



US00D907216S

(12) **United States Design Patent** (10) **Patent No.:** **US D907,216 S**
Rehbein et al. (45) **Date of Patent:** **** Jan. 5, 2021**

(54) **THERAPY DEVICE**

(56) **References Cited**

(71) Applicant: **KCI LICENSING, INC.**, San Antonio, TX (US)

U.S. PATENT DOCUMENTS

(72) Inventors: **Jonathan G. Rehbein**, San Antonio, TX (US); **Richard M. Kazala**, San Antonio, TX (US); **Luke A. Perkins**, San Antonio, TX (US); **Larry Tab Randolph**, San Antonio, TX (US)

1,355,846 A	10/1920	Rannells	
2,547,758 A	4/1951	Keeling	
2,632,443 A	3/1953	Leshner	
2,682,873 A	7/1954	Evans et al.	
2,910,763 A	11/1959	Lauterbach	
2,969,057 A	1/1961	Simmons	
3,066,672 A	12/1962	Crosby, Jr. et al.	
3,367,332 A	2/1968	Groves	
3,520,300 A	7/1970	Flower, Jr.	
3,568,675 A *	3/1971	Harvey	A61M 27/00 604/355

(73) Assignee: **KCI LICENSING, INC.**, San Antonio, TX (US)

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

(21) Appl. No.: **29/679,596**

3,648,692 A	3/1972	Wheeler	
3,682,180 A	8/1972	McFarlane	
3,826,254 A	7/1974	Mellor	
4,080,970 A	3/1978	Miller	
4,096,853 A	6/1978	Weigand	
4,139,004 A	2/1979	Gonzalez, Jr.	
4,165,748 A	8/1979	Johnson	
4,184,510 A	1/1980	Murry et al.	
4,233,969 A	11/1980	Lock et al.	
4,245,630 A	1/1981	Lloyd et al.	
4,256,109 A	3/1981	Nichols	
4,261,363 A	4/1981	Russo	
4,275,721 A	6/1981	Olson	
4,284,079 A	8/1981	Adair	
4,297,995 A	11/1981	Golub	
4,333,468 A	6/1982	Geist	
4,373,519 A	2/1983	Errede et al.	
4,382,441 A	5/1983	Svedman	
4,392,853 A	7/1983	Muto	
4,392,858 A	7/1983	George et al.	
4,419,097 A	12/1983	Rowland	
D272,943 S *	3/1984	Stone	D24/134
4,465,485 A	8/1984	Kashmer et al.	
4,475,909 A	10/1984	Eisenberg	
4,480,638 A	11/1984	Schmid	
4,525,166 A	6/1985	Leclerc	
4,525,374 A	6/1985	Vaillancourt	
4,540,412 A	9/1985	Van Overloop	
4,543,100 A	9/1985	Brodsky	
4,548,202 A	10/1985	Duncan	
4,551,139 A	11/1985	Plaas et al.	
4,569,348 A	2/1986	Hasslinger	
4,605,399 A	8/1986	Weston et al.	
4,608,041 A	8/1986	Nielsen	

(22) Filed: **Feb. 7, 2019**

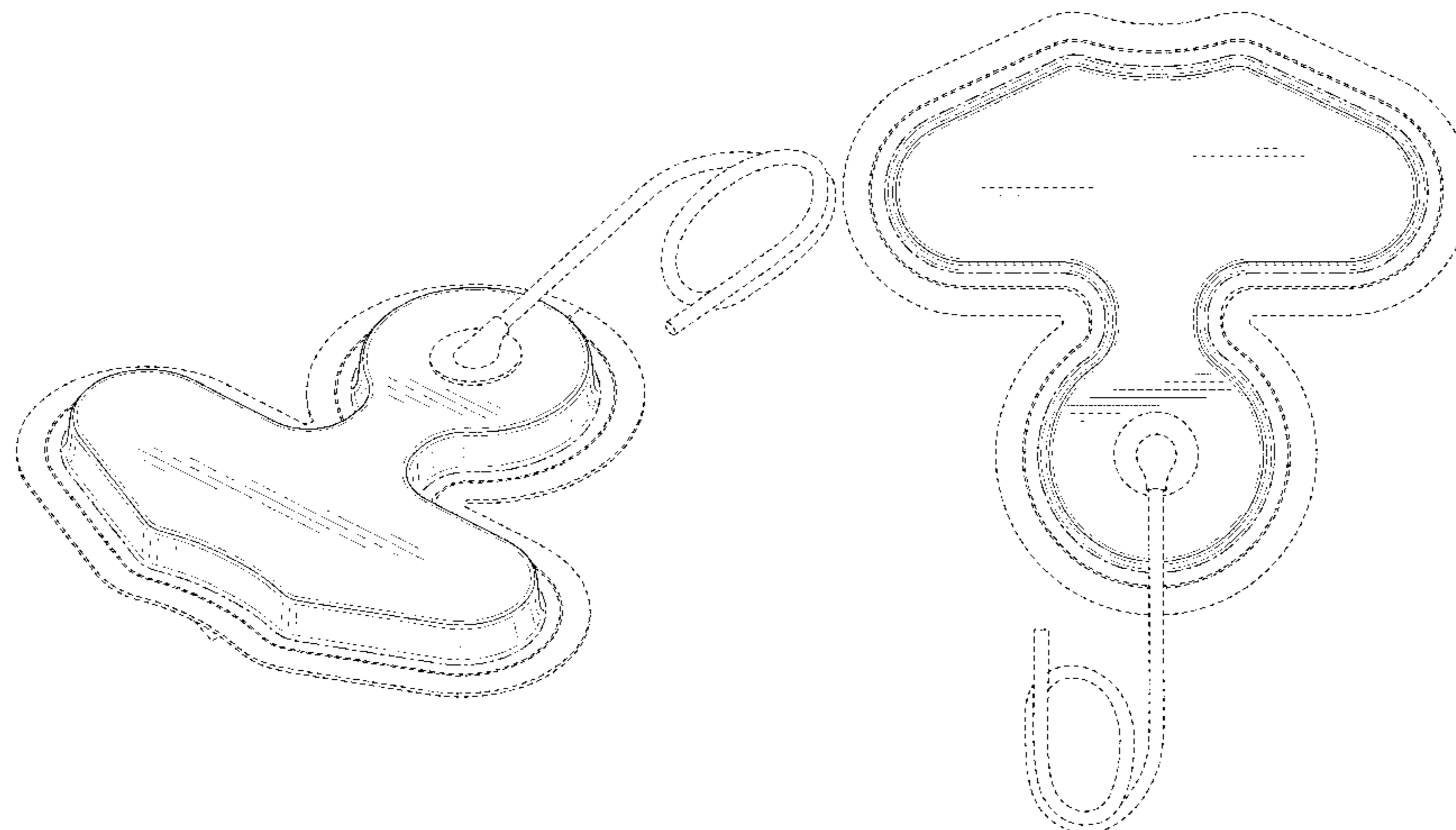
(51) **LOC (13) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/189**; D24/188

(58) **Field of Classification Search**
USPC D24/133, 200, 209, 211, 212, 213, 214, D24/215, 188-192, 206-207; D30/160; D29/120.1, 120.2, 121.1, 121.2, 100, D29/101.1, 101.2, 101.3, 101.4, 101.5, D29/122

CPC A61M 1/0088; A61M 1/0031; A61M 1/0092; A61M 1/0023; A61M 27/00; A61N 1/0456; A61N 1/322; A61N 2005/0654; A61N 2005/0645; A61N 5/0613; A61N 1/18; A61N 5/0616; A61N 2005/0644; A61N 2005/0662; A61N 2007/0034; A61F 2007/0225; A61F 7/007; A61F 2005/0172; A61F 2005/0169; A61F 2005/0137; A61F 5/0109; A61F 5/0123; A61F 2002/30024; A61F 2002/5055; A61F 2002/5056; A61F 2002/7818; A61F 2002/785; A61F 13/38

See application file for complete search history.



US D907,216 S

4,640,688 A	2/1987	Hauser	D816,833 S *	5/2018	Parkhurst	D24/128
4,655,754 A	4/1987	Richmond et al.	D821,593 S *	6/2018	Perez	D24/200
4,664,662 A	5/1987	Webster	D821,595 S *	6/2018	Ito	D24/200
4,710,165 A	12/1987	McNeil et al.	D822,197 S *	7/2018	Stonecipher	D24/112
4,733,659 A	3/1988	Edenbaum et al.	D822,211 S *	7/2018	Davies	D24/169
4,743,232 A	5/1988	Kruger	D826,396 S *	8/2018	Stonecipher	D24/112
4,758,220 A	7/1988	Sundblom et al.	D827,837 S *	9/2018	Pascal	D24/186
4,787,888 A	11/1988	Fox	D830,537 S *	10/2018	Hwang	D24/112
4,826,494 A	5/1989	Richmond et al.	D831,217 S *	10/2018	Geissen	D24/168
4,838,883 A	6/1989	Matsuura	D837,394 S *	1/2019	Cryan	D24/200
4,840,187 A	6/1989	Brazier	D840,024 S *	2/2019	Stonecipher	D24/112
4,863,449 A	9/1989	Therriault et al.	D842,996 S *	3/2019	Frick	D24/169
4,872,450 A	10/1989	Austad	D847,358 S *	4/2019	Matsushita	D24/200
4,878,901 A	11/1989	Sachse	D849,955 S *	5/2019	Christiansen	D24/176
4,897,081 A	1/1990	Poirier et al.	D852,965 S *	7/2019	Bahney	A61B 5/721
4,906,233 A	3/1990	Moriuchi et al.				D24/186
4,906,240 A	3/1990	Reed et al.	D855,816 S *	8/2019	Xu	D24/200
4,919,654 A	4/1990	Kalt	D857,191 S *	8/2019	Hwang	D24/112
4,941,882 A	7/1990	Ward et al.	D857,205 S *	8/2019	Lemons	D24/168
4,953,565 A	9/1990	Tachibana et al.	D862,715 S *	10/2019	Wang	D24/200
4,969,880 A	11/1990	Zamierowski	D870,291 S *	12/2019	Barry	D24/169
4,985,019 A	1/1991	Michelson	D877,893 S *	3/2020	Stonecipher	D24/112
5,037,397 A	8/1991	Kalt et al.	D878,559 S *	3/2020	Stonecipher	D24/113
5,086,170 A	2/1992	Luheshi et al.	D879,305 S *	3/2020	Gu	A61M 1/0084
5,092,858 A	3/1992	Benson et al.				D24/187
5,100,396 A	3/1992	Zamierowski	D879,979 S *	3/2020	Ostan	D24/189
5,134,994 A	8/1992	Say	D882,432 S *	4/2020	Yee	A61B 5/7405
5,149,331 A	9/1992	Ferdman et al.				D10/81
5,167,613 A	12/1992	Karami et al.	D882,760 S *	4/2020	Katz	D24/111
5,176,663 A	1/1993	Svedman et al.	D884,195 S *	5/2020	Kazala	D24/189
5,215,522 A	6/1993	Page et al.	D884,906 S *	5/2020	Rehbein	D24/189
5,232,453 A	8/1993	Plass et al.	D886,303 S *	6/2020	Huang	D24/187
5,261,893 A	11/1993	Zamierowski	D888,255 S *	6/2020	Kazala	D24/189
5,278,100 A	1/1994	Doan et al.	10,695,229 B2 *	6/2020	Toth	A61F 13/0243
5,279,550 A	1/1994	Habib et al.	RE48,117 E *	7/2020	Albert	A61F 13/02
5,298,015 A	3/1994	Komatsuzaki et al.	10,729,590 B2 *	8/2020	Simmons	A61F 13/00068
5,342,376 A	8/1994	Ruff	10,736,788 B2 *	8/2020	Locke	A61F 13/00017
5,344,415 A *	9/1994	DeBusk	2002/0077661 A1	6/2002	Saadat	
			2002/0115951 A1	8/2002	Norstrem et al.	
5,358,494 A	10/1994	Svedman	2002/0120185 A1	8/2002	Johnson	
5,437,622 A	8/1995	Carion	2002/0143286 A1	10/2002	Tumey	
5,437,651 A	8/1995	Todd et al.	2009/0299257 A1 *	12/2009	Long	A61F 13/00068
5,527,293 A	6/1996	Zamierowski				602/53
5,549,584 A	8/1996	Gross	2013/0211348 A1 *	8/2013	Randolph	A61M 1/0084
5,556,375 A	9/1996	Ewall				604/290
5,607,388 A	3/1997	Ewall	2015/0057624 A1 *	2/2015	Simmons	A61F 13/0223
5,636,643 A	6/1997	Argenta et al.				604/319
5,645,081 A	7/1997	Argenta et al.	2016/0067106 A1 *	3/2016	Howell	C08L 75/04
6,071,267 A	6/2000	Zamierowski				602/52
6,135,116 A	10/2000	Vogel et al.	2016/0120706 A1 *	5/2016	Collinson	A61F 13/0253
D436,532 S *	1/2001	Richardson				604/319
6,241,747 B1	6/2001	Ruff	2018/0318475 A1 *	11/2018	Thomson	A61M 1/0088
D445,673 S *	7/2001	Richardson				
D445,675 S *	7/2001	Richardson				
6,287,316 B1	9/2001	Agarwal et al.				
6,345,623 B1	2/2002	Heaton et al.				
6,488,643 B1	12/2002	Tumey et al.				
6,493,568 B1	12/2002	Bell et al.				
6,553,998 B2	4/2003	Heaton et al.				
6,814,079 B2	11/2004	Heaton et al.				
D658,304 S *	4/2012	Rundle				D24/200
D683,858 S *	6/2013	Smith				D24/189
D704,848 S *	5/2014	Thomas				D24/200
D712,052 S *	8/2014	Thomas				D24/200
D734,847 S *	7/2015	Green				D24/118
D746,481 S *	12/2015	Nishioka				D24/206
D746,994 S *	1/2016	Lewis, Jr.				D24/187
D750,266 S *	2/2016	Guarraia				D24/200
D750,267 S *	2/2016	Guarraia				D24/200
D751,213 S *	3/2016	Guarraia				D24/200
D754,355 S *	4/2016	Ganapathy				D24/186
D757,275 S *	5/2016	Lee				D24/187
D804,042 S *	11/2017	Cohrs				D24/186
D806,220 S *	12/2017	Gobber				D23/366
D806,256 S *	12/2017	Allen				A61M 1/0056
						D24/189
D813,380 S *	3/2018	Stonecipher				D24/113
D815,289 S *	4/2018	Evers				D24/169
D816,227 S *	4/2018	Geissen				D24/168

FOREIGN PATENT DOCUMENTS

AU	550575 B2	3/1986
AU	745271 B2	3/2002
AU	755496 B2	12/2002
CA	2005436 A1	6/1990
DE	26 40 413 A1	3/1978
DE	43 06 478 A1	9/1994
DE	29 504 378 U1	9/1995
EP	0100148 A1	2/1984
EP	0117632 A2	9/1984
EP	0161865 A2	11/1985
EP	0358302 A2	3/1990
EP	1018967 A1	7/2000
GB	692578 A	6/1953
GB	2 195 255 A	4/1988
GB	2 197 789 A	6/1988
GB	2 220 357 A	1/1990
GB	2 235 877 A	3/1991
GB	2 329 127 A	3/1999
GB	2 333 965 A	8/1999
JP	4129536 B2	8/2008
SG	71559	4/2002
WO	80/02182 A1	10/1980
WO	87/04626 A1	8/1987

WO	90/010424	A1	9/1990
WO	93/009727	A1	5/1993
WO	94/020041	A1	9/1994
WO	96/05873	A1	2/1996
WO	97/18007	A1	5/1997
WO	99/13793	A1	3/1999

OTHER PUBLICATIONS

Pensar Medical Wound Vac,[site visited Jul. 2, 2020]. Available from Internet. URL: https://www.compressionmedical.com/negative-pressure-wound-therapy-pump/pensar-medical-wound-vac-basic-sting-ray-suction-bell-10-box/?gclid=EAlalQobChMI5vXrt_2u6glVg5yzCh0M1wrKEAsYFiABEgLfzefD_BwE (Year: 2020).*

Negative Pressure Wound Therapy Kit,[site visited Jul. 2, 2020]. Available from Internet. URL: https://www.bettymills.com/negative-pressure-wound-therapy-kit-snapadvanced-4-x-4-inch-1-ea-kt-skftf10x10s?utm_source=. . . (Year: 2020).*

Louis C. Argenta, MD and Michael J. Morykwas, PhD; Vacuum-Assisted Closure: A New Method for Wound Control and Treatment: Clinical Experience; *Annals of Plastic Surgery*; vol. 38, No. 6, Jun. 1997; pp. 563-576.

Susan Mendez-Eatmen, RN; "When wounds Won't Heal" *RN* Jan. 1998, vol. 61 (1); Medical Economics Company, Inc., Montvale, NJ, USA; pp. 20-24.

James H. Blackburn II, MD et al.: Negative-Pressure Dressings as a Bolster for Skin Grafts; *Annals of Plastic Surgery*, vol. 40, No. 5, May 1998, pp. 453-457; Lippincott Williams & Wilkins, Inc., Philadelphia, PA, USA.

John Masters; "Reliable, Inexpensive and Simple Suction Dressings"; Letter to the Editor, *British Journal of Plastic Surgery*, 1998, vol. 51 (3), p. 267; Elsevier Science/The British Association of Plastic Surgeons, UK.

S.E. Greer, et al. "The Use of Subatmospheric Pressure Dressing Therapy to Close Lymphocutaneous Fistulas of the Groin" *British Journal of Plastic Surgery* (2000), 53, pp. 484-487.

George V. Letsou, MD., et al; "Stimulation of Adenylate Cyclase Activity in Cultured Endothelial Cells Subjected to Cyclic Stretch"; *Journal of Cardiovascular Surgery*, 31, 1990, pp. 634-639.

Orringer, Jay, et al; "Management of Wounds in Patients with Complex Enterocutaneous Fistulas"; *Surgery, Gynecology & Obstetrics*, Jul. 1987, vol. 165, pp. 79-80.

International Search Report for PCT International Application PCT/GB95/01983; dated Nov. 23, 1995.

PCT International Search Report for PCT International Application PCT/GB98/02713; dated Jan. 8, 1999.

PCT Written Opinion; PCT International Application PCT/GB98/02713; dated Jun. 8, 1999.

PCT International Examination and Search Report, PCT International Application PCT/GB96/02802; dated Jan. 15, 1998 & Apr. 29, 1997.

PCT Written Opinion, PCT International Application PCT/GB96/02802; Sep. 3, 1997.

Dattilo, Philip P., Jr., et al; "Medical Textiles: Application of an Absorbable Barbed Bi-directional Surgical Suture"; *Journal of Textile and Apparel, Technology and Management*, vol. 2, Issue 2, Spring 2002, pp. 1-5.

Kostyuchenok, B.M., et al; "Vacuum Treatment in the Surgical Management of Purulent Wounds"; *Vestnik Khirurgi*, Sep. 1986, pp. 18-21 and 6 page English translation thereof.

Davydov, Yu. A., et al; "Vacuum Therapy in the Treatment of Purulent Lactation Mastitis"; *Vestnik Khirurgi*, May 14, 1986, pp. 66-70, and 9 page English translation thereof.

Yusupov, Yu.N., et al; "Active Wound Drainage"; *Vestniki Khirurgi*, vol. 138, Issue 4, 1987, and 7 page English translation thereof.

Davydov, Yu.A., et al; "Bacteriological and Cytological Assessment of Vacuum Therapy for Purulent Wounds"; *Vestnik Khirurgi*, Oct. 1988, pp. 48-52, and 8 page English translation thereof.

Davydov, Yu.A., et al; "Concepts for the Clinical-Biological Management of the Wound Process in the Treatment of Purulent Wounds by Means of Vacuum Therapy"; *Vestnik Khirurgi*, Jul. 7, 1980, pp. 132-136, and 8 page English translation thereof.

Chariker, Mark E., M.D., et al; "Effective Management of incisional and cutaneous fistulae with closed suction wound drainage"; *Contemporary Surgery*, vol. 34, Jun. 1989, pp. 59-63.

Egnell Minor, *Instruction Book*, First Edition, 300 7502, Feb. 1975, pp. 24.

Egnell Minor: Addition to the Users Manual Concerning Overflow Protection—Concerns all Egnell Pumps, Feb. 3, 1983, pp. 2.

Svedman, P.: "Irrigation Treatment of Leg Ulcers", *The Lancet*, Sep. 3, 1983, pp. 532-534.

Chinn, Steven D. et al.: "Closed Wound Suction Drainage", *The Journal of Foot Surgery*, vol. 24, No. 1, 1985, pp. 76-81.

Arnljots, Björn et al.: "Irrigation Treatment in Split-Thickness Skin Grafting of Intractable Leg Ulcers", *Scand J. Plast Reconstr. Surg.*, No. 19, 1985, pp. 211-213.

Svedman, P.: "A Dressing Allowing Continuous Treatment of a Biosurface", *IRCS Medical Science: Biomedical Technology, Clinical Medicine, Surgery and Transplantation*, vol. 7, 1979, p. 221.

Svedman, P. et al: "A Dressing System Providing Fluid Supply and Suction Drainage Used for Continuous of Intermittent Irrigation", *Annals of Plastic Surgery*, vol. 17, No. 2, Aug. 1986, pp. 125-133.

N.A. Bagautdinov, "Variant of External Vacuum Aspiration in the Treatment of Purulent Diseases of Soft Tissues," *Current Problems in Modern Clinical Surgery: Interdepartmental Collection*, edited by V. Ye Volkov et al. (Chuvashia State University, Cheboksary, U.S.S.R. 1986); pp. 94-96.

K.F. Jeter, T.E. Tintle, and M. Chariker, "Managing Draining Wounds and Fistulae: New and Established Methods," *Chronic Wound Care*, edited by D. Krasner (Health Management Publications, Inc., King of Prussia, PA 1990), pp. 240-246.

G. Živadnovi?, V. ?uki?, Ž. Maksimovi?, ?. Radak, and P. Peška, "Vacuum Therapy in the Treatment of Peripheral Blood Vessels," *Timok Medical Journal* 11 (1986), pp. 161-164 (copy and certified translation).

F.E. Johnson, "An Improved Technique for Skin Graft Placement Using a Suction Drain," *Surgery, Gynecology, and Obstetrics* 159 (1984), pp. 584-585.

A.A. Safronov, Dissertation Abstract, Vacuum Therapy of Trophic Ulcers of the Lower Leg with Simultaneous Autoplasty of the Skin (Central Scientific Research Institute of Traumatology and Orthopedics, Moscow, U.S.S.R. 1967) (copy and certified translation).

M. Schein, R. Saadia, J.R. Jamieson, and G.A.G. Decker, "The 'Sandwich Technique' in the Management of the Open Abdomen," *British Journal of Surgery* 73 (1986), pp. 369-370.

D.E. Tribble, An Improved Sump Drain-Irrigation Device of Simple Construction, *Archives of Surgery* 105 (1972) pp. 511-513.

M.J. Morykwas, L.C. Argenta, E.I. Shelton-Brown, and W. McGuirt, "Vacuum-Assisted Closure: A New Method for Wound Control and Treatment: Animal Studies and Basic Foundation," *Annals of Plastic Surgery* 38 (1997), pp. 553-562 (Morykwas I).

C.E. Tennants, "The Use of Hyperemia in the Postoperative Treatment of Lesions of the Extremities and Thorax," *Journal of the American Medical Association* 64 (1915), pp. 1548-1549.

Selections from W. Meyer and V. Schmieden, Bier's Hyperemic Treatment in Surgery, Medicine, and the Specialties: A Manual of Its Practical Application, (W.B. Saunders Co., Philadelphia, PA 1909), pp. 17-25, 44-64, 90-96, 167-170, and 210-211.

V.A. Solovev et al., Guidelines, The Method of Treatment of Immature External Fistulas in the Upper Gastrointestinal Tract, editor-in-chief Prov. V.I. Parahonyak (S.M. Kirov Gorky State Medical Institute, Gorky, U.S.S.R. 1987) ("Solovev Guidelines").

V.A. Kuznetsov & N.a. Bagautdinov, "Vacuum and Vacuum-Sorption Treatment of Open Septic Wounds," in II All-Union Conference on Wounds and Wound Infections: Presentation Abstracts, edited by B.M. Kostyuchenok et al. (Moscow, U.S.S.R. Oct. 28-29, 1986) pp. 91-92 ("Bagautdinov II").

V.A. Solovev, Dissertation Abstract, Treatment and Prevention of Suture Failures after Gastric Resection (S.M. Kirov Gorky State Medical Institute, Gorky, U.S.S.R. 1988) ("Solovev Abstract").

V.A.C.® Therapy Clinical Guidelines: A Reference Source for Clinicians; Jul. 2007.

* cited by examiner

Primary Examiner — T Chase Nelson

Assistant Examiner — Kelly L Gross

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **CLAIM**

We claim the ornamental design for a therapy device, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an embodiment of the claimed design;

FIG. 2 is a front view thereof;

FIG. 3 is a back view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a top view thereof; and,

FIG. 7 is a bottom view thereof.

Any portion of the article depicted in broken lines forms no part of the claimed design. Broken lines formed by equal length dashes show unclaimed subject matter. Broken lines formed of unequal length dashes (i.e., dash-dot) show boundaries between claimed and unclaimed portions of the design.

1 Claim, 5 Drawing Sheets

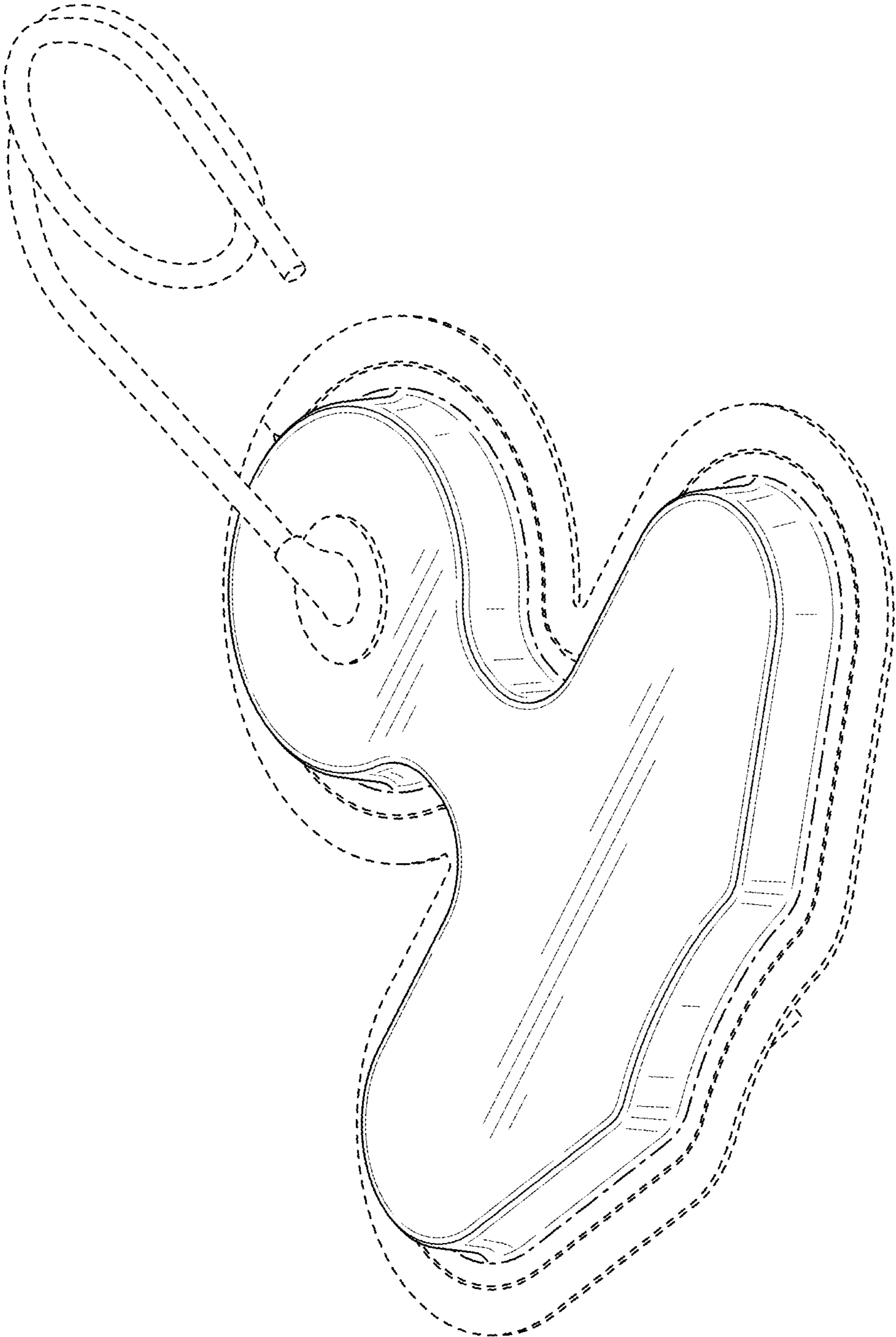


FIG. 1

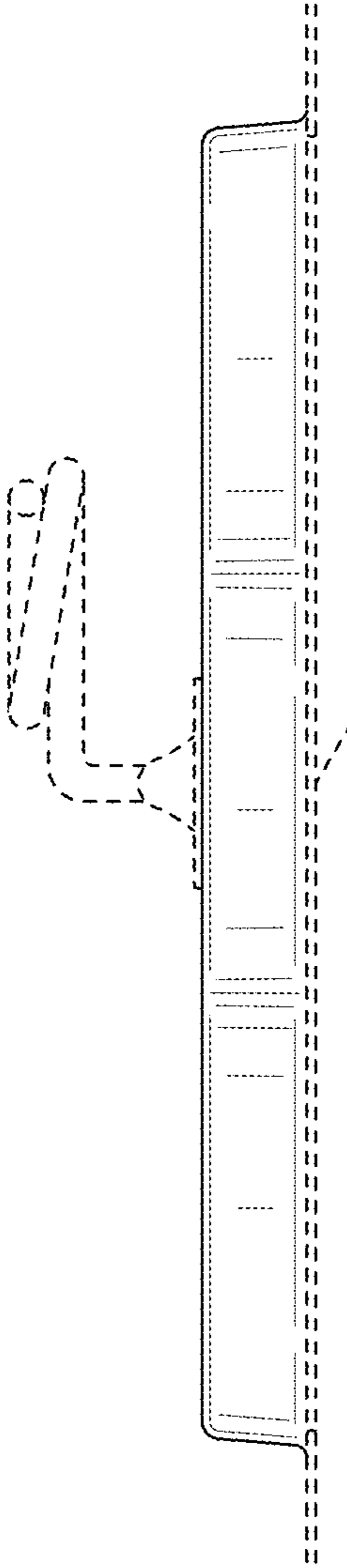


FIG. 2

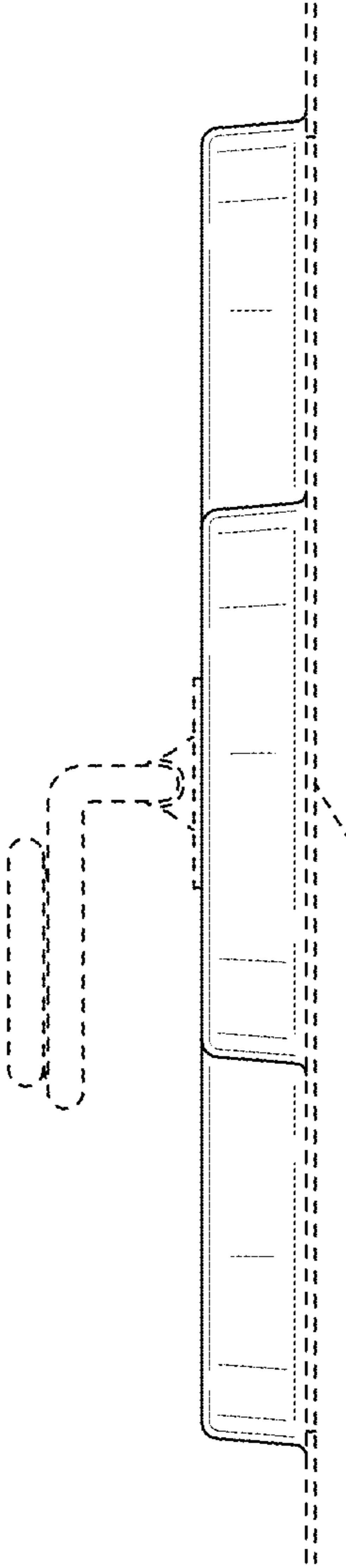


FIG. 3

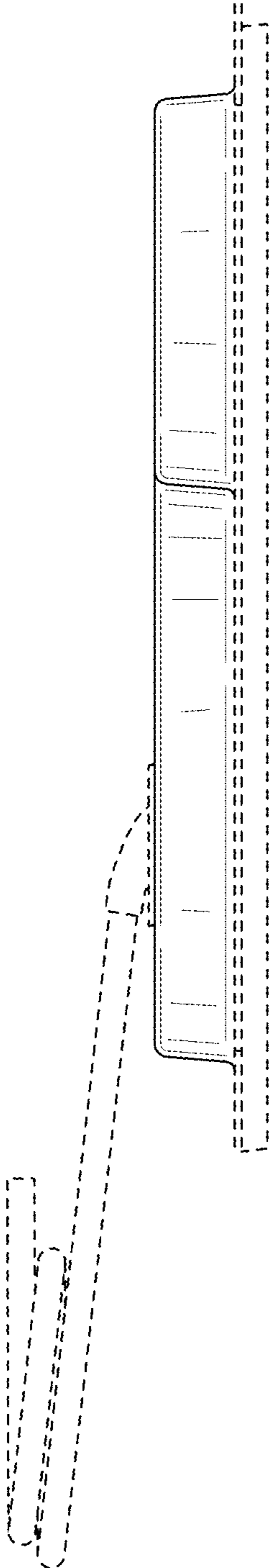


FIG. 4

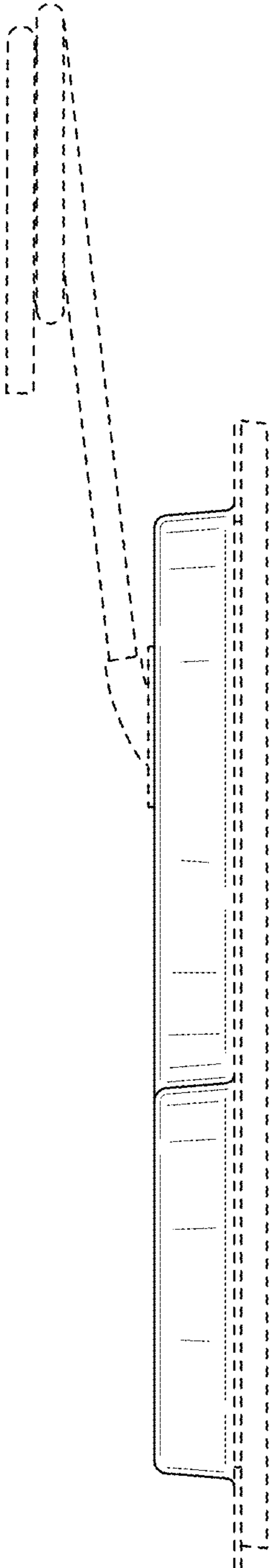


FIG. 5

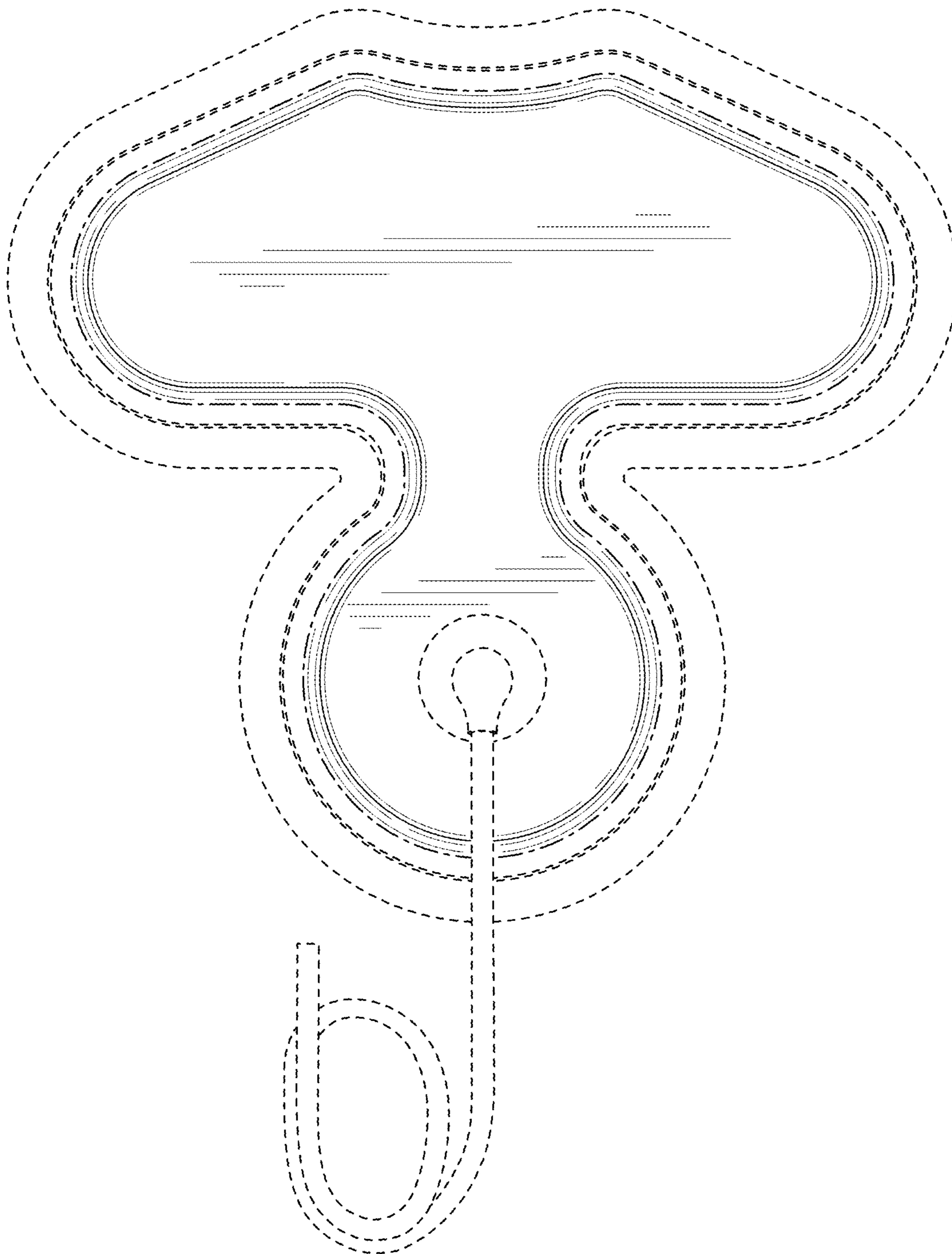


FIG. 6

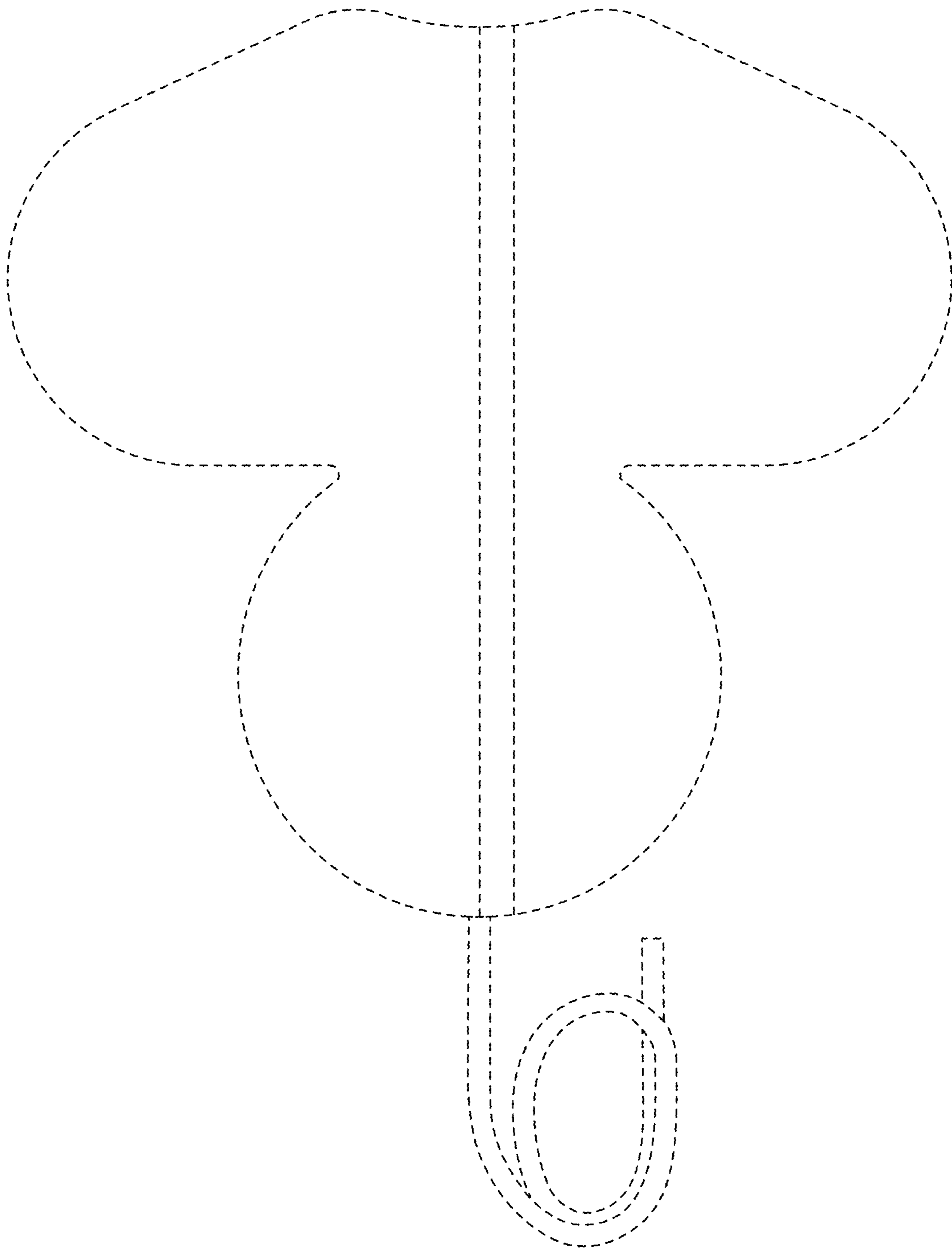


FIG. 7