



US00D490036S

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

(10) **Patent No.:** **US D490,036 S**

(45) **Date of Patent:** **\*\* May 18, 2004**

(54) **MUFFLER END FLANGE**

(75) **Inventor:** **Kevin N. W. Cho**, Camarillo, CA (US)

(73) **Assignee:** **SPW Inc.**, Los Angeles, CA (US)

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

(21) **Appl. No.:** **29/166,622**

(22) **Filed:** **Aug. 29, 2002**

(51) **LOC (7) Cl.** ..... **12-16**

(52) **U.S. Cl.** ..... **D12/194**

(58) **Field of Search** ..... D12/194, 114;  
D15/5; 181/227, 228, 247, 249, 252, 284,  
239-243

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

2,449,756	A	*	9/1948	Trautmann	.....	181/252
5,198,625	A	*	3/1993	Borla	.....	181/248
D384,319	S	*	9/1997	Harutiunian	.....	D12/194
D394,236	S	*	5/1998	Verlengiere	.....	D12/194
D397,661	S	*	9/1998	Harutiunian	.....	D12/194
5,892,186	A	*	4/1999	Flugger	.....	181/252
6,267,199	B1	*	7/2001	Chang	.....	181/252
D458,570	S	*	6/2002	Wang	.....	D12/194
6,431,311	B1	*	8/2002	Brown et al.	.....	181/282

D465,181	S	*	11/2002	Wang	.....	D12/194
D467,210	S	*	12/2002	Yu	.....	D12/194
D480,030	S	*	9/2003	Gilli	.....	D12/194

\* cited by examiner

*Primary Examiner*—Stacia Cadmus

(74) *Attorney, Agent, or Firm*—Felix L. Fischer

(57) **CLAIM**

The ornamental design for a muffler end flange, as shown and described.

**DESCRIPTION**

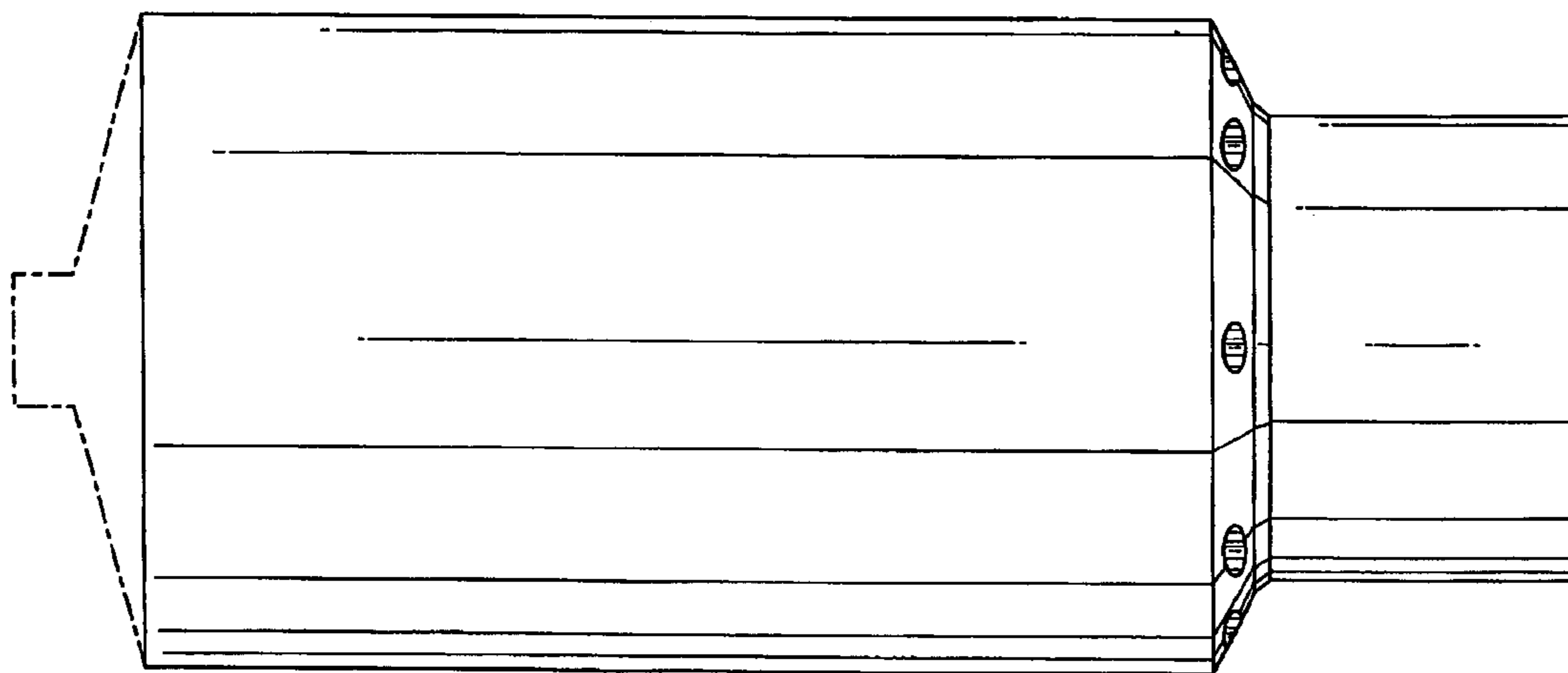
FIG. 1 is a perspective view of a muffler employing the ornamental design;

FIG. 2 is an end view of the muffler of FIG. 1; and,

FIG. 3 is a side view of the muffler of FIG. 1 with the attachment flange to a vehicle exhaust manifold, which is not claimed as an element of the present inventive design, shown in phantom.

The ornamental design incorporates a plurality of stop drilled holes arranged in a circular pattern on the end flange of the muffler as best seen in FIG. 2. The end flange is tapered from the barrel of the muffler to the exit pipe attachment as best seen in FIG. 3.

**1 Claim, 3 Drawing Sheets**



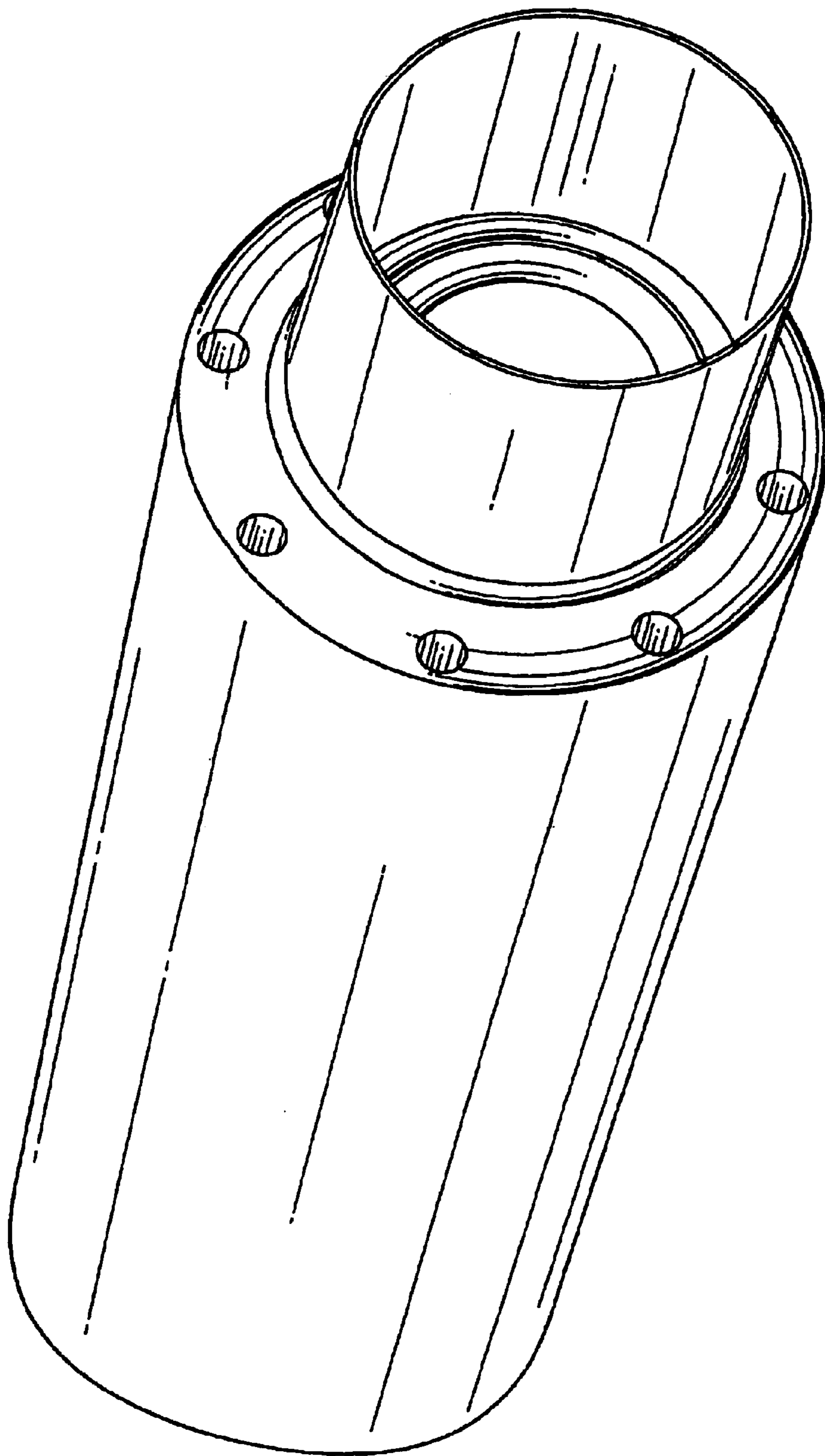


FIG. 1

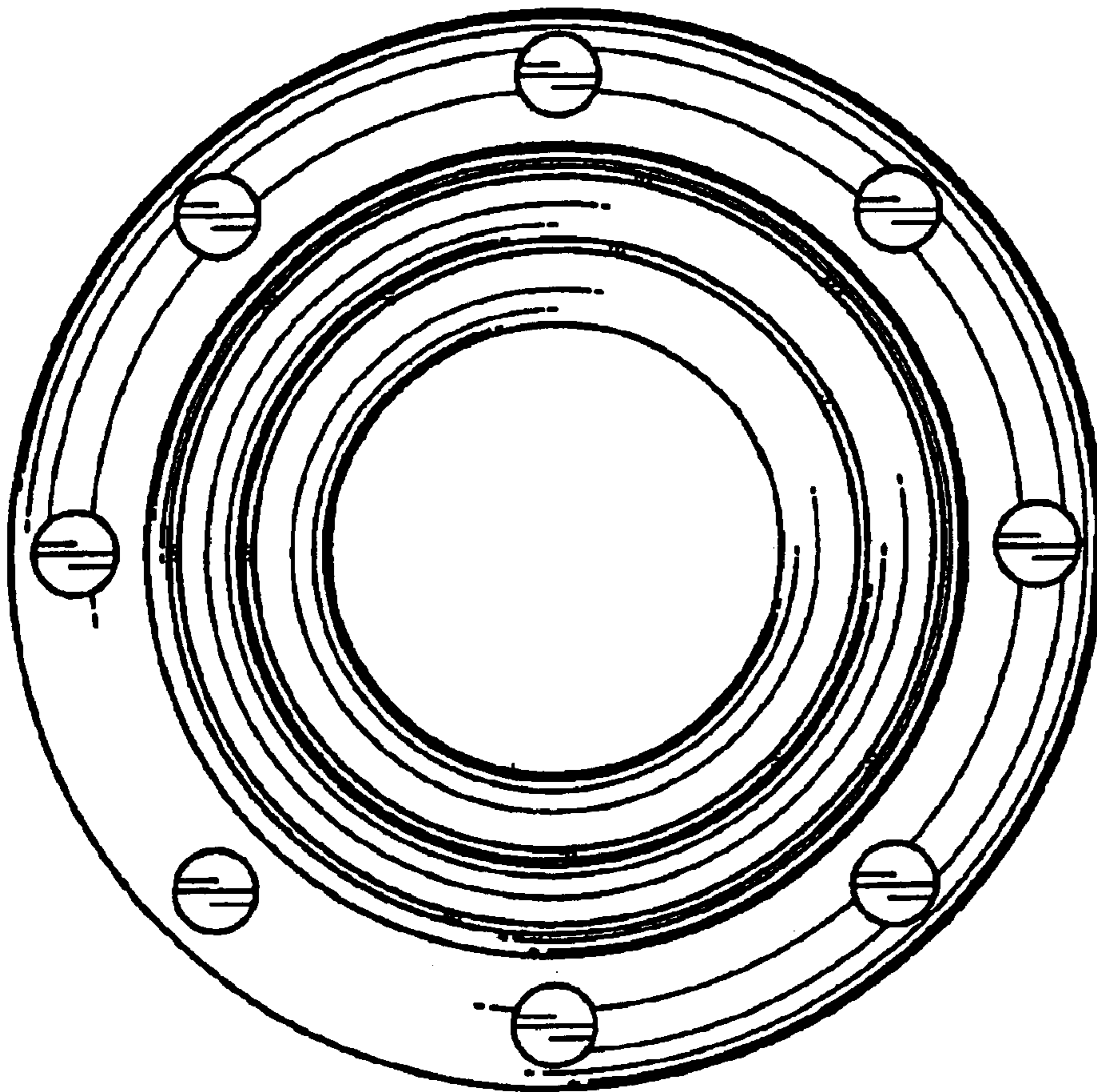


FIG. 2

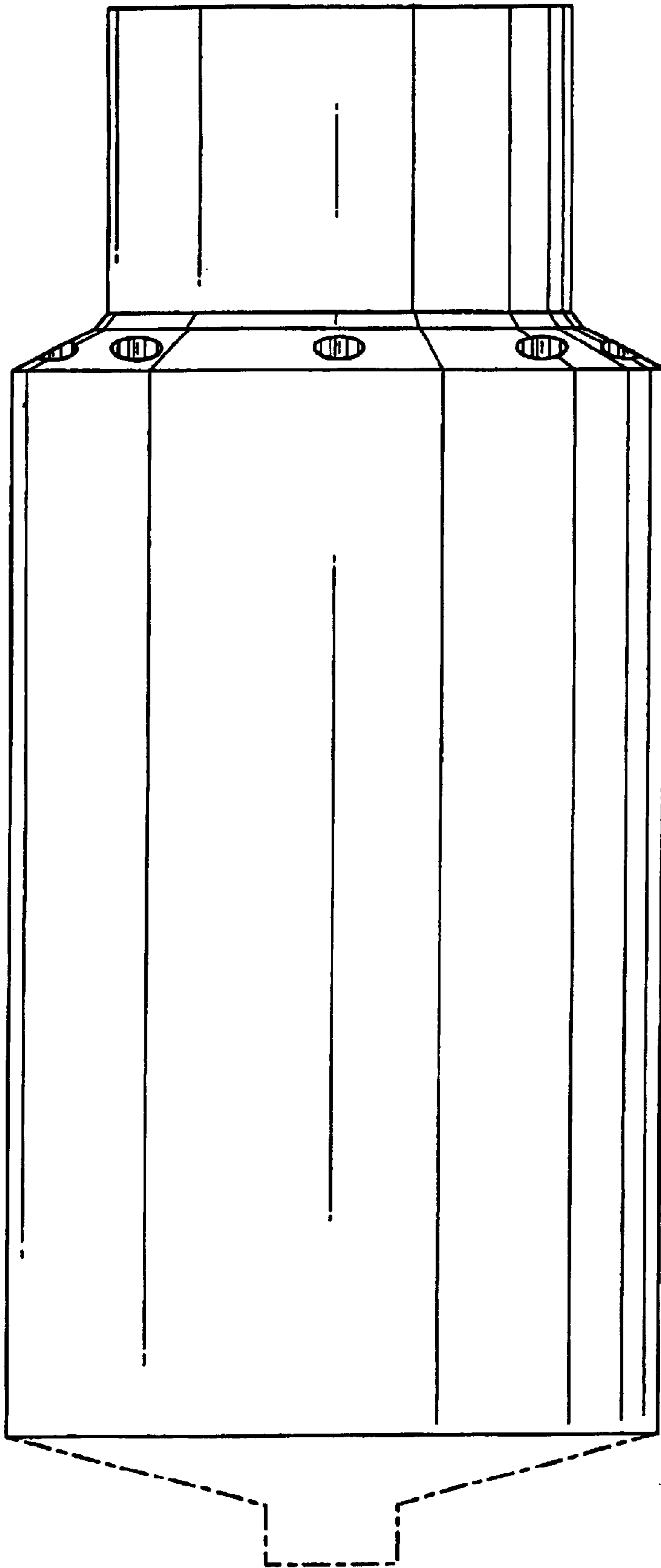


FIG. 3