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(12) **United States Design Patent**
Shelton, IV et al.

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(54) **THREE DIMENSIONAL ADJUNCT**

FOREIGN PATENT DOCUMENTS

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EP 449431 A2 10/1991
EP 594148 A1 4/1994
(Continued)

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

(21) Appl. No.: **29/708,336**

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OTHER PUBLICATIONS

Baker et al., "The Science of Stapling and Leaks," Obesity Surgery, vol. 14, Nov. 2004, pp. 1290-98.
(Continued)

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Related U.S. Application Data

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(51) **LOC (13) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/145**

(58) **Field of Classification Search**
USPC D24/145
CPC . A61B 17/105; A61B 17/068; A61B 17/0682; A61B 17/064; A61B 17/072; A61B 17/07207; A61B 17/07292; A61B 2017/04271; A61B 2017/07278; A61B 2017/07285

See application file for complete search history.

(57) **CLAIM**

The ornamental design for a three dimensional adjunct, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a new design of a three dimensional adjunct shown on a surgical stapling device; FIG. 2 is an enlarged view of a section of the three dimensional adjunct of FIG. 1; FIG. 3 is a top view of the three dimensional adjunct of FIG. 1; FIG. 4 is a bottom view of the three dimensional adjunct of FIG. 1 with the surgical stapling device removed; FIG. 5 is a left view of the three dimensional adjunct of FIG. 1, the right view being a mirror image thereof; FIG. 6 is a front view of the three dimensional adjunct of FIG. 1 with the surgical stapling device removed; and, FIG. 7 is a back view of the three dimensional adjunct of FIG. 1.

The broken lines in the drawings form no part of the claimed design.

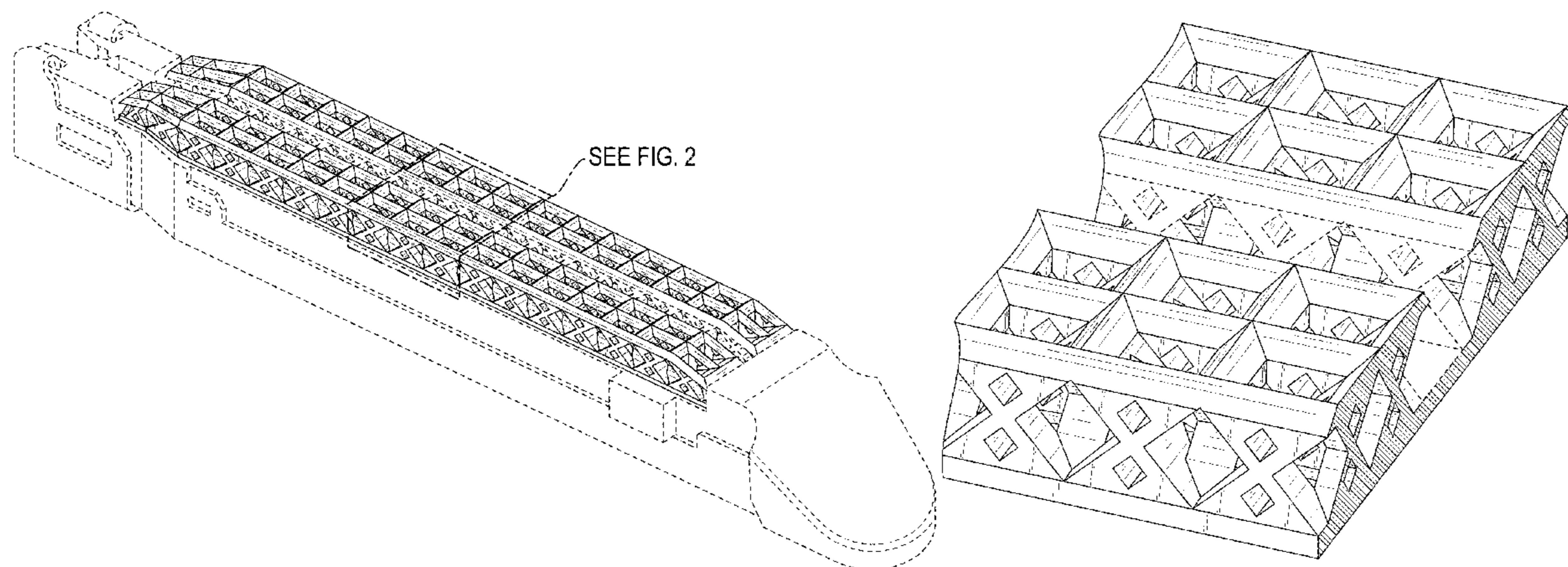
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,213,058 A 10/1965 Boyle et al.
D297,764 S 9/1988 Hunt et al.
4,892,244 A 1/1990 Fox et al.
5,236,637 A 8/1993 Hull
RE34,519 E 1/1994 Fox et al.
5,391,072 A 2/1995 Lawton et al.

(Continued)

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,468,253 A 11/1995 Bezwada et al.
 5,529,473 A 6/1996 Lawton et al.
 6,916,867 B2 7/2005 Gugumus
 7,157,586 B2 1/2007 Wood et al.
 7,195,640 B2 3/2007 Falotico et al.
 7,438,846 B2 10/2008 John
 7,641,091 B2 1/2010 Olson et al.
 7,695,643 B2 4/2010 Fritzsche et al.
 7,892,474 B2 2/2011 Shkolnik et al.
 8,110,135 B2 2/2012 El-Siblani
 8,590,762 B2 11/2013 Hess et al.
 9,205,601 B2 12/2015 DeSimone et al.
 9,211,120 B2 12/2015 Scheib et al.
 9,211,678 B2 12/2015 DeSimone et al.
 9,216,546 B2 12/2015 DeSimone et al.
 9,307,965 B2 4/2016 Ming et al.
 9,332,984 B2 5/2016 Weaner et al.
 9,453,142 B2 9/2016 Rolland et al.
 9,770,241 B2 9/2017 Rousseau et al.
 9,873,790 B1 1/2018 Andjelic et al.
 9,924,944 B2 3/2018 Shelton, IV et al.
 10,028,744 B2 7/2018 Shelton, IV et al.
 10,052,104 B2 8/2018 Shelton, IV et al.
 D831,209 S 10/2018 Huitema et al.
 10,085,745 B2 10/2018 Dalessandro et al.
 D836,198 S 12/2018 Harris et al.
 10,149,753 B2 12/2018 Chen et al.
 10,166,026 B2 1/2019 Shelton, IV et al.
 10,172,616 B2 1/2019 Murray et al.
 10,271,849 B2 4/2019 Vendely et al.
 10,335,150 B2 7/2019 Shelton, IV
 10,349,939 B2 7/2019 Shelton, IV et al.
 D882,782 S 4/2020 Shelton, IV et al.
 D885,574 S * 5/2020 Shelton, IV D24/145
 10,835,246 B2 * 11/2020 Shelton, IV A61B 17/07207
 2009/0090763 A1 4/2009 Zemlok et al.
 2011/0276125 A1 11/2011 Walker et al.
 2012/0080344 A1 4/2012 Shelton, IV
 2012/0080493 A1 4/2012 Shelton, IV et al.
 2012/0241491 A1 9/2012 Aldridge et al.
 2012/0241497 A1 9/2012 Mandakolathur Vasudevan et al.
 2012/0241502 A1 9/2012 Aldridge et al.
 2012/0241505 A1 9/2012 Alexander, III et al.
 2012/0253298 A1 10/2012 Henderson et al.
 2012/0318842 A1 12/2012 Anim et al.
 2013/0161374 A1 6/2013 Swayze
 2013/0161375 A1 6/2013 Huitema et al.
 2013/0253661 A1 9/2013 D'Agostino et al.
 2013/0256375 A1 10/2013 Shelton, IV et al.
 2013/0292862 A1 11/2013 Joyce
 2013/0295212 A1 11/2013 Chen et al.
 2013/0317526 A1 11/2013 Mortarino
 2014/0155916 A1 6/2014 Hodgkinson et al.
 2014/0224857 A1 8/2014 Schmid
 2015/0034696 A1 2/2015 Shelton, IV et al.
 2015/0133995 A1 5/2015 Shelton, IV et al.
 2015/0245841 A1 9/2015 Linder et al.
 2015/0250475 A1 9/2015 Ek
 2015/0297222 A1 10/2015 Huitema et al.
 2015/0313594 A1 11/2015 Shelton, IV et al.
 2015/0331402 A1 11/2015 Lin et al.
 2015/0351754 A1 12/2015 Harris et al.
 2015/0351758 A1 12/2015 Shelton, IV et al.
 2015/0351858 A9 12/2015 Kubiak et al.
 2015/0360419 A1 12/2015 Willis et al.
 2016/0000430 A1 1/2016 Ming et al.
 2016/0034696 A1 2/2016 Jooste et al.
 2016/0066914 A1 3/2016 Baber et al.
 2016/0100933 A1 4/2016 Linder et al.
 2016/0106426 A1 * 4/2016 Shelton, IV A61B 17/07292
 2016/0106427 A1 4/2016 Shelton, IV et al.
 2016/0174974 A1 6/2016 Schmid et al.
 2016/0213395 A1 7/2016 Anim
 2016/0249919 A1 9/2016 Savage et al.

2016/0278765 A1 9/2016 Shelton, IV et al.
 2016/0288376 A1 10/2016 Sun et al.
 2016/0345976 A1 12/2016 Gonzalez et al.
 2017/0056000 A1 3/2017 Nalagatla et al.
 2017/0086829 A1 3/2017 Vendely et al.
 2017/0086837 A1 3/2017 Vendely et al.
 2017/0129167 A1 5/2017 Castanon
 2017/0129169 A1 5/2017 Batchelder et al.
 2017/0231633 A1 8/2017 Marczyk et al.
 2017/0355815 A1 12/2017 Becker et al.
 2018/0126630 A1 5/2018 Panzer et al.
 2018/0243976 A1 8/2018 Feller
 2018/0290374 A1 10/2018 Willis et al.
 2018/0361510 A1 12/2018 Stamp et al.
 2019/0059889 A1 2/2019 Shelton, IV et al.
 2019/0240385 A1 8/2019 Hartwell et al.
 2019/0254654 A1 8/2019 Shelton, IV et al.
 2019/0254655 A1 8/2019 Shelton, IV et al.
 2019/0254656 A1 8/2019 Shelton, IV et al.
 2019/0254657 A1 8/2019 Shelton, IV et al.
 2019/0254658 A1 8/2019 Shelton, IV et al.
 2019/0254659 A1 8/2019 Harris et al.
 2019/0254660 A1 8/2019 Shelton, IV et al.
 2019/0254661 A1 8/2019 Shelton, IV et al.
 2019/0254664 A1 8/2019 Vendely et al.
 2019/0254665 A1 8/2019 Vendely et al.
 2019/0254666 A1 8/2019 Vendely et al.
 2019/0254667 A1 8/2019 Vendely et al.
 2019/0254668 A1 8/2019 Vendely et al.
 2019/0254669 A1 8/2019 Shelton, IV et al.
 2019/0254670 A1 8/2019 Shelton, IV et al.
 2019/0269400 A1 9/2019 Mandakolathur Vasudevan et al.
 2019/0269817 A1 9/2019 Williams et al.
 2020/0000469 A1 * 1/2020 Shelton, IV A61B 17/07292

FOREIGN PATENT DOCUMENTS

EP 1815804 A2 8/2007
 EP 2090248 A2 8/2009
 EP 2954857 A1 12/2015
 EP 3087931 A2 11/2016
 EP 3132812 A1 2/2017
 EP 3135222 A1 3/2017
 EP 3135317 A1 3/2017
 EP 3150134 A1 4/2017
 EP 3150142 A2 4/2017
 EP 3150144 A1 4/2017
 EP 3162388 A1 5/2017
 EP 3363382 A1 8/2018
 EP 3363386 A1 8/2018
 RU 2629239 C2 8/2017
 WO 2006088946 A2 8/2006

OTHER PUBLICATIONS

Yo et al., "Buttressing of the Staple Line in Gastrointestinal Anas-
 tomoses: Overview of New Technology Designed to Reduce Periopera-
 tive Complications," Digestive Surgery, vol. 23, No. 5-6, Oct. 2006,
 pp. 283-91.
 European Search Report and Written Opinion for EP19158186
 dated Jul. 5, 2019 (9 pages).
 International Search Report and Written Opinion for PCT/IB2019/
 050500 dated May 17, 2019 (21 pages).
 International Search Report and Written Opinion for PCT/IB2019/
 050408 dated Jun. 5, 2019 (17 pages).
 European Search Report and Written Opinion for EP Application
 19158219 dated Apr. 9, 2019 (10 pages).
 Partial European Search Report and Written Opinion for EP Appli-
 cation 19158306 dated Apr. 9, 2019 (21 pages).
 European Search Report and Written Opinion for EP Application
 19158301 dated Mar. 27, 2019 (7 pages).
 Partial European Search Report and Written Opinion for EP Appli-
 cation 19158223 dated Apr. 25, 2019 (10 pages).
 Wismans et al., "Characterization of Polymeric Foams," Eindhoven
 University of Technology. Jul. 2009 (35 pages).

(56)

References Cited

OTHER PUBLICATIONS

European Search Report and Written Opinion for EP19158306 dated May 8, 2019 (19 pages).

Extended European Search Report and Written Opinion for EP Application 201965332, dated Oct. 30, 2020, 2020, 10 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050363, dated Sep. 3, 2020, 9 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050400, dated Sep. 3, 2020, 9 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050402, dated Sep. 3, 2020, 11 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050403, dated Sep. 3, 2020, 23 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050404, dated Sep. 3, 2020, 10 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050406, dated Sep. 3, 2020, 9 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050407, dated Sep. 3, 2020, 13 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050408, dated Sep. 3, 2020, 9 pages.

International Preliminary Report on Patentability issued in International Patent Application No. PCT/IB2019/050500, dated Sep. 3, 2020, 13 pages.

International Search Report and Written Opinion issued in International Patent Application No. PCT/IB2019/050363, dated Jul. 15, 2019, 11 pages.

Elomaa et al., "Preparation of Poly(ϵ -caprolactone)based Tissue Engineering Scaffolds", *Acta Biomaterialia*, 2011, 7:3850-3856.

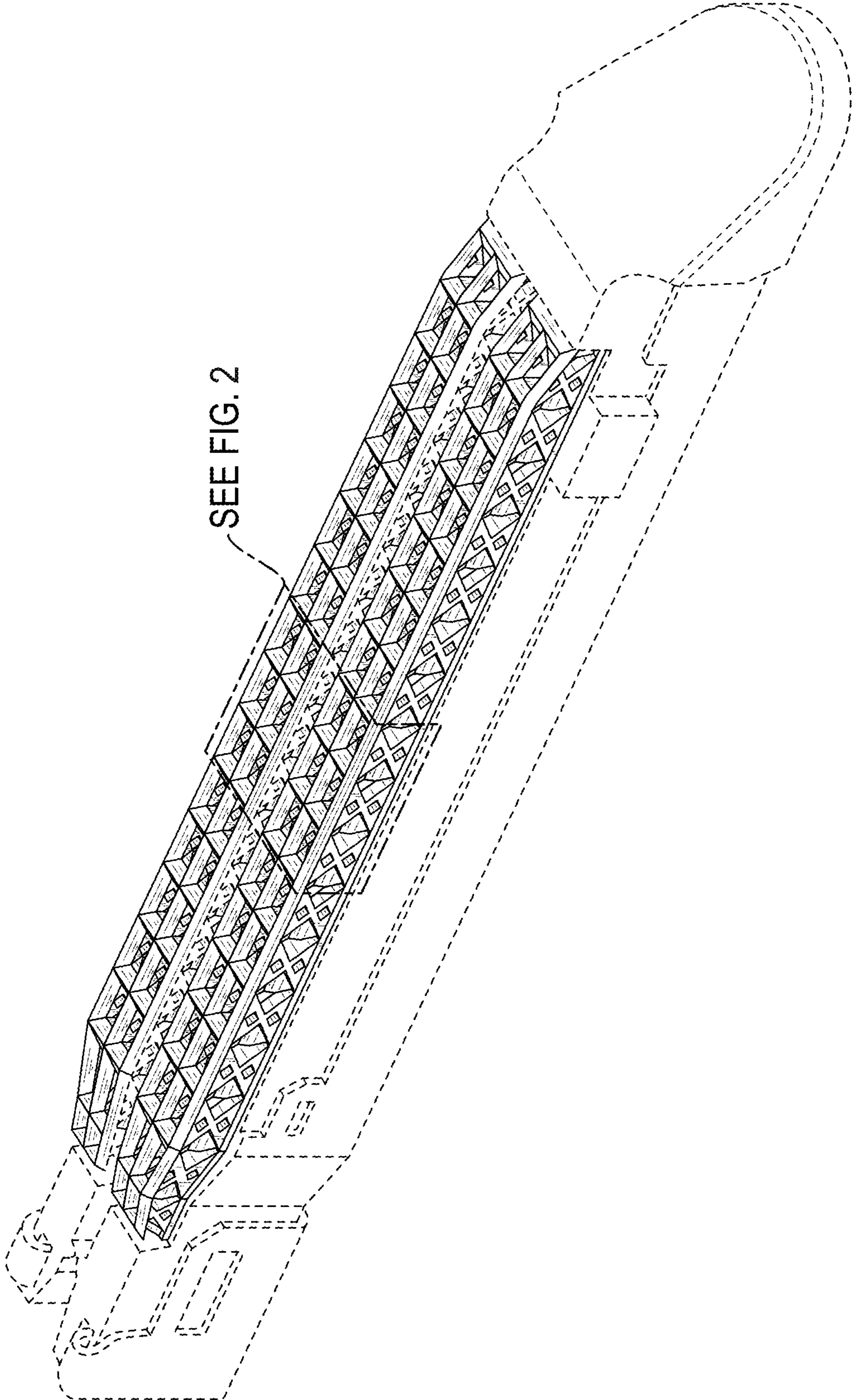
Januszewicz et al., "Layerless Fabrication with Continuous Liquid Interface Production", *Proceedings of the National Academy of Sciences*, 2016, 113(42):11703-11708.

Melchels et al., "Effects of the Architecture of Tissue Engineering Scaffolds on Cell Seeding and Culturing", *Acta Biomaterialia*, 2010, 6(11):4208-4217.

Tumbleston et al., "Continuous Liquid Interface Production of 3D Objects", *Science*, 2015, 347(6228):1349-1352.

Extended European Search Report and Written Opinion for EP Application 20196541.5 dated Nov. 25, 2020, 10 pages.

* cited by examiner



SEE FIG. 2

FIG. 1

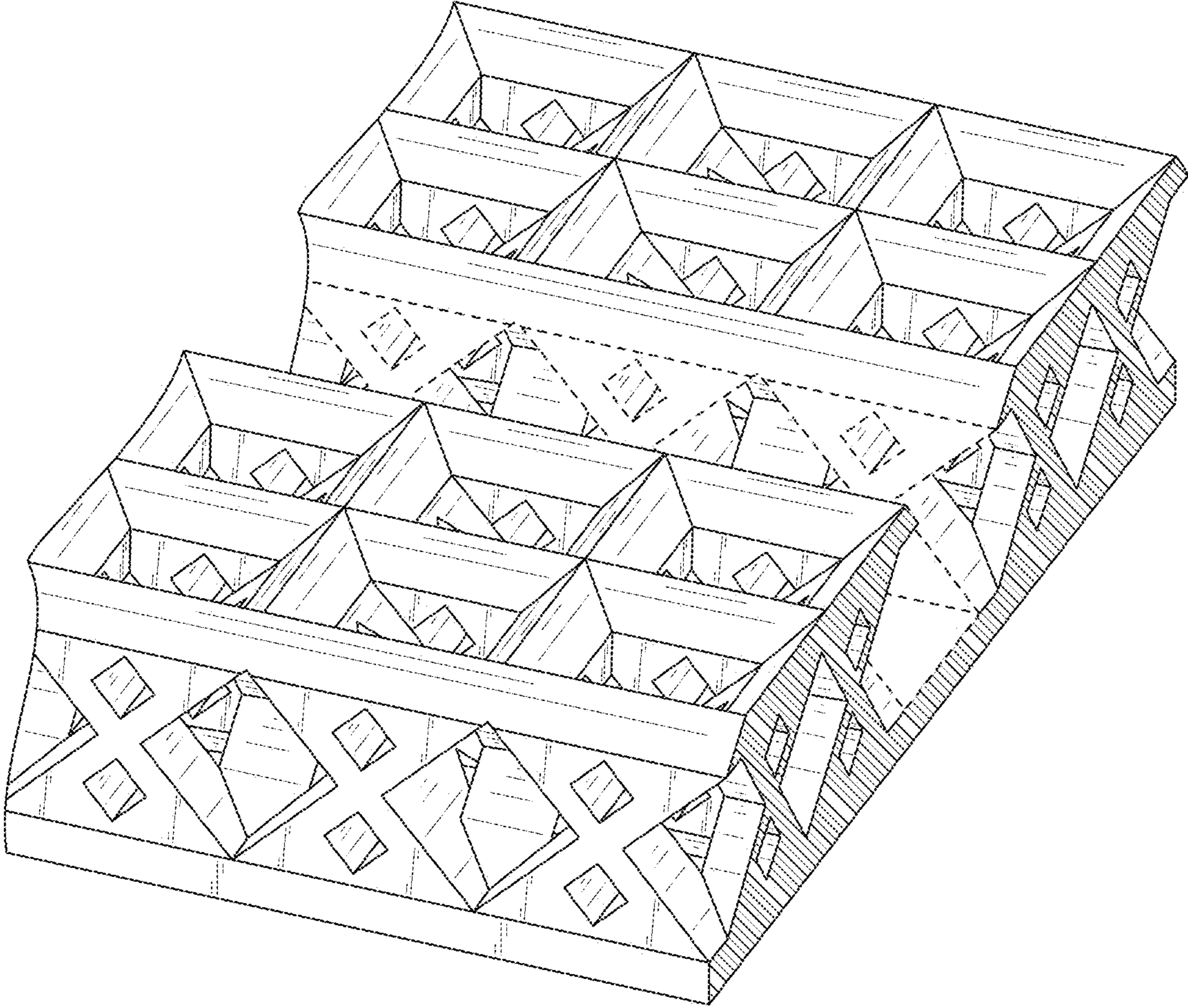


FIG. 2

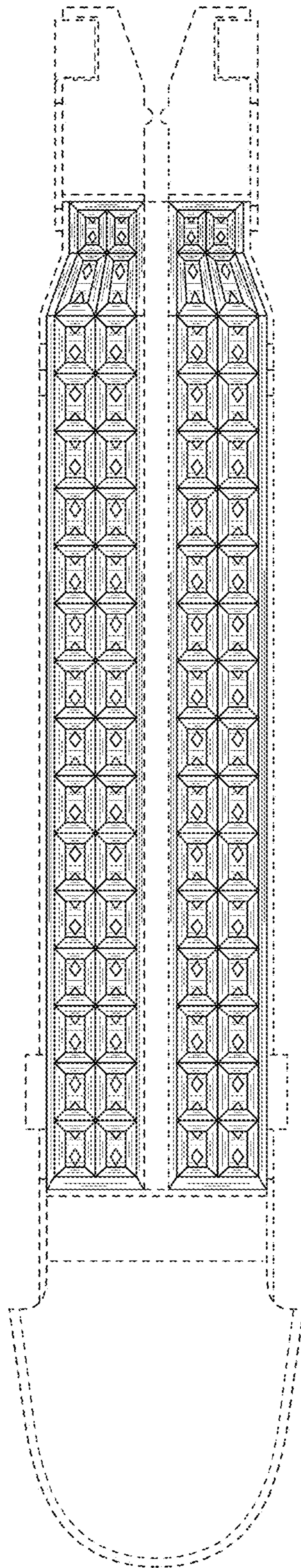


FIG. 3

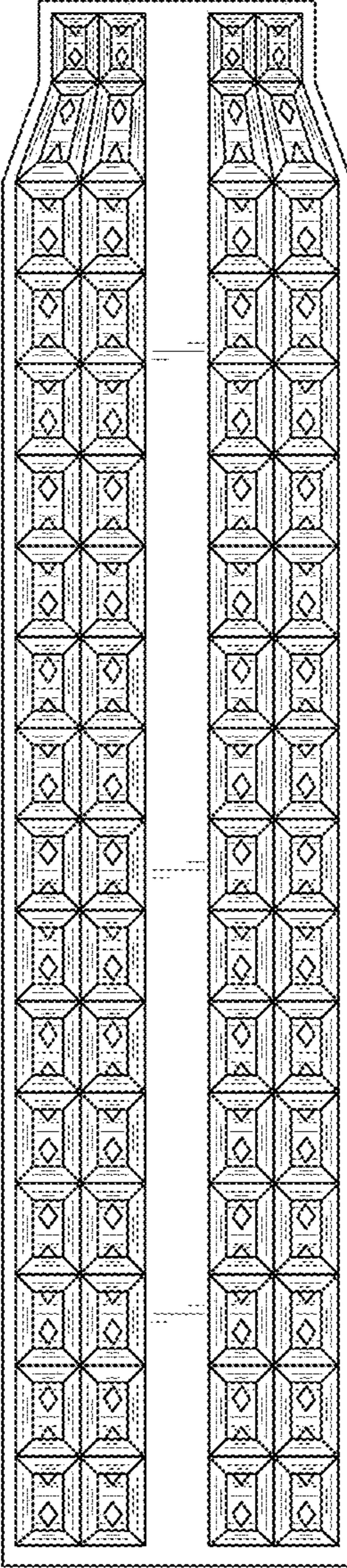


FIG. 4

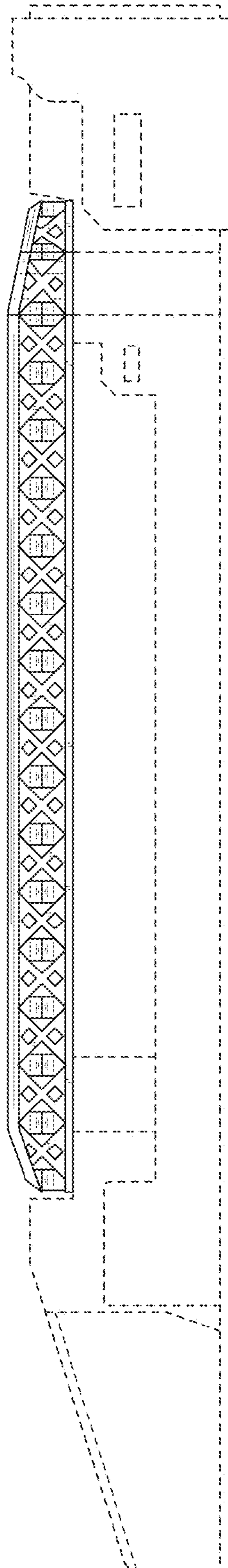


FIG. 5

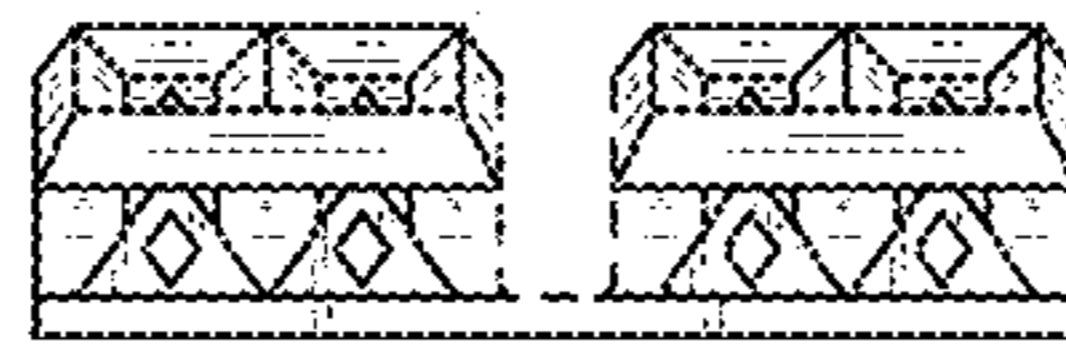


FIG. 6

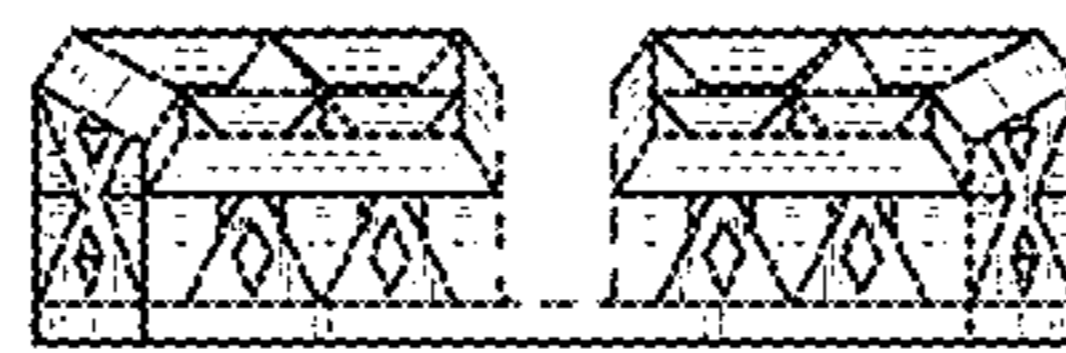


FIG. 7