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(12) **United States Design Patent** (10) **Patent No.:** **US D851,745 S**
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(54) **MEDICAL FLUID TRANSFER SYSTEM**
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4,519,792 A 5/1985 Dawe
4,559,043 A 12/1985 Whitehouse et al.
4,561,856 A 12/1985 Cochran
4,666,429 A 5/1987 Stone
4,670,007 A 6/1987 Wheeldon et al.
4,683,916 A 8/1987 Raines

(Continued)

FOREIGN PATENT DOCUMENTS

DE 20 2004 014 868 11/2004
EP 0 974 330 1/2000

(Continued)

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,923,501 A 8/1933 Perry
D222,956 S * 2/1972 Sato D24/111
D222,957 S * 2/1972 Sato D24/111
D236,163 S * 7/1975 Manno D24/111
4,005,710 A 2/1977 Zeddies et al.
4,084,606 A 4/1978 Mittleman
4,190,048 A 2/1980 Sampson
4,262,671 A 4/1981 Kersten
4,306,705 A 12/1981 Svensson
4,336,802 A 6/1982 Stone et al.
4,367,736 A * 1/1983 Gupton A61M 5/365
128/DIG. 13
D268,206 S * 3/1983 Kosako D24/111
D268,284 S * 3/1983 Manno D24/111
4,410,321 A 10/1983 Pearson et al.

OTHER PUBLICATIONS

B. Braun Medical Inc, Two-Bag Irrigation Set, Two Non-vented Spikes, dated Jul. 2012, in 1 page.

(Continued)

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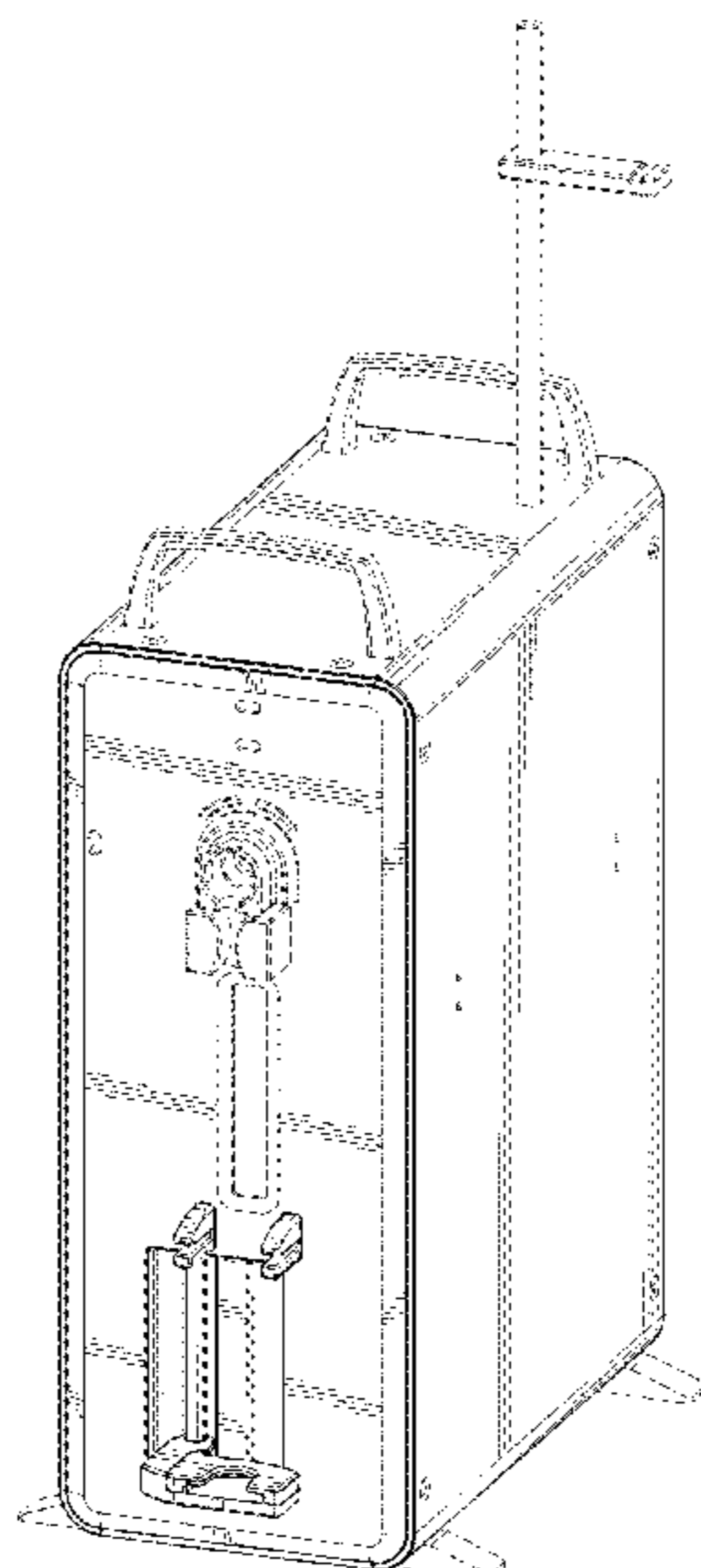
(57) **CLAIM**

The ornamental design for a medical fluid transfer system, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a medical fluid transfer system;
FIG. 2 is a front view thereof;
FIG. 3 is a back view thereof;
FIG. 4 is a right side view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a top view thereof; and,
FIG. 7 is a bottom view thereof.
The broken lines in the figures depict portions of the medical fluid transfer system that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,755,172	A	7/1988	Baldwin	6,953,450	B2	10/2005	Baldwin et al.
4,768,568	A	9/1988	Fournier et al.	6,985,870	B2	1/2006	Martucci et al.
4,778,450	A	10/1988	Kamen	6,991,002	B2	1/2006	Osborne et al.
4,819,684	A	4/1989	Zaugg et al.	6,994,315	B2	2/2006	Ryan et al.
4,863,429	A	9/1989	Baldwin	6,997,917	B2	2/2006	Niedospial, Jr. et al.
D305,165	S	12/1989	Rudolph et al.	7,017,623	B2	3/2006	Tribble et al.
4,922,975	A	5/1990	Polaschegg	7,086,431	B2	8/2006	D'Antonio et al.
4,969,874	A	11/1990	Michel et al.	7,117,902	B2	10/2006	Osborne
4,976,590	A	12/1990	Baldwin	7,128,105	B2	10/2006	Tribble et al.
4,995,268	A	2/1991	Ash et al.	7,163,035	B2	1/2007	Khan et al.
5,024,347	A	6/1991	Baldwin	7,194,336	B2	3/2007	DiGianfilippo et al.
5,037,390	A	8/1991	Raines et al.	7,317,967	B2	1/2008	DiGianfilippo et al.
5,114,580	A	5/1992	Ahmad et al.	7,343,224	B2	3/2008	DiGianfilippo et al.
D328,952	S *	8/1992	Arioka D24/111	7,343,943	B2	3/2008	Khan et al.
5,176,658	A	1/1993	Ranford	7,351,226	B1	4/2008	Herskowitz
5,224,937	A	7/1993	van der Heiden et al.	7,392,638	B2	7/2008	Baldwin et al.
5,256,155	A	10/1993	Yerlikaya et al.	7,396,051	B2	7/2008	Baldwin et al.
5,300,044	A	4/1994	Classey et al.	7,418,981	B2	9/2008	Baker et al.
D348,101	S *	6/1994	Poli D24/108	7,442,186	B2	10/2008	Blomquist
5,334,211	A	8/1994	Shiber	7,488,311	B2	2/2009	Domkowski et al.
5,336,201	A	8/1994	von der Decken	7,499,581	B2	3/2009	Tribble et al.
D352,778	S *	11/1994	Irvin D24/111	7,527,619	B2	5/2009	Domkowski et al.
5,378,231	A	1/1995	Johnson et al.	7,530,974	B2	5/2009	Domkowski et al.
5,405,333	A	4/1995	Richmond	7,538,858	B2	5/2009	Mackey
5,423,791	A	6/1995	Bartlett	D594,120	S	6/2009	Berberich et al.
5,431,201	A	6/1995	Torchia et al.	D596,291	S	7/2009	Berberich et al.
5,439,451	A	8/1995	Collinson et al.	7,566,326	B2	7/2009	Duchon et al.
5,609,572	A	3/1997	Lang	7,610,115	B2	10/2009	Rob et al.
5,645,538	A	7/1997	Richmond	7,632,261	B2	12/2009	Zinger et al.
5,676,346	A	10/1997	Leinsing	7,654,976	B2	2/2010	Peterson et al.
5,685,866	A	11/1997	Lopez	7,681,606	B2	3/2010	Khan et al.
5,776,345	A	7/1998	Truitt et al.	D616,092	S	5/2010	Domkowski et al.
5,782,816	A	7/1998	Werschmidt et al.	7,717,897	B2	5/2010	Burg et al.
5,807,312	A	9/1998	Dzwonkiewicz	D620,108	S	7/2010	Eitenmueller et al.
5,871,500	A	2/1999	Jepson et al.	7,758,560	B2	7/2010	Connell et al.
D408,079	S	4/1999	Ellis	7,789,850	B2	9/2010	Roger
5,897,526	A	4/1999	Vaillancourt	7,814,731	B2	10/2010	Bender et al.
5,904,666	A	5/1999	DeDecker et al.	7,850,051	B2	12/2010	Py et al.
5,935,106	A	8/1999	Olsen	7,882,863	B2	2/2011	Pestotnik et al.
5,947,951	A	9/1999	Ortiz et al.	7,900,658	B2	3/2011	Osborne et al.
5,968,014	A	10/1999	Neftel et al.	7,913,720	B2	3/2011	Tribble et al.
5,989,237	A	11/1999	Fowles et al.	7,963,954	B2	6/2011	Kavazov
6,059,747	A	5/2000	Bruggeman et al.	7,967,202	B2	6/2011	Durrell et al.
6,110,153	A	8/2000	Davis et al.	7,981,381	B2	7/2011	Lurvey et al.
RE36,871	E	9/2000	Epstein et al.	7,997,304	B2	8/2011	Ranalletta et al.
6,123,685	A	9/2000	Reynolds	8,034,041	B2	10/2011	Domkowski et al.
6,132,404	A	10/2000	Lopez	8,075,545	B2	12/2011	Moy et al.
6,152,900	A	11/2000	Mayer	8,091,727	B2	1/2012	Domkowski
6,179,823	B1	1/2001	Niedospial, Jr.	8,091,860	B2	1/2012	Thompson et al.
6,202,708	B1	3/2001	Bynum	8,104,644	B2	1/2012	Py et al.
6,221,041	B1	4/2001	Russo	8,140,351	B2	3/2012	Tribble et al.
6,245,048	B1	6/2001	Fangrow, Jr. et al.	8,141,601	B2	3/2012	Fehr et al.
6,287,289	B1	9/2001	Niedospial, Jr.	8,151,835	B2	4/2012	Khan et al.
6,302,864	B1	10/2001	Nowosielski	8,162,903	B2	4/2012	Reilly et al.
6,425,497	B1	7/2002	Chu et al.	8,162,914	B2	4/2012	Kraushaar et al.
6,474,375	B2	11/2002	Spero et al.	D660,423	S	5/2012	Hermle
6,485,472	B1	11/2002	Richmond	8,197,459	B2	6/2012	Jansen et al.
6,551,299	B2	4/2003	Miyoshi et al.	8,206,367	B2	6/2012	Warrne et al.
6,572,256	B2	6/2003	Seaton et al.	D664,647	S	7/2012	Becker
6,585,229	B2	7/2003	Cote, Sr. et al.	D664,648	S	7/2012	Becker
6,590,167	B2	7/2003	Clare	D664,649	S	7/2012	Becker
6,599,273	B1	7/2003	Lopez	8,216,207	B2	7/2012	Moy et al.
6,623,455	B2	9/2003	Small et al.	8,220,504	B2	7/2012	Hartman et al.
6,629,956	B1	10/2003	Polidoro et al.	8,221,382	B2	7/2012	Moy et al.
6,651,956	B2	11/2003	Miller	8,225,824	B2	7/2012	Eliuk et al.
6,663,586	B2	12/2003	Verkaart et al.	8,225,826	B2	7/2012	Horppu et al.
6,689,108	B2	2/2004	Lavi et al.	8,231,567	B2	7/2012	Tennican et al.
6,726,672	B1	4/2004	Hanly et al.	8,241,265	B2	8/2012	Moy et al.
6,793,651	B1	9/2004	Bennett et al.	8,267,912	B2	9/2012	Ferris
6,813,868	B2	11/2004	Baldwin et al.	8,287,513	B2	10/2012	Ellstrom et al.
6,854,620	B2	2/2005	Ramet	8,328,082	B1	12/2012	Bochenko et al.
6,877,530	B2	4/2005	Osborne et al.	8,336,587	B2	12/2012	Rosenquist et al.
6,908,459	B2	6/2005	Harding et al.	8,353,318	B2	1/2013	Ranalletta et al.
6,915,823	B2	7/2005	Osborne et al.	8,356,644	B2	1/2013	Chong et al.
6,948,522	B2	9/2005	Newbrough et al.	8,356,645	B2	1/2013	Chong et al.
				8,357,137	B2	1/2013	Yandell
				8,381,776	B2	2/2013	Horppu
				8,382,696	B2	2/2013	Beiriger et al.
				8,403,905	B2	3/2013	Yow

(56)

References Cited

U.S. PATENT DOCUMENTS

8,409,165 B2	4/2013	Niedospial, Jr. et al.	2006/0064053 A1	3/2006	Bollish et al.
8,425,487 B2	4/2013	Beiriger et al.	2006/0259195 A1	11/2006	Eliuk et al.
8,449,521 B2	5/2013	Thorne, Jr. et al.	2007/0007478 A1	1/2007	Leinsing et al.
8,506,548 B2	8/2013	Okiyama	2007/0088252 A1	4/2007	Pestotnik et al.
8,522,832 B2	9/2013	Lopez et al.	2007/0106244 A1	5/2007	Mosler et al.
8,551,037 B2	10/2013	Suchecky et al.	2008/0065006 A1	3/2008	Roger et al.
8,567,235 B2	10/2013	Bojan et al.	2008/0086094 A1	4/2008	Peters
8,562,584 B2	11/2013	Beiriger et al.	2008/0114328 A1	5/2008	Doherty et al.
8,602,067 B2	12/2013	Kuhni et al.	2008/0125897 A1	5/2008	DiGianfilippo et al.
8,608,723 B2	12/2013	Lev et al.	2008/0169043 A1	7/2008	Osborne et al.
8,622,985 B2	1/2014	Ellstrom	2008/0169044 A1	7/2008	Osborne et al.
8,679,075 B2	3/2014	Lurvey et al.	2008/0177222 A1	7/2008	De Marco Luigino et al.
8,684,994 B2	4/2014	Lev et al.	2008/0195416 A1	8/2008	Tribble et al.
8,701,696 B2	4/2014	Guala	2008/0199353 A1	8/2008	Mlodzinski et al.
8,702,675 B2	4/2014	Imai	2008/0287920 A1	11/2008	Fangrow et al.
8,720,496 B2	5/2014	Huwiler et al.	2009/0012449 A1	1/2009	Lee et al.
8,721,612 B2	5/2014	Moy et al.	2009/0050216 A1	2/2009	Trocki et al.
8,721,614 B2	5/2014	Takemoto et al.	2009/0067973 A1	3/2009	Eliuk et al.
8,753,325 B2	6/2014	Lev et al.	2009/0069743 A1	3/2009	Krishnamoorthy et al.
8,795,231 B2	8/2014	Chong et al.	2009/0082649 A1	3/2009	Muller et al.
8,821,436 B2	9/2014	Mosler et al.	2009/0088687 A1	4/2009	Yardimci et al.
8,834,444 B2	9/2014	Domkowski	2009/0099547 A1	4/2009	Radmer
8,852,147 B2	10/2014	Callan et al.	2009/0101576 A1	4/2009	Rohde et al.
8,864,725 B2	10/2014	Ranalletta et al.	2009/0126825 A1	5/2009	Eliuk et al.
8,864,737 B2	10/2014	Hasegawa et al.	2009/0145509 A1	6/2009	Baker et al.
8,868,788 B2	10/2014	Ranalletta et al.	2009/0149743 A1	6/2009	Barron et al.
8,870,832 B2	10/2014	Raday et al.	2009/0163860 A1	6/2009	Patrick et al.
8,882,739 B2	11/2014	Domkowski et al.	2009/0177149 A1	7/2009	Childers et al.
8,911,421 B2	12/2014	Domkowski et al.	2009/0198215 A1	8/2009	Chong et al.
D721,803 S	1/2015	Dubach	2009/0254031 A1	10/2009	Lee
8,926,554 B2	1/2015	Okuda et al.	2009/0306621 A1	12/2009	Thome, Jr. et al.
8,958,112 B2	2/2015	Matsui et al.	2010/0024904 A1	2/2010	Hoffman et al.
D724,198 S	3/2015	Oostman et al.	2010/0049157 A1	2/2010	Fangrow
8,973,622 B2	3/2015	Lopez et al.	2010/0121246 A1	5/2010	Peters et al.
8,979,792 B2	3/2015	Lev et al.	2010/0245056 A1	9/2010	Braun et al.
9,043,019 B2	5/2015	Eliuk et al.	2010/0276034 A1	11/2010	Gonnelli et al.
9,056,164 B2	6/2015	Tate et al.	2010/0280430 A1	11/2010	Caleffi et al.
9,057,363 B2	6/2015	Capone	2011/0062703 A1	3/2011	Lopez et al.
9,057,370 B2	6/2015	Mundt et al.	2011/0152757 A1	6/2011	Beck et al.
9,060,923 B2	6/2015	Hossainy	2011/0178493 A1	7/2011	Okiyama
9,061,130 B2	6/2015	Truitt et al.	2011/0196304 A1	8/2011	Kramer et al.
9,079,686 B2	7/2015	Domkowski et al.	2012/0157914 A1	1/2012	Stroup
9,089,474 B2	7/2015	Cederschiöld	2012/0041391 A1	2/2012	Fangrow et al.
9,101,717 B2	8/2015	Mansour et al.	2012/0067429 A1	3/2012	Mosler et al.
9,132,062 B2	9/2015	Fangrow	2012/0109077 A1	5/2012	Ryan
9,132,063 B2	9/2015	Lev et al.	2012/0123298 A1	5/2012	Mendels et al.
9,139,316 B2	9/2015	Husnu et al.	2012/0298254 A1	11/2012	Brem et al.
9,144,646 B2	9/2015	Barron, III et al.	2012/0302986 A1	11/2012	Brem et al.
9,149,576 B2	10/2015	Bullington et al.	2013/0006214 A1	1/2013	Garfield et al.
9,198,832 B2	12/2015	Moy et al.	2013/0053815 A1	2/2013	Mucientes et al.
9,211,231 B2	12/2015	Mansour et al.	2013/0180618 A1	7/2013	Py
9,212,762 B2	12/2015	Duncan	2013/0211332 A1*	8/2013	Beiriger A61M 1/342 604/151
9,242,039 B2	1/2016	Valk et al.	2013/0218121 A1	8/2013	Waller et al.
9,270,890 B2	2/2016	Okuma et al.	2013/0220484 A1	8/2013	De Marco
9,345,641 B2	5/2016	Kraus et al.	2013/0292002 A1	11/2013	Lopez
9,345,643 B2	5/2016	Okiyama	2014/0124087 A1	5/2014	Anderson et al.
9,381,135 B2	7/2016	Reynolds et al.	2014/0124092 A1	5/2014	Gonnelli et al.
9,381,137 B2	7/2016	Garfield et al.	2014/0135732 A1	5/2014	Spronken et al.
9,402,786 B2	8/2016	Petrone	2014/0150925 A1	6/2014	Sjogren et al.
D774,192 S	12/2016	Fuchs	2014/0174596 A1	6/2014	Lopez
D775,325 S	12/2016	Larson et al.	2014/0238532 A1	8/2014	Fangrow
D803,396 S	11/2017	Oberkircher et al.	2014/0261727 A1	9/2014	Mansour et al.
9,827,163 B2	11/2017	Lopez et al.	2014/0261860 A1	9/2014	Heath
D804,651 S	12/2017	Loonan	2014/0261877 A1	9/2014	Ivosevic et al.
9,849,236 B2	12/2017	Hachey et al.	2014/0263614 A1	9/2014	Keefe et al.
2002/0179544 A1	12/2002	Johnson et al.	2014/0276386 A1	9/2014	Mansour et al.
2003/0236500 A1	12/2003	Scheu	2014/0276649 A1	9/2014	Ivosevic et al.
2004/0035743 A1	2/2004	Tighe et al.	2014/0299221 A1	10/2014	Lopez
2004/0087888 A1	5/2004	DiGianfilippo et al.	2014/0323970 A1	10/2014	Duncan
2004/0116891 A1	6/2004	Curutcharry	2015/0000784 A1	1/2015	Jamaledine
2005/0096627 A1	5/2005	Howard	2015/0008664 A1	1/2015	Tachizaki
2005/0131357 A1	6/2005	Denton et al.	2015/0025453 A1	1/2015	Ledford et al.
2005/0230575 A1	10/2005	Zelenski et al.	2015/0040987 A1	2/2015	Reichert et al.
2005/0252572 A1	11/2005	Khan et al.	2015/0040988 A1	2/2015	Reichert et al.
2005/0252574 A1	11/2005	Khan et al.	2015/0041531 A1	2/2015	Vavala et al.
			2015/0045772 A1	2/2015	Reichert et al.
			2015/0082746 A1	3/2015	Ivosevic et al.
			2015/0101707 A1	4/2015	Ranalletta et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2015/0119820	A1	4/2015	Kanamoto
2015/0123398	A1	5/2015	Sanders et al.
2015/0126958	A1	5/2015	Sanders et al.
2015/0133879	A1	5/2015	Kanamoto et al.
2015/0151041	A1	6/2015	Yodfat et al.
2015/0161354	A1	6/2015	Blomquist
2015/0202382	A1	7/2015	Juretich et al.
2015/0202383	A1	7/2015	Juretich et al.
2015/0202384	A1	7/2015	Juretich et al.
2015/0202385	A1	7/2015	Juretich et al.
2015/0209230	A1	7/2015	Lev et al.
2015/0209233	A1	7/2015	Fukuoka
2015/0209495	A1	7/2015	Biset et al.
2015/0209510	A1	7/2015	Burkholz et al.
2015/0209572	A1	7/2015	Garfield et al.
2015/0250680	A1	9/2015	Browka et al.
2015/0250681	A1	9/2015	Lev et al.
2015/0257977	A1	9/2015	Bochenko et al.
2015/0265500	A1	9/2015	Russo et al.
2015/0283322	A1	10/2015	Hachey et al.
2015/0297451	A1	10/2015	Mariei et al.
2015/0297453	A1	10/2015	Kim et al.
2015/0297454	A1	10/2015	Sanders et al.
2015/0297456	A1	10/2015	Mariei et al.
2015/0297459	A1	10/2015	Sanders et al.
2015/0297460	A1	10/2015	Mansour et al.
2015/0297839	A1	10/2015	Sanders et al.
2015/0297881	A1	10/2015	Sanders et al.
2015/0314066	A1	11/2015	Shimizu
2015/0346013	A1	12/2015	Feng et al.
2015/0359709	A1	12/2015	Kriheli et al.
2015/0366758	A1	12/2015	Noguchi et al.
2016/0000653	A1	1/2016	Kramer
2016/0081878	A1	3/2016	Marks et al.
2016/0081879	A1	3/2016	Garfield et al.
2016/0101020	A1	4/2016	Guala
2016/0136051	A1	5/2016	Lavi
2016/0136412	A1	5/2016	McKinnon et al.
2016/0158104	A1	6/2016	Ali et al.
2016/0206511	A1	7/2016	Garfield et al.
2016/0213568	A1	7/2016	Mansour et al.
2016/0250102	A1	9/2016	Garfield et al.
2016/0256632	A1	9/2016	Fangrown
2016/0331893	A1	11/2016	Yeh et al.
2017/0079883	A1	3/2017	Lopez
2017/0128666	A1	5/2017	Davis
2017/0129763	A1	5/2017	Fangrow, Jr.
2018/0055735	A1*	3/2018	Lopez A61J 1/2096
2018/0161244	A1*	6/2018	Lopez A61M 5/14228
2018/0177940	A1	6/2018	Hachey
2018/0207063	A1*	7/2018	Lopez A61J 1/2096
2018/0272117	A1	9/2018	Fangrow

FOREIGN PATENT DOCUMENTS

EP	1 563 819	8/2005
EP	1 997 471	12/2008
JP	06-343706	12/1994
JP	2002-355318	12/2002
JP	2003-144546	5/2003
JP	2003-225305 A	8/2003
WO	WO 1997/14493	4/1997
WO	WO 1998/23353	6/1998
WO	WO 1999/63547	12/1999
WO	WO 2001/03757	1/2001
WO	WO 2001/039874	6/2001
WO	WO 2005/041846	5/2005
WO	WO 2005/123162	12/2005
WO	WO 2007/033013	3/2007
WO	WO 2007/061424	5/2007
WO	WO 2007/079305	7/2007
WO	WO 2007/148708	12/2007
WO	WO 2008/128074	10/2008
WO	WO 2008/144447	11/2008
WO	WO 2009/060419	5/2009

WO	WO 2011/012313	2/2011
WO	WO 2011/014525	2/2011
WO	WO 2011/058545	5/2011
WO	WO 2011/058548	5/2011
WO	WO 2011/091542	8/2011
WO	WO 2011/104711	9/2011
WO	WO 2011/104712	9/2011
WO	WO 2011/150037	12/2011
WO	WO 2011/091543	8/2012
WO	WO 2012/119225	9/2012
WO	WO 2014/122643	8/2014
WO	WO 2014/181320	11/2014
WO	WO 2015/029020	3/2015
WO	WO 2015/077184	5/2015
WO	WO 2015/077466	5/2015
WO	WO 2013/096911	1/2016
WO	WO 2016/010909	1/2016
WO	WO 2017/096072	6/2017

OTHER PUBLICATIONS

Cato (Computer Aided Therapy for Oncology)—Reference Manual—Vienna, May 2005, 255 pgs.

Neo Care Medical Products: Product Catalog, dated Jun. 2008, in 38 pages.

Pinnacle TPN Management System, from B Braun, downloaded May 5, 2009 from <http://www.bbraunusa.com/index.cfm?uid=7386ADF065B05CD0D22AF700339AA4092>, 1 page.

Product detail for “NAMIC® Closed Fluid Systems” from Navilyst Medical, downloaded on May 11, 2010 from <http://www.navilystmedical.com/Products/index.cfm/19>, 2 pages.

Product detail for “RapidFill™ Automated Syringe Filler,” from Baxa, downloaded on Mar. 31, 2010 from <http://www.baxa.com/PharmacyProducts/AutomatedFillingSystems/ProductDetail/?id=B1>, 2 pages.

Product detail for “Summit Medical DirectFlow” micro infusion extension set from Summit Medical Technologies, downloaded on May 10, 2010 from <http://summitmedtech.com/p6line.php>, 1 page.

Riva, downloaded in Apr. 2009 from <http://www.rivasystem.com>, 6 pages.

Smith, “Lifesaving Cancer Drugs May Put Workers’ Lives at Risk,” downloaded on Jul. 12, 2010 from <http://www.msnbc.msn.com/id/38114586/ns/health-cancer>, 7 pages.

Technical Data sheet for Analog Amplifiers Type VA, models V8-C and V8-D; STM Sensors dated Dec. 2007, 4 pages.

Technical Data sheet for Through Beam Sensors Type G2, 1480 nm, STM Sensors dated Dec. 2009, 2 pages.

Technical Data sheet for Through Beam Sensors Type G2, 645 nm, STM Sensors dated Dec. 2008, 2 pages.

User Guide for medOC 1xx Basic, Neo Care Medical Products GmbH, Version Jun. 2008, 23 pages.

User Manual for medOC 3xx /6xx /8xx, Neo Care Medical Products GmbH, Version May 2008, 44 pages.

International Invitation to Pay Additional Fees (with cited art), re PCT Application No. PCT/US 16/64467, dated Jan. 25, 2017.

International Search Report and Written Opinion, re PCT Application No. PCT/US 16/64467, dated Apr. 5, 2017.

Autoyec 50, from KRZ, Dec. 6, 2007.

BioExpert International Inc., Company overview, credentials for Rabih Jamaledine, Nabil Kereknawi, and Danica Robillard Corso, 2010 BioExpert International Inc., in 3 pages.

Clearlink Needleless IV Access System, dated Aug. 2007, in 2 pages.

CytoCare, by Health Robotics, Brochure, Date Unknown, downloaded on May 25, 2012 from <http://www.health-robotics.com/smartedit/downloads/en/cytocare7.pdf>, 6 pages.

Exacta-Mix 2400, from Baxa, which appears to have a date of 2007, 2 pages.

Flickinger, Bruce, “Misperceptions Cloud the Issue of Sterile Drug Compounding,” Jun. 2007.

Fox, Brent I., “Pharmacy Automation and Technology: Automated Intravenous Preparation: Robots for the Pharmacy,” Hospital Pharmacy, vol. 44, Mar. 2009, pp. 255-257.

(56)

References Cited

OTHER PUBLICATIONS

Healthmark, "Hospital Medication Preparation, Packaging and Dispensing," Chemo Drug Preparation/Administration in 2 pages downloaded Jan. 6, 2015.

Healthmark, "Hospital Medication Preparation, Packaging and Dispensing," Chemosphere, Sterile chemo Compounding (Isolator) in 1 page downloaded Jan. 6, 2015.

Healthmark, "Hospital Medication Preparation, Packaging and Dispensing," in 1 page downloaded Jan. 6, 2015.

Healthmark, "Hospital Medication Preparation, Packaging and Dispensing," Oncology Preparation and Administration in 1 page downloaded Jan. 6, 2015.

Healthmark, "Hospital Medication Preparation, Packaging and Dispensing," Phocus RX (Camera Verification System), Remote Rx Checking of admistures, in 2 pages downloaded Jan. 6, 2015.

Healthmark, "New Product Items," in 1 page downloaded Jan. 6, 2015.

Integra Brochure, from Eurospital, Brochure acquired in Mar. 2012.

International Preliminary Report on Patentability for International PCT Patent Application No. PCT/US2014/065972, dated Jun. 9, 2016.

International Search Report and Written Opinion for International PCT Patent Application No. PCT/US2014/065972, dated Feb. 24, 2015.

Precifill, Trademark search (TESS), in 1 page, downloaded Jan. 6, 2015.

SmartSite Safety Disposables, with copyright notice dated 2004.

Spiros—Closed Male Connector, published Jan. 22, 2008.

International Preliminary Report on Patentability, re PCT Application No. PCT/US 16/64467, dated Jun. 5, 2018.

* cited by examiner

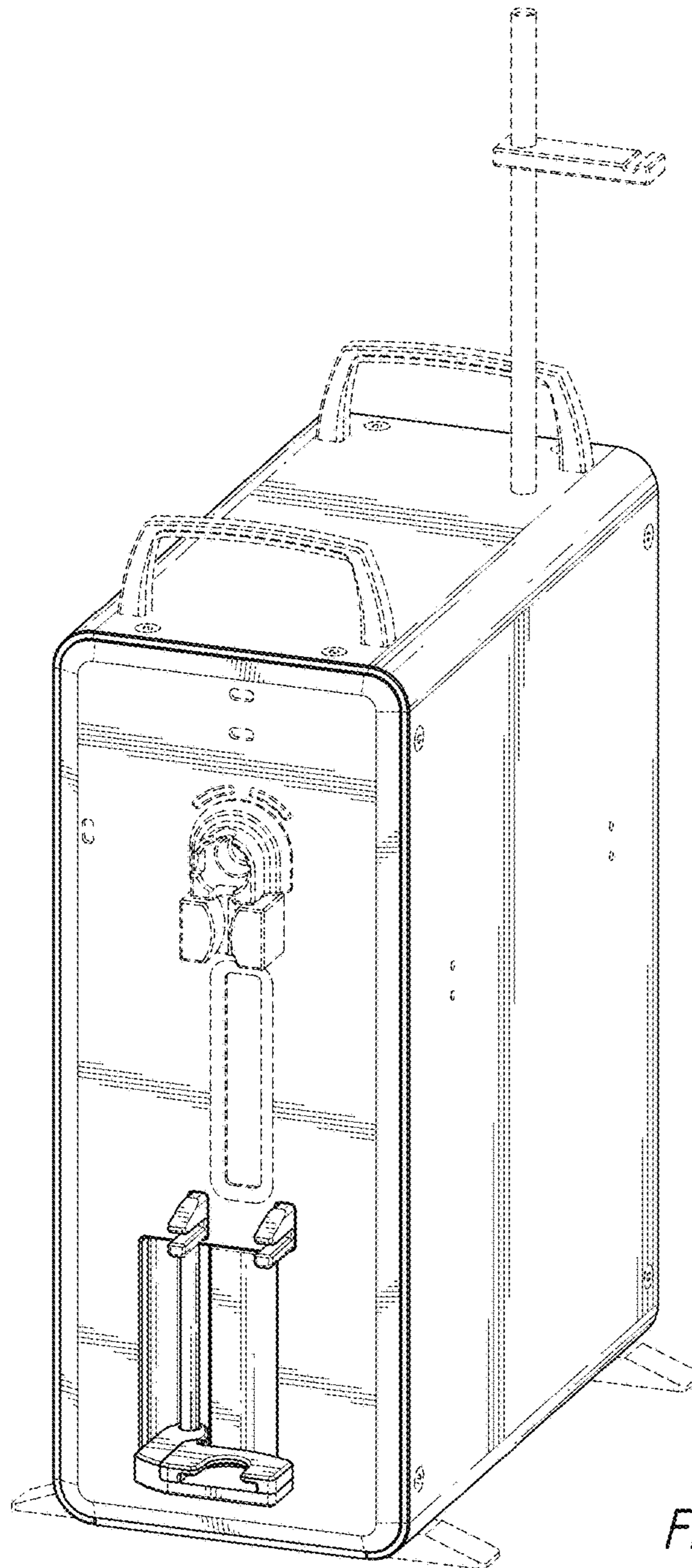


FIG. 1

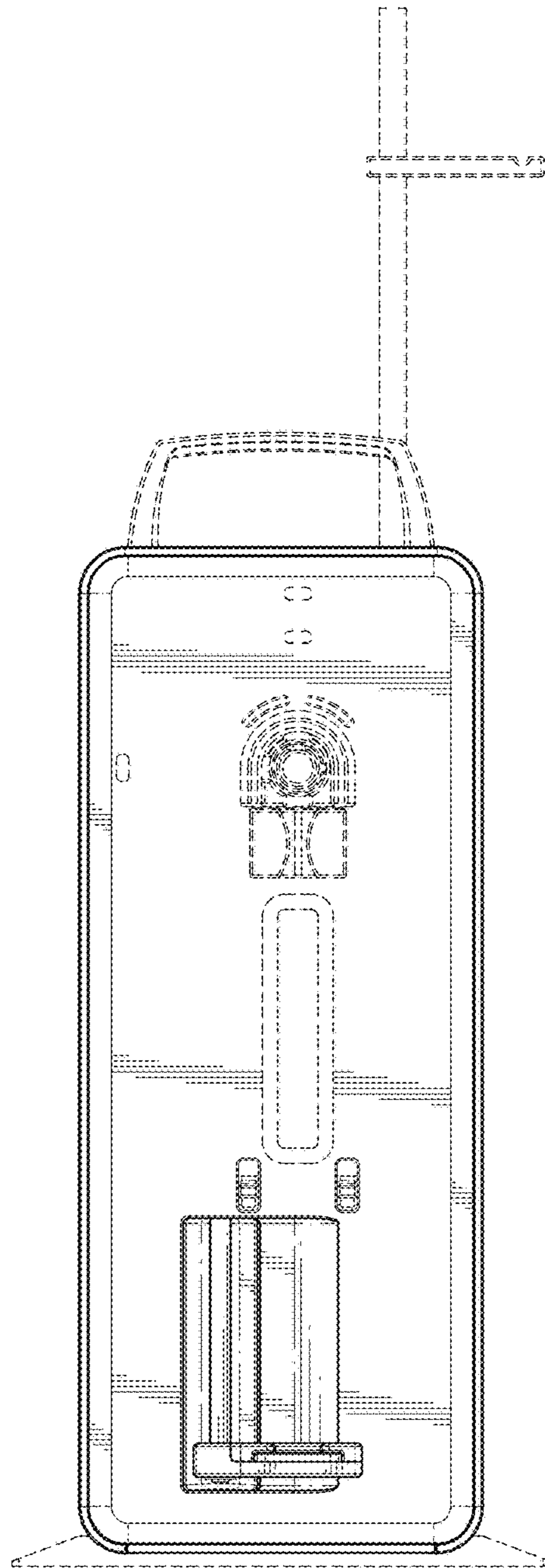


FIG. 2

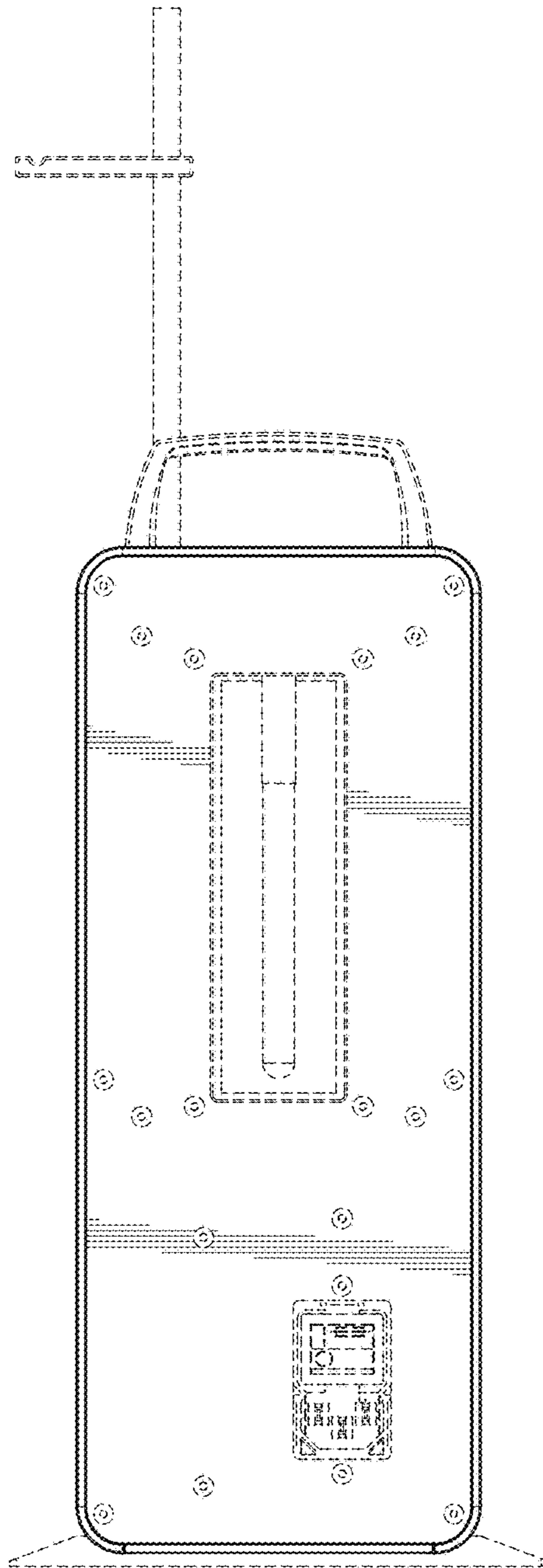


FIG. 3

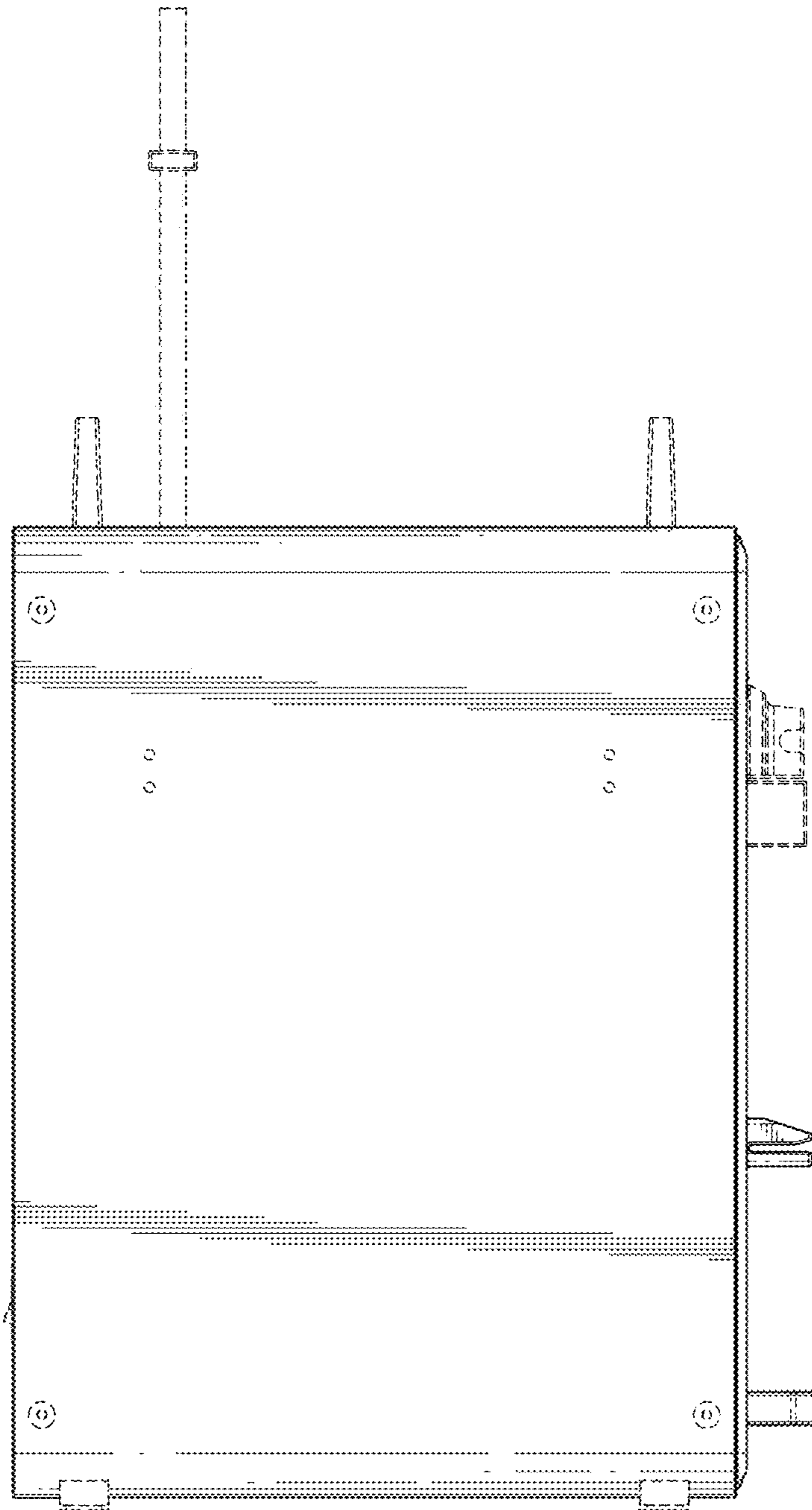


FIG. 4

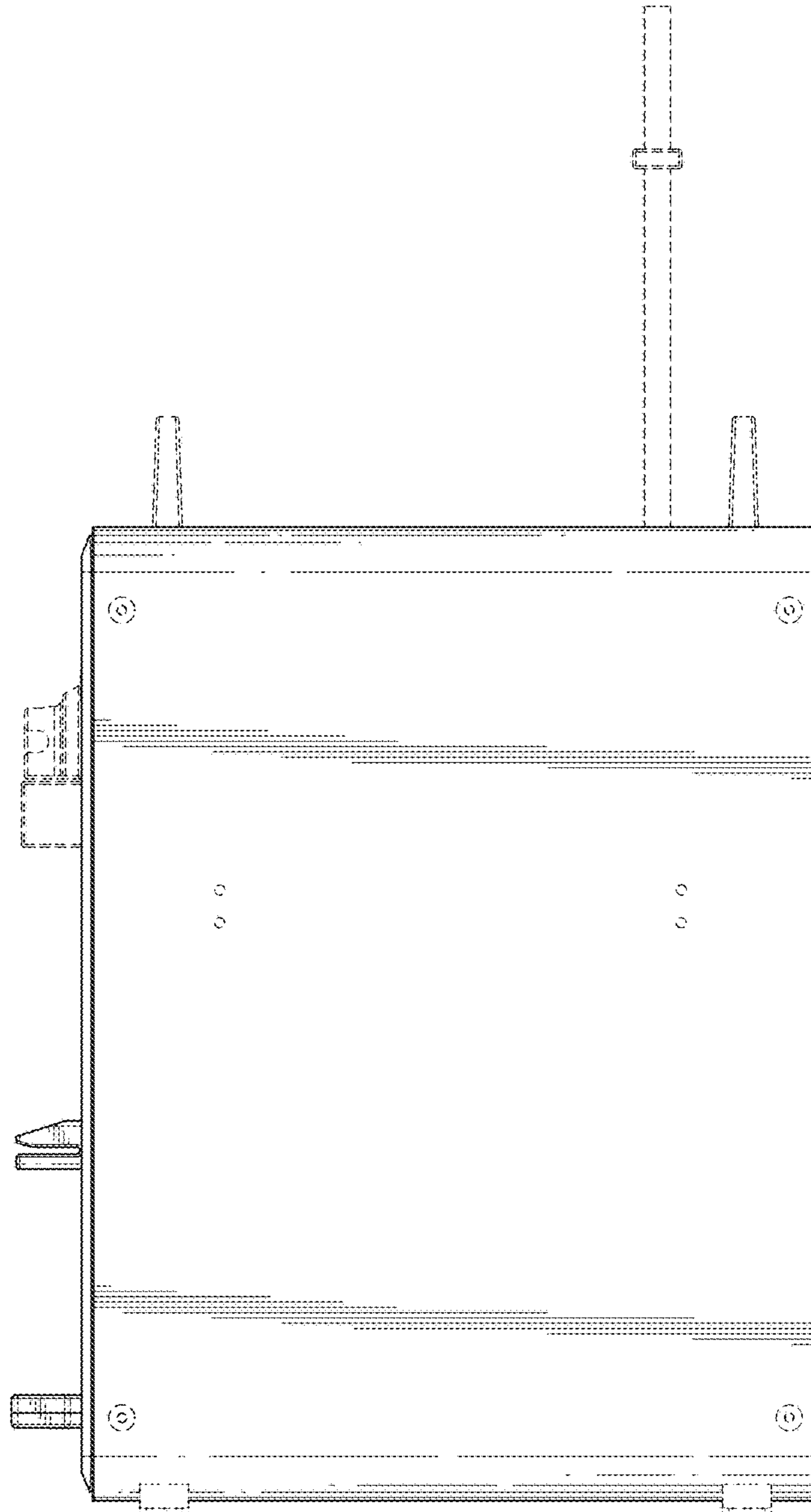


FIG. 5

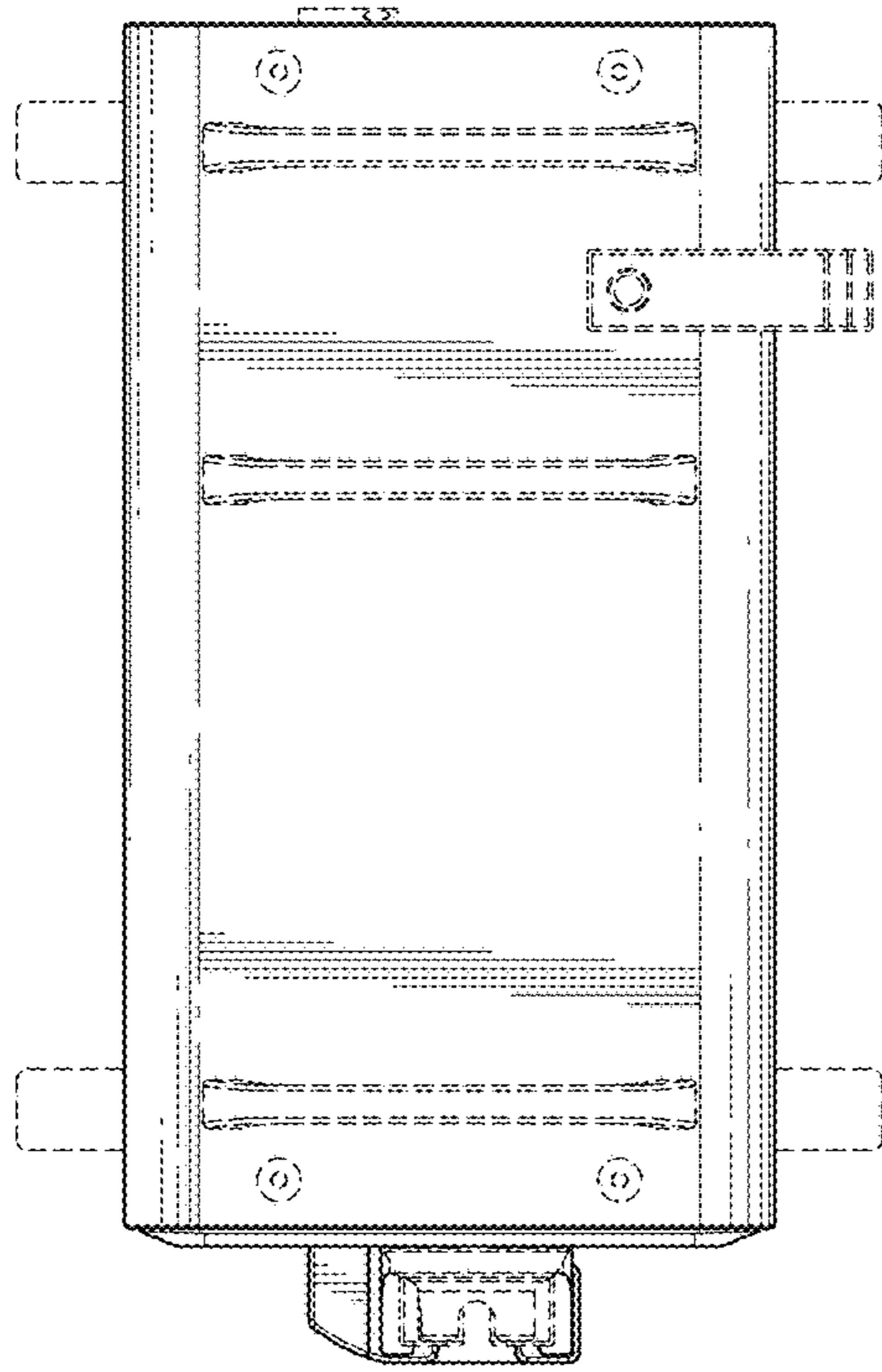


FIG. 6

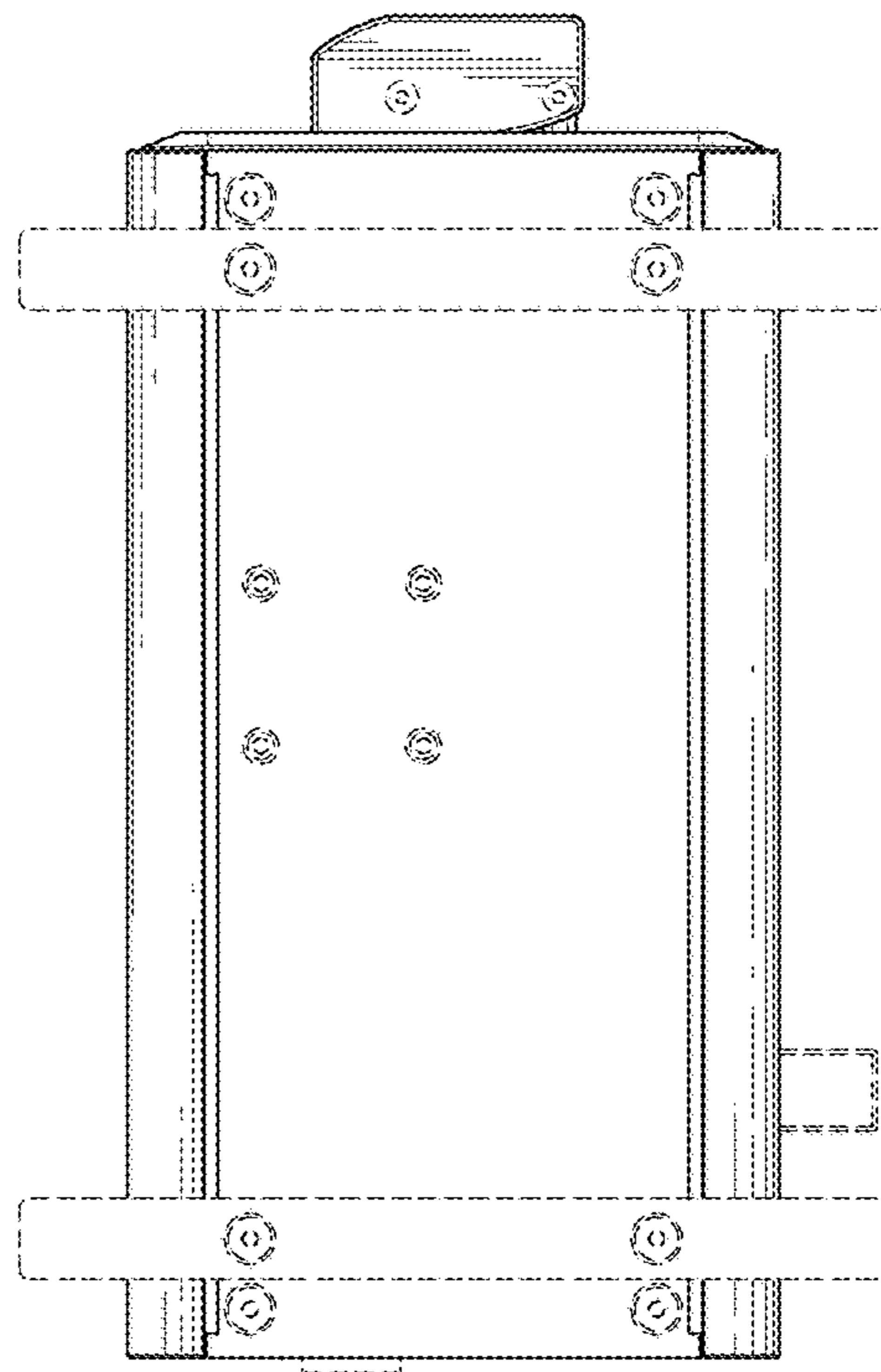


FIG. 7