



US00D800306S

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

(10) **Patent No.:** **US D800,306 S**

(45) **Date of Patent:** **** Oct. 17, 2017**

- (54) **SURGICAL SUTURING DEVICE**
- (71) Applicant: **Ethicon Endo-Surgery, LLC**,
Guaynabo, PR (US)
- (72) Inventors: **Christopher J. Hess**, Blue Ash, OH
(US); **Daniel J. Mumaw**, Liberty
Township, OH (US); **James G. Lee**,
Cincinnati, OH (US)
- (73) Assignee: **ETHICON LLC**, Guaynabo, PR (US)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/548,114**
- (22) Filed: **Dec. 10, 2015**
- (51) **LOC (10) Cl.** **24-02**
- (52) **U.S. Cl.**
USPC **D24/145**
- (58) **Field of Classification Search**
USPC D24/133, 143, 145-148; D8/51, 68, 107
CPC A61B 17/0684; A61B 17/068; A61B
17/0469; A61B 17/320092; A61B 17/32;
A61B 18/1445
See application file for complete search history.

- 4,406,237 A 9/1983 Eguchi et al.
- 4,417,532 A 11/1983 Yasukata
- 4,440,171 A 4/1984 Nomoto et al.
- 4,557,265 A 12/1985 Andersson
- 4,624,254 A 11/1986 McGarry et al.
- 4,880,015 A 11/1989 Nierman
- 4,890,614 A 1/1990 Kawada et al.
- 4,899,746 A 2/1990 Brunk
- 4,942,866 A 7/1990 Usami
- 5,020,514 A 6/1991 Hecke

(Continued)

FOREIGN PATENT DOCUMENTS

- CN 101243985 8/2008
- CN 102551825 7/2012

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 13/792,976, filed Mar. 11, 2013 by Ethicon Endo-Surgery, Inc.

(Continued)

Primary Examiner — Wan Laymon

(57) **CLAIM**

The ornamental design for a surgical suturing device, as shown and described.

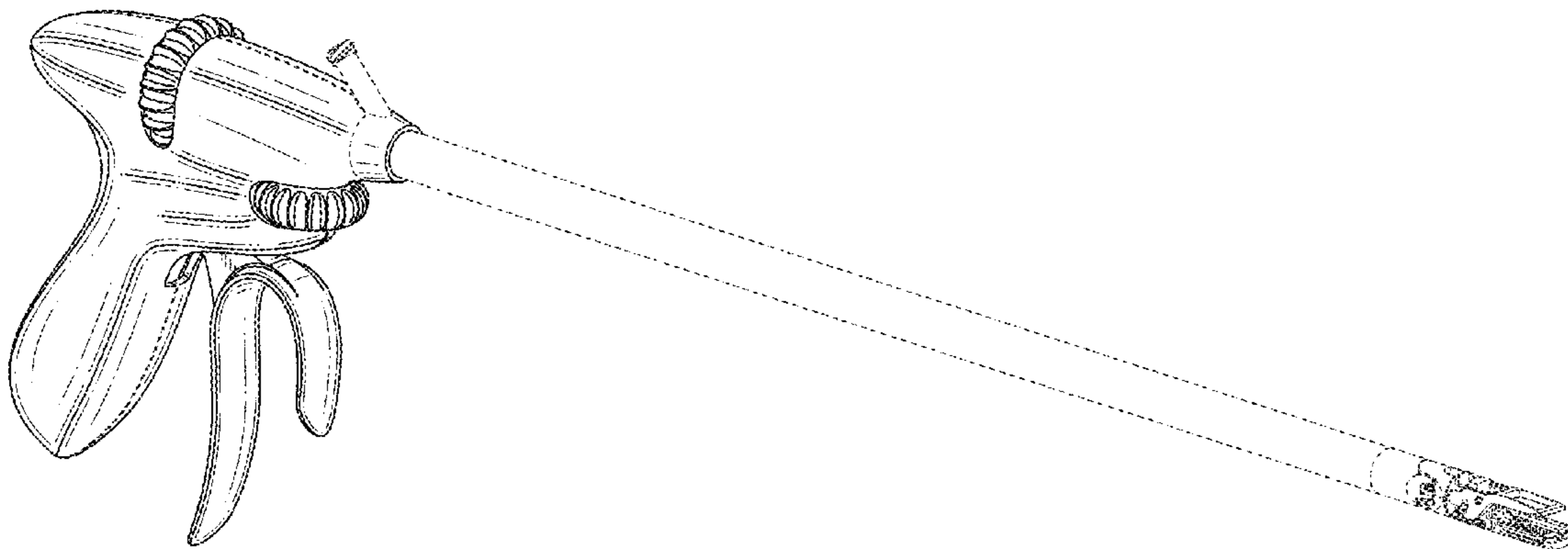
DESCRIPTION

FIG. 1 is a perspective view of a surgical suturing device; FIG. 2 is a top plan view thereof; FIG. 3 is a side elevation view thereof; FIG. 4 is a bottom plan view thereof; FIG. 5 is a front elevation view thereof; and, FIG. 6 is a back elevation view thereof. The broken lines shown in the drawings are included for the purpose of illustrating structural environment and form no part of the claimed design.

1 Claim, 3 Drawing Sheets

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

- 1,203,244 A 10/1916 Nash
- 1,579,379 A 4/1926 Marbel
- 1,822,330 A 9/1931 Ainslie
- 1,884,149 A 10/1932 Nullmeyer
- 2,291,181 A 7/1942 Alderman
- 3,168,097 A 2/1965 Dormia
- 3,598,281 A 8/1971 Watermeier
- 3,749,238 A 7/1973 Taylor
- 4,027,608 A 6/1977 Arbuckle
- 4,123,982 A 11/1978 Bess, Jr. et al.
- 4,196,836 A 4/1980 Becht
- 4,203,430 A 5/1980 Takahashi
- 4,235,177 A 11/1980 Arbuckle



(56)

References Cited

U.S. PATENT DOCUMENTS

5,133,723 A	7/1992	Li et al.	5,904,667 A	5/1999	Falwell
5,209,747 A	5/1993	Knoepfler	5,908,428 A	6/1999	Scirica et al.
5,282,806 A	2/1994	Haber et al.	5,911,727 A	6/1999	Taylor
5,289,963 A	3/1994	McGarry et al.	5,921,956 A	7/1999	Grinberg et al.
5,306,281 A	4/1994	Beurrier	5,938,668 A	8/1999	Scirica et al.
5,308,353 A	5/1994	Beurrier	5,941,430 A	8/1999	Kuwabara
5,312,023 A	5/1994	Green et al.	5,947,982 A	9/1999	Duran
5,318,578 A	6/1994	Hasson	5,954,731 A	9/1999	Yoon
5,330,502 A	7/1994	Hassler et al.	5,954,733 A	9/1999	Yoon
5,344,061 A	9/1994	Crainich	5,976,074 A	11/1999	Moriyama
5,383,888 A	1/1995	Zvenyatsky et al.	5,993,381 A	11/1999	Ito
5,389,103 A	2/1995	Melzer et al.	5,993,466 A	11/1999	Yoon
5,403,347 A	4/1995	Roby et al.	6,016,905 A	1/2000	Gemma et al.
5,403,354 A	4/1995	Adams et al.	6,053,908 A	4/2000	Crainich et al.
5,437,681 A	8/1995	Meade et al.	6,056,771 A	5/2000	Proto
5,454,823 A	10/1995	Richardson et al.	6,071,289 A	6/2000	Stefanchik et al.
5,458,609 A	10/1995	Gordon et al.	6,086,601 A	7/2000	Yoon
5,470,338 A	11/1995	Whitfield et al.	6,096,051 A	8/2000	Kortenbach et al.
5,478,344 A	12/1995	Stone et al.	6,126,666 A	10/2000	Trapp et al.
5,478,345 A	12/1995	Stone et al.	6,129,741 A	10/2000	Wurster et al.
5,480,406 A	1/1996	Nolan et al.	6,135,385 A	10/2000	Martinez de Lahidalga
5,527,321 A	6/1996	Hinchliffe	6,136,010 A	10/2000	Modesitt et al.
5,540,704 A	7/1996	Gordon et al.	6,138,440 A	10/2000	Gemma
5,540,705 A	7/1996	Meade et al.	6,152,934 A	11/2000	Harper et al.
5,540,706 A	7/1996	Aust et al.	6,162,208 A	12/2000	Hipps
5,549,542 A	8/1996	Kovalcheck	6,214,030 B1	4/2001	Matsutani et al.
5,553,477 A	9/1996	Eisensmith et al.	6,231,565 B1	5/2001	Tovey et al.
5,554,170 A	9/1996	Roby et al.	6,332,888 B1	12/2001	Levy et al.
5,560,532 A	10/1996	DeFonzo et al.	6,332,889 B1	12/2001	Sancoff et al.
5,569,301 A	10/1996	Granger et al.	6,364,888 B1	4/2002	Niemeyer et al.
5,571,090 A	11/1996	Sherts	6,443,962 B1	9/2002	Gaber
5,591,181 A	1/1997	Stone et al.	6,454,778 B2	9/2002	Kortenbach
5,593,421 A	1/1997	Bauer	6,481,568 B1	11/2002	Cerwin et al.
5,607,450 A	3/1997	Zvenyatsky et al.	6,533,112 B2	3/2003	Warnecke
5,610,653 A	3/1997	Abecassis	6,719,763 B2	4/2004	Chung et al.
5,617,952 A	4/1997	Kranendonk	6,719,764 B1	4/2004	Gellman et al.
5,630,825 A	5/1997	de la Torre et al.	6,743,239 B1	6/2004	Kuehn et al.
5,632,432 A	5/1997	Schulze et al.	6,755,843 B2	6/2004	Chung et al.
5,632,746 A	5/1997	Middleman et al.	6,783,524 B2	8/2004	Anderson et al.
5,643,295 A	7/1997	Yoon	6,783,537 B1	8/2004	Kuhr et al.
5,645,552 A	7/1997	Sherts	D496,997 S	10/2004	Dycus et al.
5,649,961 A	7/1997	McGregor et al.	6,923,819 B2	8/2005	Meade et al.
5,665,096 A	9/1997	Yoon	6,936,054 B2	8/2005	Chu
5,665,109 A	9/1997	Yoon	6,939,358 B2	9/2005	Palacios et al.
5,669,490 A	9/1997	Colligan et al.	6,955,643 B2	10/2005	Gellman et al.
5,674,229 A	10/1997	Tovey et al.	7,004,951 B2	2/2006	Gibbens, III
5,674,230 A	10/1997	Tovey et al.	7,022,085 B2	4/2006	Cooke et al.
5,693,071 A	12/1997	Gorecki et al.	7,041,111 B2	5/2006	Chu
5,702,408 A	12/1997	Wales et al.	7,131,979 B2	11/2006	DiCarlo et al.
5,707,379 A	1/1998	Fleenor et al.	7,144,401 B2	12/2006	Yamamoto et al.
5,709,693 A	1/1998	Taylor	7,232,447 B2	6/2007	Gellman et al.
5,713,910 A	2/1998	Gordon et al.	7,235,087 B2	6/2007	Modesitt et al.
5,728,107 A	3/1998	Zlock et al.	7,278,563 B1	10/2007	Green
5,728,108 A	3/1998	Griffiths et al.	7,338,504 B2	3/2008	Gibbens, III et al.
5,728,109 A	3/1998	Schulze et al.	7,442,198 B2	10/2008	Gellman et al.
5,733,293 A	3/1998	Scirica et al.	7,491,166 B2	2/2009	Ueno et al.
5,741,277 A	4/1998	Gordon et al.	7,520,382 B2	4/2009	Kennedy et al.
5,755,729 A	5/1998	de la Torre et al.	7,524,320 B2	4/2009	Tierney et al.
5,759,188 A	6/1998	Yoon	D594,983 S	6/2009	Price et al.
5,766,186 A	6/1998	Faraz et al.	7,582,096 B2	9/2009	Gellman et al.
5,766,196 A	6/1998	Griffiths	7,588,583 B2	9/2009	Hamilton et al.
5,776,186 A	7/1998	Uflacker	7,604,611 B2	10/2009	Falwell et al.
5,792,135 A	8/1998	Madhani et al.	7,615,060 B2	11/2009	Stokes et al.
5,792,151 A	8/1998	Heck et al.	7,628,796 B2	12/2009	Shelton, IV et al.
5,797,927 A	8/1998	Yoon	7,637,369 B2	12/2009	Kennedy et al.
5,814,054 A	9/1998	Kortenbach et al.	7,666,194 B2	2/2010	Field et al.
5,814,069 A	9/1998	Schulze et al.	7,686,831 B2	3/2010	Stokes et al.
5,817,084 A	10/1998	Jensen	7,691,095 B2	4/2010	Bednarek et al.
5,846,254 A	12/1998	Schulze et al.	7,691,098 B2	4/2010	Wallace et al.
5,860,992 A	1/1999	Daniel et al.	7,699,860 B2	4/2010	Huitema et al.
5,865,836 A	2/1999	Miller	7,703,653 B2	4/2010	Shah et al.
5,871,488 A	2/1999	Tovey et al.	7,763,036 B2	7/2010	Stokes et al.
5,878,193 A	3/1999	Wang et al.	7,766,925 B2	8/2010	Stokes et al.
5,888,192 A	3/1999	Heimberger	7,770,365 B2	8/2010	Enriquez, III et al.
5,897,563 A	4/1999	Yoon et al.	7,806,891 B2	10/2010	Nowlin et al.
			7,815,654 B2	10/2010	Chu
			7,824,401 B2	11/2010	Manzo et al.
			7,828,812 B2	11/2010	Stokes et al.
			7,833,235 B2	11/2010	Chu

(56)

References Cited

U.S. PATENT DOCUMENTS

7,833,236 B2	11/2010	Stokes et al.	8,771,295 B2	7/2014	Chu
7,842,048 B2	11/2010	Ma	8,821,518 B2	9/2014	Saliman et al.
7,846,169 B2	12/2010	Shelton, IV et al.	8,821,519 B2	9/2014	Meade et al.
7,857,812 B2	12/2010	Dycus et al.	8,833,549 B2	9/2014	Kirsch
7,862,572 B2	1/2011	Meade et al.	8,858,572 B2	10/2014	Klundt et al.
7,862,575 B2	1/2011	Tal	D716,945 S *	11/2014	Miller D24/148
7,862,582 B2	1/2011	Ortiz et al.	8,906,043 B2	12/2014	Woodard, Jr. et al.
D631,965 S	2/2011	Price et al.	8,920,440 B2	12/2014	McClurg et al.
7,887,554 B2	2/2011	Stokes et al.	8,920,441 B2	12/2014	Saliman
7,891,485 B2	2/2011	Prescott	8,925,783 B2	1/2015	Zemlok et al.
7,896,890 B2	3/2011	Ortiz et al.	8,968,337 B2	3/2015	Whitfield et al.
7,909,220 B2	3/2011	Viola	9,060,769 B2	6/2015	Coleman et al.
7,922,063 B2	4/2011	Zemlok et al.	9,113,861 B2	8/2015	Martin et al.
7,935,128 B2	5/2011	Rioux et al.	9,113,876 B2	8/2015	Zemlok et al.
7,942,886 B2	5/2011	Alvarado	9,125,645 B1	9/2015	Martin et al.
7,947,052 B2	5/2011	Baxter, III et al.	9,168,037 B2	10/2015	Woodard, Jr. et al.
7,976,553 B2	7/2011	Shelton, IV et al.	9,173,655 B2 *	11/2015	Martin A61B 17/0469
7,976,555 B2	7/2011	Meade et al.	D745,146 S *	12/2015	Hess D24/133
7,993,354 B1	8/2011	Brecher et al.	9,220,496 B2 *	12/2015	Martin A61B 17/0469
8,012,161 B2	9/2011	Primavera et al.	9,241,712 B2	1/2016	Zemlok et al.
8,016,840 B2	9/2011	Takemoto et al.	9,247,938 B2	2/2016	Martin et al.
8,021,375 B2	9/2011	Aldrich et al.	9,277,916 B2	3/2016	Martin et al.
8,048,092 B2	11/2011	Modesitt et al.	9,289,206 B2	3/2016	Hess et al.
8,057,386 B2	11/2011	Aznoian et al.	D754,856 S	4/2016	Martin et al.
8,066,737 B2	11/2011	Meade et al.	9,314,292 B2	4/2016	Trees et al.
8,100,922 B2	1/2012	Griffith	9,351,754 B2	5/2016	Vakharia et al.
8,118,820 B2	2/2012	Stokes et al.	9,357,998 B2	6/2016	Martin et al.
8,123,762 B2	2/2012	Chu et al.	9,370,354 B1	6/2016	Martin et al.
8,123,764 B2	2/2012	Meade et al.	9,375,212 B2 *	6/2016	Martin A61B 17/0469
8,136,656 B2	3/2012	Kennedy et al.	9,398,905 B2 *	7/2016	Martin A61B 17/0469
8,187,288 B2	5/2012	Chu et al.	9,427,226 B2	8/2016	Martin et al.
8,196,739 B2	6/2012	Kirsch	9,427,227 B2 *	8/2016	Martin A61B 17/0469
8,201,721 B2	6/2012	Zemlok et al.	9,427,228 B2	8/2016	Hart
8,206,284 B2	6/2012	Aznoian et al.	9,451,946 B2	9/2016	Woodard, Jr. et al.
8,211,143 B2	7/2012	Stefanchik et al.	9,474,522 B2 *	10/2016	Deck A61B 17/0469
8,236,010 B2	8/2012	Ortiz et al.	D771,811 S	11/2016	Reyhan et al.
8,236,013 B2	8/2012	Chu	9,486,209 B2	11/2016	Martin et al.
8,241,320 B2	8/2012	Lyons et al.	9,498,207 B2	11/2016	Martin et al.
8,246,637 B2	8/2012	Viola et al.	9,526,495 B2	12/2016	Martin et al.
8,252,008 B2	8/2012	Ma	9,554,793 B2	1/2017	Lane et al.
8,256,613 B2	9/2012	Kirsch et al.	2001/0025134 A1	9/2001	Bon et al.
8,257,369 B2	9/2012	Gellman et al.	2001/0027312 A1	10/2001	Bacher et al.
8,257,371 B2	9/2012	Hamilton et al.	2002/0138084 A1	9/2002	Weber
8,292,067 B2	10/2012	Chowaniec et al.	2002/0193809 A1	12/2002	Meade et al.
8,292,906 B2	10/2012	Taylor et al.	2003/0083674 A1	5/2003	Gibbens, III
8,307,978 B2	11/2012	Kirsch et al.	2003/0208100 A1	11/2003	Levy
8,333,776 B2	12/2012	Cheng et al.	2003/0233104 A1	12/2003	Gellman et al.
8,361,089 B2	1/2013	Chu	2004/0050721 A1	3/2004	Roby et al.
8,366,725 B2	2/2013	Chu	2004/0172047 A1	9/2004	Gellman et al.
8,372,090 B2	2/2013	Wingardner et al.	2004/0260314 A1	12/2004	Lizardi et al.
8,398,660 B2	3/2013	Chu et al.	2005/0015101 A1	1/2005	Gibbens, III et al.
8,460,320 B2	6/2013	Hirzel	2005/0216038 A1	9/2005	Meade et al.
8,469,973 B2	6/2013	Meade et al.	2006/0036232 A1	2/2006	Primavera et al.
8,474,522 B2	7/2013	Lynde et al.	2006/0047309 A1	3/2006	Cichocki, Jr.
8,490,713 B2	7/2013	Furnish et al.	2006/0069396 A1	3/2006	Meade et al.
8,500,756 B2	8/2013	Papa et al.	2006/0111732 A1	5/2006	Gibbens et al.
8,512,243 B2	8/2013	Stafford	2006/0173491 A1	8/2006	Meade et al.
8,518,058 B2	8/2013	Gellman et al.	2006/0259073 A1	11/2006	Miyamoto et al.
8,551,122 B2	10/2013	Lau	2006/0281970 A1	12/2006	Stokes et al.
8,556,069 B2	10/2013	Kirsch	2006/0282096 A1	12/2006	Papa et al.
8,562,630 B2	10/2013	Campbell	2006/0282097 A1	12/2006	Ortiz et al.
8,568,428 B2	10/2013	McClurg et al.	2006/0282098 A1	12/2006	Shelton, IV et al.
8,579,918 B2	11/2013	Whitfield et al.	2006/0282099 A1	12/2006	Stokes et al.
8,603,089 B2	12/2013	Viola	2007/0088372 A1	4/2007	Gellman et al.
8,623,027 B2	1/2014	Price et al.	2007/0162052 A1	7/2007	Hashimoto et al.
8,623,048 B2	1/2014	Brecher et al.	2007/0173864 A1	7/2007	Chu
8,641,728 B2	2/2014	Stokes et al.	2007/0256945 A1	11/2007	Kennedy et al.
8,663,253 B2	3/2014	Saliman	2008/0091220 A1	4/2008	Chu
8,696,687 B2	4/2014	Gellman et al.	2008/0103357 A1	5/2008	Zeiner et al.
8,702,729 B2	4/2014	Chu	2008/0109015 A1	5/2008	Chu et al.
8,702,732 B2	4/2014	Woodard, Jr. et al.	2008/0132919 A1	6/2008	Chui et al.
8,709,021 B2	4/2014	Chu et al.	2008/0177134 A1	7/2008	Miyamoto et al.
8,746,445 B2	6/2014	Kennedy et al.	2008/0228204 A1	9/2008	Hamilton et al.
8,747,304 B2	6/2014	Zeiner et al.	2008/0243146 A1	10/2008	Sloan et al.
D709,194 S *	7/2014	Miller D24/143	2008/0255590 A1	10/2008	Meade et al.
			2009/0024145 A1	1/2009	Meade et al.
			2009/0084826 A1	4/2009	Shah et al.
			2009/0088792 A1	4/2009	Hoell, Jr. et al.
			2009/0205987 A1	8/2009	Kennedy et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2009/0209980 A1 8/2009 Harris
 2009/0248041 A1 10/2009 Williams et al.
 2009/0259092 A1 10/2009 Ogdahl et al.
 2009/0287226 A1 11/2009 Gellman et al.
 2009/0312772 A1 12/2009 Chu
 2010/0010512 A1 1/2010 Taylor et al.
 2010/0016866 A1 1/2010 Meade et al.
 2010/0023024 A1 1/2010 Zeiner et al.
 2010/0036415 A1 2/2010 Cabezas
 2010/0042116 A1 2/2010 Chui et al.
 2010/0063519 A1 3/2010 Park et al.
 2010/0078336 A1 4/2010 Reyhan et al.
 2010/0100125 A1 4/2010 Mahadevan
 2010/0152751 A1 6/2010 Meade et al.
 2010/0274265 A1 10/2010 Wingardner et al.
 2011/0028999 A1 2/2011 Chu
 2011/0040308 A1 2/2011 Cabrera et al.
 2011/0042245 A1 2/2011 McClurg et al.
 2011/0046642 A1 2/2011 McClurg et al.
 2011/0046667 A1 2/2011 Culligan et al.
 2011/0060352 A1 3/2011 Chu
 2011/0082476 A1 4/2011 Furnish et al.
 2011/0288582 A1 11/2011 Meade et al.
 2011/0295278 A1 12/2011 Meade et al.
 2012/0004672 A1 1/2012 Giap et al.
 2012/0035626 A1 2/2012 Chu
 2012/0041456 A1 2/2012 Gellman et al.
 2012/0055828 A1 3/2012 Kennedy et al.
 2012/0059396 A1 3/2012 Harris et al.
 2012/0078243 A1 3/2012 Worrell et al.
 2012/0109163 A1 5/2012 Chu et al.
 2012/0123471 A1 5/2012 Woodard, Jr. et al.
 2012/0130404 A1 5/2012 Meade et al.
 2012/0143248 A1 6/2012 Brecher et al.
 2012/0165837 A1 6/2012 Belman et al.
 2012/0165838 A1 6/2012 Kobylewski et al.
 2012/0215234 A1 8/2012 Chowaniec et al.
 2012/0220832 A1 8/2012 Nakade et al.
 2012/0226292 A1 9/2012 Hirzel
 2012/0228163 A1 9/2012 Kirsch
 2012/0232567 A1 9/2012 Fairmeny
 2012/0283748 A1 11/2012 Ortiz et al.
 2012/0283750 A1 11/2012 Saliman et al.
 2012/0283755 A1 11/2012 Gellman et al.
 2013/0041388 A1 2/2013 Lane et al.
 2013/0158593 A1 6/2013 Kiapour et al.
 2013/0282031 A1 10/2013 Woodard, Jr. et al.
 2013/0296889 A1 11/2013 Tong et al.
 2013/0331866 A1 12/2013 Gellman et al.
 2014/0005681 A1 1/2014 Gee et al.
 2014/0088621 A1 3/2014 Krieger et al.
 2014/0166514 A1 6/2014 Martin et al.
 2014/0171977 A1* 6/2014 Martin A61B 17/0469
 606/145
 2014/0171978 A1 6/2014 Martin
 2014/0171979 A1 6/2014 Martin et al.
 2014/0172015 A1 6/2014 Martin et al.
 2014/0228865 A1 8/2014 Weisel et al.
 2014/0305988 A1 10/2014 Boudreaux et al.
 2015/0127024 A1 5/2015 Berry
 2015/0133967 A1 5/2015 Martin
 2015/0142020 A1 5/2015 Woodard, Jr. et al.
 2015/0351745 A1* 12/2015 Mumaw A61B 17/0469
 606/145
 2015/0351746 A1* 12/2015 Martin A61B 17/0469
 606/145
 2015/0351749 A1 12/2015 Martin et al.
 2015/0351756 A1 12/2015 Martin et al.
 2016/0120740 A1 5/2016 Rawls-Meehan
 2016/0331374 A1* 11/2016 Martin A61B 17/0469
 2016/0345958 A1 12/2016 Martin et al.
 2016/0346827 A1 12/2016 Martin et al.
 2016/0361055 A1* 12/2016 Martin A61B 17/0469
 2016/0367238 A1 12/2016 Deck et al.
 2016/0367240 A1* 12/2016 Shelton, IV A61B 17/0469

2016/0367243 A1 12/2016 Martin et al.
 2017/0112487 A1* 4/2017 Martin A61B 17/0469
 2017/0112489 A1* 4/2017 Shelton, IV A61B 17/0469

FOREIGN PATENT DOCUMENTS

CN 202426582 9/2012
 DE 4310315 10/1993
 DE 4300307 7/1994
 EP 0674875 10/1995
 EP 0739184 9/1998
 EP 1791476 6/2007
 EP 2055243 5/2009
 EP 2292157 3/2011
 EP 2308391 4/2011
 EP 2792308 10/2014
 FR 2540377 A1 8/1984
 GB 18602 A 0/1909
 GB 2389313 A 12/2003
 JP 55-151956 A 11/1980
 WO WO 95/19149 A1 7/1995
 WO WO 97/29694 A1 8/1997
 WO WO 99/12482 A1 3/1999
 WO WO 99/40850 A1 8/1999
 WO WO 99/47050 A2 9/1999
 WO WO 01/12084 A1 2/2001
 WO WO 02/102226 A2 12/2002
 WO WO 03/028541 A2 4/2003
 WO WO 03/063712 A1 8/2003
 WO WO 2004/012606 A1 2/2004
 WO WO 2004/021894 A1 3/2004
 WO WO 2004/086986 A1 10/2004
 WO WO 2006/034209 A2 3/2006
 WO WO 2007/089603 A2 8/2007
 WO WO 2008/045333 A2 4/2008
 WO WO 2008/045376 A2 4/2008
 WO WO 2008/081474 A1 7/2008
 WO WO 2008/147555 A2 12/2008
 WO WO 2008/150773 A1 12/2008
 WO WO 2010/031064 A1 3/2010
 WO WO 2010/062380 A2 6/2010
 WO WO 2010/127274 A1 11/2010
 WO WO 2011/156733 A2 12/2011
 WO WO 2012/029689 A1 3/2012
 WO WO 2012/044998 A2 4/2012
 WO WO 2012/068002 A1 5/2012
 WO WO 2012/088232 A3 6/2012
 WO WO 2013/142487 A1 9/2013
 WO WO 2013/158622 A1 10/2013
 WO WO 2014/147619 A1 9/2014
 WO WO 2014/162434 A1 10/2014

OTHER PUBLICATIONS

U.S. Appl. No. 14/298,083, filed Jun. 6, 2014 by Ethicon Endo-Surgery, Inc.
 U.S. Appl. No. 14/600,486, filed Jan. 20, 2015 by Ethicon Endo-Surgery, Inc.
 U.S. Appl. No. 29/493,233, filed Jun. 6, 2014 by Ethicon Endo-Surgery, Inc.
 U.S. Appl. No. 14/741,849, filed Jun. 17, 2015 by Ethicon Endo-Surgery, Inc.
 U.S. Appl. No. 29/530,605, filed Jun. 18, 2015 by Ethicon Endo-Surgery, Inc.
 International Preliminary Report Dated Jun. 16, 2015, International Application No. PCT/US2013/074866.
 International Search Report Dated May 6, 2014, International Application No. PCT/US2013/074866.
 International Search Report Dated Sep. 15, 2015, International Application No. PCT/US2015/031883.
 International Preliminary Report Dated Dec. 6, 2016, International Application No. PCT/US2015/031883.
 International Search Report Dated Sep. 28, 2015, International Application No. PCT/US2015/031911.
 International Search Report Dated Aug. 8, 2016, International Application No. PCT/US2016/033782.

(56)

References Cited

OTHER PUBLICATIONS

International Search Report Dated Jul. 29, 2016, International Application No. PCT/US2016/035390.

International Search Report Dated Nov. 14, 2016, International Application No. PCT/US2016/037348.

International Search Report Dated Nov. 14, 2016, International Application No. PCT/US2016/037350.

International Search Report Dated Oct. 24, 2016, International Application No. PCT/US2016/037557.

European Search Report Dated Feb. 3, 2016; Application No. 15176794.4.

European Search Report Dated Dec. 7, 2015; Application No. 15176796.9.

European Search Report Dated Dec. 4, 2015; Application No. 15176924.7.

European Search Report Dated Nov. 30, 2015; Application No. 15176774.6.

Endo 360 “Laparoscopic & Minimally Invasive Suturing Devices” Catalog—2 pages—EndoEvolution, LLC—2011.

Covidien Endo Stitch (Features and Benefits) “Suturing Made Easy” Brochure—4 pages—2008.

Pages from www.endoevolution.com. Printed on Jun. 3, 2014, but publication date unknown. Please treat as prior art until applicant establishes otherwise.

* cited by examiner

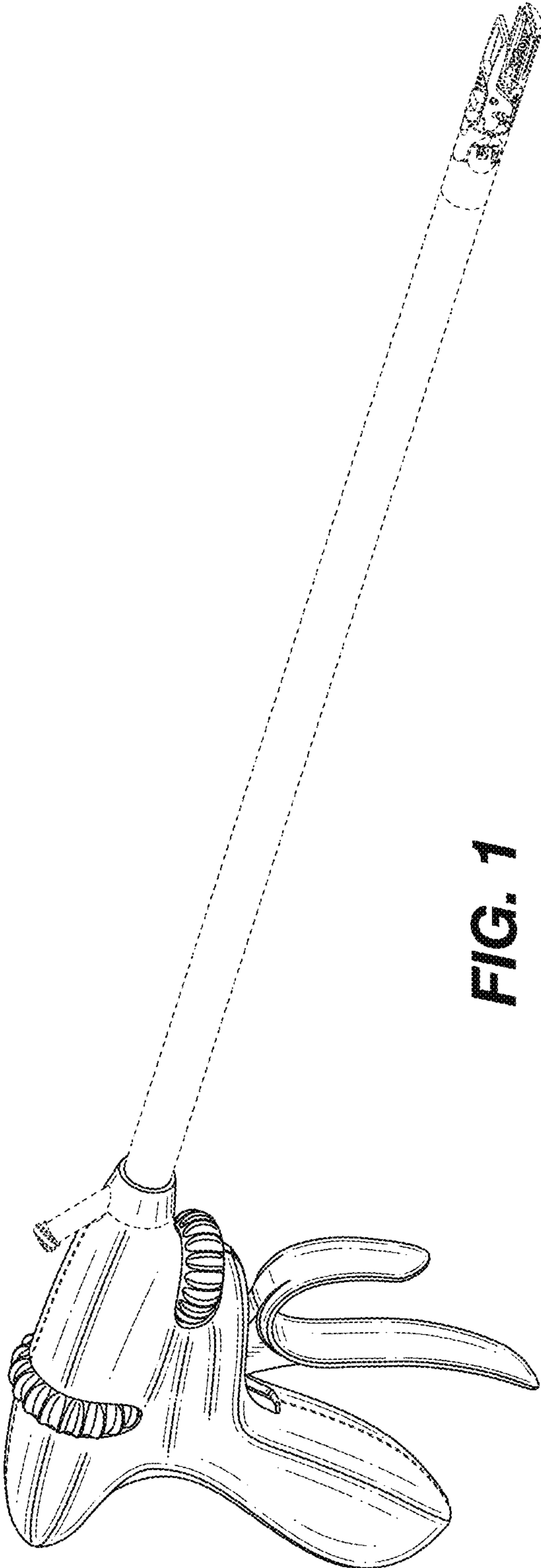


FIG. 1

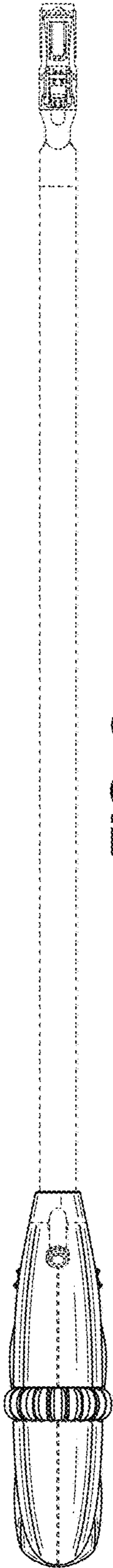


FIG. 2

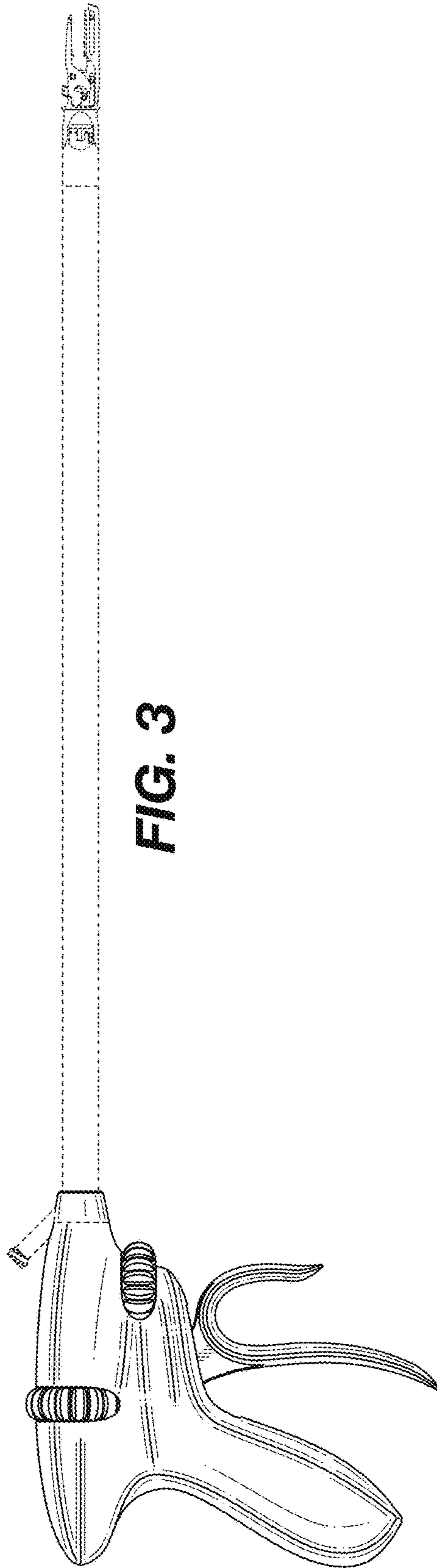


FIG. 3

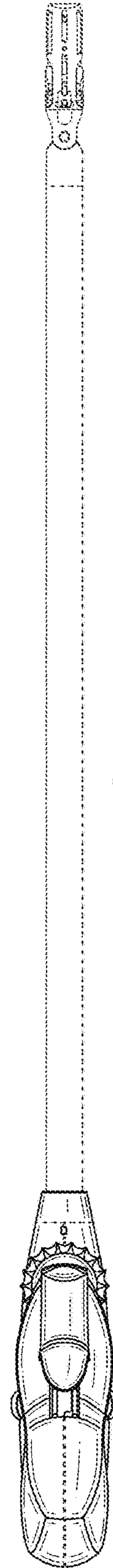


FIG. 4

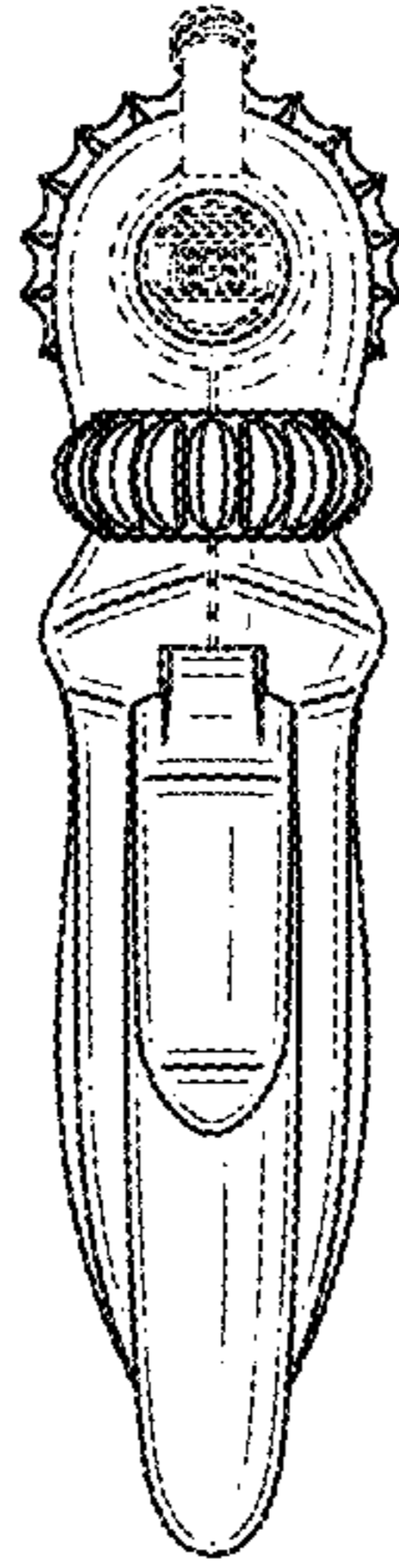


FIG. 5

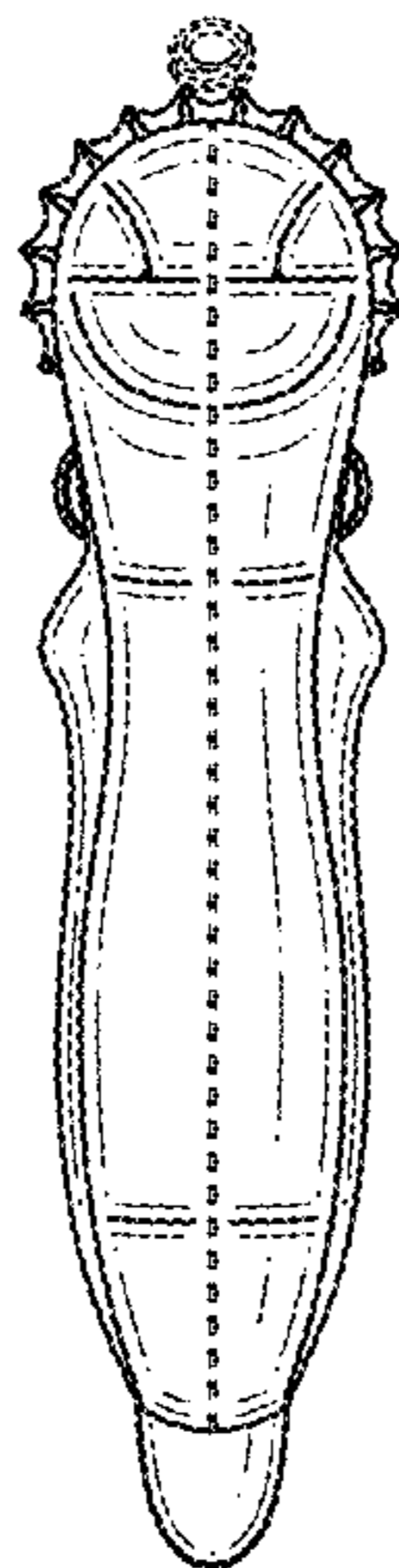


FIG. 6