

US00D821988S

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

(10) **Patent No.:** **US D821,988 S**

(45) **Date of Patent:** **** Jul. 3, 2018**

(54) **WIRE HOUSING PROTECTOR**

(71) Applicant: **Yi-Fong Chang**, Taipei (TW)

(72) Inventor: **Yi-Fong Chang**, Taipei (TW)

(**) Term: **15 Years**

(21) Appl. No.: **29/627,035**

(22) Filed: **Nov. 22, 2017**

(51) **LOC (11) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/184**

(58) **Field of Classification Search**
USPC D13/184, 153-156; 439/470, 471
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,627,286	A *	5/1927	Ile	.....	H01R 13/447 439/686
4,453,353	A *	6/1984	Killop	.....	E04H 12/20 16/DIG. 13
4,643,505	A *	2/1987	House	.....	H01R 13/6392 174/92
5,139,429	A *	8/1992	Herman	.....	H01R 13/60 439/133
D332,940	S *	2/1993	Finlay	.....	D13/154
5,217,387	A *	6/1993	Hull	.....	H01R 13/6392 439/367
5,259,782	A *	11/1993	Giffin	.....	H01R 13/6392 439/314
5,584,720	A *	12/1996	Elswick	.....	H01R 13/6392 439/368
5,713,753	A *	2/1998	Bayer	.....	H01R 13/6392 439/369
D407,377	S *	3/1999	Landerholm	.....	D13/154
D408,365	S *	4/1999	Sanders	.....	D13/153
6,220,893	B1 *	4/2001	Stephan	.....	H01R 4/30 439/519

D464,325	S *	10/2002	Peters	.....	D13/156
D473,524	S *	4/2003	Koehler	.....	D13/156
D508,232	S *	8/2005	Suckle	.....	D13/156
7,189,100	B1 *	3/2007	Colbourne	.....	H01R 13/6392 439/367
D571,733	S *	6/2008	Seil	.....	D13/156
D586,757	S *	2/2009	Minnick	.....	D13/156
7,553,181	B1 *	6/2009	Van Dalinda, III	.....	H01R 13/6392 174/92
D607,412	S *	1/2010	Palomaki	.....	D13/149

(Continued)

Primary Examiner — Lakiya G Rogers

Assistant Examiner — Harold E Blackwell, II

(74) *Attorney, Agent, or Firm* — Leong C. Lei

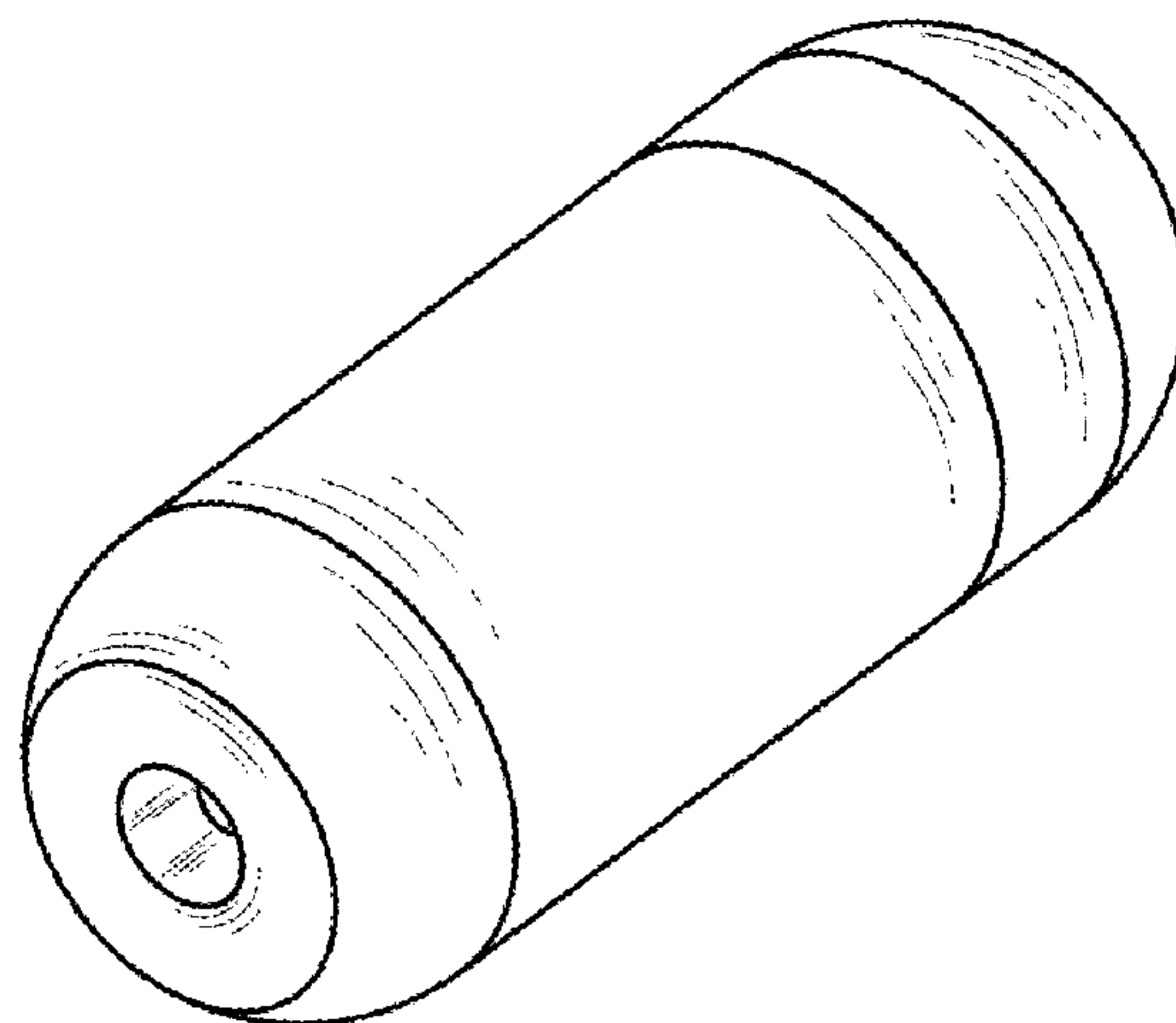
(57) **CLAIM**

The ornamental design for a wire housing protector, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a wire housing protector showing my new design;
 FIG. 2 is a front elevational view thereof;
 FIG. 3 is a rear elevational view thereof;
 FIG. 4 is a left side view thereof;
 FIG. 5 is a right side view thereof;
 FIG. 6 is a top plan view thereof;
 FIG. 7 is a bottom plan view thereof;
 FIG. 8 is an exploded perspective view thereof;
 FIG. 9 is another exploded perspective view thereof, shown in relation to a wire of my wire housing protector; and,
 FIG. 10 is another perspective view thereof, shown in relation to a wire of my wire housing protector.
 The broken lines shown in the figures are for the purpose of illustrating environment and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D631,848 S * 2/2011 Montena H01R 13/5213
D13/133
8,129,631 B1 * 3/2012 Shemtov H02G 3/14
174/480
8,702,440 B2 * 4/2014 Nooner H01R 13/5213
439/279
D776,623 S * 1/2017 Jenkins D13/156
9,653,837 B2 * 5/2017 Nooner H01R 13/52

* cited by examiner

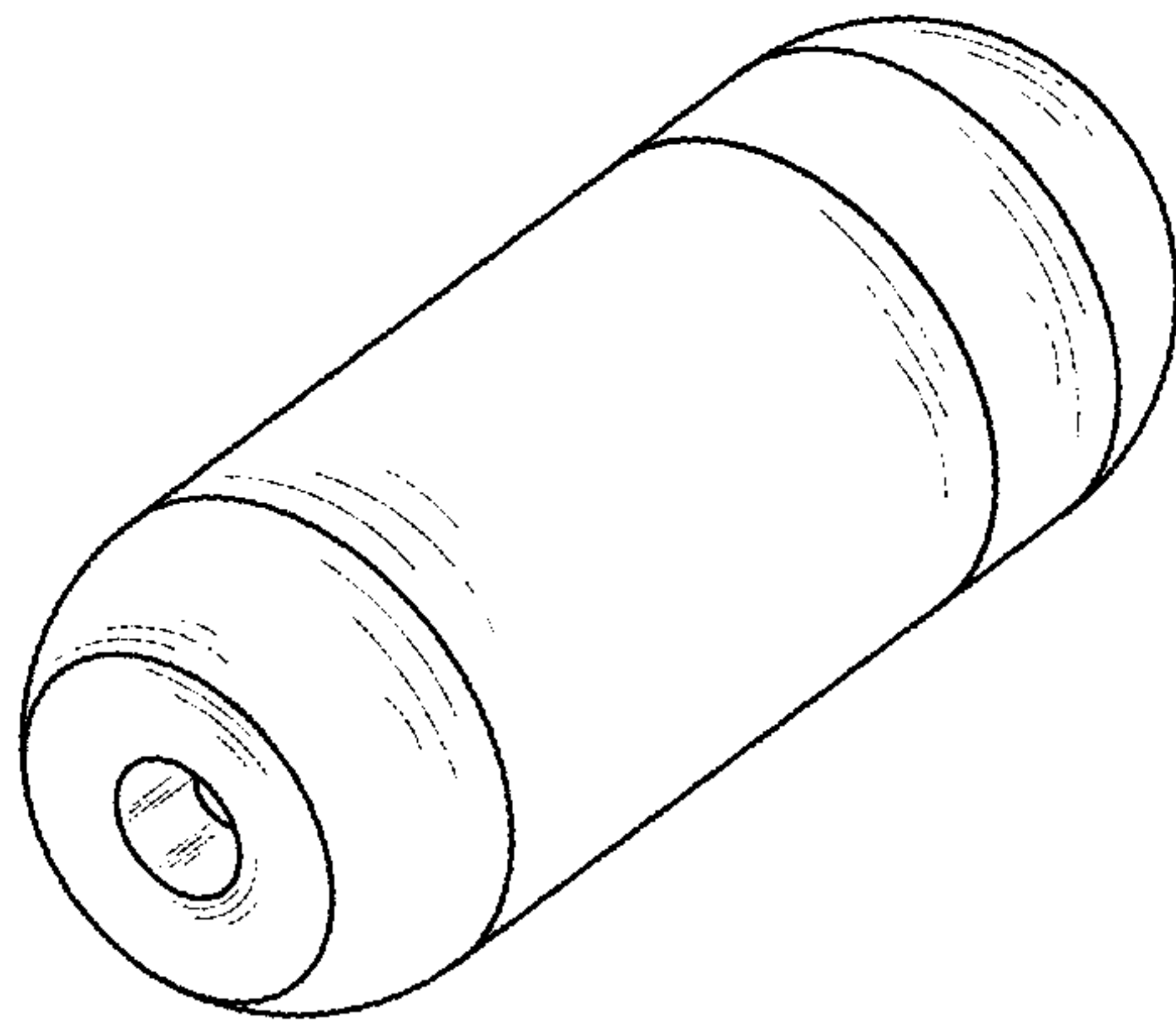


Fig. 1

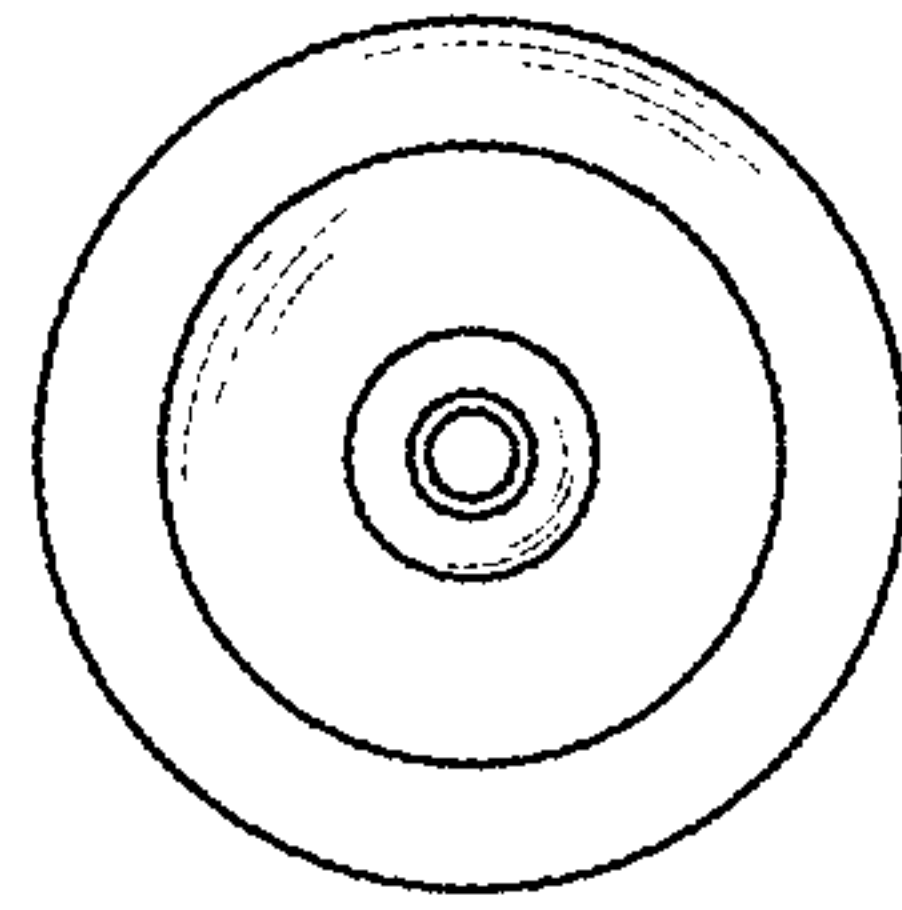


Fig. 2

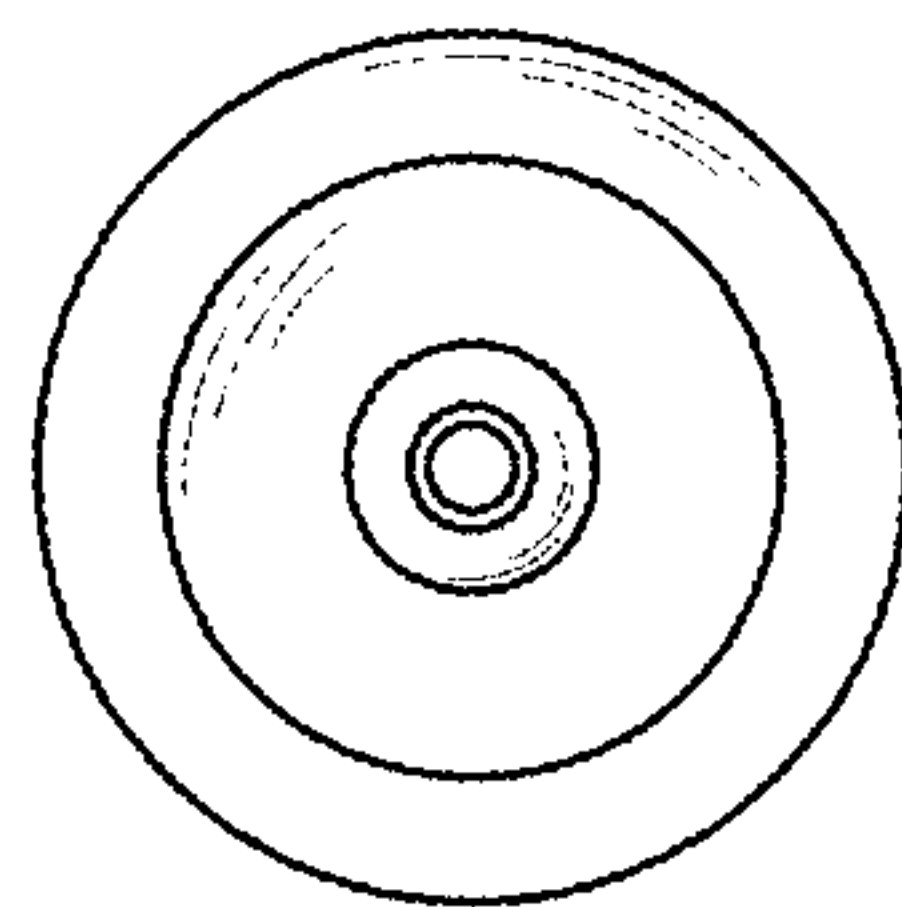


Fig. 3

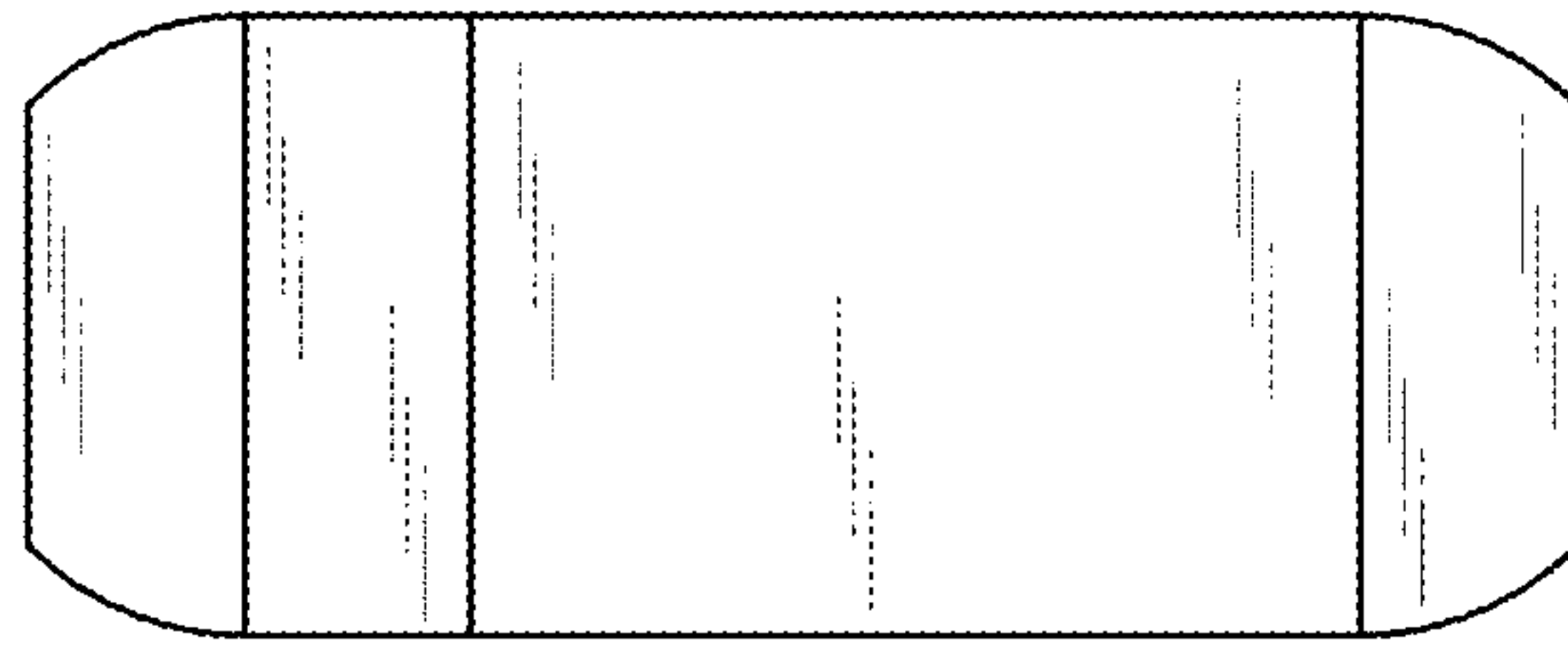


Fig. 4

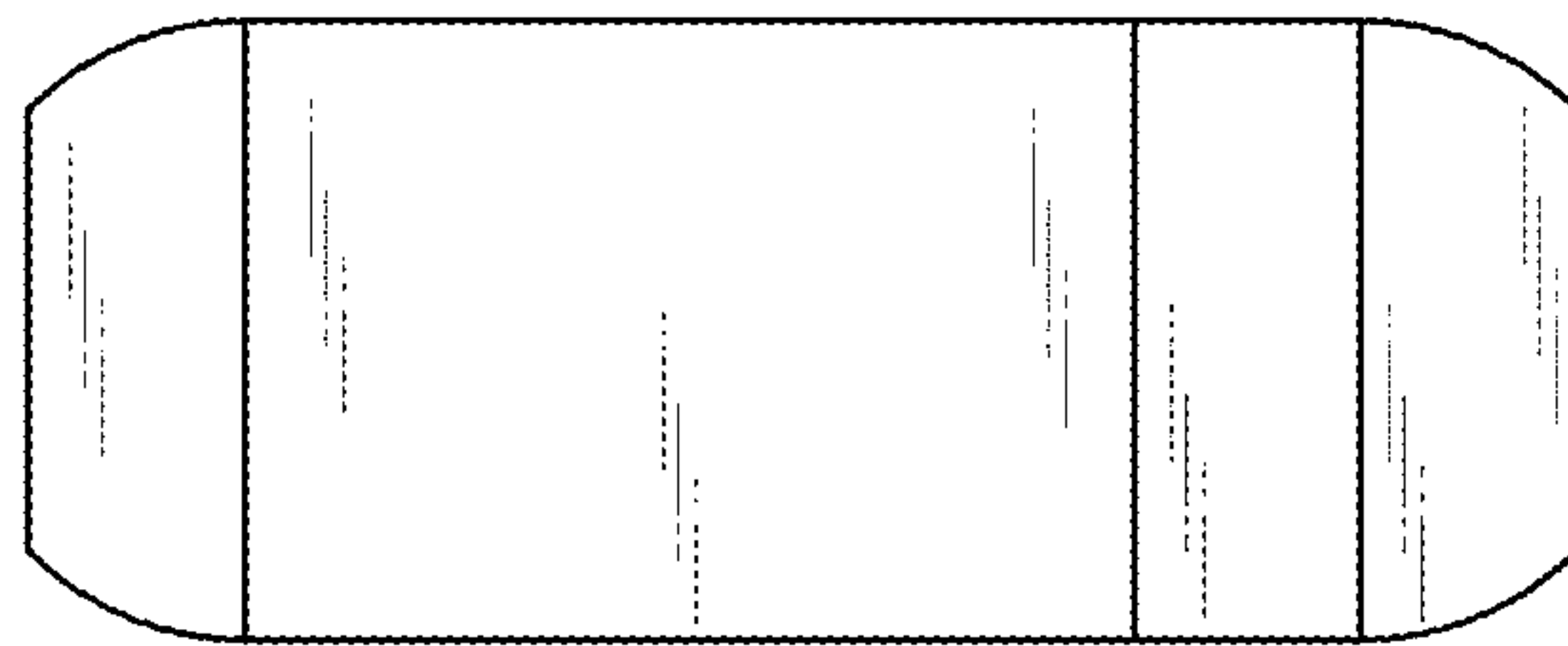


Fig. 5

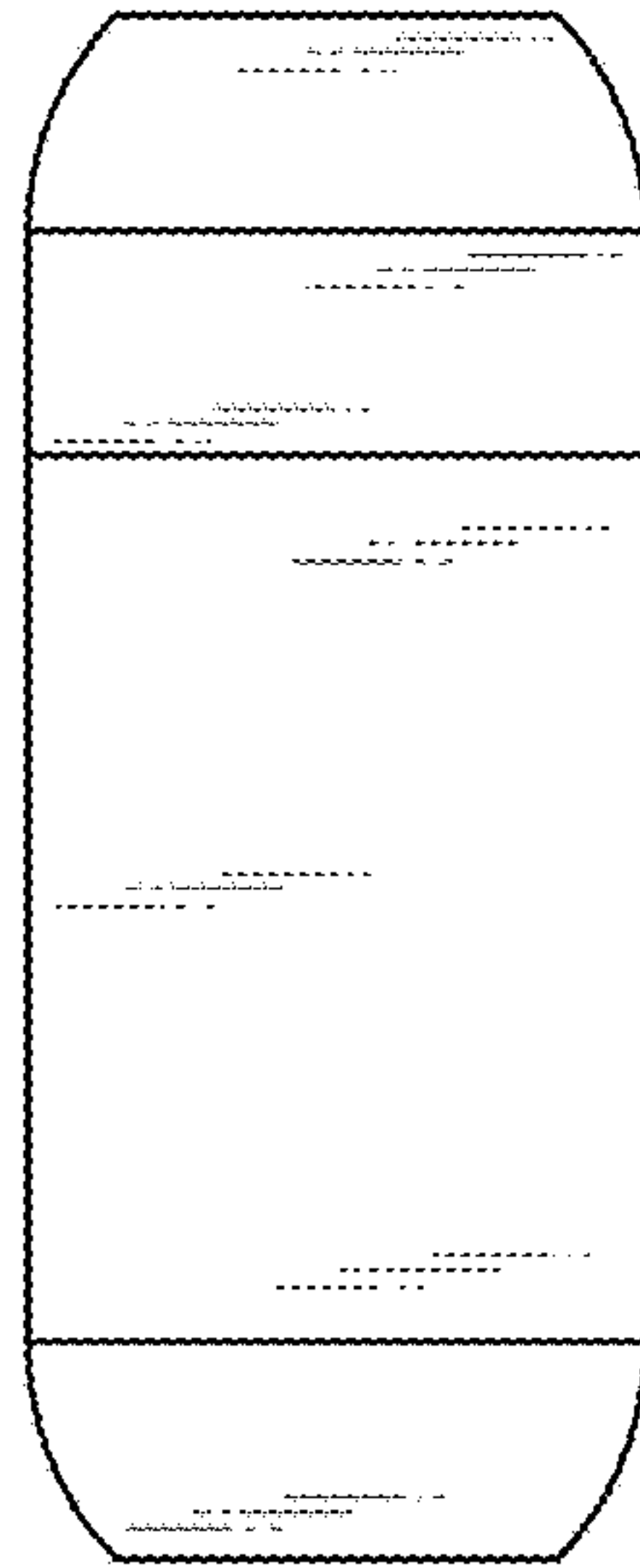


Fig. 6

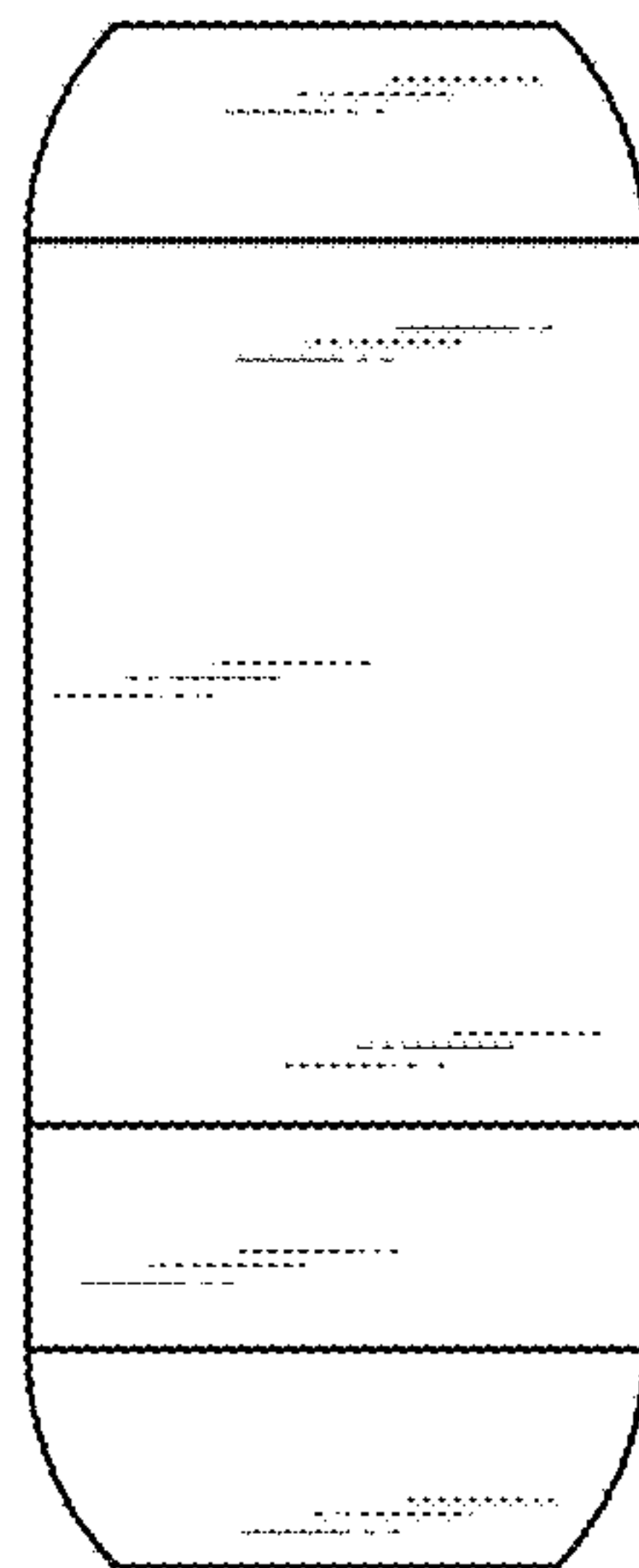


Fig. 7

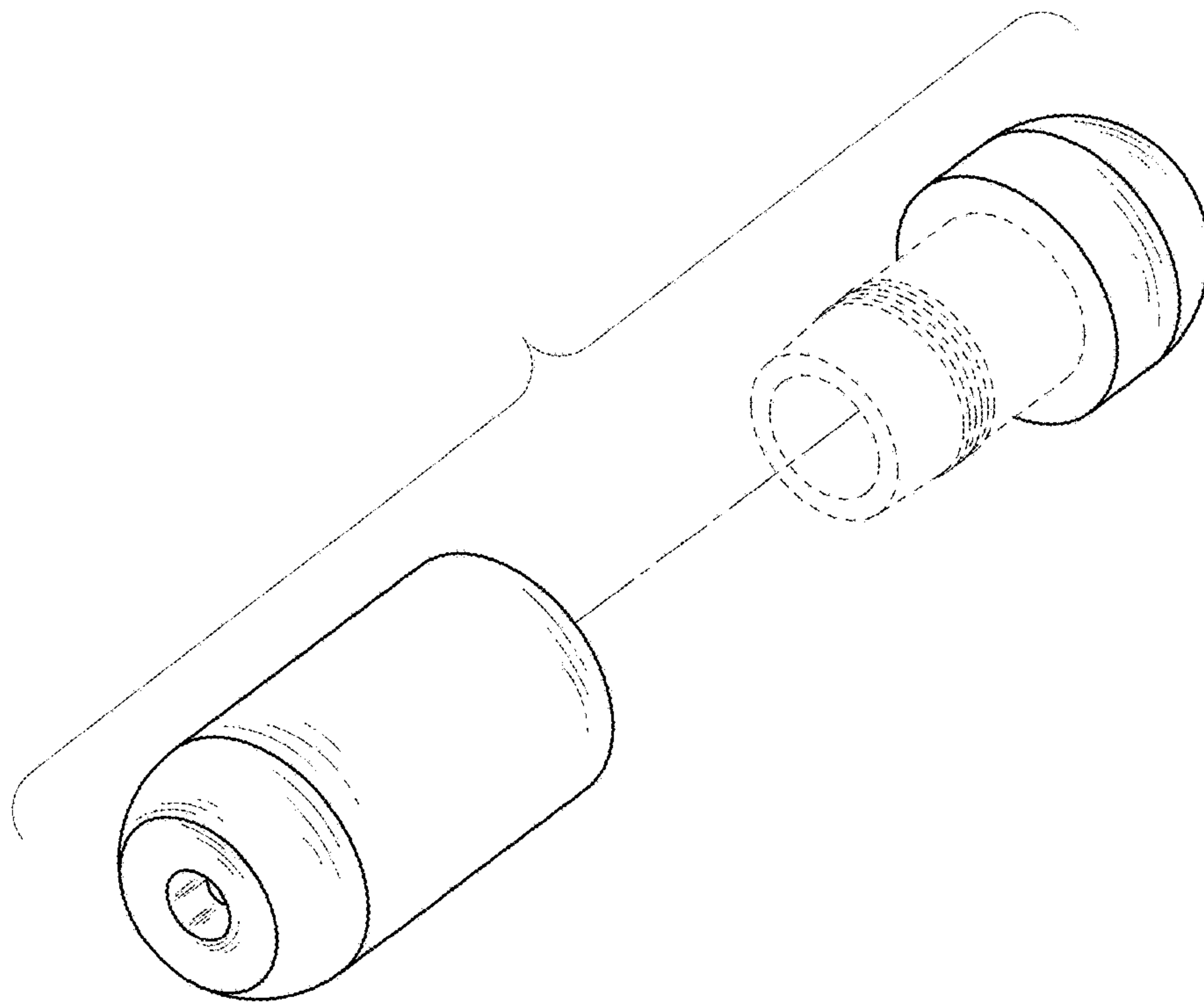


Fig. 8

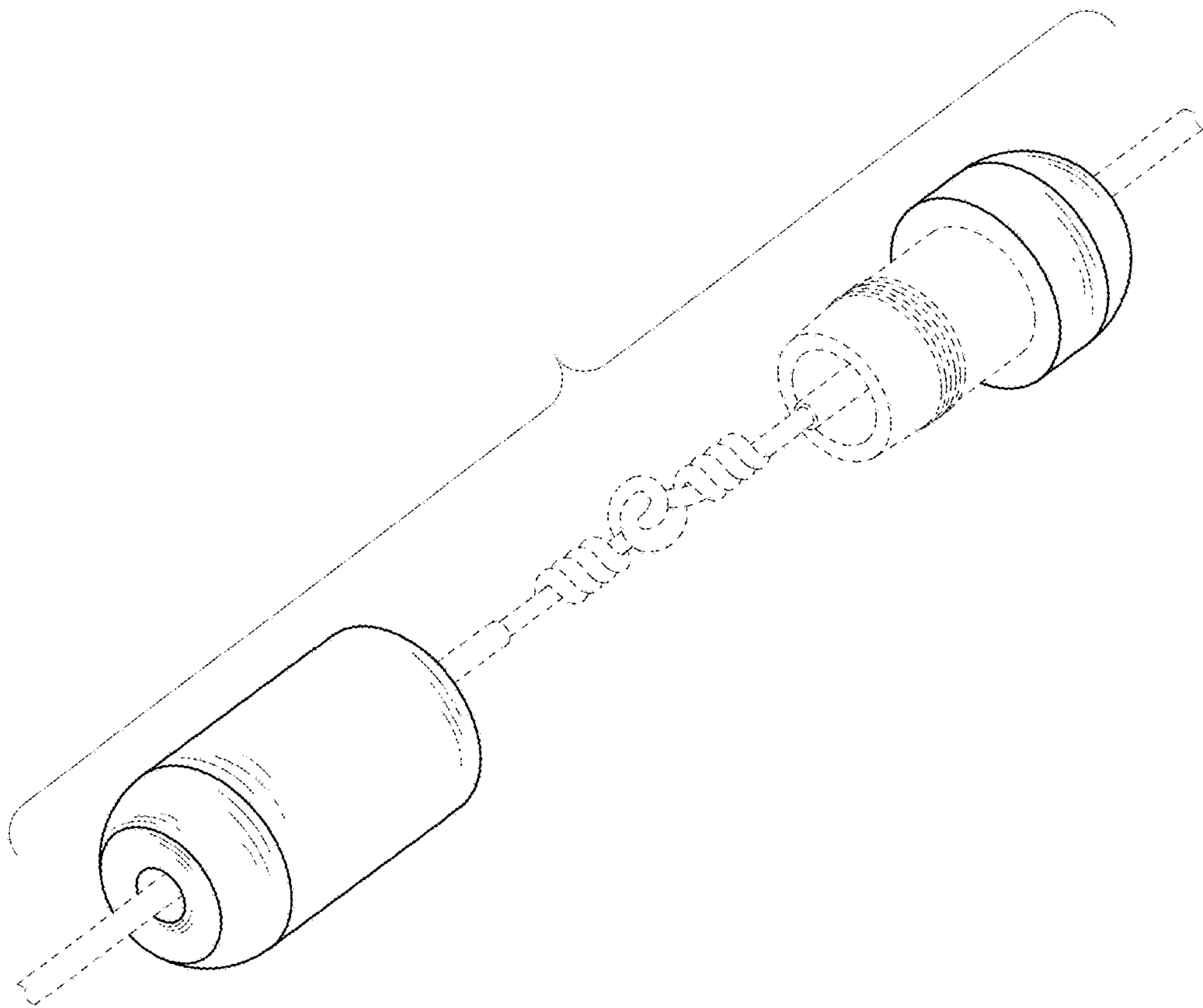


Fig. 9

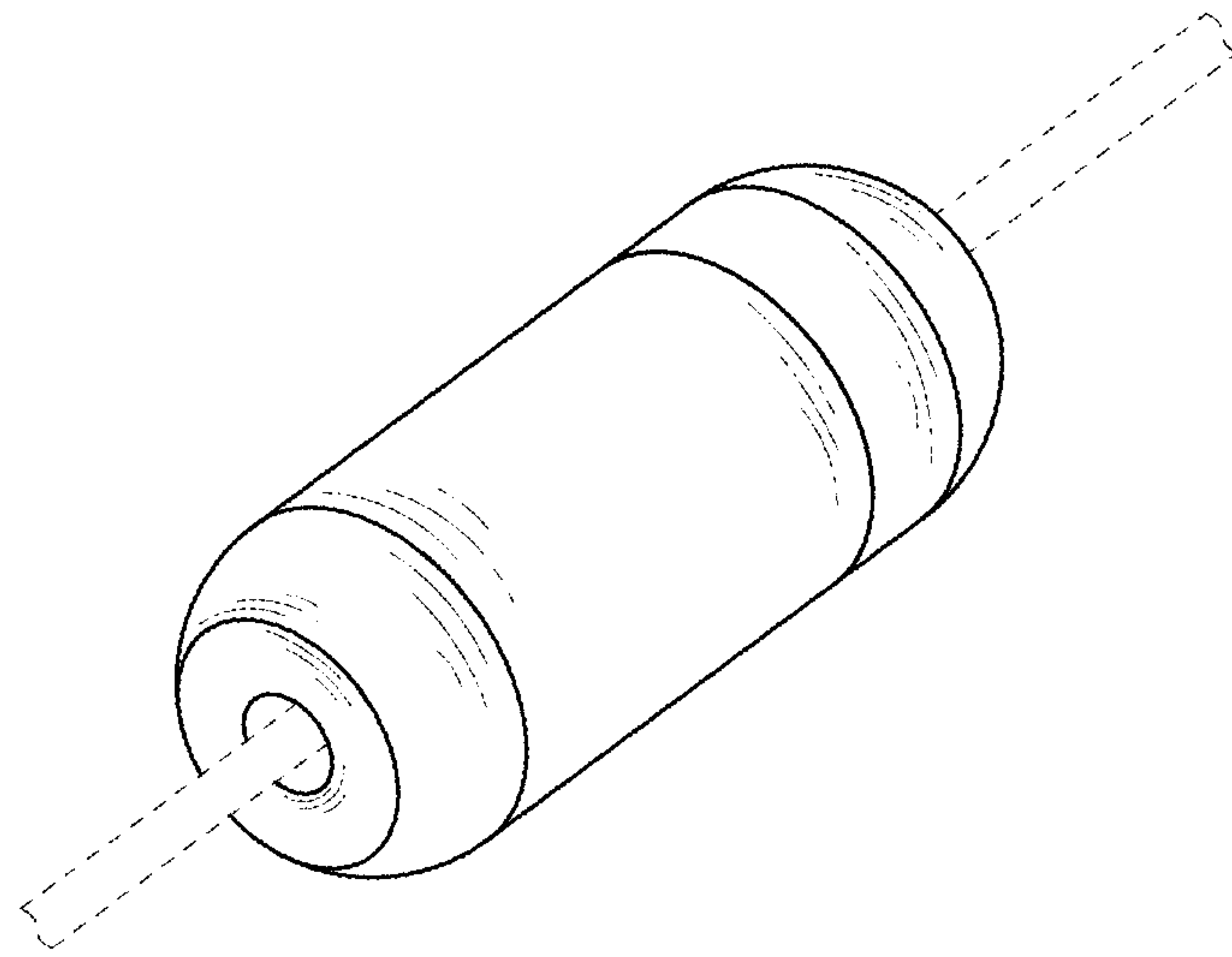


Fig. 10