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

(10) **Patent No.:** **US D545,964 S**

(45) **Date of Patent:** **** Jul. 3, 2007**

(54) **COMBINED SEAL AND VALVE ASSEMBLY**

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(73) Assignee: **Erblan Surgical, Inc.**, Belmont, MA (US)

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

(21) Appl. No.: **29/208,947**

(22) Filed: **Jul. 9, 2004**

(51) **LOC (8) Cl.** **24-01**

(52) **U.S. Cl.** **D24/129**

(58) **Field of Classification Search** D24/129,
D24/146; 604/9, 335, 236, 245, 246, 256,
604/167.01, 167.02, 167.06; 600/566, 567
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,601,710 A	7/1986	Moll
4,654,030 A	3/1987	Moll et al.
4,878,897 A	11/1989	Katzin
4,931,042 A	6/1990	Holmes et al.
5,152,754 A	10/1992	Plyley et al.
5,209,737 A	5/1993	Ritchart et al.
5,248,298 A	9/1993	Bedi et al.
5,295,993 A	3/1994	Green
5,318,580 A	6/1994	Gresl, Jr.
5,324,268 A	6/1994	Yoon
5,324,280 A	6/1994	Wong et al.

(Continued)

FOREIGN PATENT DOCUMENTS

GB	1356386	6/1970
WO	WO 00/54648	9/2000
WO	WO 02/28295 A1	4/2002

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(57) **CLAIM**

The ornamental design for a combined seal and valve assembly, as shown and described.

DESCRIPTION

FIG. 1 is a top, front and left side perspective view of the valve of the seal valve assembly, showing my design;

FIG. 2 is a left side elevational view thereof, the right side elevational view being a mirror image of the side view shown;

FIG. 3 is a top plan view thereof, the bottom plan view being a mirror image of the plan view shown;

FIG. 4 is a bottom plan view thereof;

FIG. 5 is a front elevational view thereof;

FIG. 6 is a rear elevational view thereof;

FIG. 7 is a top, front and left side perspective view of the seal of the seal valve assembly;

FIG. 8 is a left side elevational view thereof, the right side elevational view being a mirror image of the side view shown;

FIG. 9 is a front elevational view thereof;

FIG. 10 is a rear elevational view thereof;

FIG. 11 is a top plan view thereof, the bottom plan view being a mirror image of the plan view shown;

FIG. 12 is a top front and left side perspective view of the seal valve assembly for use with a trocar;

FIG. 13 is a left side elevational view thereof, the right side elevational view being a mirror image of the side view shown;

FIG. 14 is a front elevational view thereof;

FIG. 15 is a rear elevational view thereof;

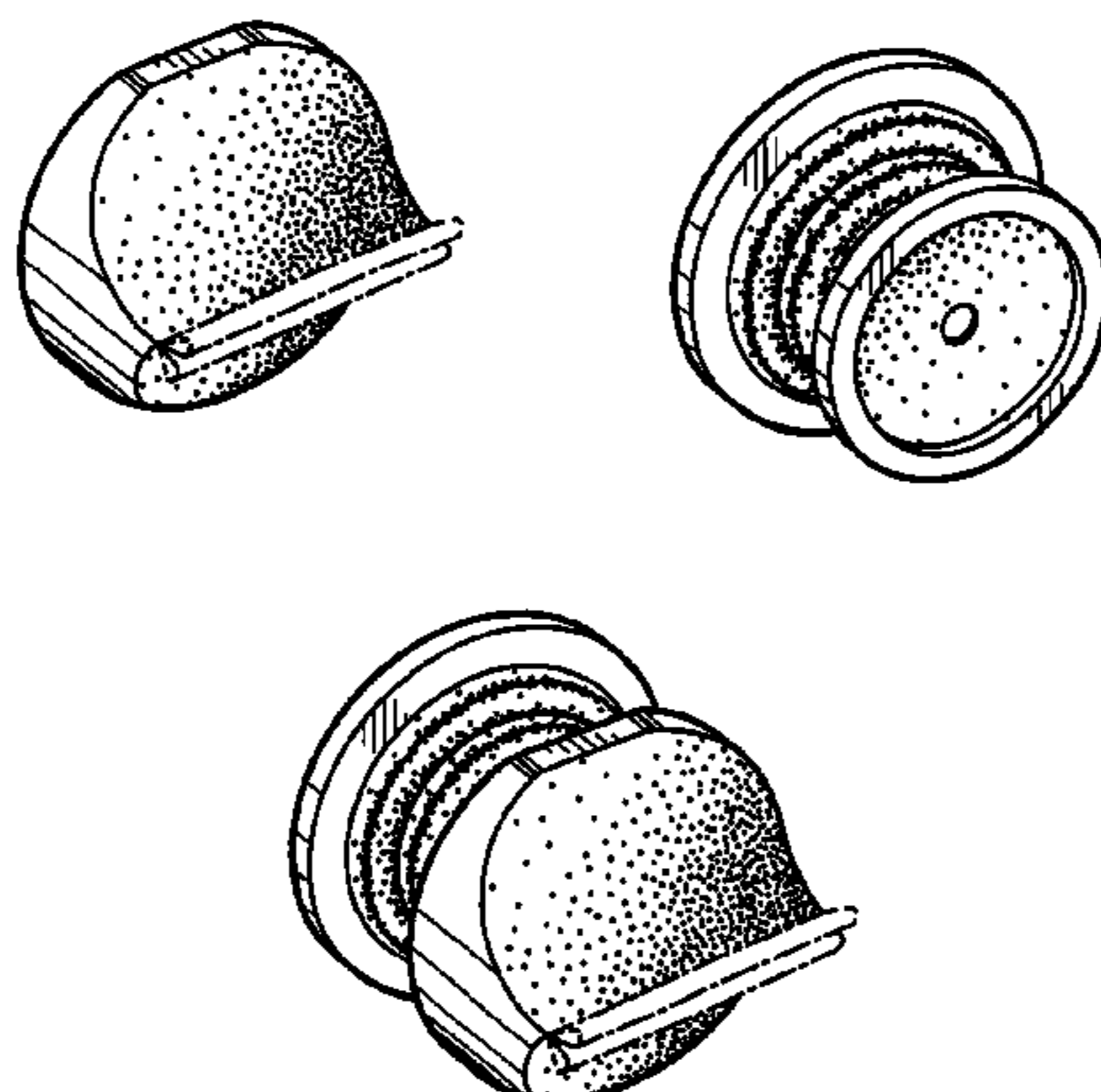
FIG. 16 is a top plan view thereof, the bottom plan view being a mirror image of the plan view shown;

FIG. 17 is a bottom plan view thereof; and,

FIG. 18 shows the seal, the valve and the seal valve assembly when in use in a trocar.

The broken lines shown throughout the drawing disclosure are for illustrative purposes only and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



US D545,964 S

Page 2

U.S. PATENT DOCUMENTS

5,330,437 A *	7/1994	Durman	604/167.04	5,868,773 A	2/1999	Danks et al.	
5,364,372 A	11/1994	Danks et al.		5,878,501 A	3/1999	Owens et al.	
5,385,553 A	1/1995	Hart et al.		5,895,377 A *	4/1999	Smith et al.	604/256
5,387,197 A	2/1995	Smith et al.		5,904,699 A	5/1999	Schwemberger et al.	
5,389,081 A *	2/1995	Castro	604/256	5,941,852 A	8/1999	Dunlap et al.	
5,391,153 A	2/1995	Haber et al.		5,984,941 A	11/1999	Wilson et al.	
5,411,515 A	5/1995	Haber et al.		6,017,328 A	1/2000	Fischell et al.	
5,417,705 A	5/1995	Haber et al.		6,017,356 A	1/2000	Frederick et al.	
5,478,317 A	12/1995	Yoon		6,063,099 A	5/2000	Danks et al.	
5,486,190 A	1/1996	Green		6,077,288 A *	6/2000	Shimomura et al. ...	604/167.01
5,522,833 A	6/1996	Stephens et al.		6,093,176 A *	7/2000	Dennis	604/256
5,536,256 A	7/1996	Yoon		6,228,061 B1 *	5/2001	Flatland et al.	604/167.06
5,538,509 A	7/1996	Dunlap et al.		6,238,407 B1	5/2001	Wolf et al.	
5,545,150 A	8/1996	Danks et al.		6,497,687 B1	12/2002	Blanco	
5,569,293 A	10/1996	Yoon		6,497,716 B1	12/2002	Green et al.	
5,584,850 A	12/1996	Hart et al.		6,595,946 B1 *	7/2003	Pasqualucci	604/167.06
5,591,193 A	1/1997	Yoon		6,595,955 B2	7/2003	Ferguson et al.	
5,603,702 A *	2/1997	Smith et al.	604/256	6,716,201 B2	4/2004	Blanco	
5,607,396 A	3/1997	Yoon		6,719,746 B2	4/2004	Blanco	
5,607,440 A	3/1997	Danks et al.		D497,669 S	10/2004	Blanco	
5,618,271 A	4/1997	Yoon		D499,484 S *	12/2004	Blanco	D24/129
5,628,732 A	5/1997	Antoon, Jr. et al.		2001/0029387 A1	10/2001	Wolf et al.	
5,634,934 A	6/1997	Yoon		2002/0161387 A1	10/2002	Bianco	
5,645,076 A	7/1997	Yoon		2003/0060770 A1	3/2003	Wing et al.	
5,665,102 A	9/1997	Yoon		2004/0078003 A1	4/2004	Smith et al.	
5,676,156 A	10/1997	Yoon		2005/0065541 A1	3/2005	Abidin et al.	
5,720,730 A *	2/1998	Blake, III	604/167.02	2005/0070943 A1	3/2005	Hueil et al.	
5,797,943 A	8/1998	Danks et al.		2005/0070946 A1	3/2005	Franer et al.	
5,810,866 A	9/1998	Yoon		2005/0070947 A1	3/2005	Franer et al.	
5,865,812 A	2/1999	Correia					

* cited by examiner

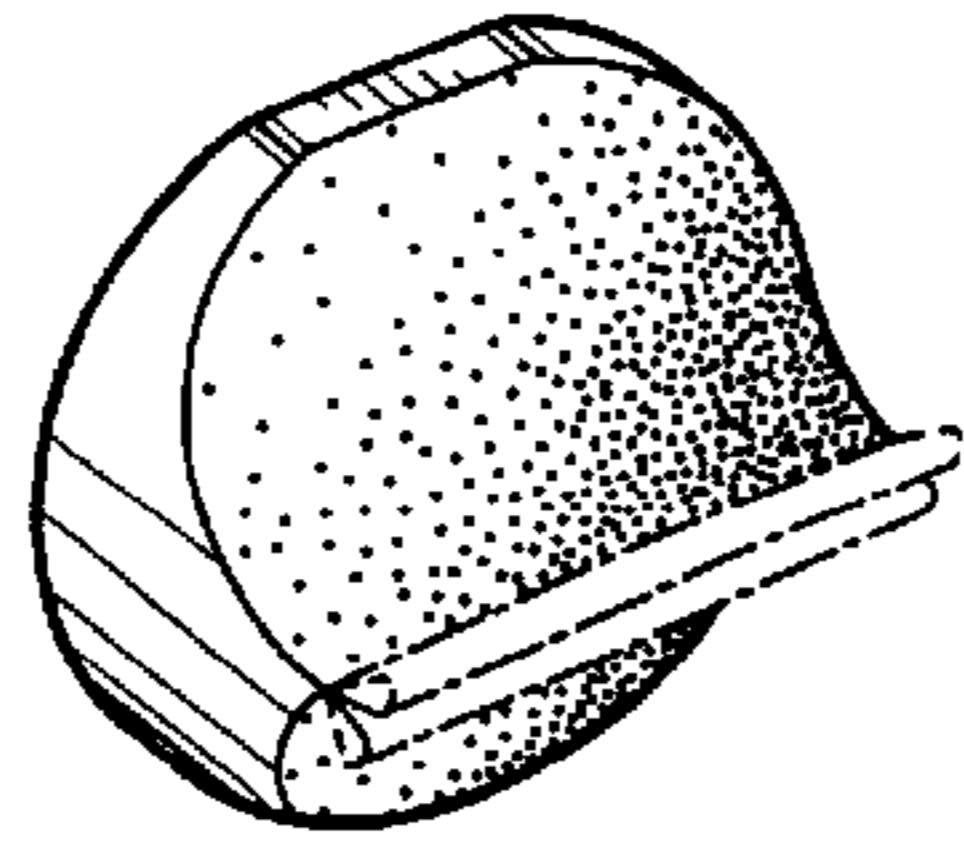


FIG. 1

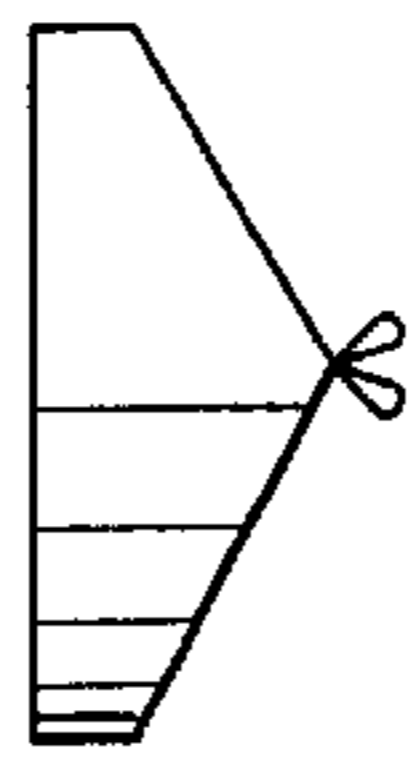


FIG. 2



FIG. 3

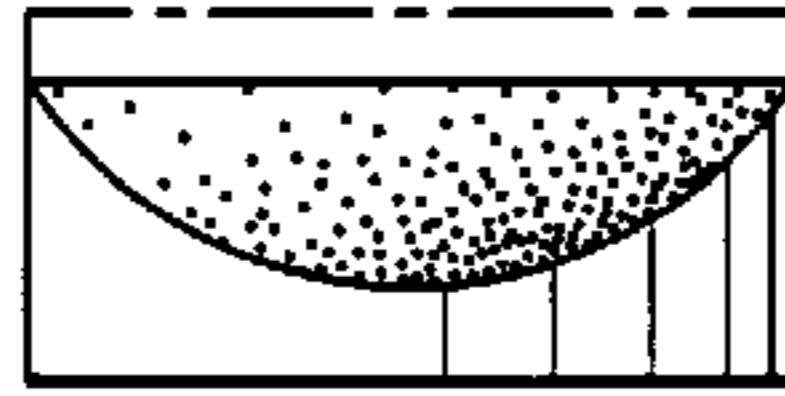


FIG. 4

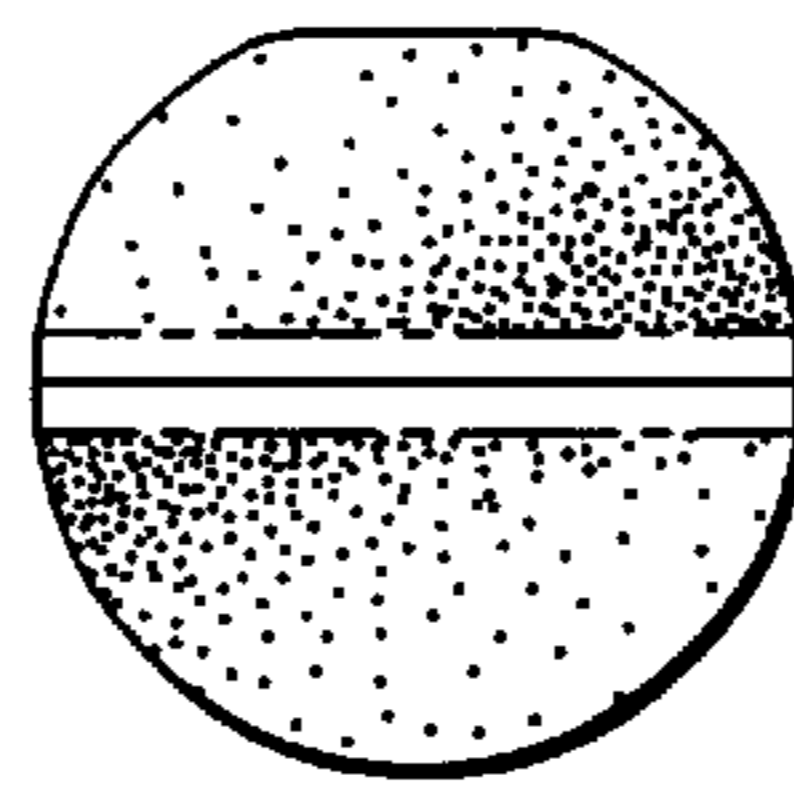


FIG. 5

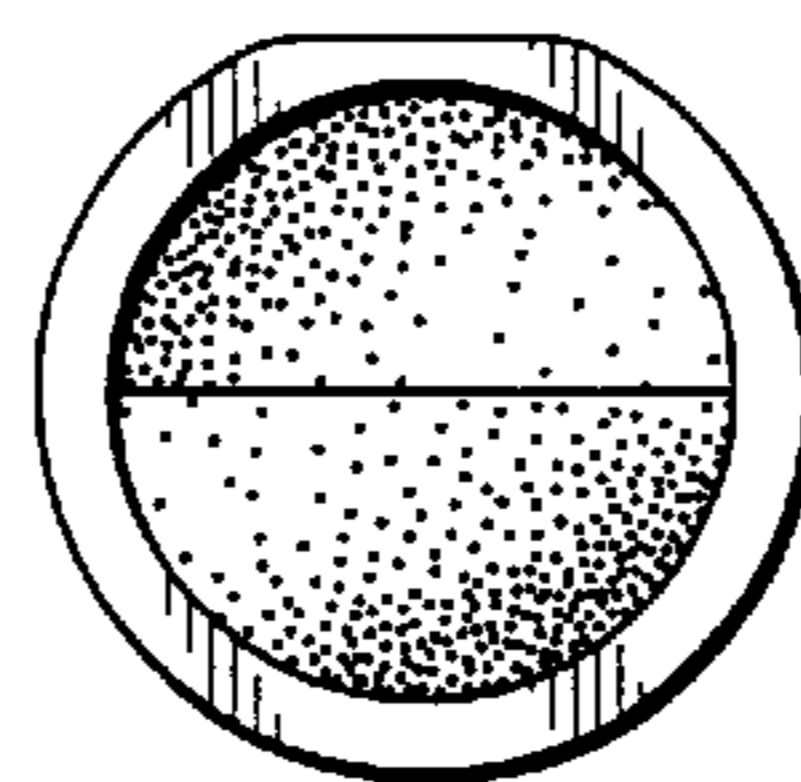


FIG. 6

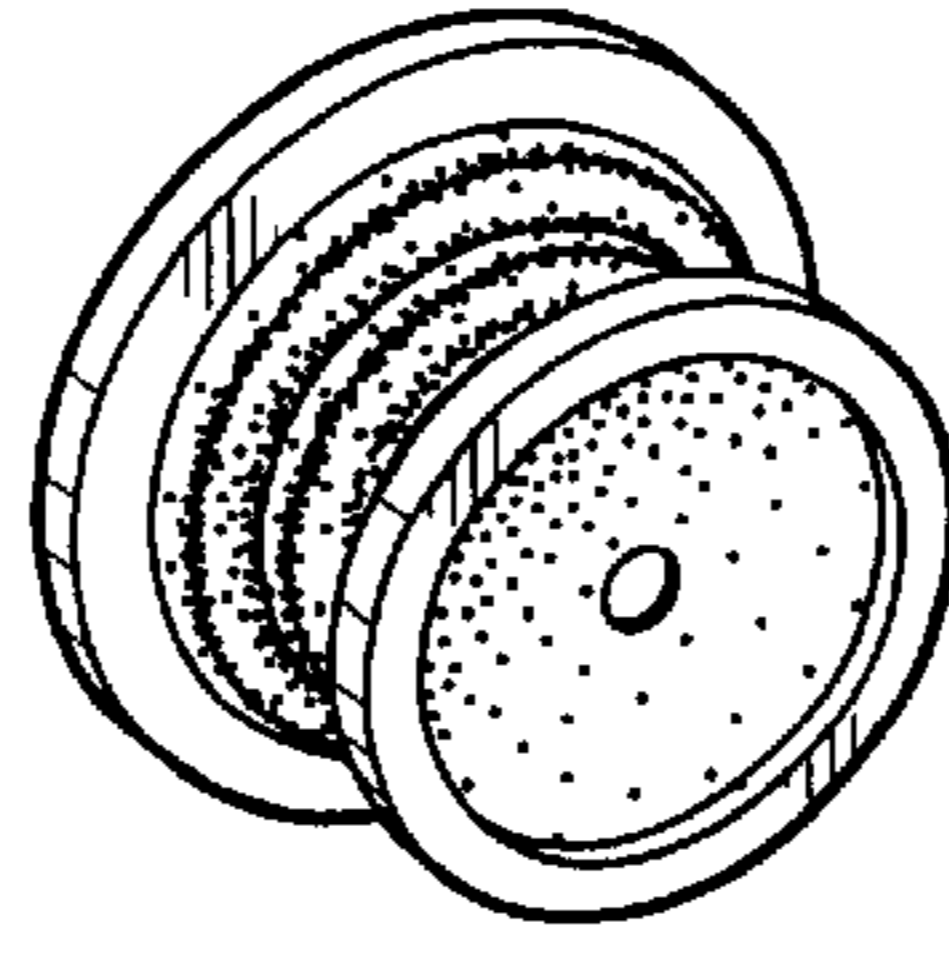


FIG. 7



FIG. 8

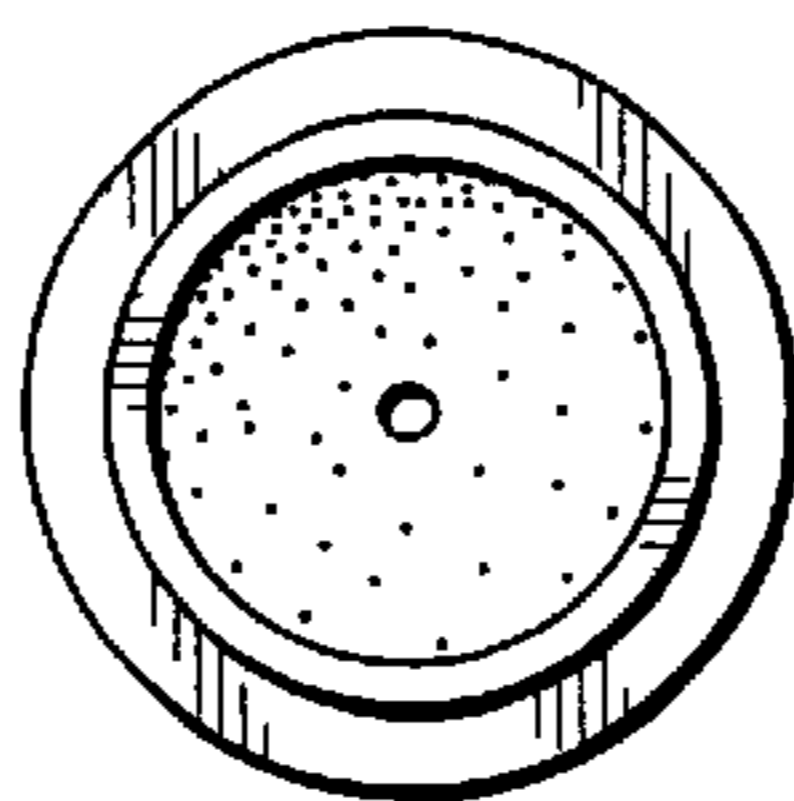


FIG. 9

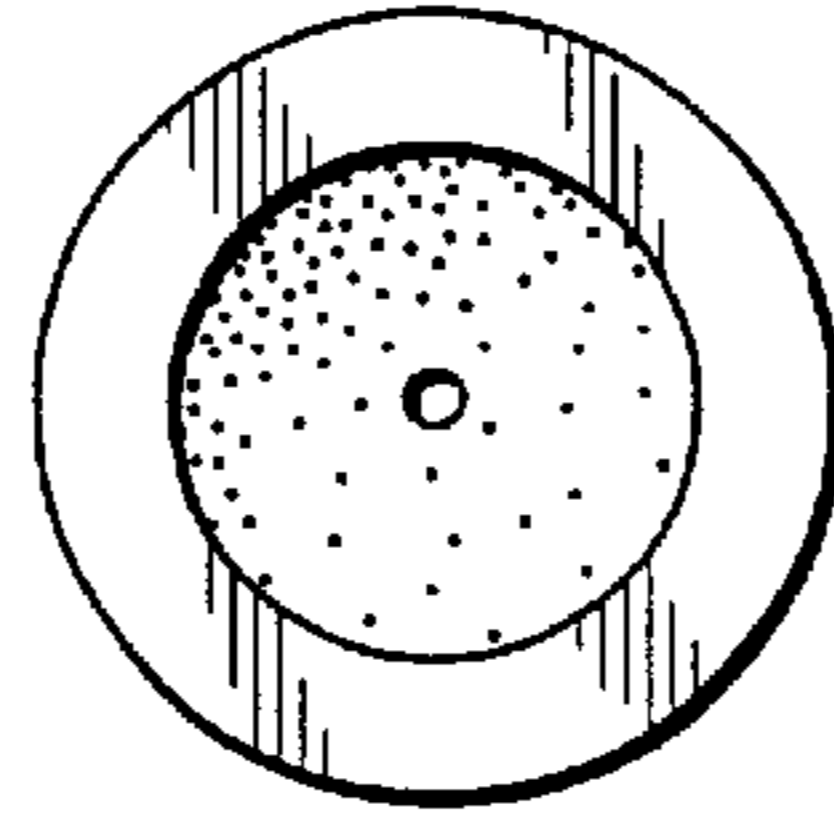


FIG. 10

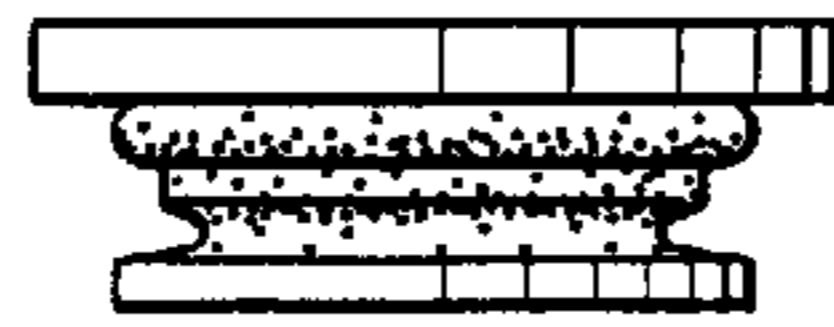


FIG. 11

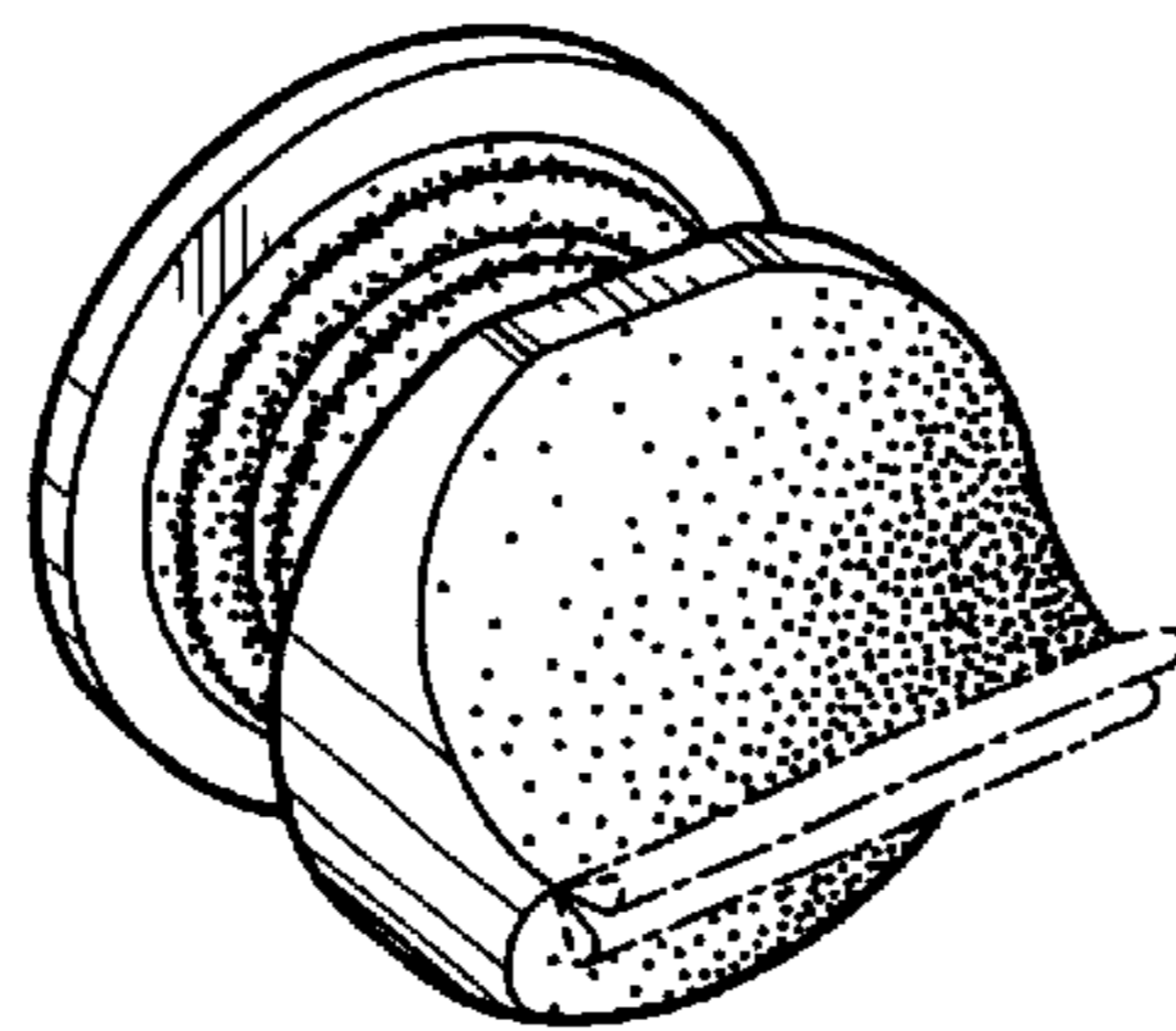


FIG. 12

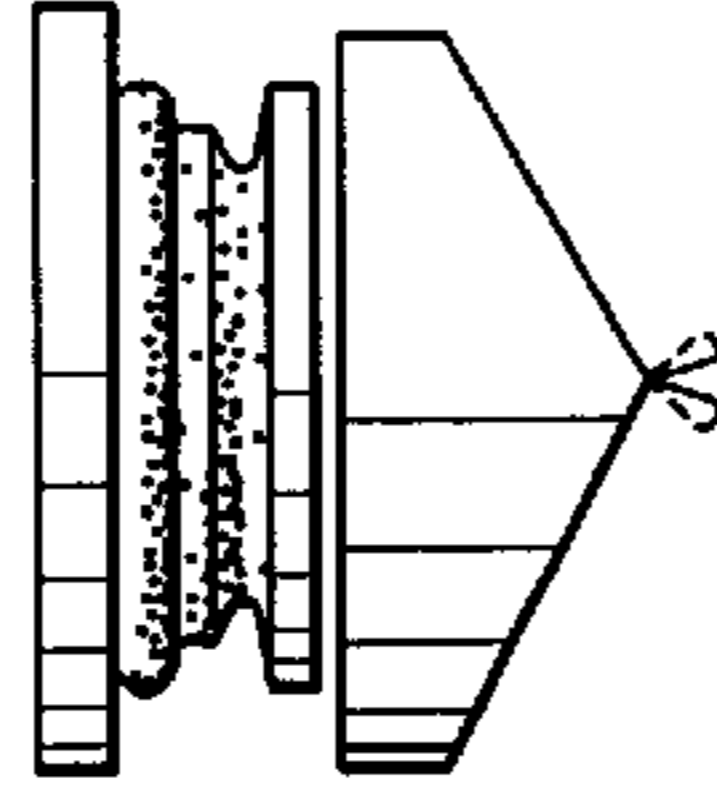


FIG. 13

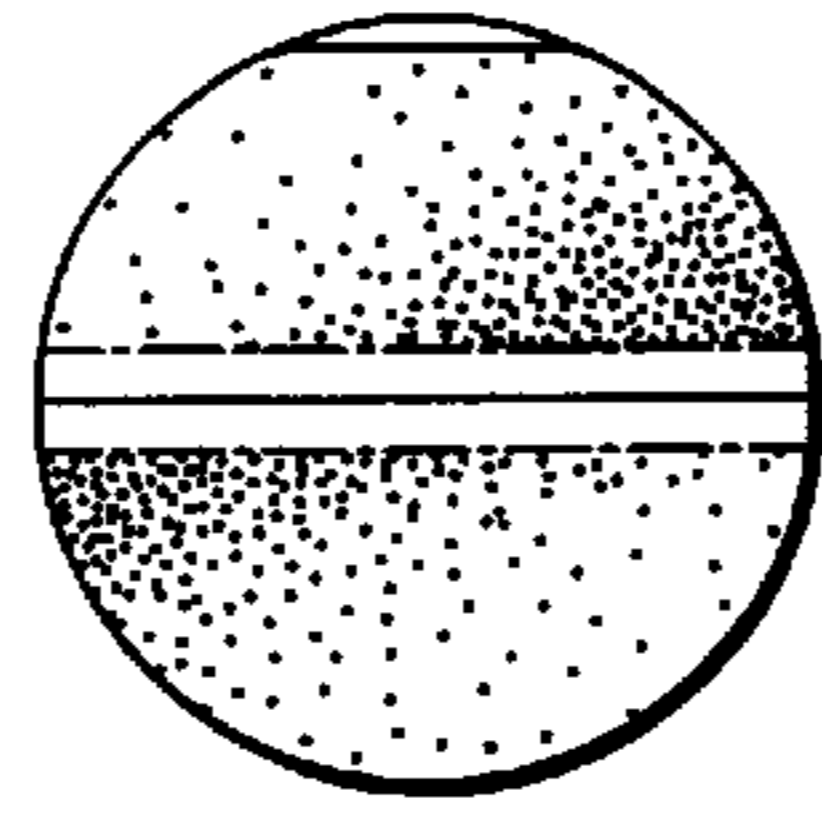


FIG. 14

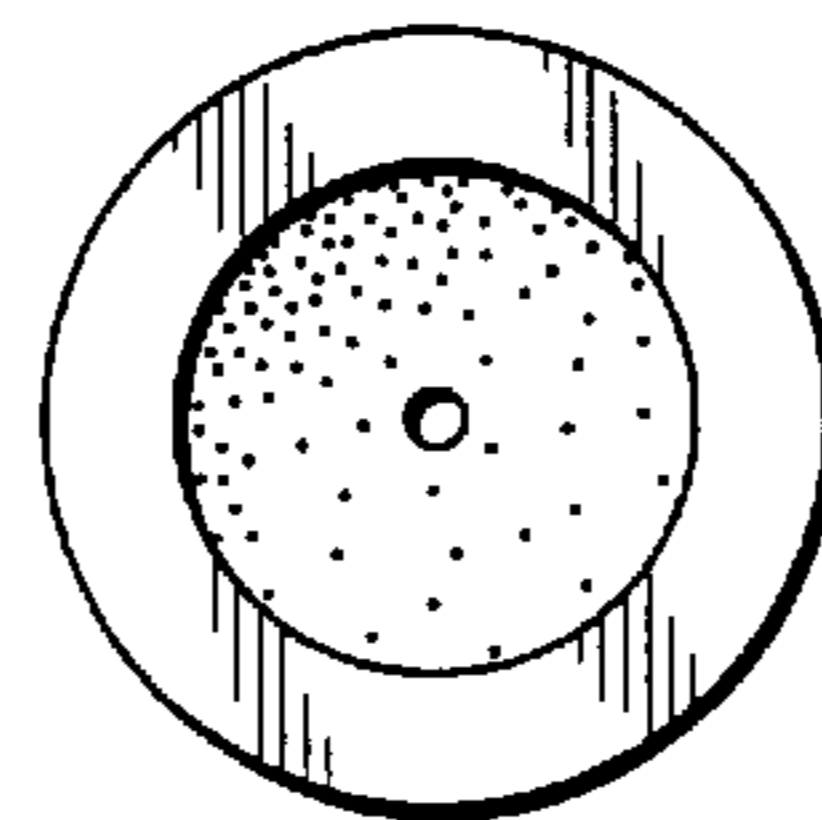


FIG. 15

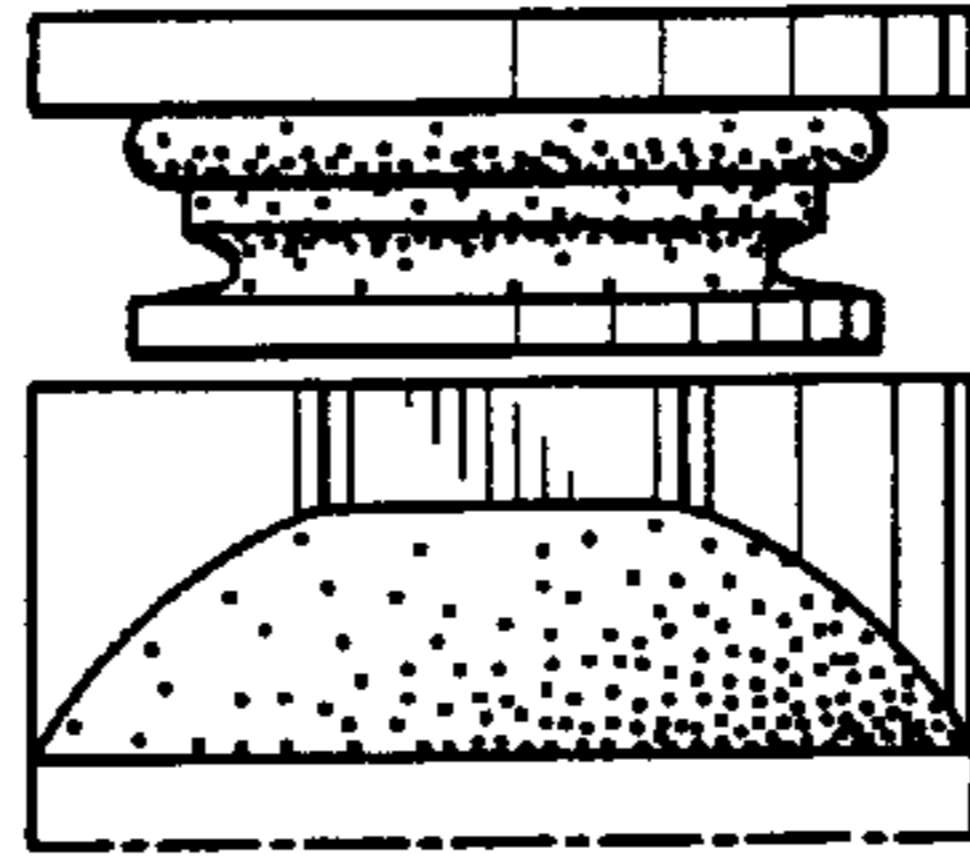


FIG. 16

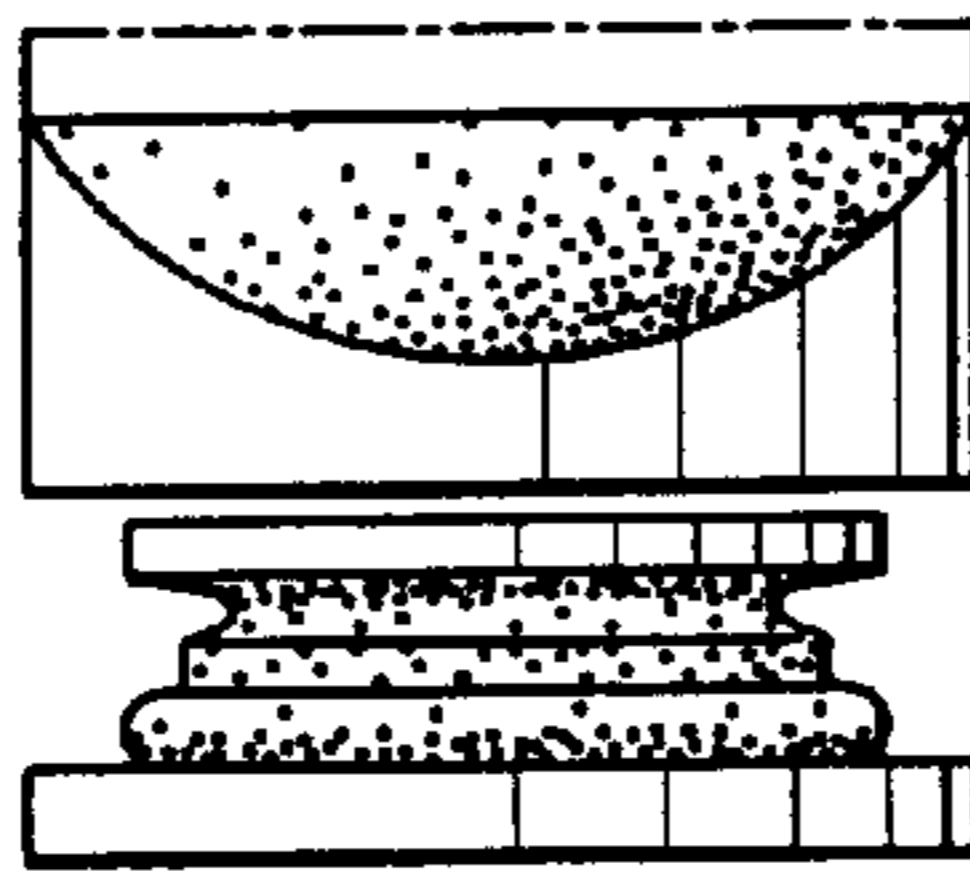


FIG. 17

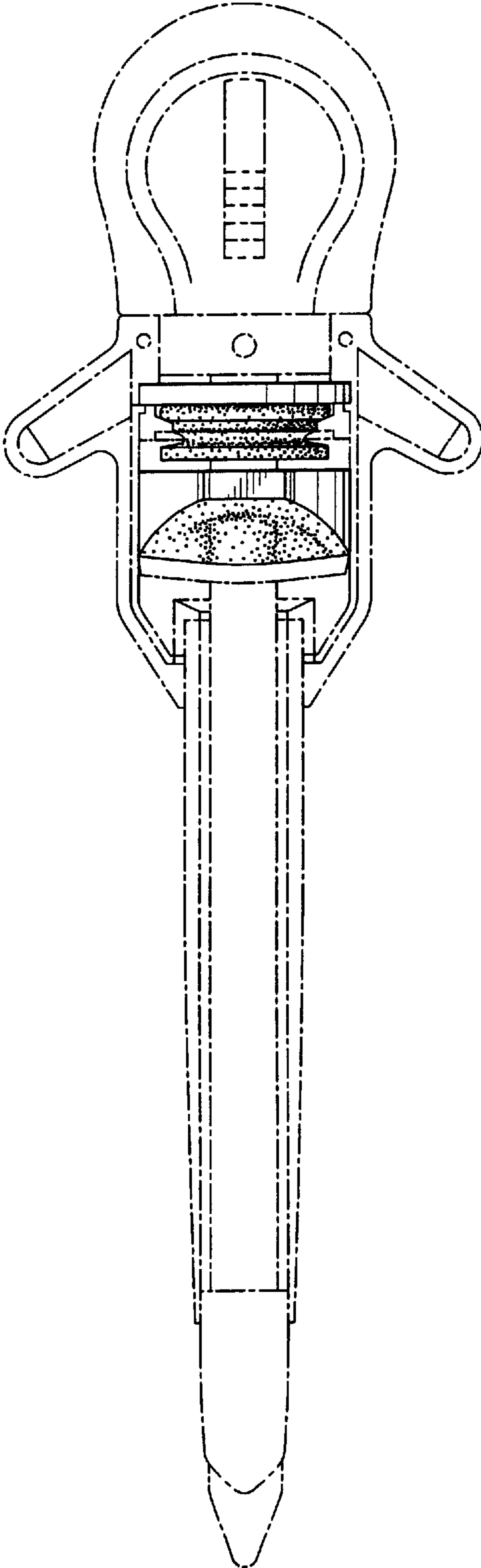


FIG. 18