



US00D823906S

(12) **United States Design Patent** (10) **Patent No.:** **US D823,906 S**
Kaminski et al. (45) **Date of Patent:** **** Jul. 24, 2018**

(54) **POWDER INJECTOR**

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

(21) Appl. No.: **29/600,593**

(22) Filed: **Apr. 13, 2017**

(51) **LOC (11) Cl.** **15-09**

(52) **U.S. Cl.**
USPC **D15/135**

(58) **Field of Classification Search**
USPC D15/135, 138, 144, 144.1, 144.2;
D23/213, 223

CPC B05B 5/03; B05B 5/0531
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D251,796 S *	5/1979	Edin	.....	D15/144.1
4,456,228 A *	6/1984	Cable	.....	B23K 7/10 266/70
4,853,515 A	8/1989	Willen		
D365,345 S *	12/1995	Carkhuff	.....	D15/144
5,678,770 A *	10/1997	Shah	.....	B05B 5/0531 239/690
5,793,013 A *	8/1998	Read	.....	H05H 1/30 118/723 MW
5,837,959 A	11/1998	Muehlberger		
D417,459 S *	12/1999	Shintani	.....	D15/144
D446,231 S *	8/2001	Kuraoka	.....	D15/144
D492,709 S *	7/2004	Horner-Richardson	D15/144
D513,058 S *	12/2005	Hayduk	D23/226

(Continued)

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(57) **CLAIM**

We claim the ornamental design for a powder injector, as shown and described.

DESCRIPTION

FIG. 1 shows a left side view of an embodiment of a powder injector;

FIG. 2 shows a right side view of FIG. 1;

FIG. 3 shows a cross-section view taken along line 3-3 of FIG. 4;

FIG. 4 shows a front view of FIG. 1;

FIG. 5 shows a rear view of FIG. 1;

FIG. 6 shows a top view of FIG. 1;

FIG. 7 shows a bottom view of FIG. 1;

FIG. 8 shows a left side view of another embodiment of a powder injector;

FIG. 9 shows a right side view of FIG. 8;

FIG. 10 shows a cross-section view taken along line 10-10 of FIG. 11;

FIG. 11 shows a front view of FIG. 8;

FIG. 12 shows a rear view of FIG. 8;

FIG. 13 shows a top view of FIG. 8;

FIG. 14 shows a bottom view of FIG. 8;

FIG. 15 shows a left side view of another embodiment of a powder injector;

FIG. 16 shows a right side view of FIG. 15;

FIG. 17 shows a cross-section view taken along line 17-17 of FIG. 18;

FIG. 18 shows a front view of FIG. 15;

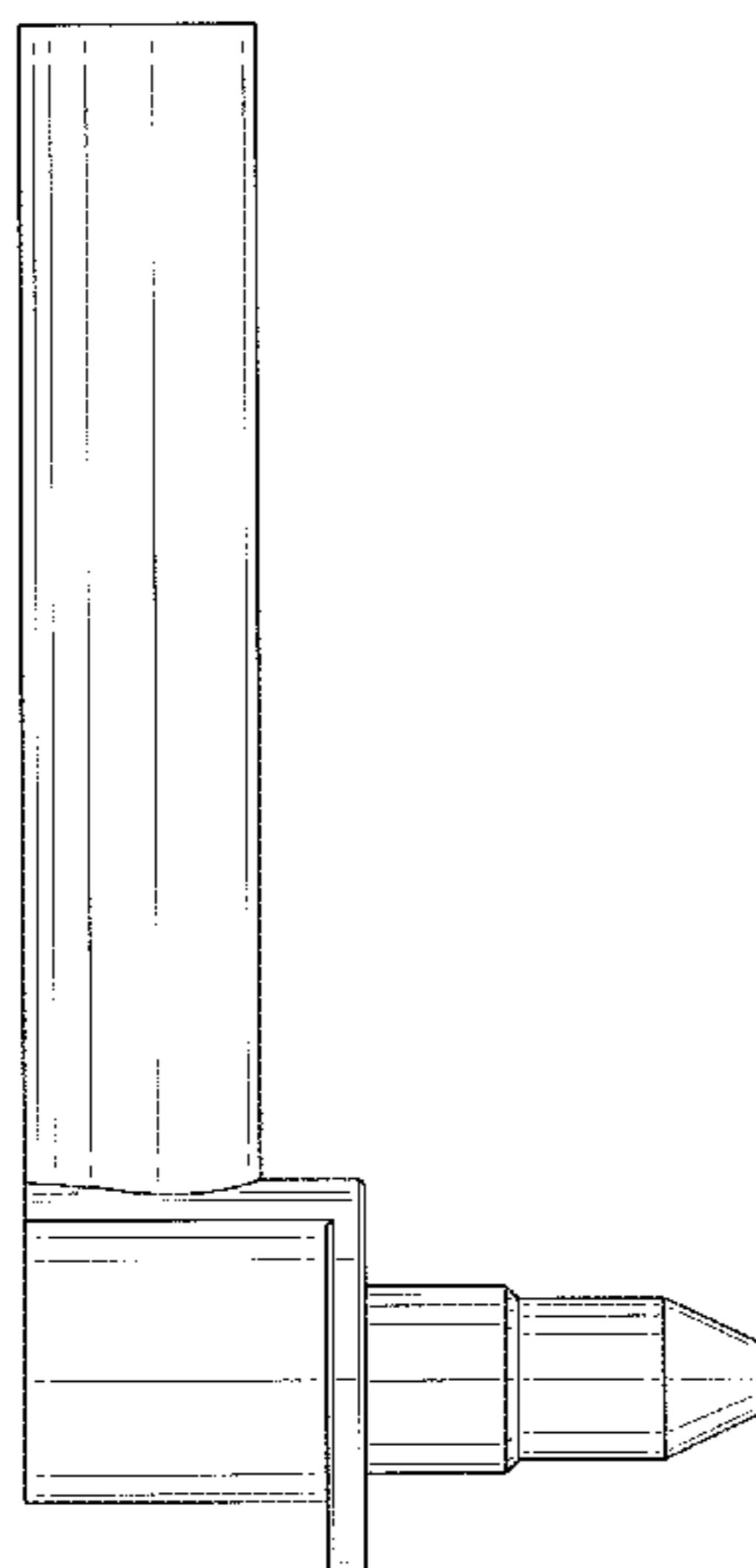
FIG. 19 shows a rear view of FIG. 15;

FIG. 20 shows a top view of FIG. 15; and,

FIG. 21 shows a bottom view of FIG. 15.

The broken lines in the drawings depict unclaimed environmental subject matter.

1 Claim, 21 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D527,401	S *	8/2006	Mizuno	.....	D15/144
D540,908	S *	4/2007	Py	.....	D23/213
7,342,196	B2	3/2008	Koenig		
D567,900	S *	4/2008	Patterson	.....	D23/213
D582,950	S *	12/2008	Yamaguchi	.....	D15/144
D608,856	S *	1/2010	Dammkoehler	.....	D23/223
D636,844	S *	4/2011	Herre	.....	D23/213
D636,845	S *	4/2011	Suzuki	.....	D23/213
D637,267	S *	5/2011	Suzuki	.....	D23/213
D660,940	S *	5/2012	Flowers	.....	D23/213
8,253,058	B2 *	8/2012	Zehavi	.....	H05H 1/42 219/121.47
D668,742	S *	10/2012	English	.....	D23/213
D669,961	S *	10/2012	Sanwald	.....	D23/213
D670,356	S *	11/2012	Sanwald	.....	D23/213
D670,786	S *	11/2012	Mauchle	.....	D23/213
D704,799	S *	5/2014	Crawley	.....	D23/213
D744,564	S *	12/2015	Hassan	.....	D15/144
D776,787	S *	1/2017	Zhang	.....	D23/213
D777,812	S *	1/2017	Namburu	.....	D15/144
D804,555	S *	12/2017	Townsend	.....	B23K 9/282 D15/144
2004/0234687	A1	11/2004	Schmid		
2007/0138147	A1	6/2007	Molz		
2008/0121624	A1	5/2008	Belashchenko		
2012/0298217	A1	11/2012	Molz		
2014/0326703	A1	11/2014	Molz		
2016/0228892	A1 *	8/2016	St. Peter	.....	B05B 5/1608

* cited by examiner

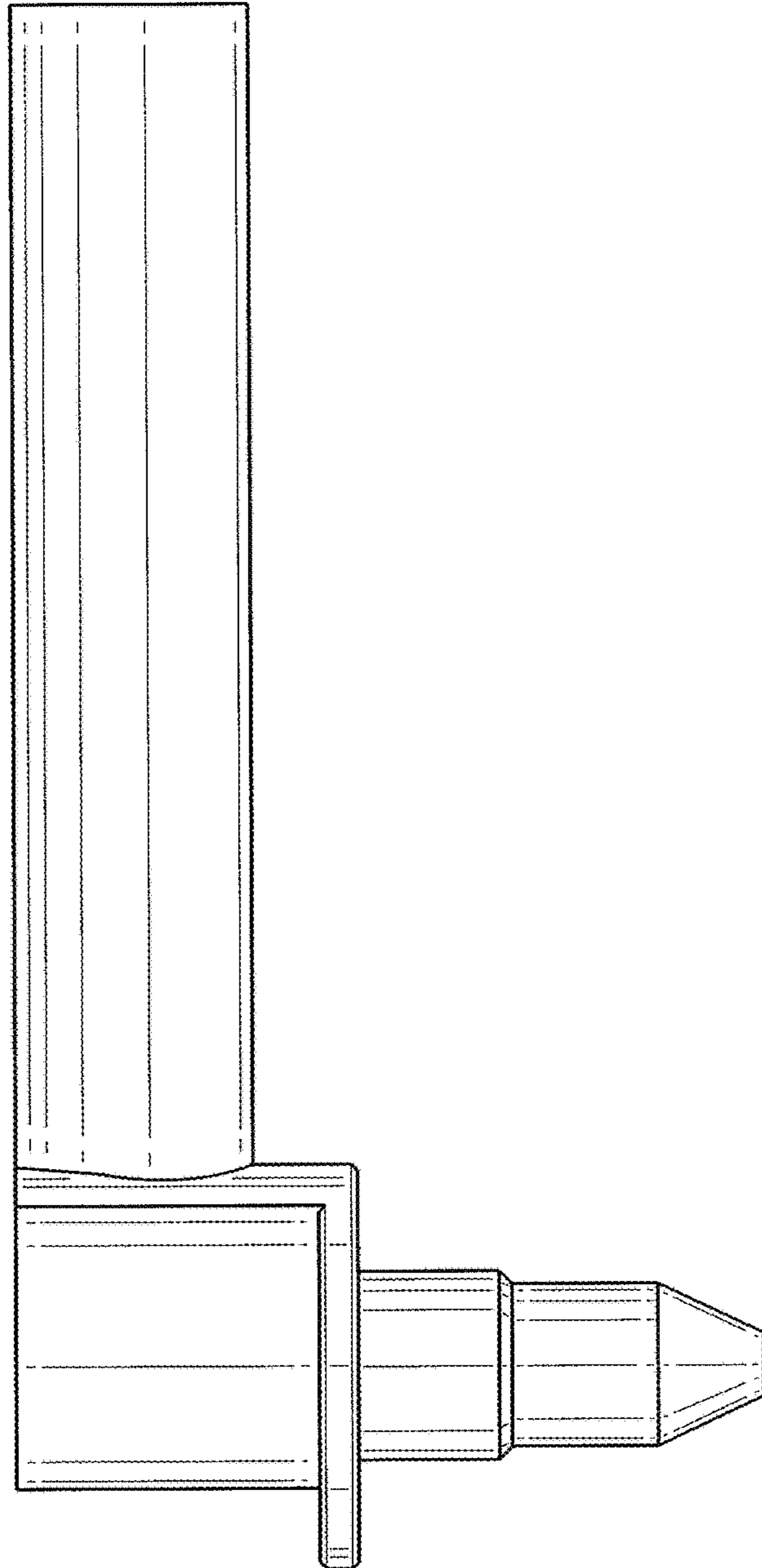


FIG. 1

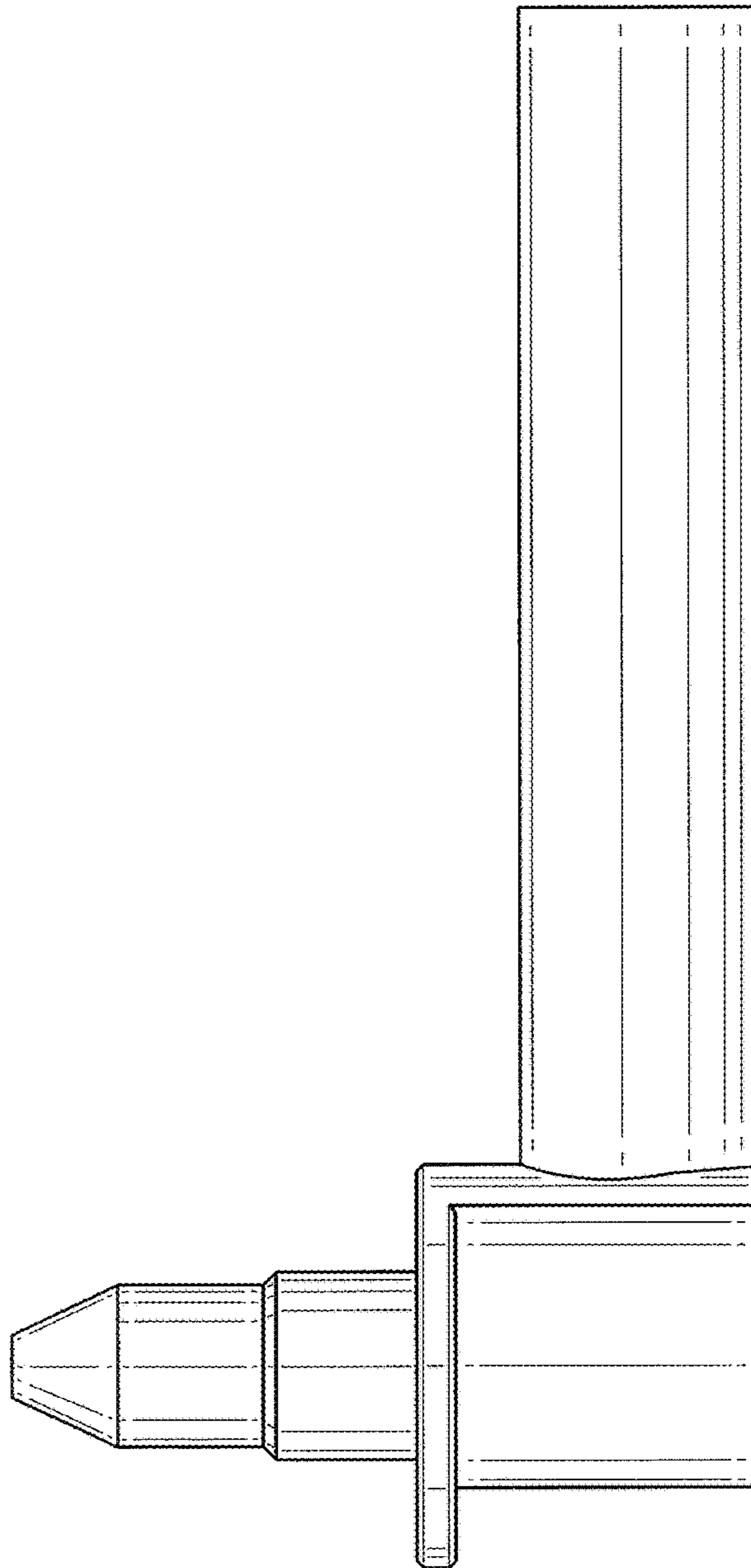


FIG. 2

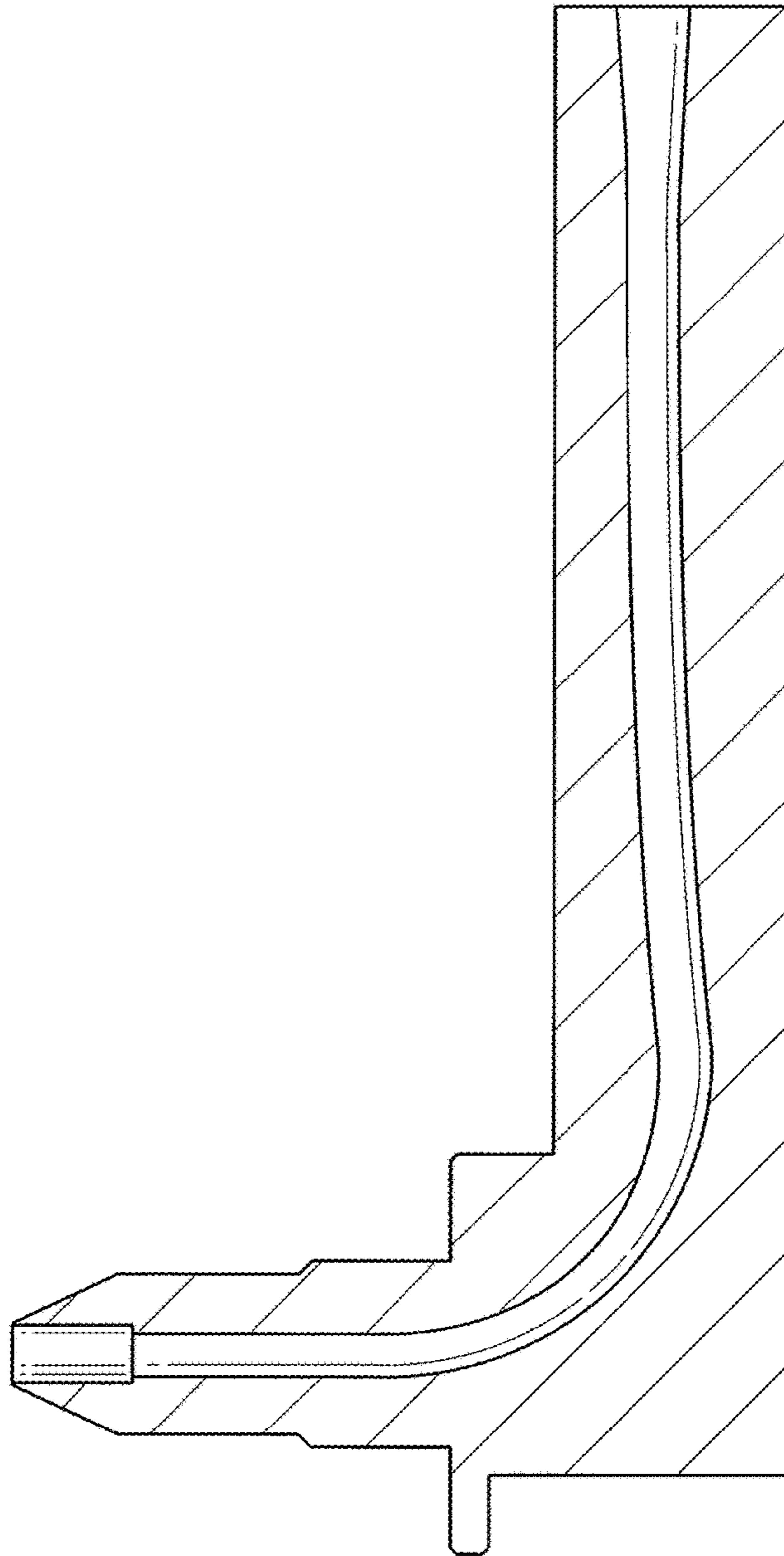


FIG. 3

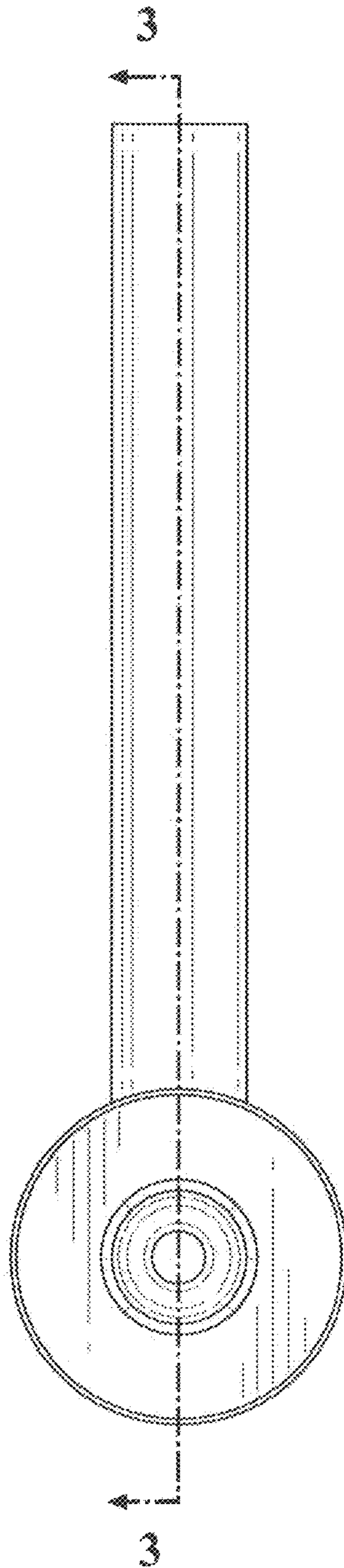


FIG. 4

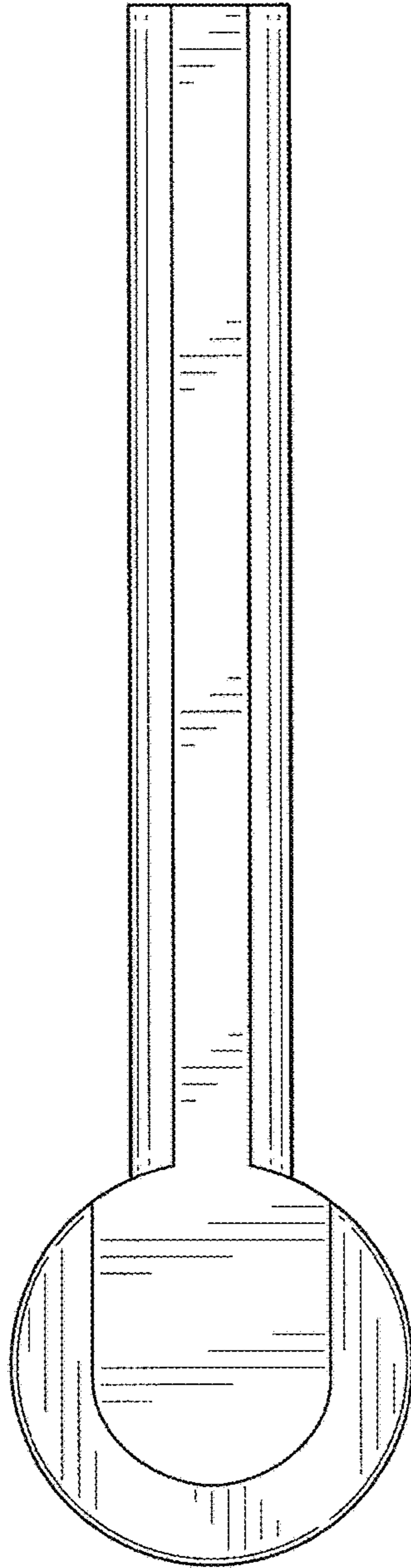


FIG. 5

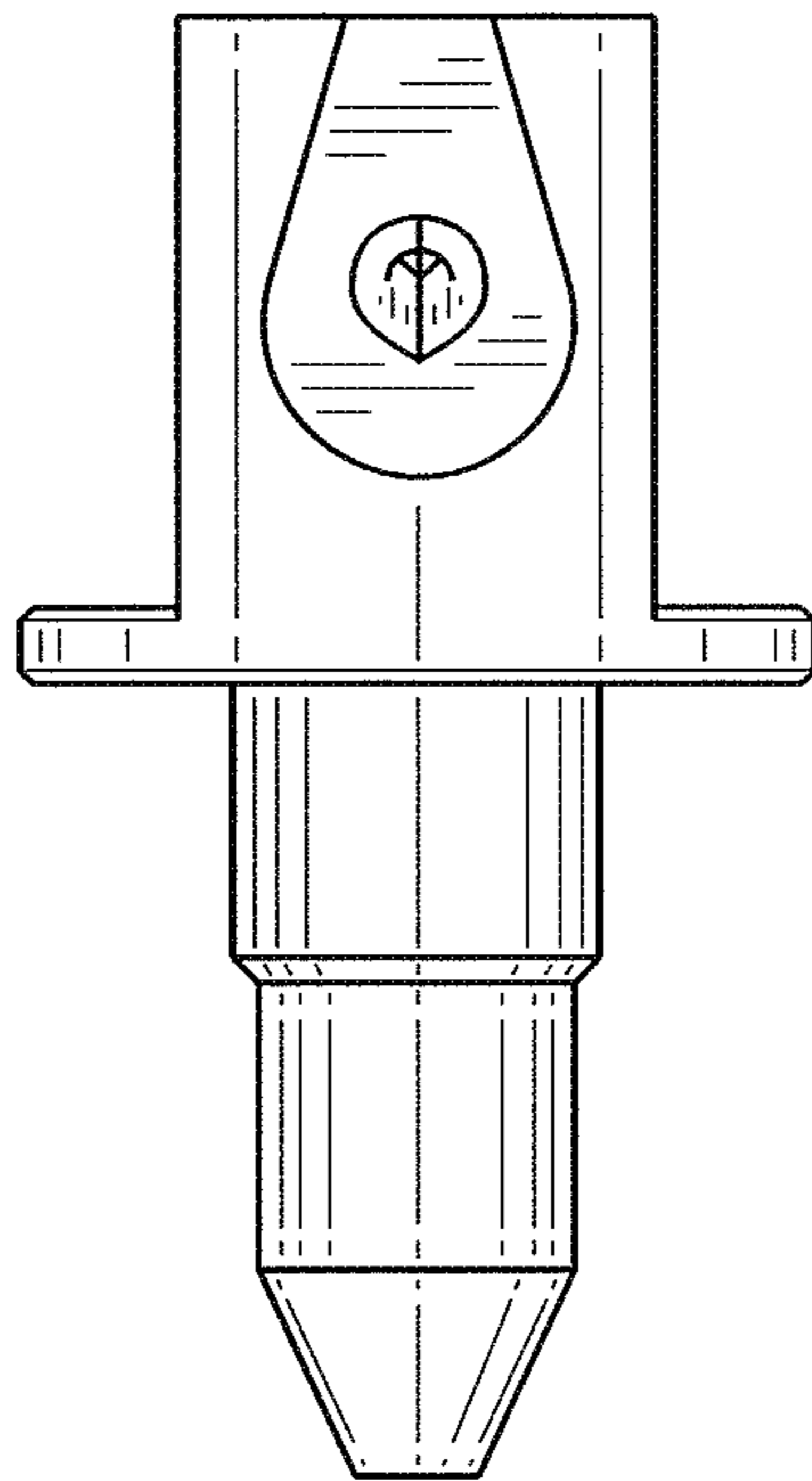


FIG. 6

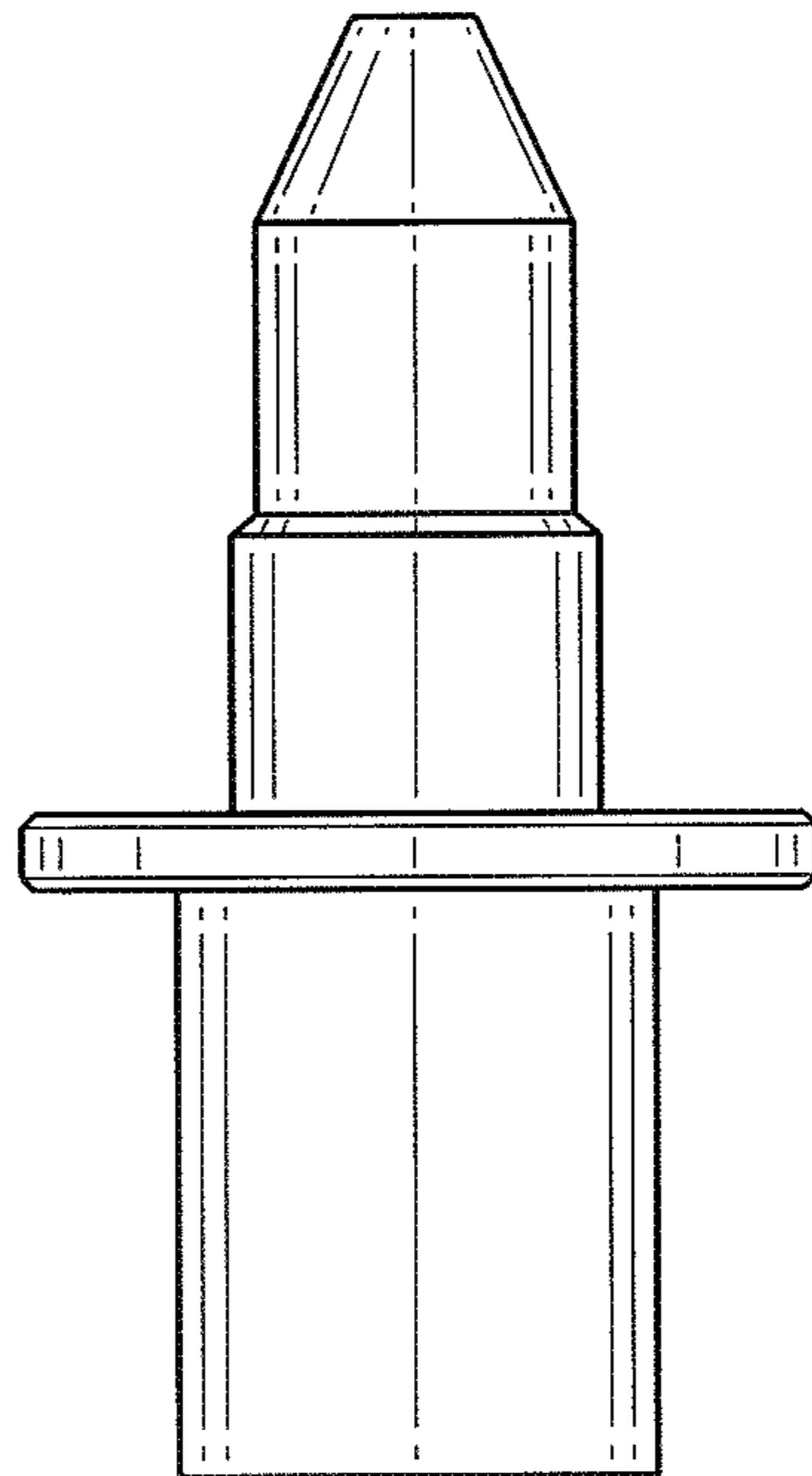


FIG. 7



FIG. 8

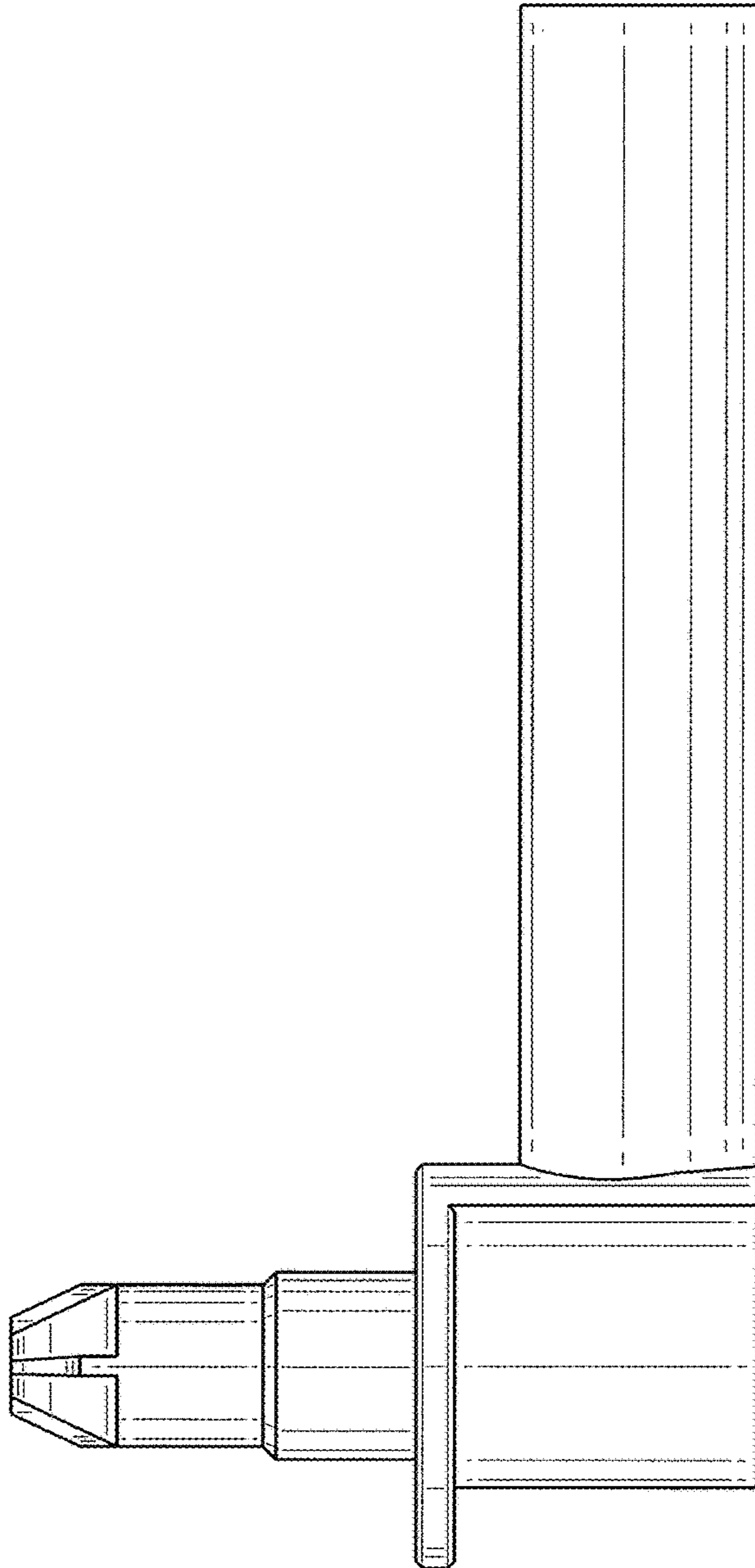


FIG. 9

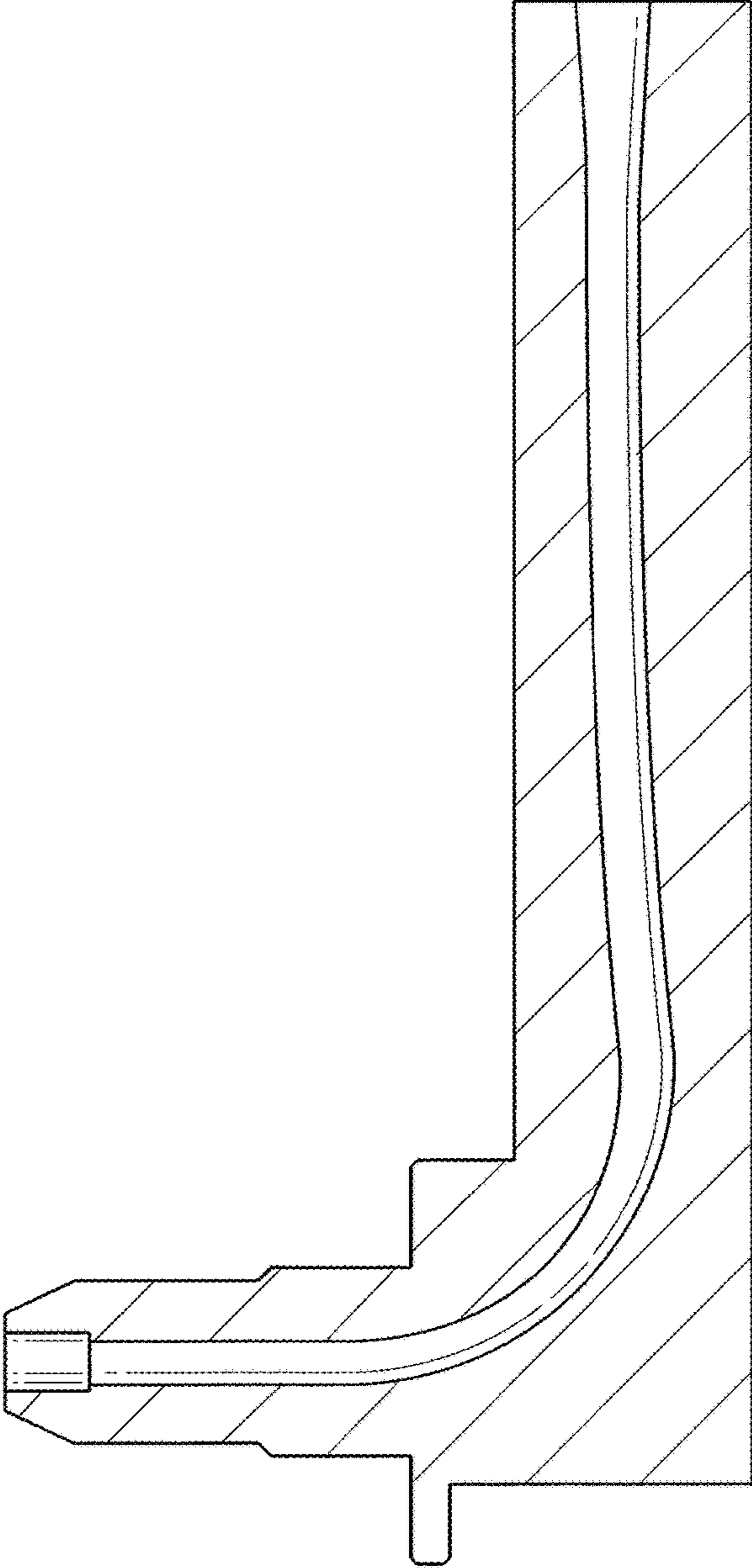


FIG. 10

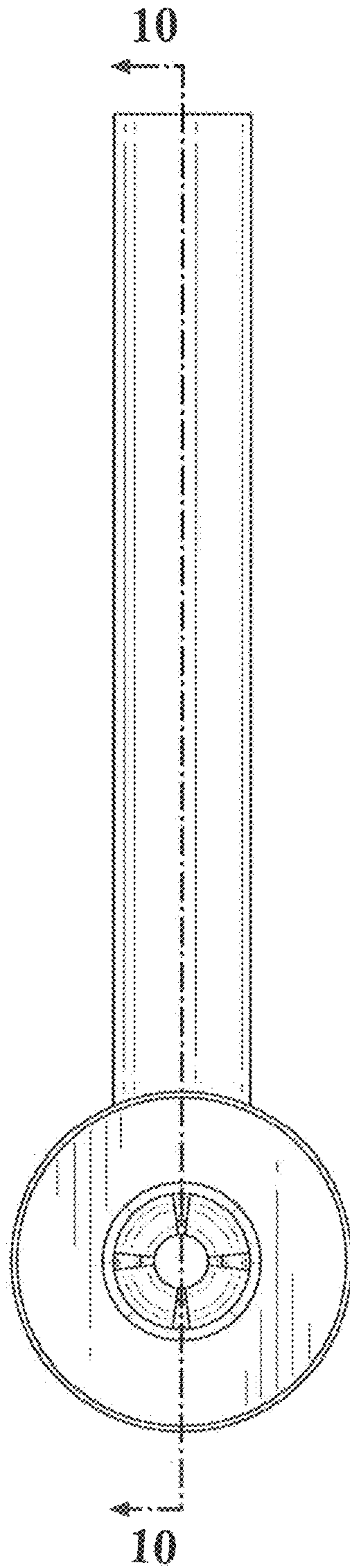


FIG. 11

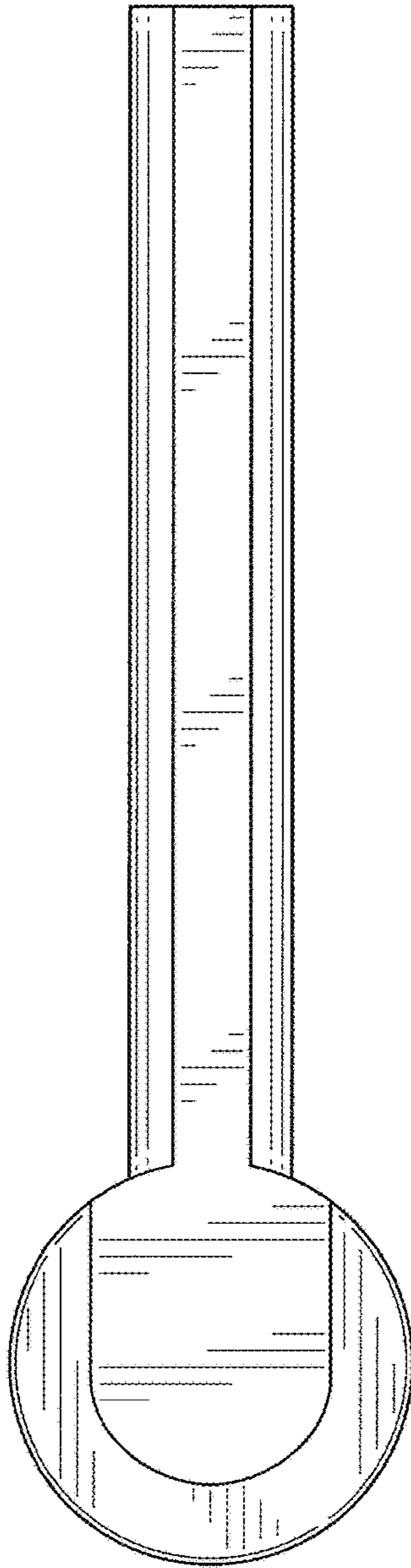


FIG. 12

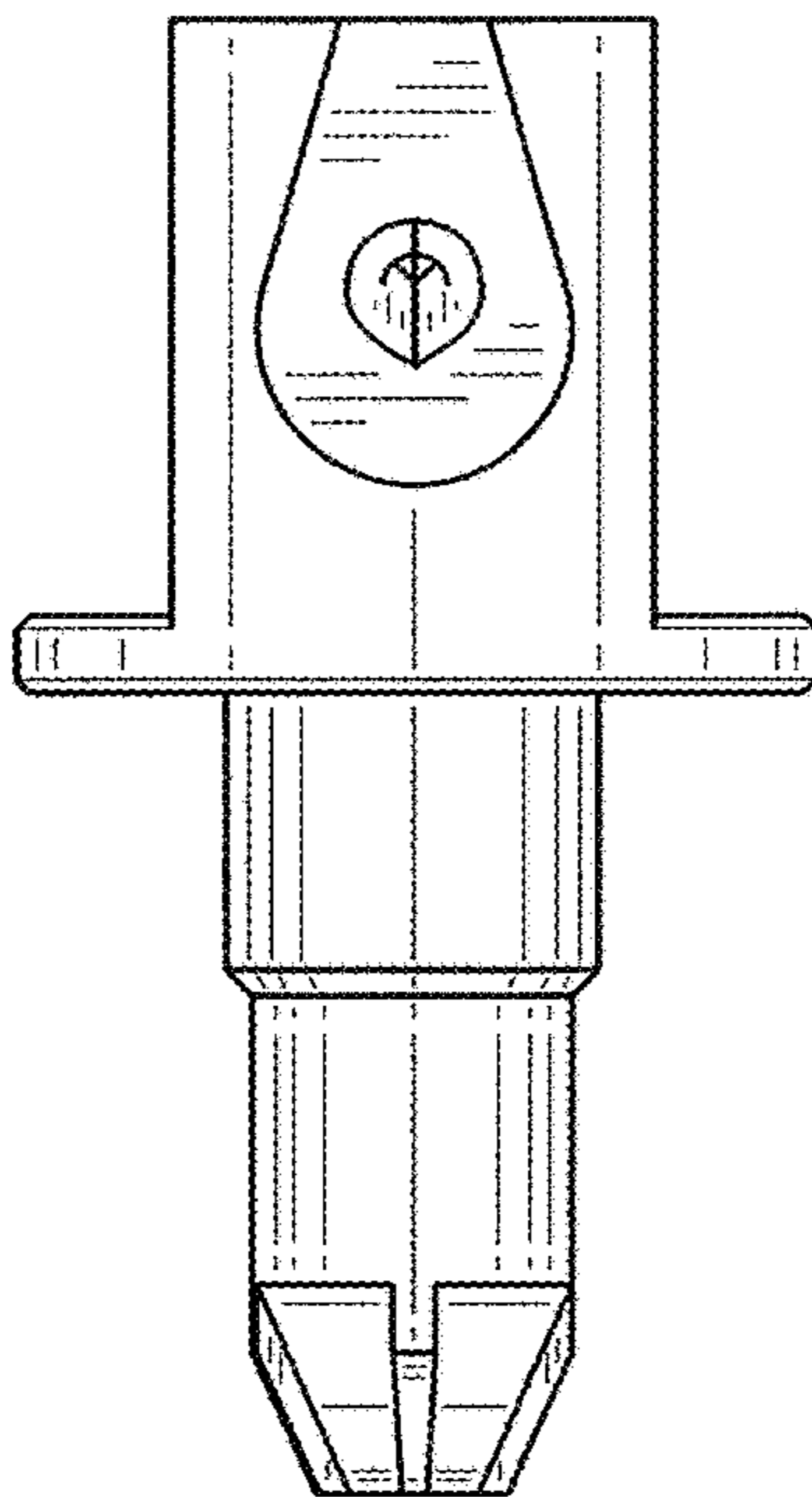


FIG. 13

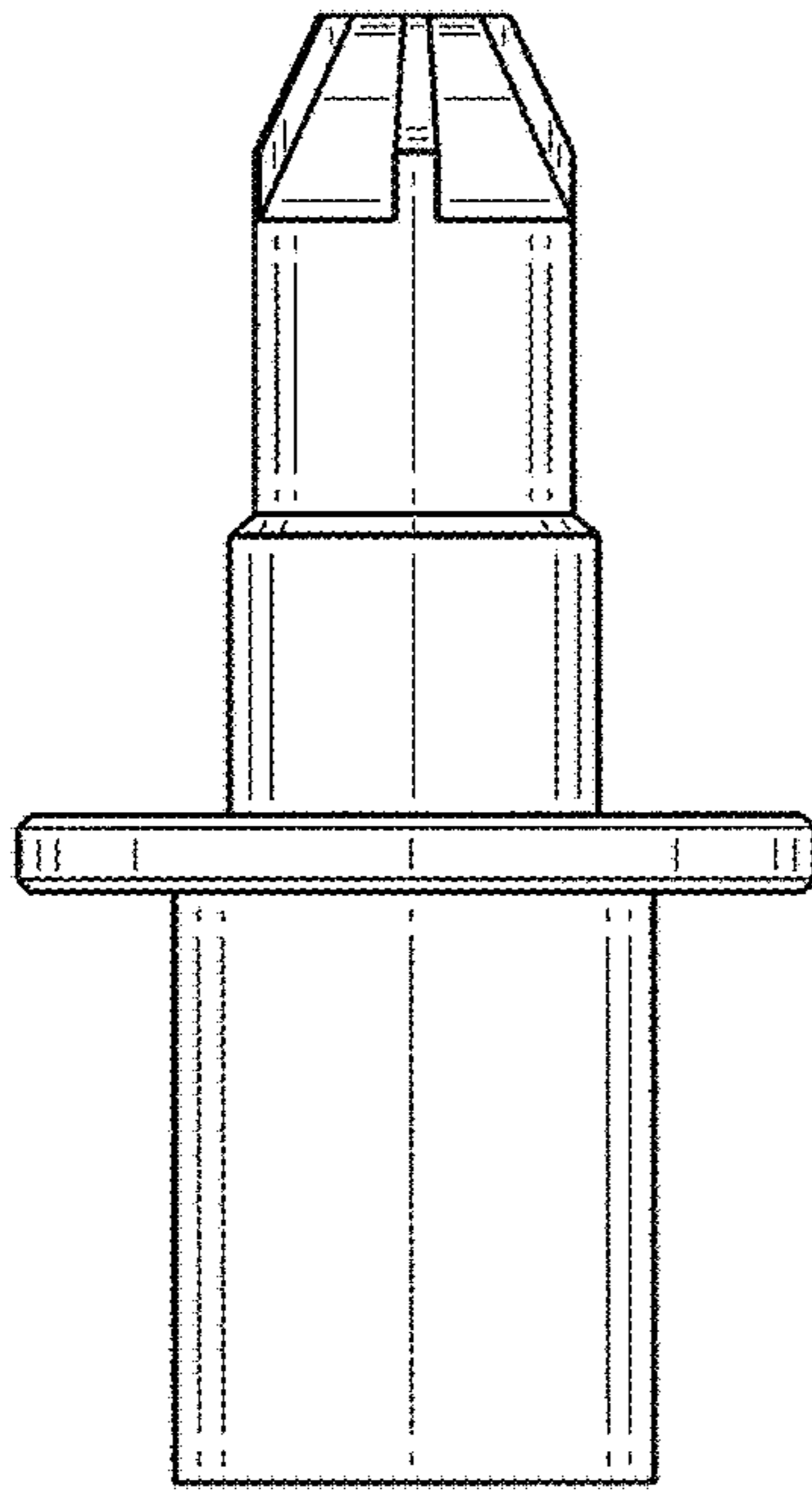


FIG. 14

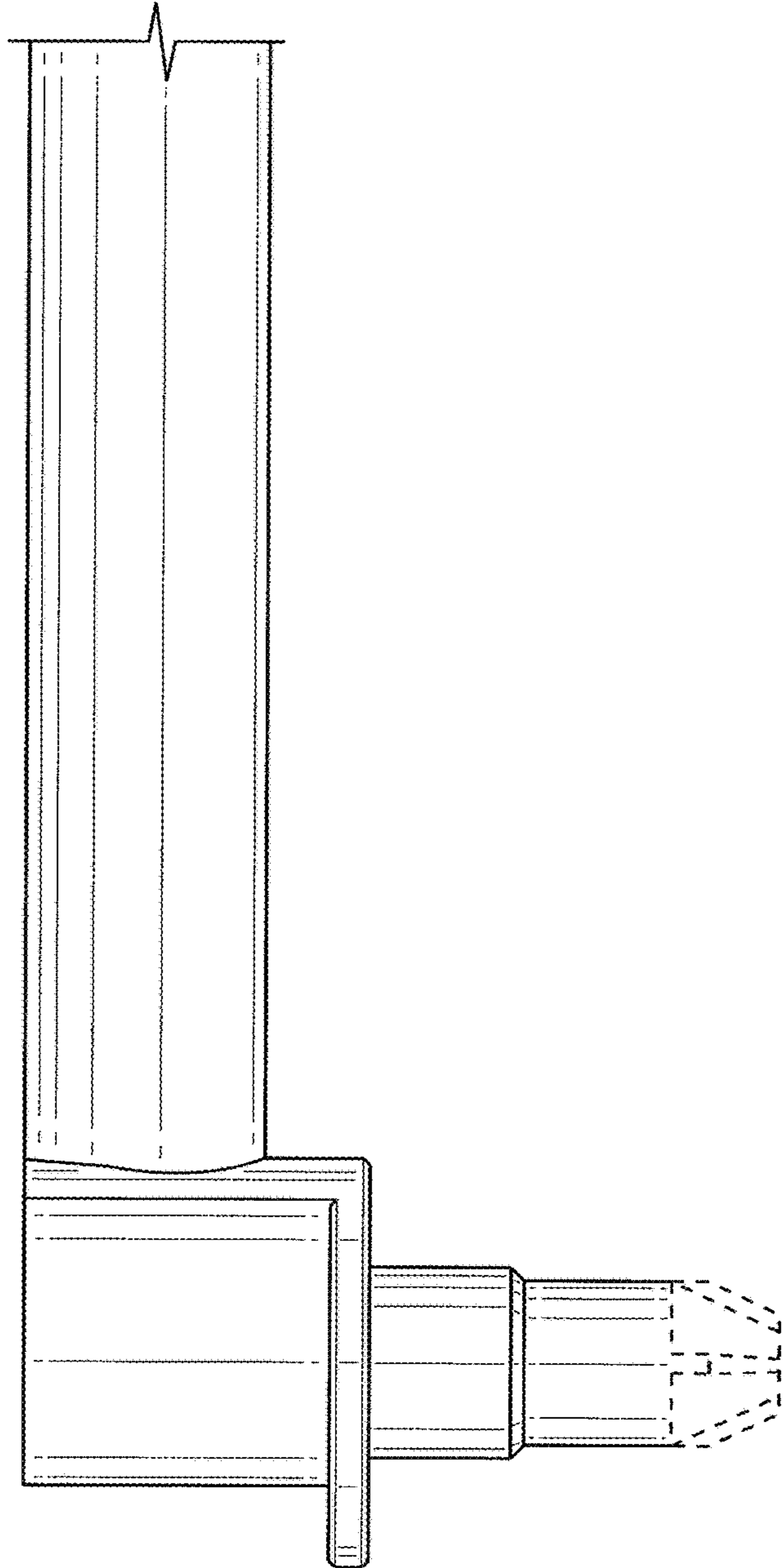


FIG. 15

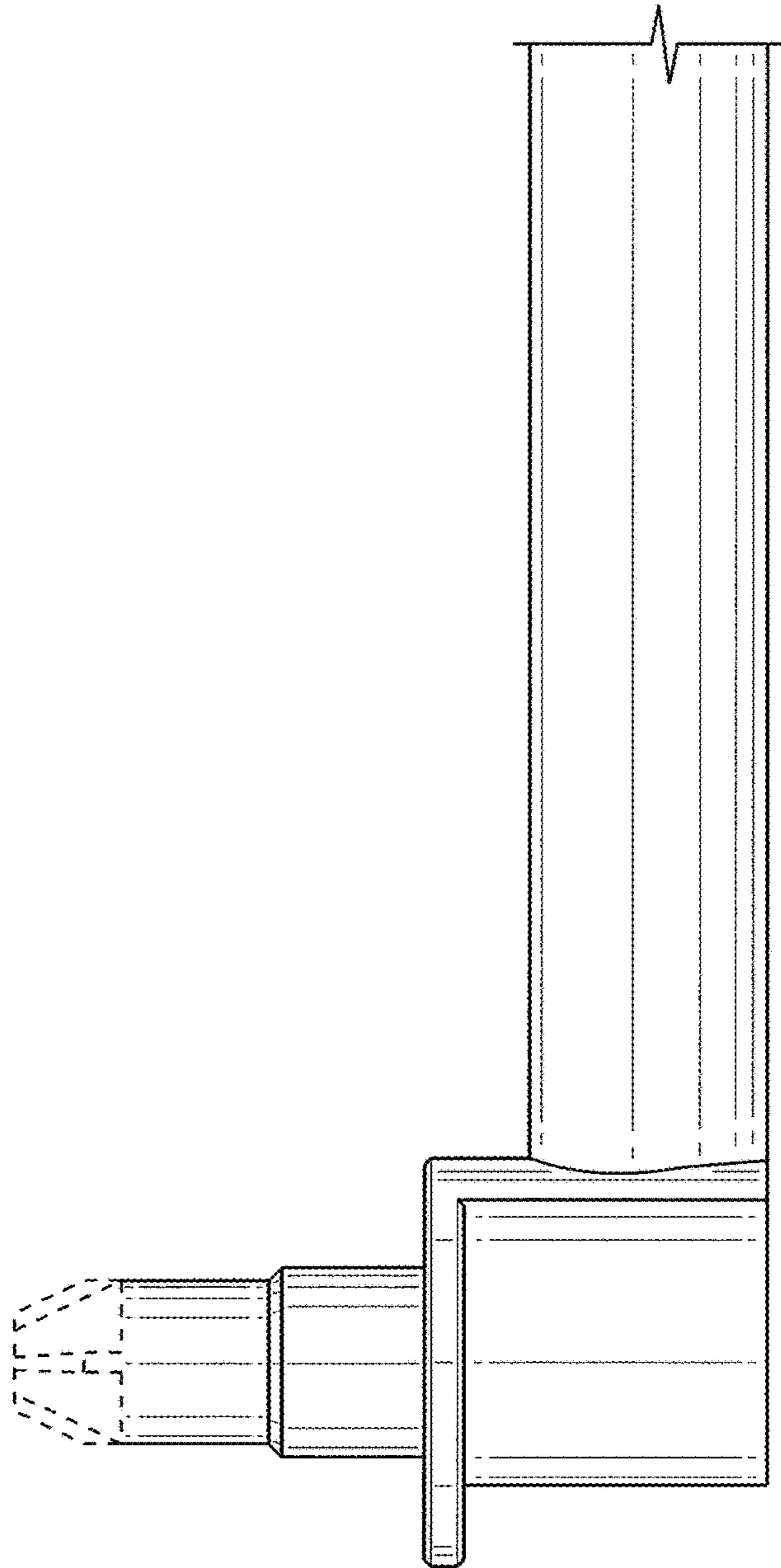


FIG. 16

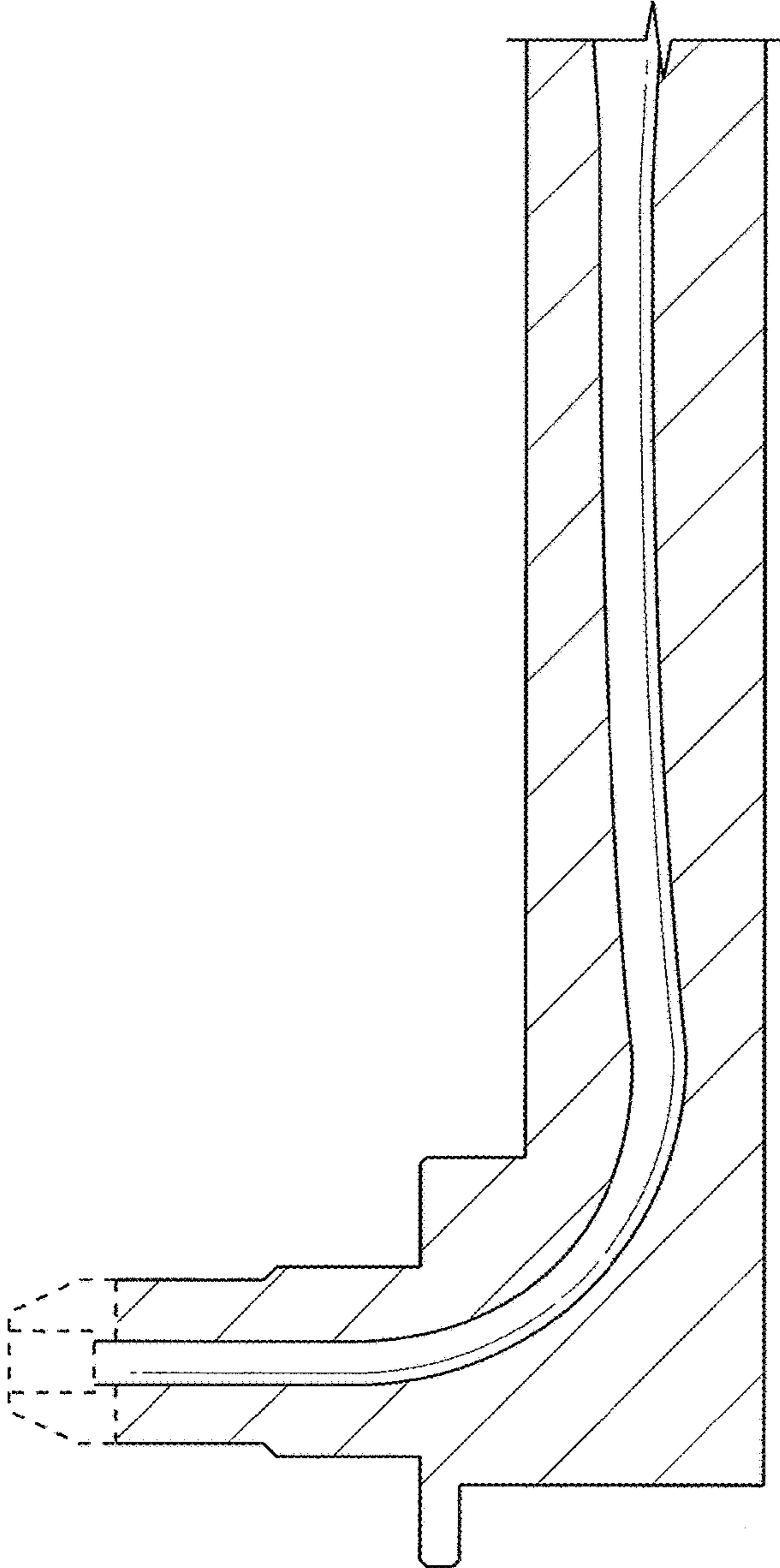


FIG. 17

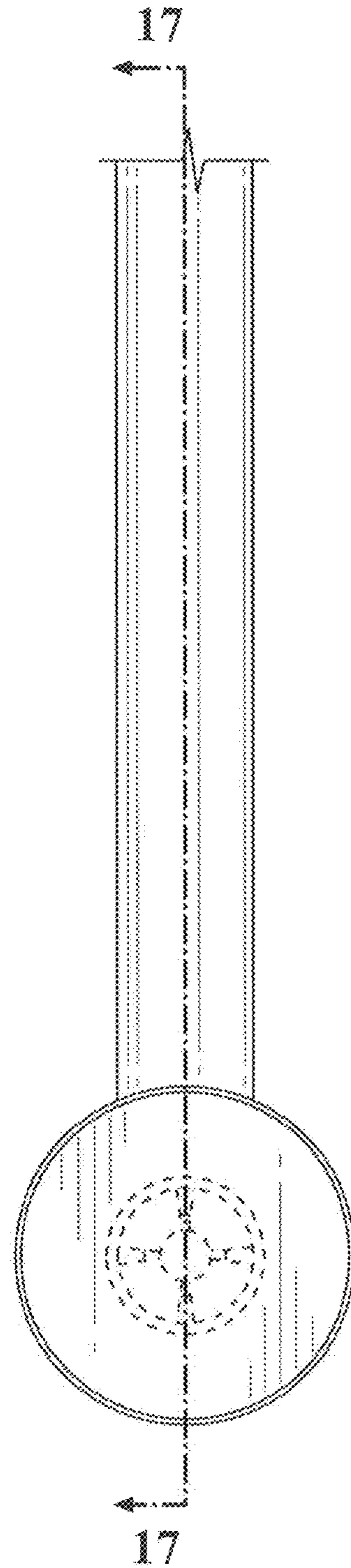


FIG. 18

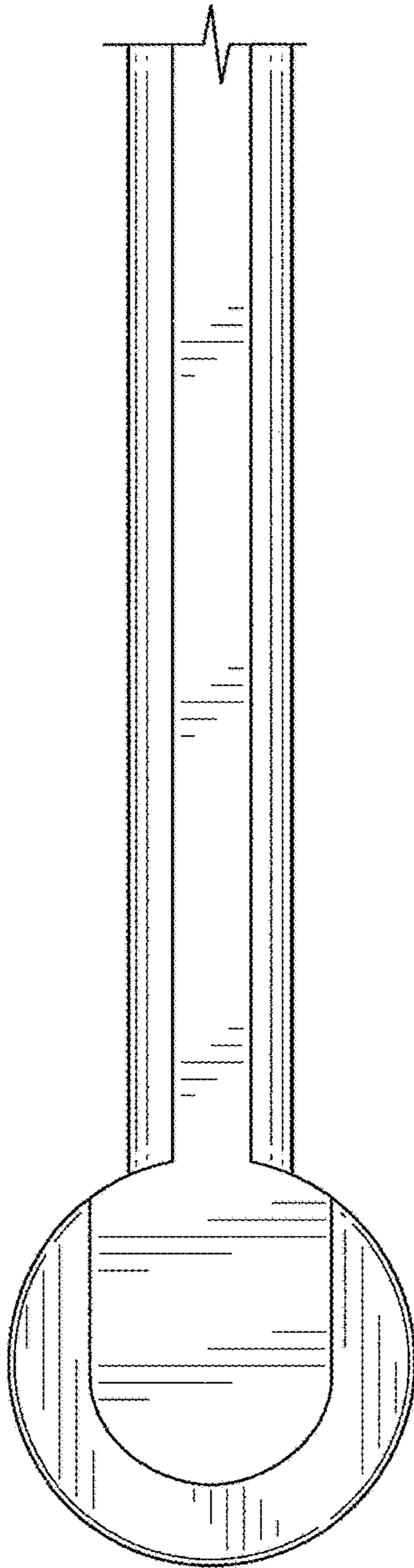


FIG. 19

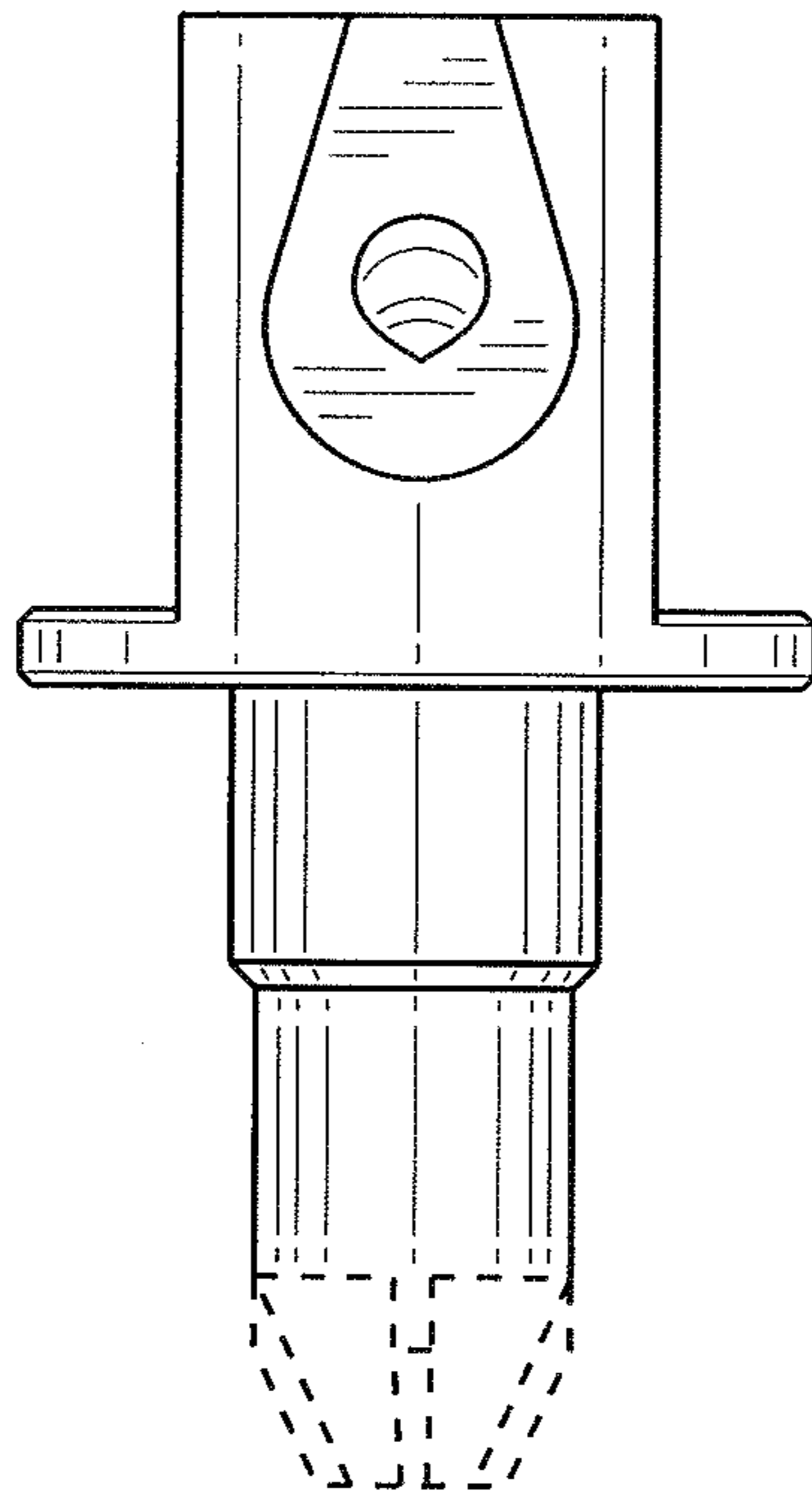


FIG. 20

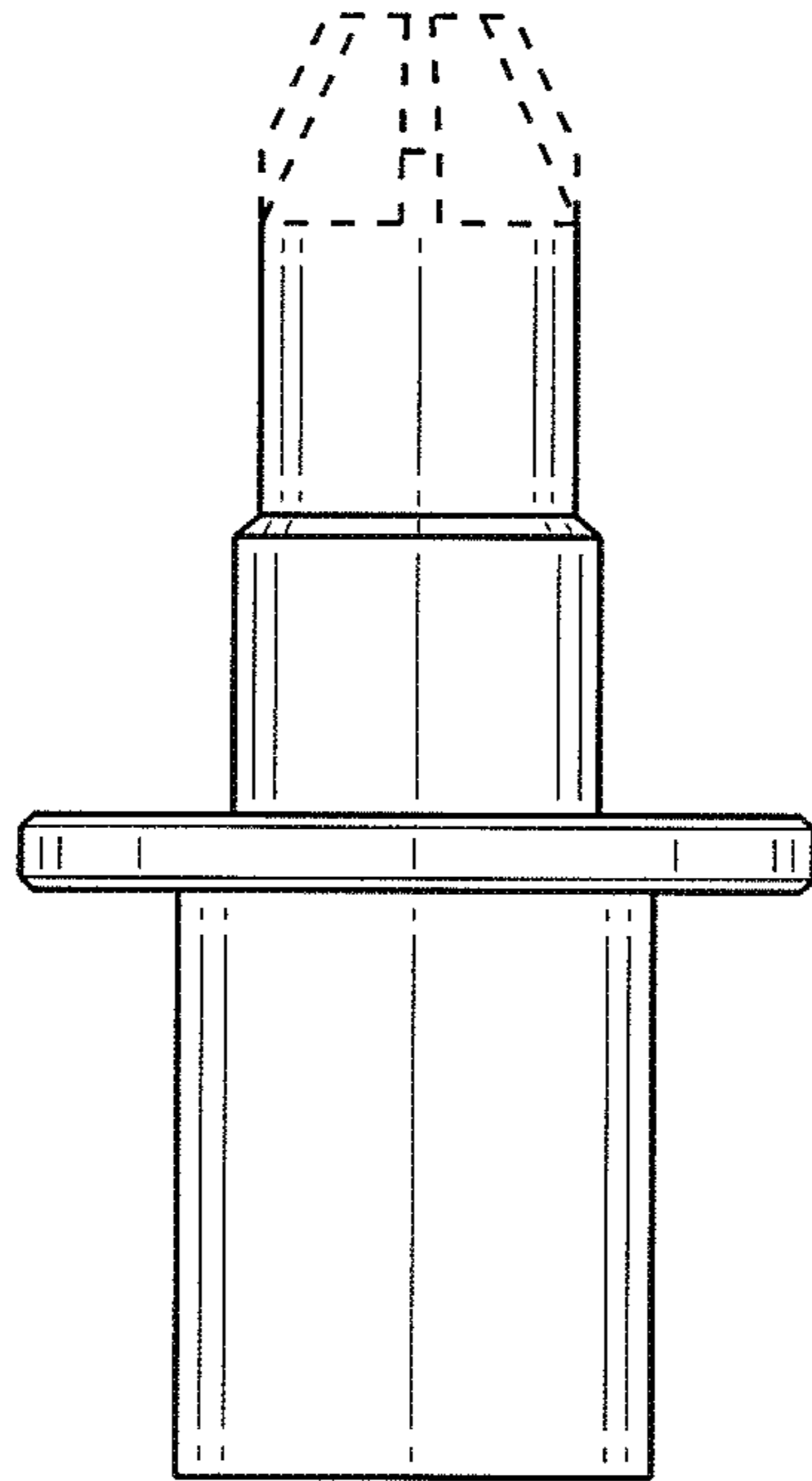


FIG. 21