



US00D677391S

(12) **United States Design Patent**
Bickford

(10) **Patent No.:** **US D677,391 S**
(45) **Date of Patent:** **** Mar. 5, 2013**

(54) **CONVEX-CONCAVE ROLLER**
(75) Inventor: **William R. Bickford**, Ronkonkoma, NY (US)
(73) Assignee: **ELC Management, LLC**, New York, NY (US)
(**) Term: **14 Years**

(21) Appl. No.: **29/400,162**
(22) Filed: **Aug. 24, 2011**
(51) **LOC (9) Cl.** **28-03**
(52) **U.S. Cl.** **D24/211**
(58) **Field of Classification Search** D24/200, D24/211-215, 141; 601/27, 28, 33, 40, 46, 601/47, 48, 63, 80, 99, 104, 112, 113, 114, 601/119, 122, 125, 129, 134, 135, 137, DIG. 12, 601/DIG. 13, DIG. 14, DIG. 15, DIG. 16, 601/DIG. 17; D14/137, 147
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,501,342	A	7/1924	Hoard	
D105,722	S *	8/1937	Widmann	D24/211
D113,690	S	3/1939	Tresenberg	
D166,427	S *	4/1952	Strock	D4/109
3,157,135	A	11/1964	Fetrow et al.	
D211,549	S *	6/1968	Christopher	D24/211
D214,608	S *	7/1969	Howell	D28/7
3,638,939	A	2/1972	Langley	
D260,560	S *	9/1981	Flower	D28/7
4,335,483	A	6/1982	Buck	
D299,972	S	2/1989	Moore	
5,218,955	A *	6/1993	Gueret	601/123
D341,427	S *	11/1993	Koll	D24/211
5,410,773	A	5/1995	Forkner	
D363,377	S *	10/1995	Koptis	D4/122
D414,875	S *	10/1999	Sirois et al.	D24/215
D459,639	S	7/2002	Hefti et al.	
6,484,341	B2	11/2002	Hefti et al.	
D535,893	S *	1/2007	Shurtleff et al.	D9/726
7,169,120	B2	1/2007	Murdock et al.	
D549,834	S *	8/2007	Huang	D24/211
7,435,029	B1	10/2008	Marini	

D617,943	S *	6/2010	Bouix et al.	D28/7
D631,192	S *	1/2011	Lim	D28/7
7,896,824	B2 *	3/2011	Gueret	601/127
D654,811	S *	2/2012	Song	D9/726
D659,549	S *	5/2012	Fera et al.	D9/726
D661,168	S *	6/2012	Furling et al.	D8/51
D665,642	S *	8/2012	Furling et al.	D8/51
D669,590	S *	10/2012	Matsushita	D24/211
2005/0131320	A1	6/2005	Lee	
2009/0158529	A1	6/2009	Vaes	

* cited by examiner

Primary Examiner — Sandra Snapp

(74) Attorney, Agent, or Firm — Cynthia R. Miller

(57) **CLAIM**

The ornamental design for a convex-concave roller, substantially as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a first embodiment of our new design for a convex-concave roller, both rollers having a smooth surface;
 FIG. 2 is an end view of the convex-concave roller shown in FIG. 1;
 FIG. 3 is a front elevational view of the convex-concave roller shown in FIG. 1;
 FIG. 4 is an opposite end view of the convex-concave roller shown in FIG. 1;
 FIG. 5 is a side elevational view of the convex-concave roller shown in FIG. 1;
 FIG. 6 is a rear elevational view of the convex-concave roller shown in FIG. 1;
 FIG. 7 is an opposite side elevational view of the convex-concave roller shown in FIG. 1;
 FIG. 8 is a perspective view of a second embodiment of our new design for a convex-concave roller, both rollers having a flocked or a textured surface;
 FIG. 9 is an end view of the convex-concave roller shown in FIG. 8;
 FIG. 10 is a front elevational view of the convex-concave roller shown in FIG. 8;
 FIG. 11 is an opposite end view of the convex-concave roller shown in FIG. 8;

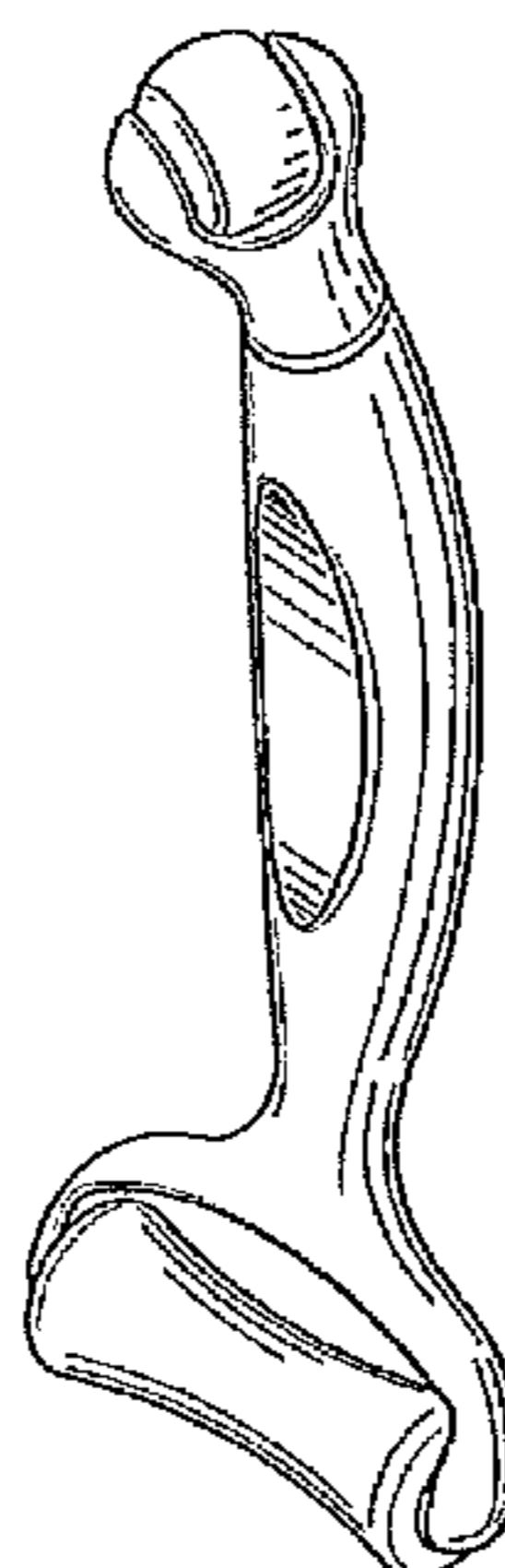


FIG. 12 is a side elevational view of the convex-concave roller shown in FIG. 8;

FIG. 13 is a rear elevational view of the convex-concave roller shown in FIG. 8;

FIG. 14 is an opposite side elevational view of the convex-concave roller shown in FIG. 8;

FIG. 15 is a perspective view of a third embodiment of our new design for a convex-concave roller, one roller having a smooth surface and the other roller having a flocked or textured surface;

FIG. 16 is an end view of the convex-concave roller shown in FIG. 15;

FIG. 17 is a front elevational view of the convex-concave roller shown in FIG. 15;

FIG. 18 is an opposite end view of the convex-concave roller shown in FIG. 15;

FIG. 19 is a side elevational view of the convex-concave roller shown in FIG. 15;

FIG. 20 is a rear elevational view of the convex-concave roller shown in FIG. 15;

FIG. 21 is an opposite side elevational view of the convex-concave roller shown in FIG. 15;

FIG. 22 is a perspective view of a fourth embodiment of our new design for a convex-concave roller, one roller having a smooth surface and the other roller having a flocked or textured surface;

FIG. 23 is an end view of the convex-concave roller shown in FIG. 22;

FIG. 24 is a front elevational view of the convex-concave roller shown in FIG. 22;

FIG. 25 is an opposite end view of the convex-concave roller shown in FIG. 22;

FIG. 26 is a side elevational view of the convex-concave roller shown in FIG. 22;

FIG. 27 is a rear elevational view of the convex-concave roller shown in FIG. 22; and,

FIG. 28 is an opposite side elevational view of the convex-concave roller shown in FIG. 22.

1 Claim, 12 Drawing Sheets

FIG. 1

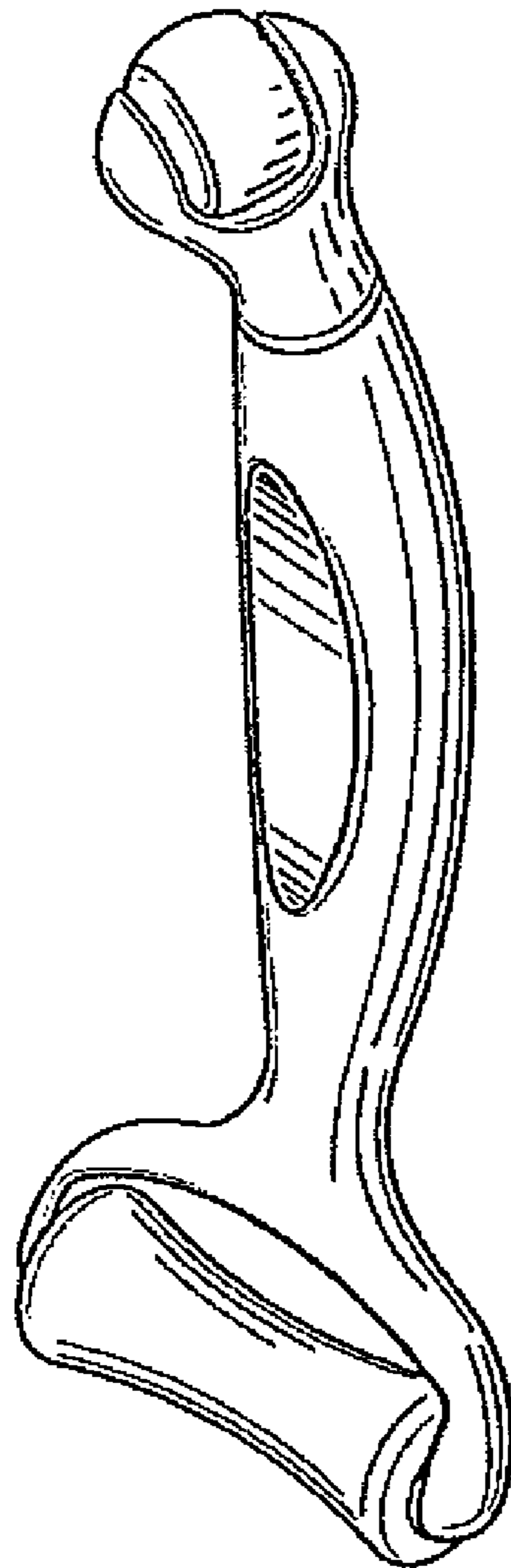


FIG. 2

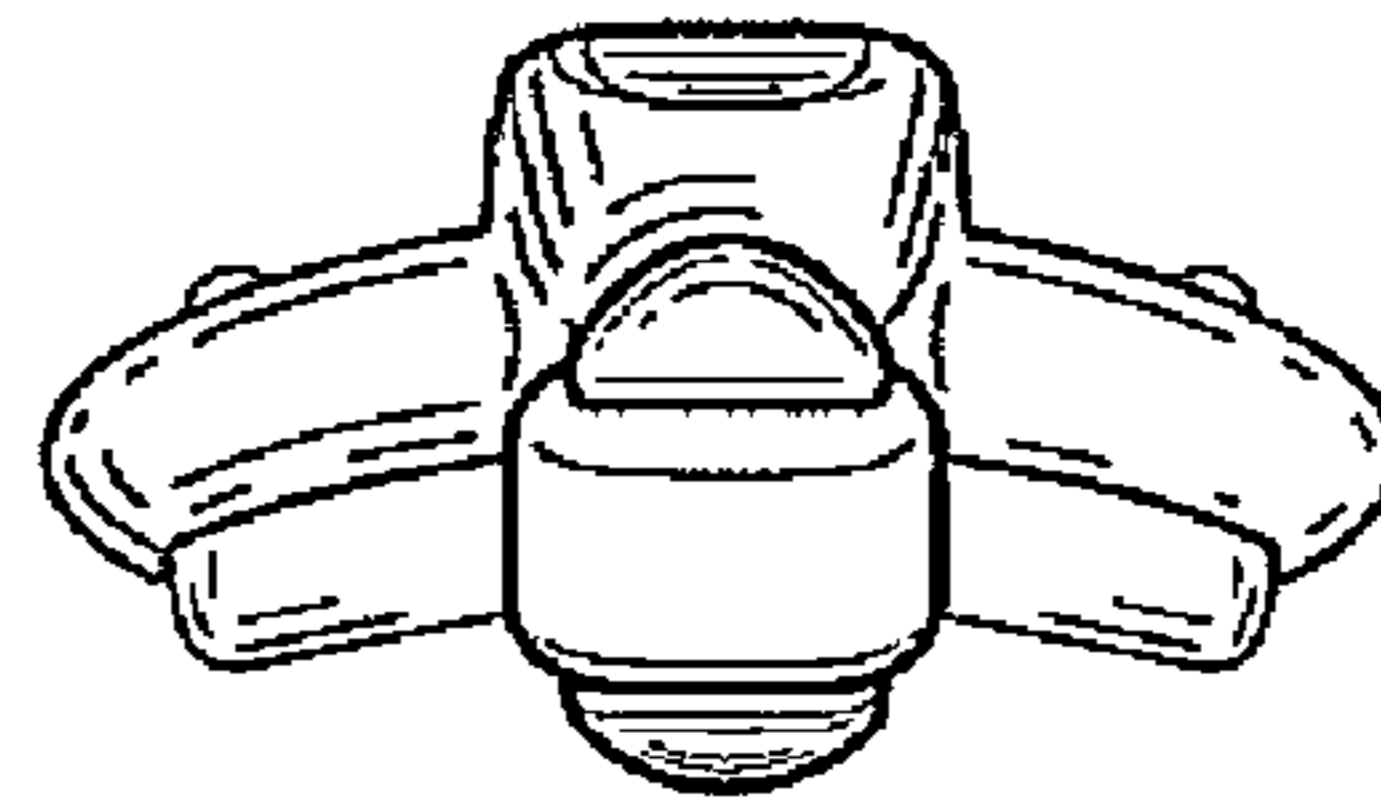


FIG. 3

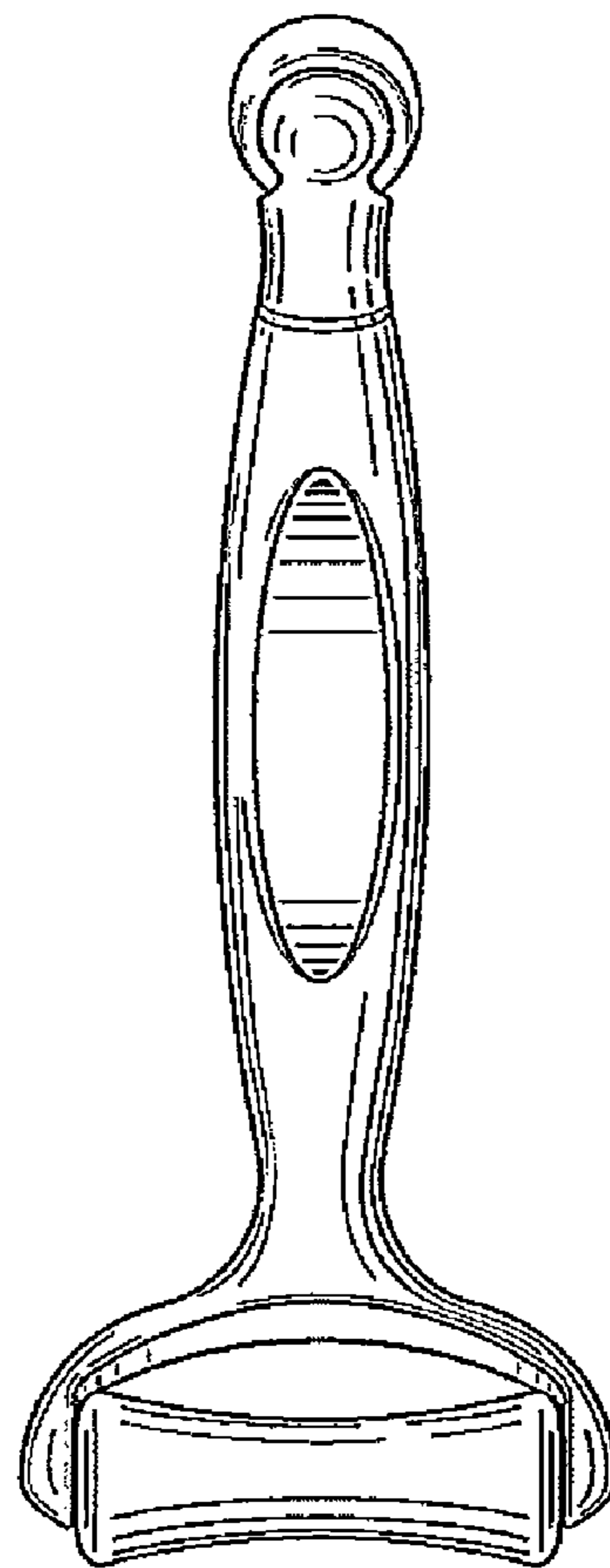


FIG. 4

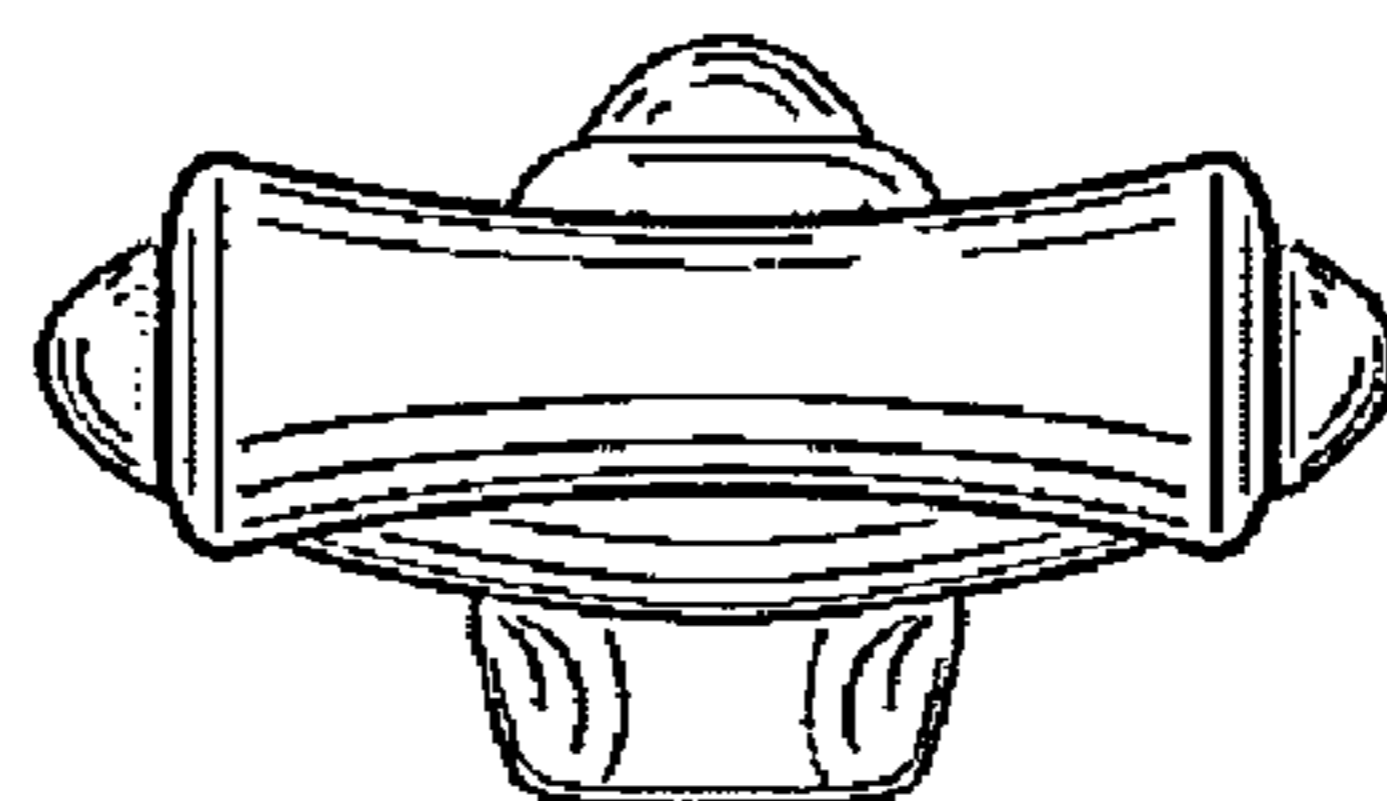


FIG. 5



FIG. 6

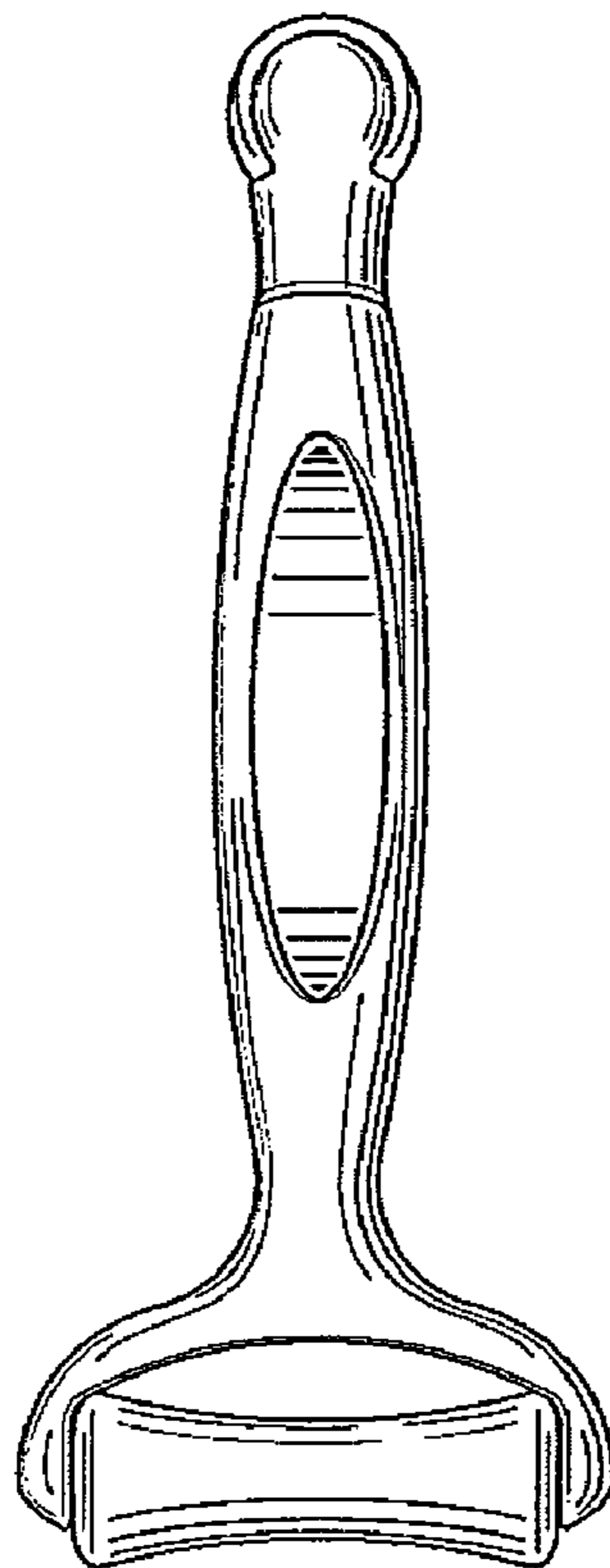


FIG. 7

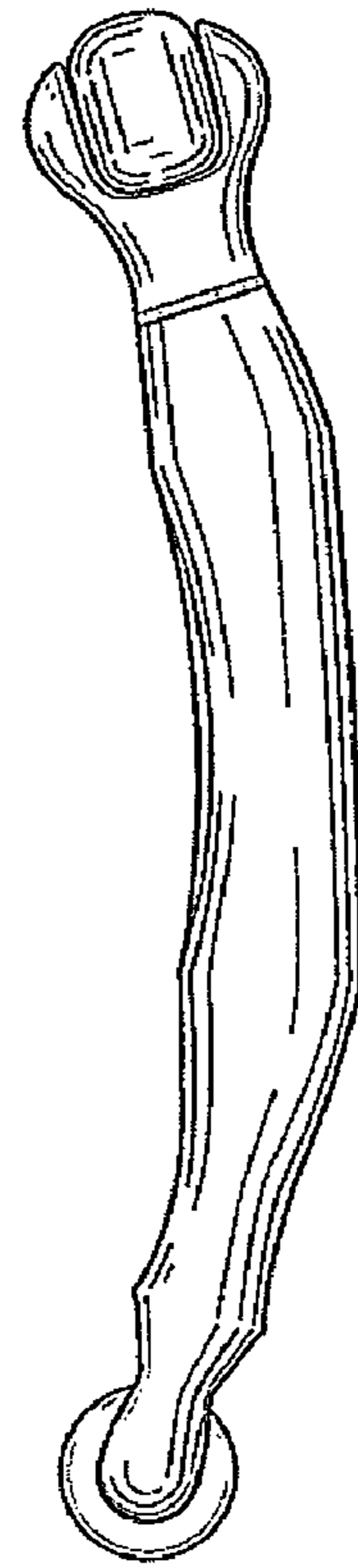


FIG. 8

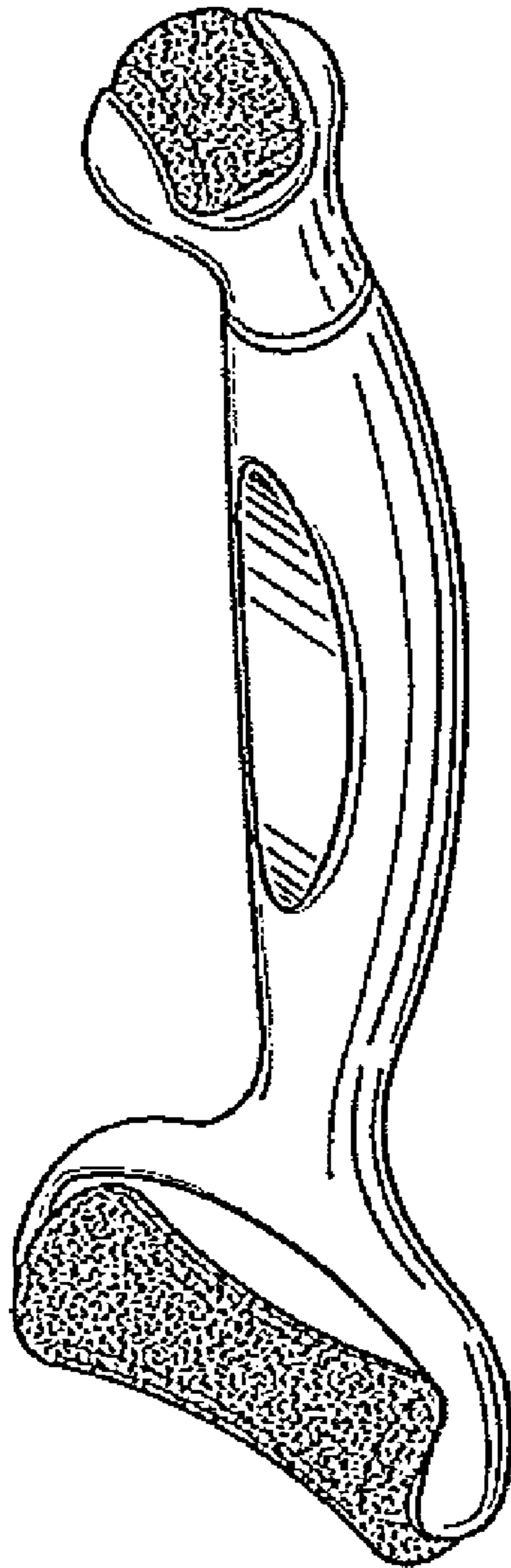


FIG. 9

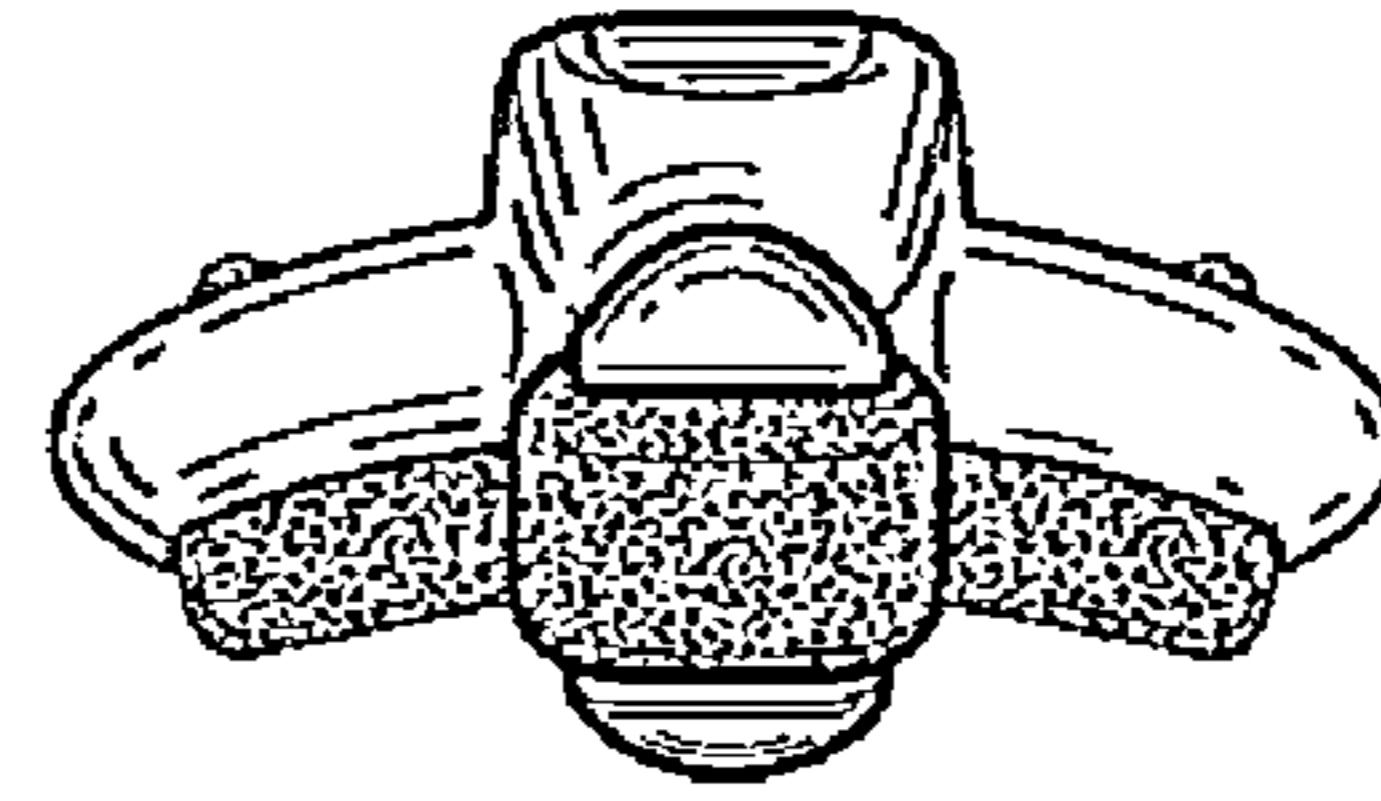


FIG. 10

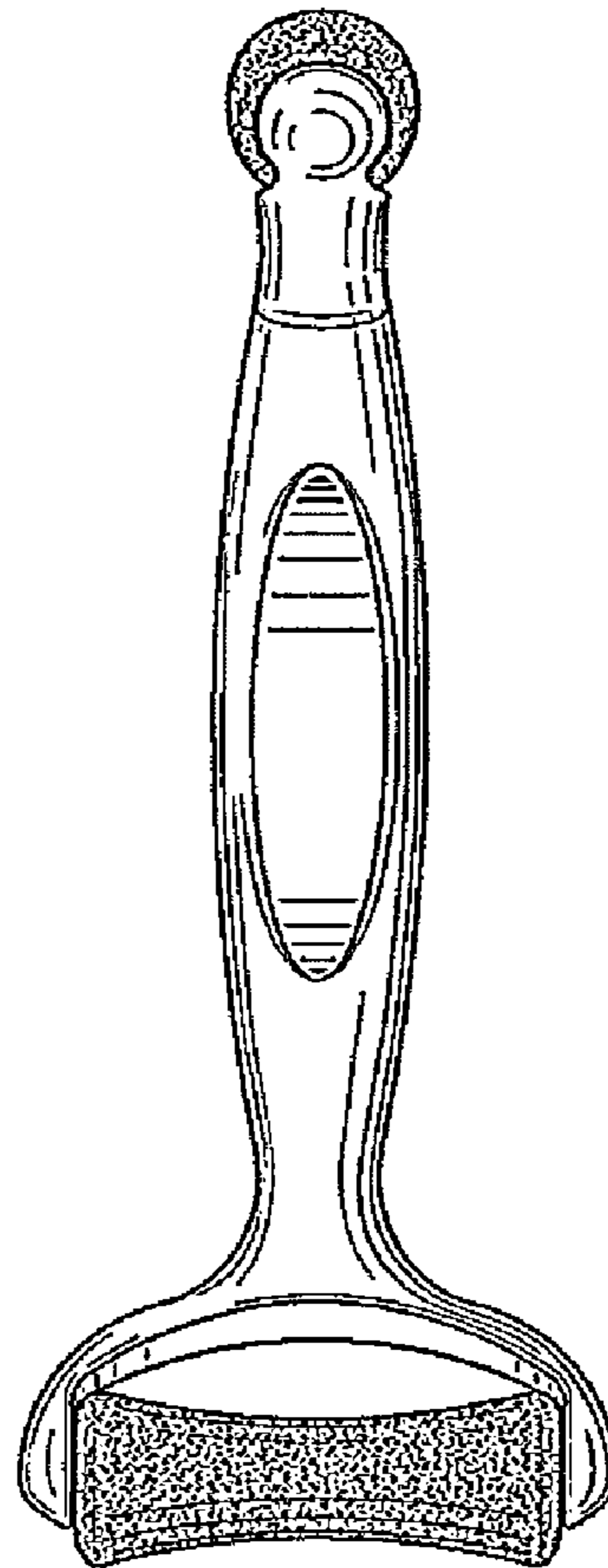


FIG. 11

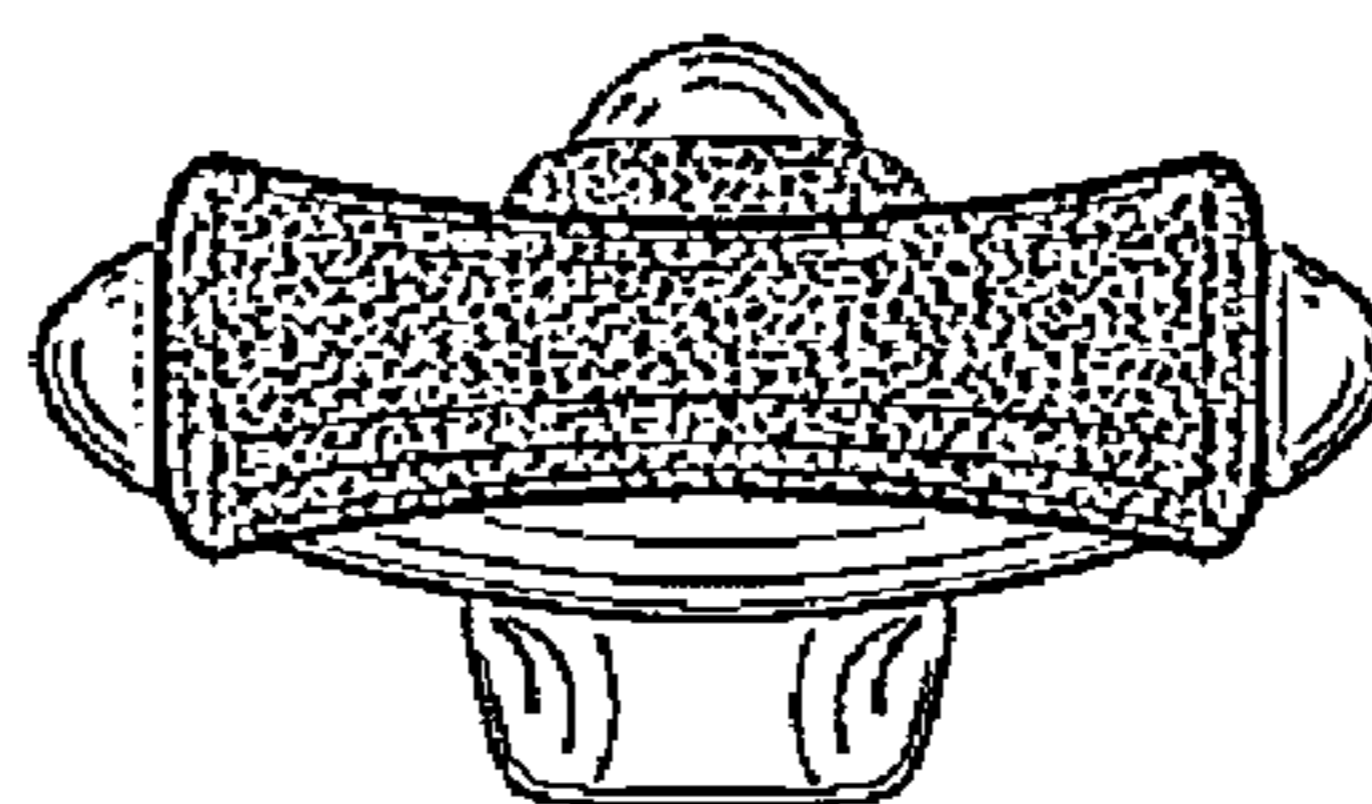


FIG. 12



FIG. 13

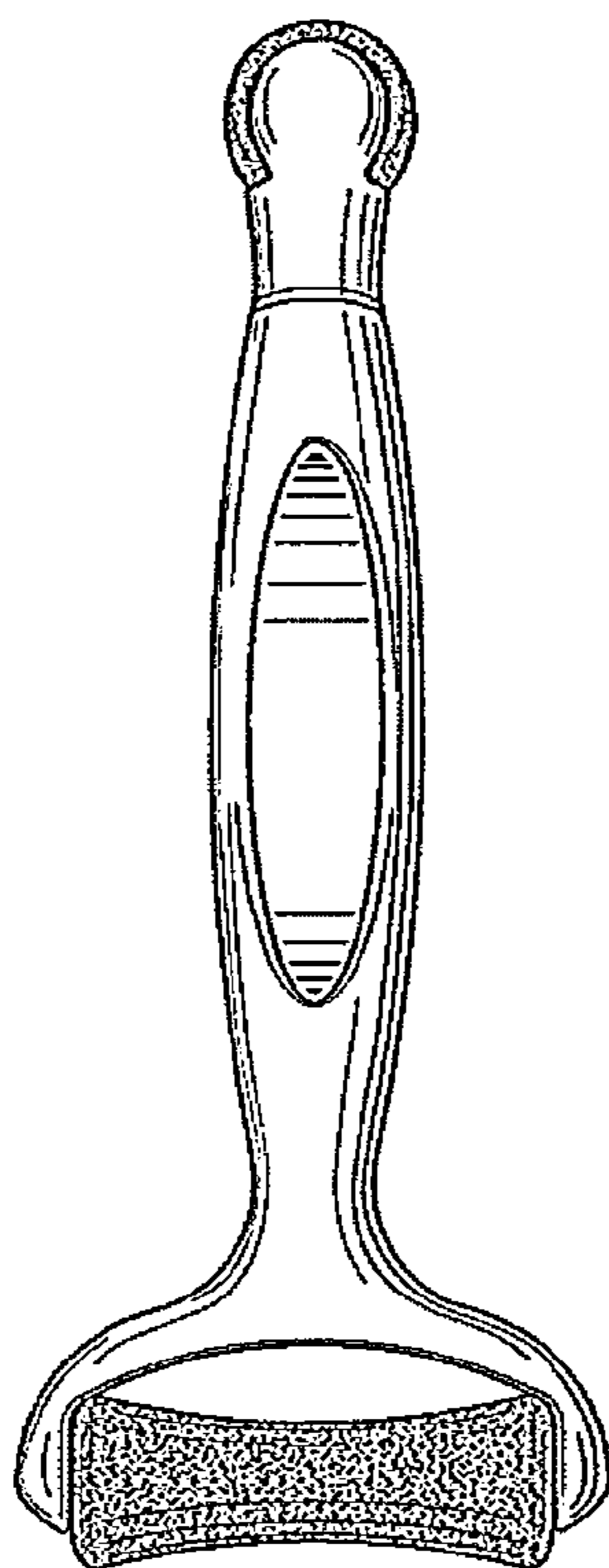


FIG. 14



FIG. 15

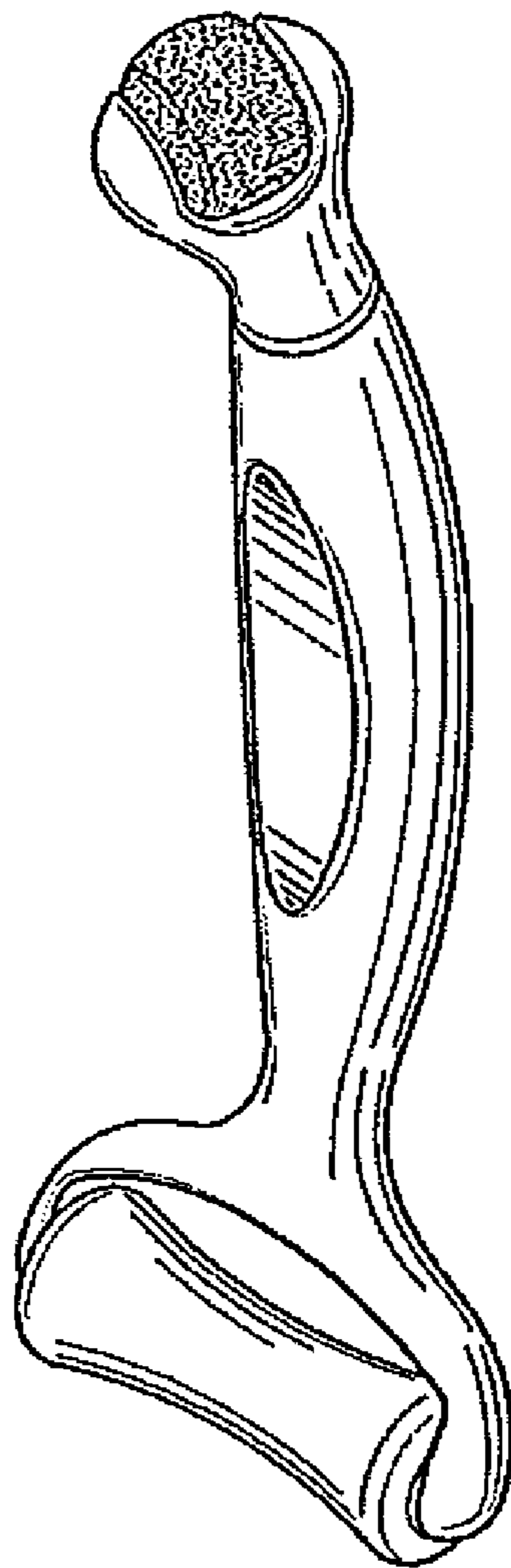


FIG. 16

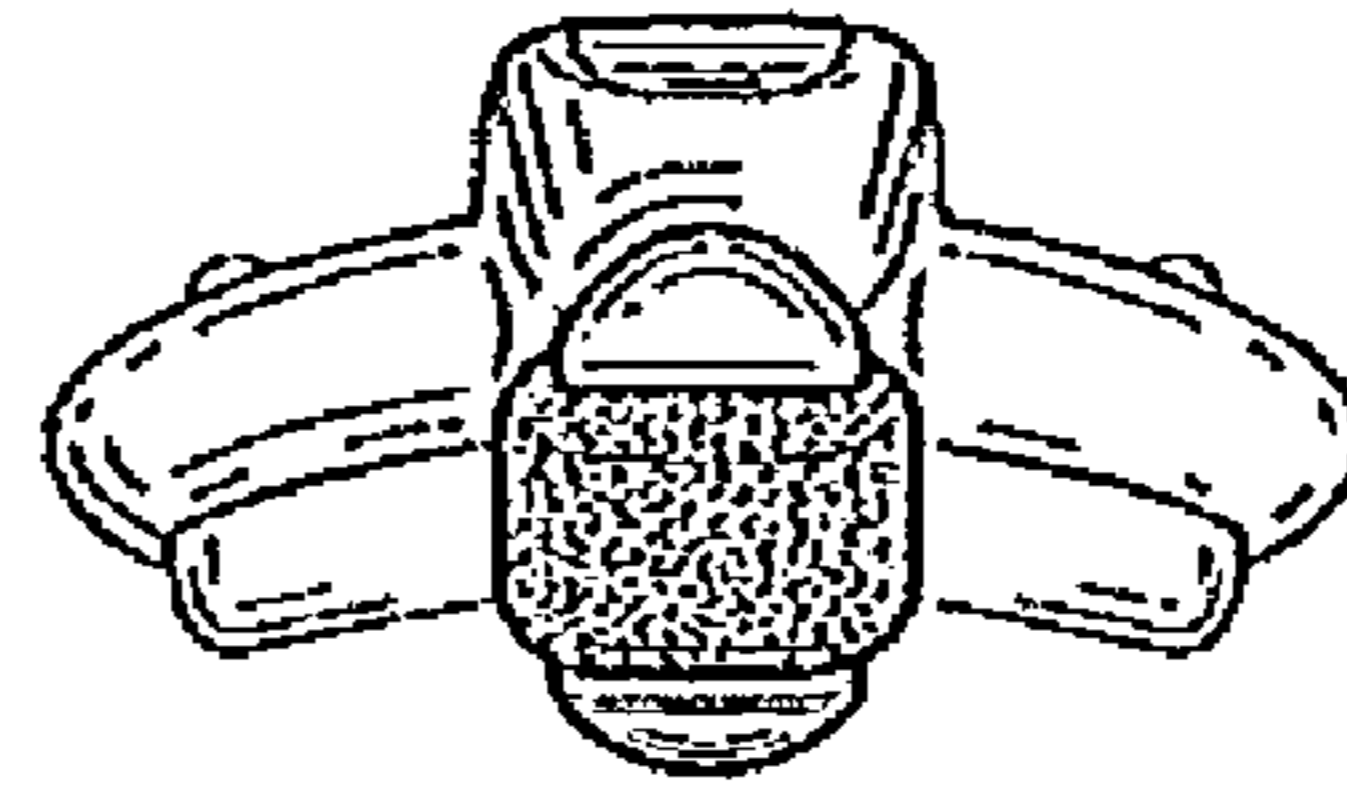


FIG. 17

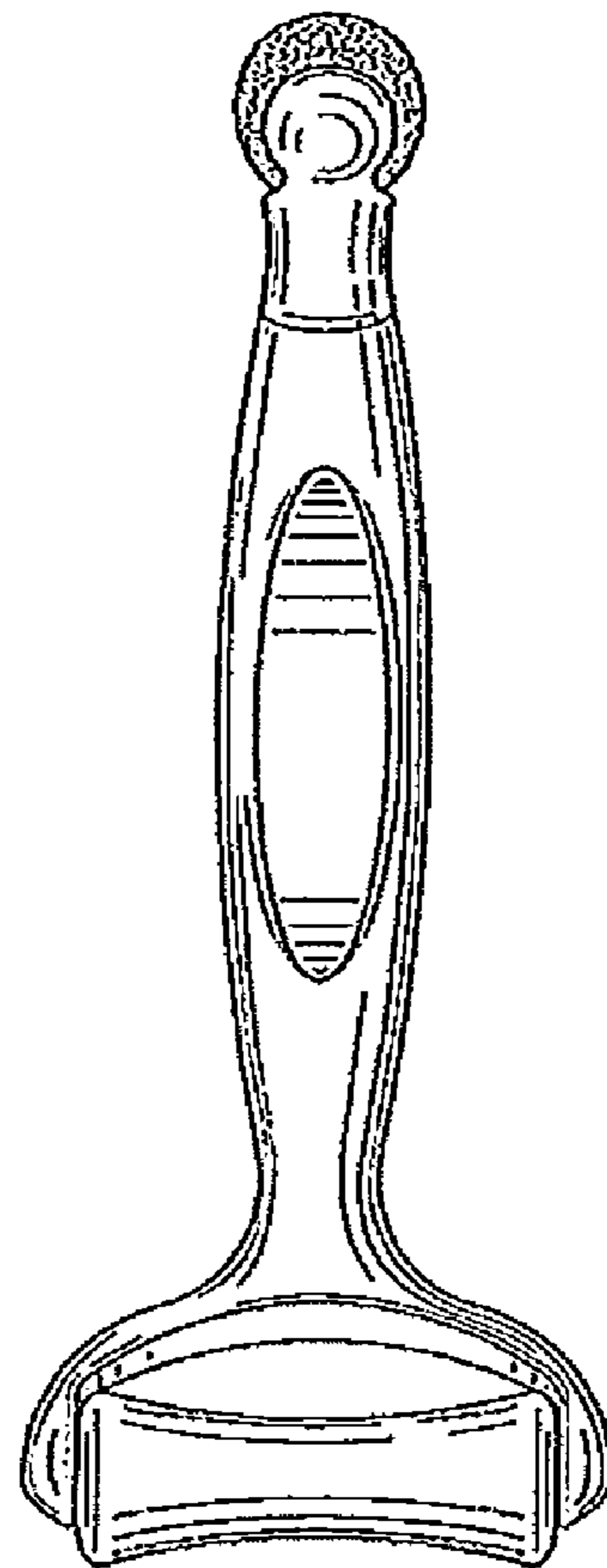


FIG. 18

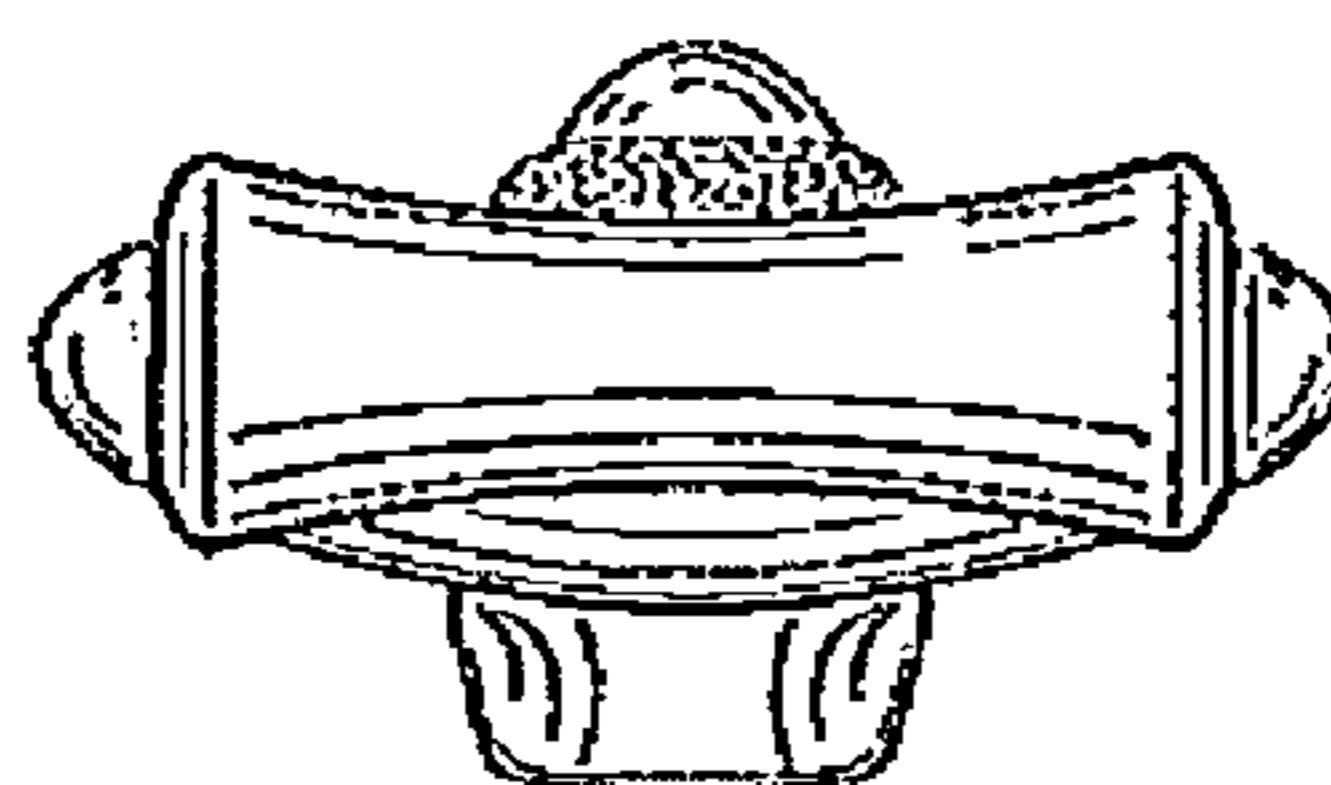


FIG. 19



FIG. 20

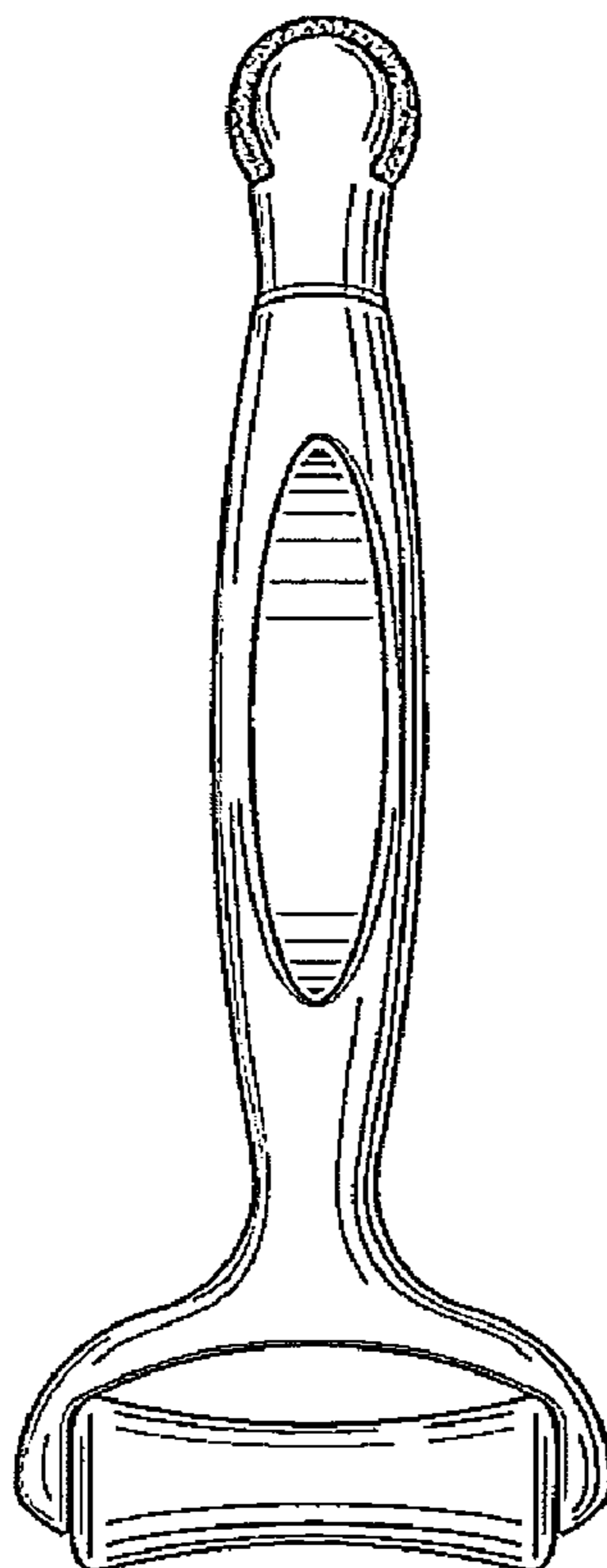


FIG. 21



FIG. 22

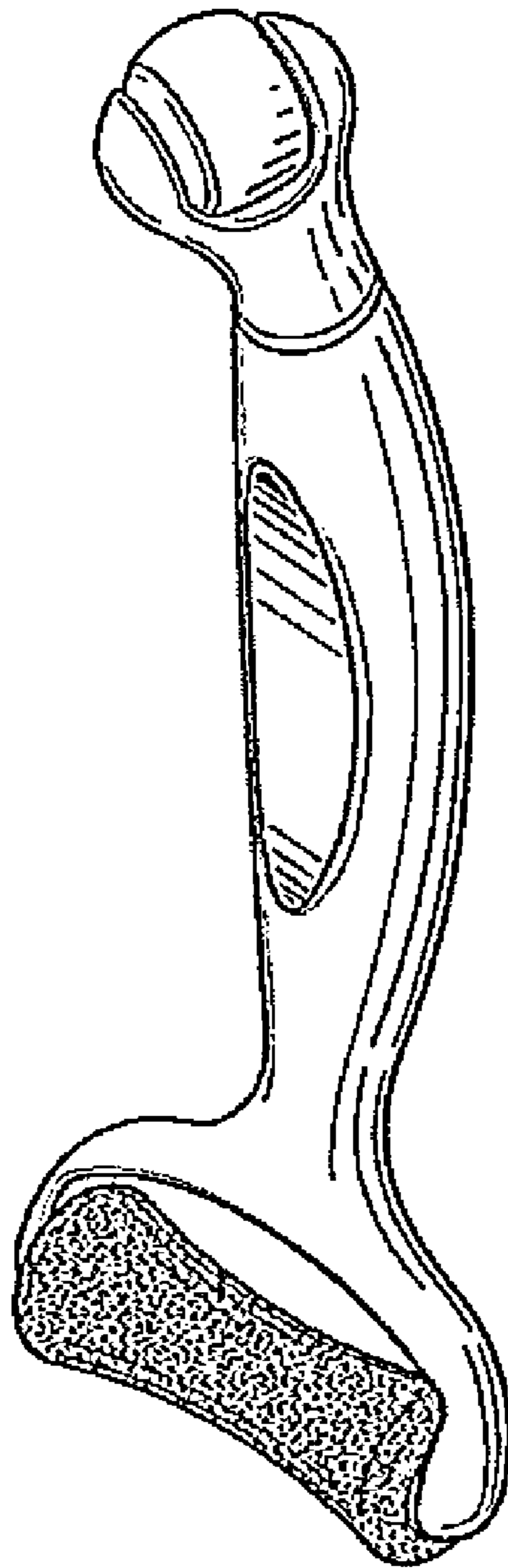


FIG. 23

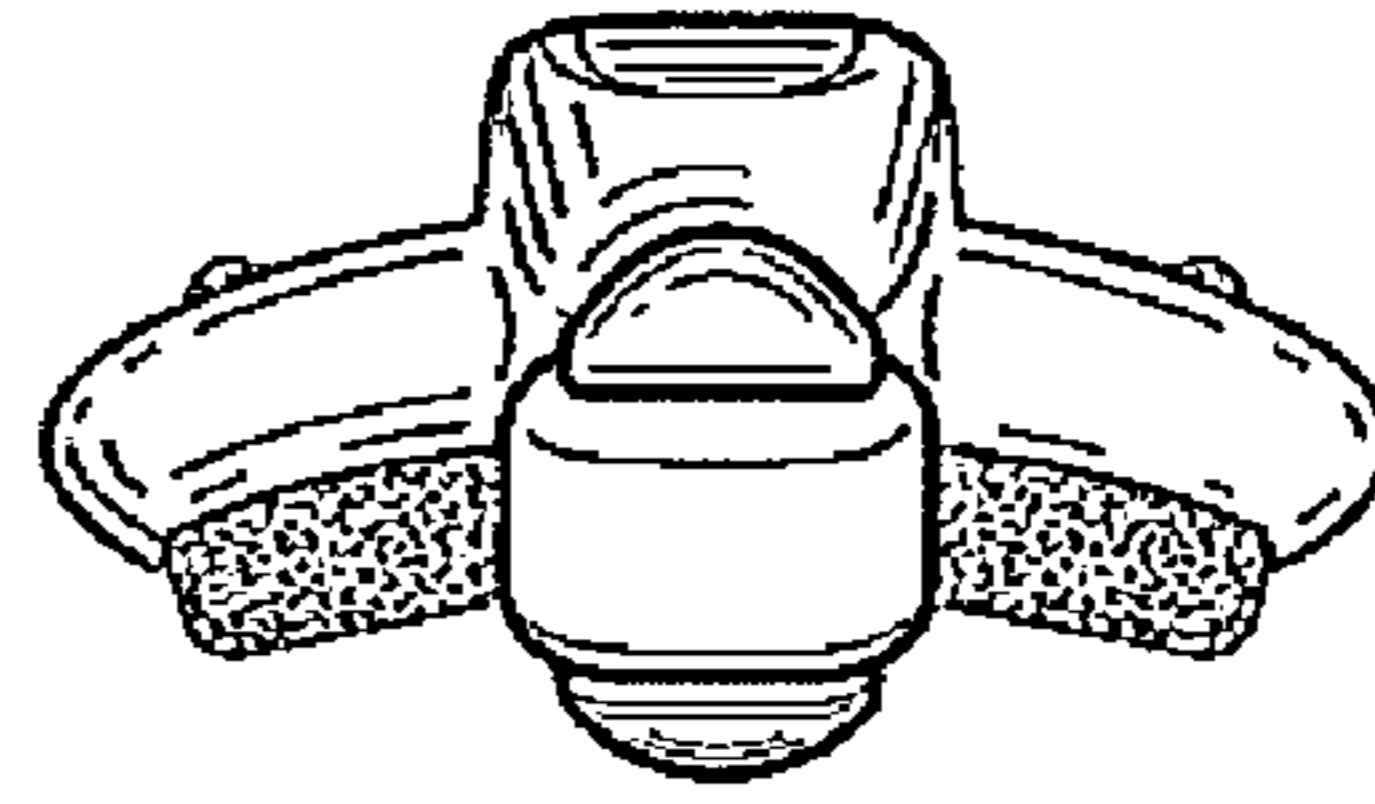


FIG. 24

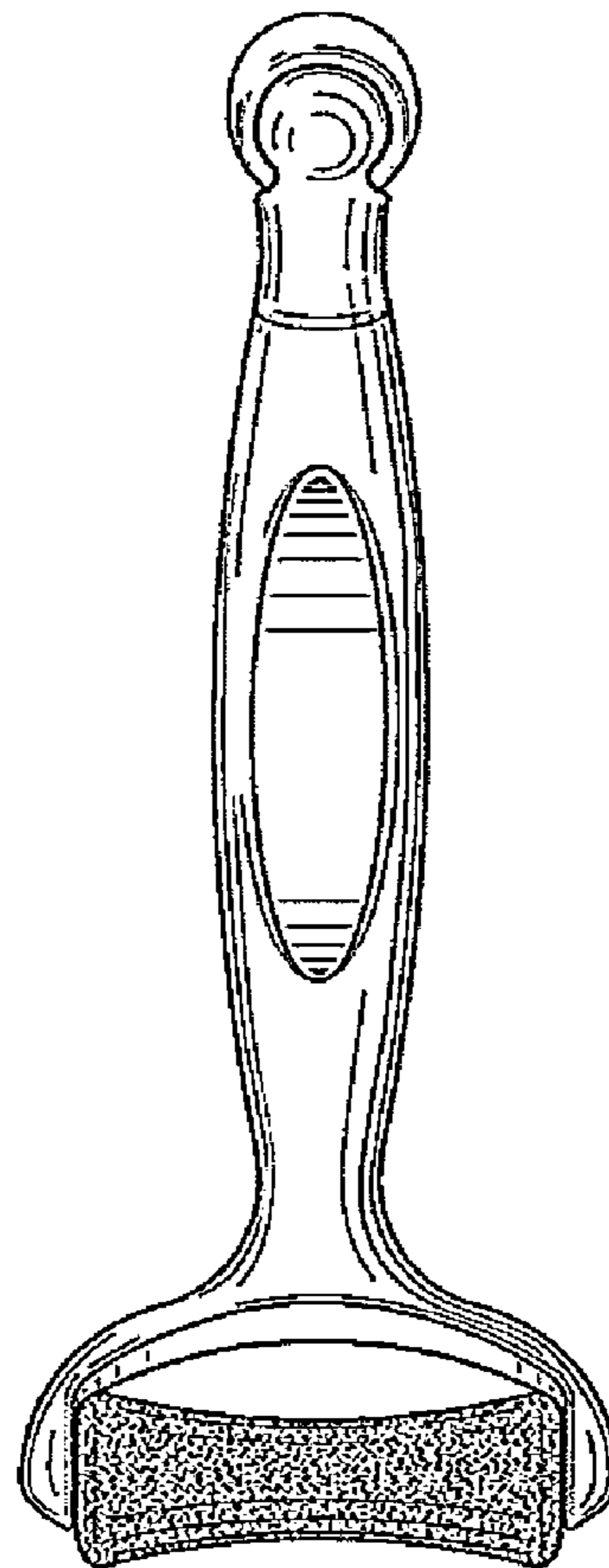


FIG. 25

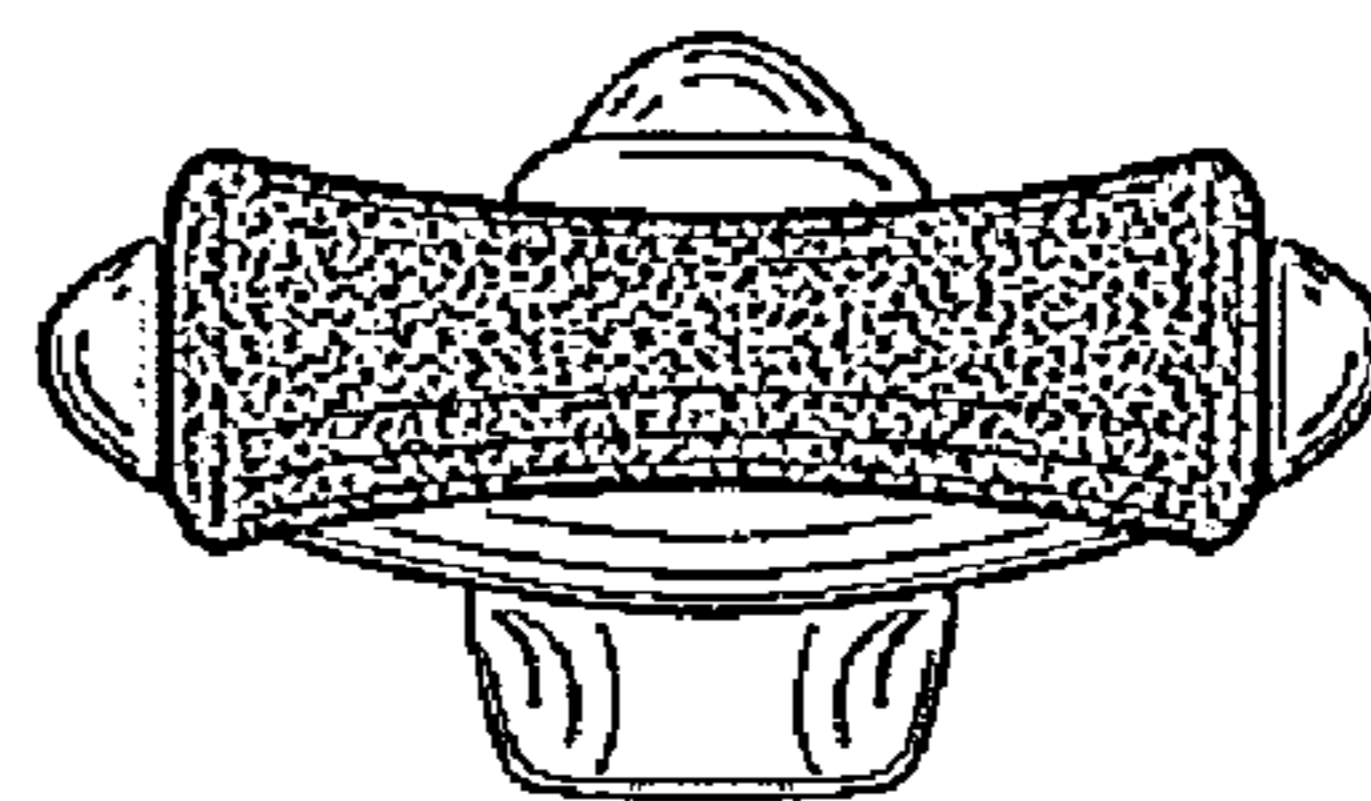


FIG. 26



FIG. 27

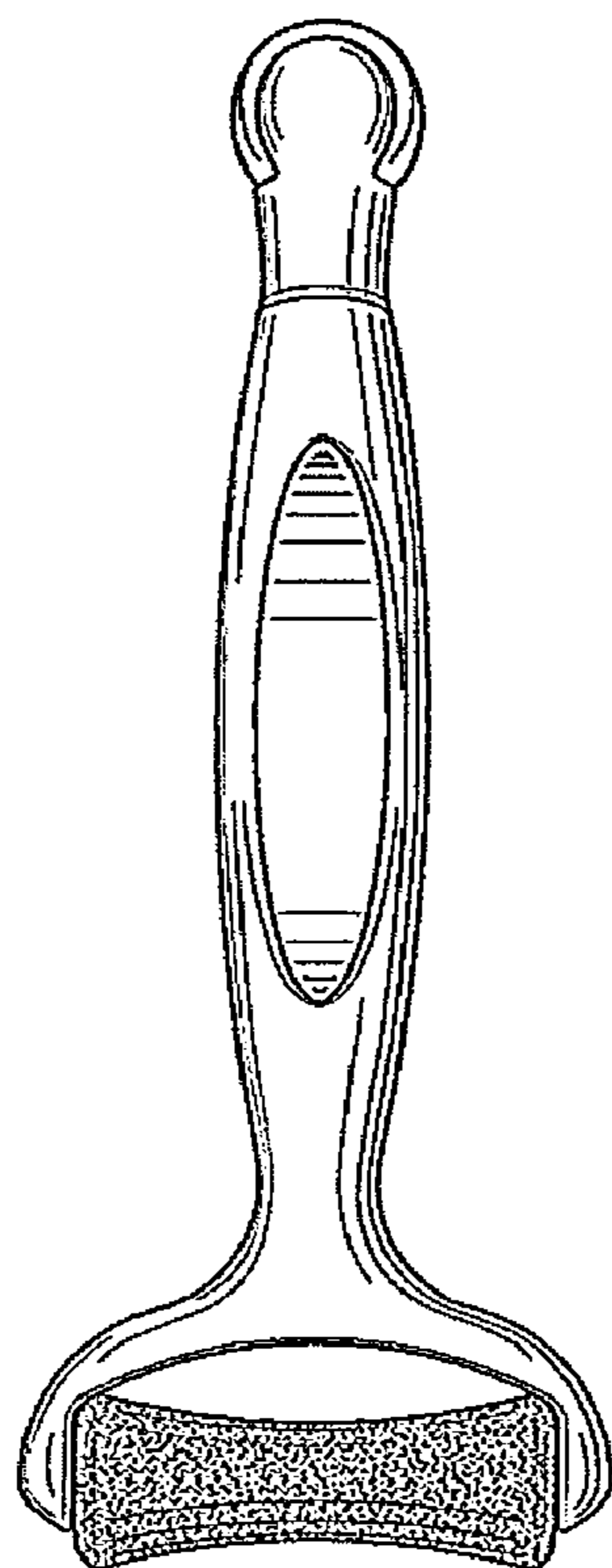


FIG. 28

