



US00D567943S

(12) **United States Design Patent** (10) **Patent No.:** **US D567,943 S**
Moses et al. (45) **Date of Patent:** **** Apr. 29, 2008**

(54) **OVER-RATCHET SAFETY FOR A VESSEL SEALING INSTRUMENT**

4,005,714 A 2/1977 Hildebrandt

(Continued)

(75) Inventors: **Michael C. Moses**, Boulder, CO (US);
Adam B. Seitman, Anthem, AZ (US)

FOREIGN PATENT DOCUMENTS

(73) Assignee: **Sherwood Services AG**, Schaffhausen (CH)

CA	2104423	2/1994
DE	2415263	10/1975
DE	29616210	1/1997
DE	19608716	4/1997
DE	19751108	5/1999
EP	0364216 A1	4/1990
EP	0518230 A1	12/1992

(**) Term: **14 Years**

(Continued)

(21) Appl. No.: **29/214,823**

(22) Filed: **Oct. 8, 2004**

OTHER PUBLICATIONS

(51) **LOC (8) Cl.** **24-02**

(52) **U.S. Cl.** **D24/144; D24/133**

(58) **Field of Classification Search** D24/144,
D24/133, 146, 147, 149, 143, 153; 606/51,
606/52, 41, 44, 48, 171, 205, 207

PCT/US01/11340, International Search Report.
PCT/US01/11420, International Search Report.
PCT/US02/01890, International Search Report.
PCT/US02/11100, International Search Report.
PCT/US04/03436, International Search Report.
PCT/US04/13273, International Search Report.
PCT/US04/15311, International Search Report.

See application file for complete search history.

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

371,664 A	10/1887	Brannan et al.
702,472 A	6/1902	Pignolet
728,883 A	5/1903	Downes
1,586,645 A	6/1926	Bierman
2,002,594 A	5/1935	Wappler et al.
2,011,169 A	8/1935	Wappler
2,031,682 A	2/1936	Wappler et al.
2,176,479 A	10/1939	Willis
2,305,156 A	12/1942	Grubel
2,632,661 A	3/1953	Cristofv
2,668,538 A	2/1954	Baker
2,796,065 A	6/1957	Kapp
3,459,187 A	8/1969	Pallotta
3,643,663 A	2/1972	Sutter
3,651,811 A	3/1972	Hildebrandt et al.
3,862,630 A	1/1975	Balamuth
3,866,610 A	2/1975	Kletschka
3,911,766 A	10/1975	Fridolph et al.
3,920,021 A	11/1975	Hildebrandt
3,921,641 A	11/1975	Hulka
3,938,527 A	2/1976	Rioux et al.
3,952,749 A	4/1976	Fridolph et al.

Primary Examiner—Ian Simmons
Assistant Examiner—Christopher Lee

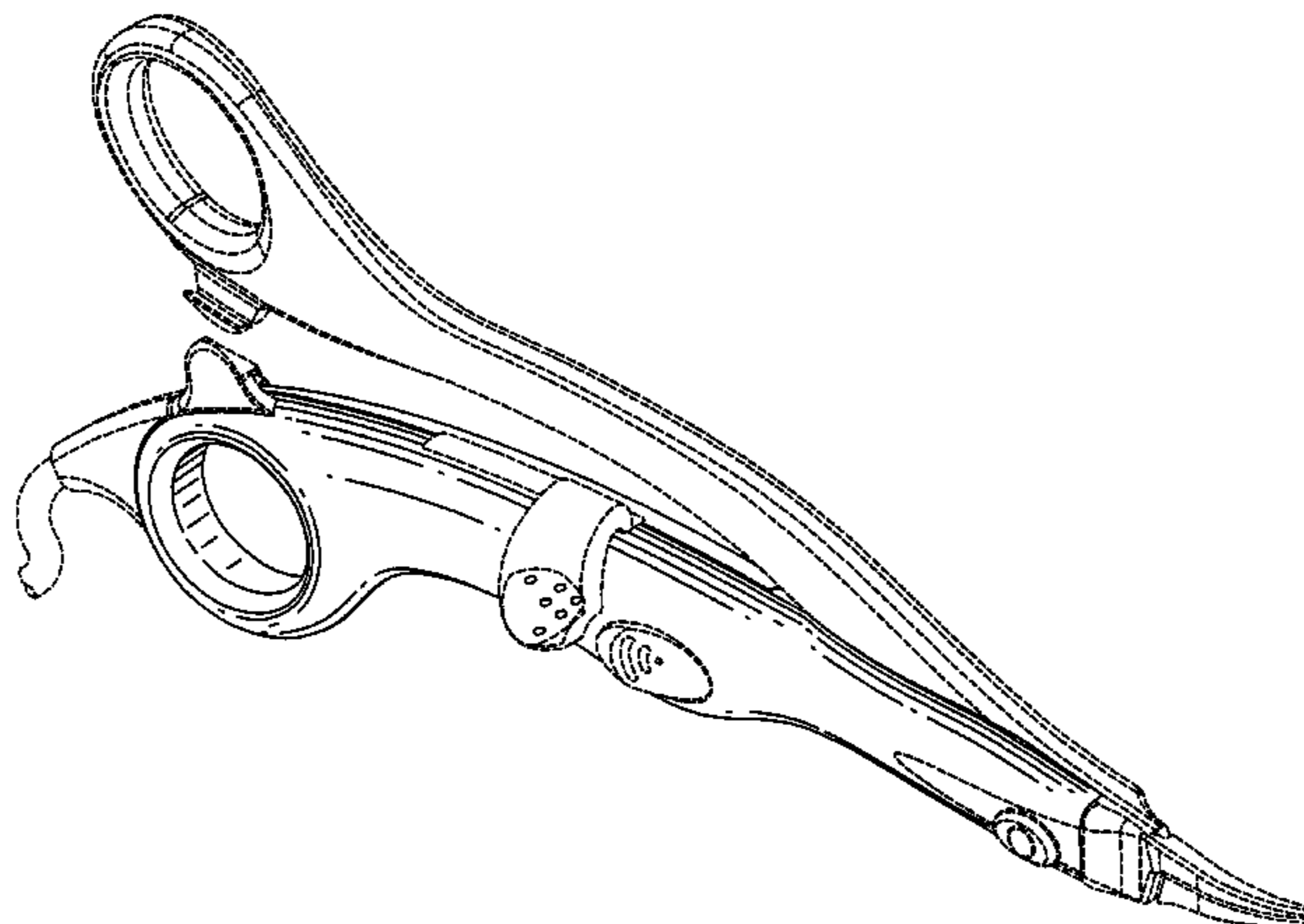
(57) **CLAIM**

We claim the ornamental design for an over-ratchet safety for a vessel sealing instrument, as shown.

DESCRIPTION

FIG. 1 is a perspective view of an over-ratchet safety for a vessel sealing instrument showing our new design;
FIG. 2 is a rear perspective view thereof;
FIG. 3 is a right side view thereof;
FIG. 4 is a left side view thereof;
FIG. 5 is a bottom view thereof;
FIG. 6 is top view thereof;
FIG. 7 is a front view thereof;
FIG. 8 is a rear view thereof.

1 Claim, 6 Drawing Sheets



US D567,943 S

Page 2

U.S. PATENT DOCUMENTS					
4,074,718 A	2/1978	Morrison, Jr.	5,425,739 A	6/1995	Jessen
4,088,134 A	5/1978	Mazzariello	5,429,616 A	7/1995	Schaffer
4,165,746 A	8/1979	Burgin	5,431,674 A	7/1995	Basile et al.
4,300,564 A	11/1981	Furihata	5,437,292 A	8/1995	Kipshidze et al.
4,370,980 A	2/1983	Lottick	5,438,302 A	8/1995	Goble
4,416,276 A	11/1983	Newton et al.	5,441,517 A	8/1995	Kensey et al.
4,452,246 A	6/1984	Bader et al.	5,443,463 A	8/1995	Stern et al.
4,492,231 A	1/1985	Auth	5,443,464 A	8/1995	Russell et al.
4,552,143 A	11/1985	Lottick	5,443,480 A	8/1995	Jacobs et al.
4,574,804 A	3/1986	Kurwa	5,445,638 A	8/1995	Rydell et al.
4,597,379 A	7/1986	Kihn et al.	5,445,658 A	8/1995	Durrfeld et al.
4,600,007 A	7/1986	Lahodny et al.	5,451,224 A	9/1995	Goble et al.
4,657,016 A	4/1987	Garito et al.	5,456,684 A	10/1995	Schmidt et al.
4,662,372 A	5/1987	Sharkany et al.	5,458,598 A	10/1995	Feinberg et al.
4,671,274 A	6/1987	Sorochenko	5,460,629 A	10/1995	Shlain et al.
4,685,459 A	8/1987	Xoch et al.	5,462,546 A	10/1995	Rydell
D295,893 S	5/1988	Sharkany et al.	5,472,443 A	12/1995	Cordis et al.
D295,894 S	5/1988	Sharkany et al.	5,478,351 A	12/1995	Meade et al.
4,763,669 A	8/1988	Jaeger	5,480,409 A	1/1996	Riza
4,827,929 A	5/1989	Hodge	5,484,436 A	1/1996	Eggers et al.
4,887,612 A	12/1989	Esser et al.	5,496,317 A	3/1996	Goble et al.
4,938,761 A	7/1990	Ensslin	5,496,347 A	3/1996	Hashiguchi et al.
4,985,030 A	1/1991	Melzer et al.	5,499,997 A	3/1996	Sharpe et al.
5,007,908 A	4/1991	Rydell	5,509,922 A	4/1996	Aranyi et al.
5,026,370 A	6/1991	Lottick	5,514,134 A	5/1996	Rydell et al.
5,099,840 A	3/1992	Goble et al.	5,527,313 A	6/1996	Scott et al.
5,116,332 A	5/1992	Lottick	5,531,744 A	7/1996	Nardella et al.
5,147,357 A	9/1992	Rose et al.	5,536,251 A	7/1996	Evard et al.
5,151,102 A	9/1992	Xamiyama et al.	5,540,684 A	7/1996	Hassler, Jr.
5,176,695 A	1/1993	Dulebohn	5,540,685 A	7/1996	Parins et al.
5,190,541 A	3/1993	Abele et al.	5,540,715 A	7/1996	Katsaros et al.
5,197,964 A	3/1993	Parins	5,558,672 A	9/1996	Edwards et al.
5,215,101 A	6/1993	Jacobs et al.	5,562,699 A	10/1996	Heimberger et al.
5,217,457 A	6/1993	Delahuerga et al.	5,569,241 A	10/1996	Edwardds
5,217,458 A	6/1993	Parins	5,569,243 A	10/1996	Kortenbach et al.
5,244,462 A	9/1993	Delahuerga et al.	5,571,100 A	11/1996	Goble et al.
5,250,047 A	10/1993	Rydell	5,573,424 A	11/1996	Poppe
5,258,006 A	11/1993	Rydell et al.	5,573,534 A	11/1996	Stone
5,261,918 A	11/1993	Phillips et al.	5,573,535 A	11/1996	Viklund
5,275,615 A	1/1994	Rose	5,582,611 A	12/1996	Tsukagoshi et al.
5,277,201 A	1/1994	Stern	5,585,896 A	12/1996	Yamazaki et al.
5,282,799 A	2/1994	Rydell	5,590,570 A	1/1997	LeMaire, III et al.
5,290,286 A	3/1994	Parins	5,603,711 A	2/1997	Parins et al.
5,304,203 A	4/1994	El-Mallawany et al.	5,603,723 A	2/1997	Aranyi et al.
5,308,357 A	5/1994	Lichtman	5,626,578 A	5/1997	Tihon
5,318,589 A	6/1994	Lichtman	5,626,609 A	5/1997	Zvenyatsky et al.
5,324,289 A	6/1994	Eggers	5,630,833 A	5/1997	Katsaros et al.
5,330,471 A	7/1994	Eggers	5,637,110 A	6/1997	Pennybacker et al.
5,334,183 A	8/1994	Wuchinich	5,643,294 A	7/1997	Tovey et al.
5,334,215 A	8/1994	Chen	5,647,869 A	7/1997	Goble et al.
5,336,221 A	8/1994	Anderson	5,647,871 A	7/1997	Levine et al.
5,342,359 A	8/1994	Rydell	5,649,959 A	7/1997	Hannam et al.
5,342,381 A	8/1994	Tidemand	5,658,281 A	8/1997	Heard
5,342,393 A	8/1994	Stack	5,662,667 A	9/1997	Knodel
5,352,222 A	10/1994	Rydell	5,667,526 A	9/1997	Levin
5,354,271 A	10/1994	Voda	5,674,220 A	10/1997	Fox et al.
5,356,408 A	10/1994	Rydell	5,681,282 A	10/1997	Eggers et al.
5,366,477 A	11/1994	LeMarie, III et al.	5,693,051 A	12/1997	Schulze et al.
5,383,897 A	1/1995	Wholey	5,695,522 A	12/1997	LeMaire, III et al.
5,389,098 A	2/1995	Tsuruta et al.	5,700,261 A	12/1997	Brinkerhoff
5,389,104 A	2/1995	Hahnen et al.	5,702,390 A	12/1997	Austin et al.
5,391,166 A	2/1995	Eggers	5,707,369 A	1/1998	Vaitekunas et al.
5,391,183 A	2/1995	Janzen et al.	5,709,680 A	1/1998	Yates et al.
5,403,312 A	4/1995	Yates et al.	5,716,366 A	2/1998	Yates
5,411,519 A	5/1995	Tovey et al.	5,720,744 A	2/1998	Eggleston et al.
5,411,520 A	5/1995	Nash et al.	5,727,428 A	3/1998	LeMaire, III et al.
5,413,571 A	5/1995	Katsaros et al.	5,735,848 A	4/1998	Yates et al.
5,415,657 A	5/1995	Taymor-Luria	5,743,906 A	4/1998	Parins et al.
5,422,567 A	6/1995	Matsunaga	5,755,717 A	5/1998	Yates et al.
5,423,810 A	6/1995	Goble et al.	5,766,130 A	6/1998	Selmonosky
			5,766,166 A	6/1998	Hooven

US D567,943 S

Page 3

5,766,170 A	6/1998	Eggers	6,190,386 B1	2/2001	Rydell
5,769,849 A	6/1998	Eggers	6,193,718 B1	2/2001	Kortenbach et al.
5,776,128 A	7/1998	Eggers	6,206,877 B1	3/2001	Kese et al.
5,776,130 A	7/1998	Buysse et al.	6,224,593 B1	5/2001	Ryan et al.
5,779,701 A	7/1998	McBrayer et al.	6,228,080 B1	5/2001	Gines
5,792,137 A	8/1998	Carr et al.	6,228,083 B1	5/2001	Lands et al.
5,792,177 A	8/1998	Kaseda	6,267,761 B1	7/2001	Ryan
5,797,938 A	8/1998	Paraschac et al.	6,270,497 B1	8/2001	Sekino et al.
5,797,958 A	8/1998	Yoon	6,270,508 B1	8/2001	Klieman et al.
5,800,449 A	9/1998	Wales	6,273,887 B1	8/2001	Yamauchi et al.
5,810,808 A	9/1998	Eggers	6,277,117 B1	8/2001	Tetzlaff et al.
5,810,811 A	9/1998	Yates et al.	6,280,458 B1	8/2001	Boche et al.
5,810,877 A	9/1998	Roth et al.	6,283,961 B1	9/2001	Underwood et al.
5,814,043 A	9/1998	Shapeton	D449,886 S	10/2001	Tetzlaff et al.
5,817,093 A	10/1998	Williamson, IV et al.	6,322,561 B1	11/2001	Eggers et al.
5,820,630 A	10/1998	Lind	6,334,860 B1	1/2002	Dorn
5,827,271 A	10/1998	Buysse et al.	6,334,861 B1	1/2002	Chandler et al.
5,827,279 A	10/1998	Hughett et al.	6,350,264 B1	2/2002	Hooven
5,827,281 A	10/1998	Levin	6,352,536 B1	3/2002	Buysse et al.
5,833,690 A	11/1998	Yates et al.	D457,958 S	5/2002	Dycus et al.
5,843,080 A	12/1998	Fleenor et al.	D457,959 S	5/2002	Tetzlaff et al.
5,849,022 A	12/1998	Sakashita et al.	6,398,779 B1	6/2002	Buysse et al.
5,853,412 A	12/1998	Mayenberger	6,402,747 B1	6/2002	Lindemann et al.
5,876,401 A	3/1999	Schulze et al.	6,409,728 B1	6/2002	Ehr et al.
5,891,141 A	4/1999	Rydell	H2037 H	7/2002	Yates et al.
5,891,142 A	4/1999	Eggers et al.	6,419,675 B1	7/2002	Gallo, Sr.
5,893,863 A	4/1999	Yoon	6,425,896 B1	7/2002	Baltschun et al.
5,893,875 A	4/1999	O'Connor et al.	6,440,144 B1	8/2002	Bacher
5,893,877 A	4/1999	Gampp, Jr. et al.	6,443,970 B1	9/2002	Schulze et al.
5,902,301 A	5/1999	Olig	6,451,018 B1	9/2002	Lands et al.
5,906,630 A	5/1999	Anderhub et al.	6,458,128 B1	10/2002	Schulze
5,908,420 A	6/1999	Parins et al.	6,458,130 B1	10/2002	Frazier et al.
5,913,874 A	6/1999	Berns et al.	6,464,702 B2	10/2002	Schulze et al.
5,921,984 A	7/1999	Sutcu et al.	6,464,704 B2	10/2002	Schmaltz et al.
5,935,126 A	8/1999	Riza	6,511,480 B1	1/2003	Tetzlaff et al.
5,944,718 A	8/1999	Dafforn et al.	6,585,735 B1	7/2003	Frazier et al.
5,951,549 A	9/1999	Richardson et al.	6,620,161 B2	9/2003	Schulze et al.
5,954,720 A	9/1999	Wilson et al.	6,626,901 B1	9/2003	Treat et al.
5,976,132 A	11/1999	Morris	6,682,528 B2	1/2004	Frazier et al.
5,989,277 A	11/1999	LeMaire, III et al.	6,685,724 B1	2/2004	Haluck
6,004,335 A	12/1999	Vaitekunas et al.	6,695,840 B2	2/2004	Schulze
6,010,516 A	1/2000	Hulka et al.	6,726,686 B2	4/2004	Buysse et al.
6,024,741 A	2/2000	Williamson et al.	6,733,498 B2	5/2004	Paton et al.
6,024,744 A	2/2000	Kese et al.	6,743,229 B2	6/2004	Buysse et al.
6,033,399 A	3/2000	Gines	6,770,072 B1	8/2004	Truckai et al.
6,039,733 A	3/2000	Buysse et al.	D496,997 S	10/2004	Dycus et al.
6,041,679 A	3/2000	Slater et al.	D499,181 S	11/2004	Dycus et al.
6,050,996 A	4/2000	Schmaltz et al.	6,926,716 B2	8/2005	Baker et al.
6,053,914 A	4/2000	Eggers et al.	6,929,644 B2	8/2005	Truckai et al.
6,053,933 A	4/2000	Balazs et al.	2002/0107517 A1	8/2002	Witt et al.
D424,694 S	5/2000	Tetzlaff et al.	2002/0188294 A1	12/2002	Couture et al.
D425,201 S	5/2000	Tetzlaff et al.	2003/0014052 A1	1/2003	Buysse et al.
RE36,795 E	7/2000	Rydell	2003/0014053 A1	1/2003	Nguyen et al.
6,083,223 A	7/2000	Baker	2003/0018331 A1	1/2003	Dycus et al.
6,086,586 A	7/2000	Hooven	2003/0018332 A1	1/2003	Schmaltz et al.
6,090,107 A	7/2000	Borgmeier et al.	2003/0032956 A1	2/2003	Lands et al.
6,096,037 A	8/2000	Mulier et al.	2003/0069571 A1	4/2003	Treat et al.
6,099,550 A	8/2000	Yoon	2003/0078578 A1	4/2003	Truckai Csaba et al.
6,102,909 A	8/2000	Chen et al.	2003/0109875 A1	6/2003	Tetzlaff et al.
6,110,171 A	8/2000	Rydell	2003/0139741 A1	7/2003	Goble et al.
6,113,596 A	9/2000	Hooven et al.	2003/0139742 A1	7/2003	Wampler et al.
6,113,598 A	9/2000	Baker	2003/0158549 A1	8/2003	Swanson
6,117,158 A	9/2000	Measamer et al.	2003/0181910 A1	9/2003	Dycus et al.
H1904 H	10/2000	Yates et al.	2003/0199869 A1	10/2003	Johnson et al.
6,126,658 A	10/2000	Baker	2003/0229344 A1	12/2003	Dycus et al.
6,152,923 A	11/2000	Ryan	2004/0082952 A1	4/2004	Dycus et al.
6,174,309 B1	1/2001	Wrublewski et al.	2004/0087943 A1	5/2004	Dycus et al.
6,179,834 B1	1/2001	Buysse et al.	2004/0115296 A1	6/2004	Duffin
6,179,837 B1	1/2001	Hooven	2004/0116924 A1	6/2004	Dycus et al.
6,183,467 B1	2/2001	Shapeton et al.	2004/0122423 A1	6/2004	Dycus et al.
6,187,003 B1	2/2001	Buysse et al.	2004/0143263 A1	7/2004	Schechter et al.

2004/0147925	A1	7/2004	Buyse et al.	WO	WO 99/03407	1/1999
2004/0162557	A1	8/2004	Tetzlaff et al.	WO	WO 99/03408	1/1999
2004/0176762	A1	9/2004	Lawes et al.	WO	WO 99/03409	1/1999
2004/0225288	A1	11/2004	Buyse et al.	WO	WO 99/12488 A	3/1999
2004/0236325	A1	11/2004	Tetzlaff et al.	WO	WO 99/12488	3/1999
2004/0243125	A1	12/2004	Dycus et al.	WO	WO 99/40857	8/1999
2004/0249371	A1	12/2004	Dycus et al.	WO	WO 99/51158	10/1999
2004/0249374	A1	12/2004	Tetzlaff et al.	WO	WO 99/66850 A	12/1999
2004/0250419	A1	12/2004	Sremcich et al.	WO	WO 00/24330	5/2000
2004/0254573	A1	12/2004	Dycus et al.	WO	WO 00/24331	5/2000
2005/0004568	A1	1/2005	Lawes et al.	WO	WO 00/41638	7/2000
2005/0004570	A1	1/2005	Chapman et al.	WO	WO 00/53112	9/2000
2005/0021025	A1	1/2005	Buyse et al.	WO	WO 01/17448 A	3/2001
2005/0021026	A1	1/2005	Baily	WO	WO 01/54604	8/2001
2005/0021027	A1	1/2005	Shields et al.	WO	WO 02/07627	1/2002
2005/0101951	A1	5/2005	Wham et al.	WO	WO 02/080783	10/2002
2005/0113818	A1	5/2005	Sartor et al.	WO	WO 02/080784	10/2002

FOREIGN PATENT DOCUMENTS

EP	0 541 930	B1	5/1993
EP	0572131		12/1993
EP	O584787	A1	3/1994
EP	623316	A1	11/1994
EP	0624348	A2	11/1994
EP	06024348	A2	11/1994
EP	650701	A1	5/1995
EP	694290	A3	3/1996
EP	0717966	A1	6/1996
EP	0754437	A3	3/1997
EP	O853922	A1	7/1998
EP	0887046	A3	1/1999
EP	0923907	A1	6/1999
EP	1034747	A1	9/2000
EP	1034748	A1	9/2000
EP	1025807	A3	10/2000
EP	1034746	A3	10/2000
EP	1050278	A1	11/2000
EP	1053719	A1	11/2000
EP	1053720	A1	11/2000
EP	1055399	A1	11/2000
EP	1055400	A1	11/2000
EP	1080694	A1	3/2001
EP	1082944	A1	3/2001
EP	1159926	A2	12/2001
GB	2214430	A	6/1989
JP	501068		9/1984
JP	502328		3/1992
JP	5-40112		2/1993
JP	06343644	A2	12/1994
JP	07265328	A2	10/1995
JP	08056955	A2	3/1996
JP	08252263	A2	10/1996
JP	09010223	A2	1/1997
JP	11244298	A2	9/1999
JP	2000342599	A2	12/2000
JP	2000350732	A2	12/2000
JP	2001008944	A2	1/2001
JP	2001029356	A2	2/2001
JP	2001128990	A2	5/2001
SU	401367		10/1973
WO	WO 92/06642		4/1992
WO	WO 94/08524	A	4/1994
WO	WO 95/02369		1/1995
WO	WO 95/07662		3/1995
WO	WO 96/13218		9/1996
WO	WO 96/00646		1/1997
WO	WO 97/00647		1/1997
WO	WO 97/10764		3/1997
WO	WO 97/24073		7/1997
WO	WO 97/24993		7/1997
WO	WO 98/27880		7/1998

WO	WO 02/080785	10/2002
WO	WO 02/080786	10/2002
WO	WO 02/080793	10/2002
WO	WO 02/080794	10/2002
WO	WO 02/080795	10/2002
WO	WO 02/080796	A1 10/2002
WO	WO 02/080797	10/2002
WO	WO 02/080798	A1 10/2002
WO	WO 02/080798	10/2002
WO	WO 02/080799	10/2002
WO	WO 02/081170	10/2002
WO	WO 04/032777	4/2004
WO	WO 2004/052221	A1 6/2004
WO	WO 04/073490	9/2004
WO	WO 2004/082495	A1 9/2004
WO	WO 2004/098383	A1 11/2004
WO	WO 04/103156	12/2004

OTHER PUBLICATIONS

EP 98944778, International Search Report.
 EP 98958575, International Search Report.
 EP 04027479, International Search Report.
 EP 04027705, International Search Report.
 EP 04027314, International Search Report.
 Sigel et al. "The Mechanism of Blood Vessel Closure by High Frequency Electrocoagulation" *Surgery Gynecology & Obstetrics*, Oct. 1965, pp. 823-831.
 Bergdahl et al. "Studies on Coagulation and the Development of an Automatic Computerized Bipolar Coagulator" *J. Neurosurg.*, vol. 75, Jul. 1991, pp. 148-151.
 Peterson et al. "Comparison of Healing Process Following Ligation with Sutures and Bipolar Vessel Sealing" *Surgical Technology International* (2001).
 Linehan et al. "A Phase I Study of the LigaSure Vessel Sealing System in Hepatic Surgery" Section of HPB Surger, Washington University School of Medicine, St. Louis MO, Presented at AHPBA, Feb. 2001.
 Johnson et al. "Evaluation of the LigaSure Vessel Sealing System in Hemorrhoidectomy" American College of Surgeons (ACS) Clinica Congress Poster (2000).
 Heniford et al. "Initial Results with an Electrothermal Bipolar Vessel Sealer" *Surgical Endoscopy* (2000) 15:799-801.
 Heniford et al. "Initial Research and Clinical Results with an Electrothermal Bipolar Vessel Sealer" Oct. 1999.
 McLellan et al. "Vessel Sealing for Hemostasis During Pelvic Surgery" Int'l Federation of Gynecology and Obstetrics FIGO World Congress 2000, Washington, D.C.
 Levy et al. "Use of a New Energy-based Vessel Ligation Device During Vaginal Hysterectomy" Int'l Federation of Gynecology and Obstetrics (FIGO) World Congress.

- Crawford et al. "Use of the LigaSure Vessel Sealing System in Urologic Cancer Surger" Grand Rounds in Urology 1999 vol. 1 Issue 4 pp. 10–17.
- Rothenberg et al. "Use of the LigaSure Vessel Sealing System in Minimally Invasive Surgery in Children" Int'l Pediatric Endosurgery Group (IPEG) 2000.
- Palazzo et al. "Randomized clinical trial of Ligasure versus open haemorrhoidectomy" British Journal of Surgery 2002, 89, 154–157.
- LigaSure Vessel Sealing System, the Seal of Confidence in General Gynecologic, Urologic, and Laparoscopic Surgery Sales/Product Literature.
- Carbonell et al., "Comparison of theGyrus PlasmaKinetic Sealer and the Valleylab LigaSure Device in the Hemostasis of Small, Medium, and Large-Sized Arteries" Carolinas Laparoscopic and Advanced Surgery Program, Carolinas Medical Center, Charlotte, NC.
- "Reducing Needlestick Injuries in the Operating Room" Sales/Product Literature.
- Chung et al., "Clinical Experience of Sutureless Closed Hemorrhoidectomy with LigaSure" Diseases of the Colon & Rectum vol. 48, No. 1 Jan. 2003.
- Strasberg et al., "Use of a Bipolar Vessel-Sealing Device for Parenchymal Transection During Liver Surgery" Journal of Gastrointestinal Surgery, vol. 6, No. 4, Jul./Aug. 2002 pp. 569–574.
- Paul G. Horgan, "A Novel Technique for Parenchymal Division During Hepaectomy" The American Journal of Surgery, vol. 181, No. 3, □Apr. 2001 pp. 236–237.
- Michael Choti, "Abdominoperineal Resection with the Liga-Sure Vessel Sealing System and LigaSure Atlas 20 cm Open Instrument" Innovations That Work, □Jun. 2003.
- Craig Johnson, "Use of the LigaSure Vessel Sealing System in Bloodless Hemorrhoidectomy" Innovations That Work, □Mar. 2000.
- Muller et al., "Extended Left Hemicolectomy Using the LigaSure Vessel Sealing System" Innovations That Work, □Sep. 1999.
- Herman et al., "Laparoscopic Intestinal Resection With the LigaSure Vessel Sealing System: A Case Report" Innovations That Work, □Feb. 2002.
- Carus et al., "Initial Experience With The LigaSure Vessel Sealing System in Abdominal Surgery" Innovations That Work, □Jun. 2002.
- Levy et al. "Randomized Trial of Suture Versus Electrosurgical Bipolar Vessel Sealing in Vaginal Hysterectomy" Obstetrics & Gynecology, vol. 102, No. 1, Jul. 2003.
- Levy et al., "Update on Hysterectomy—New Technologies and Techniques" OBG Management, Feb. 2003.
- Barbara Levy, "Use of a New Vessel Ligation Device During Vaginal Hysterectomy" FIGO 2000, Washington, D.C.
- McLellan et al. "Vessel Sealing For Hemostasis During Gynecologic Surgery" Sales/Product Literature.
- Sengupta et al., "Use of a Computer-Controlled Bipolar Diathermy System in Radical Prostatectomies and Other Open Urological Surgery" ANZ Journal of Surgery (2001) 71.9 pp. 538–540.
- E. David Crawford "Use of a Novel Vessel Sealing Technology in Management of the Dorsal Venous Complex" Sales/Product Literature.
- Jarrett et al., "Use of the LigaSure Vessel Sealing System for Peri-Hilar Vessels in Laparoscopic Nephrectomy" Sales/Product Literature.
- E. David Crawford "Evaluation of a New Vessel Sealing Device in Urologic Cancer Surgery" Sales/Product Literature.
- Joseph Ortenberg "LigaSure System Used in Laparoscopic 1st and 2nd Stage Orchiopexy" Innovations That Work, Nov. 2002.
- Koyle et al., "Laparoscopic Palomo Varicocele Ligation in Children and Adolescents" Pediatric Endosurgery & Innovative Techniques, vol. 6, No. 1, 2002.
- Int'l Search Report PCT/US01/11218.
- Int'l Search Report PCT/US99/24869.
- Int'l Search Report PCT/US98/18640.
- Int'l Search Report PCT/US98/23950.
- Int'l Search Report PCT/US04/13273.
- Int'l Search Report PCT/US04/15311.
- Int'l Search Report PCT/US01/11420.
- Int'l Search Report PCT/US02/11100.
- "Innovation in Electrosurgery" Sales/Product Literature; Dec. 31, 2000.
- LigaSure Vessel Sealing System, the Seal of Confidence in General, Gynecologic, Urologic, and Laparoscopic Surgery Sales/Product Literature; Jan. 2004.
- Olsson et al. "Radical Cystectomy in Females" Current Surgical Techniques in Urology, vol. 14, Issue 3, 2001.
- Dulemba et al. "Use of a Bipolar Electrothermal Vessel Sealer in Laparoscopically Assisted Vaginal Hysterectomy" Sales Product Literature; Jan. 2004.
- Johnson et al. "Evaluation of a Bipolar electrothermal Vessel Sealing Device in Hemorrhoidectomy" Sales Product Literature; Jan. 2004.
- Kennedy et al. "High-burst-strength, feedback-controlled bipolar vessel sealing" SURGICAL ENDOSCOPY (1998) 12: 876–878.
- Sayfan et al. "Sutureless Closed Hemorrhoidectomy: A New Technique" ANNALS of SURGERY vol. 234 No. 1 Jul. 2001 pp. 21–24.
- W. Scott Helton, "LigaSure Vessel Sealing System: Revolutionary Hemostasis Product for General Surgery" Sales/Product Literature 1999.

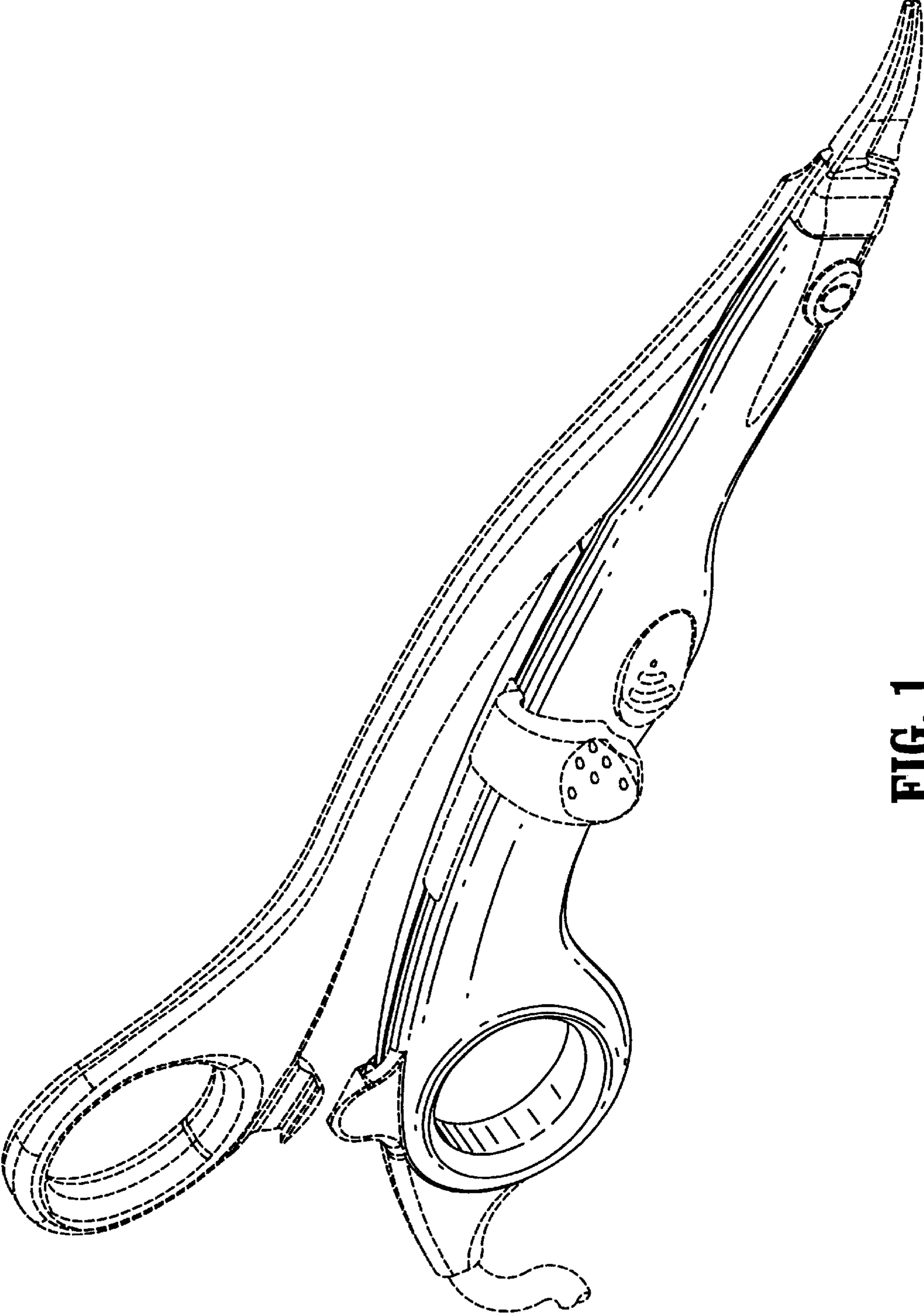


FIG. 1

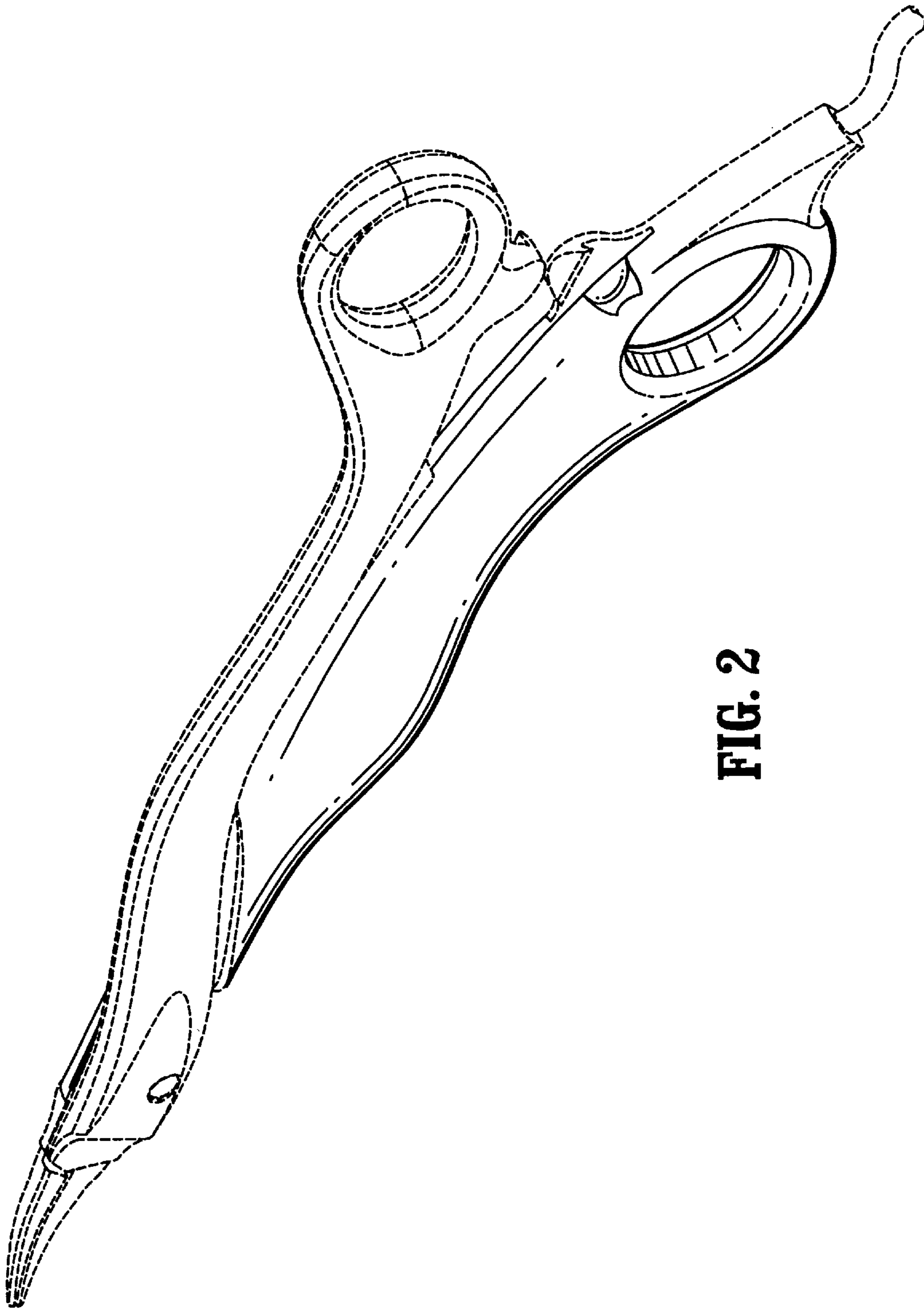


FIG. 2

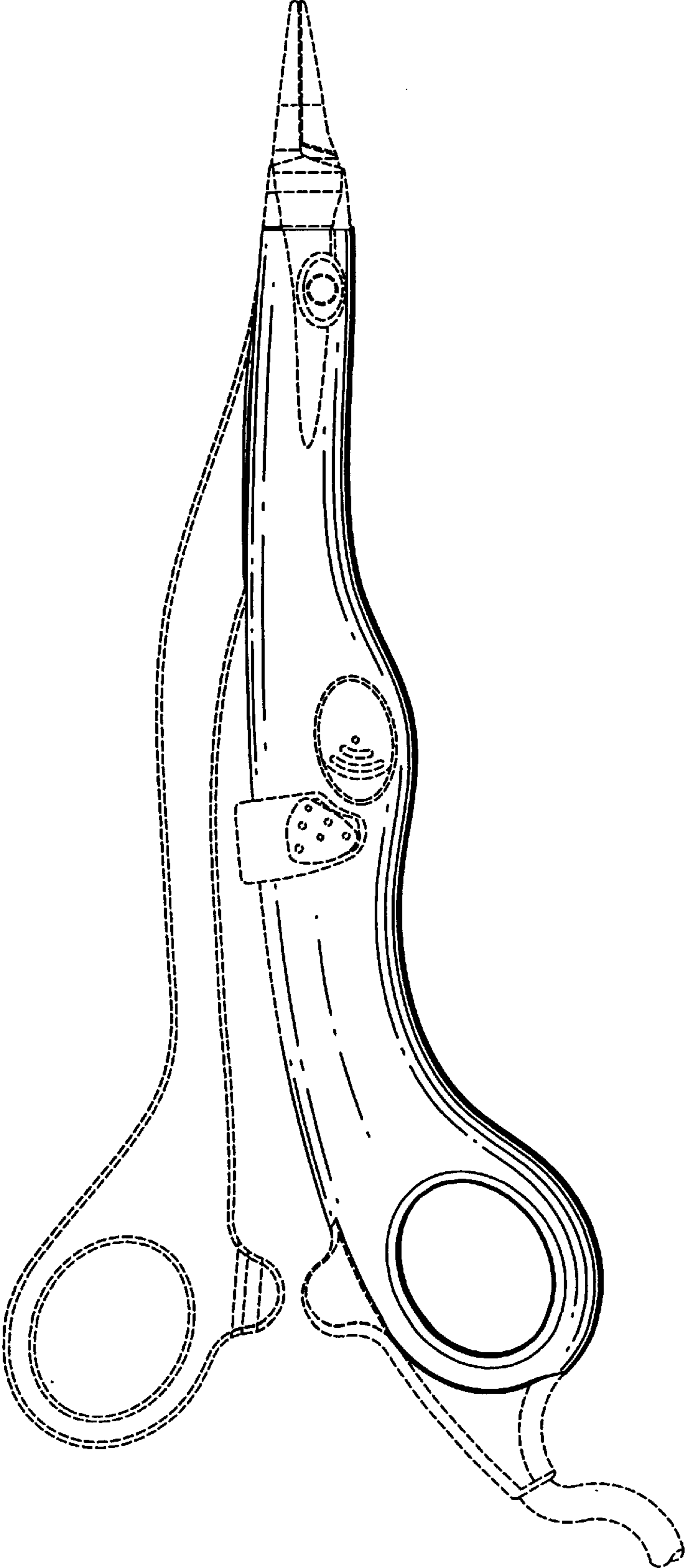


FIG. 3

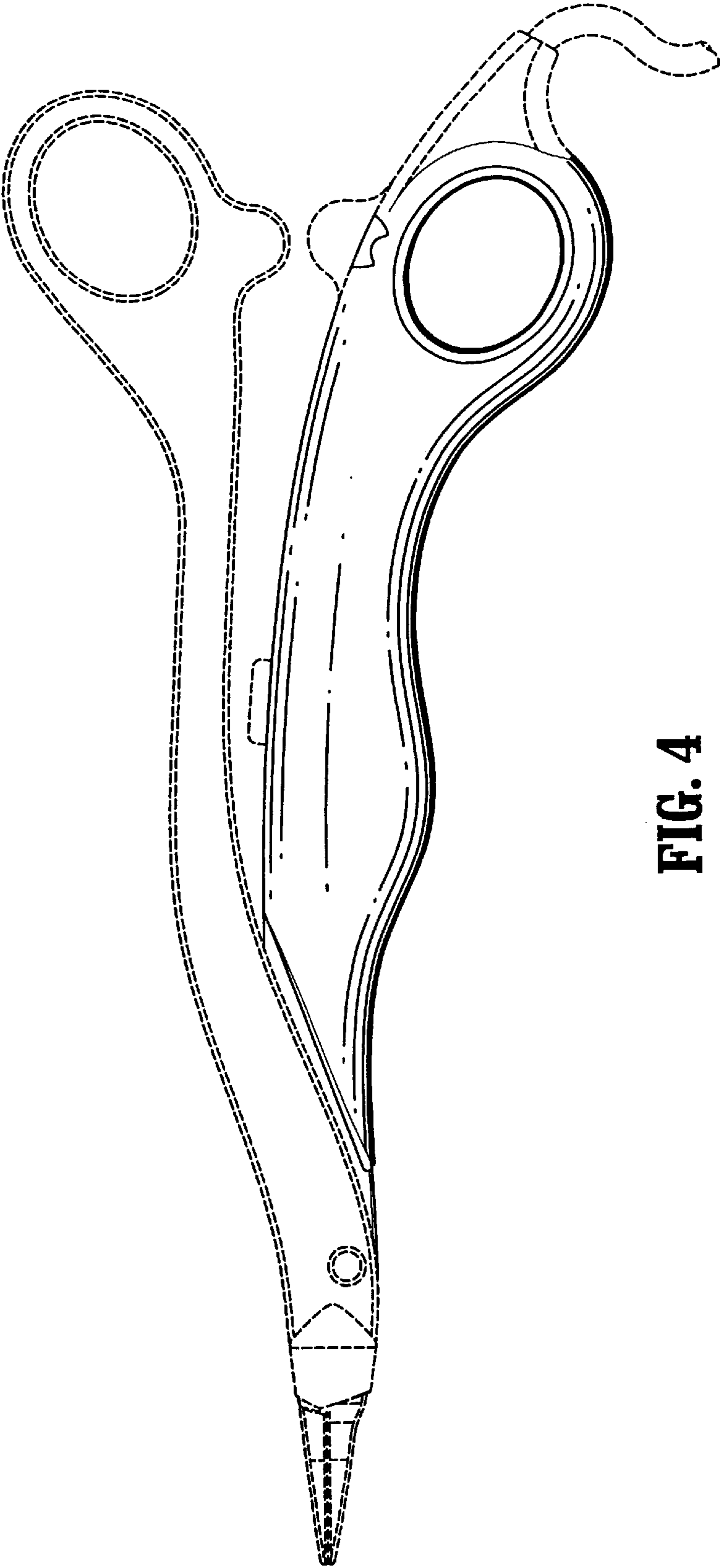


FIG. 4



FIG. 5

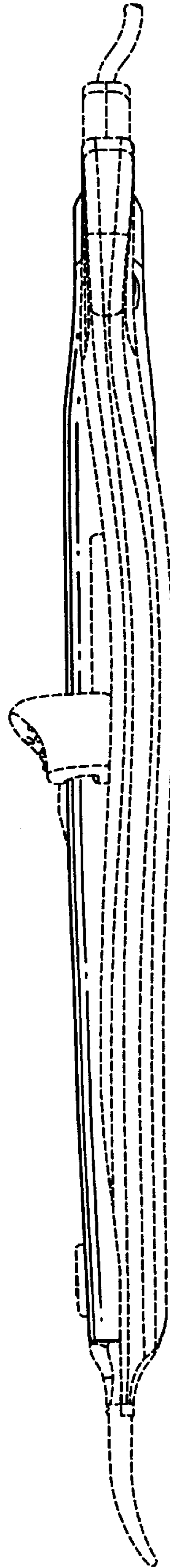


FIG. 6

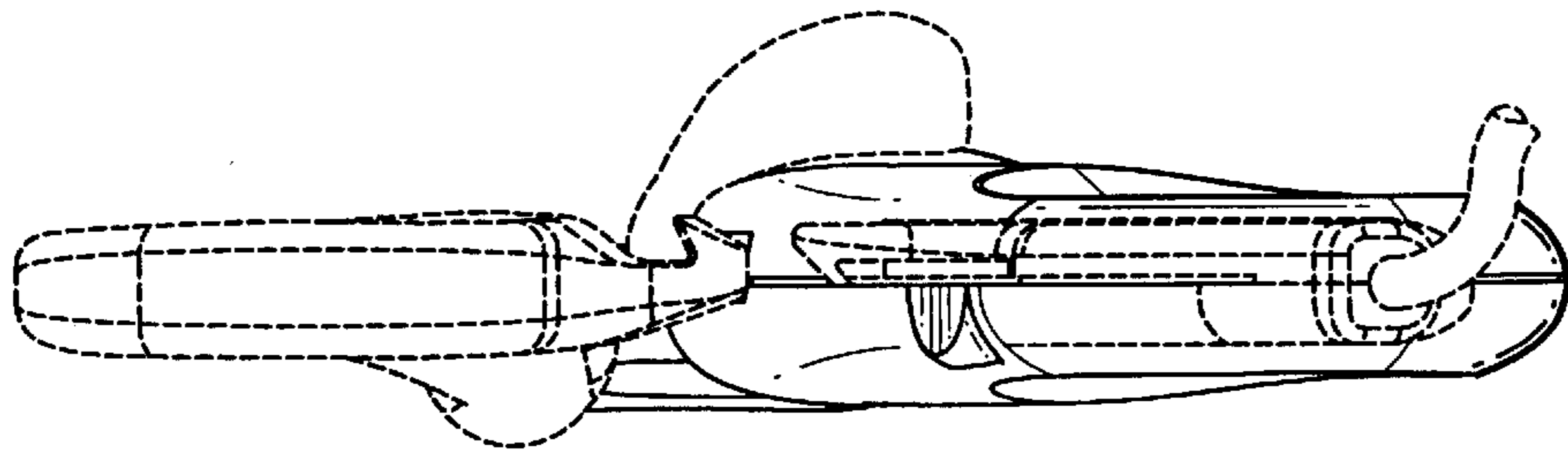


FIG. 8

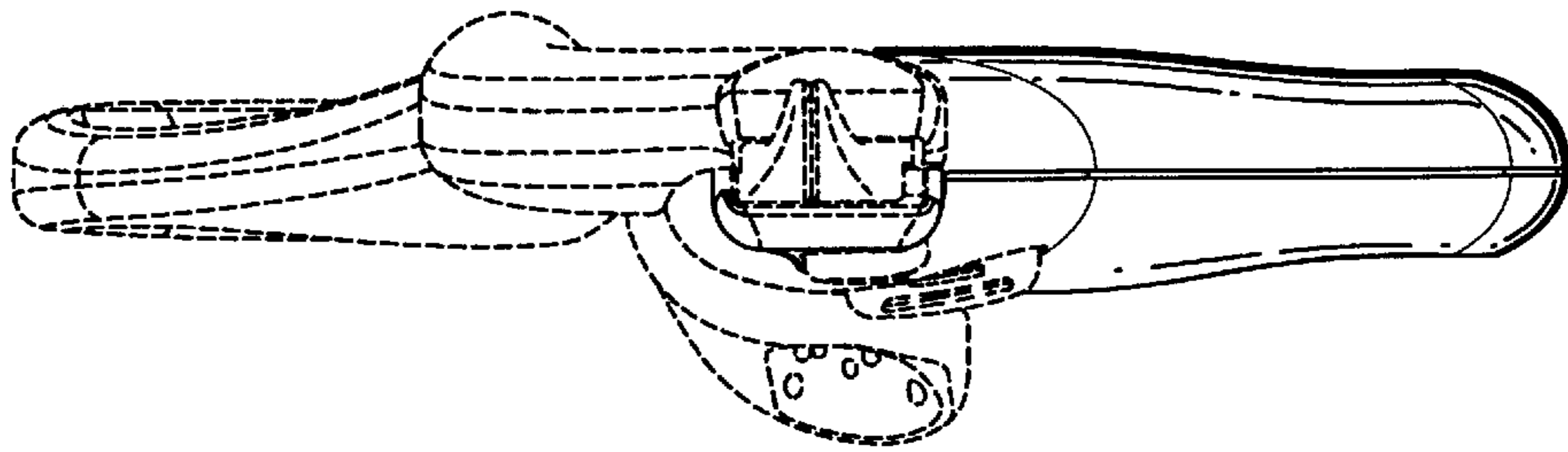


FIG. 7