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(12) **United States Design Patent** (10) **Patent No.:** **US D940,318 S**
Shelton, IV et al. (45) **Date of Patent:** **** Jan. 4, 2022**

(54) **KNITTED TISSUE SCAFFOLD**

FOREIGN PATENT DOCUMENTS

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EP 0449431 A2 10/1991
EP 2008595 A2 12/2008
(Continued)

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OTHER PUBLICATIONS

European Search Report for EP Application No. 15171455, dated Sep. 30, 2015 (5 pages).
(Continued)

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

Primary Examiner — Wan Laymon

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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 2017/04271; A61B 2017/07278; A61B 2017/07228; A61B 2017/07235; A61B 2017/07242; A61B 2017/07285; A61B 2017/07292
See application file for complete search history.

(57) **CLAIM**

The ornamental design for a knitted tissue scaffold, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a new design of a knitted tissue scaffold shown on a surgical stapling device; FIG. 2 is a top view of the knitted tissue scaffold of FIG. 1; FIG. 3 is a bottom view of the knitted tissue scaffold of FIG. 1 with the surgical stapling device removed; FIG. 4 is a left view of the knitted tissue scaffold of FIG. 1, the right view being a mirror image thereof; FIG. 5 is a front view of the knitted tissue scaffold of FIG. 1 with the surgical stapling device removed; and, FIG. 6 is a back view of the knitted tissue scaffold of FIG. 1 with the surgical stapling device removed. The broken lines immediately adjacent the shaded areas represent the bounds of the claimed design while all other broken lines are directed to environment and are for illustrative purposes only; the broken lines form for no part of the claimed design.

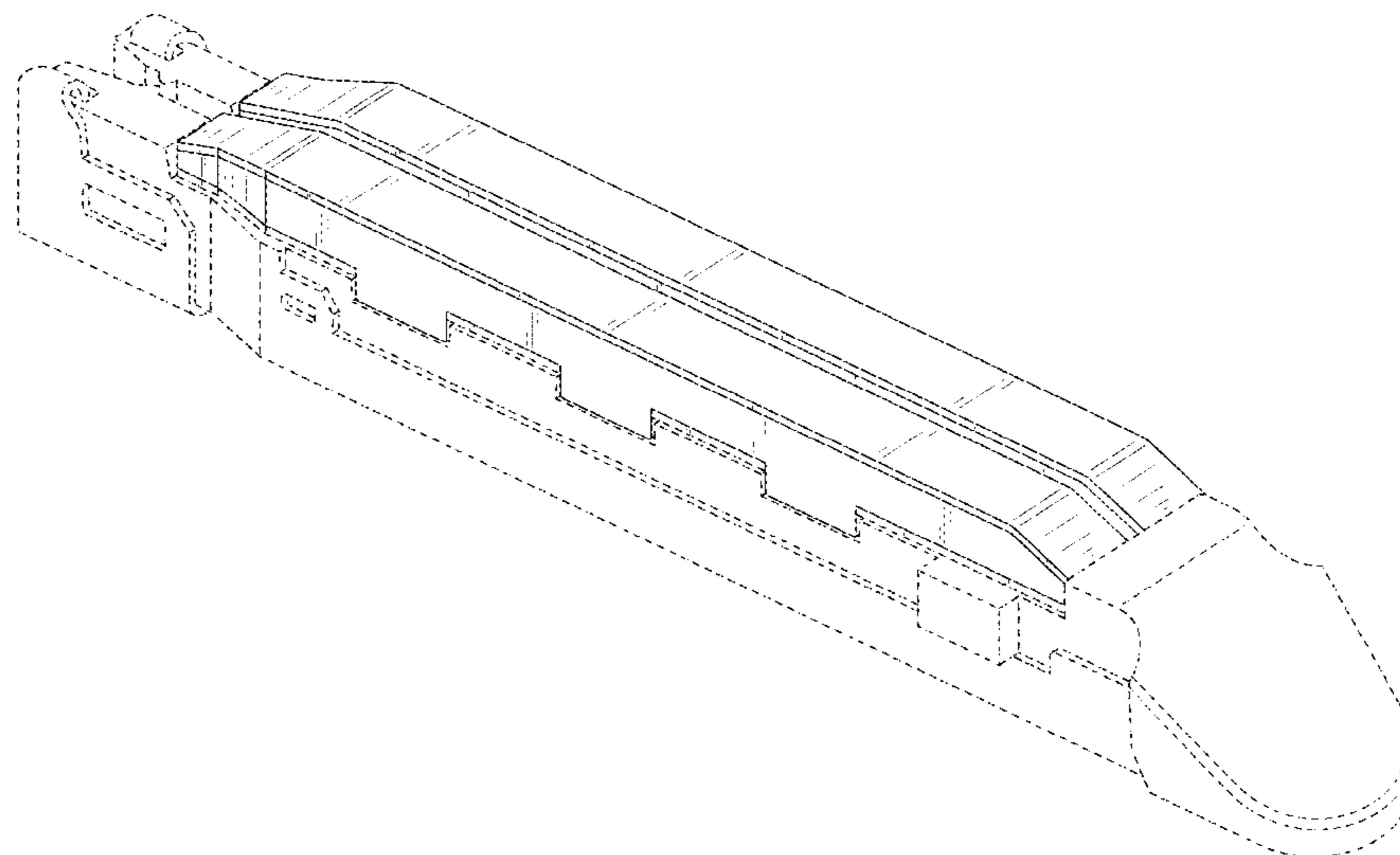
(56) **References Cited**

U.S. PATENT DOCUMENTS

D297,764 S 9/1988 Spreckelmeier et al.
4,892,244 A 1/1990 Fox et al.
RE34,519 E 1/1994 Fox et al.
5,542,594 A 8/1996 Mckean et al.
5,690,675 A 11/1997 Sawyer et al.
6,147,135 A 11/2000 Yuan et al.

(Continued)

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,736,823 B2 5/2004 Darois et al.
 7,143,924 B2 12/2006 Scirica et al.
 7,192,604 B2 3/2007 Brown et al.
 7,641,091 B2 1/2010 Olson et al.
 8,590,762 B2 11/2013 Hess et al.
 9,307,965 B2 4/2016 Ming et al.
 9,332,984 B2 5/2016 Weaner et al.
 9,801,630 B2 10/2017 Harris et al.
 9,913,646 B2 3/2018 Shelton, IV
 9,924,944 B2 3/2018 Shelton, IV et al.
 9,924,946 B2 3/2018 Vendely et al.
 9,936,954 B2 4/2018 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.
 D836,198 S 12/2018 Harris et al.
 10,166,026 B2 1/2019 Shelton, IV et al.
 10,172,616 B2 1/2019 Murray et al.
 10,206,686 B2 2/2019 Swayze et al.
 10,271,849 B2 4/2019 Vendely et al.
 10,390,828 B2 8/2019 Vendely et al.
 10,426,481 B2 10/2019 Aronhalt et al.
 10,441,285 B2 10/2019 Shelton, IV et al.
 10,610,226 B2 4/2020 Shelton, IV et al.
 D885,574 S 5/2020 Shelton, IV et al.
 10,952,724 B2 * 3/2021 Shelton, IV A61B 17/07207
 10,959,721 B2 * 3/2021 Shelton, IV A61B 17/07207
 10,966,713 B2 * 4/2021 Shelton, IV A61B 17/07207
 10,980,533 B2 * 4/2021 Shelton, IV A61B 17/07207
 10,982,360 B2 * 4/2021 Vendely A61B 17/07207
 2005/0059997 A1 3/2005 Bauman et al.
 2005/0245965 A1 11/2005 Orban et al.
 2006/0084930 A1 4/2006 Dhanaraj et al.
 2008/0003913 A1 1/2008 Vinson et al.
 2008/0140115 A1 6/2008 Stopek
 2009/0001122 A1 1/2009 Prommersberger et al.
 2009/0090763 A1 4/2009 Zemlok et al.
 2012/0080344 A1 4/2012 Shelton, IV
 2012/0187179 A1 7/2012 Gleiman
 2012/0241502 A1 9/2012 Aldridge et al.
 2013/0013074 A1 1/2013 Shikinami
 2013/0112733 A1 5/2013 Aranyi et al.
 2013/0146642 A1 6/2013 Shelton, IV et al.
 2013/0161374 A1 6/2013 Swayze et al.
 2013/0161375 A1 6/2013 Huitema et al.
 2013/0256376 A1 10/2013 Barton et al.
 2013/0317526 A1 11/2013 Mortarino
 2014/0158741 A1 6/2014 Woodard et al.
 2014/0158742 A1 6/2014 Stopek et al.
 2014/0205637 A1 7/2014 Widenhouse et al.
 2014/0224686 A1 8/2014 Aronhalt et al.
 2014/0224857 A1 8/2014 Schmid
 2014/0277575 A1 9/2014 Landgrebe et al.
 2015/0034696 A1 2/2015 Shelton et al.
 2015/0099098 A1 4/2015 Bahukudumbi et al.
 2015/0099410 A1 4/2015 Bahukudumbi et al.
 2015/0108199 A1 4/2015 Shelton, IV et al.
 2015/0196299 A1 7/2015 Swayze et al.
 2015/0272575 A1 10/2015 Leimbach et al.
 2015/0297222 A1 10/2015 Huitema et al.

2015/0313594 A1 11/2015 Shelton et al.
 2015/0351753 A1 12/2015 Shelton, IV et al.
 2015/0351754 A1 12/2015 Harris et al.
 2015/0351758 A1 12/2015 Shelton et al.
 2016/0000430 A1 1/2016 Ming et al.
 2016/0106427 A1 4/2016 Shelton et al.
 2016/0174974 A1 6/2016 Schmid et al.
 2017/0055981 A1 3/2017 Vendely et al.
 2017/0056000 A1 3/2017 Nalagatla et al.
 2017/0056566 A1 3/2017 Shelton et al.
 2017/0086835 A1 3/2017 Harris et al.
 2017/0086837 A1 3/2017 Vendely et al.
 2017/0216535 A1 8/2017 Mao
 2017/0231633 A1 8/2017 Marczyk et al.
 2019/0038280 A1 2/2019 Shelton, IV et al.
 2019/0059889 A1 2/2019 Shelton et al.
 2019/0254659 A1 8/2019 Harris 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 et al.
 2020/0197006 A1 6/2020 Shelton, IV et al.
 2020/0205806 A1 7/2020 Shelton, IV et al.

FOREIGN PATENT DOCUMENTS

EP 2644121 A2 10/2013
 EP 2724734 A2 4/2014
 EP 2954855 A1 12/2015
 EP 2954857 A1 12/2015
 EP 3135222 A1 3/2017
 EP 3150143 A1 4/2017
 EP 3162384 A1 5/2017
 EP 3275378 A1 1/2018
 WO 2015/191277 A2 12/2015

OTHER PUBLICATIONS

International Search Report and Written Opinion for PCT/IB2019/050501, dated Jul. 31, 2019, 24 pages.
 International Search Report and Written Opinion for PCT/IB2019/050502, dated Aug. 20, 2019, 22 pages.
 International Search Report and Written Opinion for PCT/IB2019/050503, dated May 21, 2019, 17 pages.
 International Search Report and Written Opinion for PCT/IB2019/050504, dated Jun. 4, 2019, 16 pages.
 International Search Report and Written Opinion for PCT/IB2019/050505, dated Jun. 4, 2019, 15 pages.
 International Search Report and Written Opinion for PCT/IB2019/050506, dated Jun. 4, 2019, 16 pages.
 Partial European Search Report for EP Application No. 19158395.4, dated May 14, 2019, 14 pages.
 Baker et al. (Nov. 2004) "The Science of Stapling and Leaks", Obesity Surgery, 14:1290-1298.
 Ye et al. (2008) "Development of the Warp Knitted Spacer Fabrics for Cushion Applications", Journal of Industrial Textiles, 37(3):213-223.

* cited by examiner

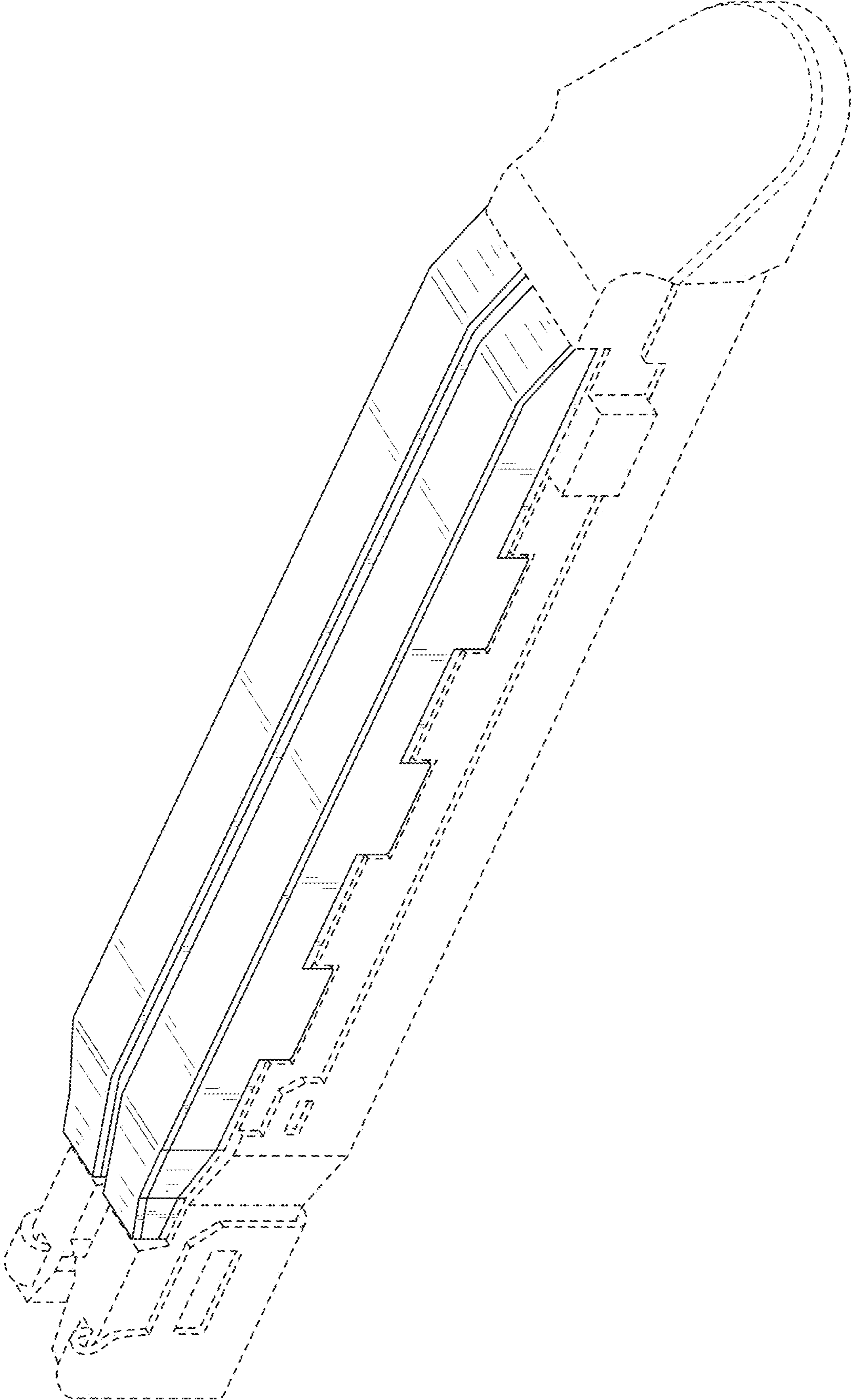


FIG. 1

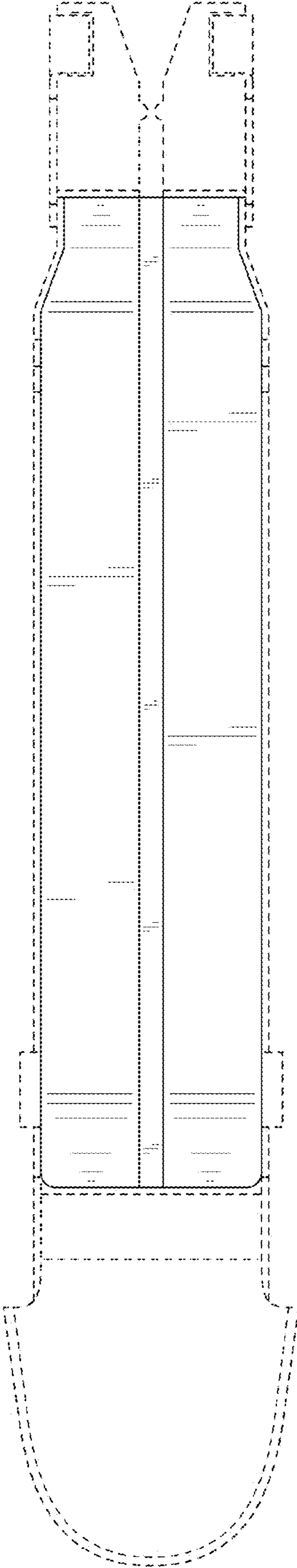


FIG. 2

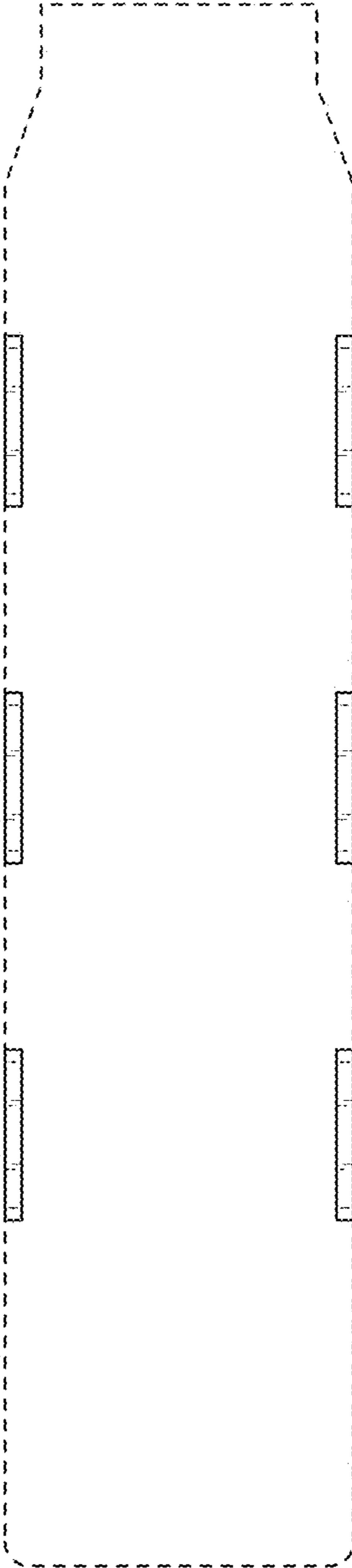


FIG. 3

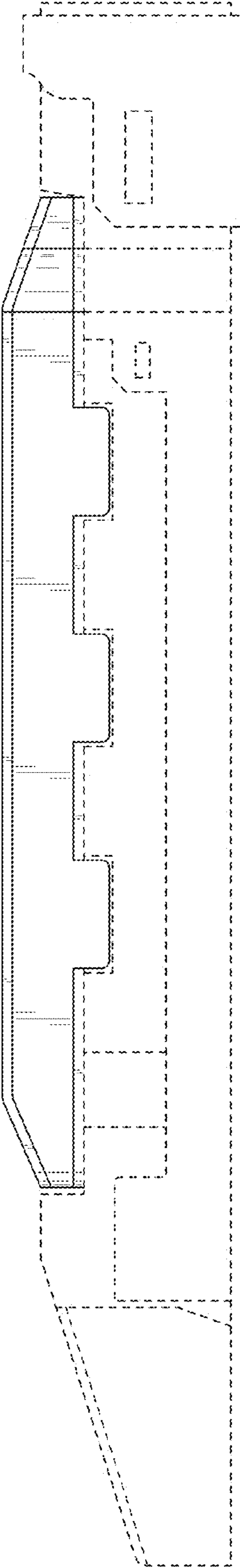


FIG. 4

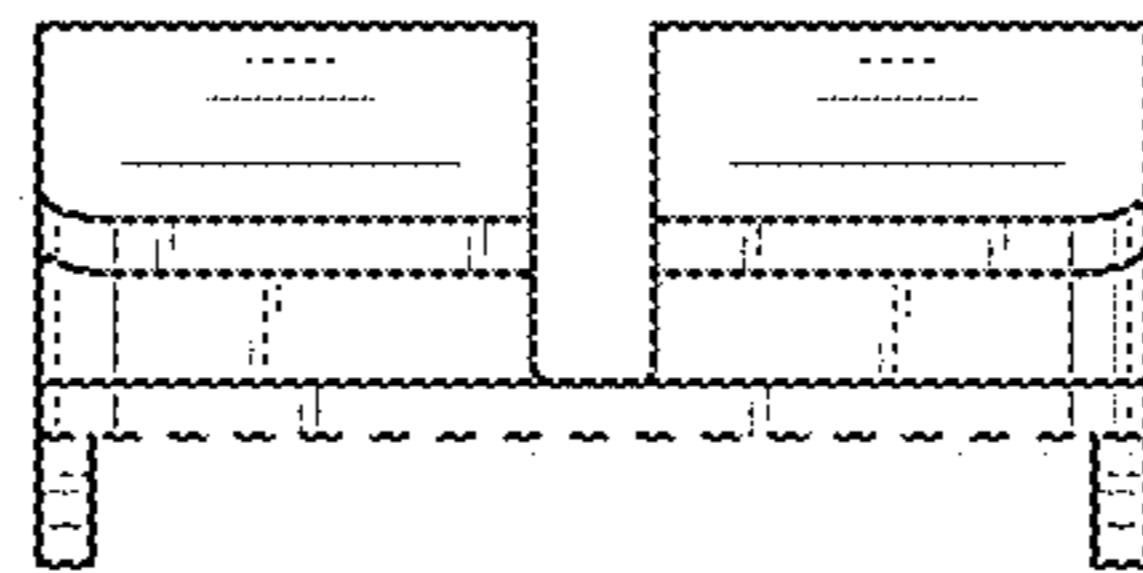


FIG. 5

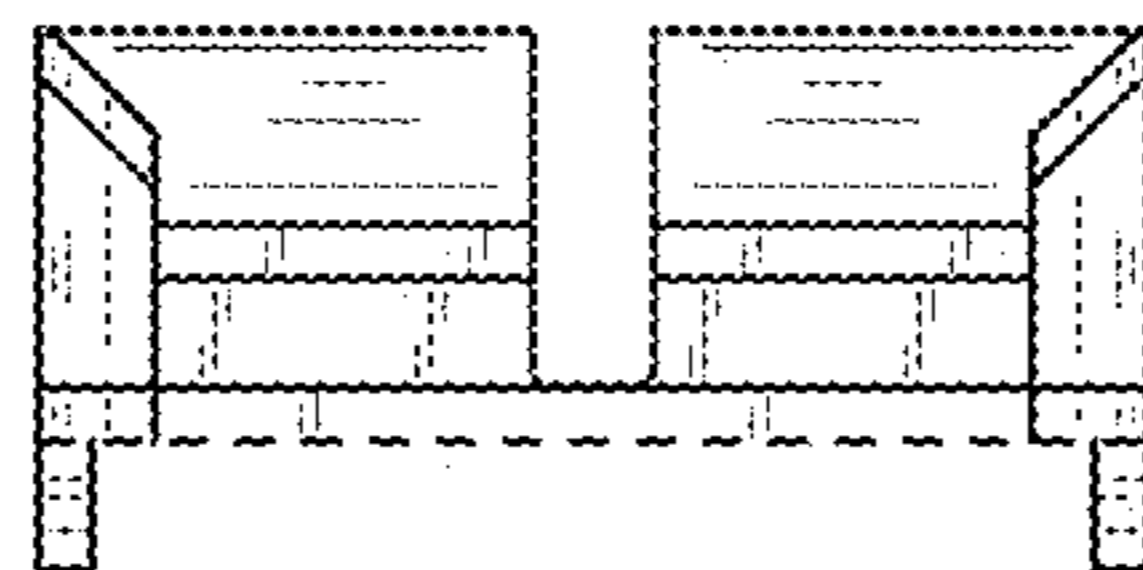


FIG. 6