



US00D621930S

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

(10) **Patent No.:** **US D621,930 S**

(45) **Date of Patent:** **** *Aug. 17, 2010**

(54) **GROOVED PISTON**

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(*) Notice: This patent is subject to a terminal disclaimer.

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

(21) Appl. No.: **29/341,356**

(22) Filed: **Aug. 4, 2009**

(51) **LOC (9) Cl.** **24-02**

(52) **U.S. Cl.** **D24/130**

(58) **Field of Classification Search** D24/112,
D24/114, 127-130; 206/363-364, 367; 604/54,
604/110, 192, 263, 295

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,998,224	A *	12/1976	Chiquiar-Arias	604/110
4,252,118	A *	2/1981	Richard et al.	604/110
4,660,569	A	4/1987	Etherington	
4,826,483	A *	5/1989	Molnar, IV	604/110
5,021,047	A *	6/1991	Movern	604/110
5,042,695	A	8/1991	Battegazzore	
5,183,466	A *	2/1993	Movern	604/110
5,360,146	A	11/1994	Ikushima	
5,453,093	A *	9/1995	Haining	604/110
5,738,655	A *	4/1998	Vallelunga et al.	604/110
5,865,803	A	2/1999	Major	
6,503,084	B2	1/2003	Evers et al.	
6,572,565	B2 *	6/2003	Daley et al.	600/573
6,632,198	B2 *	10/2003	Caizza	604/110
6,916,308	B2	7/2005	Dixon et al.	

7,101,351	B2 *	9/2006	Crawford et al.	604/110
7,128,246	B2	10/2006	Raia et al.	
D581,528	S *	11/2008	Sudo	D24/130
D583,938	S *	12/2008	Sudo	D24/130
7,503,905	B2	3/2009	Jessop et al.	
7,547,297	B2 *	6/2009	Brinkhues	604/199
2002/0077598	A1 *	6/2002	Yap et al.	604/155
2003/0233075	A1 *	12/2003	Huegli	604/222
2005/0137533	A1 *	6/2005	Sudo et al.	604/218
2006/0178643	A1 *	8/2006	Sudo et al.	604/230
2007/0078406	A1 *	4/2007	Lee	604/198
2007/0078407	A1 *	4/2007	Huang	604/198
2007/0167910	A1 *	7/2007	Tennican et al.	604/110
2007/0250004	A1 *	10/2007	Tung	604/110
2008/0097387	A1 *	4/2008	Spector	604/512
2008/0154192	A1 *	6/2008	Schraga	604/110

FOREIGN PATENT DOCUMENTS

GB 1 475 430 6/1977

* cited by examiner

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(57) **CLAIM**

The ornamental design for a grooved piston, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a top perspective view showing the new design for a grooved piston;

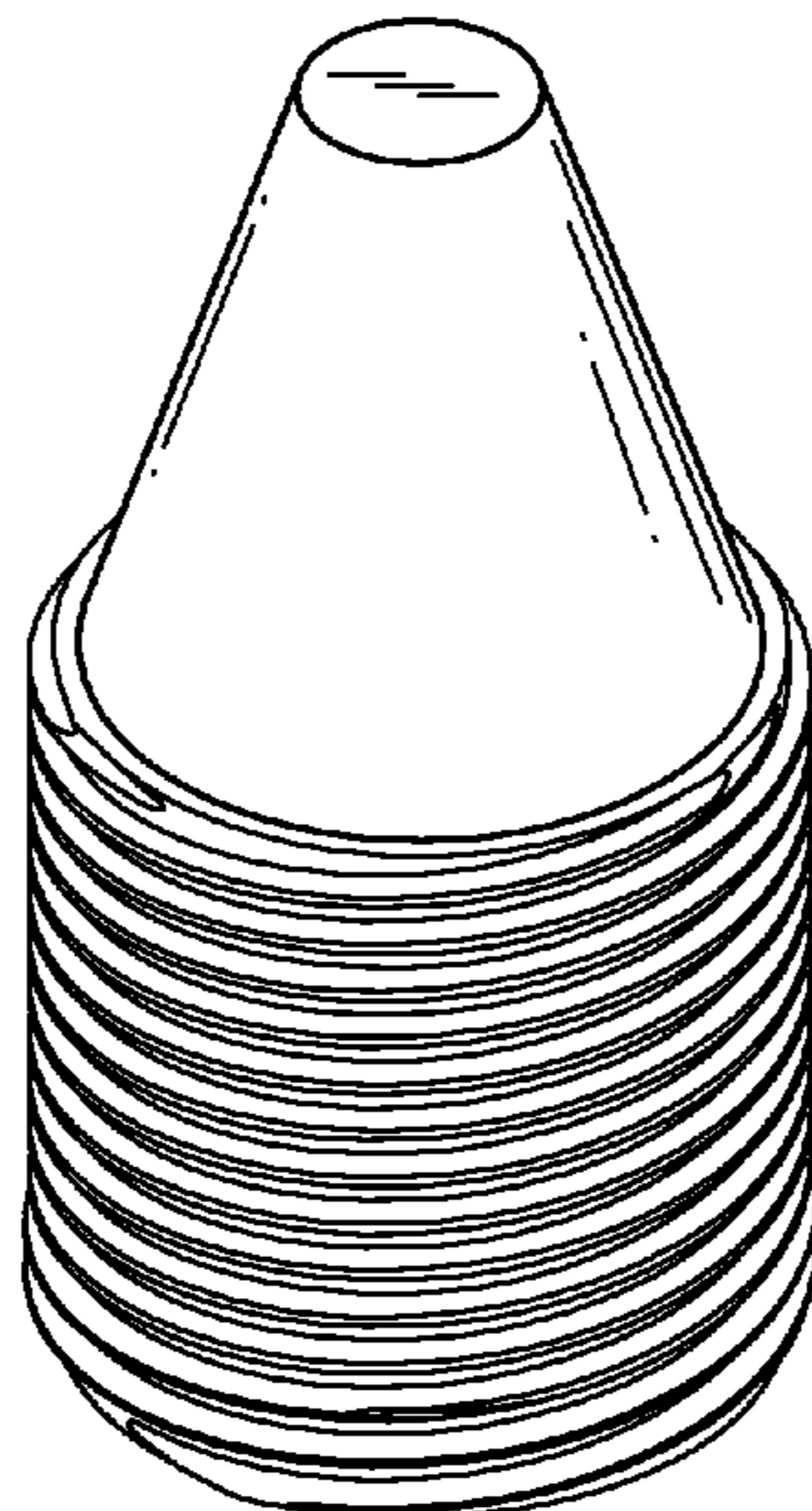
FIG. 2 is a side elevational view thereof;

FIG. 3 is a top plan view thereof; and,

FIG. 4 is a bottom plan view thereof.

The portions of the grooved piston shown in broken lines form no part of the claimed design.

1 Claim, 1 Drawing Sheet



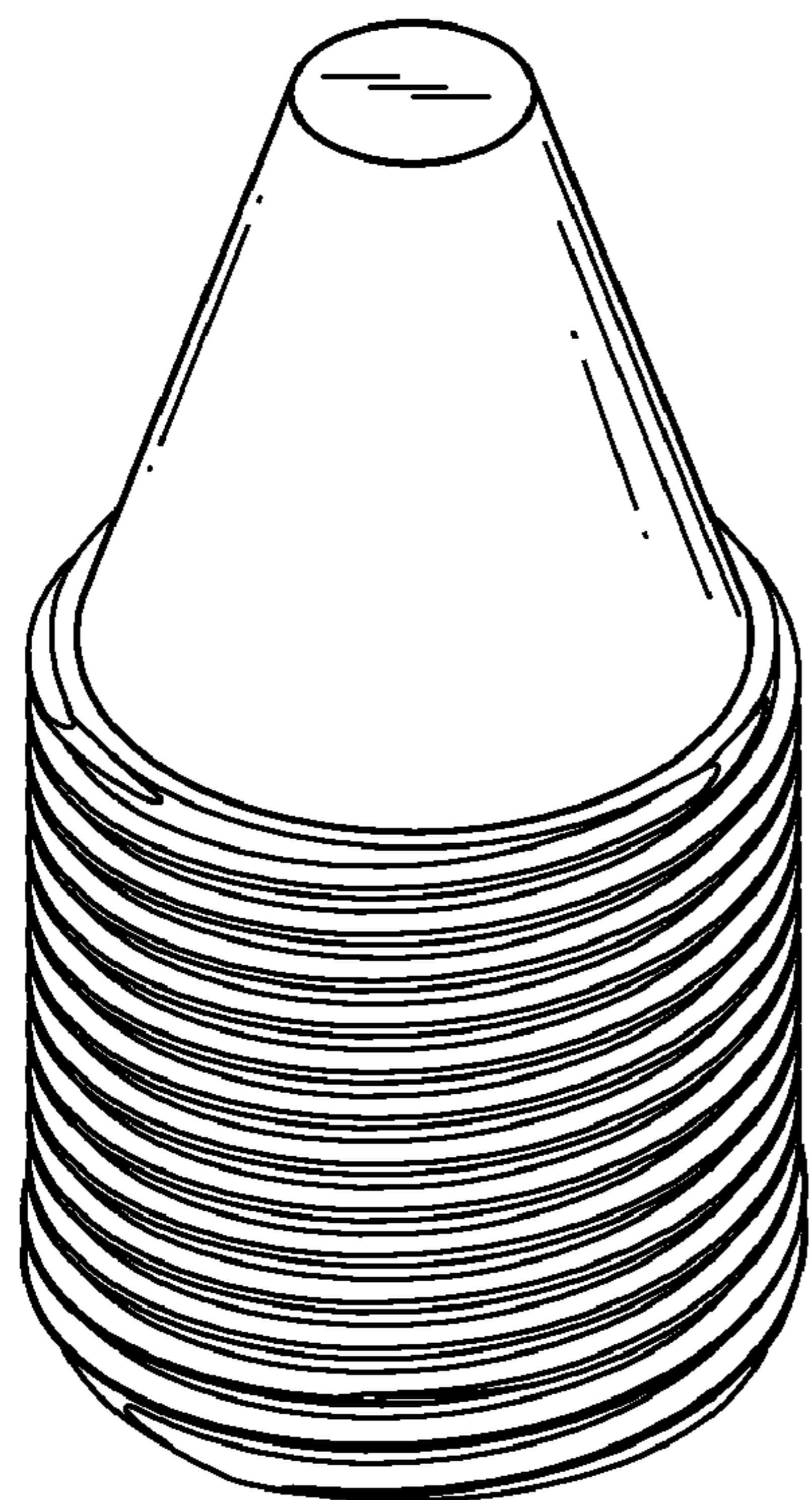


FIG. 1

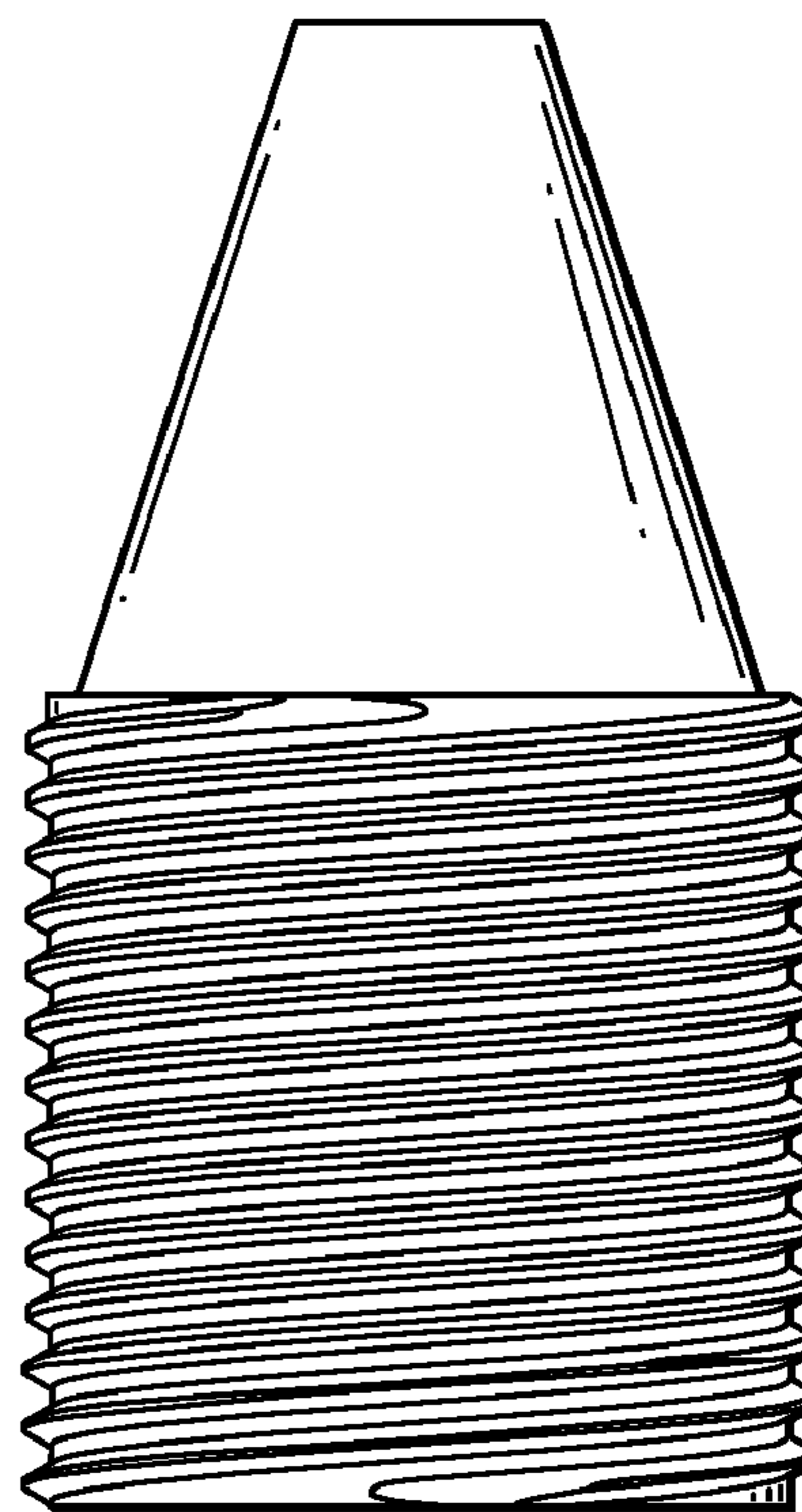


FIG. 2

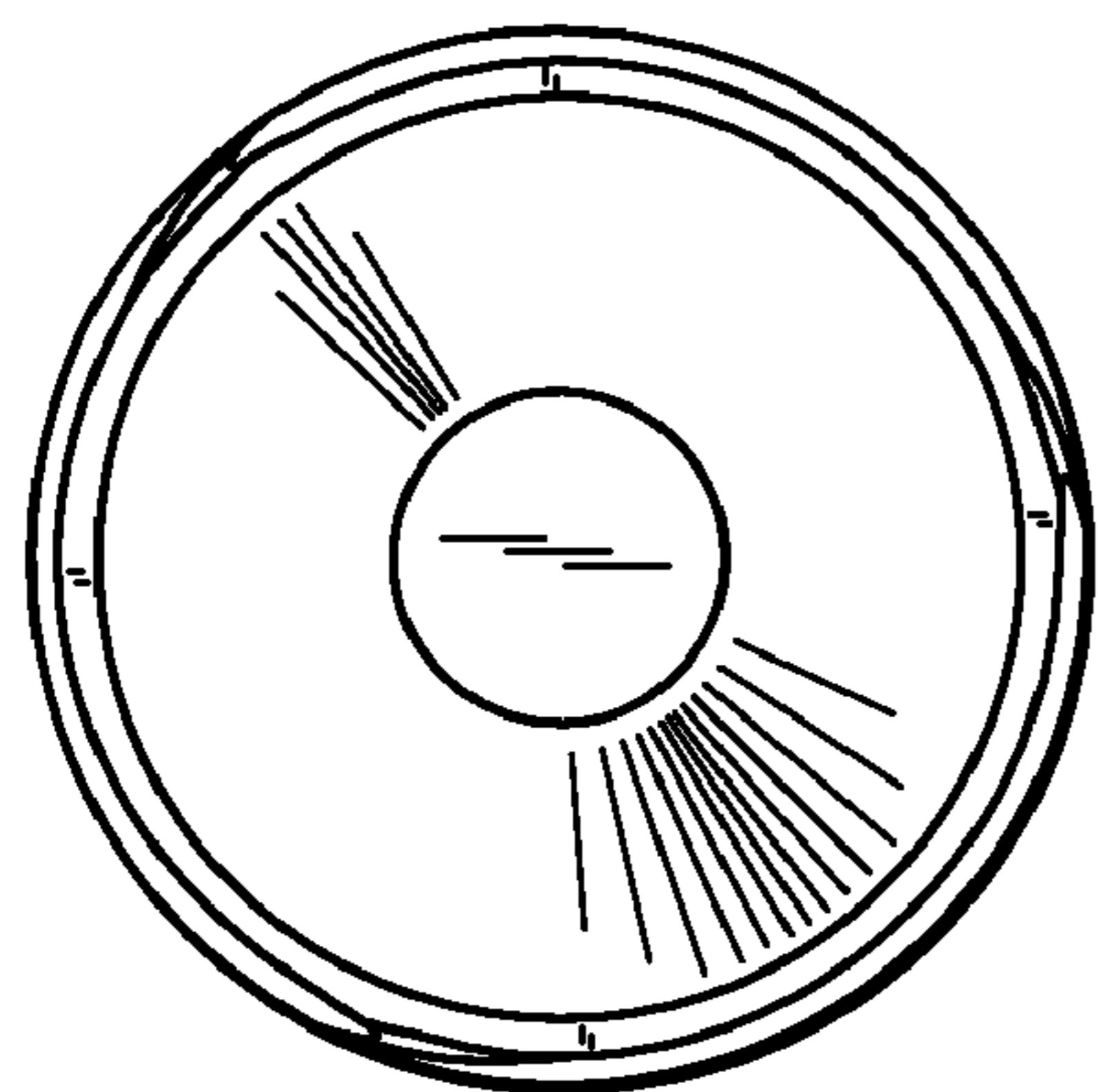


FIG. 3

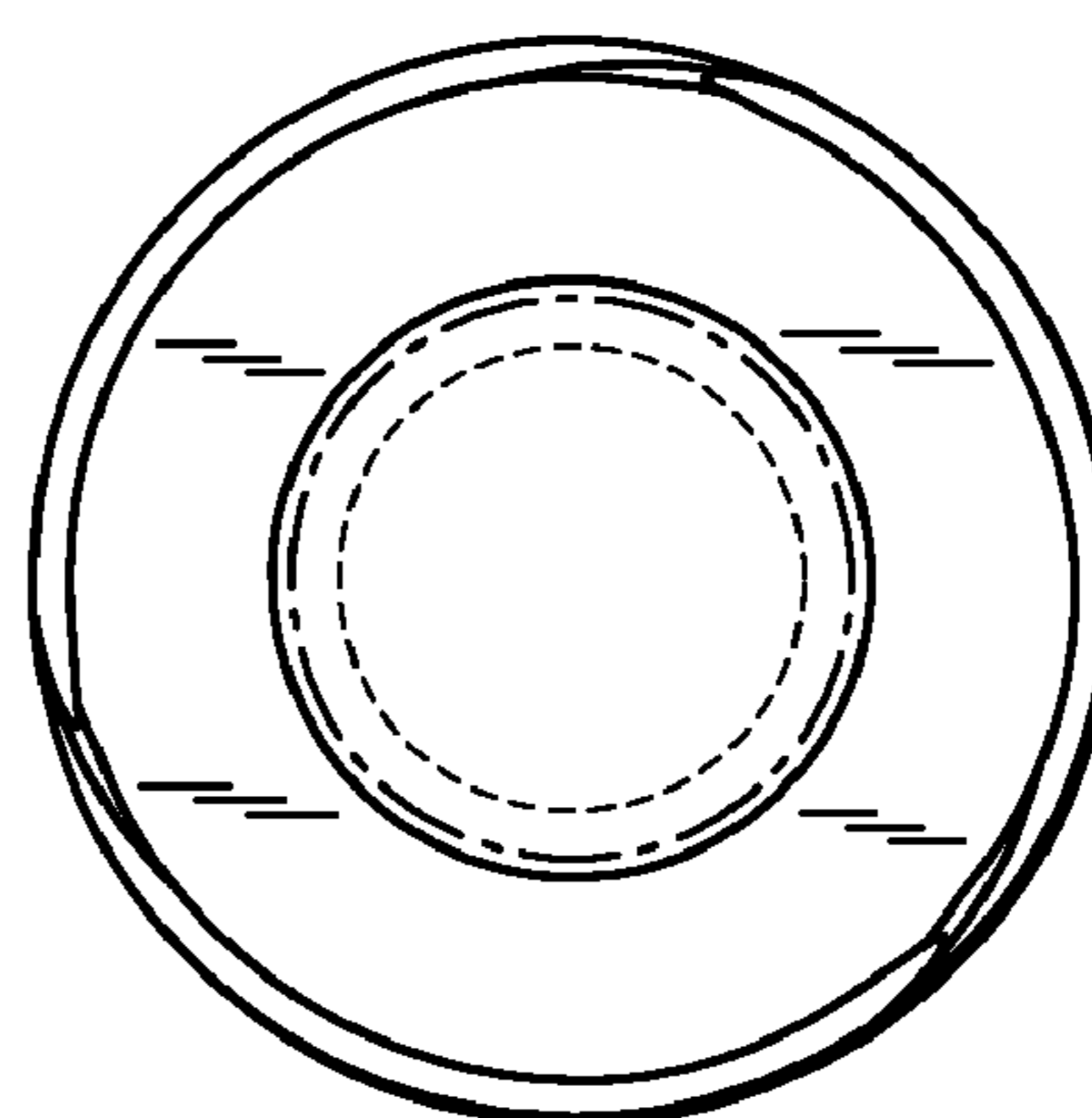


FIG. 4