



US00D737979S

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

(10) **Patent No.:** **US D737,979 S**
(45) **Date of Patent:** **** Sep. 1, 2015**

- (54) **ECG ELECTRODE CONNECTOR**
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Peter Yu, Bao An (CN)
- (**) Term: **14 Years**
- (21) Appl. No.: **29/486,095**
- (22) Filed: **Mar. 26, 2014**

3,868,946 A	3/1975	Hurley
3,888,240 A	6/1975	Reinhold, Jr. et al.
3,895,635 A	7/1975	Justus et al.
3,901,218 A	8/1975	Buchalter
3,997,225 A	12/1976	Horwinski
3,998,213 A	12/1976	Price
4,027,664 A	6/1977	Heavner, Jr. et al.
4,034,854 A	7/1977	Bevilacqua
4,077,397 A	3/1978	Ellis et al.
4,112,941 A *	9/1978	Larimore 600/394
4,166,465 A	9/1979	Esty et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CN	101491437 A	7/2009
CN	101491438 A	7/2009

(Continued)

OTHER PUBLICATIONS

A&D Company, Limited, "Vital Sensor Graphic Model;" Instruction Manual for TM-2560G/TM-2564G—TM2560GP/TM-2564GP; Jan. 1, 2004; 62 Pages.

(Continued)

Related U.S. Application Data

- (63) Continuation of application No. 13/785,713, filed on Mar. 5, 2013, now Pat. No. 8,690,611, which is a continuation of application No. 13/443,096, filed on Apr. 10, 2012, now Pat. No. 8,408,948, which is a continuation of application No. 13/182,656, filed on Jul. 14, 2011, now Pat. No. 8,152,571, which is a continuation of application No. 12/330,550, filed on Dec. 9, 2008, now Pat. No. 8,038,484.
- (51) **LOC (10) Cl.** **24-01**
- (52) **U.S. Cl.**
USPC **D24/167**
- (58) **Field of Classification Search**
USPC D24/165–168, 186, 187; D13/133, 120,
D13/147; 600/508, 509, 513, 515, 528;
439/346, 368
See application file for complete search history.

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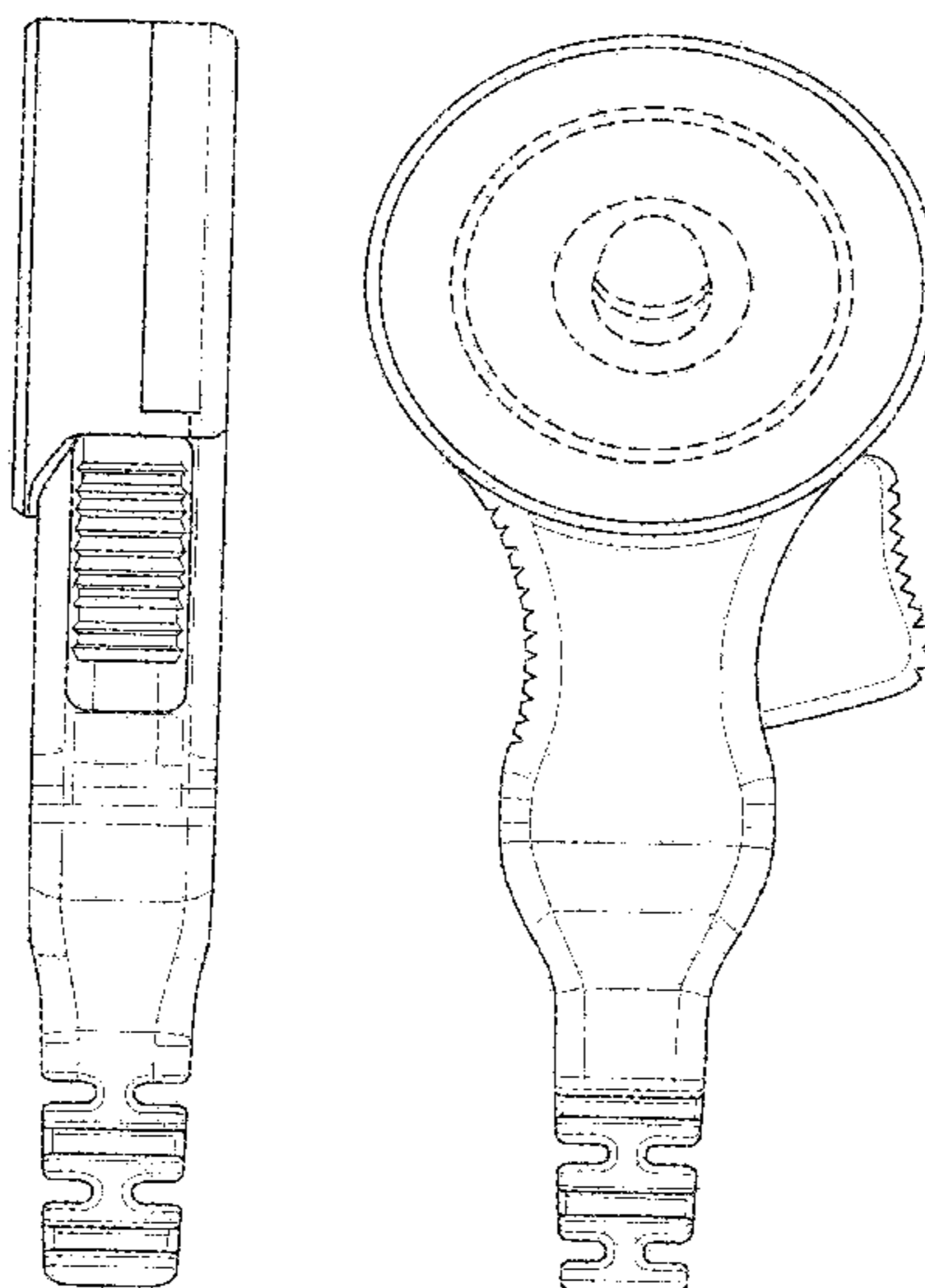
(57) **CLAIM**
The ornamental design for an ECG electrode connector, as shown and described.

DESCRIPTION

FIG. 1 is a top view of an ECG electrode connector showing our new design,
FIG. 2 is a left-side view thereof; and,
FIG. 3 is a bottom view thereof.
The broken lines in FIGS. 1 and 3 are included for the purpose of illustrating portions of the ECG electrode connector that form no part of the claimed design.

1 Claim, 2 Drawing Sheets

- (56) **References Cited**
U.S. PATENT DOCUMENTS
3,606,881 A 9/1971 Woodson
3,752,151 A 8/1973 Robichaud
3,805,769 A 4/1974 Sessions
3,828,766 A 8/1974 Krasnow
3,829,826 A 8/1974 Brown et al.
3,842,394 A 10/1974 Bolduc



(56)

References Cited

U.S. PATENT DOCUMENTS

4,220,390	A	9/1980	Cobaugh et al.	5,486,117	A	1/1996	Chang
4,303,293	A	12/1981	Grunwald	5,507,290	A	4/1996	Kelly et al.
D263,167	S *	2/1982	Stone D24/168	5,507,665	A	4/1996	Oda
4,353,372	A	10/1982	Ayer	5,507,668	A	4/1996	Lambrinos et al.
4,365,634	A	12/1982	Bare et al.	5,509,822	A	4/1996	Negus et al.
4,498,480	A	2/1985	Mortensen	5,511,553	A	4/1996	Segalowitz
4,674,817	A	6/1987	Olms	5,546,950	A	8/1996	Schoeckert et al.
4,729,377	A	3/1988	Granek et al.	5,558,535	A	9/1996	Saka et al.
4,763,660	A	8/1988	Kroll et al.	5,564,939	A	10/1996	Maitani et al.
4,781,200	A	11/1988	Baker	5,582,180	A	12/1996	Manset et al.
4,785,822	A	11/1988	Wallace	5,584,719	A	12/1996	Tsuji et al.
4,815,964	A	3/1989	Cohen et al.	D377,219	S *	1/1997	Strand et al. D24/187
4,842,557	A	6/1989	Muz	5,599,199	A	2/1997	Wright
4,850,356	A	7/1989	Heath	5,603,632	A	2/1997	Johannes et al.
4,909,260	A	3/1990	Salem et al.	5,611,708	A	3/1997	Mizunuma et al.
4,947,846	A	8/1990	Kitagawa et al.	5,613,870	A	3/1997	Traver, Jr.
4,957,109	A	9/1990	Groeger et al.	5,615,674	A	4/1997	Maurer
4,974,594	A *	12/1990	Berlin 600/395	5,622,168	A	4/1997	Keusch et al.
5,080,604	A	1/1992	Rider et al.	5,624,271	A	4/1997	Childs et al.
5,083,238	A	1/1992	Bousman	5,624,281	A	4/1997	Christensson
5,083,933	A	1/1992	Colleran et al.	5,626,135	A	5/1997	Sanfilippo
5,104,253	A	4/1992	Zielinski et al.	5,632,274	A	5/1997	Quedens et al.
5,104,334	A	4/1992	Honma et al.	5,651,689	A	7/1997	Plyler et al.
5,131,854	A	7/1992	Jose et al.	5,653,606	A	8/1997	Chrysostomou
5,137,466	A	8/1992	Endo et al.	5,674,088	A	10/1997	Roche et al.
5,154,646	A	10/1992	Shoup	5,676,694	A	10/1997	Boser et al.
5,158,469	A	10/1992	Martin	5,679,022	A	10/1997	Cappa et al.
5,160,276	A	11/1992	Marsh et al.	5,679,029	A	10/1997	Saunier et al.
5,173,059	A	12/1992	Sato et al.	5,685,303	A	11/1997	Rollman et al.
5,176,343	A	1/1993	Cheney et al.	5,695,355	A	12/1997	Hasenfratz et al.
5,178,556	A	1/1993	Chen	5,702,265	A	12/1997	Yamaguchi
5,180,312	A	1/1993	Martin	5,704,351	A	1/1998	Mortara et al.
5,190,467	A	3/1993	Ohta	5,711,684	A	1/1998	Inoue et al.
5,192,226	A	3/1993	Wang	5,718,596	A	2/1998	Inaba et al.
5,197,901	A	3/1993	Hashiguchi	5,724,025	A	3/1998	Tavori
5,199,897	A	4/1993	Hashiguchi	5,724,984	A	3/1998	Arnold et al.
5,201,669	A	4/1993	Lin	5,725,525	A	3/1998	Kordis
5,203,715	A	4/1993	Yamamoto	5,741,155	A	4/1998	Herman
5,203,719	A	4/1993	Kozono	5,749,746	A	5/1998	Tan et al.
5,207,594	A	5/1993	Olson	5,769,650	A	6/1998	Aoyama et al.
5,224,479	A	7/1993	Sekine	5,772,591	A	6/1998	Cram
5,232,383	A	8/1993	Barnick	5,775,953	A	7/1998	Yamanashi et al.
5,234,357	A	8/1993	Yamaguchi	5,782,647	A	7/1998	Okura et al.
5,243,510	A	9/1993	Cheney	5,782,761	A	7/1998	Gusakov
5,263,481	A	11/1993	Axelgaard	5,782,892	A	7/1998	Castle et al.
5,276,443	A	1/1994	Gates et al.	5,788,527	A	8/1998	Sanders et al.
5,278,759	A	1/1994	Berra et al.	5,791,918	A	8/1998	Pierce
5,279,308	A	1/1994	DiSabito et al.	5,797,854	A	8/1998	Hedgecock
5,293,013	A	3/1994	Takahashi	5,806,152	A	9/1998	Saitou et al.
5,320,621	A	6/1994	Gordon et al.	5,813,404	A	9/1998	Devlin et al.
5,326,272	A	7/1994	Harhen et al.	5,813,979	A	9/1998	Wolfer
5,332,330	A	7/1994	Kaneko	5,827,086	A	10/1998	Fukuda
5,338,219	A	8/1994	Hiramoto et al.	5,830,000	A	11/1998	Shifflett et al.
5,341,806	A	8/1994	Gadsby et al.	5,836,783	A	11/1998	Morisawa et al.
5,341,812	A	8/1994	Allaire et al.	5,843,141	A	12/1998	Bischoff et al.
5,353,793	A	10/1994	Bornn	5,848,456	A	12/1998	Sjoqvist
5,354,216	A	10/1994	Cruise et al.	5,865,740	A	2/1999	Kelly et al.
5,362,249	A	11/1994	Carter	5,865,741	A	2/1999	Kelly et al.
5,370,116	A	12/1994	Rollman et al.	5,871,451	A	2/1999	Unger et al.
5,370,550	A	12/1994	Alwine et al.	5,873,747	A	2/1999	Tsuji
5,376,016	A	12/1994	Inaba et al.	5,876,232	A	3/1999	Matsushita et al.
5,378,168	A	1/1995	Sumida	5,895,284	A	4/1999	Kocher et al.
5,380,223	A	1/1995	Marsh et al.	5,895,298	A	4/1999	Faupel et al.
5,382,176	A	1/1995	Norden	5,904,579	A	5/1999	McLean et al.
5,383,794	A	1/1995	Davis et al.	5,913,834	A	6/1999	Francais
5,387,116	A	2/1995	Wang	5,916,159	A	6/1999	Kelly et al.
5,387,127	A	2/1995	Wang	5,931,689	A	8/1999	Patel
5,399,045	A	3/1995	Yoneda et al.	5,931,861	A	8/1999	Werner et al.
5,405,269	A	4/1995	Stupecky	5,934,926	A	8/1999	Gabrisko, Jr. et al.
5,415,164	A	5/1995	Faupel et al.	5,937,950	A	8/1999	Adams et al.
5,429,526	A	7/1995	Ann	5,938,470	A	8/1999	Kashiyama
5,431,166	A	7/1995	Macur	5,938,597	A	8/1999	Stratbucker
5,454,739	A	10/1995	Strand	5,941,725	A	8/1999	Brennan et al.
5,462,448	A	10/1995	Kida et al.	5,944,562	A	8/1999	Christensson
5,484,739	A	1/1996	Lee et al.	5,951,316	A	9/1999	Kawano et al.
				5,964,624	A	10/1999	Pernelle
				5,968,087	A	10/1999	Hess et al.
				5,971,790	A	10/1999	Rohde
				5,971,799	A	10/1999	Swade

(56)

References Cited

U.S. PATENT DOCUMENTS

5,980,332 A	11/1999	Tsuji et al.	6,453,186 B1	9/2002	Lovejoy et al.
5,984,717 A	11/1999	Lee	6,454,577 B1	9/2002	Yi
5,997,334 A	12/1999	Goto	6,454,590 B1	9/2002	Goodrich et al.
6,006,125 A	12/1999	Kelly et al.	6,454,605 B1	9/2002	Bassler et al.
6,027,359 A	2/2000	Aoki et al.	6,456,872 B1	9/2002	Faisandier
6,032,063 A	2/2000	Hoar et al.	6,461,179 B1	10/2002	Sullivan et al.
6,032,064 A	2/2000	Devlin et al.	6,487,430 B1	11/2002	Henderson et al.
6,038,479 A	3/2000	Werner et al.	6,494,744 B1	12/2002	Lee
6,038,481 A	3/2000	Werner et al.	6,514,099 B2	2/2003	Endo
6,050,838 A	4/2000	Norizuki et al.	6,517,372 B1	2/2003	Jones
6,055,448 A	4/2000	Anderson et al.	6,531,657 B1	3/2003	Jones, Jr. et al.
6,062,902 A	5/2000	Buckles et al.	6,533,600 B1	3/2003	Kashiyama et al.
6,066,093 A	5/2000	Kelly et al.	6,540,549 B2	4/2003	Rupert
6,074,234 A	6/2000	Hasegawa	6,551,117 B2	4/2003	Poplawski et al.
6,098,127 A	8/2000	Kwang	6,553,246 B1	4/2003	Wenger
6,109,948 A	8/2000	Kuo	6,553,250 B2	4/2003	Rantala
6,115,623 A	9/2000	McFee	6,558,189 B2	5/2003	Groebe et al.
6,116,940 A	9/2000	Bertens et al.	6,561,834 B2	5/2003	Chen
6,122,536 A	9/2000	Sun et al.	6,564,079 B1	5/2003	Cory et al.
6,122,544 A	9/2000	Organ	6,565,388 B1	5/2003	Van Woensel et al.
6,129,666 A	10/2000	DeLuca et al.	6,567,680 B2	5/2003	Swetlik et al.
6,132,233 A	10/2000	Fukuda	6,575,759 B1	6/2003	Ollivier
6,139,350 A	10/2000	Mathesius	6,575,794 B1	6/2003	Nakamura
6,139,360 A	10/2000	Hayashi	6,582,252 B1	6/2003	Lin
6,152,778 A	11/2000	Dalton	6,589,066 B1	7/2003	Wu
6,155,864 A	12/2000	Yoshiura	6,592,391 B1	7/2003	Wu
6,157,851 A	12/2000	Kelly et al.	6,592,404 B2	7/2003	Endo
6,165,017 A	12/2000	Kuo	6,604,963 B2	8/2003	Lin
6,168,453 B1	1/2001	Kuo	6,607,397 B1	8/2003	Zhang et al.
6,171,139 B1	1/2001	Sato et al.	6,609,018 B2	8/2003	Cory et al.
6,190,385 B1	2/2001	Tom et al.	6,609,833 B1	8/2003	Miyachi et al.
6,203,354 B1	3/2001	Kuwahara et al.	6,611,705 B2	8/2003	Hopman et al.
6,219,568 B1	4/2001	Kelly et al.	6,612,860 B2	9/2003	Droesbeke
6,219,569 B1	4/2001	Kelly et al.	6,619,976 B2	9/2003	Huetter et al.
6,223,088 B1	4/2001	Scharnberg et al.	6,619,989 B1	9/2003	Yi
6,232,366 B1	5/2001	Wang et al.	6,623,312 B2	9/2003	Merry et al.
6,234,827 B1	5/2001	Nishio et al.	6,636,754 B1	10/2003	Baura et al.
6,236,874 B1	5/2001	Devlin et al.	6,647,286 B1	11/2003	Kato et al.
6,240,323 B1	5/2001	Calenzo, Sr. et al.	6,648,665 B1	11/2003	Wu
6,247,963 B1	6/2001	Rattner	6,648,666 B1	11/2003	Wu
6,250,955 B1	6/2001	Archuleta	6,654,626 B2	11/2003	Devlin et al.
6,254,425 B1	7/2001	Shchervinsky et al.	6,655,979 B1	12/2003	Lee
6,257,914 B1	7/2001	Comerci et al.	6,659,790 B1	12/2003	Wi
6,257,925 B1	7/2001	Jones	6,663,412 B2	12/2003	Aramoto et al.
6,280,209 B1	8/2001	Bassler et al.	6,663,419 B2	12/2003	Vaden
6,280,227 B1	8/2001	Terada et al.	6,663,420 B1	12/2003	Xiao
6,280,243 B1	8/2001	Liu et al.	6,663,570 B2	12/2003	Mott et al.
6,283,789 B1	9/2001	Tsai	6,669,510 B2	12/2003	Yamawaki et al.
6,290,530 B1	9/2001	Chang	6,688,894 B2	2/2004	Knox, Jr. et al.
6,298,255 B1	10/2001	Cordero et al.	6,688,907 B2	2/2004	Yamaoka et al.
6,304,783 B1	10/2001	Lyster et al.	6,702,602 B2	3/2004	Wu
6,312,297 B1	11/2001	Lorkowski	6,702,603 B2	3/2004	Wu
6,324,432 B1	11/2001	Rigaux et al.	6,702,616 B1	3/2004	Chang et al.
D452,318 S *	12/2001	Merry et al. D24/168	6,709,284 B1	3/2004	Avlonitis
6,339,720 B1	1/2002	Anzellini et al.	6,716,165 B1	4/2004	Flanders et al.
6,340,306 B1	1/2002	Daoud	6,722,912 B2	4/2004	Wu
6,356,779 B1	3/2002	Katzenmaier et al.	6,736,650 B1	5/2004	Chen et al.
6,358,083 B1	3/2002	Kraft	6,743,053 B2	6/2004	Wu
6,360,119 B1	3/2002	Roberts	6,748,797 B2	6/2004	Breed et al.
6,364,685 B1	4/2002	Manning	6,751,493 B2	6/2004	Wenger
6,383,010 B1	5/2002	Mayo et al.	6,755,689 B2	6/2004	Zhang et al.
6,383,011 B2	5/2002	Chen	6,768,921 B2	7/2004	Organ et al.
6,383,036 B1	5/2002	Steinhauser et al.	6,773,293 B1	8/2004	Lee
6,386,917 B1	5/2002	Sakaguchi	6,780,065 B2	8/2004	Schwarz
6,393,317 B1	5/2002	Fukuda et al.	6,786,755 B2	9/2004	Dambach et al.
6,394,953 B1	5/2002	Devlin et al.	6,786,764 B2	9/2004	Sivertsen
6,398,575 B1	6/2002	Bresson	D498,535 S *	11/2004	Genau et al. D24/186
6,398,577 B1	6/2002	Simmel et al.	6,816,744 B2	11/2004	Garfield et al.
6,400,977 B1	6/2002	Kelly et al.	6,832,928 B2	12/2004	Suzuki
6,411,834 B1	6/2002	Nagai	6,837,734 B2	1/2005	Ushio et al.
6,413,112 B2	7/2002	Semmeling et al.	6,847,836 B1	1/2005	Sujdak
6,415,169 B1	7/2002	Kornrumpf et al.	6,848,926 B2	2/2005	Ling et al.
6,419,636 B1	7/2002	Young et al.	6,851,969 B2	2/2005	Archuleta
6,434,410 B1	8/2002	Cordero et al.	6,860,750 B1	3/2005	Wu
6,447,170 B1	9/2002	Takahashi et al.	6,866,535 B2	3/2005	Uchida
			6,881,098 B2	4/2005	Jeansonne et al.
			6,891,379 B2	5/2005	Kelly et al.
			6,913,482 B1	7/2005	Wu
			6,939,158 B2	9/2005	Moffett et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

6,939,345 B2	9/2005	Knight et al.	7,373,196 B2	5/2008	Ryu et al.
6,945,796 B2	9/2005	Bassler et al.	7,374,448 B1	5/2008	Jepsen et al.
6,945,807 B1	9/2005	Wu	7,381,082 B2	6/2008	Lai
6,948,973 B1	9/2005	Hsu et al.	7,390,224 B2	6/2008	Sodemann et al.
6,970,731 B1	11/2005	Jayaraman et al.	7,396,246 B2	7/2008	Okada et al.
6,973,341 B2	12/2005	Watson	7,399,195 B2	7/2008	Kim et al.
6,973,343 B2	12/2005	Wenger	7,401,946 B2	7/2008	Laukhuf
6,980,852 B2	12/2005	Jersey-Willuhn et al.	7,402,071 B2	7/2008	Ohtaka et al.
6,984,143 B2	1/2006	Roese	7,413,461 B2	8/2008	Dawiedczyk et al.
D516,217 S *	2/2006	Brown et al. D24/186	7,413,485 B2	8/2008	Lappoehn
6,997,733 B2	2/2006	Peng	7,416,440 B2	8/2008	Homyk et al.
7,004,787 B2	2/2006	Milan	7,422,437 B1	9/2008	Lin et al.
7,008,255 B1	3/2006	Wang	7,422,452 B2	9/2008	Achtner et al.
7,025,618 B2	4/2006	Fukuda	7,445,512 B1	11/2008	Lai
7,025,628 B2	4/2006	LaMeres et al.	7,445,522 B2	11/2008	Burnes et al.
7,029,286 B2	4/2006	Hall et al.	7,462,074 B1	12/2008	Devlin et al.
7,033,207 B2	4/2006	Nimura	7,473,141 B2	1/2009	Liao
7,041,918 B1	5/2006	Wu	7,488,187 B2	2/2009	Wolf
7,056,134 B2	6/2006	Martin et al.	7,494,383 B2	2/2009	Cohen et al.
7,056,141 B2	6/2006	Moffett et al.	7,497,738 B2	3/2009	Kuo
7,077,711 B1	7/2006	Moore	7,503,807 B2	3/2009	Martin et al.
7,081,008 B2	7/2006	Tan	7,556,535 B2	7/2009	Liao
7,081,026 B2	7/2006	Schwarz	7,581,992 B1	9/2009	Liu et al.
7,083,480 B2	8/2006	Silber	7,585,182 B2	9/2009	Asante et al.
7,085,598 B2	8/2006	Sato et al.	7,591,673 B2	9/2009	Chan et al.
7,104,801 B1	9/2006	Brodnick et al.	7,604,511 B1	10/2009	Johnson
7,110,804 B2	9/2006	Baumer et al.	7,618,377 B2	11/2009	McAtamney et al.
7,117,590 B2	10/2006	Koenig et al.	7,632,130 B2	12/2009	Sami
7,118,411 B2	10/2006	Huang et al.	D609,813 S *	2/2010	Molden et al. D24/167
7,127,279 B2	10/2006	Finneran et al.	7,666,028 B2	2/2010	Meleck
7,128,600 B2	10/2006	Osypka	D629,358 S *	12/2010	Slippy et al. D13/133
7,134,908 B2	11/2006	Wu	8,038,484 B2	10/2011	Selvitelli et al.
7,137,839 B2	11/2006	Dilliner et al.	8,152,571 B2	4/2012	Selvitelli et al.
7,144,268 B2	12/2006	Koenig et al.	8,255,041 B2	8/2012	Istvan et al.
7,150,655 B2	12/2006	Mastrototaro et al.	8,408,507 B2	4/2013	Liu
D535,029 S *	1/2007	McAtamney et al. D24/167	8,408,948 B2	4/2013	Selvitelli et al.
7,160,136 B2	1/2007	Zhang et al.	8,414,315 B2	4/2013	Dekoski
7,169,107 B2	1/2007	Jersey-Willuhn et al.	8,690,611 B2	4/2014	Selvitelli et al.
7,179,111 B2	2/2007	Van Der Mee et al.	8,694,080 B2 *	4/2014	Farrior 600/509
7,179,113 B2	2/2007	Koenig et al.	8,795,004 B2	8/2014	Selvitelli et al.
7,182,630 B1	2/2007	Su	8,897,865 B2	11/2014	Farrior
7,184,820 B2	2/2007	Jersey-Willuhn et al.	2001/0053639 A1	12/2001	Endo
7,189,097 B2	3/2007	Benham	2002/0133069 A1	9/2002	Roberts
7,197,357 B2	3/2007	Istvan et al.	2002/0138011 A1	9/2002	Rantala
7,198,502 B2	4/2007	Koenig et al.	2002/0188216 A1	12/2002	Kayyali et al.
7,201,599 B2	4/2007	Holub	2003/0068914 A1	4/2003	Merry et al.
7,207,825 B2	4/2007	Le Gallic et al.	2003/0068918 A1	4/2003	Christensson
7,214,107 B2	5/2007	Powell et al.	2004/0073127 A1	4/2004	Istvan et al.
7,236,825 B2	6/2007	Wang	2004/0127802 A1	7/2004	Istvan et al.
7,252,542 B2	8/2007	Chen	2004/0176674 A1	9/2004	Nazeri
7,252,556 B2	8/2007	Anbo et al.	2004/0203273 A1	10/2004	Schwarz
7,252,565 B2	8/2007	Hunter	2005/0164551 A1	7/2005	Wlos
7,255,609 B1	8/2007	Epstein	2005/0177052 A1	8/2005	Istvan et al.
7,258,566 B2	8/2007	Koenig et al.	2005/0203349 A1	9/2005	Nanikashvili
7,264,510 B2	9/2007	Koenig et al.	2006/0004273 A1	1/2006	Lobodzinski
7,270,568 B2	9/2007	Osypka	2006/0073728 A1	4/2006	Zaiken et al.
7,270,580 B2 *	9/2007	Bradley et al. 439/909	2006/0286861 A1	12/2006	Avevor et al.
7,272,427 B2	9/2007	Ristolainen	2007/0038057 A1	2/2007	Nam et al.
7,272,428 B2	9/2007	Hopman et al.	2007/0260133 A1	11/2007	Meyer
7,275,951 B2	10/2007	Shigeta et al.	2008/0132106 A1	6/2008	Burnes et al.
7,281,937 B2	10/2007	Reed et al.	2008/0132773 A1	6/2008	Burnes et al.
7,287,998 B2	10/2007	Masai	2008/0177168 A1	7/2008	Callahan et al.
7,303,430 B2	12/2007	Butcher	2009/0099423 A1	4/2009	Al-Ali et al.
7,318,740 B1	1/2008	Henry et al.	2009/0149731 A1	6/2009	Selvitelli et al.
7,319,895 B2	1/2008	Klefstad-Sillonville et al.	2009/0221153 A1	9/2009	Santangelo et al.
7,322,849 B2	1/2008	Sutton	2011/0092833 A1 *	4/2011	Farrior 600/508
7,329,139 B2	2/2008	Benham	2011/0275252 A1	11/2011	Selvitelli et al.
7,333,850 B2	2/2008	Marossero et al.	2012/0196474 A1	8/2012	Selvitelli et al.
7,335,053 B2	2/2008	Avevor et al.	2013/0023750 A1 *	1/2013	Callahan 600/509
7,347,710 B2	3/2008	Ohtaka et al.	2013/0189881 A1	7/2013	Selvitelli et al.
7,347,826 B1	3/2008	Karicherla et al.	2014/0170896 A1	6/2014	Selvitelli et al.
7,359,751 B1	4/2008	Erickson et al.	2014/0180148 A1 *	6/2014	Coggins et al. 600/509
7,361,058 B1	4/2008	Lien et al.	2014/0243644 A1	8/2014	Farrior
7,364,440 B2	4/2008	Gobron et al.	2014/0275927 A1	9/2014	Simpson
7,371,102 B2	5/2008	Sakamoto et al.	2014/0303472 A1	10/2014	Callahan
			2014/0309514 A1	10/2014	Zhou et al.
			2014/0322945 A1	10/2014	Selvitelli et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

DE	90 02 539.3	U1	5/1990
DE	102 25 621	B3	1/2004
DE	10 2004 032 4		1/2006
EP	0 766 946	A2	4/1997
EP	0 799 628	A2	10/1997
EP	1 050 269		11/2000
EP	1 645 224		4/2008
EP	1 932 470	A1	6/2008
EP	2 070 474	A2	6/2009
GB	162804		5/1921

JP	10-248820	A	9/1998
JP	2003-010138		1/2003
JP	2004-282608		10/2004
WO	WO 03/047427	A2	6/2003
WO	WO 2008/092098	A2	7/2008
WO	WO 2013/013370	A1	1/2013

OTHER PUBLICATIONS

Andreas Boos et al., "A New, Lightweight Fetal Telemetry System;"
Hewlett-Packard Journal; Dec. 1995; 12 Pages.
Tyco Healthcare: Kendall, "ECG Electrodes;" Informational Presenta-
tion; Tyco Healthcare Group, LP; 2003; 8 Pages.

* cited by examiner

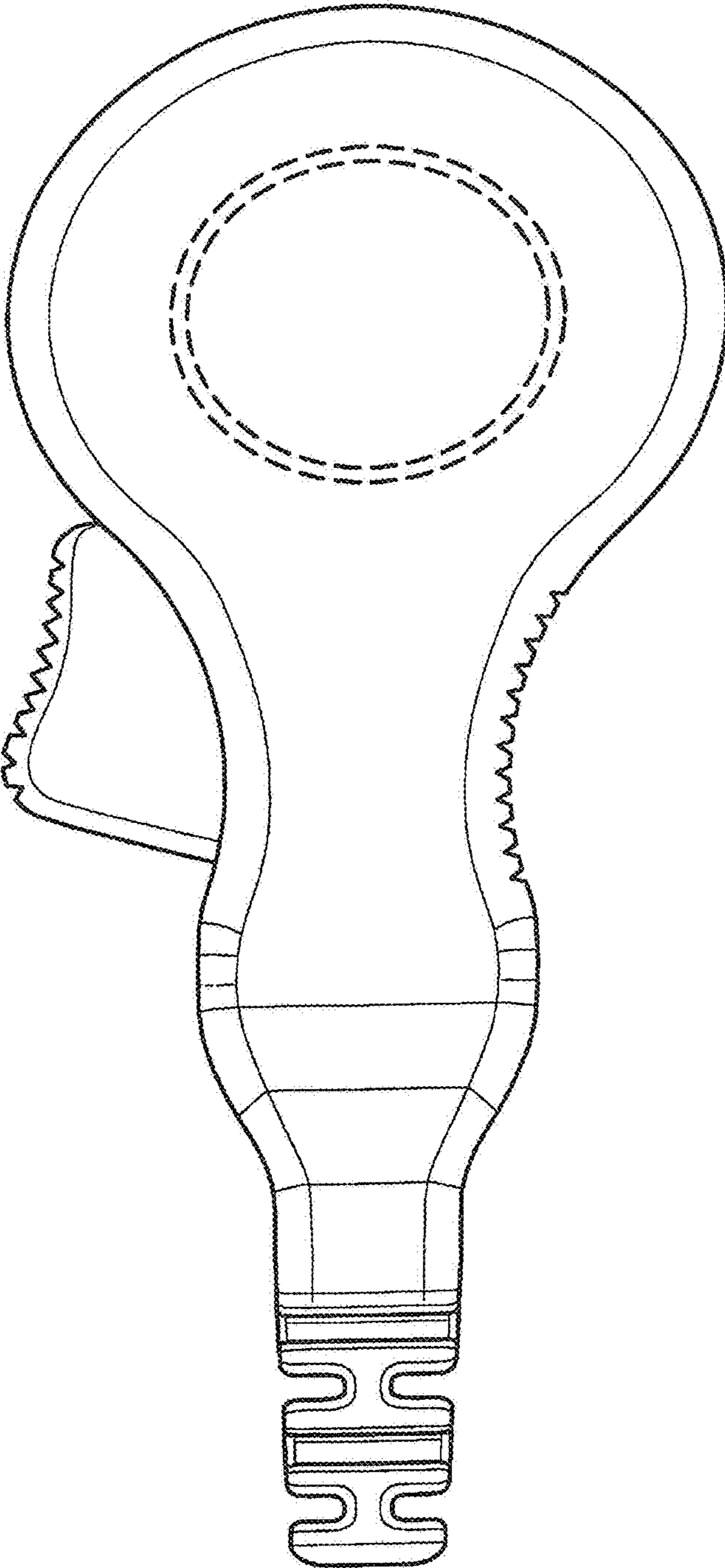


FIG. 1

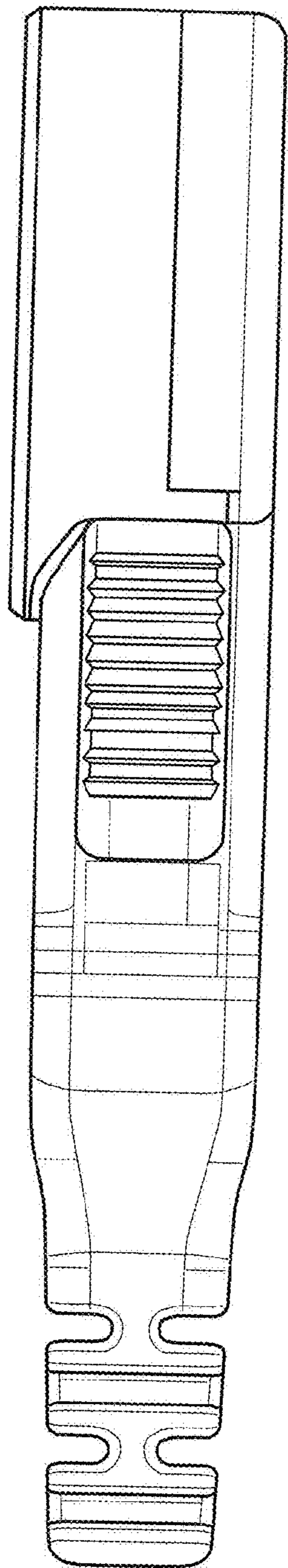


FIG. 2

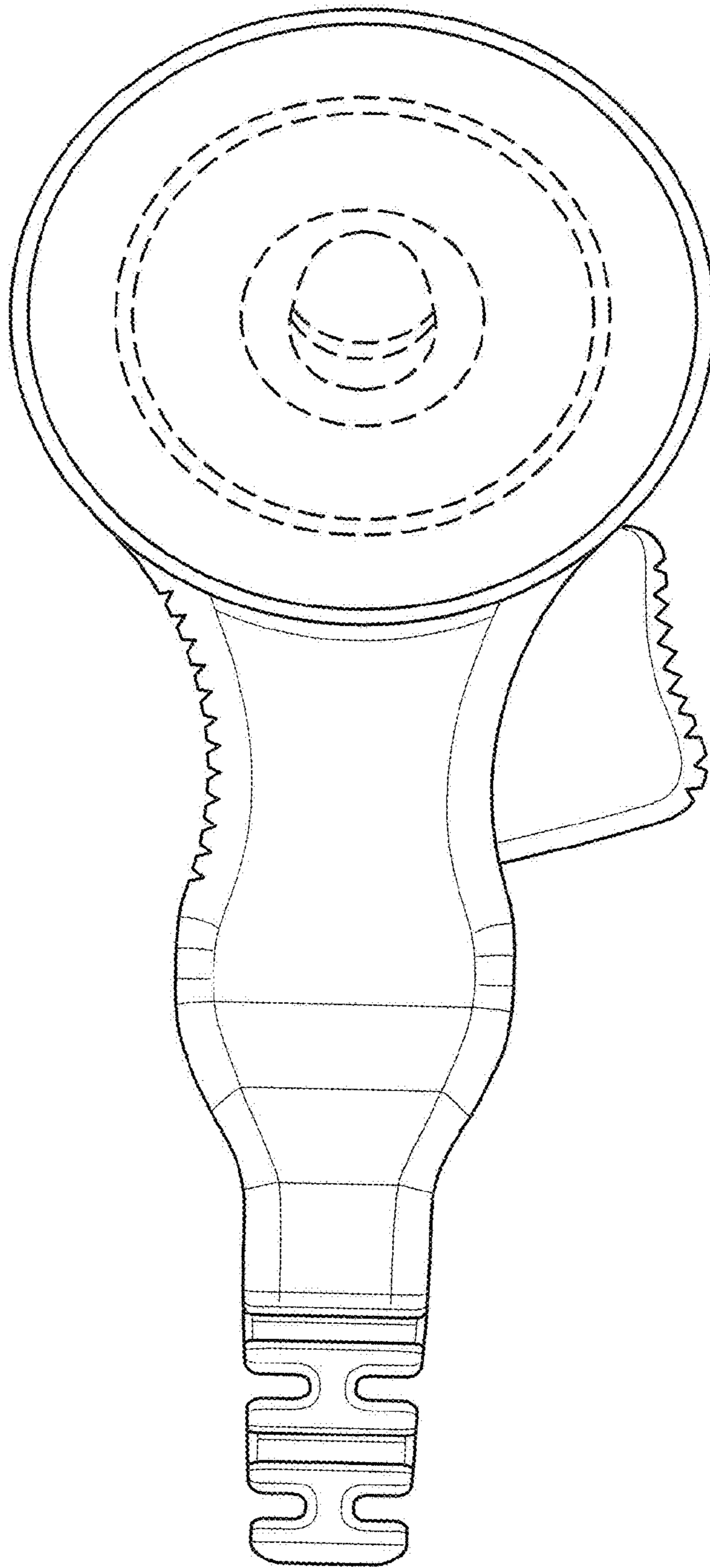


FIG. 3