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

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(54) **RADIOFREQUENCY ABLATION PUMP**

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

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(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/170**

(58) **Field of Classification Search**
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D24/110.5, 110.6

CPC A61B 2018/00577; A61B 2018/00583; A61B
18/10; A61B 18/1206; A61B 18/1815;
A61B 2018/1853; A61B 18/02; Y10S
128/27; Y10T 137/9029

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,334,181 A	8/1994	Rubinsky et al.	
D399,963 S *	10/1998	Mazess	D24/186
7,004,961 B2	2/2006	Wong et al.	
D531,728 S *	11/2006	Helgeson	D24/164
7,344,499 B1	3/2008	Prausnitz et al.	
D585,540 S *	1/2009	Lithgow	D24/110

(Continued)

FOREIGN PATENT DOCUMENTS

EM	002197871-0001	*	4/2013
EM	002518472-0002	*	10/2014

(Continued)

OTHER PUBLICATIONS

Avanos Pain Management. Link: <https://avanospainmanagement.com/product-catalog/chronic-pain/radiofrequency-probe-kits/coolief-multi-cooled-radiofrequency-kit/tda-ppu-1-coolief-c%E2%80%A6>. Visited Jan. 28, 2019. COOLIEF_ Cooled Radiofrequency Peristaltic Pump Unit. (Year: 2019).*

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(57) **CLAIM**

The ornamental design for a radiofrequency ablation pump, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a radio frequency ablation pump, showing our new design;

FIG. 2 is a top view of the radiofrequency ablation pump of FIG. 1;

FIG. 3 is a front view of the radiofrequency ablation pump of FIG. 1;

FIG. 4 is a side view of the radiofrequency ablation pump of FIG. 1;

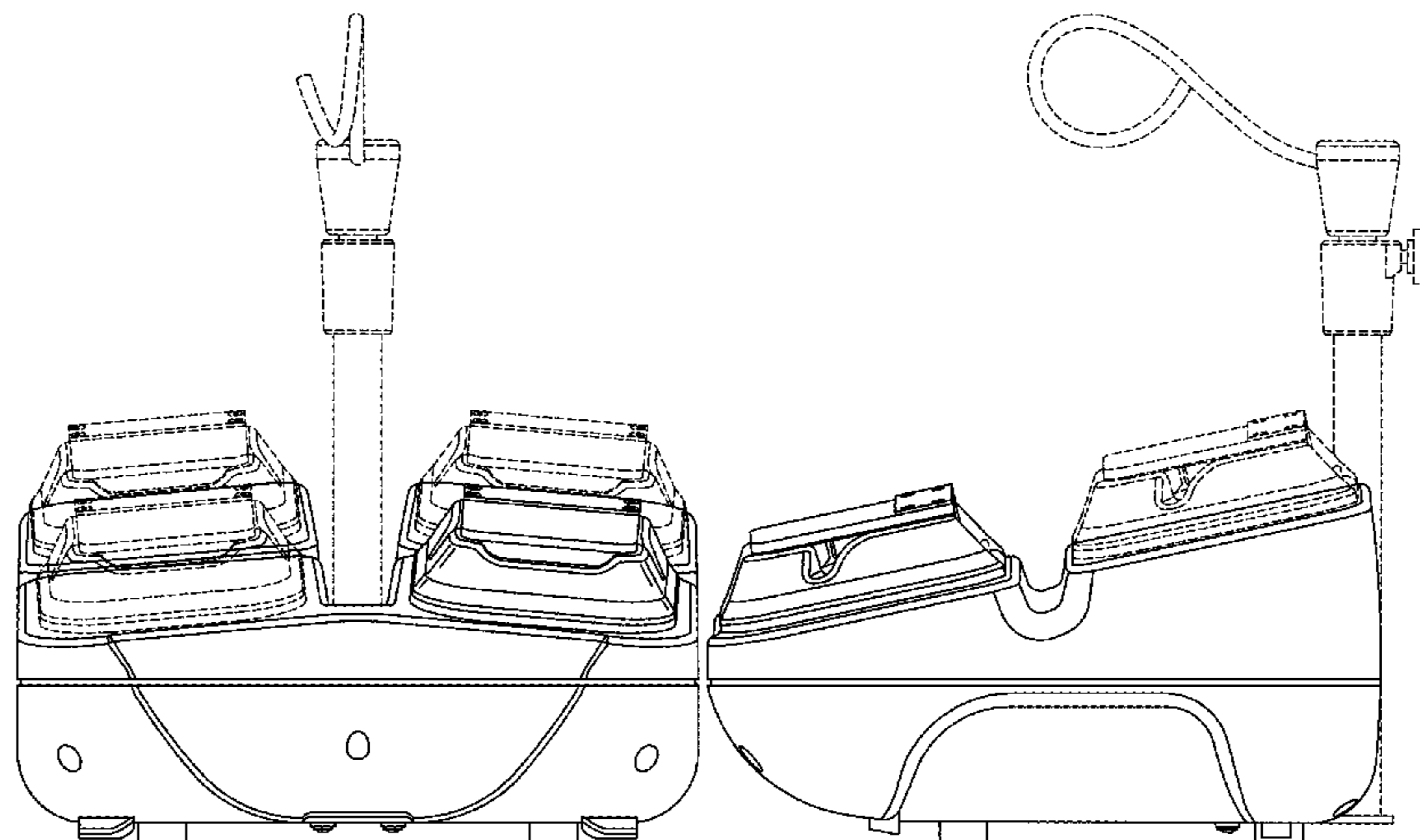
FIG. 5 is another side view of the radiofrequency ablation pump of FIG. 1;

FIG. 6 is a rear view of the radiofrequency ablation pump of FIG. 1; and,

FIG. 7 is a bottom view of the radiofrequency ablation pump of FIG. 1.

The claimed design comprises the elements shown in solid lines. The broken lines immediately adjacent to the shaded areas and adjacent to unshaded regions, represent the bounds of the claimed design while all other broken lines are directed to environment. The broken lines form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,771,420	B2	8/2010	Butty et al.	
7,857,756	B2	12/2010	Warren et al.	
D635,244	S *	3/2011	Virr	D24/110
8,361,063	B2	1/2013	Godara	
D705,424	S *	5/2014	Yarbrough	D24/144
D708,316	S *	7/2014	Bertinetti	D24/110
D726,302	S *	4/2015	Hanna	D24/107
D730,525	S *	5/2015	Acker	D24/164
9,072,540	B2	7/2015	Jarnagin et al.	
D737,449	S *	8/2015	Zheng	A61M 16/0875 D13/112 D24/164
D752,228	S *	3/2016	Verma	D24/164
9,480,528	B2	11/2016	Turovskiy et al.	
9,603,990	B2	3/2017	Woolford	
9,662,169	B2	5/2017	Schultz et al.	
9,956,032	B1	5/2018	Cosman et al.	
2003/0199794	A1	10/2003	Sakurai et al.	
2005/0096549	A1	5/2005	Gerber et al.	
2013/0030426	A1	1/2013	Gallardo et al.	
2013/0267892	A1 *	10/2013	Woolford	A61M 3/0258 604/34
2013/0267894	A1 *	10/2013	Woolford	A61B 1/317 604/264
2018/0228947	A1 *	8/2018	Woolford	A61B 1/126

FOREIGN PATENT DOCUMENTS

EP		2 977 021	A1	1/2016
WO	WO 03/000316		A1	1/2003
WO	WO 2010/018569		A1	2/2010
WO	WO 2017/039570		A1	3/2017

* cited by examiner

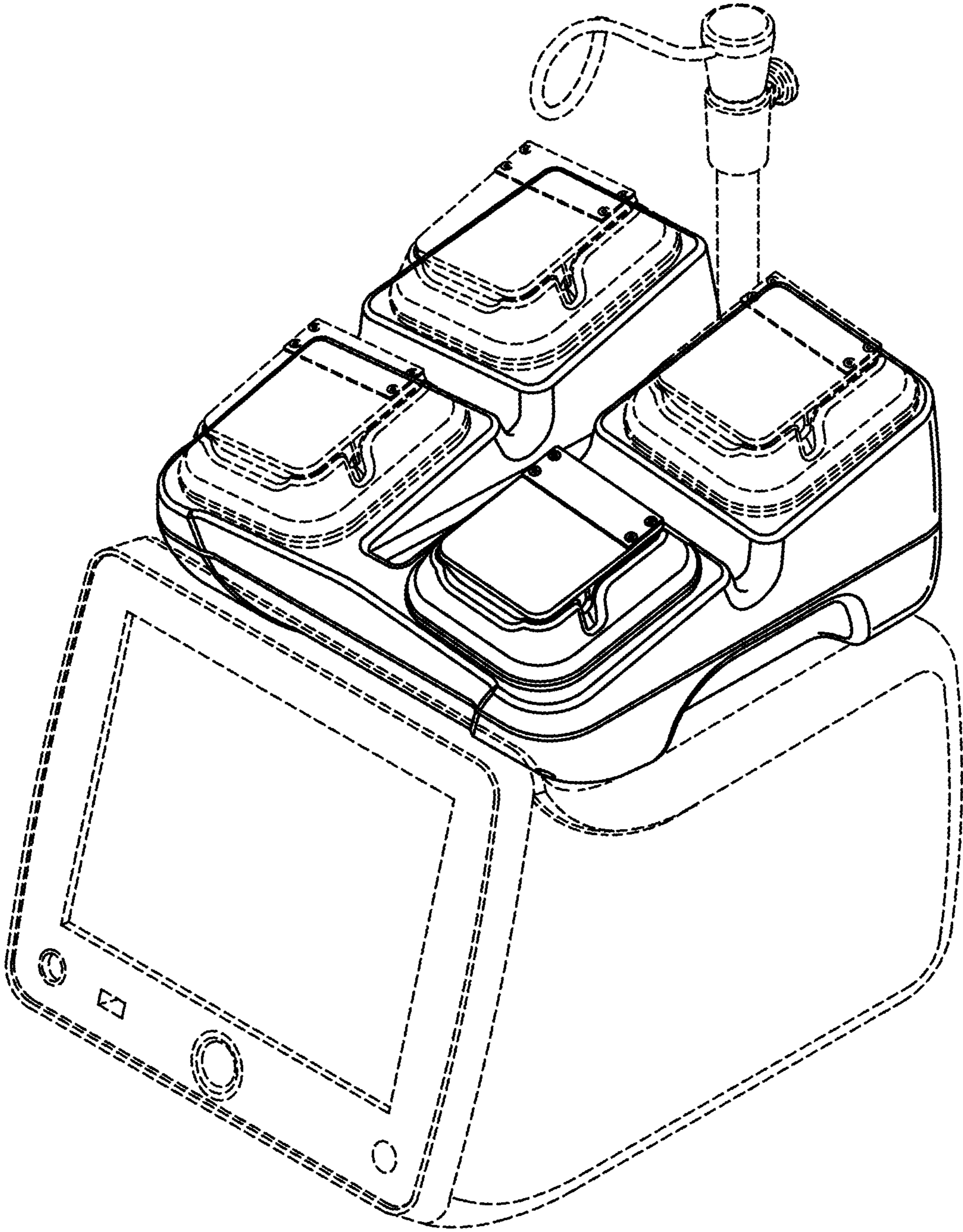


FIG. 1

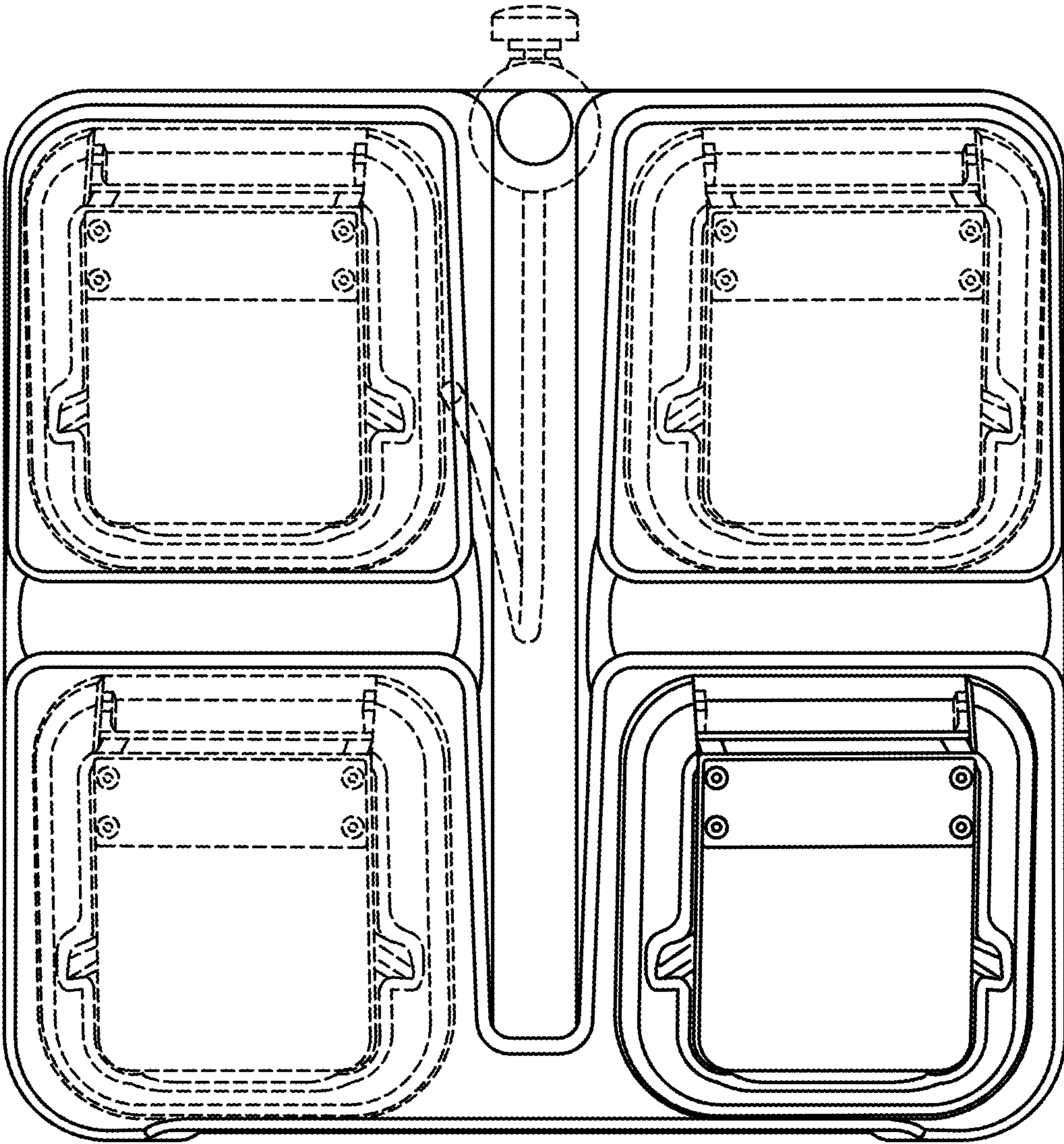


FIG. 2

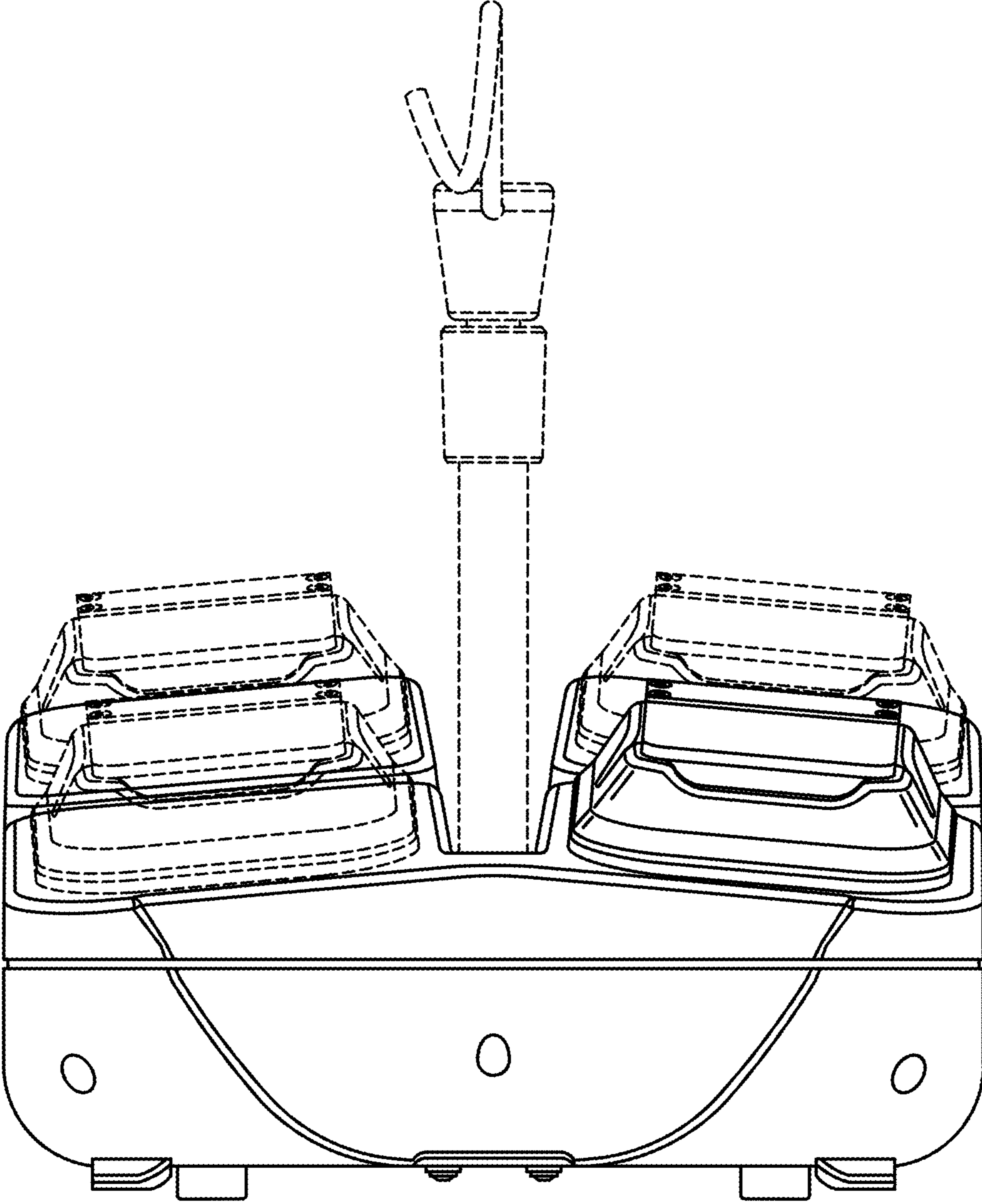


FIG. 3

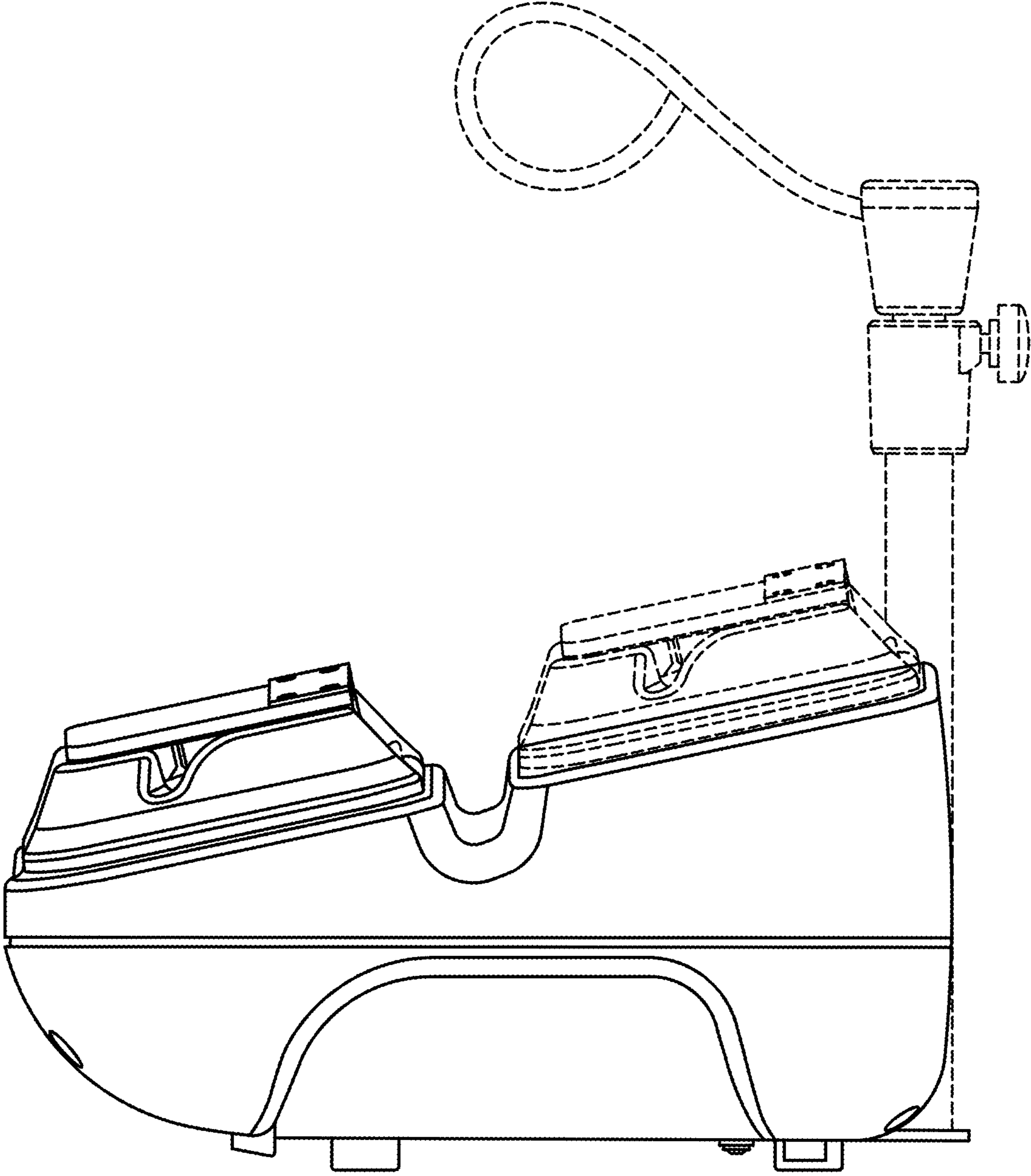


FIG. 4

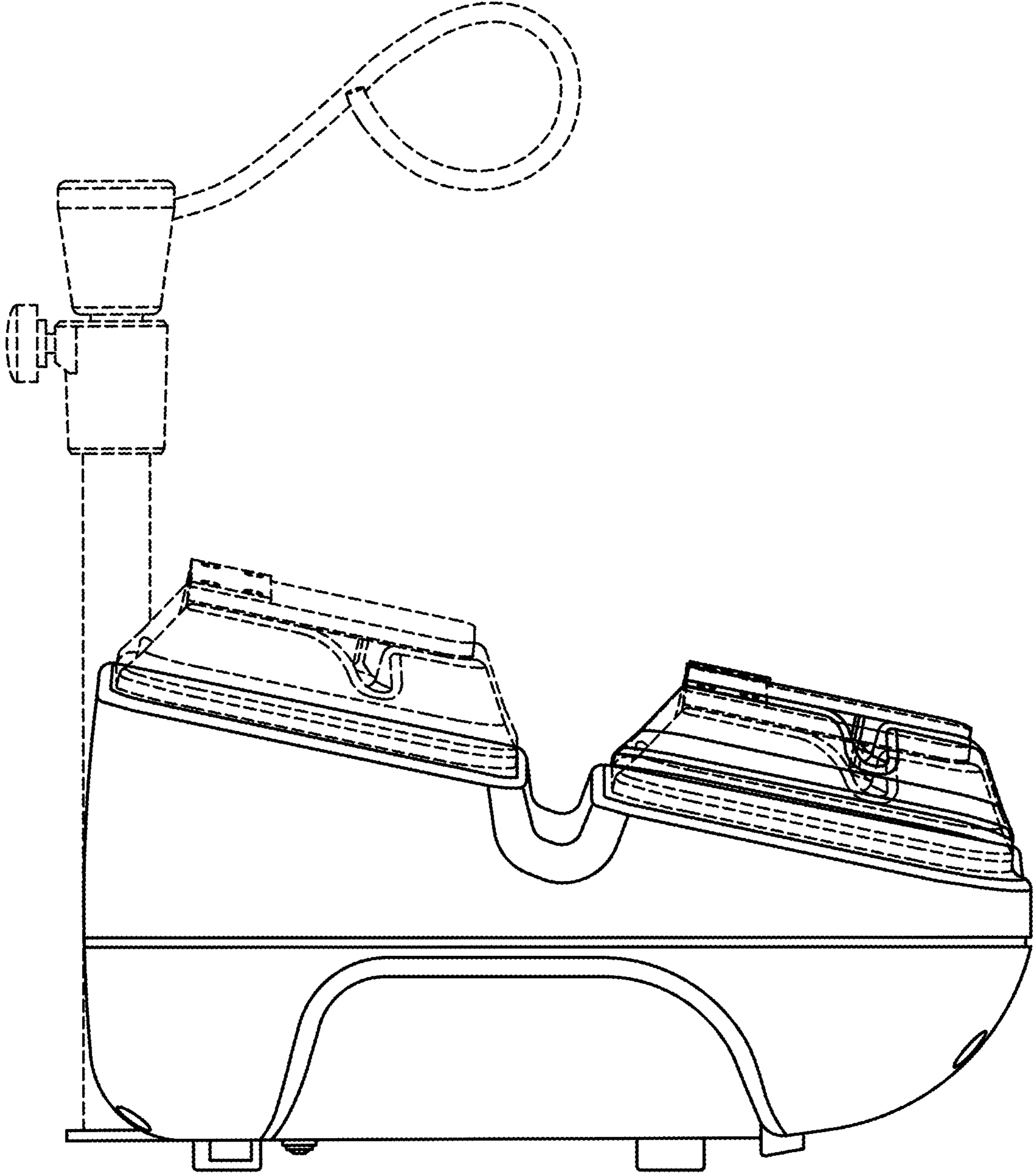


FIG. 5

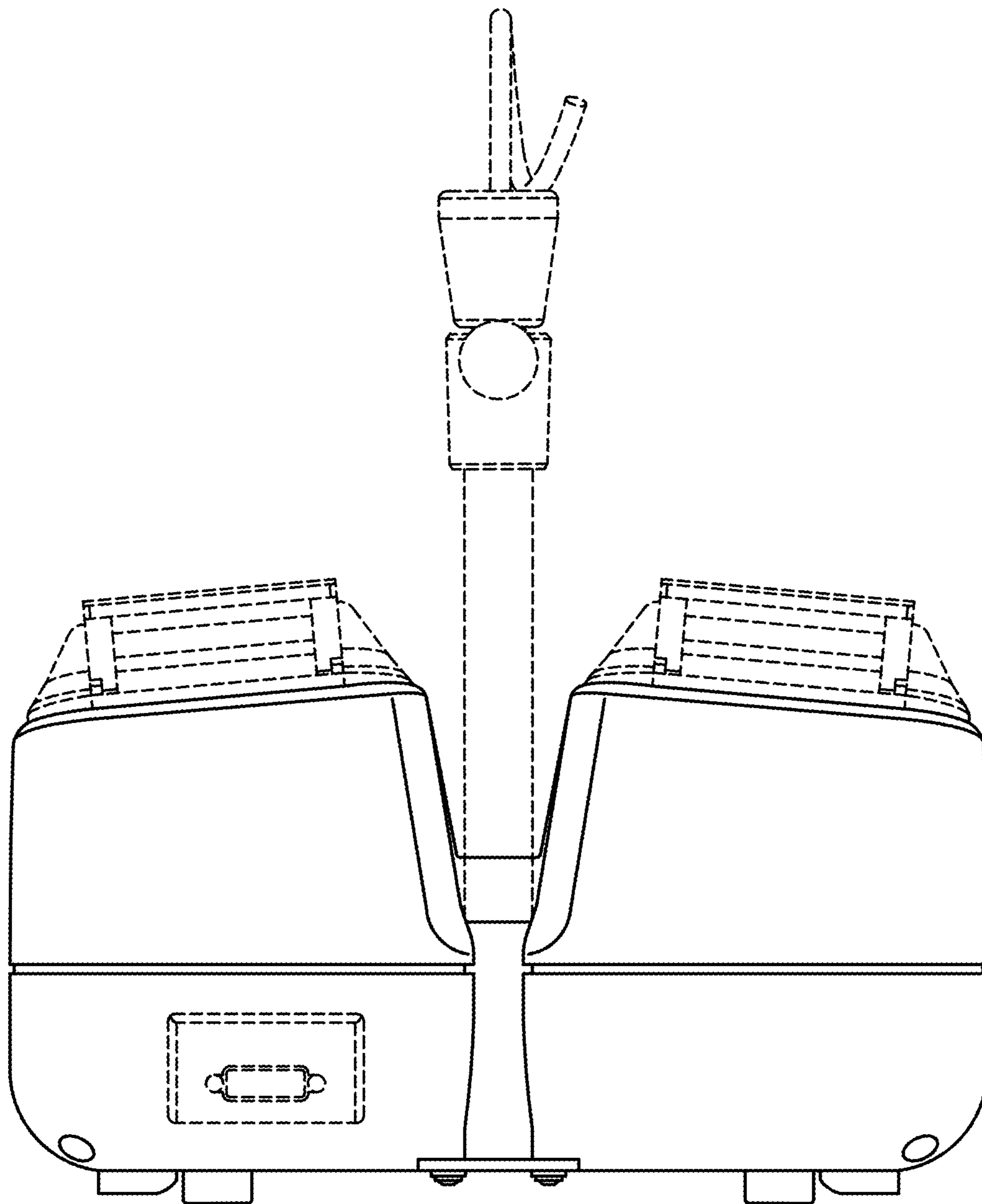


FIG. 6

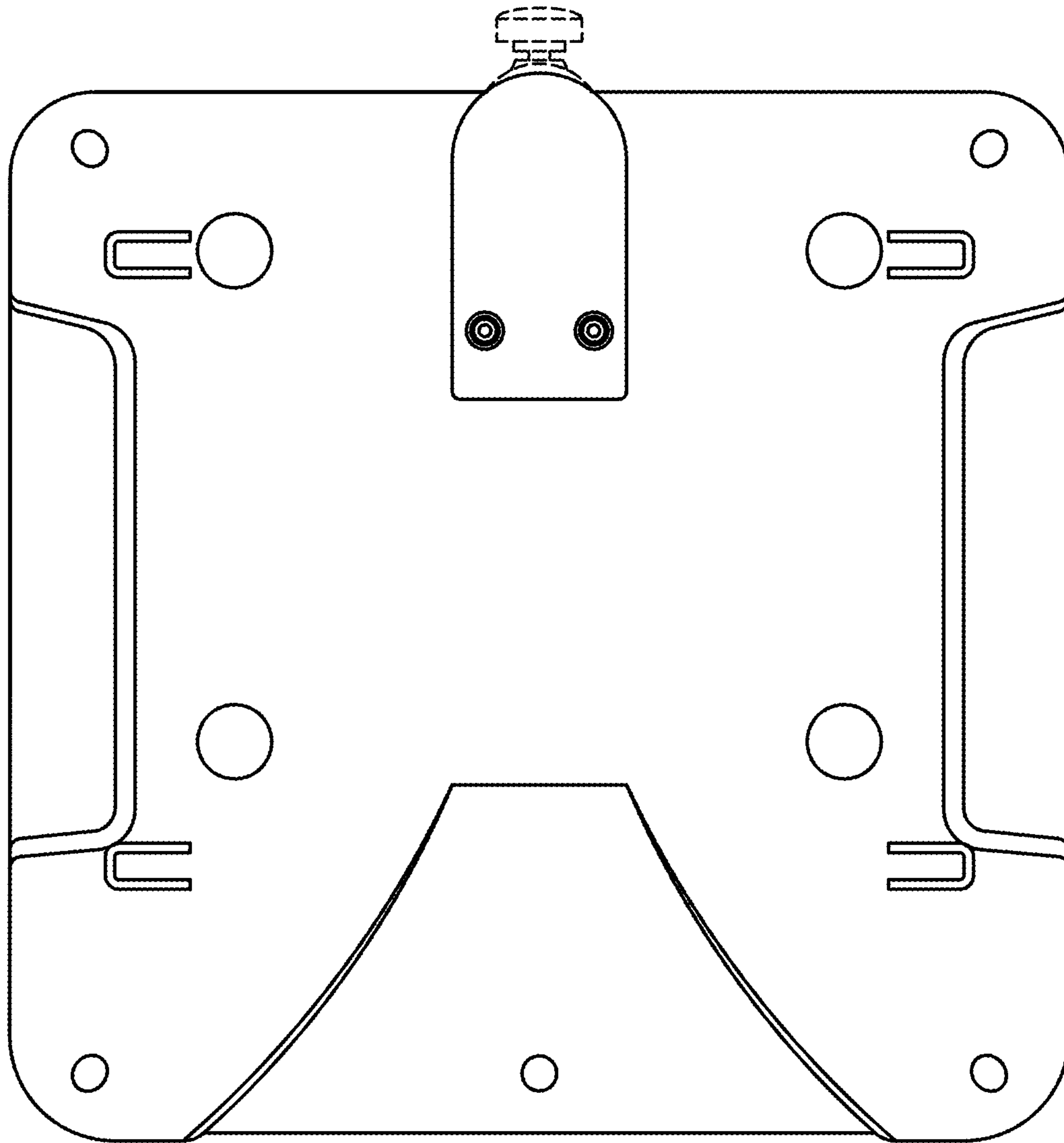


FIG. 7