



US00D882782S

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

(10) **Patent No.:** **US D882,782 S**
(45) **Date of Patent:** **** Apr. 28, 2020**

(54) **THREE DIMENSIONAL ADJUNCT**

(71) Applicant: **Ethicon LLC**, Guaynabo, PR (US)

(72) Inventors: **Frederick E. Shelton, IV**, Hillsboro, OH (US); **Jason L. Harris**, Lebanon, OH (US); **Michael J. Vendely**, Lebanon, OH (US); **Chester O. Baxter, III**, Loveland, OH (US); **Mark S. Zeiner**, Mason, OH (US)

(73) Assignee: **Ethicon LLC**, Guaynabo, PR (US)

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

(21) Appl. No.: **29/637,769**

(22) Filed: **Feb. 21, 2018**

(51) **LOC (12) Cl.** **24-02**

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

(58) **Field of Classification Search**
USPC D24/145

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D297,764 S * 9/1988 Hunt D24/145
4,892,244 A * 1/1990 Fox A61B 17/07207
227/120

(Continued)

FOREIGN PATENT DOCUMENTS

EP 0449431 A2 10/1991
EP 594148 A1 4/1994

(Continued)

OTHER PUBLICATIONS

Shelton, IV et al., U.S. Appl. No. 15/689,198 entitled "Endocutter Control System" filed Aug. 29, 2017. (60 pages).

(Continued)

Primary Examiner — Wan Laymon

(74) *Attorney, Agent, or Firm* — Mintz Levin Cohn Ferris Glovsky and Popeo, P.C.

(57) **CLAIM**

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

DESCRIPTION

FIG. 1 is a perspective view of one embodiment 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.

FIG. 8 is a perspective view of another embodiment of a new design of a three dimensional adjunct shown on a surgical stapling device;

FIG. 9 is an enlarged view of a section of the three dimensional adjunct of FIG. 8;

FIG. 10 is a top view of the three dimensional adjunct of FIG. 8;

FIG. 11 is a bottom view of the three dimensional adjunct of FIG. 8 with the surgical stapling device removed;

FIG. 12 is a left view of the three dimensional adjunct of FIG. 8, the right view being a mirror image thereof;

FIG. 13 is a front view of the three dimensional adjunct of FIG. 8 with the surgical stapling device removed; and

FIG. 14 is a back view of the three dimensional adjunct of FIG. 8.

FIG. 15 is a perspective view of another embodiment of a new design of a three dimensional adjunct shown on a surgical stapling device;

(Continued)

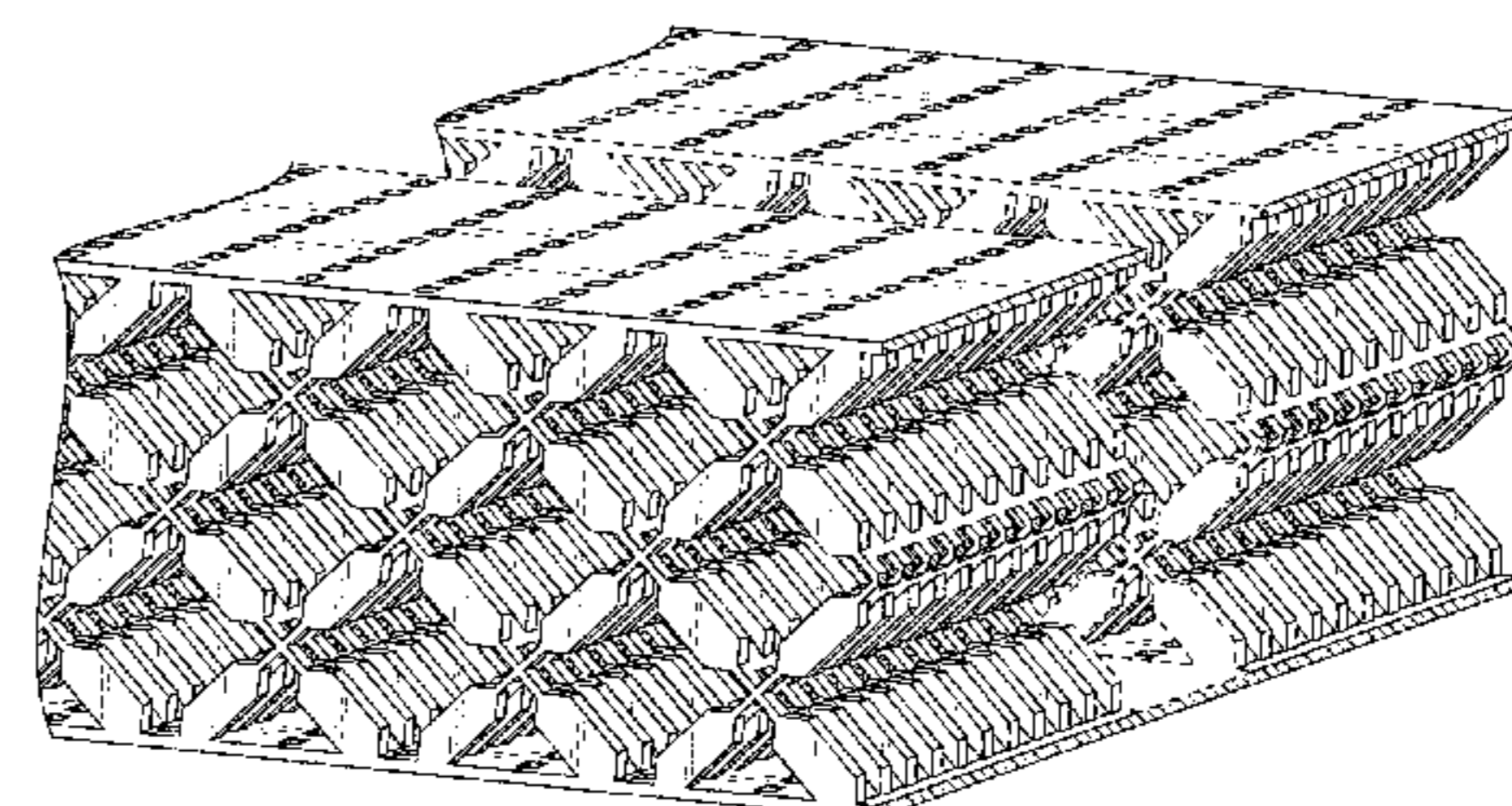
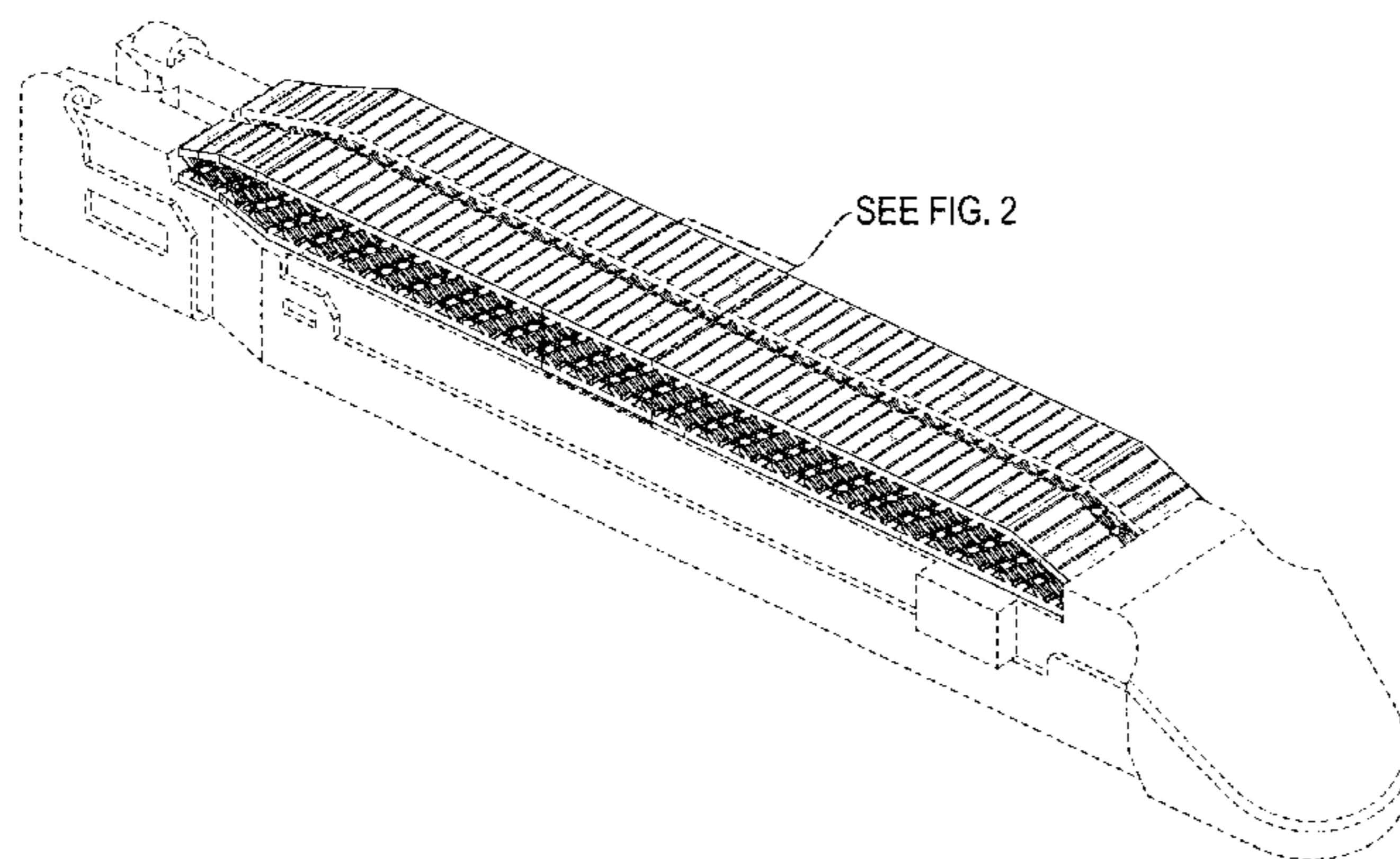


FIG. 16 is an enlarged view of a section of the three dimensional adjunct of FIG. 15;
 FIG. 17 is a top view of the three dimensional adjunct of FIG. 15;
 FIG. 18 is a bottom view of the three dimensional adjunct of FIG. 15 with the surgical stapling device removed;
 FIG. 19 is a left view of the three dimensional adjunct of FIG. 15, the right view being a mirror image thereof;
 FIG. 20 is a front view of the three dimensional adjunct of FIG. 15 with the surgical stapling device removed; and,
 FIG. 21 is a back view of the three dimensional adjunct of FIG. 15.

The broken lines in the figures depict environmental subject matter only and form no part of the claimed design.

1 Claim, 18 Drawing Sheets

(58) **Field of Classification Search**

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.

(56) **References Cited**

U.S. PATENT DOCUMENTS

RE34,519 E *	1/1994	Fox	A61B 17/07207 227/175.4
7,195,640 B2	3/2007	Falotico et al.	
7,641,091 B2 *	1/2010	Olson	A61B 17/07207 227/175.1
8,590,762 B2 *	11/2013	Hess	A61B 17/07207 227/175.1
9,307,965 B2	4/2016	Ming et al.	
9,332,984 B2	5/2016	Weaner et al.	
9,924,944 B2 *	3/2018	Shelton, IV	A61B 17/07207
10,028,744 B2 *	7/2018	Shelton, IV	A61B 17/105
10,052,104 B2 *	8/2018	Shelton, IV	A61B 17/07207
D831,209 S *	10/2018	Huitema	D24/145
D836,198 S *	12/2018	Harris	D24/145
10,166,026 B2 *	1/2019	Shelton, IV	A61B 17/105
10,172,616 B2 *	1/2019	Murray	A61B 17/105
10,271,849 B2 *	4/2019	Vendely	A61B 17/105
2009/0090763 A1	4/2009	Zemlok et al.	
2012/0080344 A1	4/2012	Shelton, IV	
2012/0241491 A1	9/2012	Aldridge 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 et al.	
2013/0161375 A1 *	6/2013	Huitema	A61B 17/07207 227/176.1
2013/0256375 A1	10/2013	Shelton, IV et al.	
2013/0317526 A1	11/2013	Mortarino	
2014/0224857 A1	8/2014	Schmid	
2015/0034696 A1	2/2015	Shelton, IV et al.	
2015/0297222 A1 *	10/2015	Huitema	A61B 17/068 227/176.1
2015/0313594 A1	11/2015	Shelton, IV et al.	
2015/0351754 A1	12/2015	Harris et al.	
2015/0351858 A9	12/2015	Kubiak et al.	

2016/0000430 A1	1/2016	Ming et al.	
2016/0066914 A1	3/2016	Baber et al.	
2016/0100933 A1	4/2016	Linder et al.	
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.	
2016/0345976 A1	12/2016	Gonzalez et al.	
2017/0056000 A1 *	3/2017	Nalagatla	A61B 17/068
2017/0086829 A1	3/2017	Vendely et al.	
2017/0086837 A1	3/2017	Vendely et al.	
2017/0231633 A1 *	8/2017	Marczyk	A61B 17/068 227/175.2
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.	
2019/0254670 A1	8/2019	Shelton, IV et al.	

FOREIGN PATENT DOCUMENTS

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
RU	2629239 C2	8/2017

OTHER PUBLICATIONS

Ye et al. "Development of the Warp Knitted Spacer Fabrics for Cushion Applications," Journal of Industrial Textiles, 2008, vol. 37, No. 3, pp. 213-223.
 International Search Report and Written Opinion for PCT/IB2019/050408 dated Jun. 5, 2019 (17 pages).
 Baker et al., "The Science of Stapling and Leaks," Obesity Surgery, vol. 14, Nov. 2004, pp. 1290-1298.
 Yo et al., "Buttressing of the Staple Line in Gastrointestinal Anastomoses: Overview of New Technology Designed to Reduce Perioperative Complications," Digestive Surgery, vol. 23, No. 5-6, Oct. 2006, pp. 283-291.
 International Search Report and Written Opinion for PCT/IB2019/050500 dated May 17, 2019 (21 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 Application 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 Application 19158223 dated Apr. 25, 2019 (10 pages).
 Wismans et al., "Characterization of Polymeric Foams," Eindhoven University of Technology. Jul. 2009 (35 pages).
 International Search Report and Written Opinion for PCT/IB2019050402 dated Apr. 30, 2019 (6 pages).
 European Search Report and Written Opinion for EP19158306 dated May 8, 2019 (19 pages).
 European Search Report and Written Opinion for EP19158186 dated Jul. 5, 2019 (9 pages).

* cited by examiner

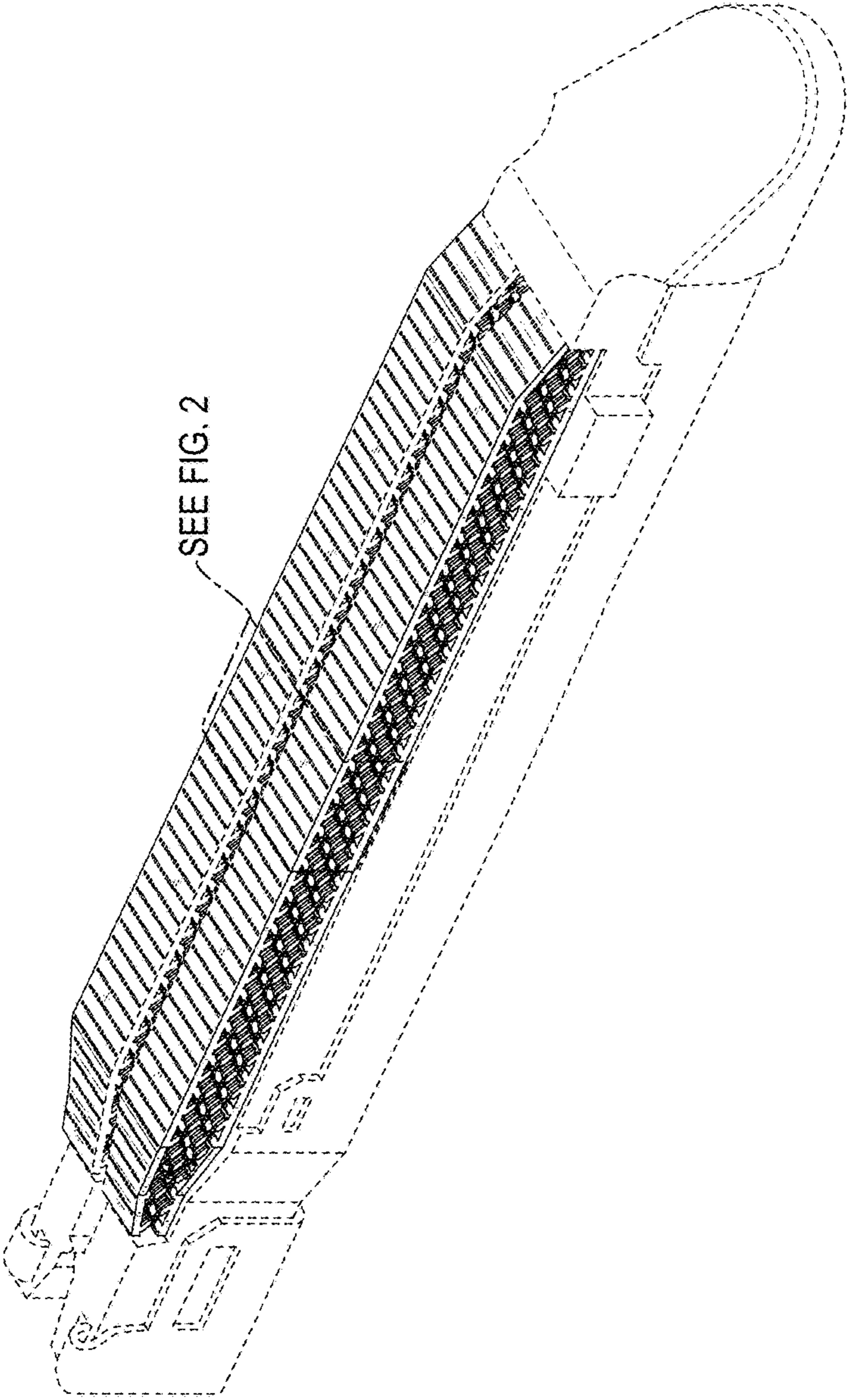


FIG. 1

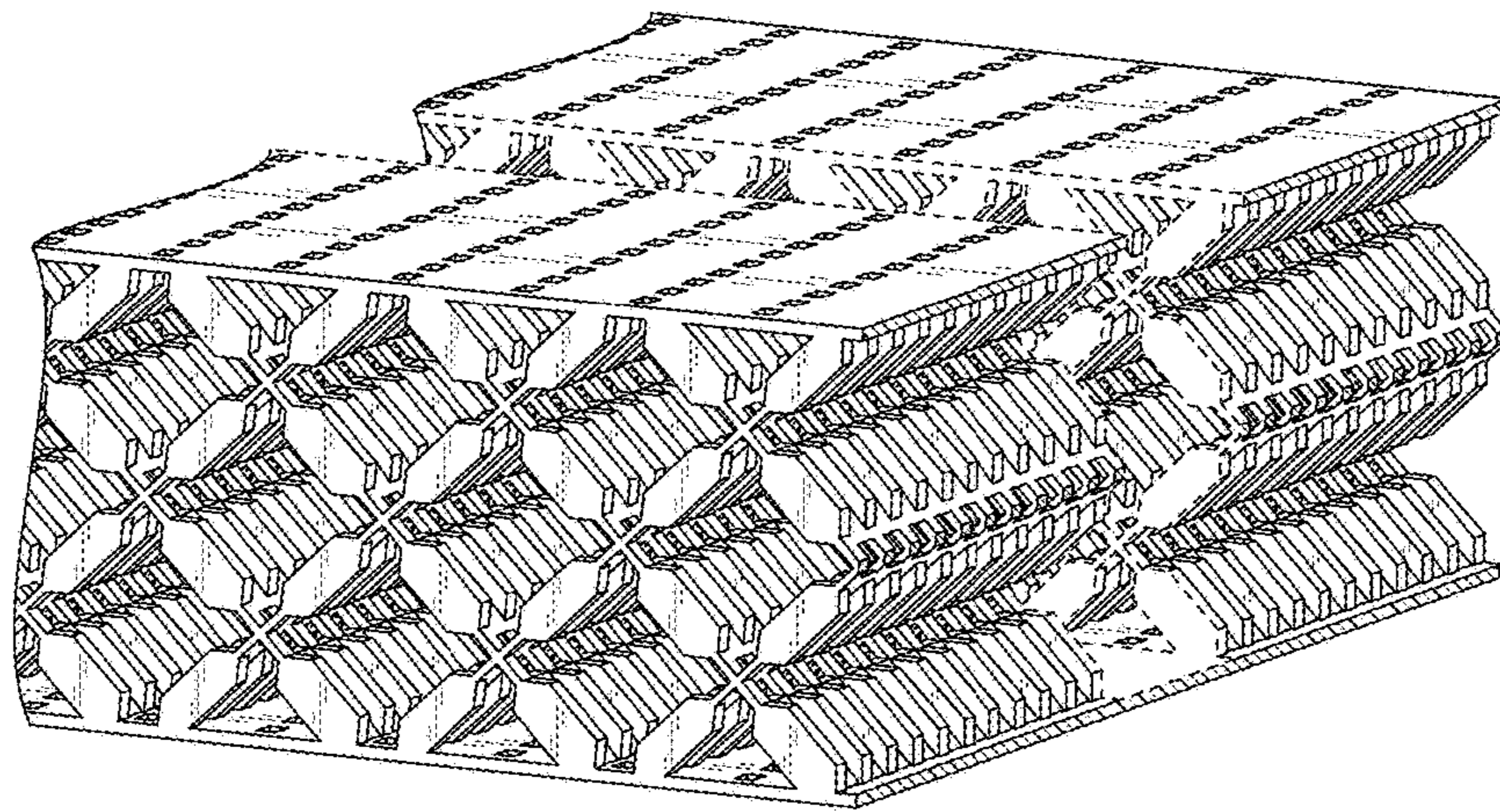


FIG. 2

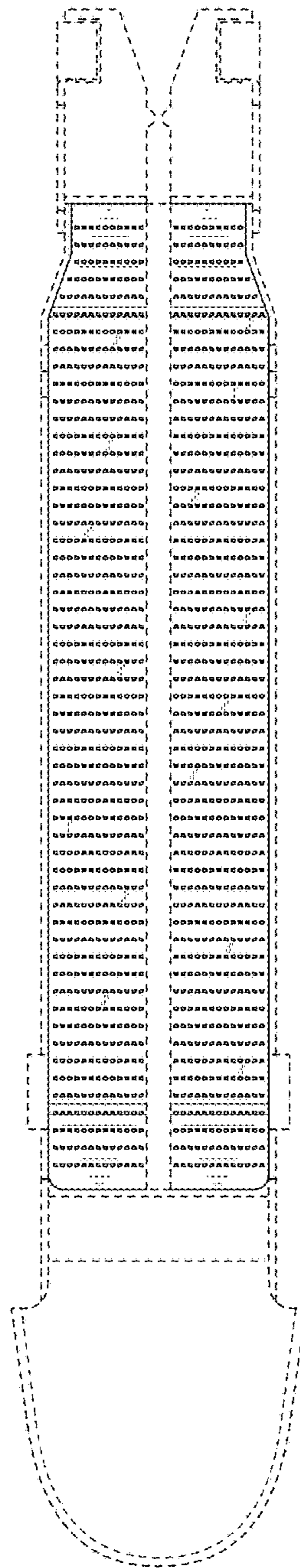


FIG. 3



FIG. 4

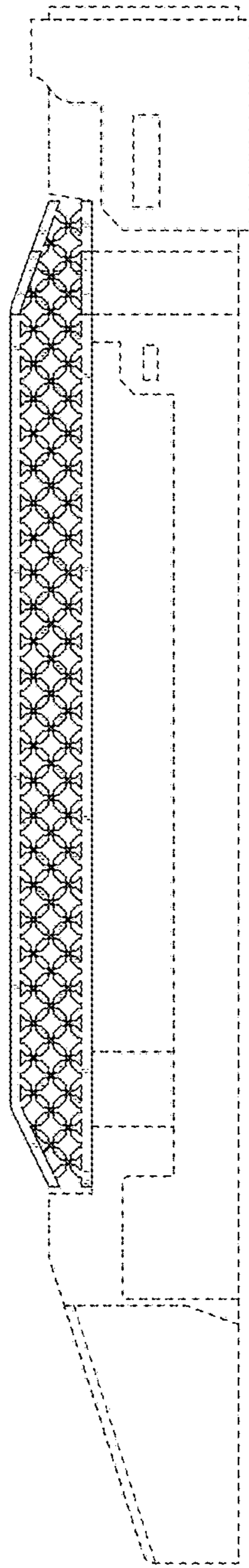


FIG. 5

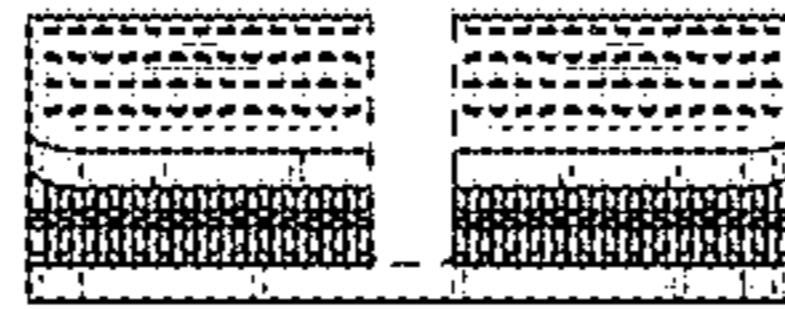


FIG. 6



FIG. 7

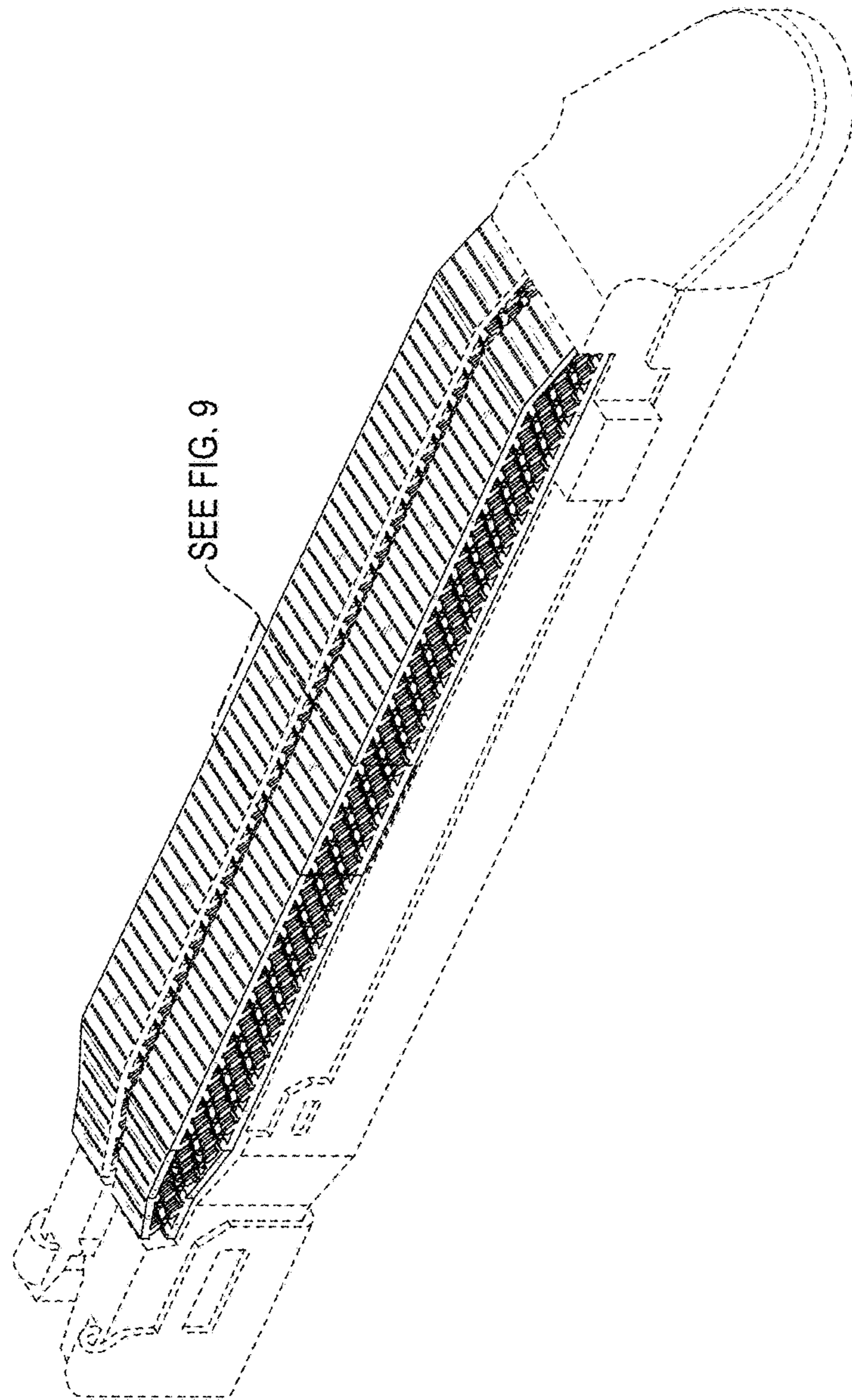


FIG. 8

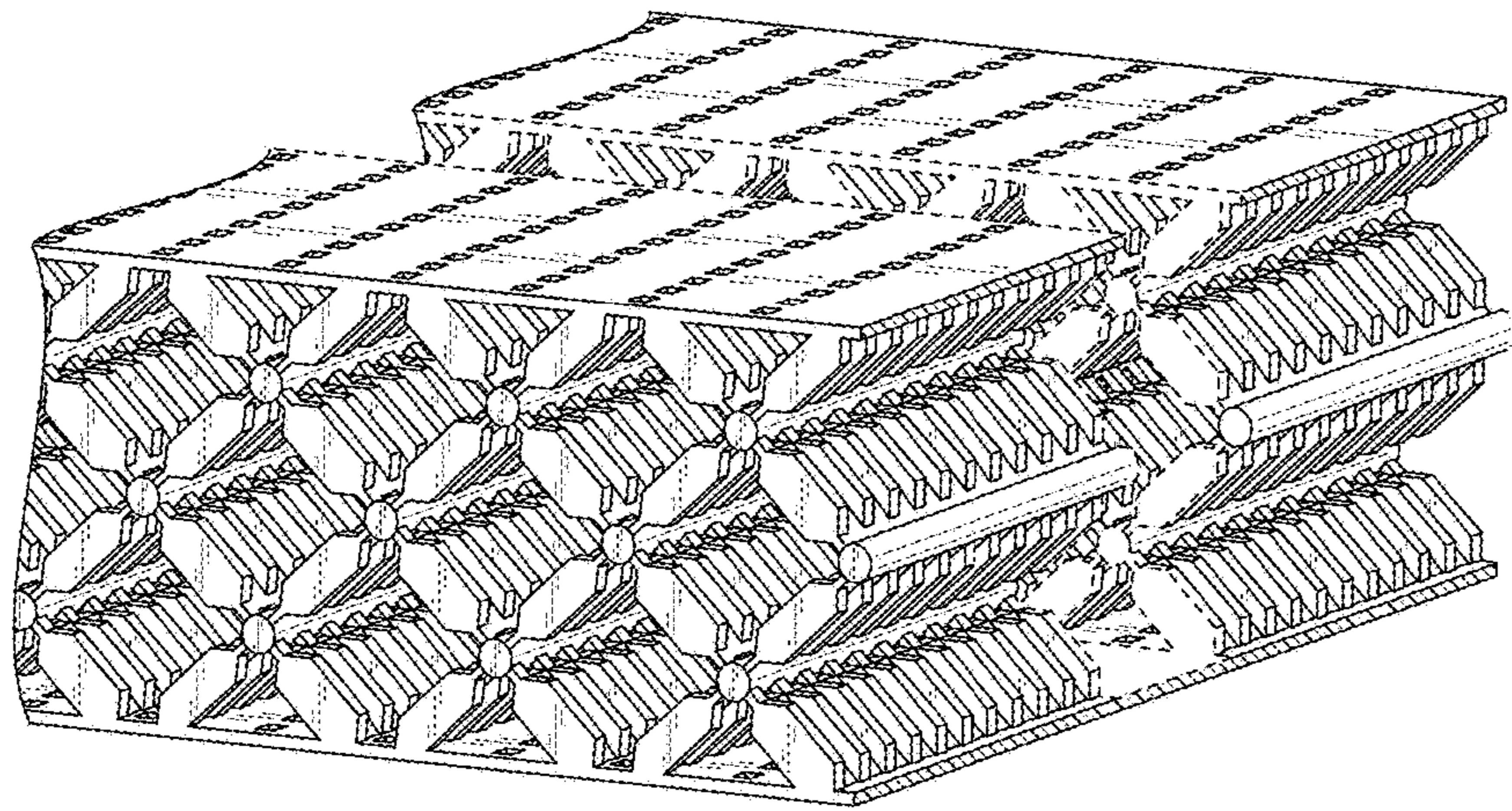


FIG. 9

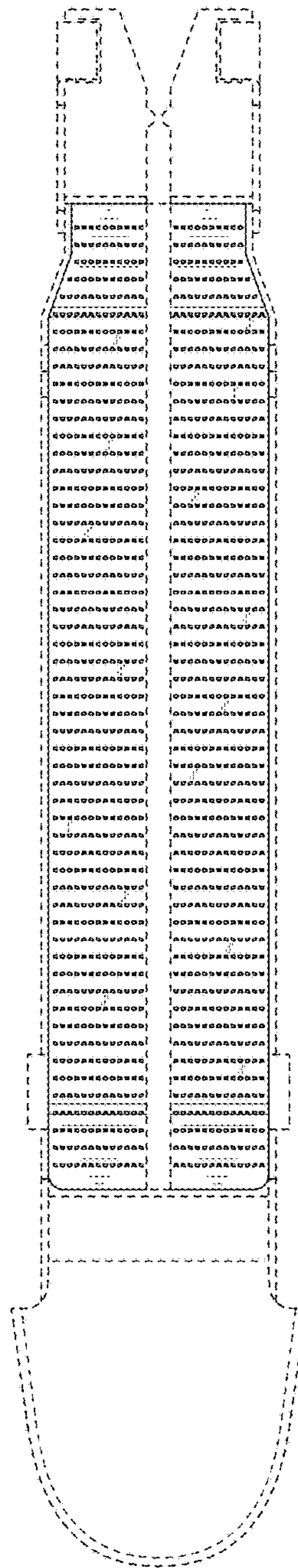


FIG. 10



FIG. 11

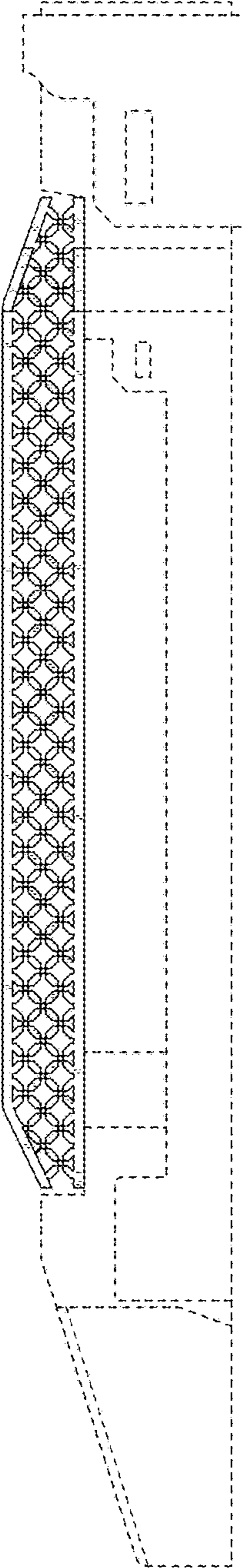


FIG. 12

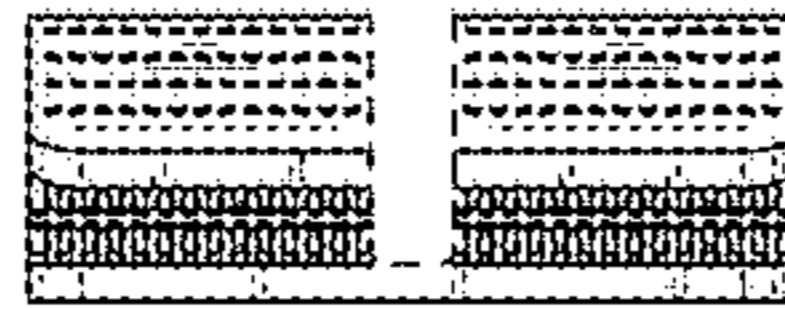


FIG. 13

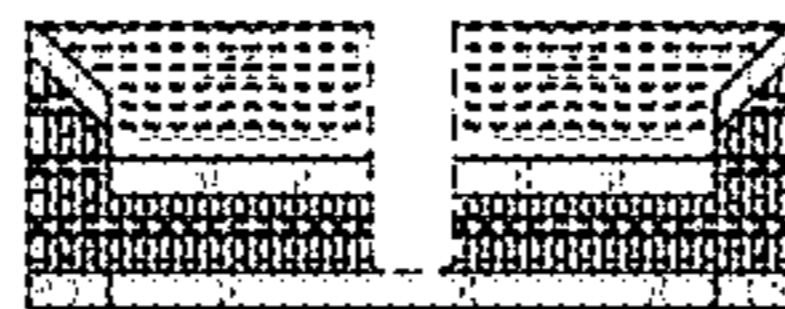


FIG. 14

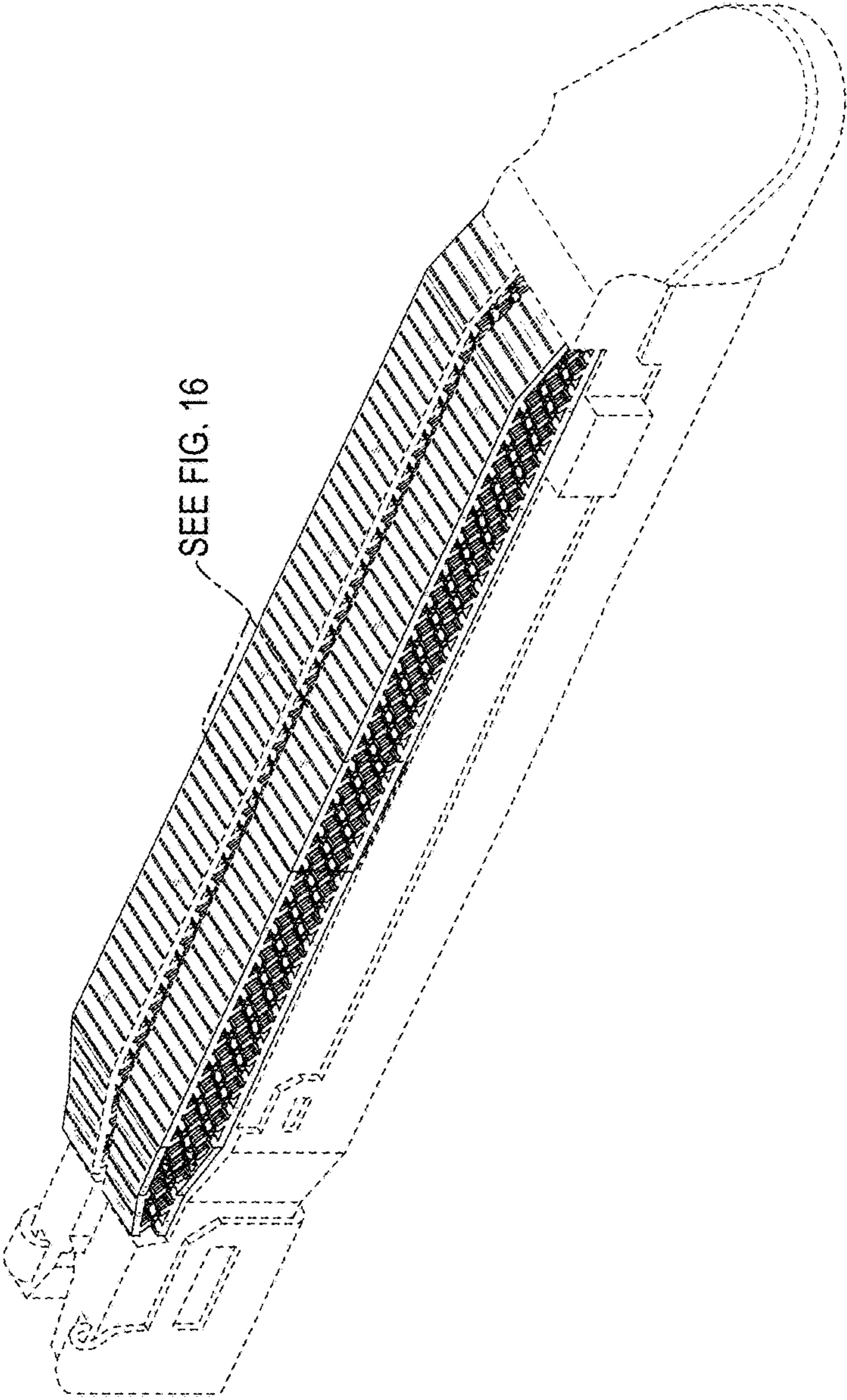


FIG. 15

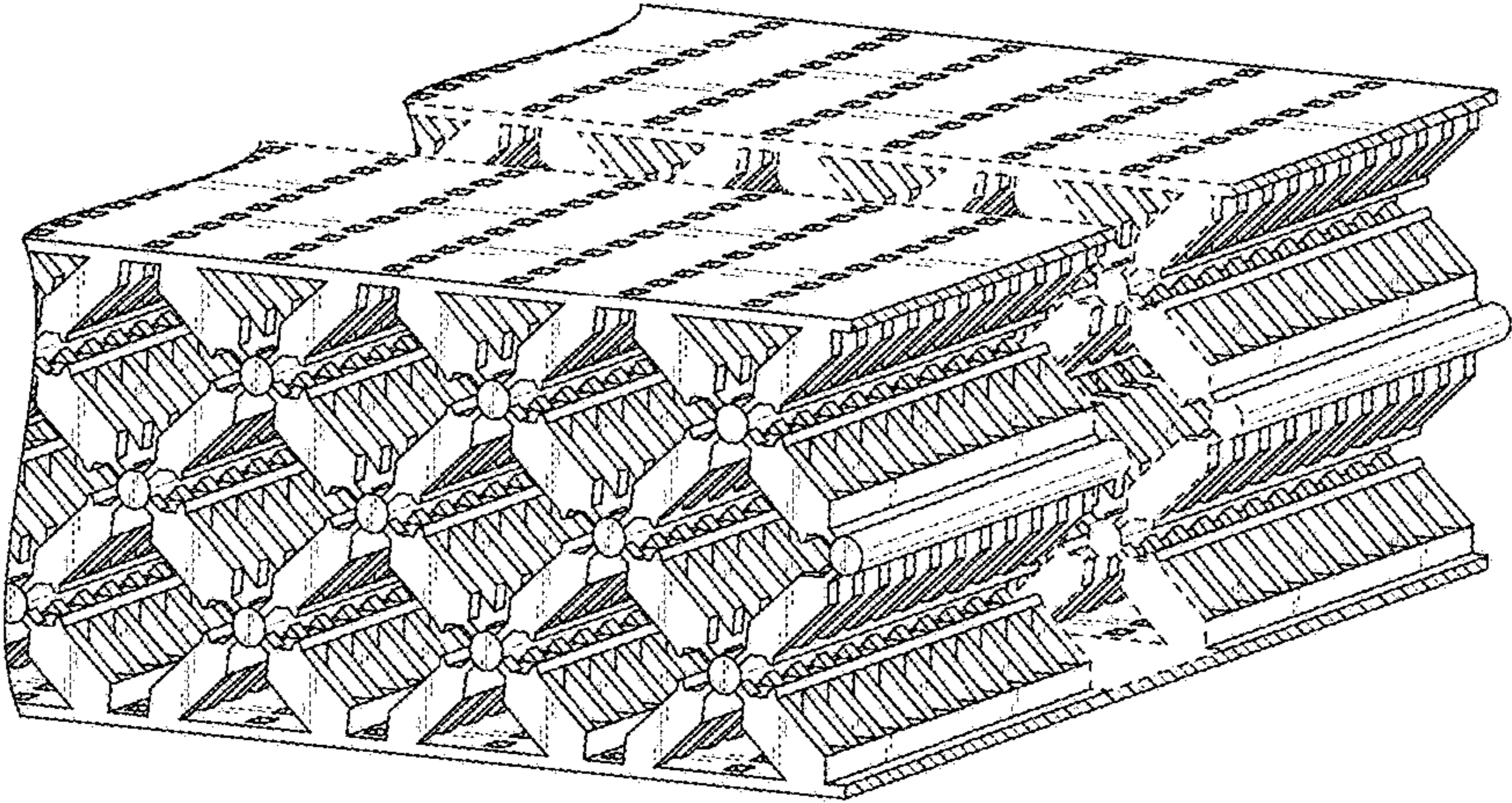


FIG. 16

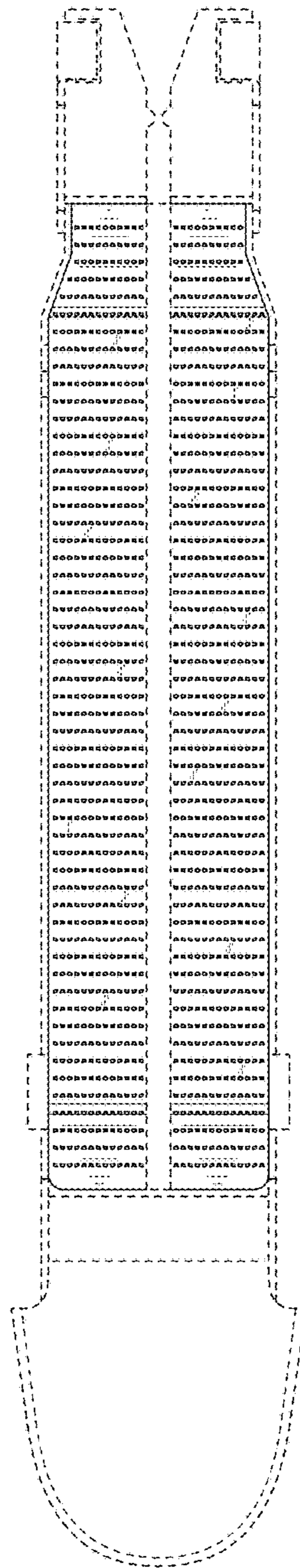


FIG. 17



FIG. 18

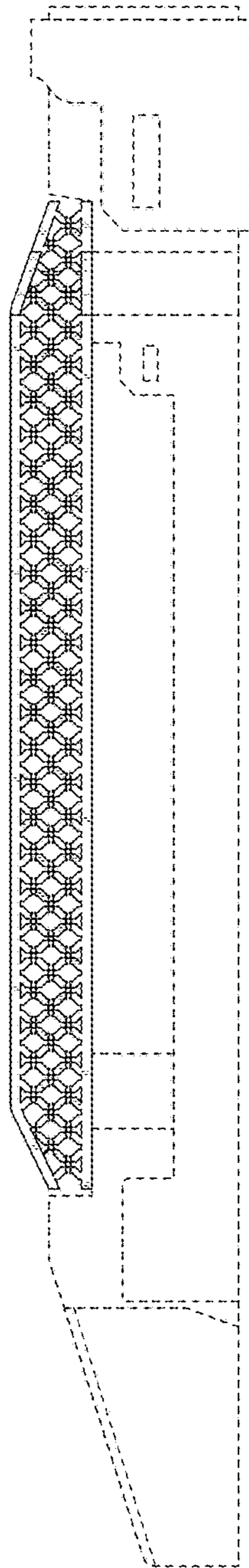


FIG. 19

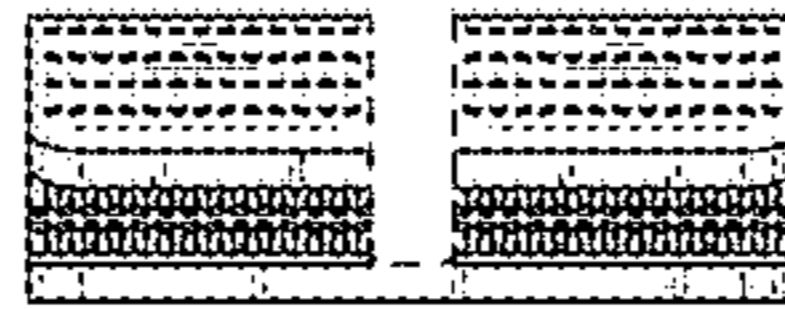


FIG. 20



FIG. 21