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(12) **United States Design Patent** (10) **Patent No.:** **US D846,735 S**
Sanborn et al. (45) **Date of Patent:** **** Apr. 23, 2019**

(54) **PLUNGER DRIVER HEAD FOR SYRINGE PUMP**

FOREIGN PATENT DOCUMENTS

WO WO 2016/196098 A1 12/2016

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OTHER PUBLICATIONS

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Endo.id, Syringe Pump, AMPall Sp-8800, Apr. 2017, retrieved Sep. 17, 2018 from <URL:https://web.archive.org/web/20170429004816/https://endo.id/catalog/product/syringe-pump-ampall> (Year: 2017).*

(Continued)

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

(57) **CLAIM**

(21) Appl. No.: **29/586,307**

We claim the ornamental design for plunger driver head for syringe pump, as shown and described.

(22) Filed: **Dec. 2, 2016**

(51) **LOC (11) Cl.** **24-02**

(52) **U.S. Cl.**

USPC **D24/127**; D24/111

(58) **Field of Classification Search**

USPC D24/108, 111, 112, 114, 127, 128, 129, D24/130, 133, 141, 146, 147, 152, 186, D24/214, 215; D8/93, 97, 300, 310, 311; D23/129, 223, 249, 259, 262; D16/202; D14/171, 196; D15/7

CPC A61B 1/00094; A61M 2005/1583; A61M 2005/1586; A61M 2005/3277; A61M 5/158; A61M 5/1582; A61M 5/3243; A61M 25/0606; A61M 25/0612; A61M 25/0631;

(Continued)

DESCRIPTION

FIG. 1 is a perspective view of a plunger driver head for syringe pump.

FIG. 2 is a front elevation view of the plunger driver head for syringe pump.

FIG. 3 is a rear elevation view of the plunger driver head for syringe pump.

FIG. 4 is a side elevation view of the plunger driver head for syringe pump.

FIG. 5 is another side elevation view of the plunger driver head for syringe pump, from the side opposite that in FIG. 4.

FIG. 6 is a top plan view of the plunger driver head for syringe pump; and,

FIG. 7 is a bottom plan view of the plunger driver head for syringe pump.

The dashed broken lines depict portions of the plunger driver for syringe pump that form no part of the claimed design.

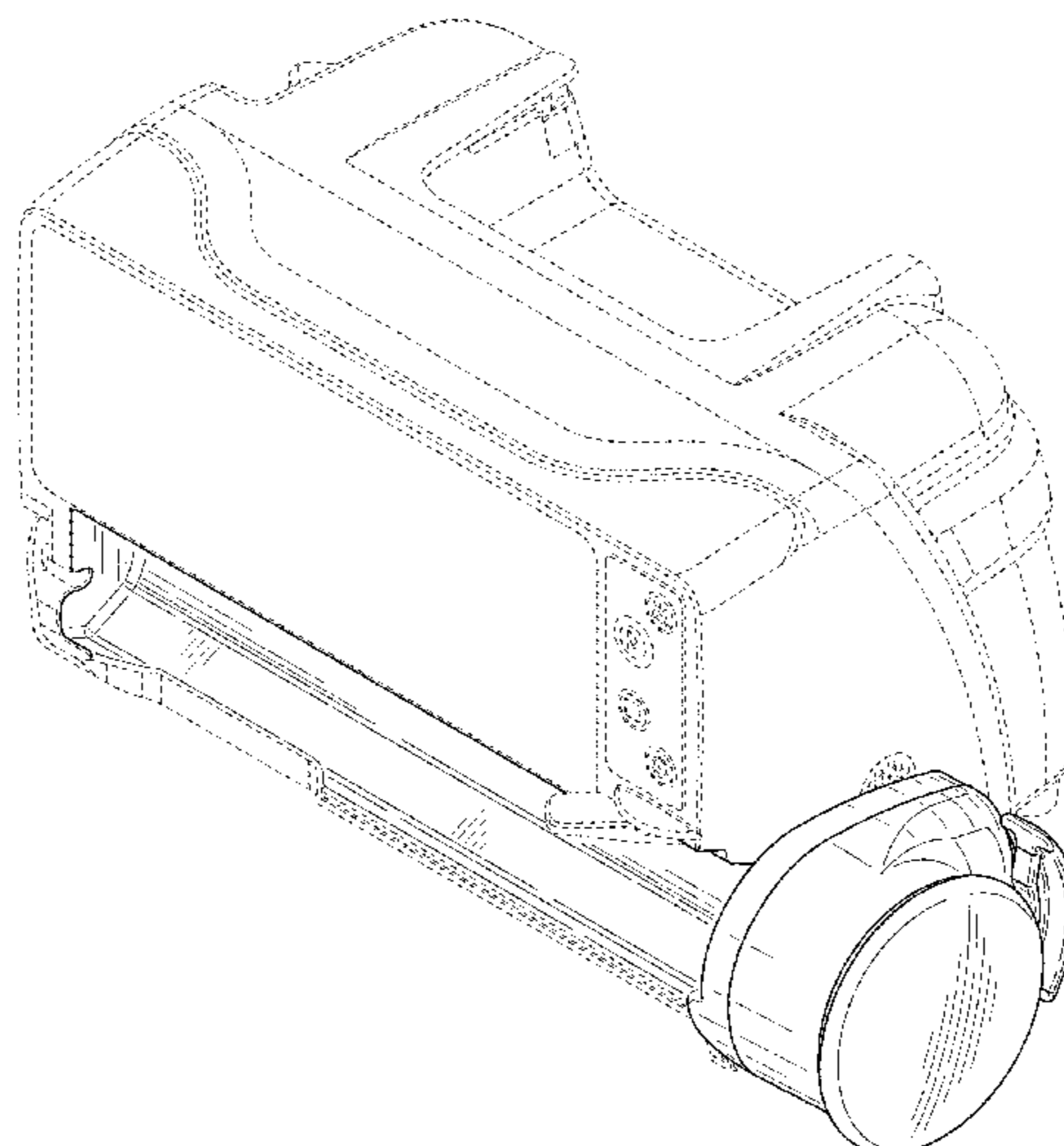
(56) **References Cited**

U.S. PATENT DOCUMENTS

4,749,109 A 6/1988 Kamen
4,978,335 A 12/1990 Arthur, III

(Continued)

1 Claim, 7 Drawing Sheets



(58) **Field of Classification Search**

CPC A61M 25/0637; A61M 5/14228; A61M
5/142; A61F 2002/9517; F04B 43/082;
F04B 43/1223

See application file for complete search history.

(56)

References Cited

U.S. PATENT DOCUMENTS

5,364,364	A	11/1994	Kasvikis et al.	
D367,527	S	2/1996	Marston et al.	
D367,528	S	2/1996	Marston et al.	
D390,654	S	2/1998	Alsberg et al.	
D669,096	S	10/2012	Katsura	
D679,379	S *	4/2013	Katsura	D24/111
9,008,803	B2	4/2015	Blomquist	
9,314,566	B2	4/2016	Wenger et al.	
D760,888	S *	7/2016	Gill	D24/108
D789,516	S *	6/2017	Gill	D24/108
D803,387	S *	11/2017	Bodwell	D24/108

D804,017	S *	11/2017	Sabin	D24/111
2003/0161744	A1	8/2003	Vilks et al.	
2004/0057855	A1	3/2004	Gerlach et al.	
2007/0073236	A1	3/2007	Mernoe et al.	
2007/0179444	A1	8/2007	Causey et al.	
2009/0069749	A1	3/2009	Miller et al.	
2009/0247982	A1	10/2009	Krulevitch et al.	
2011/0106318	A1	5/2011	Ledford	
2011/0184383	A1	7/2011	Hasegawa	
2014/0200510	A1	7/2014	Agard et al.	
2015/0265768	A1	9/2015	Vazquez et al.	
2015/0314066	A1	11/2015	Shimzu	

OTHER PUBLICATIONS

Bimedis.com, BBraun Perfusor Compact IV Infusion Pump, online product page dated Jun. 27, 2018, retrieved Sep. 17, 2018 from <URL:https://bimedis.com/a-item/iv-infusion-pumps-bbraun-perfusor-compact-1174404>.*

* cited by examiner

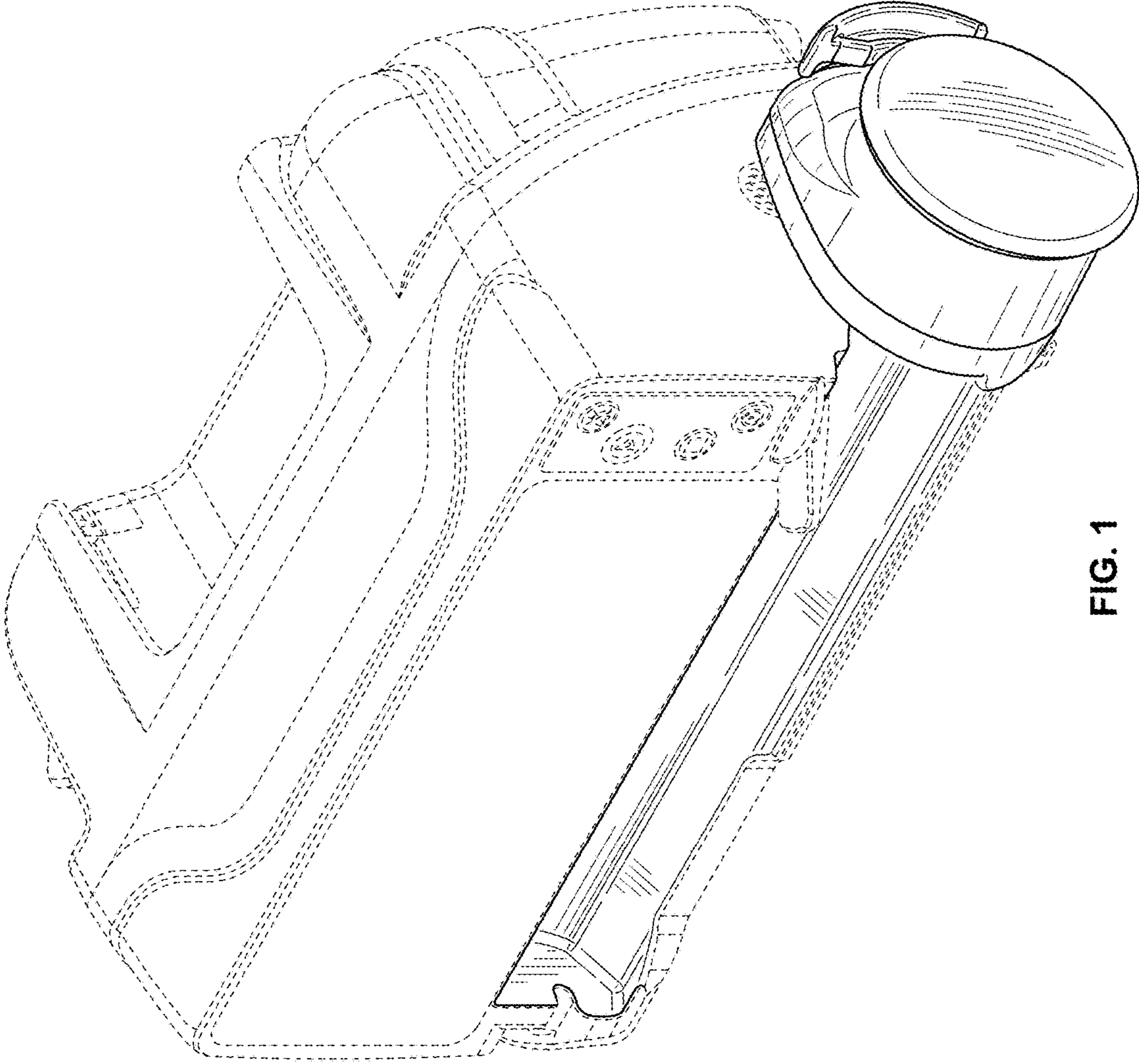


FIG. 1

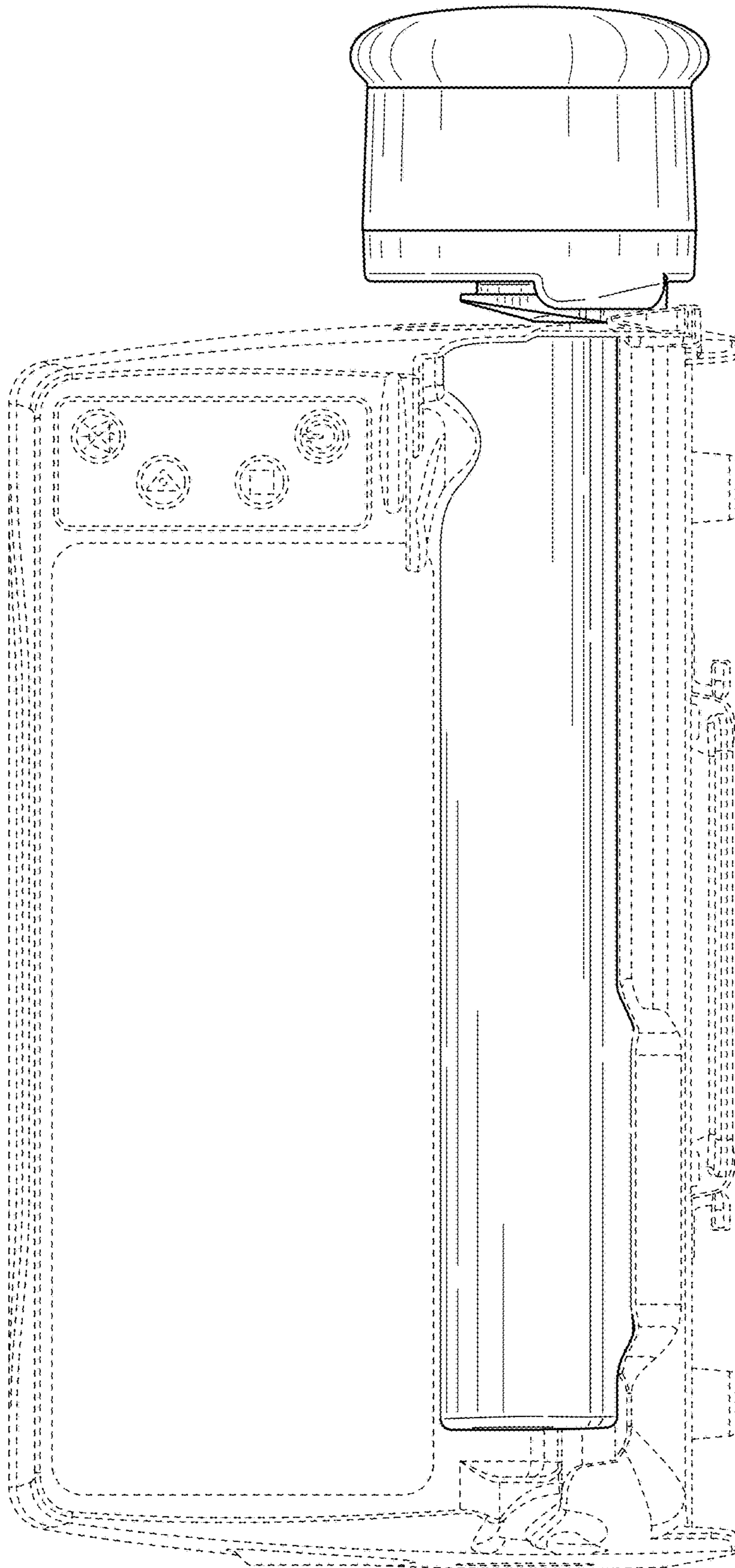


FIG. 2

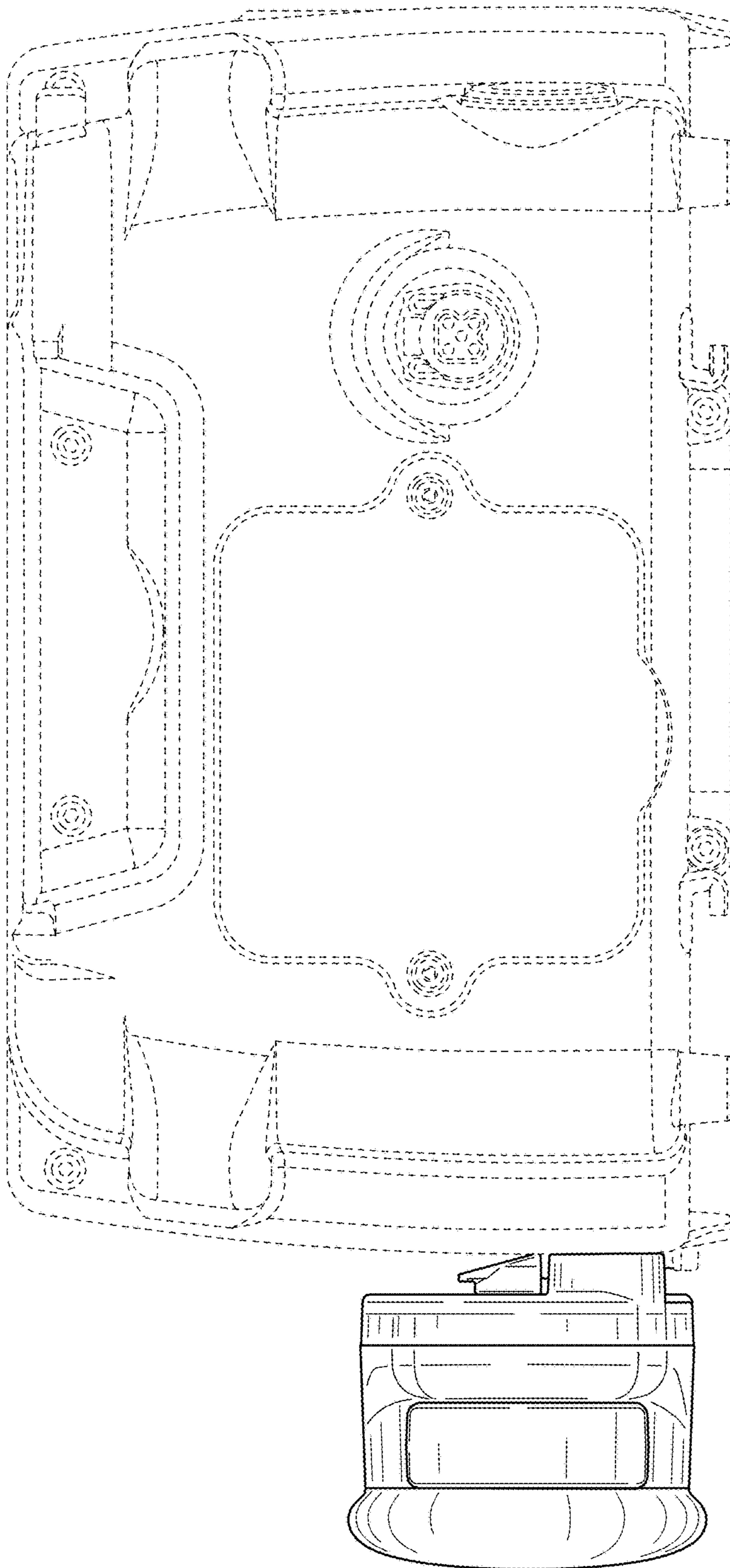


FIG. 3

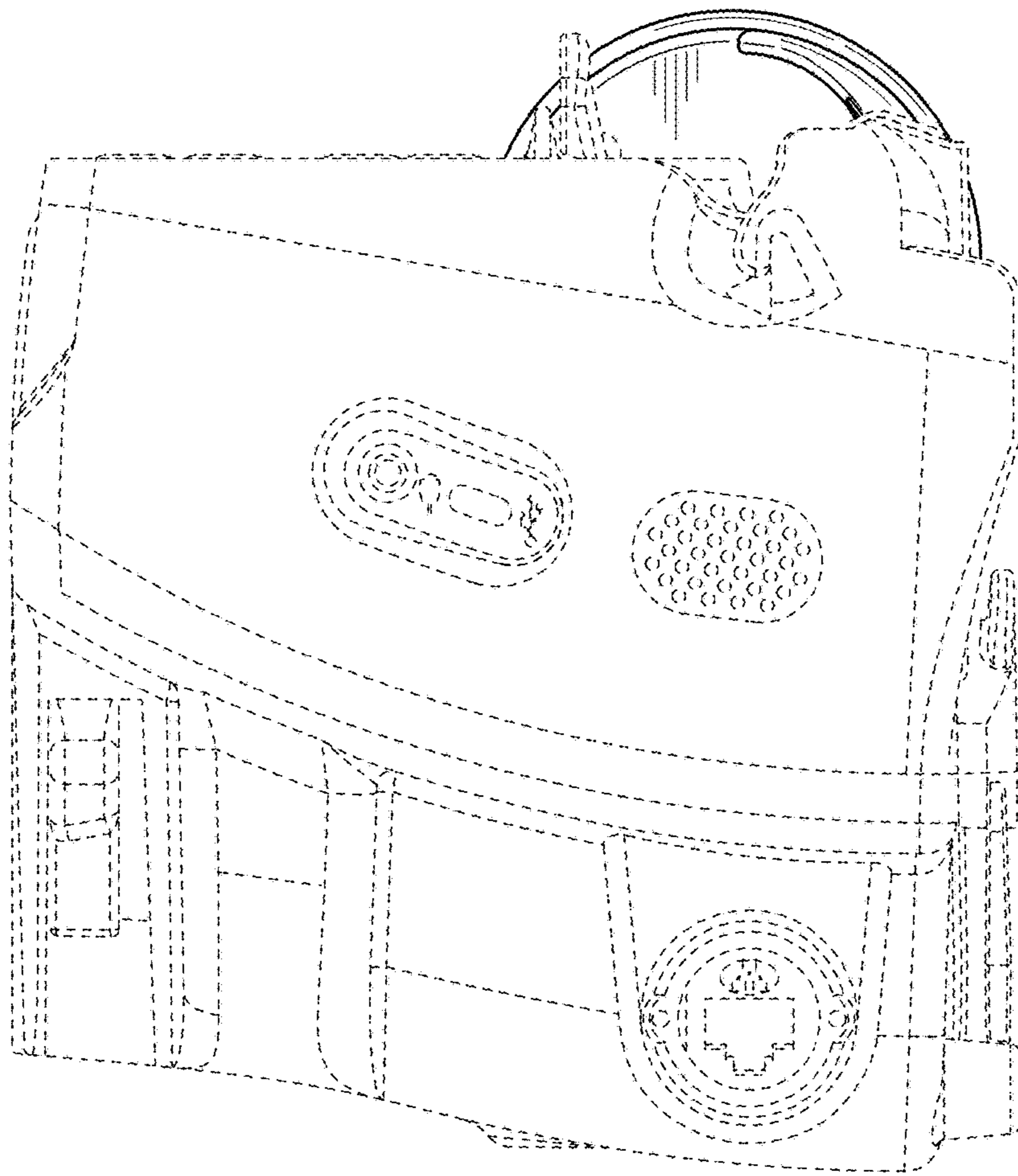


FIG. 4

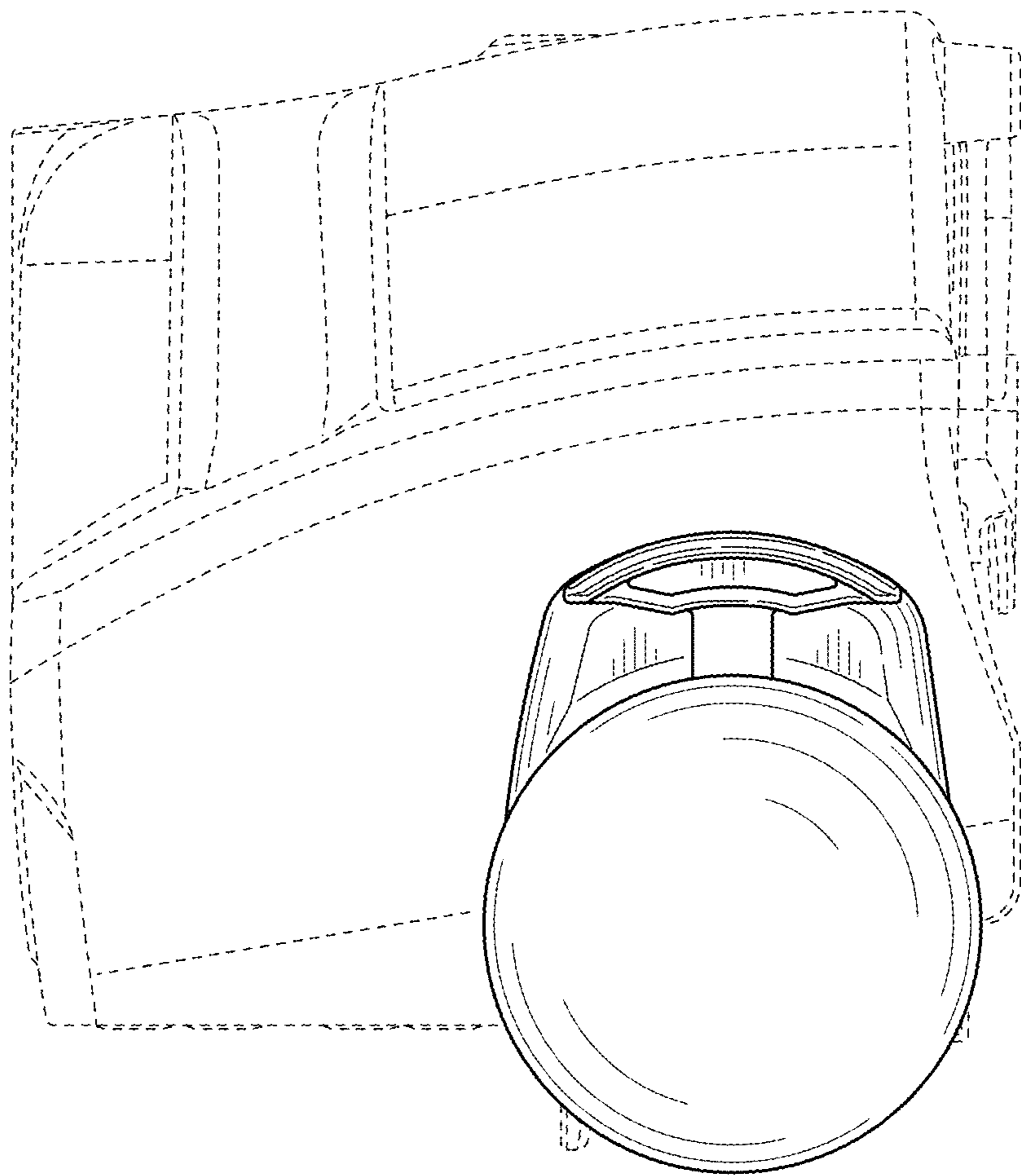


FIG. 5

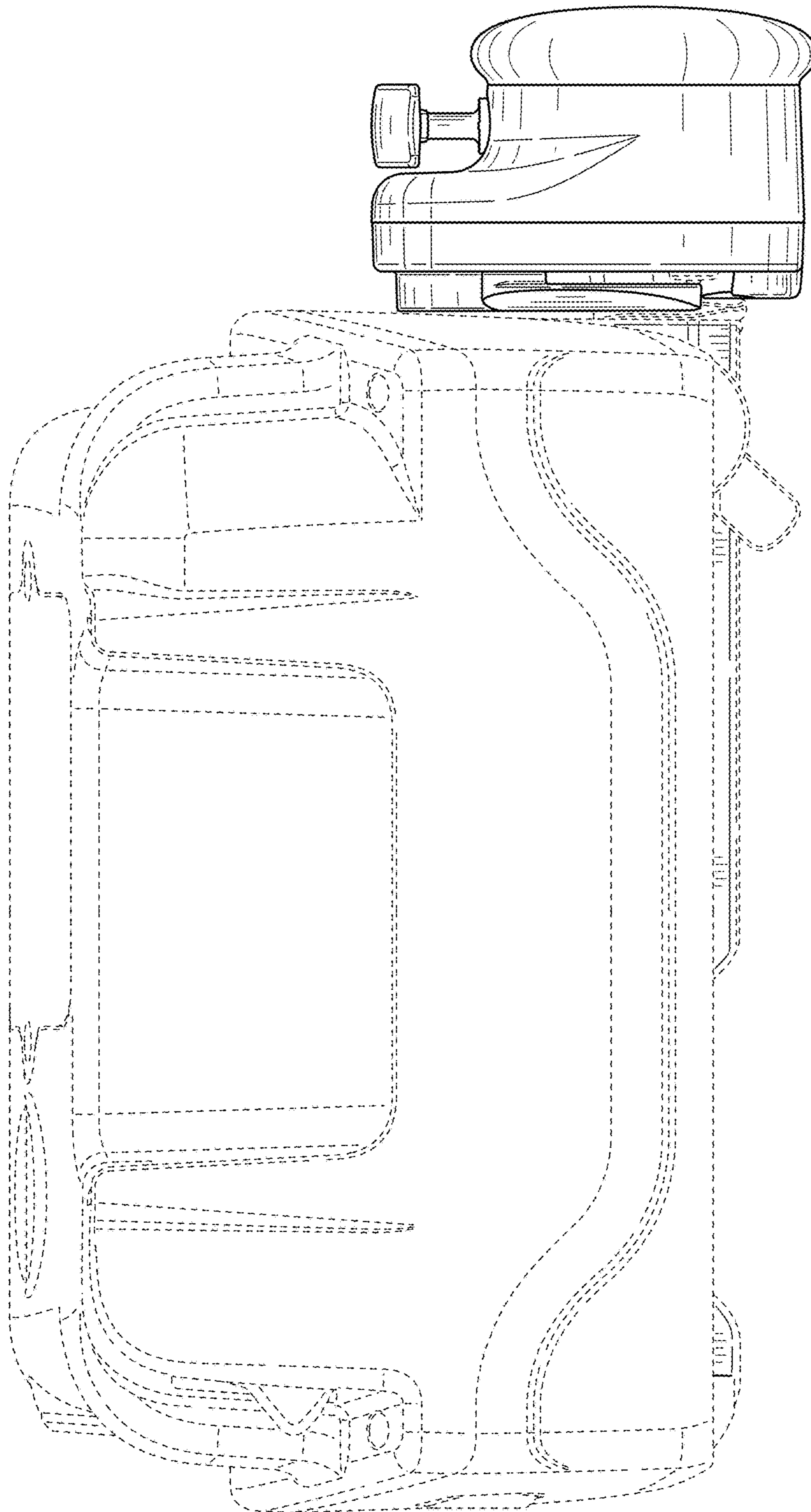


FIG. 6

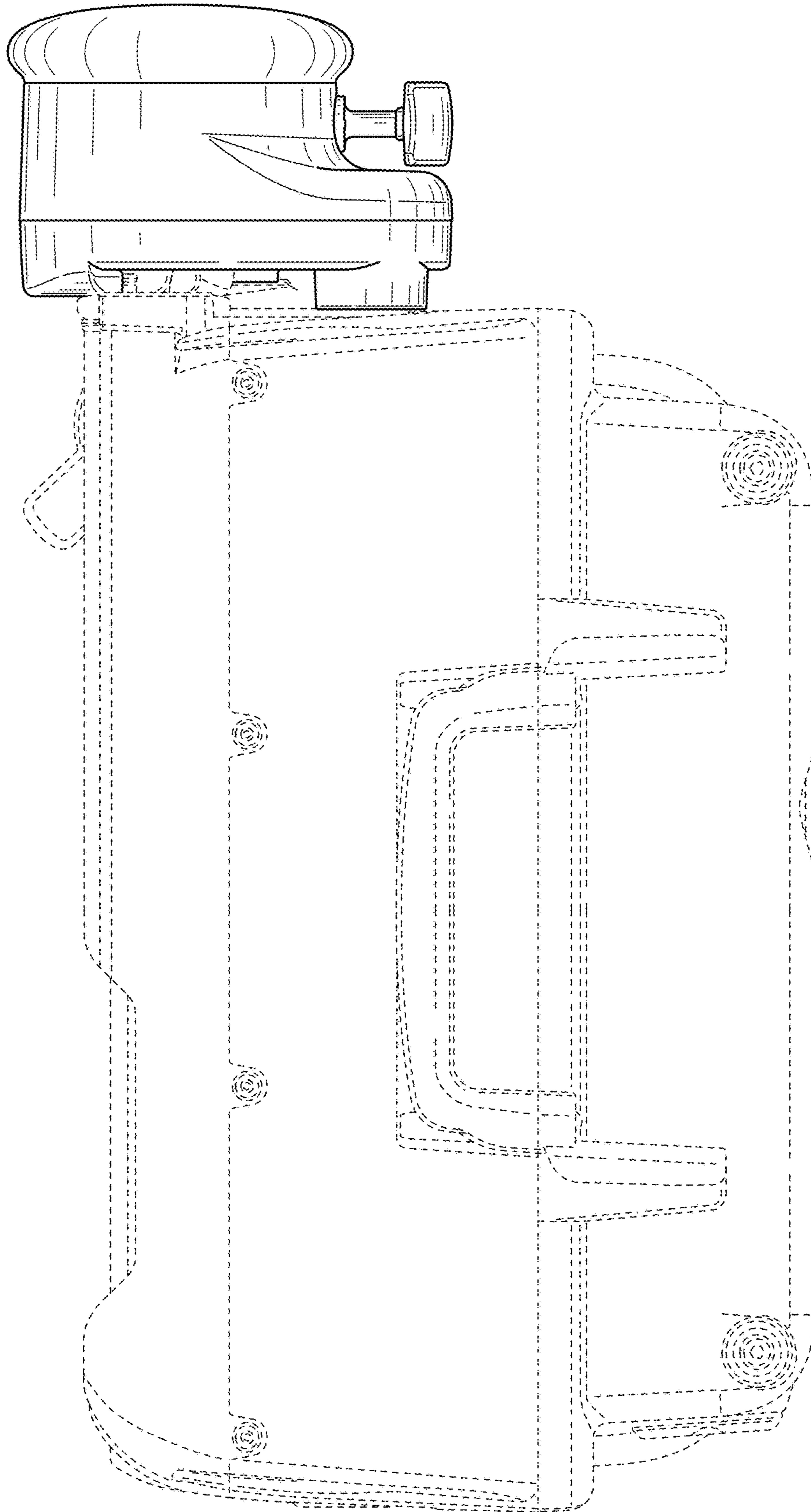


FIG. 7