US00D611146S

(12) United States Design Patent

Way et al.

(10) Patent No.: US D611,146 S
(45) Date of Patent: ** Mar. 2, 2010

(54) **TISSUE MODIFICATION DEVICE**

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

(21) Appl. No.: **29/326,735**

(22) Filed: **Oct. 23, 2008**

(51) **LOC (9) Cl.** **24-02**
(52) **U.S. Cl.** **D24/147**; D24/133
(58) **Field of Classification Search** D24/133, D24/143–147, 170; 600/131, 210, 562, 564, 600/566–567, 65; 606/42, 45–52, 108, 167, 606/170, 205–207, 184, 172
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,493,240	A	5/1924	Bohn
3,628,524	A	12/1971	Jamshidi
3,732,858	A	5/1973	Banko
3,893,445	A	7/1975	Hofsess
3,929,123	A	12/1975	Jamshidi
3,945,372	A	3/1976	Milan et al.
4,103,690	A	8/1978	Harris
4,201,213	A	5/1980	Townsend
4,283,129	A	8/1981	Bennick, Jr.
4,535,773	A	8/1985	Yoon
4,603,694	A	8/1986	Wheeler
4,682,606	A	7/1987	DeCaprio
4,708,147	A	11/1987	Haaga
4,733,663	A	3/1988	Farley
4,777,948	A	10/1988	Wright
4,801,293	A	1/1989	Jackson
4,811,734	A	3/1989	McGurk-Burleson et al.
4,834,729	A	5/1989	Sjostrom
4,844,064	A	7/1989	Thimsen et al.
4,850,354	A	7/1989	McGurk-Burleson et al.
4,867,157	A	9/1989	McGurk-Burleson et al.
4,931,059	A	6/1990	Markham
4,991,600	A	2/1991	Taylor
4,994,072	A	2/1991	Bhate et al.
5,026,375	A	6/1991	Linovitz et al.

(Continued)

FOREIGN PATENT DOCUMENTS

WO	WO 97/34536 A2	9/1997

(Continued)

OTHER PUBLICATIONS

Brunette, et al. Comparative rheology of low—and iso—osmolarity contrast agents at different temperatures. Catheter Cardiovasc Interv. Jan. 1, 2008;71(1):78-83.

(Continued)

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(57) **CLAIM**

The ornamental design for a tissue modification device, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of the tissue excision device of the present invention showing the new design;

FIG. **2** is a top plan view thereof;

FIG. **3** is a front elevational view thereof;

FIG. **4** is a right side elevational view thereof;

FIG. **5** is a left side elevational view thereof;

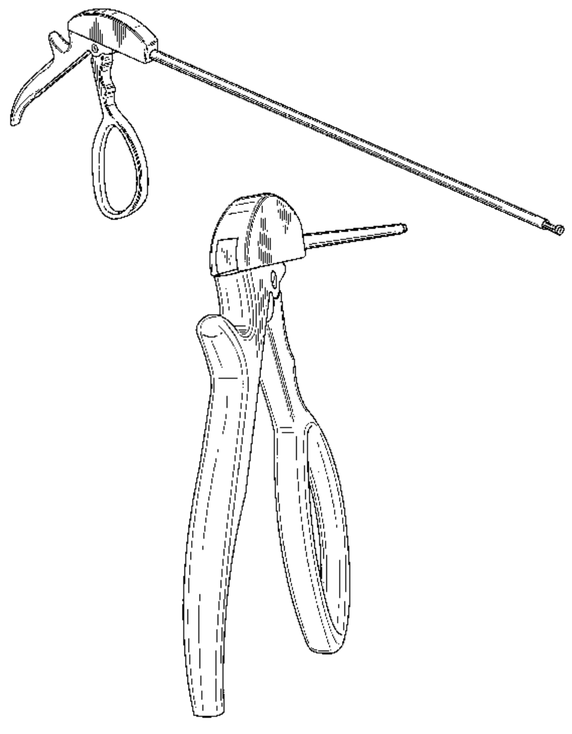
FIG. **6** is a rear elevational view thereof;

FIG. **7** is a bottom plan view thereof;

FIG. **8** is a bottom perspective view thereof; and,

FIG. **9** is an enlarged rear perspective view thereof.

1 Claim, 7 Drawing Sheets



U.S. PATENT DOCUMENTS

5,026,386	A		6/1991	Michelson et al.	
5,040,542	A		8/1991	Gray	
5,061,269	A	*	10/1991	Muller	606/83
5,108,403	A		4/1992	Stern	
5,127,916	A		7/1992	Spencer et al.	
5,172,702	A		12/1992	Leigh et al.	
5,180,393	A		1/1993	Commarmond	
5,190,759	A		3/1993	Lindblad et al.	
5,215,105	A		6/1993	Kizelshteyn et al.	
5,226,910	A		7/1993	Kajiyama et al.	
5,269,785	A		12/1993	Bonutti	
5,273,519	A	*	12/1993	Koros et al.	606/83
5,290,303	A		3/1994	Pingleton et al.	
5,300,045	A		4/1994	Plassche	
5,327,896	A	*	7/1994	Schmieding	600/566
5,354,266	A		10/1994	Snoke	
5,366,477	A		11/1994	LeMarie et al.	
5,373,854	A		12/1994	Kolozsi	
5,385,570	A		1/1995	Chin et al.	
D358,645	S	*	5/1995	Ryan et al.	D24/147
5,429,138	A		7/1995	Jamshidi	
5,439,464	A		8/1995	Shapiro	
5,451,227	A		9/1995	Michaelson	
5,458,112	A		10/1995	Weaver	
5,462,062	A		10/1995	Rubinstein	
5,496,269	A		3/1996	Snoke	
5,514,379	A		5/1996	Weissleder et al.	
5,531,749	A		7/1996	Michelson	
5,540,693	A		7/1996	Fisher	
5,562,102	A		10/1996	Taylor	
5,569,258	A		10/1996	Gambale	
5,569,284	A		10/1996	Young et al.	
5,575,794	A	*	11/1996	Walus et al.	606/116
5,582,618	A		12/1996	Chin et al.	
5,595,186	A		1/1997	Rubinstein et al.	
5,613,972	A		3/1997	Lee et al.	
5,638,827	A		6/1997	Palmer et al.	
5,645,075	A		7/1997	Palmer et al.	
5,681,337	A		10/1997	Bray, Jr.	
5,705,485	A		1/1998	Cini et al.	
5,709,697	A		1/1998	Ratcliff et al.	
5,718,237	A		2/1998	Haaga	
5,730,754	A		3/1998	Obenchain	
5,759,185	A		6/1998	Grinberg et al.	
5,762,639	A	*	6/1998	Gibbs	604/272
5,772,597	A		6/1998	Goldberger et al.	
5,775,333	A		7/1998	Burbank et al.	
5,782,849	A		7/1998	Miller	
5,827,289	A		10/1998	Reiley et al.	
5,827,305	A		10/1998	Gordon	
5,836,948	A		11/1998	Zucherman et al.	
5,840,338	A		11/1998	Roos et al.	
5,853,366	A		12/1998	Dowlatshahi	
5,857,996	A		1/1999	Snoke	
5,860,991	A		1/1999	Klein et al.	
5,868,745	A		2/1999	Alleyne	
5,873,886	A		2/1999	Larsen et al.	
5,879,353	A		3/1999	Terry	
5,879,365	A		3/1999	Whitfield et al.	
5,916,858	A		6/1999	Kim et al.	
5,925,050	A		7/1999	Howard, III	
5,925,056	A		7/1999	Thomas et al.	
5,931,855	A		8/1999	Buncke	
5,964,782	A		10/1999	Lafontaine	
5,980,525	A		11/1999	Bryant et al.	
5,985,320	A		11/1999	Edwards et al.	
6,010,493	A		1/2000	Snoke	
6,019,765	A		2/2000	Thornhill et al.	
6,022,362	A		2/2000	Lee et al.	
6,083,237	A		7/2000	Huitema et al.	
6,096,053	A		8/2000	Bates	
6,142,997	A		11/2000	Michelson	
6,221,006	B1		4/2001	Dubrul et al.	
6,241,747	B1		6/2001	Ruff	
6,258,093	B1		7/2001	Edwards et al.	
6,261,294	B1		7/2001	Stihl et al.	
6,261,582	B1		7/2001	Needham et al.	
6,264,087	B1		7/2001	Whitman	
6,264,617	B1		7/2001	Bales et al.	
6,268,405	B1		7/2001	Yao et al.	
6,273,862	B1		8/2001	Privitera et al.	
6,287,304	B1		9/2001	Eggers et al.	
6,296,639	B1		10/2001	Truckai et al.	
6,306,156	B1		10/2001	Clark	
6,332,886	B1		12/2001	Green et al.	
6,358,217	B1		3/2002	Bourassa	
6,358,254	B1		3/2002	Anderson	
6,375,659	B1		4/2002	Erbe et al.	
6,419,684	B1		7/2002	Heisler et al.	
6,423,332	B1		7/2002	Huxel et al.	
6,425,859	B1		7/2002	Foley et al.	
6,428,486	B2		8/2002	Ritchart et al.	
6,428,498	B2		8/2002	Uflacker	
6,443,910	B1		9/2002	Krueger et al.	
6,454,767	B2		9/2002	Alleyne	
6,464,682	B1		10/2002	Snoke	
6,470,209	B2		10/2002	Snoke	
6,478,805	B1		11/2002	Marino et al.	
6,488,636	B2		12/2002	Bryan et al.	
6,506,190	B1		1/2003	Walshe	
6,514,256	B2		2/2003	Zucherman et al.	
6,520,907	B1		2/2003	Foley et al.	
6,530,933	B1		3/2003	Yeung et al.	
6,572,563	B2		6/2003	Ouchi	
6,575,919	B1		6/2003	Reiley et al.	
6,575,968	B1		6/2003	Eggers et al.	
6,575,977	B1	*	6/2003	Michelson	606/83
6,599,310	B2		7/2003	Leung et al.	
6,602,248	B1		8/2003	Sharps et al.	
6,605,294	B2		8/2003	Sawhney et al.	
6,620,185	B1		9/2003	Harvie et al.	
6,626,916	B1		9/2003	Yeung et al.	
6,645,213	B2		11/2003	Sand et al.	
6,652,558	B2		11/2003	Patel et al.	
6,669,729	B2		12/2003	Chin et al.	
6,692,445	B2		2/2004	Roberts et al.	
6,716,216	B1		4/2004	Boucher et al.	
6,746,093	B2		6/2004	Martinez et al.	
6,746,451	B2		6/2004	Middleton et al.	
6,772,012	B2		8/2004	Ricart et al.	
6,783,534	B2		8/2004	Mehdizadeh	
6,818,001	B2		11/2004	Wulfman et al.	
6,852,095	B1		2/2005	Ray	
6,858,229	B1		2/2005	Hubbell et al.	
6,925,323	B2		8/2005	Snoke	
6,991,633	B2	*	1/2006	Agbodoe	606/83
7,008,433	B2		3/2006	Voellmicke et al.	
7,011,663	B2	*	3/2006	Michelson	606/83
7,025,771	B2		4/2006	Kuslich et al.	
7,041,050	B1		5/2006	Ronald	
7,066,942	B2		6/2006	Treace	
7,070,596	B1		7/2006	Woloszko et al.	
7,101,382	B2		9/2006	George et al.	
7,137,956	B2		11/2006	Nishtalas et al.	
7,189,206	B2		3/2007	Quick et al.	
7,201,722	B2		4/2007	Krueger	
7,276,032	B2		10/2007	Hibner	
7,297,147	B2	*	11/2007	Michelson	606/83
7,322,978	B2		1/2008	West, Jr.	
7,329,402	B2		2/2008	Unger et al.	
7,445,634	B2		11/2008	Trieu	
2001/0005778	A1		6/2001	Ouchi	
2003/0009125	A1		1/2003	Nita et al.	
2003/0077225	A1		4/2003	Laurent et al.	

2003/0165555	A1	9/2003	Ding et al.	
2003/0220650	A1	11/2003	Major et al.	
2004/0049217	A1	3/2004	Ross et al.	
2004/0059370	A1	3/2004	Greene et al.	
2004/0138701	A1	7/2004	Haluck	
2004/0210231	A1	10/2004	Boucher et al.	
2005/0037079	A1	2/2005	Son et al.	
2005/0038432	A1	2/2005	Shaolian et al.	
2005/0075630	A1	4/2005	Truckai et al.	
2005/0080441	A1	4/2005	Dodge et al.	
2005/0137602	A1	6/2005	Assell et al.	
2005/0209610	A1	9/2005	Carrison	
2005/0228403	A1	10/2005	Ho et al.	
2005/0267503	A1*	12/2005	Hunstad	606/170
2006/0030785	A1	2/2006	Field et al.	
2006/0036211	A1	2/2006	Solsberg et al.	
2006/0036271	A1	2/2006	Schomer et al.	
2006/0036272	A1	2/2006	Solsberg et al.	
2006/0089609	A1	4/2006	Bleich et al.	
2006/0089633	A1	4/2006	Bleich et al.	
2006/0089640	A1	4/2006	Bleich et al.	
2006/0094976	A1	5/2006	Bleich et al.	
2006/0095028	A1	5/2006	Bleich et al.	
2006/0095059	A1	5/2006	Bleich et al.	
2006/0100651	A1	5/2006	Bleich	
2006/0122458	A1	6/2006	Bleich	
2006/0122535	A1	6/2006	Daum	
2006/0135882	A1	6/2006	Bleich	
2006/0178682	A1	8/2006	Boehlke	
2006/0184175	A1	8/2006	Schomer et al.	
2006/0206115	A1	9/2006	Schomer et al.	
2006/0235334	A1	10/2006	Corvi et al.	
2006/0235451	A1	10/2006	Schomer et al.	
2006/0235452	A1	10/2006	Schomer et al.	
2006/0264994	A1	11/2006	Schomer et al.	
2007/0005084	A1	1/2007	Clague et al.	
2007/0027464	A1	2/2007	Way et al.	
2007/0055263	A1	3/2007	Way et al.	
2007/0123888	A1	5/2007	Bleich et al.	
2007/0162061	A1	7/2007	Way et al.	
2007/0198019	A1	8/2007	Schomer et al.	
2007/0225703	A1	9/2007	Schmitz et al.	
2007/0276390	A1	11/2007	Solsberg et al.	
2008/0161809	A1*	7/2008	Schmitz et al.	606/79
2008/0221383	A1	9/2008	Way et al.	
2009/0118709	A1*	5/2009	Sand et al.	604/540

FOREIGN PATENT DOCUMENTS

WO	WO 97/34536	A3	11/1997
WO	WO 00/45868	A1	8/2000
WO	WO 01/08571	A1	2/2001
WO	WO 02/076311	A2	10/2002
WO	WO 2002/076311	A3	2/2004

OTHER PUBLICATIONS

International Search Report and Written Opinion for Appl. No. PCT/US06/04342 dated Sep. 18, 2007.

International Search Report and Written Opinion for Appl. No. PCT/US2006/030299 dated Aug. 2007.

International Search Report for International Application No. PCT/US05/27216 dated Nov. 29, 2005.

* cited by examiner

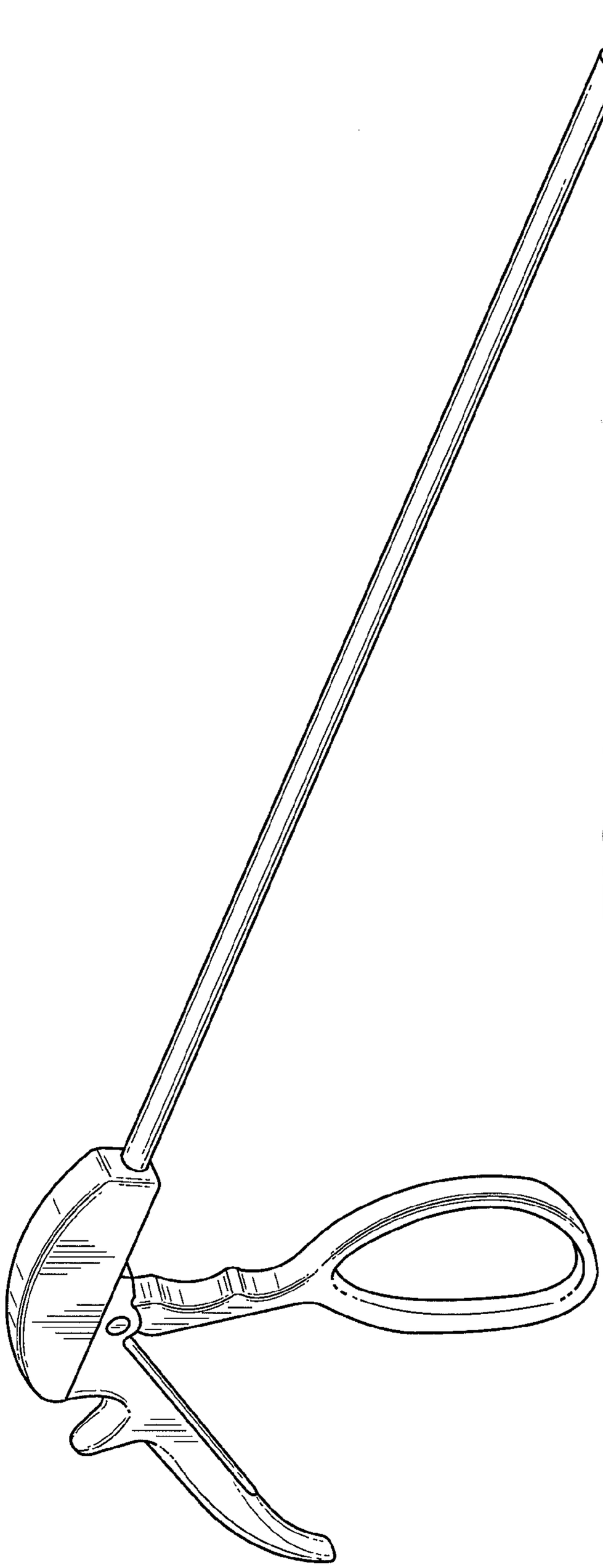
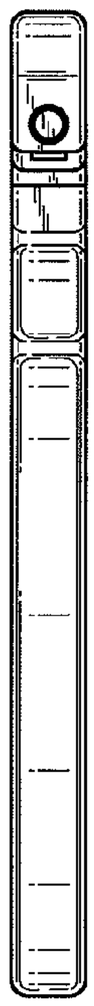


FIG. 1

FIG. 2



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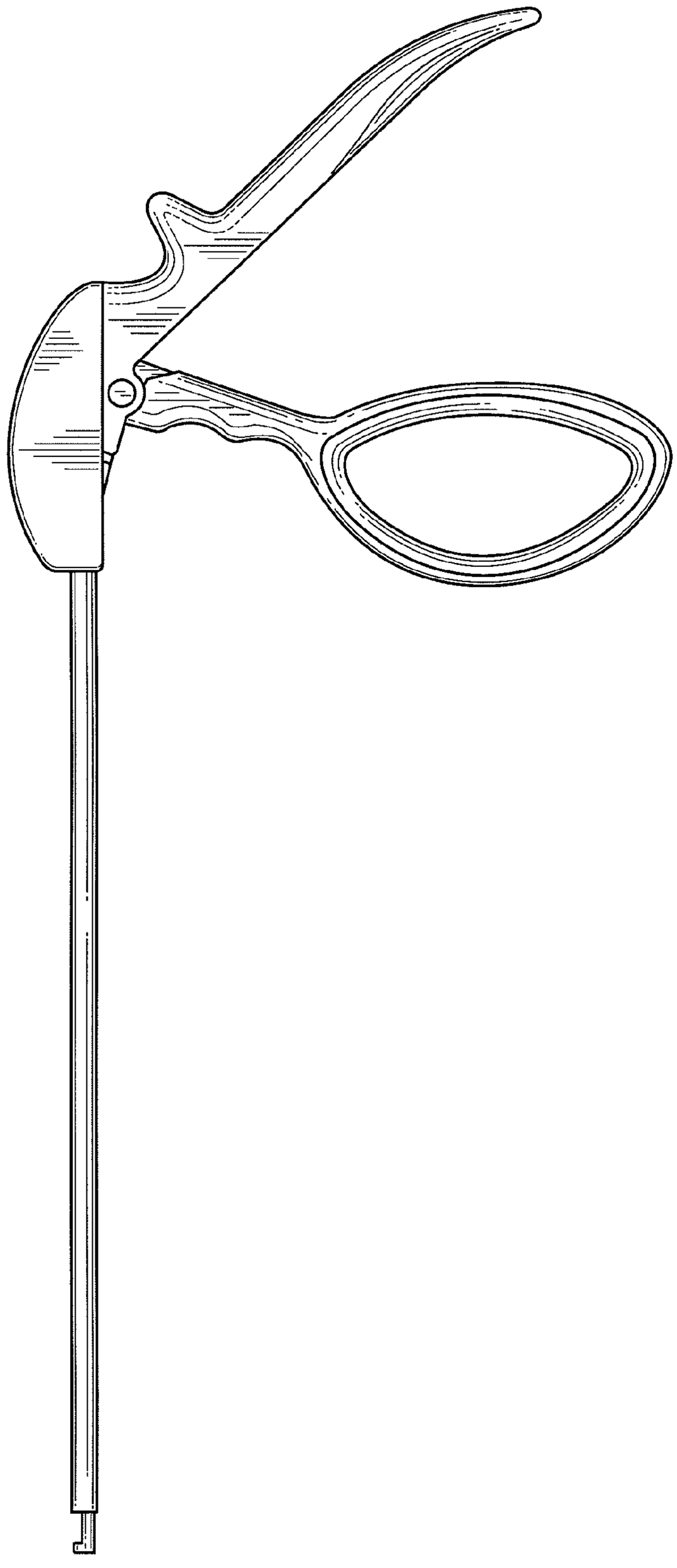

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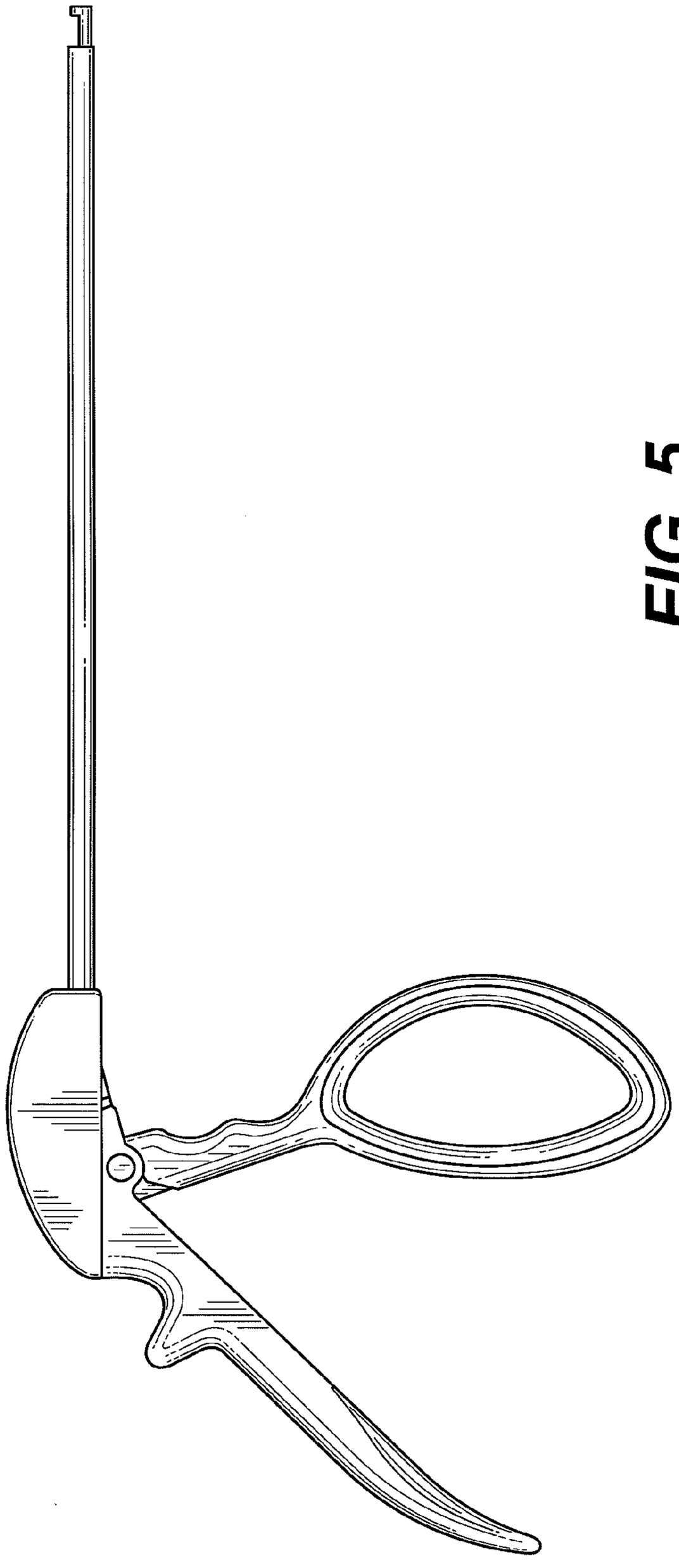

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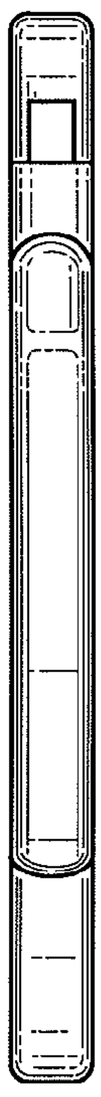

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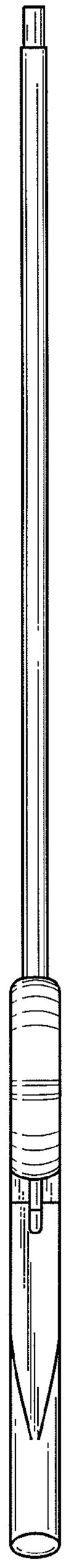

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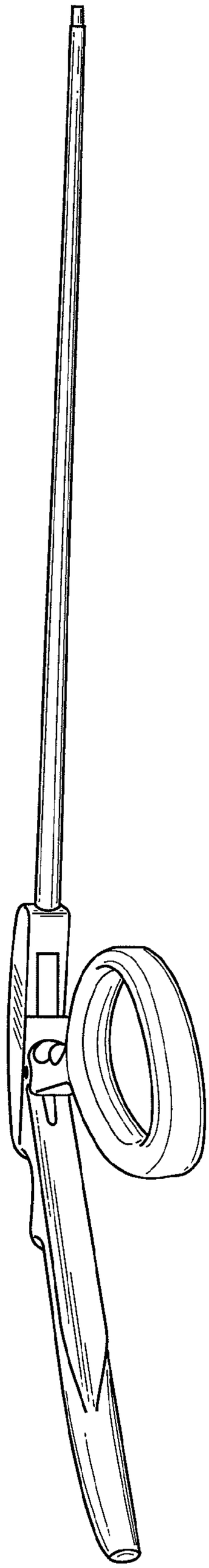

FIG. 8

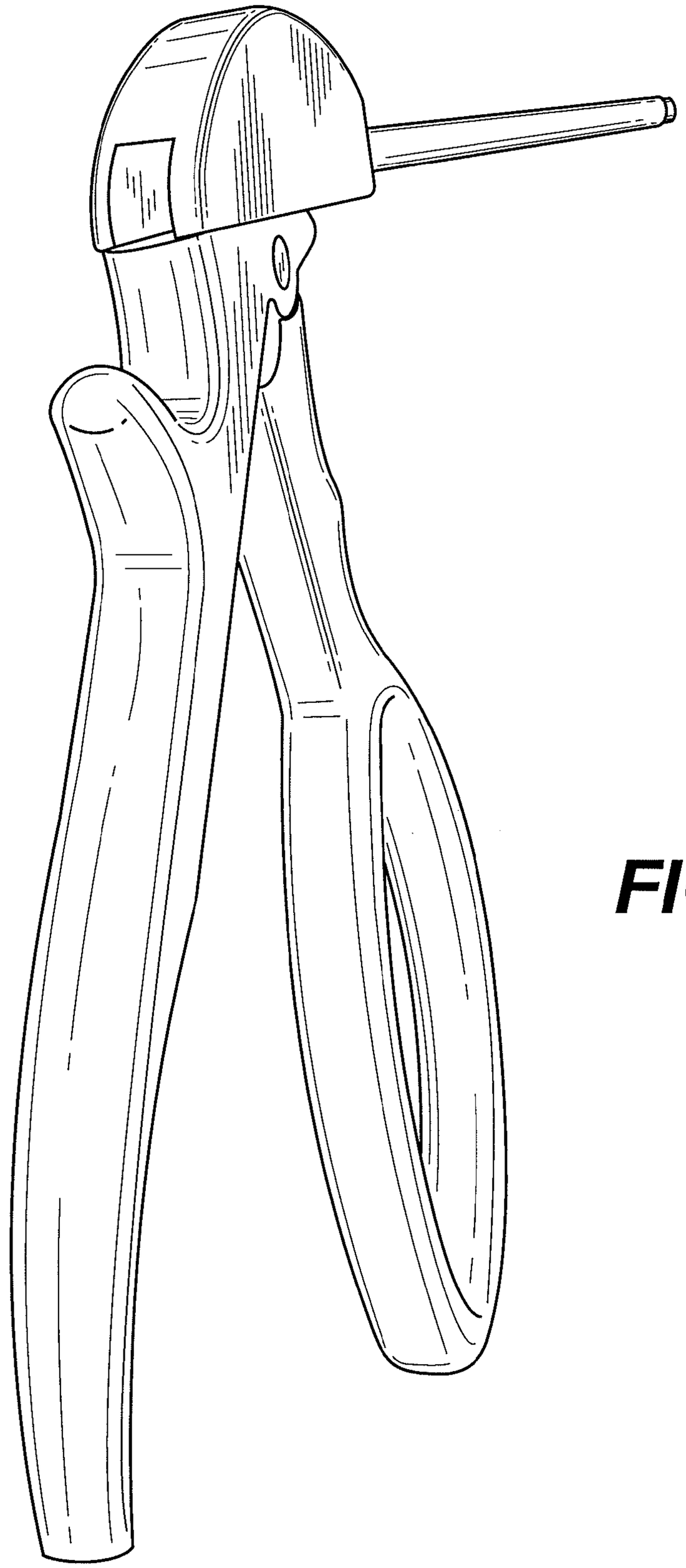

FIG. 9