



US00D620550S

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

(10) **Patent No.:** **US D620,550 S**  
(45) **Date of Patent:** **\*\* Jul. 27, 2010**

(54) **LOW FLOW IRRIGATION EMITTER**

(75) Inventors: **Raymond P. Feith**, Chino Hills, CA (US); **Jeffrey Lee Mattlin**, Pasadena, CA (US)

(73) Assignee: **Rain Bird Corporation**, Azusa, CA (US)

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

(21) Appl. No.: **29/354,560**

(22) Filed: **Jan. 26, 2010**

3,791,587 A 2/1974 Drori  
3,804,334 A 4/1974 Curry  
3,815,636 A 6/1974 Menzel  
3,851,896 A 12/1974 Olson  
3,863,845 A 2/1975 Bumpstead  
3,882,892 A 5/1975 Menzel  
3,998,244 A 12/1976 Bentley

(Continued)

**OTHER PUBLICATIONS**

Office Action mailed Jul. 30, 1999 for U.S. Appl. No. 08/607,850 (6 pages).

(Continued)

*Primary Examiner*—Robin V Webster

(74) *Attorney, Agent, or Firm*—Fitch, Even, Tabin & Flannery

**Related U.S. Application Data**

(60) Division of application No. 29/337,906, filed on Jun. 1, 2009, which is a continuation-in-part of application No. 12/347,266, filed on Dec. 31, 2008.

(51) **LOC (9) Cl.** ..... **23-01**

(52) **U.S. Cl.** ..... **D23/214**

(58) **Field of Classification Search** ..... D23/213,  
D23/214, 217, 218; 239/276, 200–206, 542,  
239/DIG. 1

See application file for complete search history.

(57)

**CLAIM**

We claim the ornamental design for a low flow irrigation emitter, as shown and described.

(56) **References Cited**

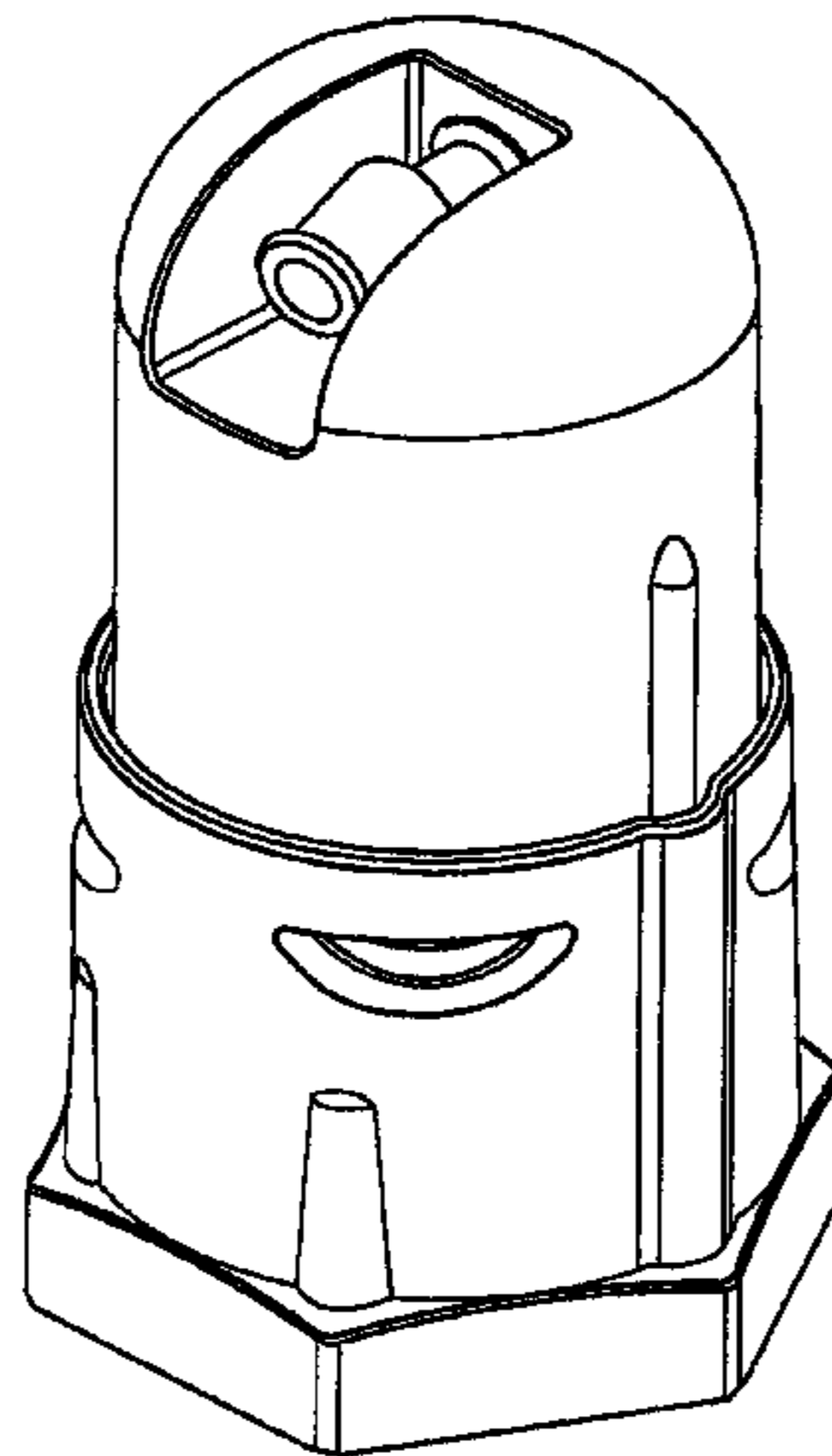
**U.S. PATENT DOCUMENTS**

2,174,515 A 10/1939 Hughes  
2,625,429 A 1/1953 Coles  
2,639,194 A 5/1953 Wahlin  
2,794,321 A 6/1957 Warner et al.  
3,155,612 A 11/1964 Weber  
3,182,916 A 5/1965 Schulz  
3,323,550 A 6/1967 Lee  
3,420,064 A 1/1969 Blass et al.  
3,434,500 A 3/1969 Burrows  
3,586,291 A 6/1971 Malec  
3,697,002 A 10/1972 Parkison  
3,729,142 A 4/1973 Rangel-Garza et al.  
3,753,527 A 8/1973 Galbraith et al.  
3,780,946 A 12/1973 Smith et al.

**DESCRIPTION**

FIG. 1 is a perspective view of an emitter;  
FIG. 2 is a top view of the emitter of FIG. 1;  
FIG. 3 is a right side elevational view of the emitter of FIG. 1;  
FIG. 4 is a rear elevational view of the emitter of FIG. 1;  
FIG. 5 is a front elevational view of the emitter of FIG. 1;  
FIG. 6 is a bottom view of the emitter of FIG. 1; and,  
FIG. 7 is a left side elevational view of the emitter of FIG. 1.

**1 Claim, 4 Drawing Sheets**



# US D620,550 S

Page 2

## U.S. PATENT DOCUMENTS

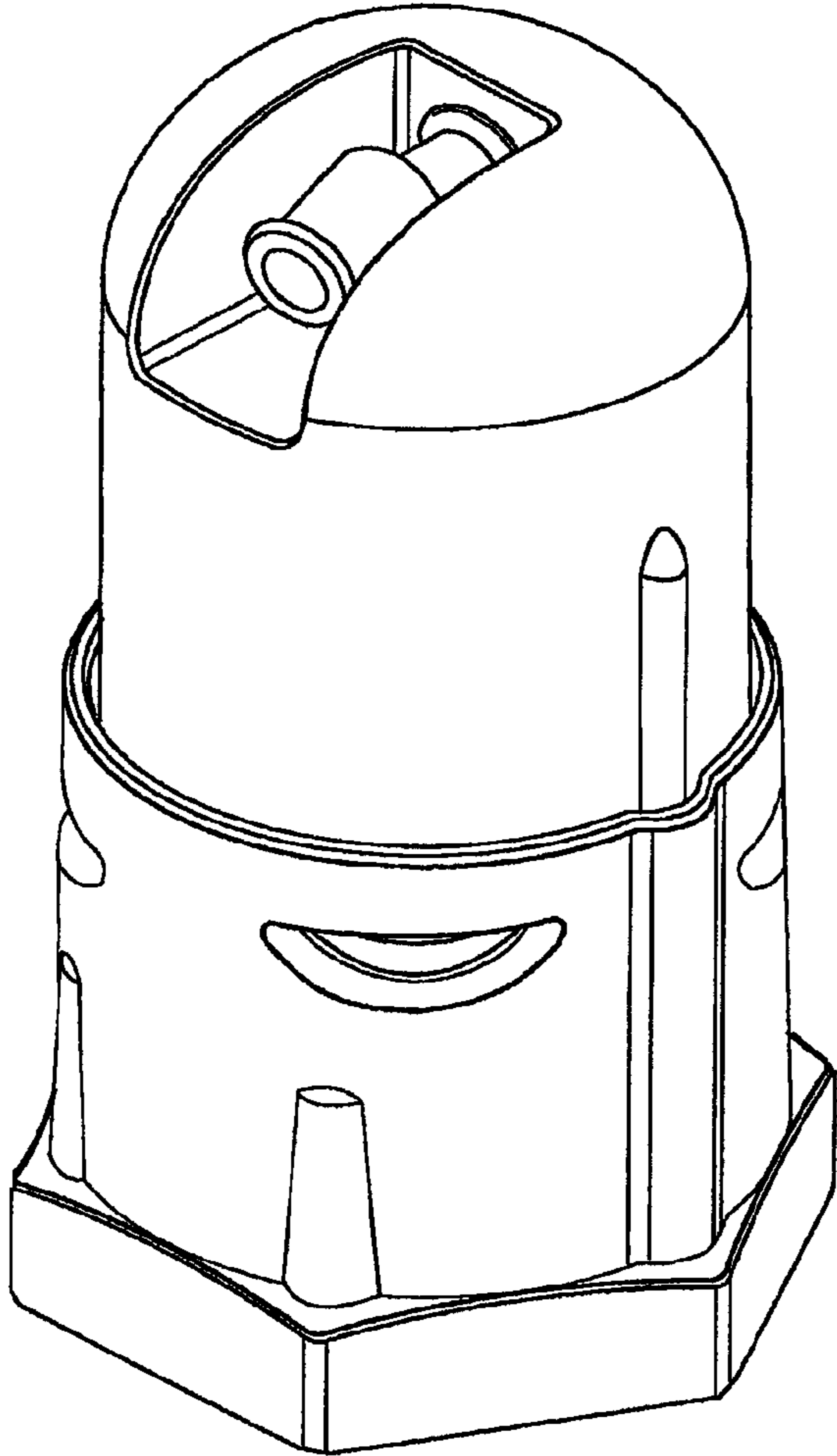
4,037,791	A	7/1977	Mullett et al.	6,015,102	A	1/2000	Daigle et al.
4,084,749	A	4/1978	Drori	6,026,850	A	2/2000	Newton et al.
4,105,162	A	8/1978	Drori	6,062,245	A	5/2000	Berglind et al.
4,177,947	A	12/1979	Menzel	6,109,296	A	8/2000	Austin
4,209,133	A	6/1980	Mehoudar	6,213,408	B1	4/2001	Shekalim
4,223,838	A	9/1980	Maria-Vittorio-Torrisi	6,238,081	B1	5/2001	Sand
4,226,368	A	10/1980	Hunter	6,464,152	B1	10/2002	Bolinis et al.
4,250,915	A	2/1981	Rikuta	D466,585	S *	12/2002	Alkalay ..... D23/214
4,274,597	A	6/1981	Dobos et al.	6,499,872	B2	12/2002	Sand
D264,491	S *	5/1982	Hunter ..... D23/218	6,557,819	B2	5/2003	Austin
4,331,293	A	5/1982	Rangel-Garza	6,581,902	B2	6/2003	Michau et al.
4,369,923	A	1/1983	Bron	6,622,946	B2	9/2003	Held et al.
4,384,680	A	5/1983	Mehoudar	6,827,298	B2	12/2004	Sacks
4,508,140	A	4/1985	Harrison	D508,973	S *	8/2005	Sener et al. .... D23/214
4,513,777	A	4/1985	Wright	6,945,476	B2	9/2005	Giuffre
4,653,695	A	3/1987	Eckstein	7,300,004	B2	11/2007	Sinden et al.
4,687,143	A	8/1987	Gorney et al.	D562,939	S *	2/2008	Lo ..... D23/214
4,718,608	A	1/1988	Mehoudar	7,363,938	B1	4/2008	Newton
4,796,660	A	1/1989	Bron	2002/0070297	A1	6/2002	Bolinis et al.
4,824,019	A	4/1989	Lew	2003/0089409	A1	5/2003	Morimoto
4,856,552	A	8/1989	Hiemstra	2005/0224607	A1	10/2005	Dinur et al.
5,031,837	A	7/1991	Hanish	2006/0144965	A1	7/2006	Keren
5,040,770	A	8/1991	Rajster et al.	2007/0095950	A1	5/2007	Kim
5,111,996	A	5/1992	Eckstein				
5,137,216	A	8/1992	Hanish				
5,183,208	A	2/1993	Cohen				
5,232,160	A	8/1993	Hendrickson et al.				
5,327,941	A	7/1994	Bitsakis et al.				
5,330,107	A	7/1994	Karathanos				
5,441,203	A	8/1995	Swan et al.				
5,443,212	A	8/1995	Dinur				
5,820,028	A	10/1998	Dinur				
5,875,815	A	3/1999	Ungerecht et al.				
5,944,260	A	8/1999	Wang				

## OTHER PUBLICATIONS

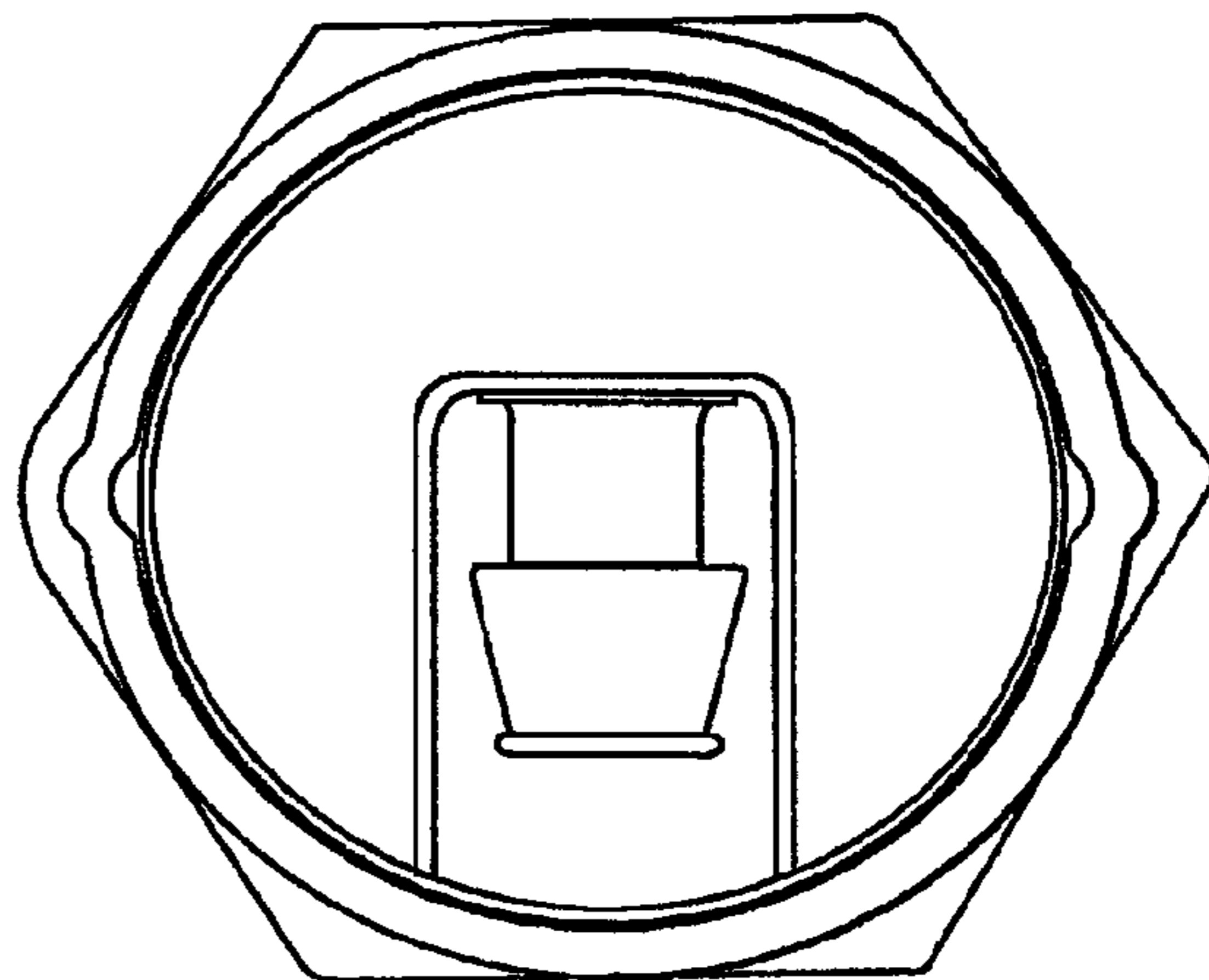
Amendment dated Sep. 22, 1999 for U.S. Appl. No. 08/607,850 (6 pages).  
 Interview Summary dated Sep. 21, 1999 for U.S. Appl. No. 08/607,850 (1 page).  
 Request For Ex Parte Reexamination Transmittal Form dated Mar. 7, 2006 and Request for Reexamination of U.S. Patent No. 6,026,850 (13 pages).  
 Order Granting/Denying Request For Ex Parte Reexamination mailed Apr. 17, 2006 for U.S. Control No. 90/007,963 (13 pages).

\* cited by examiner

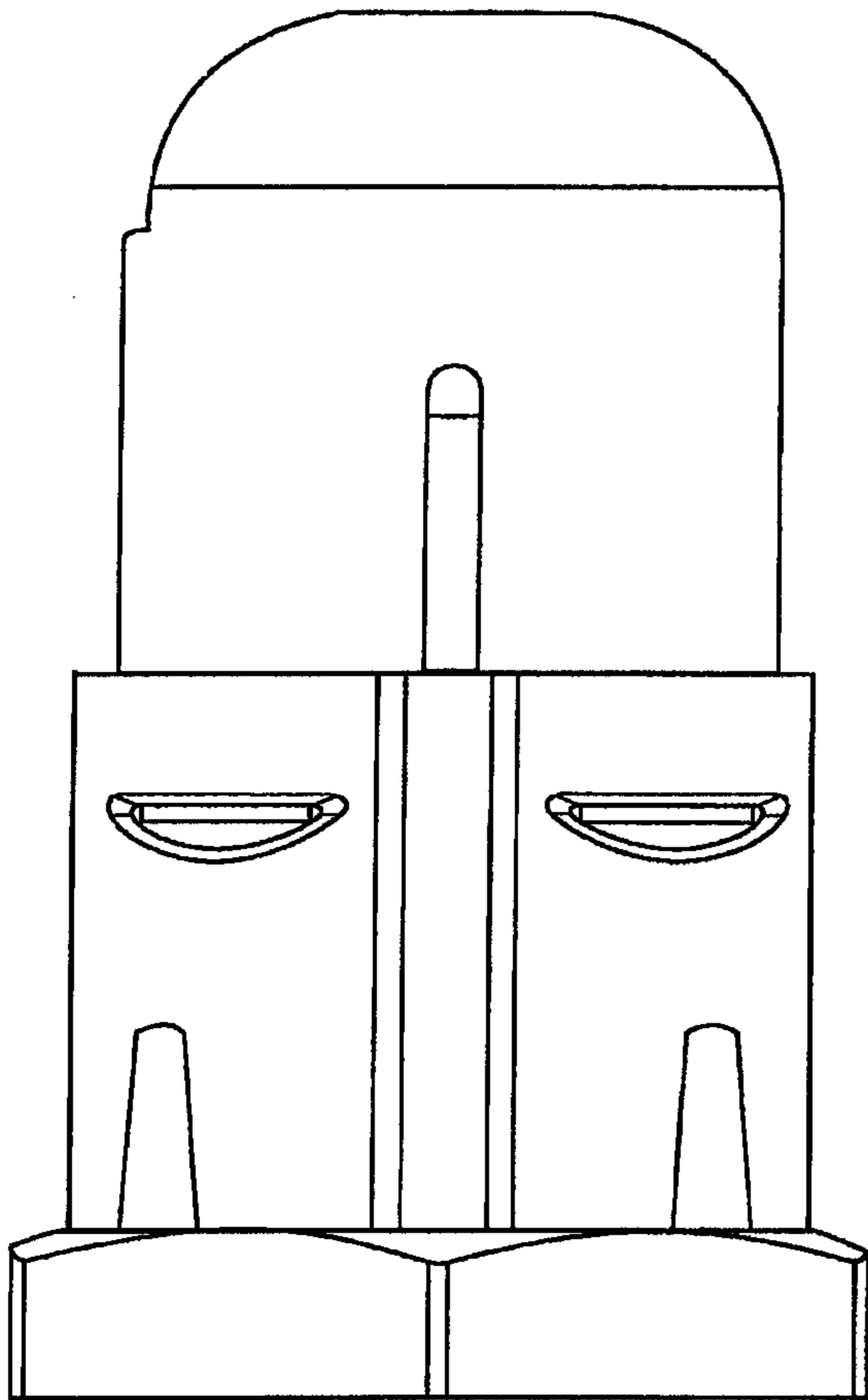
*Fig. 1*



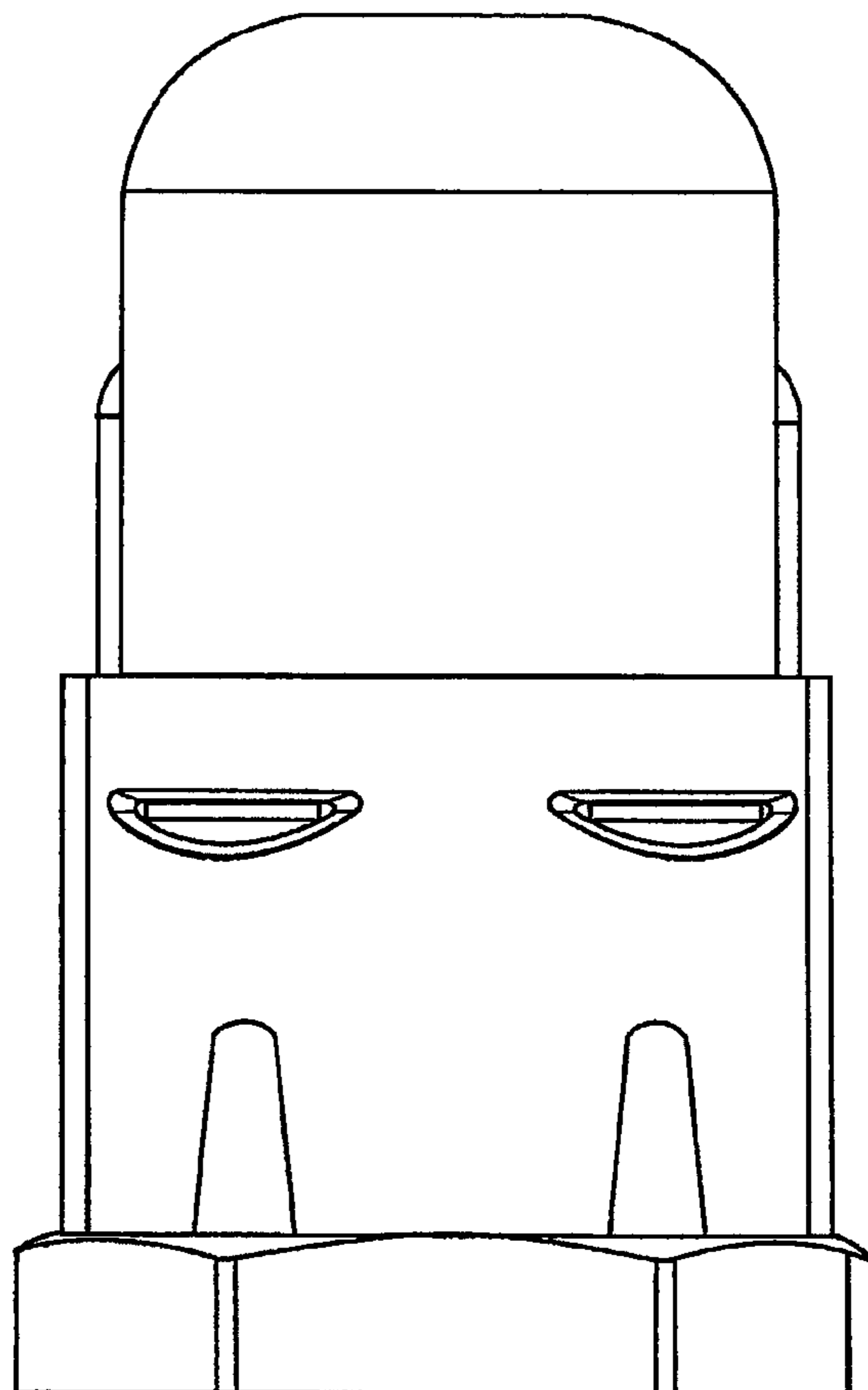
*Fig. 2*



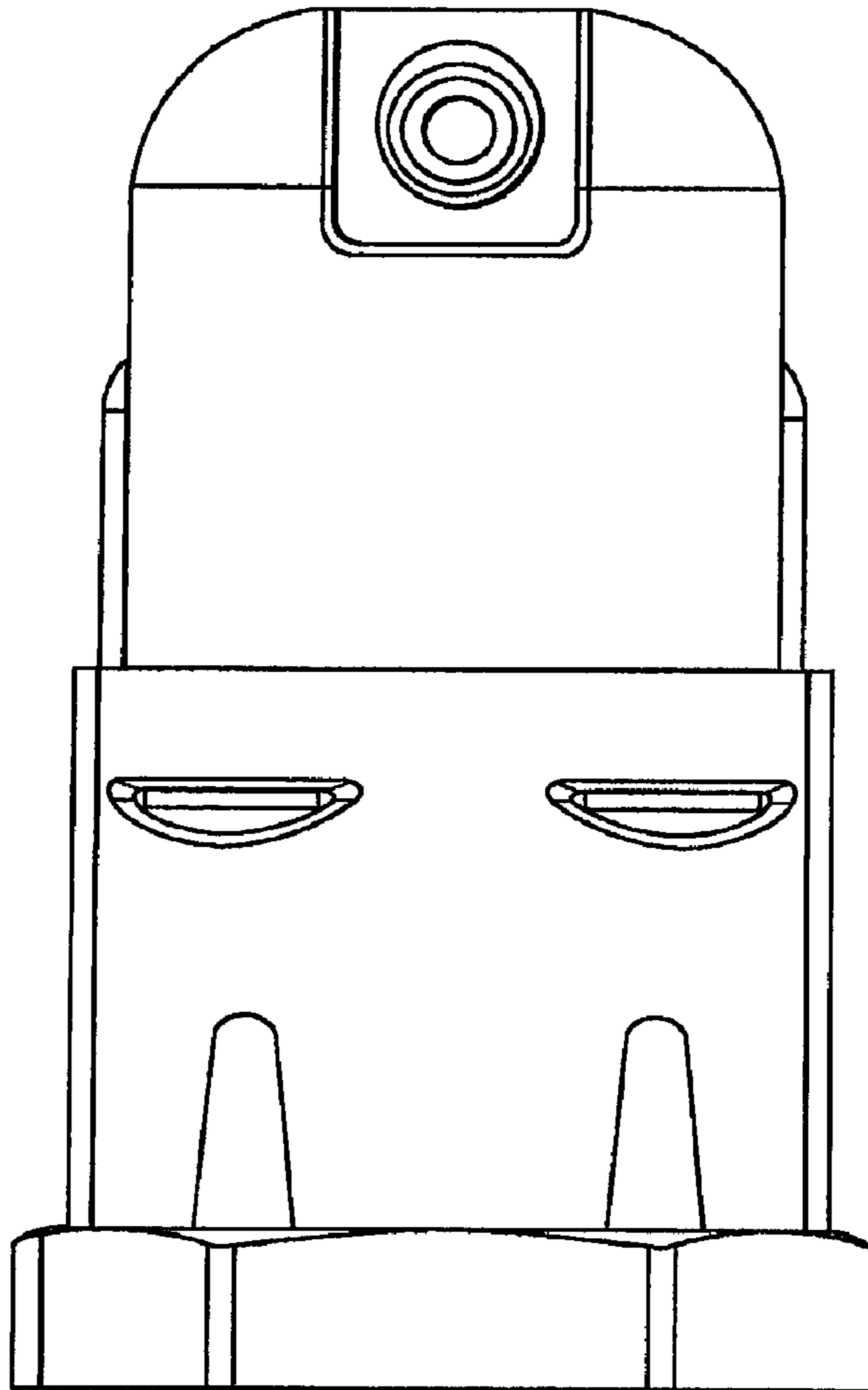
*Fig. 3*



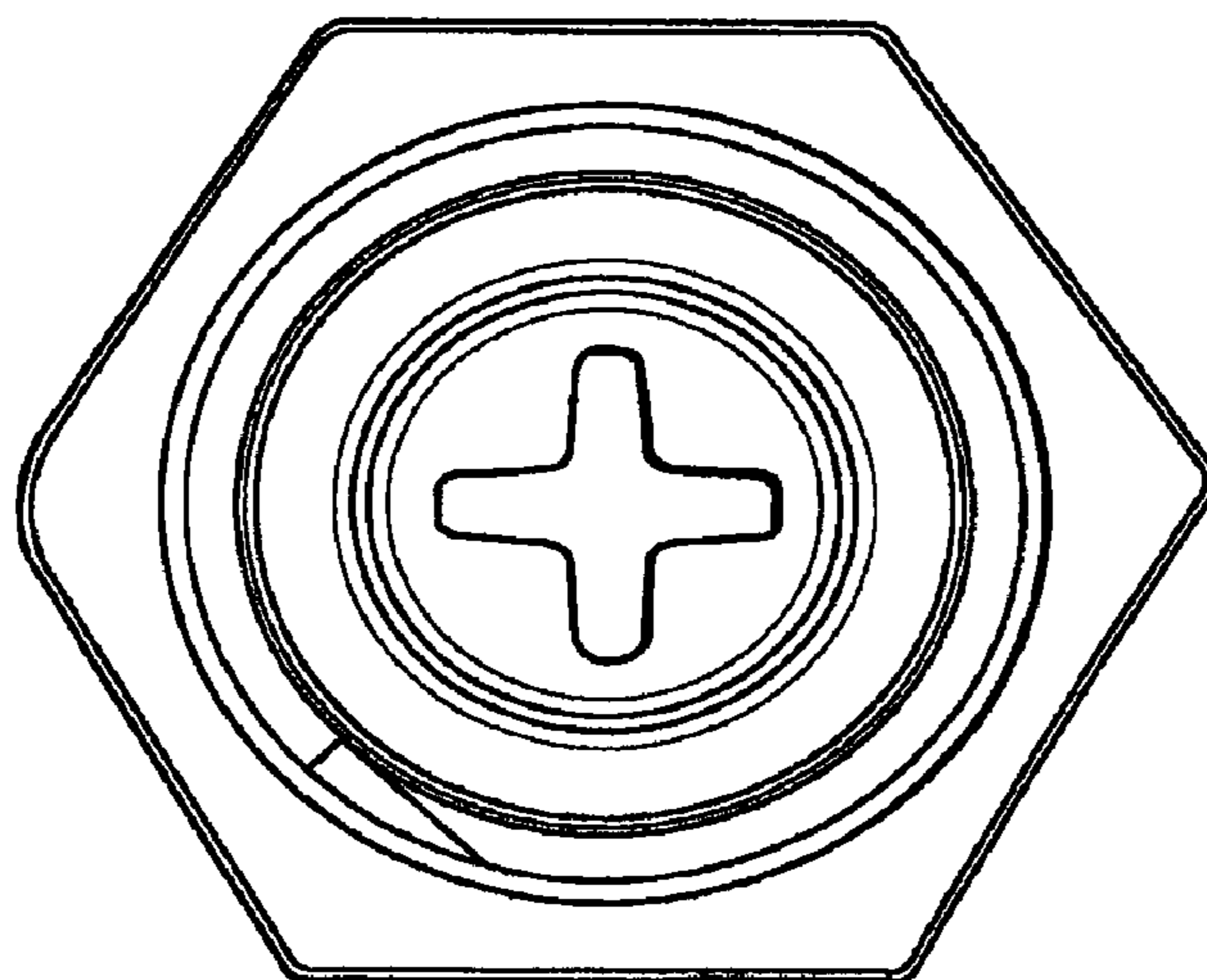
*Fig. 4*



*Fig. 5*



*Fig. 6*



*Fig. 7*

