



US00D616962S

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

(10) **Patent No.:** **US D616,962 S**
(45) **Date of Patent:** **** Jun. 1, 2010**

(54) **LOW FLOW IRRIGATION EMITTER**

3,780,946 A 12/1973 Smith et al.
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

(75) Inventors: **Kirk A. Allen**, Valencia, CA (US);
Raymond P. Feith, Chino Hills, CA
(US); **Gerald E. Peterson**, Riverside,
CA (US); **Samir Shah**, Chino Hills, CA
(US)

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

(Continued)

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

OTHER PUBLICATIONS

(21) Appl. No.: **29/342,383**

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

(22) Filed: **Aug. 24, 2009**

(Continued)

Related U.S. Application Data

(62) Division of application No. 29/332,053, filed on Feb. 6, 2009.

Primary Examiner—Robin V Webster

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

(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

(57) **CLAIM**

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

See application file for complete search history.

DESCRIPTION

(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
D220,763 S * 5/1971 Best D23/214
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.

This application is related to co-pending U.S. patent application Ser. No. 12/367,295, filed Feb. 6, 2009.

FIG. 1 is a perspective view of an emitter;

FIG. 2 is a bottom view of the emitter of FIG. 1;

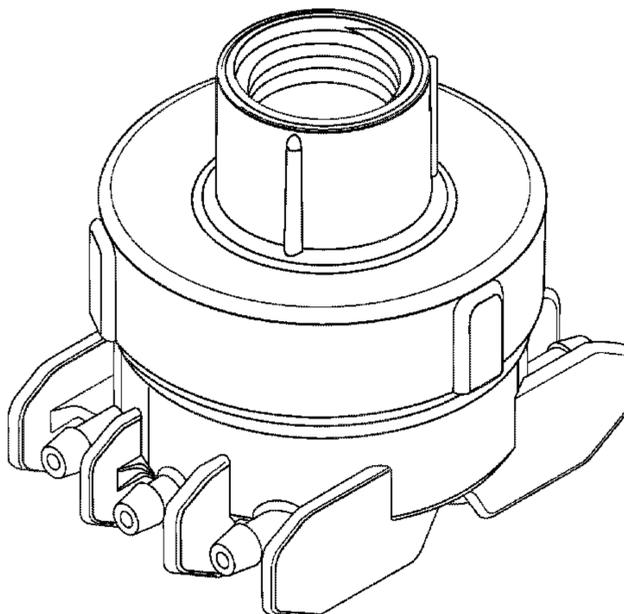
FIG. 3 is a front elevational view of the emitter of FIG. 1 and is also a mirror image of a rear elevational view of the emitter of FIG. 1;

FIG. 4 is a right side elevational view of the emitter of FIG. 1;

FIG. 5 is a left side elevational view of the emitter of FIG. 1; and,

FIG. 6 is a top view of the emitter of FIG. 1.

1 Claim, 6 Drawing Sheets



US D616,962 S

Page 2

U.S. PATENT DOCUMENTS

3,863,845 A	2/1975	Bumpstead	5,820,029 A *	10/1998	Marans 239/542
3,882,892 A	5/1975	Menzel	5,875,815 A	3/1999	Ungerecht et al.
3,998,244 A	12/1976	Bentley	5,944,260 A	8/1999	Wang
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	6,499,872 B2	12/2002	Sand
4,274,597 A	6/1981	Dobos et al.	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	6,945,476 B2	9/2005	Giuffre
4,513,777 A	4/1985	Wright	D520,108 S *	5/2006	Patel et al. D23/214
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.	7,363,938 B1	4/2008	Newton
4,718,608 A	1/1988	Mehoudar	2002/0070297 A1	6/2002	Bolinis et al.
4,796,660 A	1/1989	Bron	2003/0089409 A1	5/2003	Morimoto
4,824,019 A	4/1989	Lew	2005/0224607 A1	10/2005	Dinur et al.
4,856,552 A	8/1989	Hiemstra	2006/0144965 A1	7/2006	Keren
5,031,837 A	7/1991	Hanish	2007/0095950 A1	5/2007	Kim
5,040,770 A	8/1991	Rajster et al.			
5,054,690 A *	10/1991	Olson 239/542			
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.			
5,246,170 A *	9/1993	Woidt 239/520			
5,316,220 A *	5/1994	Dinur 239/542			
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			

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 Control U.S. Appl. No. 90/007,963 (13 pages).

* cited by examiner

FIG. 1

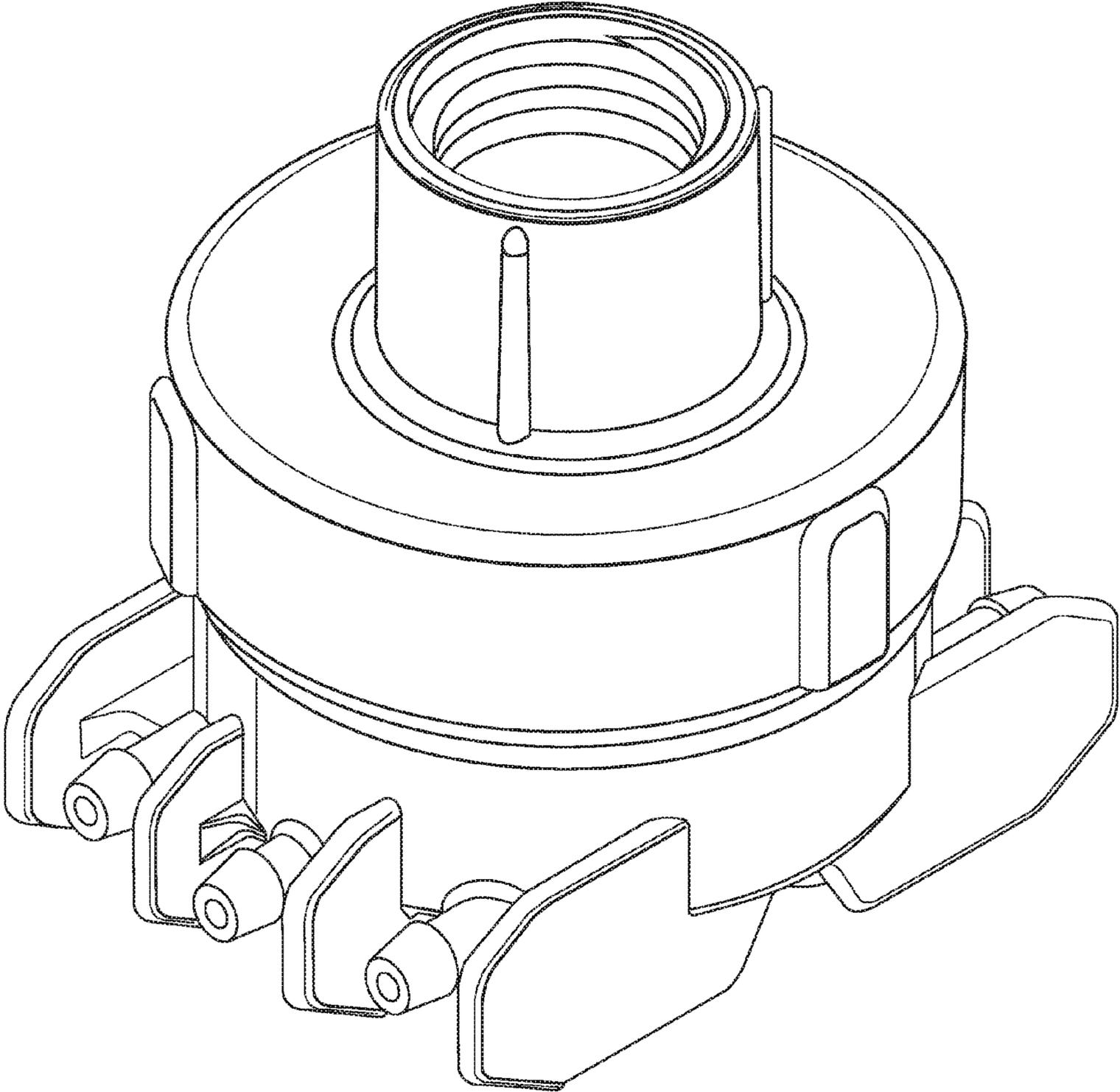


FIG. 2

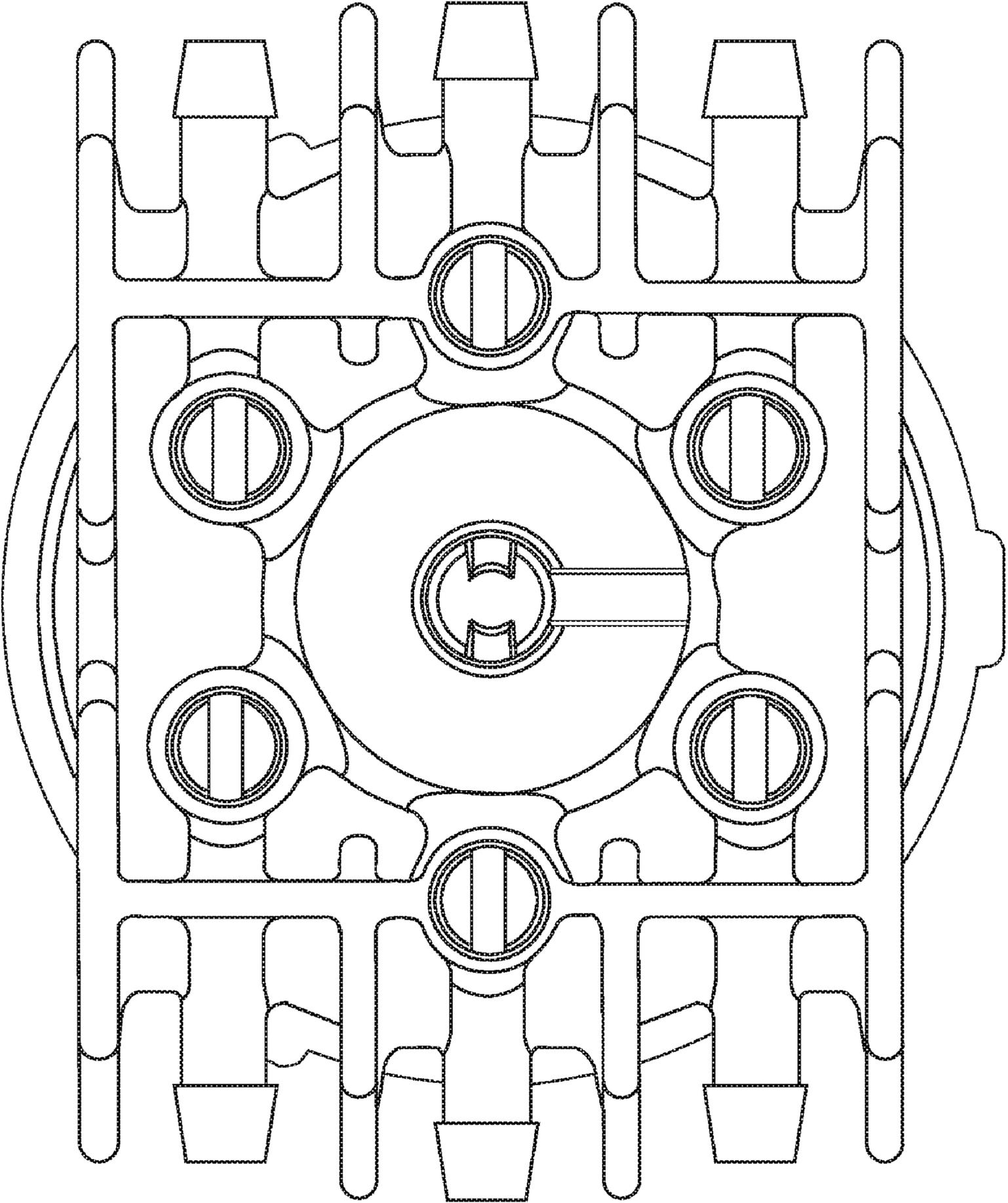


FIG. 3

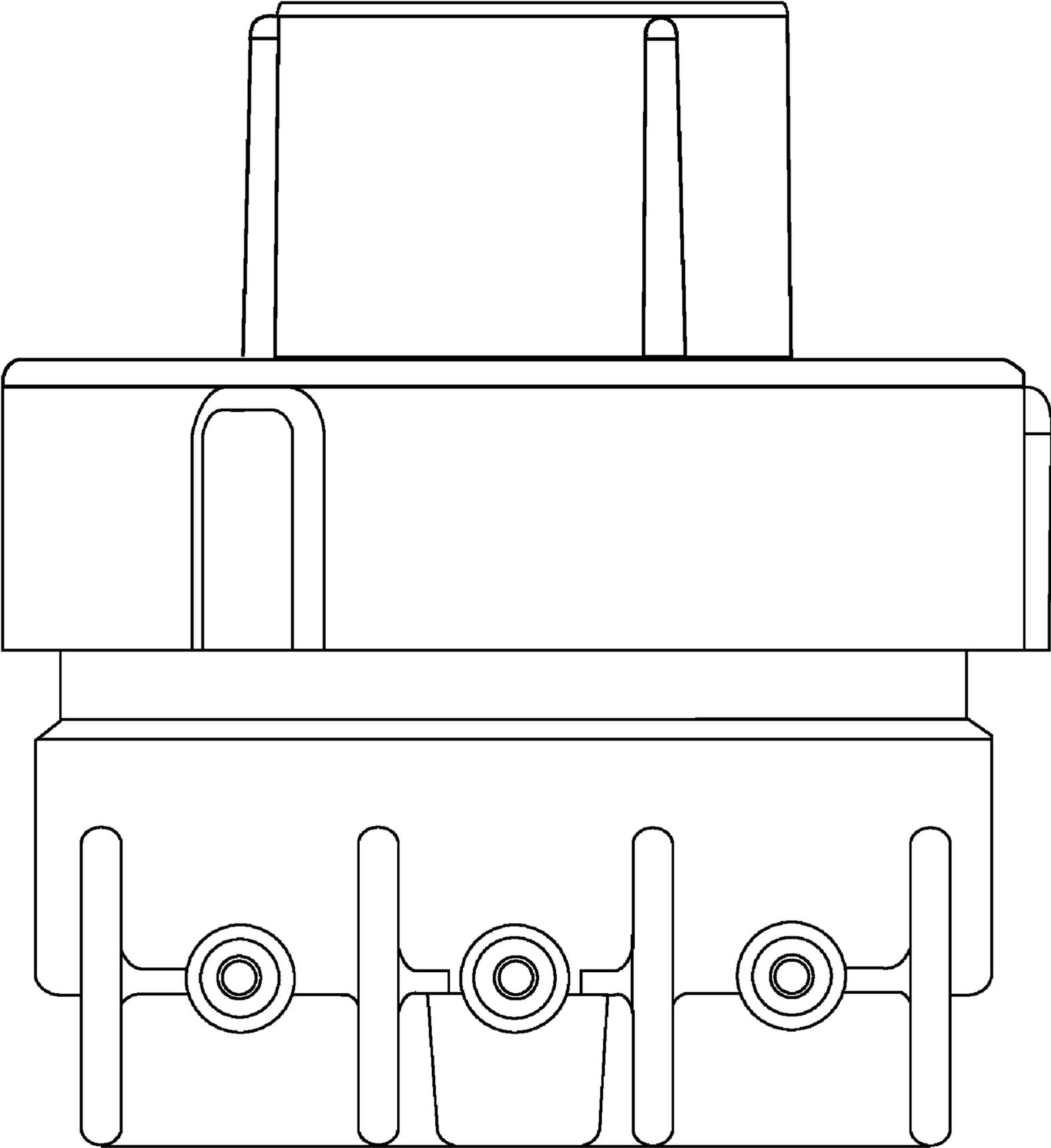


FIG. 4

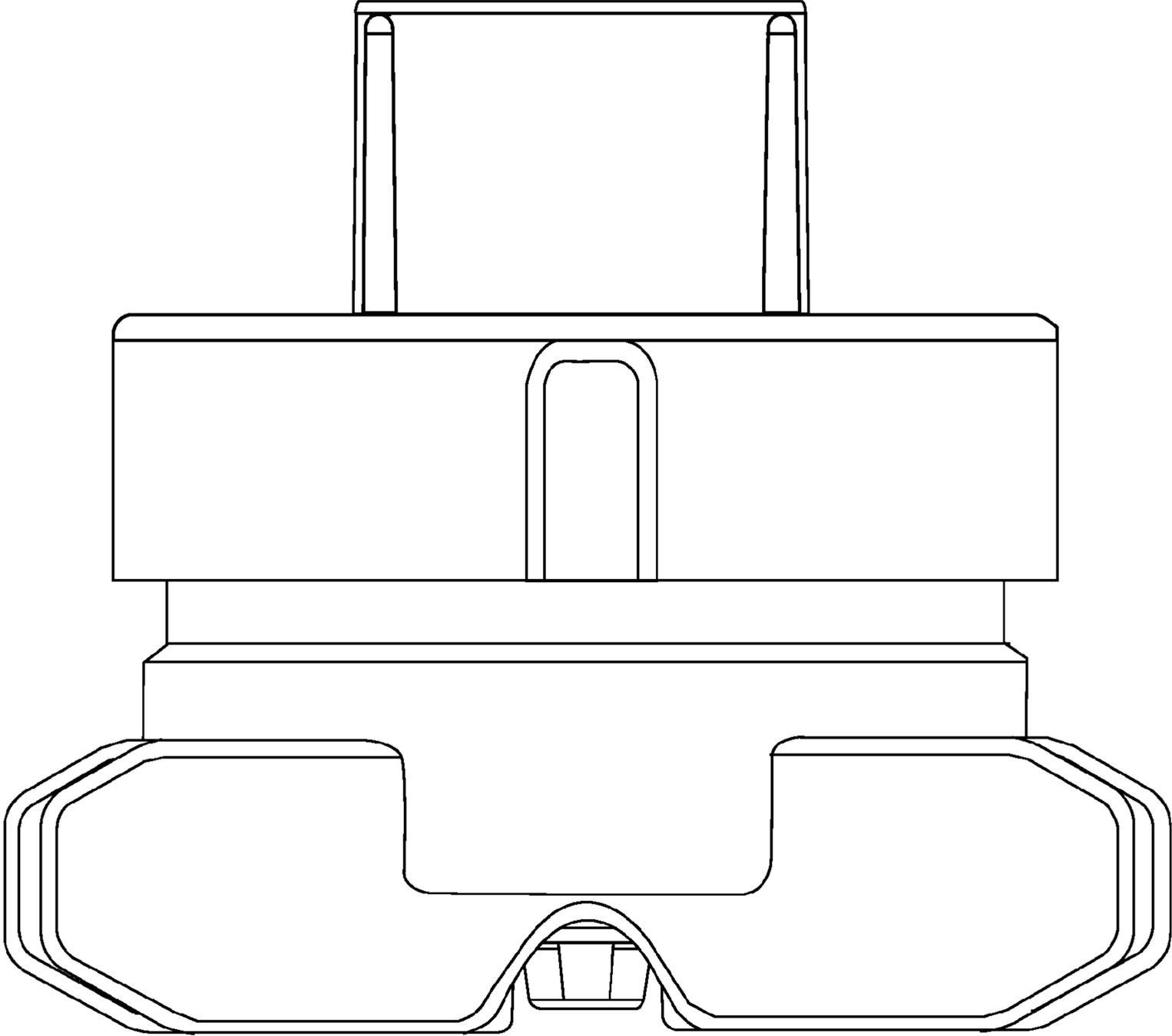


FIG. 5

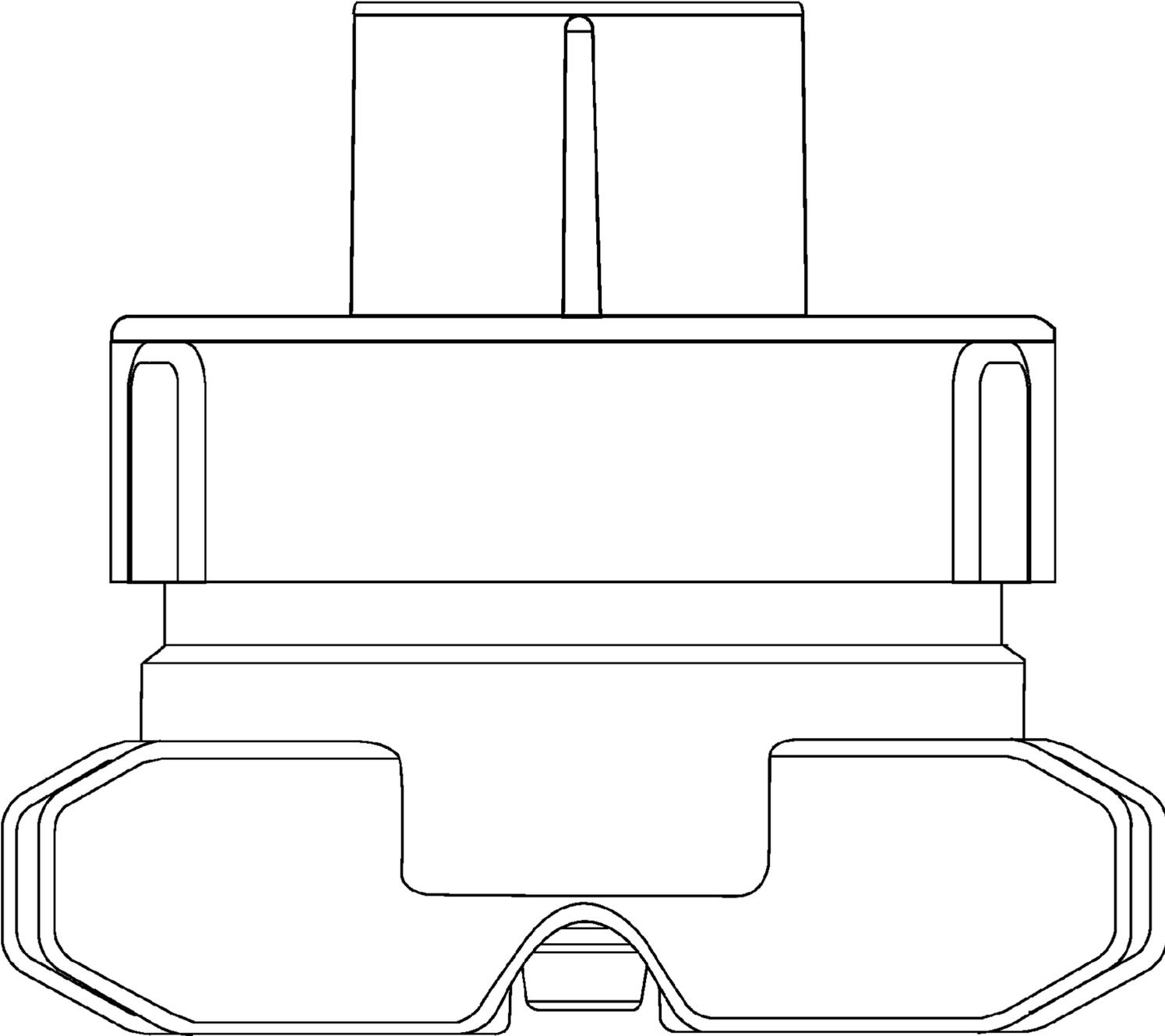


FIG. 6

