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

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(54) **COMPRESSIVE LAYER FOR ABDOMINAL WOUND DRESSING**

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

(21) Appl. No.: **29/643,438**

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(51) **LOC (12) Cl.** **24-04**

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

(58) **Field of Classification Search**
USPC D24/112, 124-128, 132, 133, 185-193, D24/199, 200, 206, 209, 210, 212-215;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,355,846 A 10/1920 Rannells
2,268,777 A * 1/1942 Scholl A61F 13/02
128/894

(Continued)

FOREIGN PATENT DOCUMENTS

AU 550575 B2 3/1986
AU 755496 B2 12/2002

(Continued)

OTHER PUBLICATIONS

Amazon. Shapes by PolyMem Oval Film Island Wound Dressing, Foam, 5.0'x3.5' Adhesive, 3.0'x2.0' Pad, 1853 (Box of 15). No date specified. <https://www.amazon.com/Shapes-PolyMem-Island-Dressing-Adhesive/dp/B01D52R9CQ> (Year: 0).*

(Continued)

Primary Examiner — Darcey E Gottschalk

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

(57) **CLAIM**

We claim the ornamental design for a compressive layer for abdominal wound dressing, as shown and described.

DESCRIPTION

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

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 right side view thereof;

FIG. 5 is a left side view thereof;

FIG. 6 is a top view thereof;

FIG. 7 is a bottom view thereof;

FIG. 8 is a perspective view of another embodiment of the claimed design;

FIG. 9 is a front view thereof;

FIG. 10 is a back view thereof;

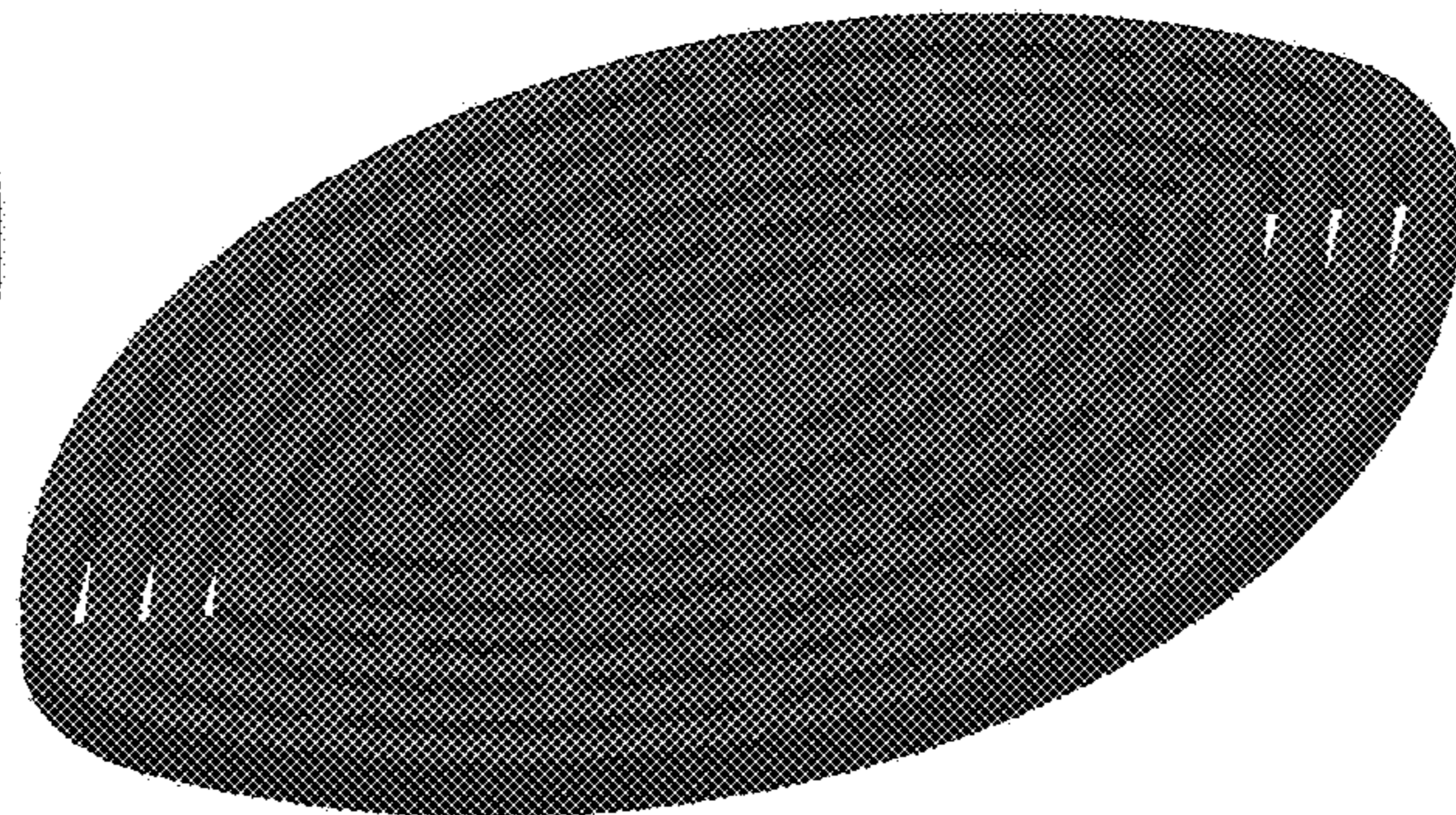
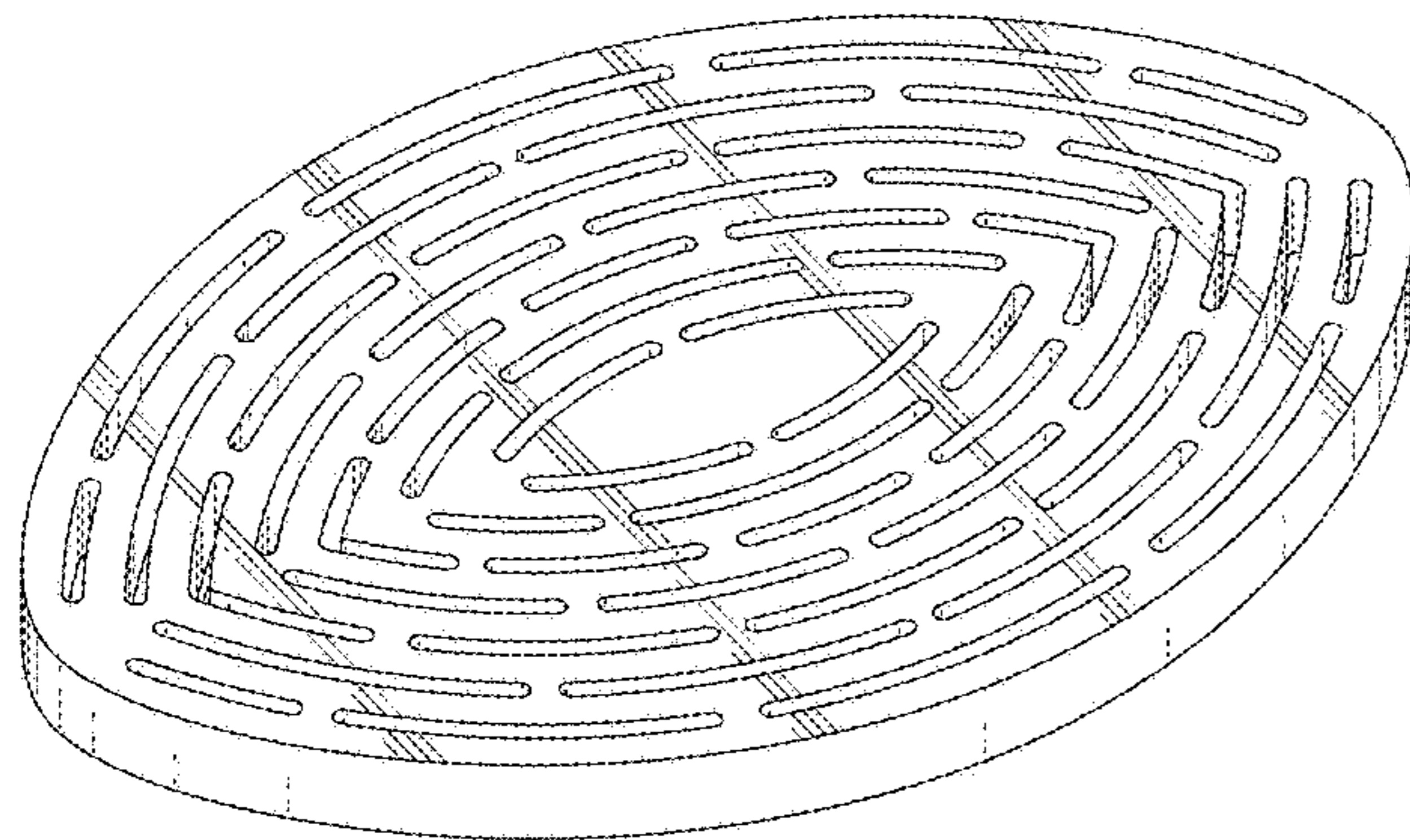
FIG. 11 is a right side view thereof;

FIG. 12 is a left side view thereof;

FIG. 13 is a top view thereof; and,

FIG. 14 is a bottom view thereof.

1 Claim, 10 Drawing Sheets
(5 of 10 Drawing Sheet(s) Filed in Color)



(58)	Field of Classification Search	4,969,472 A *	11/1990	Langley	A61F 9/04 128/858
	USPC	D29/100, 108, 120.1, 121.1, 121.2; D30/146			
	CPC .	A61M 1/0088; A61F 13/00; A61F 13/00021; A61F 13/066; A61F 13/0206; A61F 13/0203; A61F 13/00025; A61F 13/00038; A61F 13/023; A61F 13/0243; A61F 13/0266			
	See application file for complete search history.				
(56)	References Cited				
	U.S. PATENT DOCUMENTS				
	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		
	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		
	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		
	4,640,688 A	2/1987	Hauser		
	4,655,754 A	4/1987	Richmond et al.		
	4,664,662 A	5/1987	Webster		
	4,710,165 A	12/1987	McNeil et al.		
	4,733,659 A	3/1988	Edenbaum et al.		
	4,743,232 A	5/1988	Kruger		
	4,758,220 A	7/1988	Sundblom et al.		
	4,787,888 A	11/1988	Fox		
	4,826,494 A	5/1989	Richmond et al.		
	4,838,883 A	6/1989	Matsuura		
	4,840,187 A	6/1989	Brazier		
	4,863,449 A	9/1989	Therriault et al.		
	4,872,450 A	10/1989	Austad		
	4,878,901 A	11/1989	Sachse		
	4,897,081 A	1/1990	Poirier et al.		
	4,906,233 A	3/1990	Moriuchi et al.		
	4,906,240 A	3/1990	Reed et al.		
	4,919,654 A	4/1990	Kalt		
	4,941,882 A	7/1990	Ward et al.		
	4,953,565 A	9/1990	Tachibana et al.		
	4,969,880 A	11/1990	Zamierowski		
	4,985,019 A	1/1991	Michelson		
	5,037,397 A	8/1991	Kalt et al.		
	5,086,170 A	2/1992	Luheshi et al.		
	5,092,858 A	3/1992	Benson et al.		
	5,100,396 A	3/1992	Zamierowski		
	5,134,994 A	8/1992	Say		
	5,149,331 A	9/1992	Ferdman et al.		
	5,167,613 A	12/1992	Karami et al.		
	5,176,663 A	1/1993	Svedman et al.		
	5,215,522 A	6/1993	Page et al.		
	5,232,453 A	8/1993	Plass et al.		
	5,261,893 A	11/1993	Zamierowski		
	5,278,100 A	1/1994	Doan et al.		
	5,279,550 A	1/1994	Habib et al.		
	5,298,015 A	3/1994	Komatsuzaki et al.		
	5,342,376 A	8/1994	Ruff		
	5,344,415 A	9/1994	DeBusk et al.		
	5,358,494 A	10/1994	Svedman		
	5,437,622 A	8/1995	Carion		
	5,437,651 A	8/1995	Todd et al.		
	5,527,293 A	6/1996	Zamierowski		
	5,549,584 A	8/1996	Gross		
	5,556,375 A	9/1996	Ewall		
	5,607,388 A	3/1997	Ewall		
	5,636,643 A	6/1997	Argenta et al.		
	5,645,081 A	7/1997	Argenta et al.		
	D399,965 S *	10/1998	Laughlin	D24/189	
	D407,160 S *	3/1999	Dunshee	D24/189	
	6,071,267 A	6/2000	Zamierowski		
	6,135,116 A	10/2000	Vogel et al.		
	6,238,362 B1 *	5/2001	Bracht	A61M 35/006 602/41	
	6,241,747 B1	6/2001	Ruff		
	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.		
	D594,160 S *	6/2009	Worden	D29/121.1	
	D594,161 S *	6/2009	Worden	D29/121.1	
	D639,441 S *	6/2011	Sferle	D24/189	
	8,114,126 B2	2/2012	Heaton et al.		
	8,142,419 B2	3/2012	Heaton et al.		
	8,192,409 B2	6/2012	Hardman et al.		
	8,197,467 B2	6/2012	Heaton et al.		
	D679,404 S *	4/2013	Lattimore	D24/189	
	8,608,776 B2	12/2013	Coward et al.		
	D717,452 S *	11/2014	Boggs	D24/189	
	8,936,618 B2	1/2015	Sealy et al.		
	D740,952 S *	10/2015	Kawahara	D24/189	
	D746,478 S *	12/2015	Grondahl	D24/189	
	9,421,132 B2 *	8/2016	Dunn	A61M 1/0088	
	D766,448 S *	9/2016	Gergely	D24/189	
	D776,822 S *	1/2017	McKinley	D24/187	
	D791,331 S *	7/2017	Freshwater	D24/189	
	D796,684 S *	9/2017	Ko	D24/189	
	D798,460 S *	9/2017	Farley	D24/189	
	D813,464 S *	3/2018	Echeverri	D29/121.1	
	9,962,295 B2	5/2018	Dunn et al.		
	10,117,782 B2	11/2018	Dagger et al.		
	10,130,520 B2	11/2018	Dunn et al.		
	10,159,771 B2	12/2018	Hartwell et al.		
	D838,374 S *	1/2019	Bannwart	D24/189	
	10,179,073 B2	1/2019	Hartwell et al.		
	D841,172 S *	2/2019	Bannwart	D24/189	
	2002/0077661 A1	6/2002	Saadat		
	2002/0115951 A1	8/2002	Norstrem et al.		
	2002/0120185 A1	8/2002	Johnson		
	2002/0143286 A1	10/2002	Tumey		
	2011/0213287 A1 *	9/2011	Lattimore	A61F 13/00021 602/46	
	2015/0320603 A1	11/2015	Locke et al.		
	2019/0105202 A1	4/2019	Dunn et al.		

(56)

References Cited

U.S. PATENT DOCUMENTS

2019/0209383 A1 7/2019 Hartwell et al.
 2019/0231599 A1 8/2019 Dagger et al.
 2019/0231945 A1 8/2019 Hartwell et al.

FOREIGN PATENT DOCUMENTS

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
 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
 WO WO-2012/106590 A2 8/2012
 WO WO-2013/066694 A2 5/2013
 WO WO-2013/175309 A1 11/2013
 WO WO-2015/110409 A1 7/2015
 WO WO-2015/110410 A1 7/2015
 WO WO-2016/176513 A1 11/2016
 WO WO-2017/063036 A1 4/2017

OTHER PUBLICATIONS

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 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; dated 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.

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.

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.

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 (copy and certified translation).

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. Pežka, "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.

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

Partial International Search Report in International Application No. PCT/US2019/025979, dated Jun. 25, 2019.

* cited by examiner

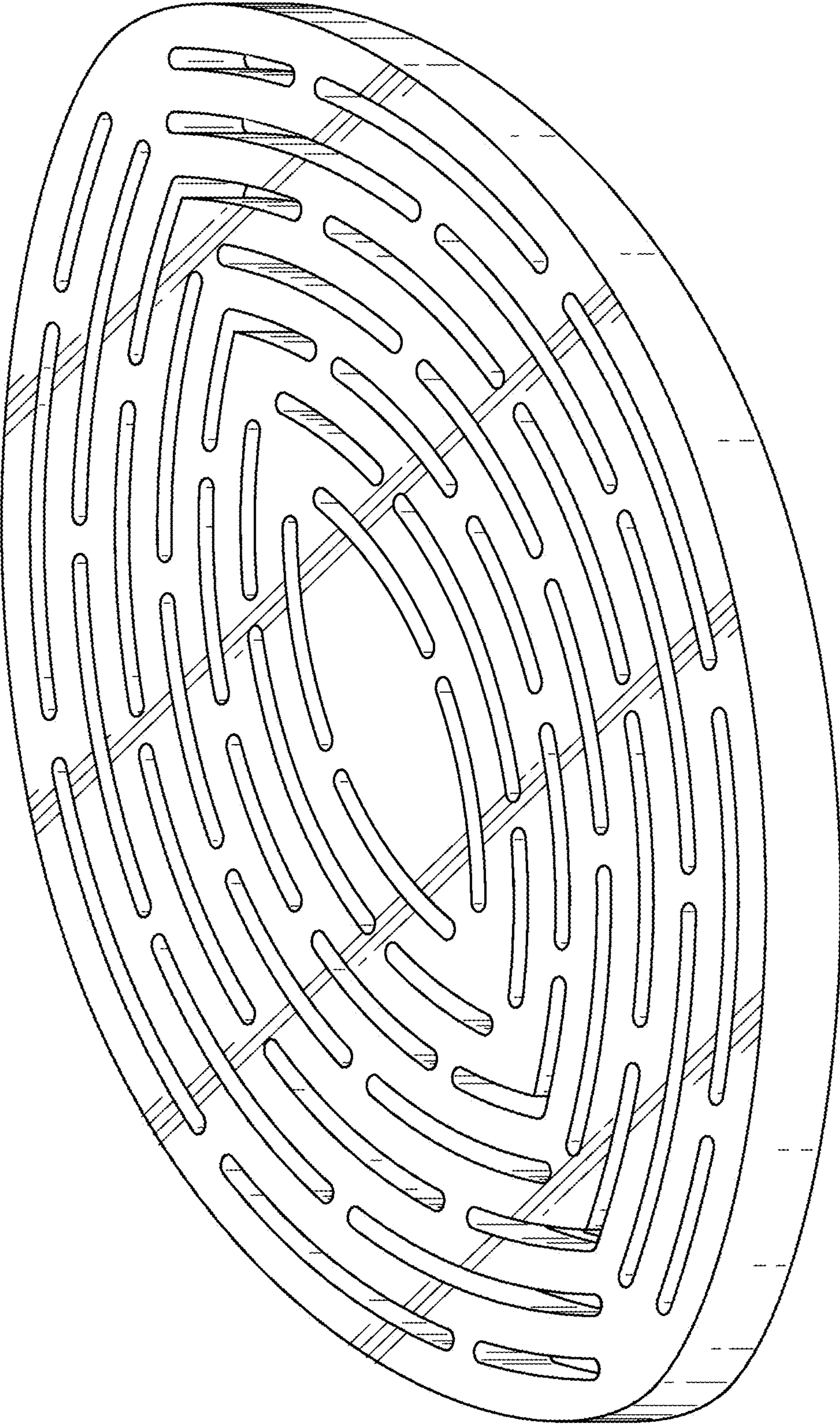


FIG. 1

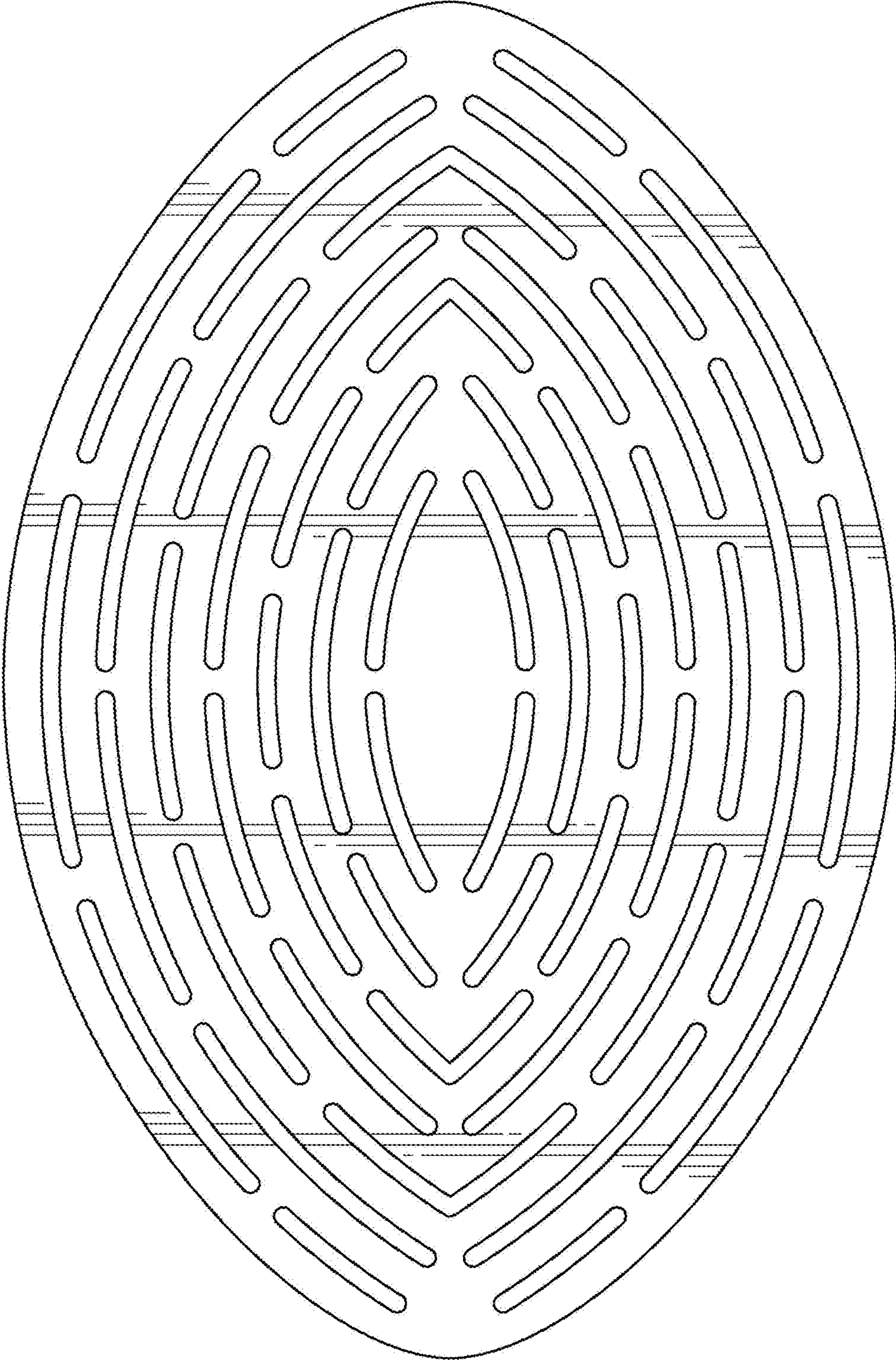


FIG. 2

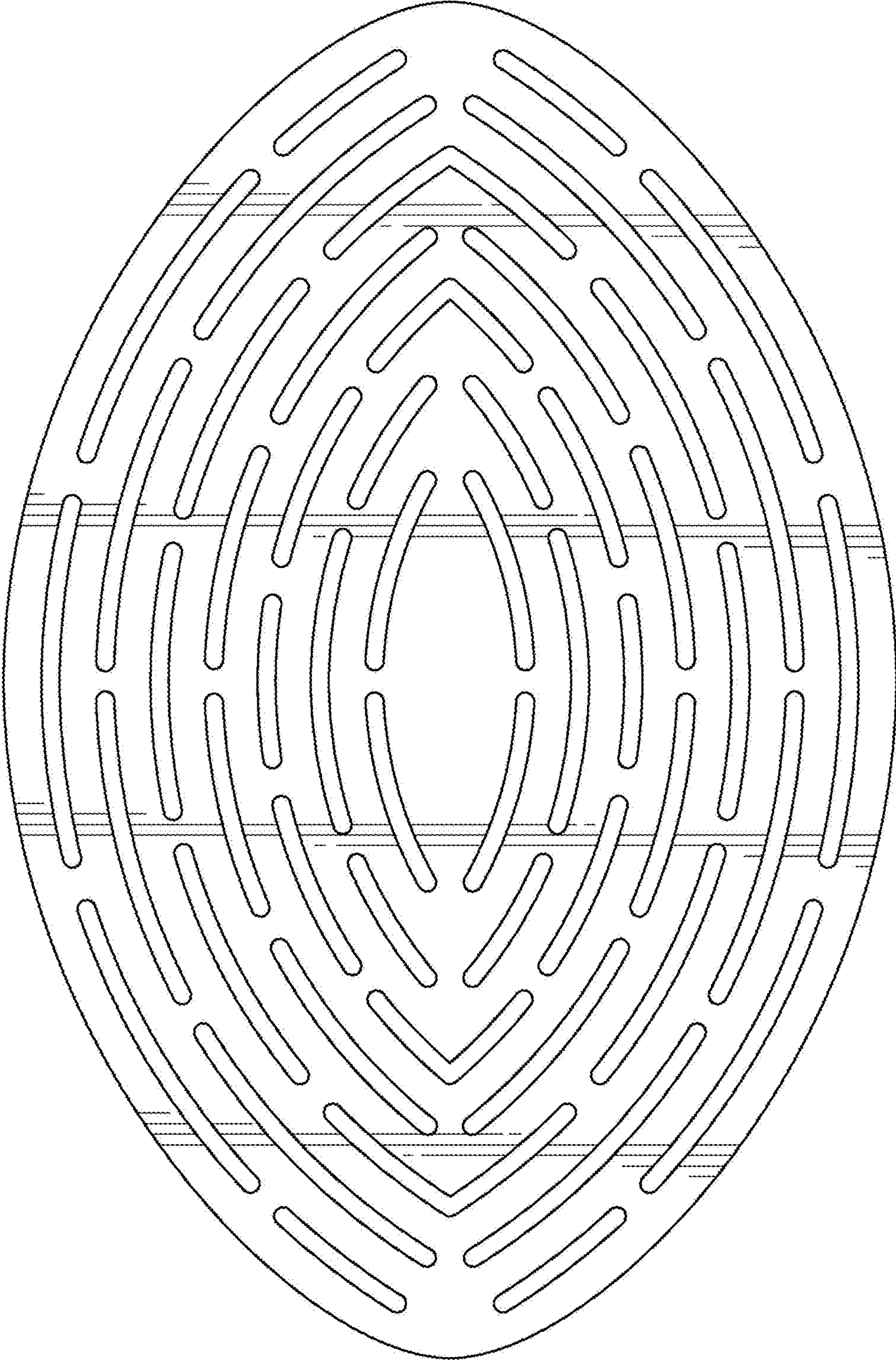


FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7



FIG. 8

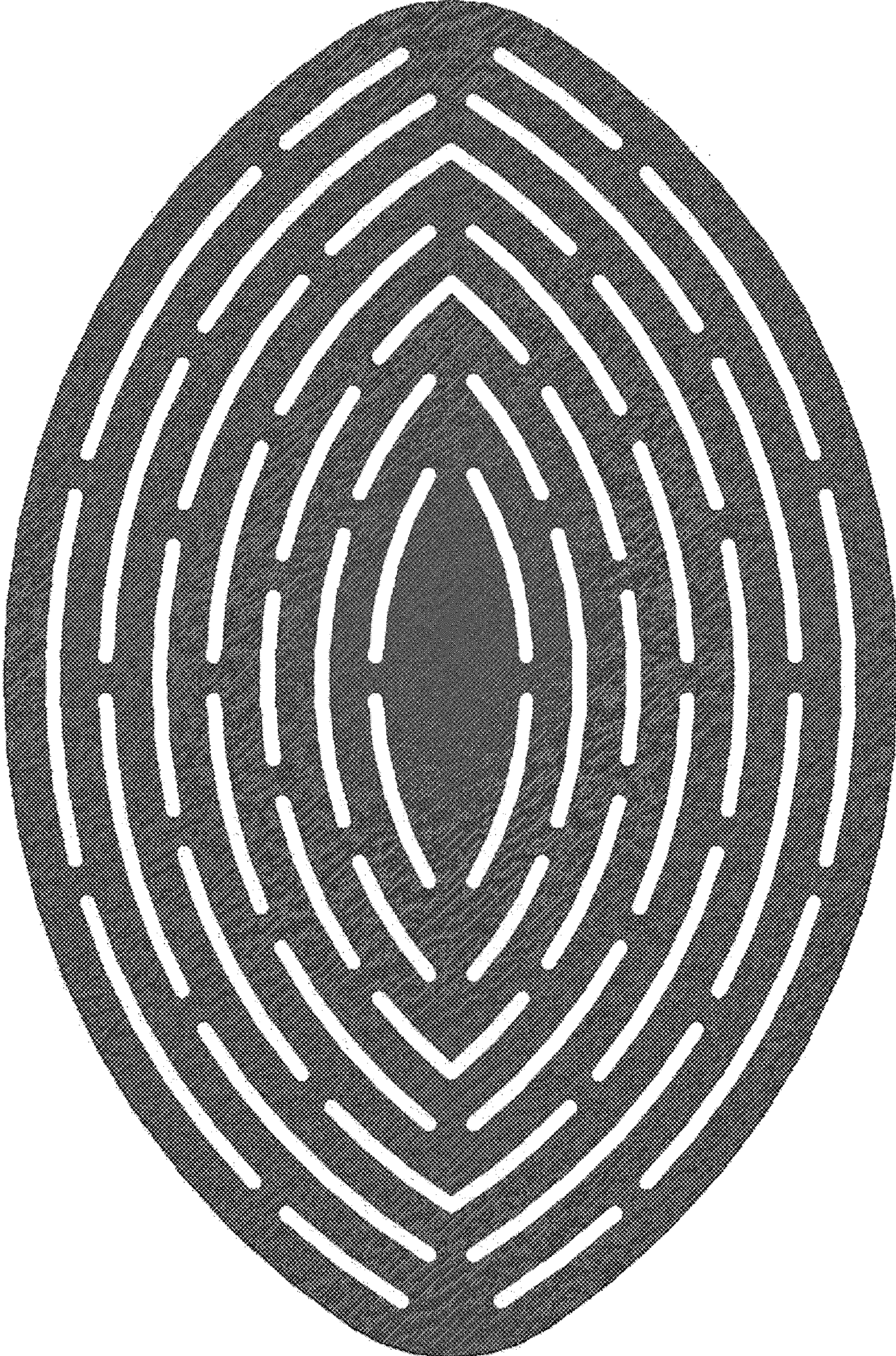


FIG. 9

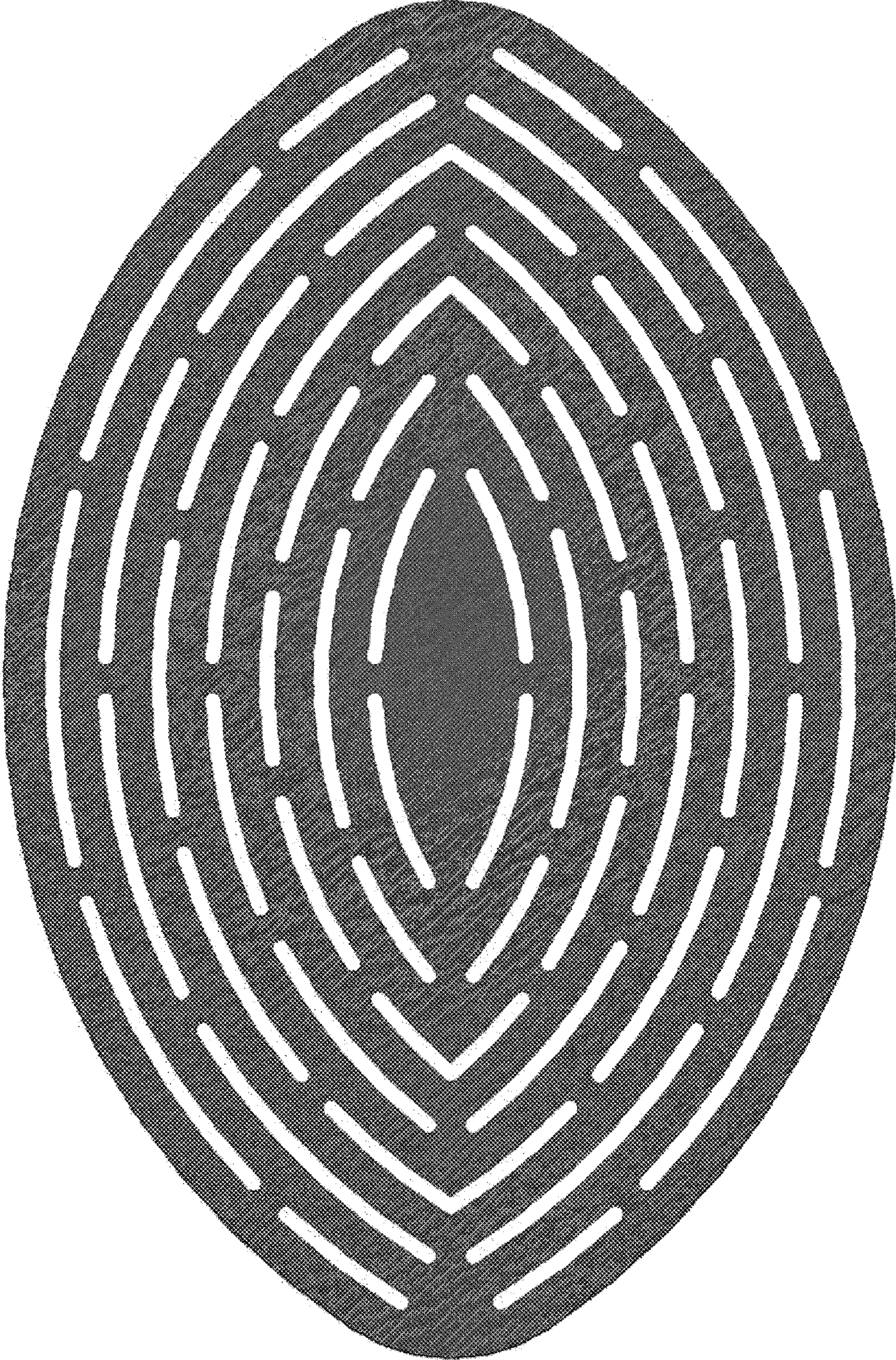


FIG. 10

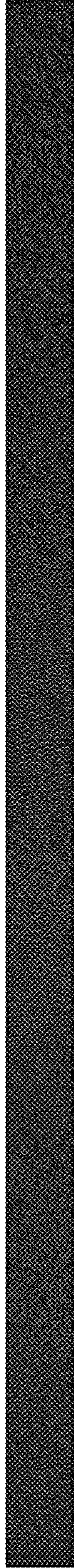


FIG. 11

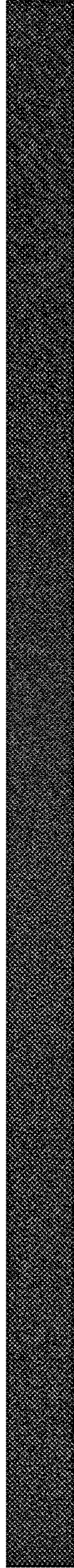


FIG. 12



FIG. 13



FIG. 14