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(54) **MEDICAL PUMP**
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D353,667 S * 12/1994 Tsubota D24/111
D354,010 S 1/1995 Pistilli
D360,259 S 7/1995 Ijiri et al.
5,482,446 A 1/1996 Williamson et al.
5,505,709 A 4/1996 Funderburk et al.
5,533,981 A 7/1996 Mandro et al.
5,637,095 A 6/1997 Nason et al.

(Continued)

FOREIGN PATENT DOCUMENTS

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CN 201379850 Y 1/2010
CN 201431672 Y 3/2010

(Continued)

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OTHER PUBLICATIONS

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CPC A61M 5/20; A61M 5/30; A61M 5/142;
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(57) **CLAIM**

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

See application file for complete search history.

DESCRIPTION

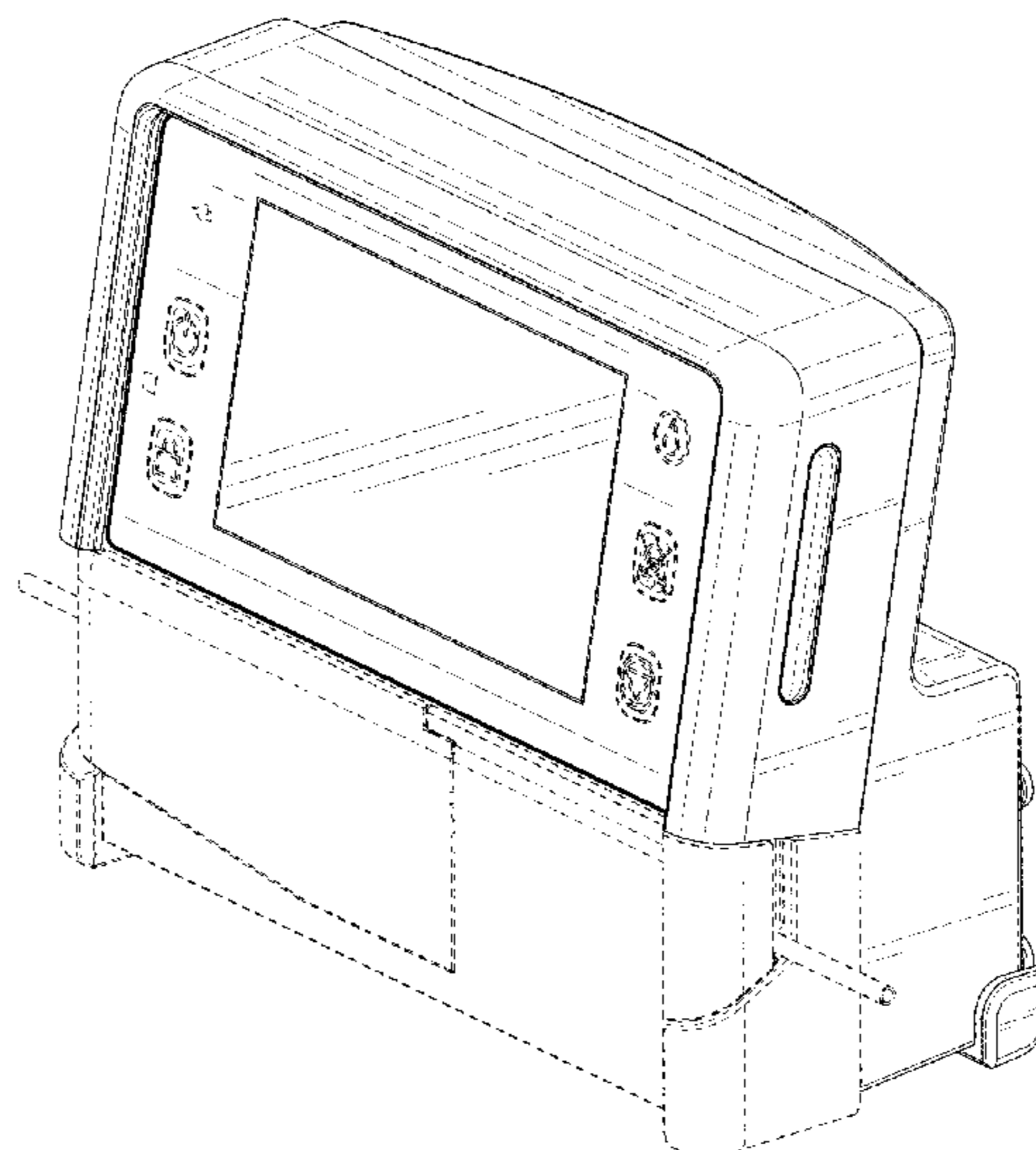
(56) **References Cited**

U.S. PATENT DOCUMENTS

D65,832 S 10/1924 Remark
D76,595 S 10/1928 Balzer
D89,168 S 2/1933 Carlson
D107,079 S 11/1937 Hedfield et al.
D263,997 S 4/1982 Preussner
D309,662 S * 7/1990 Gorton D24/111
D327,123 S 6/1992 Stracener et al.
5,256,157 A 10/1993 Samiotes et al.
5,295,967 A 3/1994 Rondelet et al.
D348,730 S 7/1994 Walker et al.

FIG. 1 is a front, top, and right side perspective view of a medical pump, showing our new design;
FIG. 2 is a front side elevational view thereof;
FIG. 3 is a rear side elevational view thereof;
FIG. 4 is a left side elevational view thereof.
FIG. 5 is a right side elevational view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.
The broken lines in the drawings illustrate portions of the medical pump that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,681,285	A	10/1997	Ford et al.		D728,779	S	5/2015	Sabin et al.
D390,654	S *	2/1998	Alsberg	D24/111	D731,509	S	6/2015	Sueishi et al.
D393,072	S	3/1998	Rogler		D732,062	S	6/2015	Kwon
5,954,697	A	9/1999	Srisathapat et al.		D732,063	S	6/2015	Kwon
D440,575	S	4/2001	Wang et al.		D732,567	S	6/2015	Moon et al.
6,228,047	B1	5/2001	Dadson		D733,740	S	7/2015	Lee et al.
D446,860	S	8/2001	Mezière et al.		D733,741	S	7/2015	Lee et al.
6,428,509	B1	8/2002	Fielder		D734,475	S	7/2015	Ross
D475,134	S	5/2003	Randolph		D735,319	S *	7/2015	Sabin D24/111
D499,740	S	12/2004	Ombao et al.		D735,746	S	8/2015	Zuckerberg et al.
6,932,242	B2	8/2005	Gerlach et al.		D736,370	S *	8/2015	Sabin D24/111
D512,151	S	11/2005	Ward et al.		D740,848	S	10/2015	Bolts et al.
7,163,381	B1 *	1/2007	Barak F04B 43/082		D741,358	S	10/2015	Seo et al.
				318/476	9,151,646	B2	10/2015	Kamen et al.
D551,243	S	9/2007	Young		D745,661	S	12/2015	Collins et al.
D556,910	S	12/2007	Reihanifam et al.		D749,206	S	2/2016	Johnson et al.
D557,272	S	12/2007	Glaser et al.		D750,222	S	2/2016	Chang
D559,262	S	1/2008	Young		D751,689	S	3/2016	Peret et al.
D576,281	S	9/2008	Reihanifam et al.		D751,690	S	3/2016	Peret et al.
D599,373	S	9/2009	Kobayashi et al.		D752,209	S	3/2016	Peret et al.
D604,740	S	11/2009	Matheny et al.		9,295,778	B2	3/2016	Kamen et al.
D622,730	S	8/2010	Krum et al.		D754,065	S	4/2016	Gray et al.
D625,322	S	10/2010	Guntaur et al.		D756,386	S	5/2016	Kendler et al.
D625,323	S	10/2010	Matsushima et al.		D758,399	S	6/2016	Kendler et al.
7,890,881	B1	2/2011	Skidgel		D760,288	S	6/2016	Kendler et al.
D633,517	S	3/2011	Weir et al.		D760,289	S	6/2016	Kendler et al.
D640,376	S	6/2011	Amano et al.		9,364,394	B2	6/2016	Demers et al.
D640,377	S	6/2011	Amano et al.		9,372,486	B2	6/2016	Peret et al.
D649,973	S	12/2011	Matas		D760,782	S	7/2016	Kendler et al.
D652,050	S	1/2012	Chaudhri		D760,888	S	7/2016	Gill et al.
D655,301	S	3/2012	Ray et al.		9,400,873	B2	7/2016	Kamen et al.
D660,313	S	5/2012	Williams et al.		D765,832	S	9/2016	Hochman et al.
D664,988	S	8/2012	Gleasman et al.		D767,756	S	9/2016	Sabin
D665,401	S	8/2012	Rai et al.		9,435,455	B2	9/2016	Peret et al.
D666,208	S	8/2012	Spears et al.		D768,716	S	10/2016	Kendler et al.
8,256,984	B2	9/2012	Fathallah et al.		9,465,919	B2	10/2016	Kamen et al.
D668,262	S	10/2012	Gleasman et al.		9,488,200	B2	11/2016	Kamen et al.
D669,096	S *	10/2012	Katsura D15/7		2001/0044602	A1	11/2001	Angersbach et al.
D669,165	S	10/2012	Estes et al.		2002/0127114	A1 *	9/2002	Barak F04B 43/082
D671,550	S	11/2012	Chen et al.					417/12
D671,551	S	11/2012	Deng et al.		2003/0217962	A1	11/2003	Childers et al.
D673,168	S	12/2012	Frijlink et al.		2004/0057855	A1	3/2004	Gerlach et al.
D675,224	S	1/2013	Lee et al.		2004/0220526	A1	11/2004	Boyne-Aitken
D675,727	S	2/2013	Collins et al.		2005/0029277	A1	2/2005	Tachibana
D678,320	S	3/2013	Kanalakis, Jr. et al.		2005/0050301	A1	3/2005	Whittle et al.
D679,379	S	4/2013	Katsura		2005/0096593	A1	5/2005	Pope et al.
D685,817	S	7/2013	Kunieda et al.		2005/0267827	A1	12/2005	Grant, Jr. et al.
D689,195	S	9/2013	Nelsen		2009/0040875	A1	2/2009	Buzescu et al.
D690,729	S	10/2013	Abratowski et al.		2009/0144620	A1	6/2009	Bauchot et al.
D691,259	S	10/2013	Estes et al.		2010/0153872	A1	6/2010	Ahn et al.
D696,684	S	12/2013	Yuk et al.		2010/0169389	A1	7/2010	Weber et al.
D696,686	S	12/2013	Yuk et al.		2010/0169783	A1	7/2010	Weber et al.
D698,362	S	1/2014	Ramesh et al.		2011/0085778	A1	4/2011	Iwase et al.
D701,232	S	3/2014	Na et al.		2011/0161806	A1	6/2011	Stern et al.
D704,213	S	5/2014	Agnew		2011/0184383	A1	7/2011	Hasegawa
D705,244	S	5/2014	Arnold et al.		2011/0271221	A1	11/2011	Lategan
D705,248	S	5/2014	McCormack et al.		2011/0313789	A1	12/2011	Kamen et al.
D708,626	S	7/2014	Klein et al.		2012/0035581	A1	2/2012	Travis
D708,627	S	7/2014	Klein et al.		2012/0079416	A1	3/2012	Fagans
D709,085	S	7/2014	Wen		2012/0083760	A1	4/2012	Ledford et al.
D712,920	S	9/2014	Sloo et al.		2012/0177507	A1	7/2012	Bennett et al.
D715,320	S	10/2014	McCormack et al.		2012/0185267	A1	7/2012	Kamen
D716,332	S	10/2014	Chotin et al.		2012/0209197	A1	8/2012	Lanigan et al.
D717,814	S	11/2014	Zuckerberg et al.		2012/0254044	A1	10/2012	Flanagan et al.
8,876,793	B2	11/2014	Ledford et al.		2012/0266964	A1	10/2012	West et al.
D718,776	S	12/2014	Hobbs et al.		2013/0053820	A1	2/2013	Estes et al.
D718,777	S	12/2014	Hobbs et al.		2013/0127870	A1	5/2013	Baudel et al.
D718,778	S	12/2014	Hobbs et al.		2013/0177455	A1	7/2013	Kamen
D719,963	S	12/2014	Hobbs et al.		2013/0182381	A1	7/2013	Gray
D719,964	S	12/2014	Hobbs et al.		2013/0184676	A1	7/2013	Kamen
D721,719	S	1/2015	Lee		2013/0188040	A1	7/2013	Kamen
D722,612	S	2/2015	Lee et al.		2013/0191513	A1	7/2013	Kamen
D722,614	S	2/2015	Williams et al.		2013/0197693	A1	8/2013	Kamen
D723,052	S	2/2015	Lai et al.		2013/0204188	A1	8/2013	Kamen
D725,670	S	3/2015	Zhang et al.		2013/0272773	A1	10/2013	Kamen
					2013/0281965	A1	10/2013	Kamen
					2013/0297330	A1	11/2013	Kamen
					2013/0310990	A1	11/2013	Peret et al.
					2013/0317753	A1	11/2013	Kamen

(56)

References Cited

U.S. PATENT DOCUMENTS

2013/0317837 A1 11/2013 Ballantyne
 2013/0318429 A1 11/2013 Dantas et al.
 2013/0325154 A1 12/2013 Oh et al.
 2013/0336814 A1 12/2013 Kamen
 2013/0339049 A1 12/2013 Blumberg, Jr.
 2013/0346108 A1 12/2013 Kamen
 2014/0046296 A1 2/2014 Clarke
 2014/0152585 A1 6/2014 Andersson Reimer
 2014/0165703 A1 6/2014 Wilt
 2014/0180711 A1 6/2014 Kamen
 2014/0188076 A1 7/2014 Kamen
 2014/0188516 A1 7/2014 Kamen
 2014/0195639 A1 7/2014 Kamen
 2014/0227021 A1 8/2014 Kamen
 2014/0237419 A1 8/2014 Ryu
 2014/0243745 A1 8/2014 Ueda et al.
 2014/0318639 A1 10/2014 Peret
 2014/0343492 A1 11/2014 Kamen
 2014/0359443 A1 12/2014 Hwang
 2015/0002667 A1 1/2015 Peret et al.
 2015/0002668 A1 1/2015 Peret et al.
 2015/0002677 A1 1/2015 Peret et al.
 2015/0018766 A1* 1/2015 Nakanishi A61M 5/14228
 604/151
 2015/0023808 A1* 1/2015 Zhu F04B 39/00
 417/63
 2015/0033823 A1 2/2015 Blumberg, Jr.
 2015/0089364 A1 3/2015 Meller et al.
 2015/0151057 A1* 6/2015 Nakanishi A61M 5/162
 604/151
 2015/0154364 A1 6/2015 Biasi et al.
 2015/0157791 A1 6/2015 Desch et al.
 2015/0238228 A1 8/2015 Langenfeld et al.
 2015/0238689 A1* 8/2015 Shimizu A61M 5/14228
 604/508
 2015/0257974 A1 9/2015 Demers et al.
 2015/0265763 A1 9/2015 Katsunuma
 2015/0314066 A1* 11/2015 Shimizu A61M 5/16831
 604/507
 2015/0314083 A1 11/2015 Blumberg, Jr. et al.
 2015/0332009 A1 11/2015 Kane et al.
 2016/0055397 A1 2/2016 Peret et al.
 2016/0055649 A1 2/2016 Peret et al.
 2016/0061641 A1 3/2016 Peret et al.
 2016/0063353 A1 3/2016 Peret et al.
 2016/0073063 A1 3/2016 Peret et al.
 2016/0084434 A1 3/2016 Janway et al.
 2016/0097382 A1 4/2016 Kamen et al.
 2016/0131272 A1 5/2016 Yoo et al.
 2016/0158437 A1 6/2016 Biasi et al.
 2016/0179086 A1 6/2016 Peret et al.
 2016/0184510 A1 6/2016 Kamen et al.
 2016/0203292 A1 7/2016 Kamen et al.
 2016/0228633 A1 8/2016 Welsch et al.
 2016/0262977 A1 9/2016 Demers et al.
 2016/0319850 A1 11/2016 Kamen et al.

FOREIGN PATENT DOCUMENTS

CN 201524307 U 7/2010
 EP 1722310 A1 11/2006
 GB 2020735 A 11/1979
 WO WO02100262 A1 12/2002
 WO WO2006086723 A2 8/2006
 WO WO2009055639 A2 4/2009
 WO WO2011021098 A1 2/2011
 WO WO2013095459 A9 6/2013
 WO WO2013096713 A2 6/2013
 WO WO2013096718 A2 6/2013
 WO WO2013096722 A2 6/2013
 WO WO2013096909 A2 6/2013
 WO WO2013176770 A2 11/2013
 WO WO2013177357 A1 11/2013
 WO WO2014100557 A2 6/2014

WO WO2014100571 A2 6/2014
 WO WO2014100658 A1 6/2014
 WO WO2014100687 A2 6/2014
 WO WO2014100736 A2 6/2014
 WO WO2014100744 A2 6/2014
 WO WO2014144557 A2 9/2014
 WO WO2015017275 A1 2/2015
 WO WO2016089572 A1 6/2016
 WO WO2016176042 A1 11/2016
 WO WO2016179389 A1 11/2016
 WO WO2016205584 A1 12/2016

OTHER PUBLICATIONS

European Community Design Registration 002374777/0001, Filed Dec. 20, 2013 and published on Dec. 23, 2013, 8 pgs.
 European Community Design Registration 002374900/0001-0001, Filed Dec. 20, 2013 and published on Dec. 23, 2013, 44 pgs.
 International Search Report & Written Opinion, dated Nov. 7, 2013, received in International patent application No. PCT/US2013/042350 18 pgs.
 International Search Report & Written Opinion, dated Oct. 1, 2013, received in International patent application No. PCT/US2012/071490 20 pgs.
 AAMI and FDA, Infusing Patients Safely: Priority Issues from the AAMI/FDA Infusion Device Summit, Symposium, Oct. 5-6, 2010, pp. 1-48, AAMI, Arlington, VA, USA., www.aami.org.
 Care Everywhere, Gateway User Manual: V1.0.13 W/CQI 1.6: For Use with the Sigma Spectrum Pump: Care Everywhere Document No. CE-100-003-IFU, manual, pp. 1-55, CareEverywhere LLC, 9 Tech Circle, Natick, MA, USA., Release 1.0.9 (Initial Release) www.sigmapumps.com.
 Fresenius Kabi AG, Agilia® Product Line, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/5316.htm.
 Fresenius Kabi AG, Alyx™, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8825.htm.
 Fresenius Kabi AG, Amicus™, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8823.htm.
 Fresenius Kabi AG, Amika®, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8934.htm.
 Fresenius Kabi AG, Applix Smart, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2202.htm.
 Fresenius Kabi AG, Applix Vision, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2224.htm.
 Fresenius Kabi AG, Aurora™, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8829.htm.
 Fresenius Kabi AG, Autopheresis-C™, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8827.htm.
 Fresenius Kabi AG, C.A.T.S Plus, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2246.htm.
 Fresenius Kabi AG, COM.TEC®, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2306.htm.
 Fresenius Kabi AG, CompoDock®, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2324.htm.
 Fresenius Kabi AG, CompoGuard®, 3 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2308.htm.
 Fresenius Kabi AG, CompoLab TS, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6921.htm.
 Fresenius Kabi AG, Compomat® G4, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2320.htm.
 Fresenius Kabi AG, CompoMat® G5 & CompoSure, 3 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6931.htm.
 Fresenius Kabi AG, CompoSeal® Mobile II, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6945.htm.
 Fresenius Kabi AG, CompoSeal® Universal, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2326.htm.
 Fresenius Kabi AG, HemoLight® Plus, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6953.htm.
 Fresenius Kabi AG, HemoSeal®, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6961.htm.
 Fresenius Kabi AG, Injectomat MC Agilia, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6195.htm.

(56)

References Cited

OTHER PUBLICATIONS

Fresenius Kabi AG, Injectomat TIVA Agilia, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6197.htm.

Fresenius Kabi AG, Link+ Agilia, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8924.htm.

Fresenius Kabi AG, MRI Guard Agilia, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/8926.htm.

Fresenius Kabi AG, Orchestra® Base A, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1630.htm.

Fresenius Kabi AG, Orchestra® Base Intensive, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1669.htm.

Fresenius Kabi AG, Orchestra® Base Primea, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1676.htm.

Fresenius Kabi AG, Orchestra® Module DPS, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1699.htm.

Fresenius Kabi AG, Orchestra® Module DPS+, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1707.htm.

Fresenius Kabi AG, Orchestra® Module DPS Visio, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1714.htm.

Fresenius Kabi AG, Orchestra® Module MVP MS, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1682.htm.

Fresenius Kabi AG, Orchestra® Module MVP PT, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/1691.htm.

Fresenius Kabi AG, Orchestra® Module MVP ST, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2026.htm.

Fresenius Kabi AG, Pilot Enteral, 2 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2238.htm.

Fresenius Kabi AG, PlaquetaMix®, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/6963.htm.

Fresenius Kabi AG, Vacuum Pump Bora, 1 pg., Sep. 24, 2013, Germany, www.fresenius-kabi.com/2249.htm.

Fresenius Kabi AG, Volumat Agilia, 3 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/VolumatAgilia.htm.

Fresenius Kabi AG, Volumat MC Agilia, 3 pgs., Sep. 24, 2013, Germany, www.fresenius-kabi.com/VolumatMCagilia.htm.

National Patient Safety Agency, Design for Patient Safety: A Guide to the Design of Electronic Infusion Devices, Ref: 0976 Mar. 2010, ISBN: 978-1-906624-10-1, pp. 1-96, Edition 1, National Patient Safety Agency, National Reporting and Learning Service, Helen Hamlyn Centre, Royal College of Art, London, USA. www.nrls.npsa.nhs.uk.

“Alaris Syringe Pumps,” Technical Service Manual, 2006, Cardinal Health Inc., accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/Cardinal_Alaris_-_Service_Manual.pdf.

“Asena GH Syringe Pump with Gaurdrails Safety Software,” Directions for Use, 2003, Alaris Medical Systems, accessed at http://video.rch.org.au/bme_rch/1PB1453N01.pdf on Apr. 16, 2014.

“Alaris GP Volumetric Pump,” Technical Service Manual, 2008, Cardinal Health Inc., accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/CardinalHealth_Alaris_GP_-_Service_manual.pdf on Apr. 16, 2014.

“Alaris GW Volumetric Pump,” Directions for Use, 2011, Carefusion Corporation, accessed at <http://www.carefusion-products.com/assets/supportdocs/DFUs/1000DF00440.pdf> on Apr. 16, 2014.

“Gemini PC-2 Volumetric Infusion Pump/Controller,” Operator’s Manual, 1994, IMED Corporation, accessed at <http://www.triumphmed.com/manuals/GEMINI-PC-2v3.44.pdf> on Apr. 16, 2014.

“Gemini PC-4 Volumetric Infusion Pump/Controller,” Maintenance Manual, Nov. 1, 1995, IMED Corporation, accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/Imed_Gemini_PC-4_Infusion_Pump_-_Service_manual.pdf on Apr. 16, 2014.

Photograph of a vital signs monitor by Carefusion Corporation, Alaris IVAC 4410 Vital Signs Monitor, accessed at <http://kahntactusa.com/Products/1136-alaris-ivac-4410-vital-signs-monitor-w-cuff-spo2.aspx> on Apr. 16, 2014.

Photograph of a pump product by Carefusion Corporation, Alaris PC, accessed at <http://www.carefusion.com/medical-products/infusion/devices/> on Apr. 16, 2014.

“Alaris PC Unit, Models 8000 and 8015” and “Alaris Pump Module, Model 8100,” Technical Service Manual, Mar. 2007, Cardinal Health, Inc., accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/CardinalHealth_Alaris_8100_-_Service_manual.pdf on Apr. 16, 2014.

“Alaris SE Pump Models 7130/7131 and 7230/7231,” Directions for Use, Nov. 2010, Carefusion Corporation, accessed at http://www.carefusion.com/pdf/Infusion/clinical_documentation/user_manuals/12155838.pdf on Apr. 16, 2014.

“Volumetric Infusion Pump ARGUS 707 V,” Service Manual, Mar. 28, 2006, ARGUS Medical AG, accessed at http://www.helse-mr.no/ftp/eqspublic/legemiddelprosessen/docs/doc_15163/attachments/Argus%20%20707%20infusionspumpe.pdf on Apr. 16, 2014.

“Volumetric Infusion Pump ARGUS 708 V,” Service Manual, Mar. 28, 2006, ARGUS Medical AG, accessed at http://www.internetmed.com/sites/default/files/Argus_708_-_Service_manual.pdf on Apr. 16, 2014.

“Auto Syringe AS40A Model AS40A Infusion Pump,” Operation Manual, 1993, Baxter Healthcare Corporation, accessed at <http://www.triumphmed.com/manuals/BAXTER-AS40A.pdf> on Apr. 16, 2014.

“Auto Syringe AS50 Model AS50 Infusion Pump,” Operator’s Manual, May 2002, Baxter Healthcare Corporation, accessed at http://www.lhsc.on.ca/Health_Professionals/CCTC/eduquiz/as50.pdf on Apr. 16, 2014.

“Colleague Volumetric Infusion Pump” and “Colleague 3 Volumetric Infusion Pump,” Global Service Manual, 2004, Baxter Healthcare Corporation, accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/Baxter_Colleague_-_Service_manual.pdf on Apr. 16, 2014.

“Colleague CX Volumetric Infusion Pump,” Addendum to Operator’s Manual, 2001, Baxter Healthcare Corporation, accessed at <http://www.triumphmed.com/manuals/Baxter-Colleague-CX.pdf> on Apr. 16, 2014.

“Flo-Gard 6301 Dual Channel Volumetric Infusion Pump,” Operator’s Manual, 1999, Baxter Healthcare Corporation, accessed at <http://www.meql.com/Manuals/Baxter-6301-Operators-Manual.pdf> on Apr. 16, 2014.

“Sigma Spectrum,” Operator’s Manual, May 15, 2008, Sigma International, accessed at <http://www.meql.com/Manuals/Sigma-Spectrum-User-Manual.pdf> on Apr. 16, 2014.

“Sigma International Model Spectrum Infusion Pump,” Service Manual, Aug. 2008, Sigma International, Inc., accessed at <http://photos.medwrench.com/equipmentManuals/3519-3759.pdf> on Apr. 17, 2014.

Photograph of a pump product by Smiths Medical, CADD-Solis Ambulatory Infusion Pump, accessed at <http://www.smiths-medical.com/catalog/ambulatory-pumps-sets/cadd-ambulatory-infusion-pumps/cadd-solis/cadd-solis-ambulatory-infusion.html> on Apr. 16, 2014 (image on website at least as early as Nov. 16, 2008).

“Production Engineering—Medical Equipment Division,” Images on website since at least Sep. 17, 2008, PEMED, accessed at <http://www.pemed.com/surgery/pumps/pumps.htm> on Apr. 18, 2014.

“Curlin 6000 CMS Ambulatory Infusion System,” 2008, B. Braun Medical Inc., accessed at <http://zivotberstrevca.cz/wp-content/uploads/2013/10/Curlin-6000-male.pdf> on Apr. 16, 2014.

“Delphia IVantage Volumetric Ambulatory Infusion System,” 2006, Delphia Corporation, accessed at <https://delphi.com/shared/pdf/ppd/medical/IVantage-Volumetric-Ambulatory-Infusion-Product-Sheet.pdf> on Apr. 16, 2014.

“Syringe Pumps Range when accuracy matters,” Smiths Medical International Ltd, accessed at http://www.smiths-medical.com/upload/products/pdf/SMI_syringe_pumps_range9.pdf on Apr. 16, 2014 (file on website at least as early as Oct. 21, 2007).

“Model 500 and Micro 505 Volumetric Infusion Pump,” Instruction Manual, 2002, Graseby Medical Limited, accessed at <http://www.graseby.com/Products/500-505-Volumetric-Infusion-Pump-Instruction-Manual.pdf> on Apr. 16, 2014.

(56)

References Cited

OTHER PUBLICATIONS

isurplus.com.au/manuals/Graseby%20500%20&%203000%20Infusion%20Pump%20User%20Manual.pdf on Apr. 16, 2014.

“Micro Macro Plum XL with DataPort,” System Operating Manual, Aug. 1997, Abbott Laboratories, accessed at <http://www.elitemedicalmall.com/manuals/Abbott-PLUM-XLwDATAPORT.pdf> on Apr. 16, 2014.

“LifeCare 4100 PCA Plus II Infuser with Microgram Delivery,” System Operating Manual, Oct. 1996, Abbott Laboratories, accessed at <http://www.meql.com/Manuals/Abbott-PCA-II-Plus-User-Manual.pdf> on Apr. 16, 2014.

“Gemstar,” Technical Service Manual, May 2007, Hospira, Inc., accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/Abbott_Gemstar_-_Service_Manual.pdf on Apr. 16, 2014.

“LifeCare 5000 Plum Concurrent Flow Infusion System With DataPort,” System Operating Manual, Jul. 1998, Abbott Laboratories, accessed at <http://www.meql.com/Manuals/Abbott-Plum-5000-User-Manual.pdf> on Apr. 16, 2014.

“Plum XL 3 Multi-Line Infusion System,” System Operating Manual, Jan. 1997, Abbott Laboratories, accessed at <http://www.elitemedicalmall.com/manuals/Abbott-PLUM-XL-3.pdf> on Apr. 16, 2014.

“Abbott Plum A+,” System Operating Manual, May 2001, Abbott Laboratories, accessed at <http://www.elitemedicalmall.com/manuals/Abbott-Plum-A+-Op-Manual.pdf> on Apr. 16, 2014.

“On ‘Grey’s Anatomy’: A supporting role for Hospira,” Sep. 8, 2008, by Laura Bianchi in Crain’s Chicago Business, accessed at <http://www.chicagobusiness.com/article/20080906/ISSUE03/100030530/on-greys-anatomy-a-supporting-role-for-hospira#> on Apr. 16, 2014.

“Symbiq Infusion System with Hospira MedNet Software,” Nov. 2006, Hospira, accessed at http://www.hospira.ca/english/_docs/P06-0589_Symbiq_Sets.pdf on Apr. 18, 2014.

“Monitors flex their muscles, hospitals reap rewards,” May 2007, Julie E. Williamson, accessed at <http://www.hponline.com/inside/2007-05-0705-or-monitors.html> on Apr. 18, 2014.

“The Incremental Commitment Model for System of Systems Development Tutorial,” p. 42, Jun. 18, 2007, Barry Boehm and Jo Ann Lane, accessed at <http://www.ieee-stc.org/proceedings/2007/pdfs/BB1686.pdf> on Apr. 18, 2014.

“Medication Management Systems,” p. 19, Sep. 2006, Hospira, accessed at http://media.corporate-ir.net/media_files/irol/17/175550/presentations/hsp0906.pdf on Apr. 17, 2014.

“Leon leon plus Modern anaesthesia work stations,” May 2006, Heinen + Löwenstein Medical Technology, accessed at <http://www.dodhysagencies.com/brochures/Anesthesia/Leon.pdf> on Apr. 16, 2014.

“Super Technology for Precise Breathing,” created Oct. 22, 2008 Heinen + Löwenstein Medical Technology, accessed at http://www.diagnos.pl/uploads/pdf/169/elisa_sonata_enlisch_221008.pdf on Apr. 18, 2014.

“Medfusion 2001 Syringe Pump,” Operations Manual, Oct. 1996, Medexinc, accessed at <http://www.triumphmed.com/manuals/MEDFUSION-2001.pdf> on Apr. 16, 2014.

“Operations Manual for Medfusion 2010 Syringe Pump,” Oct. 1996, Medexinc, accessed at <http://www.triumphmed.com/manuals/MEDFUSION-2010.pdf> on Apr. 16, 2014.

“3850 MRidium MRI Infusion System,” Operation Manual, 2006, IRadimed Corporation, accessed at http://www.iradimed.com/en-us/technical_support/MRidium%201124-3A.pdf on Apr. 16, 2014.

“Sabratek 3030 Volumetric Infusion Pump,” Operation Manual, 1996, Sabratek Corporation, accessed at <http://www.triumphmed.com/manuals/Sabratek-3030-Op-Manual.pdf> on Apr. 16, 2014.

Photograph of pump products by Abbott, Abbott Lifecare III and Abbott Lifecare 4, accessed at <http://www.msddistributors.com/biomed/meh/LIFECARE.HTM> on Apr. 16, 2014 (image on website at least as early as Mar. 6, 2001).

“Horizon Nxt,” Operation Manual, 1999, B. Braun Medical Inc. , accessed at <http://www.triumphmed.com/manuals/BBraun-Horizon-NXT.pdf> on Apr. 16, 2014.

“Perfusor compact,” Service Manual, approved by B. Braun on Mar. 16, 2006 and created on Mar. 17, 2006, B. Braun, accessed at http://frankshospitalworkshop.com/equipment/documents/infusion_pumps/service_manuals/B.Braun_Perfusor_Compact_-_Service_manual.pdf on Apr. 16, 2014.

“B. Braun Space,” created Oct. 19, 2004, B. Braun Melsungen Ag, accessed at http://info.bbraun.de/Extranet/Infusionpumpbad/Tutvustavad%20materjalid/Perfusor-space-tehniline_data.pdf on Apr. 16, 2014.

“LifeCare PCA for use with Hospira MedNet Software,” System Operating Manual, Jan. 2006, Hospira, accessed at <http://www.meql.com/Manuals/Abbott-Hospira-PCA-III-Mednet-User-Manual.pdf> on Apr. 16, 2014.

“Abbott AIM plus,” System Operating Manual, Feb. 1996, Abbott Laboratories, accessed at http://www.eecs.qmul.ac.uk/~masci/works/PVS/fluorouracil_example/ABBOTT-13967-04.pdf on Apr. 16, 2014.

“Omni-flow 4000 Plus IV Medication Management System,” System Operating Manual, Aug. 1996, Abbott Laboratories, accessed at <http://www.elitemedicalmall.com/manuals/Abbott-Omniflow-Op-Manual.pdf> on Apr. 16, 2014.

Photograph of pump product by Kendall, SCD Model 5325, accessed at <http://www.msdonline.com/biomed/meh/kendall.htm> on Apr. 16, 2014 (image on website at least as early as Nov. 29, 2006).

Photograph of pump product by Abbott, Provider 5500 Ambulatory Pump, accessed at <http://www.msddistributors.com/BioMed/MEH/abbottpt.htm> (image on website at least as early as Mar. 6, 2001).

“Model AP12 Single—Syringe Pump,” Mediaid Inc., created Feb. 15, 2008, accessed at http://www.mediaidinc.com/Brochures/M-AP12_IndiOval_English_HR.pdf on Apr. 17, 2014.

“Syringe Pumps AP 12 / 22,” Operating Manual, created Jan. 11, 2007, Ascor S. A. , accessed at http://www.ascor.com.pl/eng/pdf/AP12_AP22_OM36_070111_GB.pdf on Apr. 18, 2014.

“Biomedical Rental Equipment—Enteral Pumps and Accessories,” created Oct. 13, 2003, MSD, accessed at http://www.msddistributors.com/Drill_Downs/enteral%20pumps%20and%20accessories.pdf on Apr. 17, 2014, p. 4/5.

“Military Communications,” Product Catalogue, Sep. 2007, Codan US, Inc., accessed at http://www.codan.com.au/Portals/0/publications/hfradio/Military_Catalogue.pdf on Apr. 18, 2014.

U.S. Appl. No. 29/457,516, filed Jun. 11, 2013, D. 728,779S, Sabin et al.

U.S. Appl. No. 29/457,520, filed Jun. 11, 2013, D. 735,319S, Sabin et al.

U.S. Appl. No. 29/457,521, filed Jun. 11, 2013, D. 767,756S, Sabin.

U.S. Appl. No. 29/457,522, filed Jun. 11, 2013, D. 736,370S, Sabin et al.

U.S. Appl. No. 29/477,249, filed Dec. 20, 2013, D. 760,888S, Gill et al.

U.S. Appl. No. 29/477,232, filed Dec. 20, 2013, D. 768,716S, Kendler et al.

U.S. Appl. No. 29/477,233, filed Dec. 20, 2013, D. 760,782S, Kendler et al.

U.S. Appl. No. 29/477,236, filed Dec. 20, 2013, D. 760,288S, Kendler et al.

U.S. Appl. No. 29/477,237, filed Dec. 20, 2013, D. 760,289S, Kendler et al.

U.S. Appl. No. 29/517,096, filed Feb. 10, 2015, Sabin et al.

U.S. Appl. No. 29/517,097, filed Feb. 10, 2015, Sabin et al.

U.S. Appl. No. 29/517,100, filed Feb. 10, 2015, Gill, Matthew R.

U.S. Appl. No. 29/517,101, filed Feb. 10, 2015, Bodwell et al.

U.S. Appl. No. 29/531,366, filed Jun. 25, 2015.

U.S. Appl. No. 29/532,660, filed Jul. 9, 2015, Sabin et al.

U.S. Appl. No. 29/569,460, filed Jun. 28, 2016, D. 789,516S, Gill et al.

(56)

References Cited

OTHER PUBLICATIONS

U.S. Appl. No. 29/569,450, filed Jun. 28, 2016, Kendler et al.

U.S. Appl. No. 29/570,648, filed Jul. 11, 2016, Sabin.

U.S. Appl. No. 29/571,387, filed Jul. 18, 2016, Sabin.

* cited by examiner

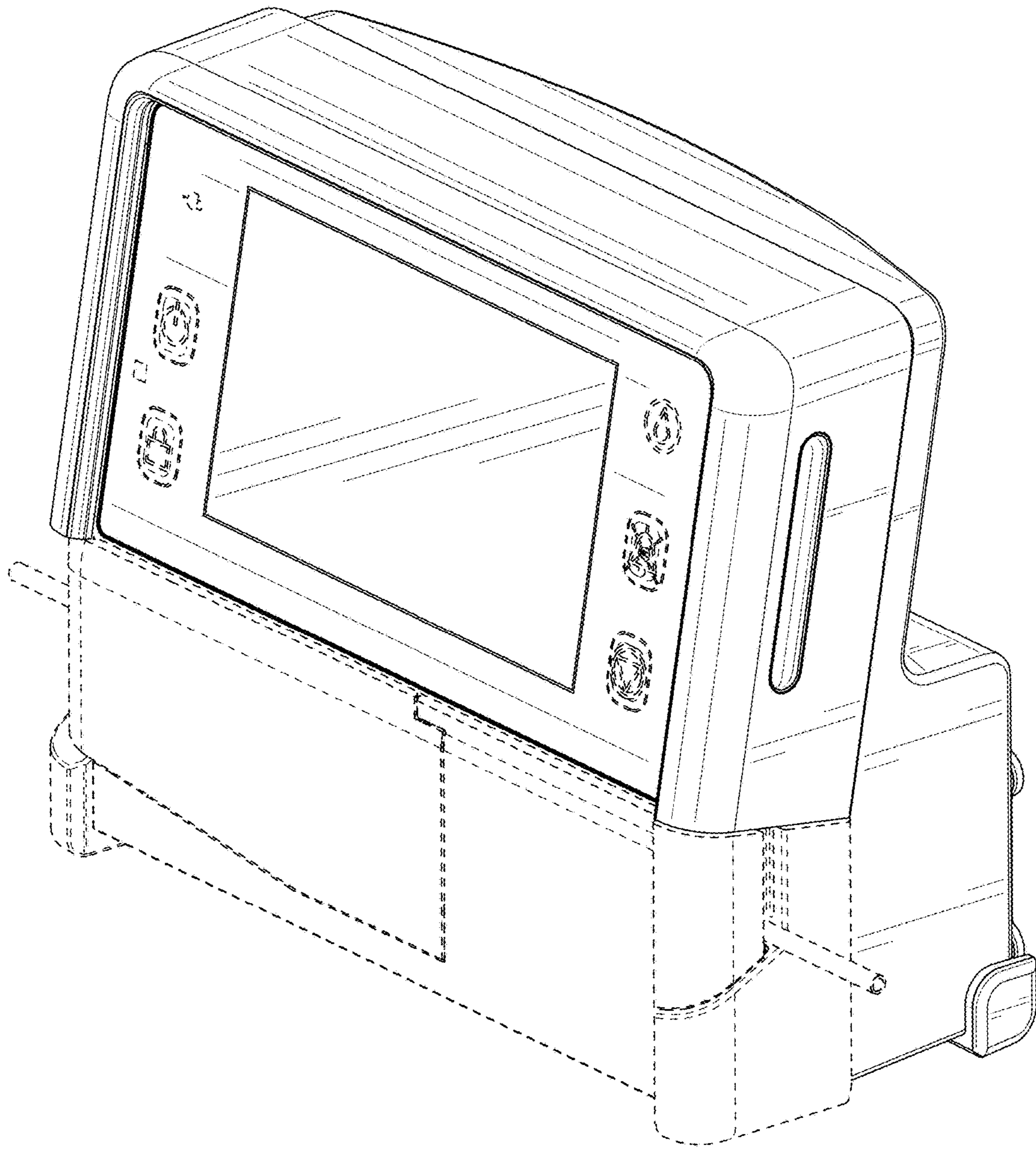


FIG. 1

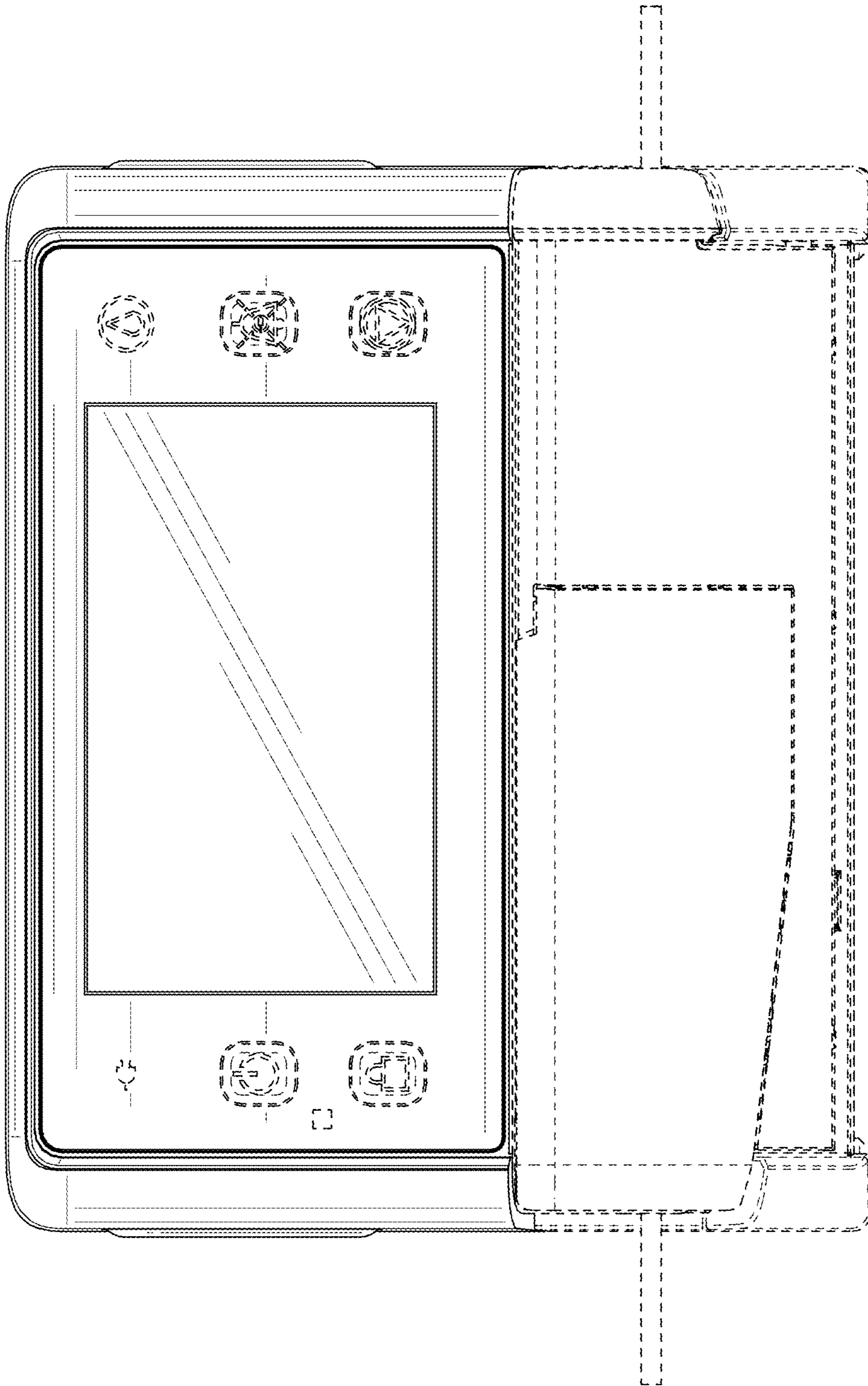


FIG. 2

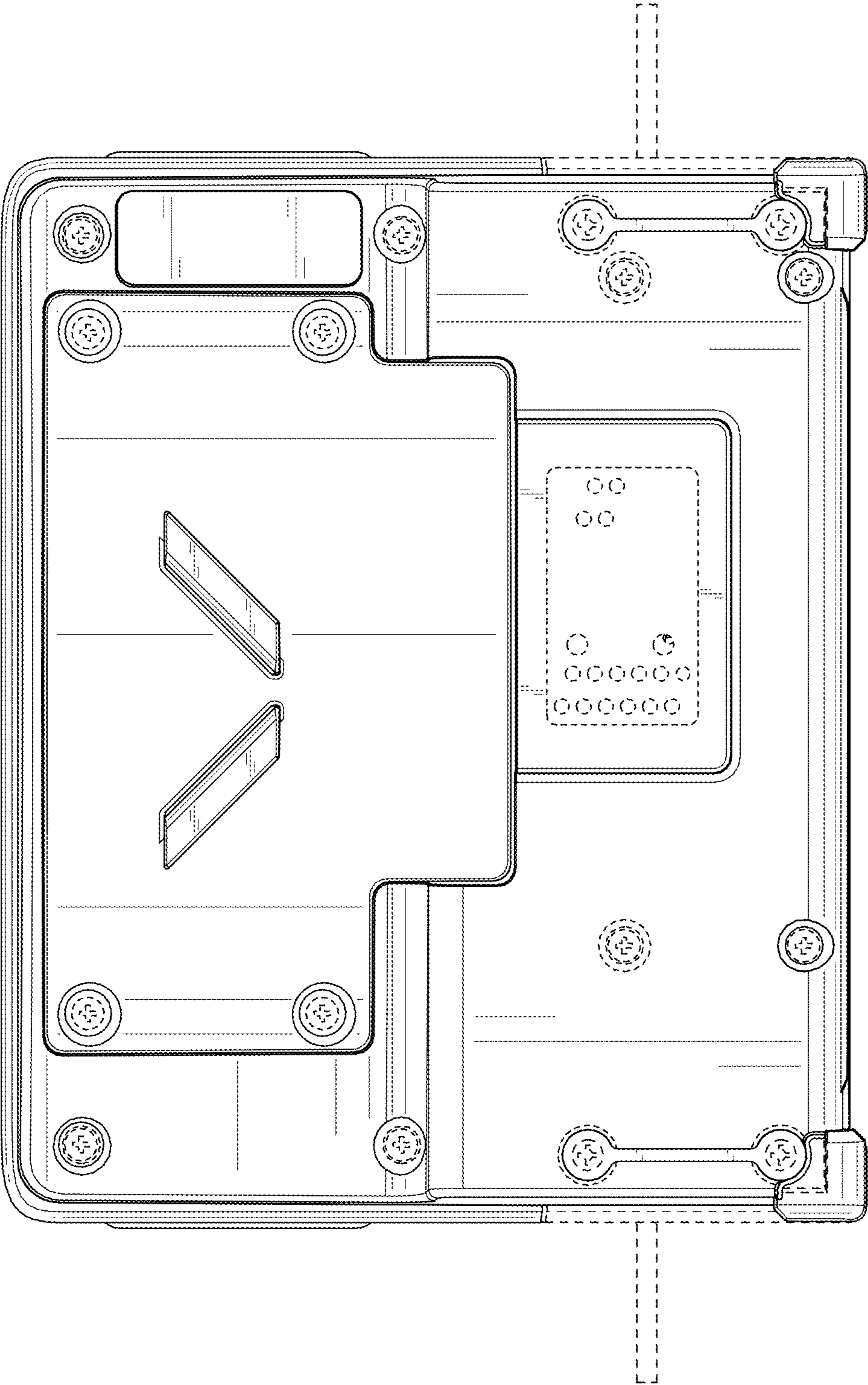


FIG. 3

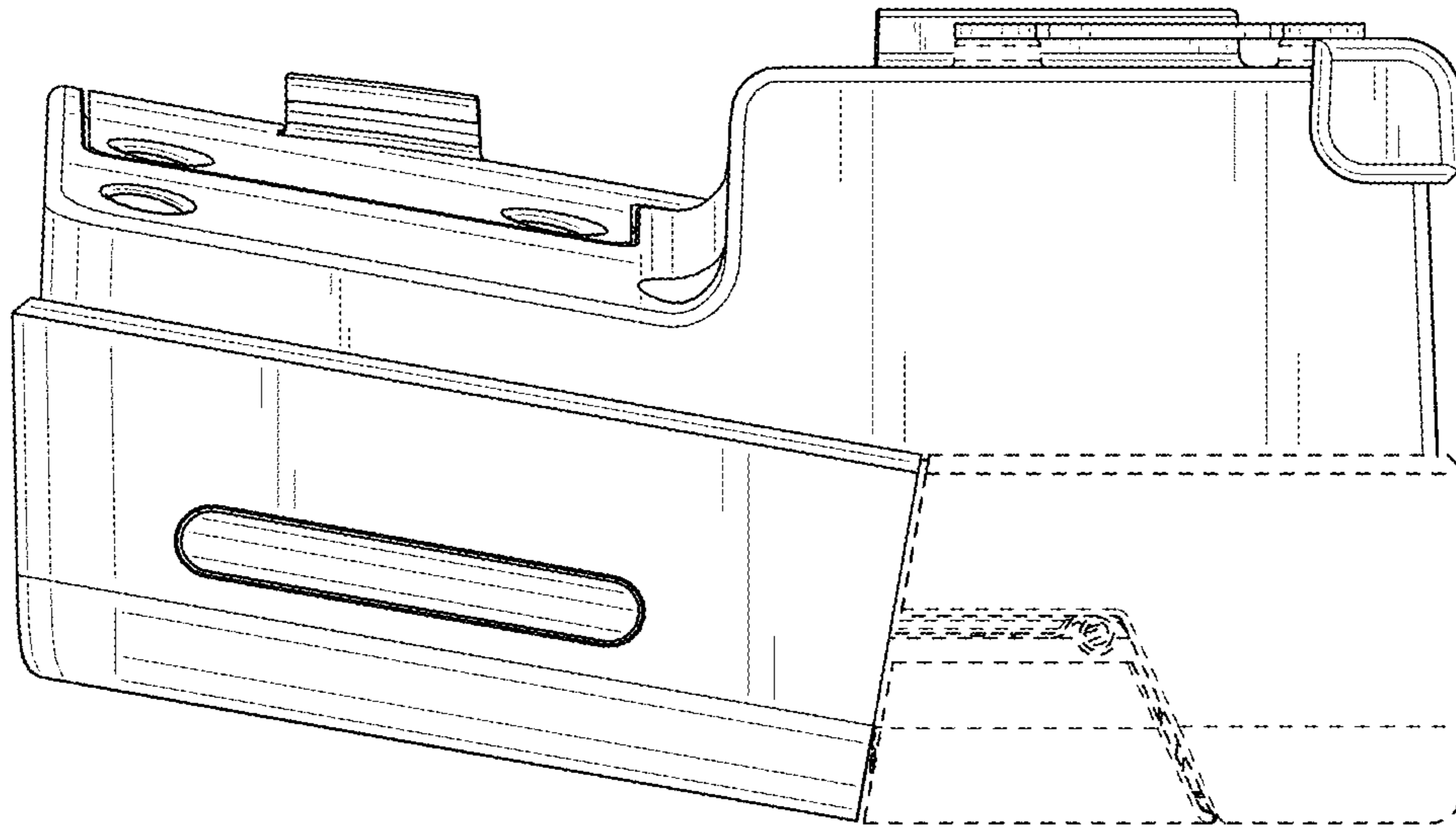


FIG. 5

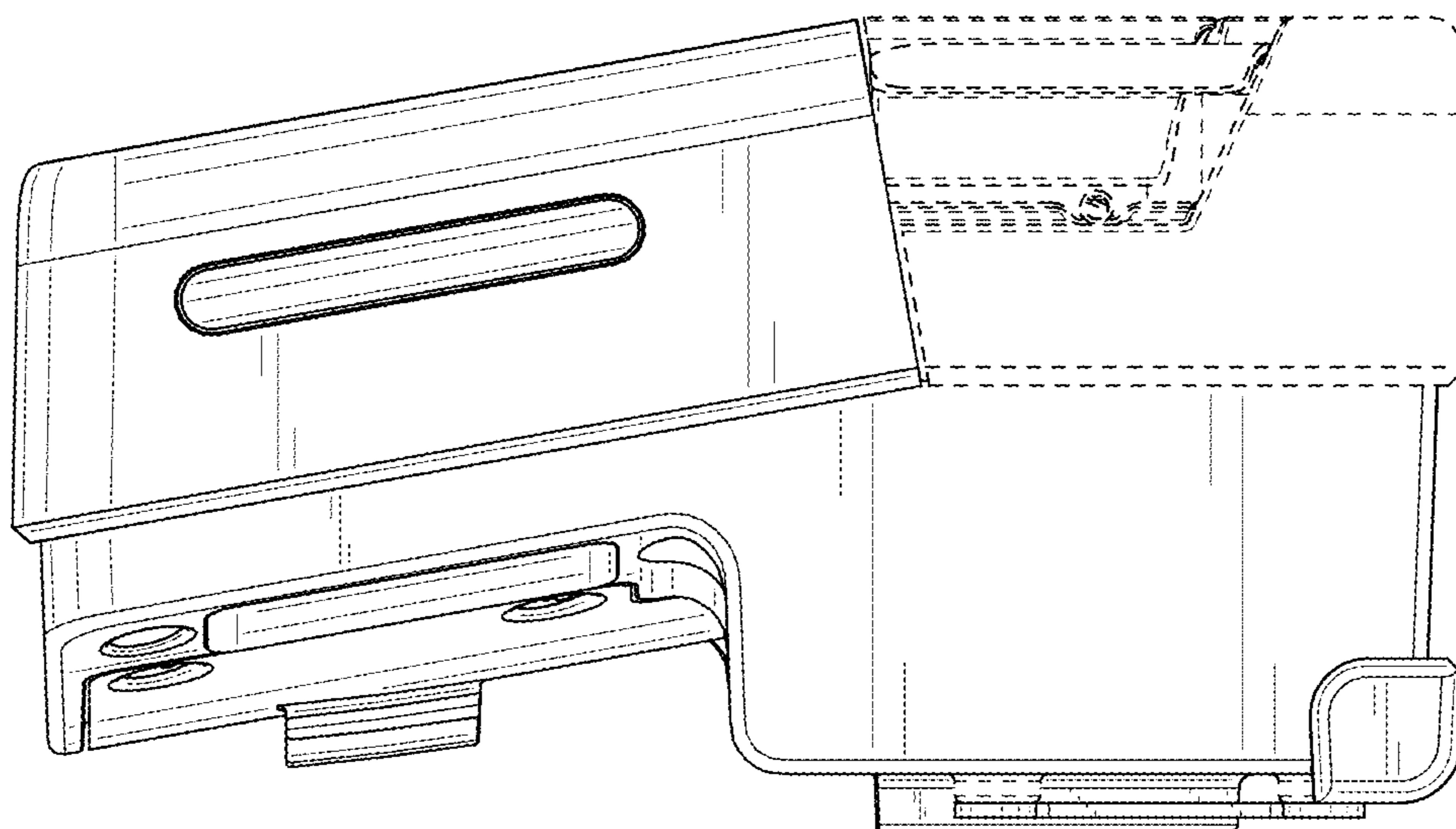


FIG. 4

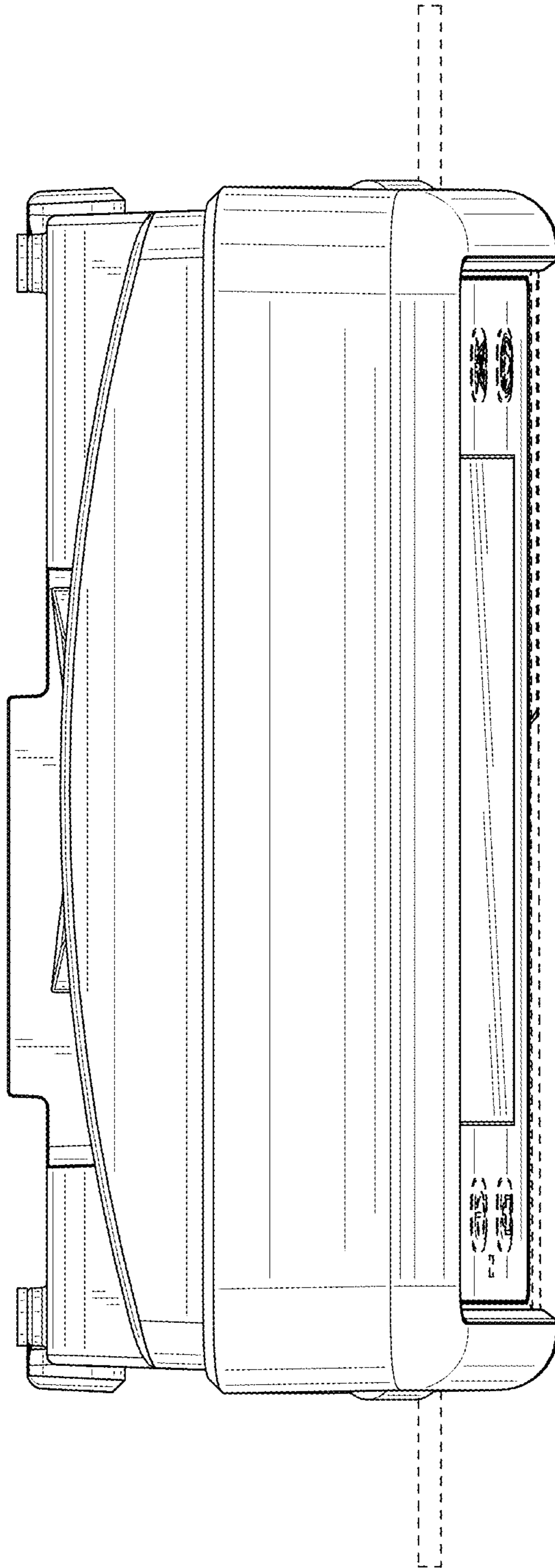


FIG. 6

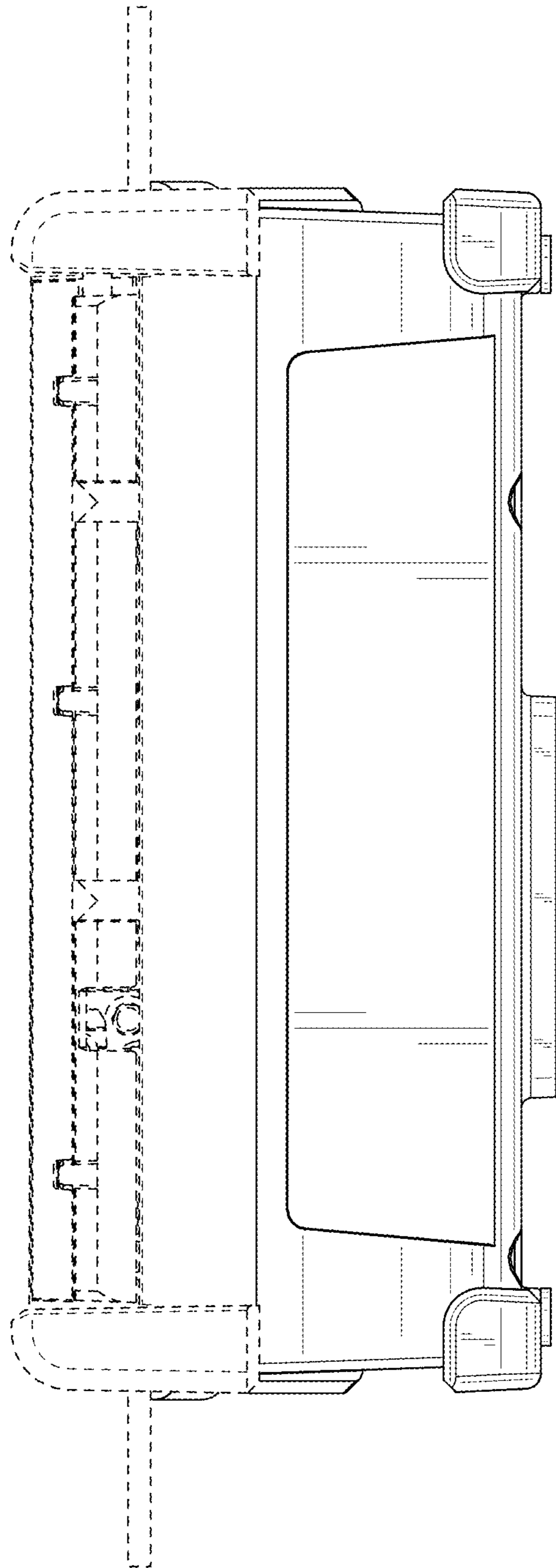


FIG. 7