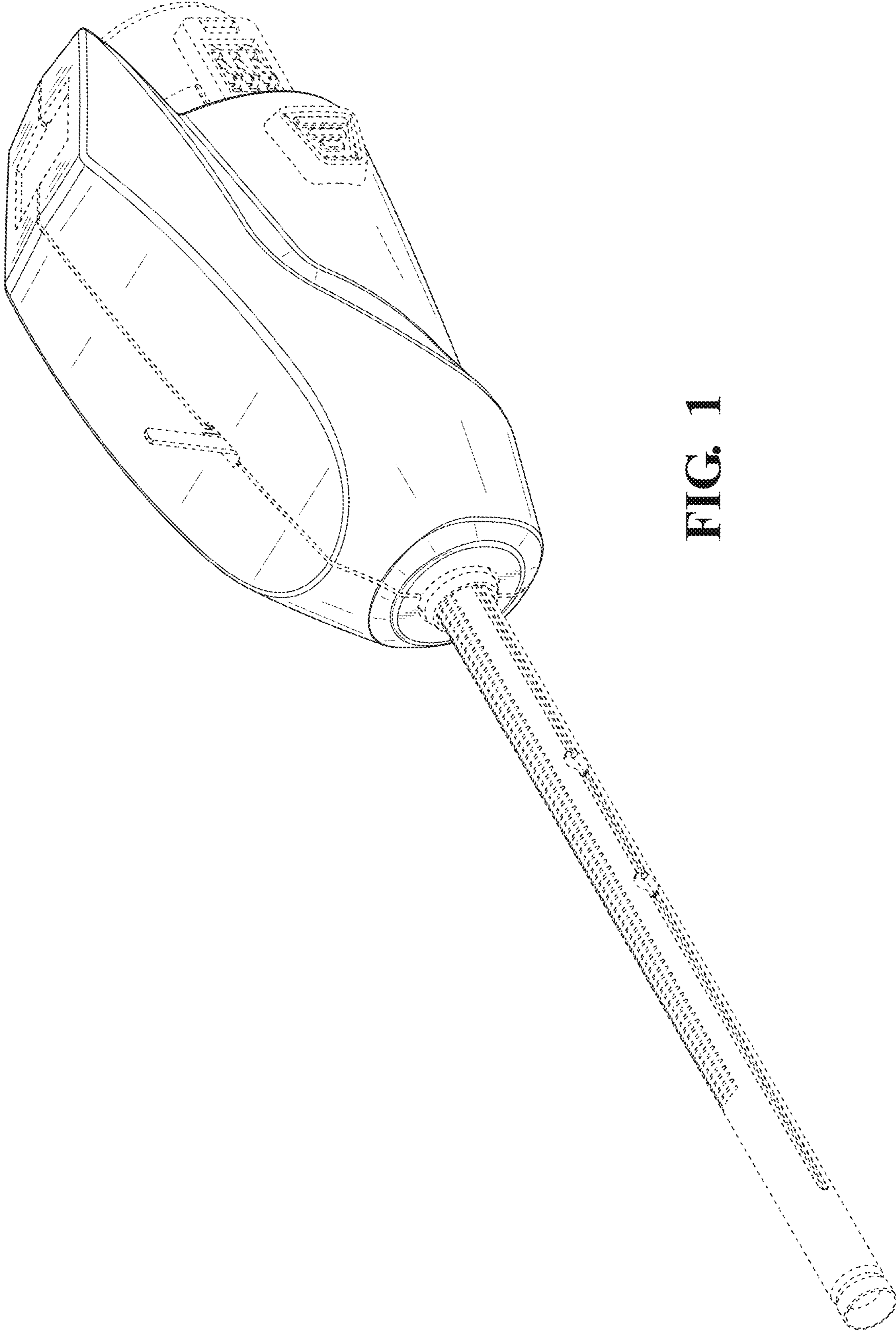


FIG. 1

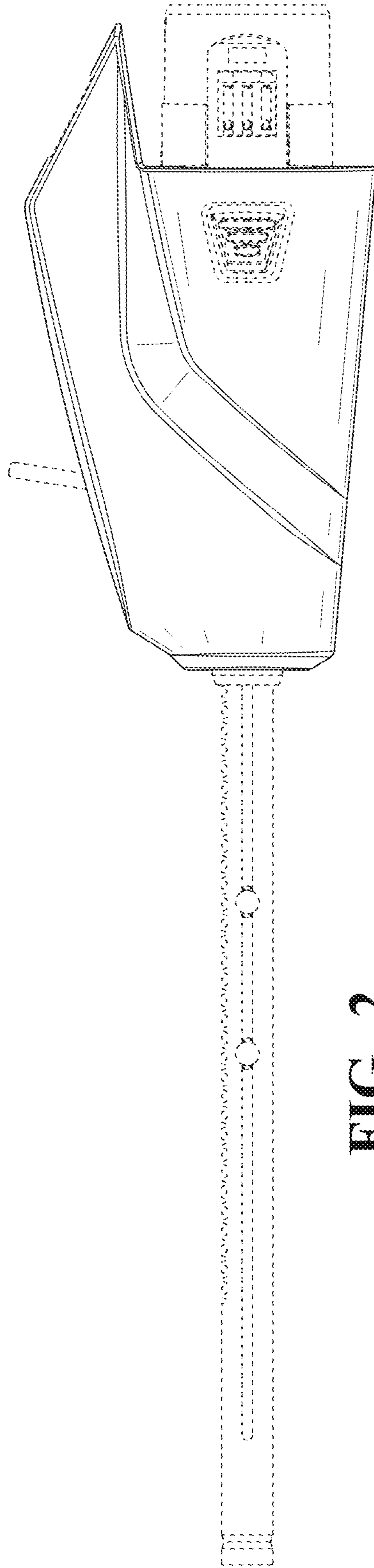


FIG. 2

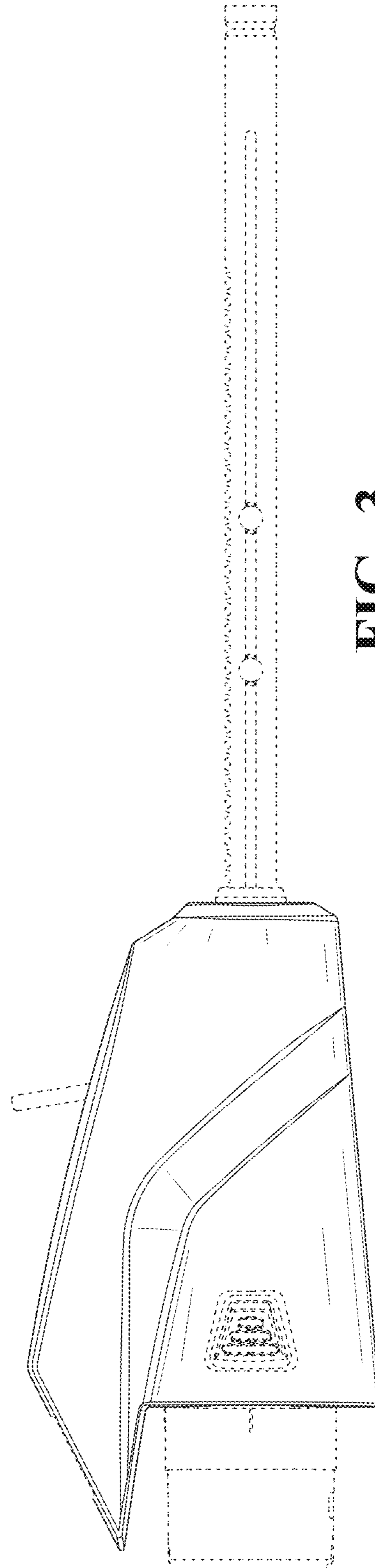


FIG. 3

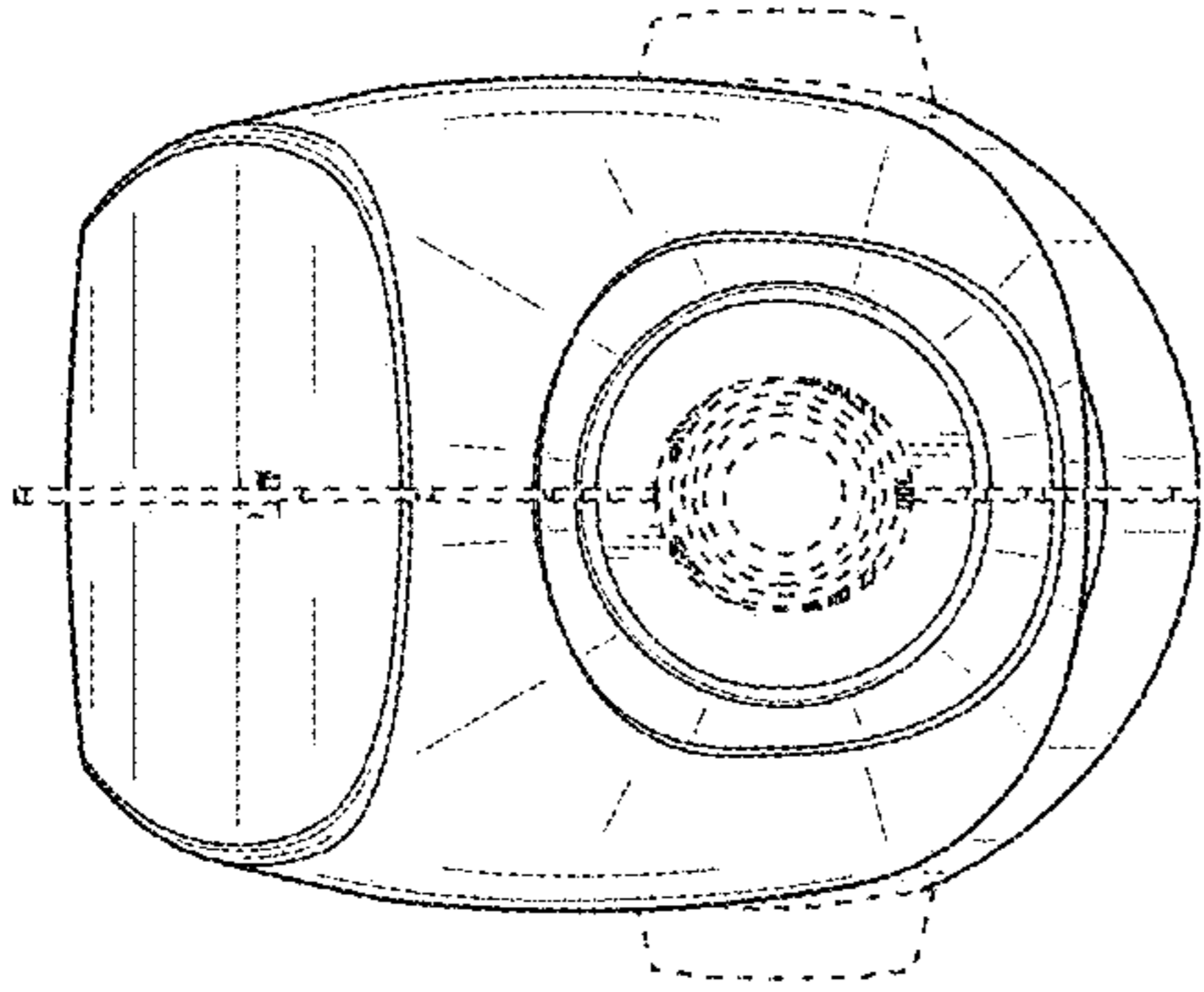


FIG. 4

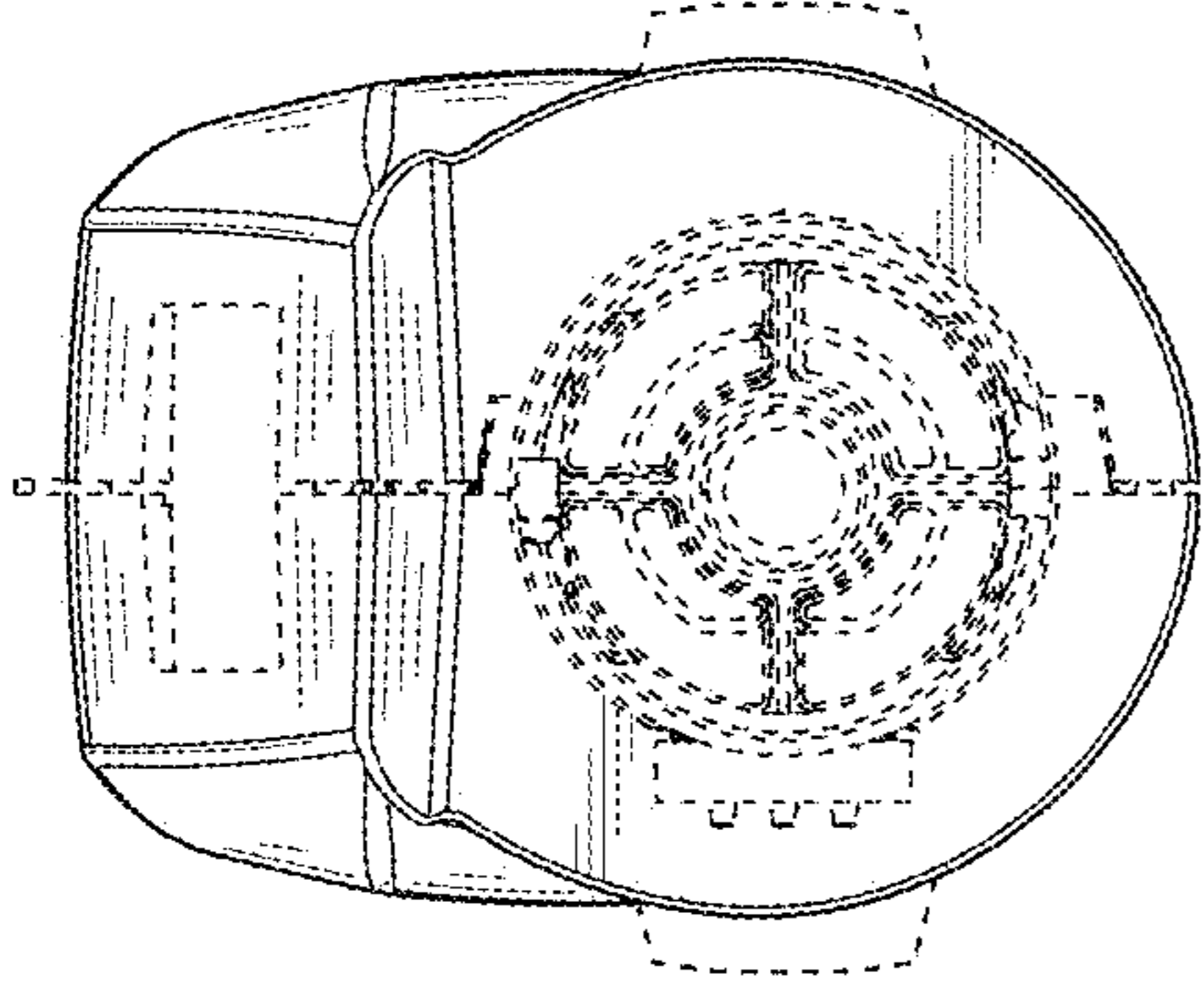


FIG. 5

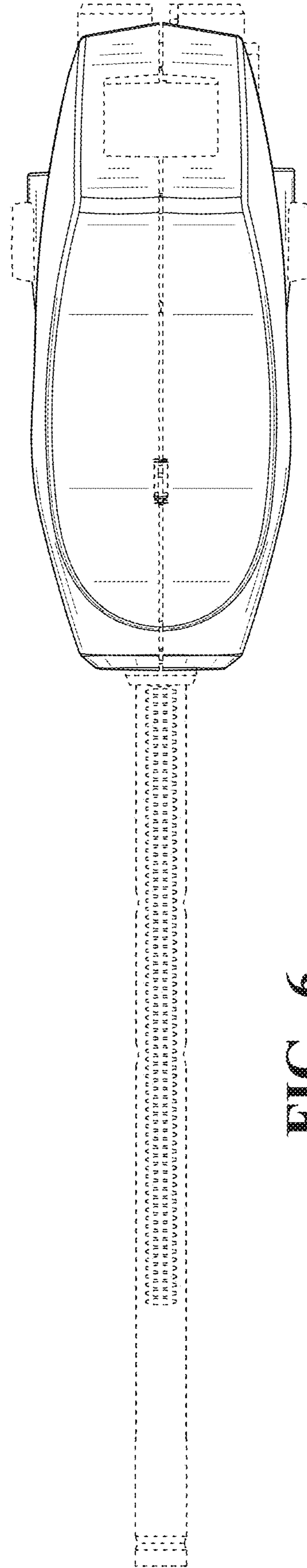


FIG. 6

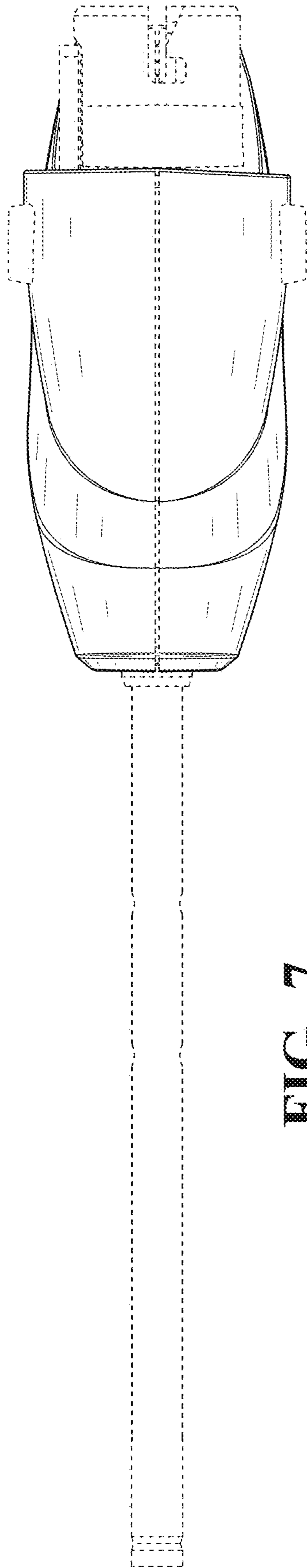


FIG. 7