



US00D894066S

(12) **United States Design Patent** (10) **Patent No.:** **US D894,066 S**
Kuemmerling et al. (45) **Date of Patent:** **** Aug. 25, 2020**

(54) **BRAKE DUST FILTER**

(56) **References Cited**

(71) Applicant: **MANN+HUMMEL GmbH**,
Ludwigsburg (DE)
(72) Inventors: **Volker Kuemmerling**,
Bietigheim-Bissingen (DE); **Thomas
Jessberger**, Aspberg (DE); **Lukas
Bock**, Bietigheim-Bissingen (DE);
Andreas Klinser, Ludwigsburg (DE);
Benedikt Weller, Kleinbottwar (DE);
Johannes Lampert, Landshut (DE);
Ludwig Bammersperger, Reisbach
(DE); **Coskun Evlekli**, Waiblingen
(DE); **Jan Corba**, Chamerau (DE)

U.S. PATENT DOCUMENTS

2,746,577	A *	5/1956	Butler	.....	F16D 65/847 188/264 A
D291,189	S *	8/1987	Stahel	.....	D12/126
6,371,569	B1 *	4/2002	Dean	.....	B60B 7/061 188/218 A
D515,484	S *	2/2006	Winkler	.....	D12/180
7,144,142	B1 *	12/2006	Suarez	.....	B60Q 1/326 362/500
D688,608	S *	8/2013	Amy	.....	D12/180
10,066,687	B2 *	9/2018	Barland	.....	F16D 65/0031
D864,808	S *	10/2019	Crippa	.....	D12/180
2004/0074716	A1 *	4/2004	Brumfield	.....	F16D 55/22 188/218 A
2005/0258008	A1 *	11/2005	King	.....	F16D 65/00 188/264 R
2006/0042890	A1 *	3/2006	Samuelsson	.....	F16D 55/00 188/73.1

(73) Assignee: **MANN+HUMMEL GmbH**,
Ludwigsburg (DE)

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

(Continued)

(21) Appl. No.: **29/674,264**

Primary Examiner — Philip S Hyder

Assistant Examiner — Jerry Shiu-an-Hua Hsu

(22) Filed: **Dec. 20, 2018**

(74) *Attorney, Agent, or Firm* — James Hasselbeck

(30) **Foreign Application Priority Data**

Jun. 20, 2018 (EM) 005317559-0001

(51) **LOC (12) Cl.** **12-16**

(52) **U.S. Cl.**

USPC **D12/180**

(58) **Field of Classification Search**

USPC D12/14, 174, 180
CPC F16D 55/00; F16D 55/22; F16D 55/225;
F16D 55/226; F16D 55/227; F16D 65/00;
F16D 65/0006; F16D 65/092; F16D
65/0972; F16D 65/0031; F16D 65/0081;
F16D 65/0087; F16D 65/0977; F16D
65/097; F16D 65/847; B32B 3/06; B60Q
1/326; B01D 46/10; B03C 1/0332; B60B
7/061

See application file for complete search history.

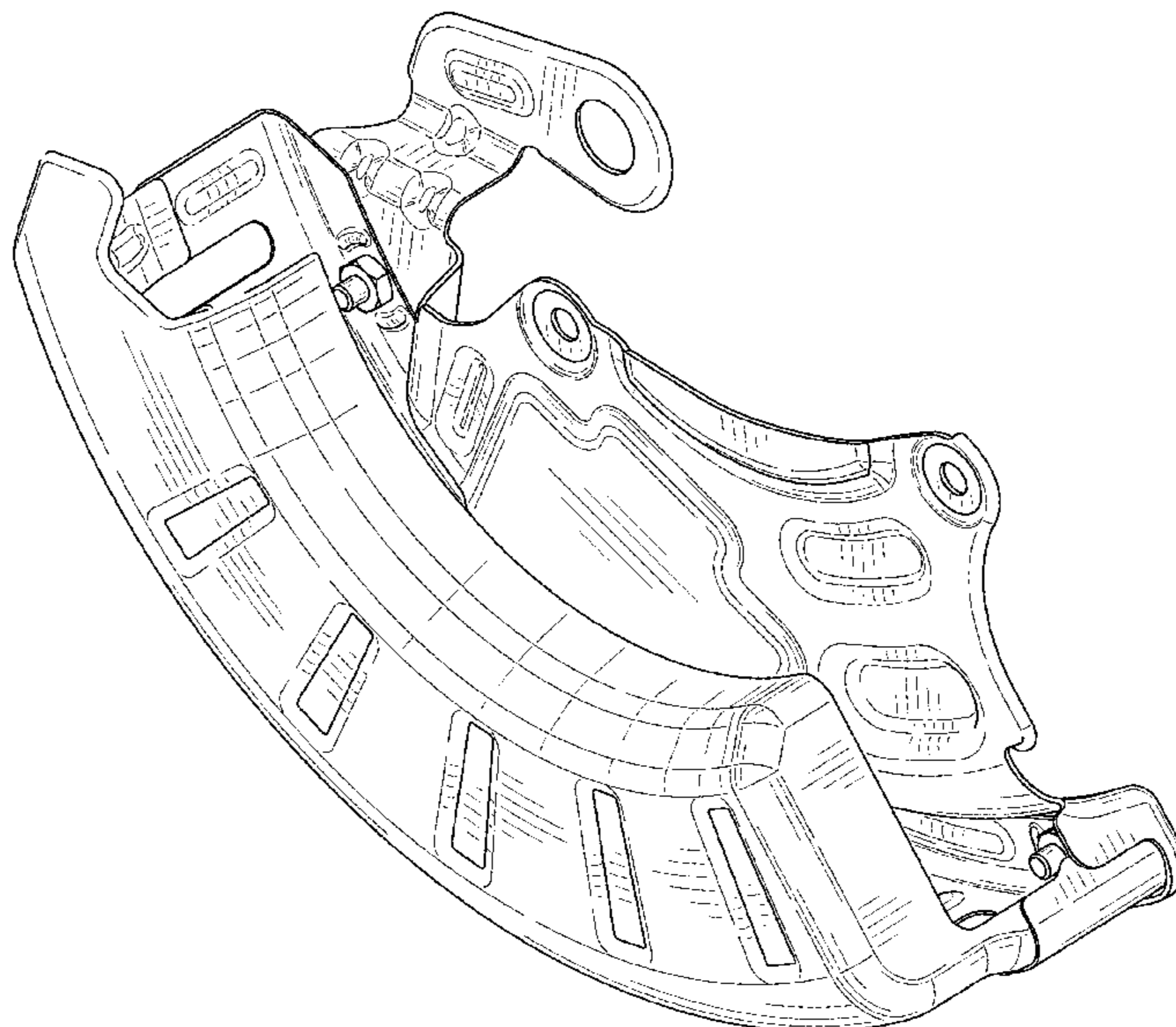
(57) **CLAIM**

We claim the ornamental design for a brake dust filter, as shown and described.

DESCRIPTION

FIG. 1 is a front top left perspective view of a brake dust filter, showing our new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a right side elevational view thereof;
FIG. 5 is a left side elevational view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2009/0321198 A1* 12/2009 Barland F16D 65/0031
188/264 A
2010/0065387 A1* 3/2010 Tsiberidis F16D 65/0031
188/218 A
2012/0067206 A1* 3/2012 Lupica B03C 1/0332
95/28
2013/0095278 A1* 4/2013 Collura B32B 3/06
428/99
2014/0054119 A1* 2/2014 Hummel F16D 65/0031
188/218 A
2014/0054121 A1* 2/2014 Hummel F16D 65/0031
188/218 A
2016/0025162 A1* 1/2016 Morse F16D 65/0081
188/218 A
2017/0248180 A1* 8/2017 Metayer B01D 46/10
2018/0003250 A1* 1/2018 Liu F16D 65/00
2018/0080512 A1* 3/2018 Barland F16D 65/0087
2018/0094684 A1* 4/2018 Kobayashi F16D 65/0081
2019/0271369 A1* 9/2019 Philpott F16D 55/22
2019/0338815 A1* 11/2019 Park F16D 55/22

* cited by examiner

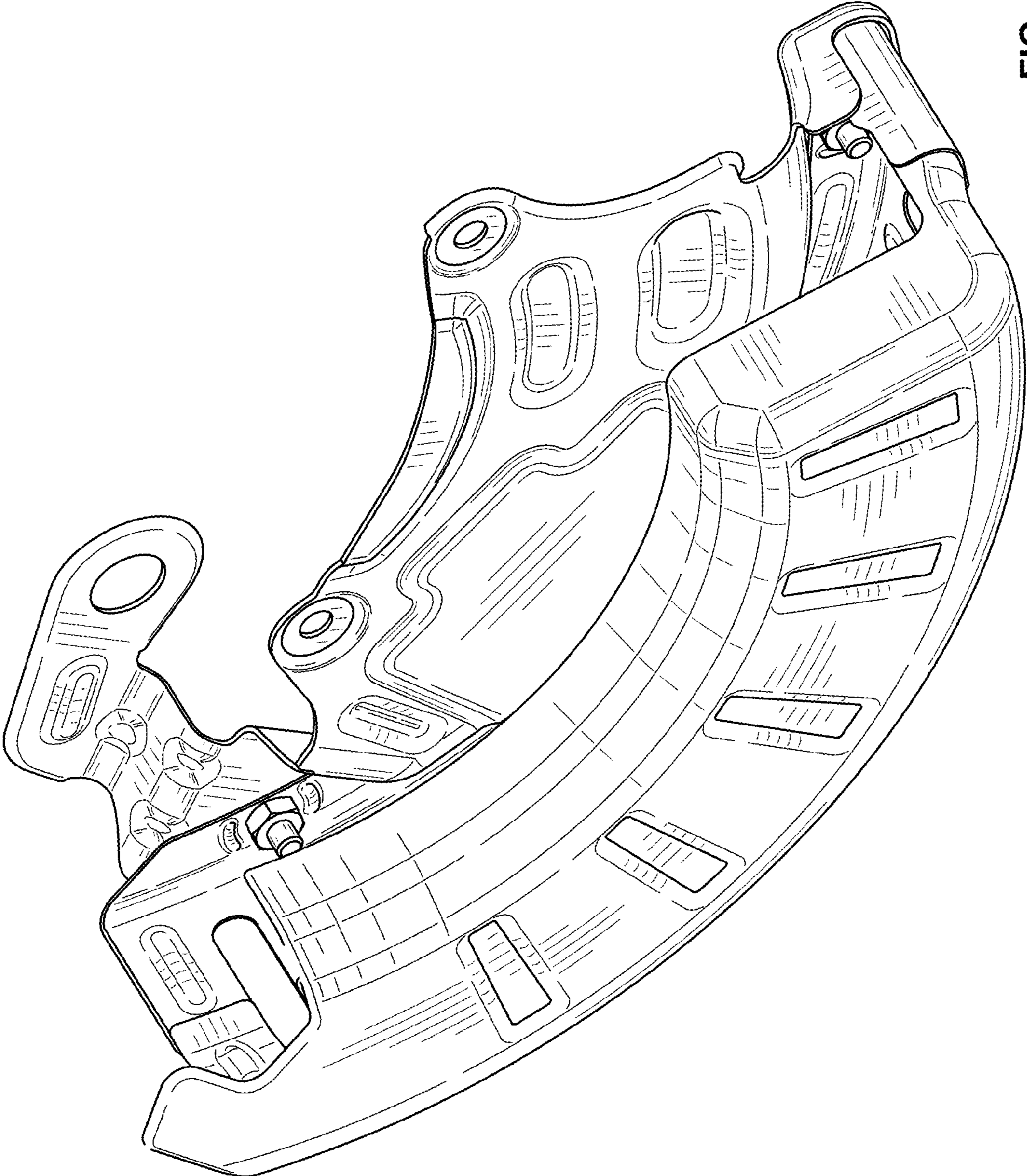


FIG. 1

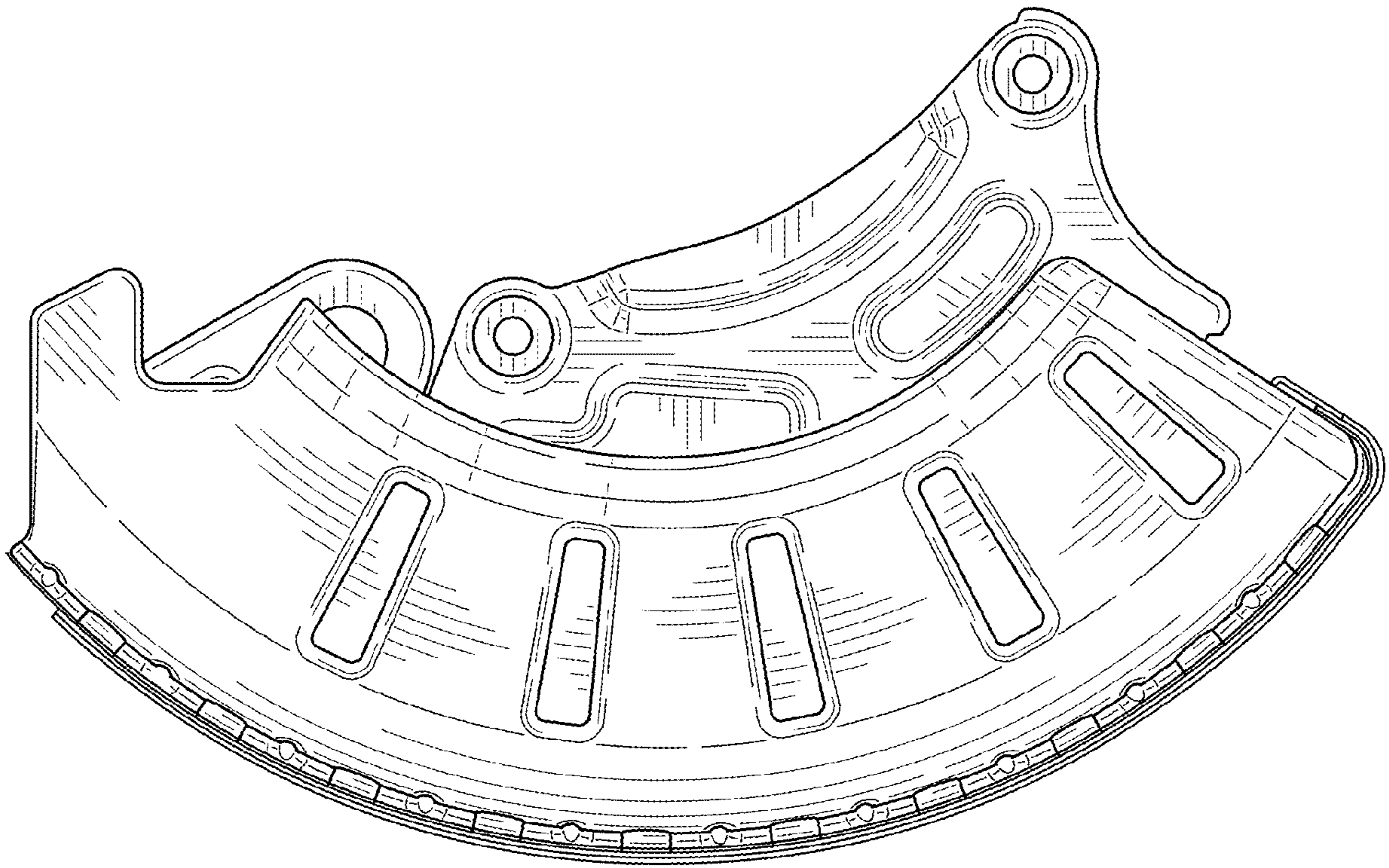


FIG. 2

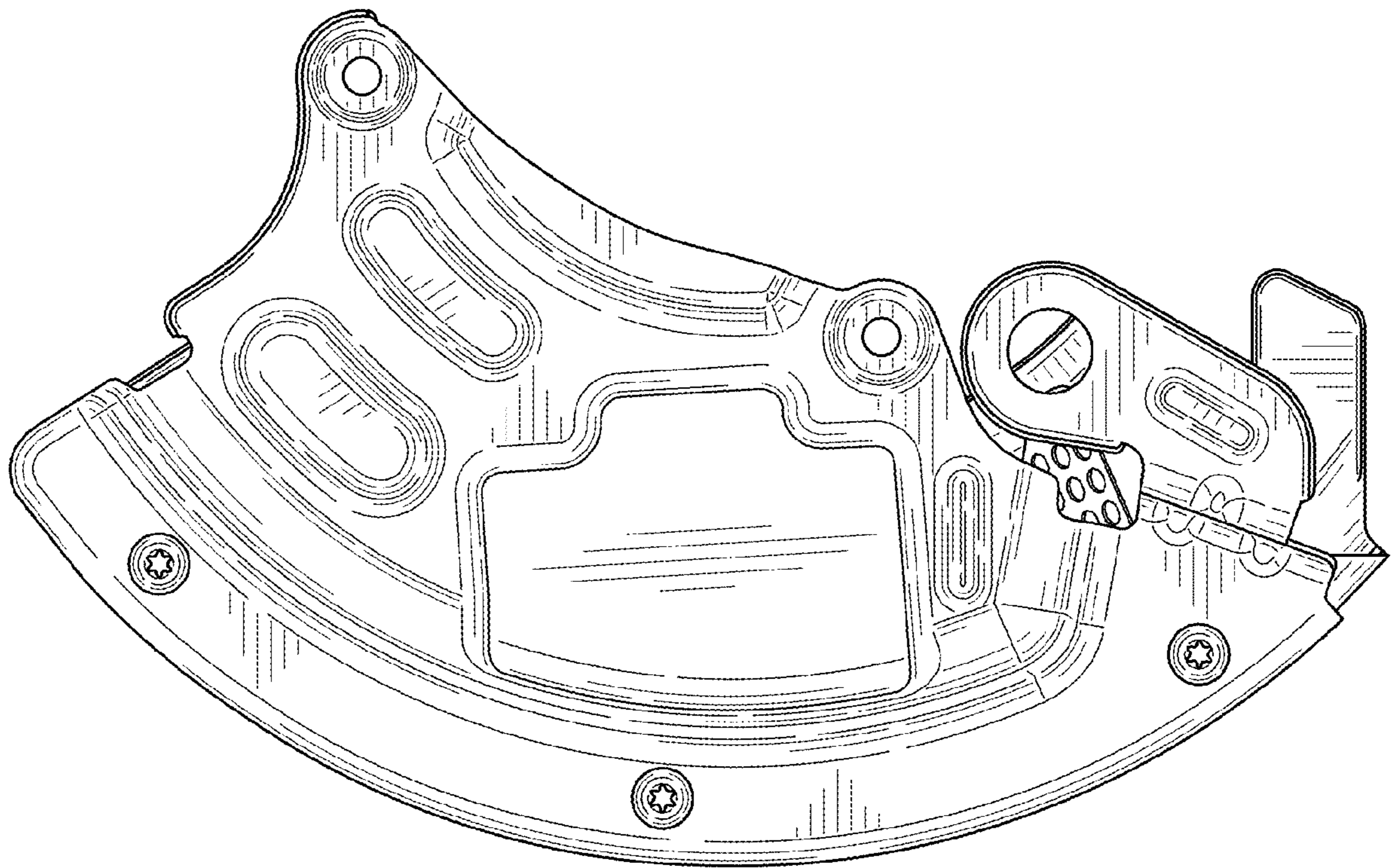


FIG. 3

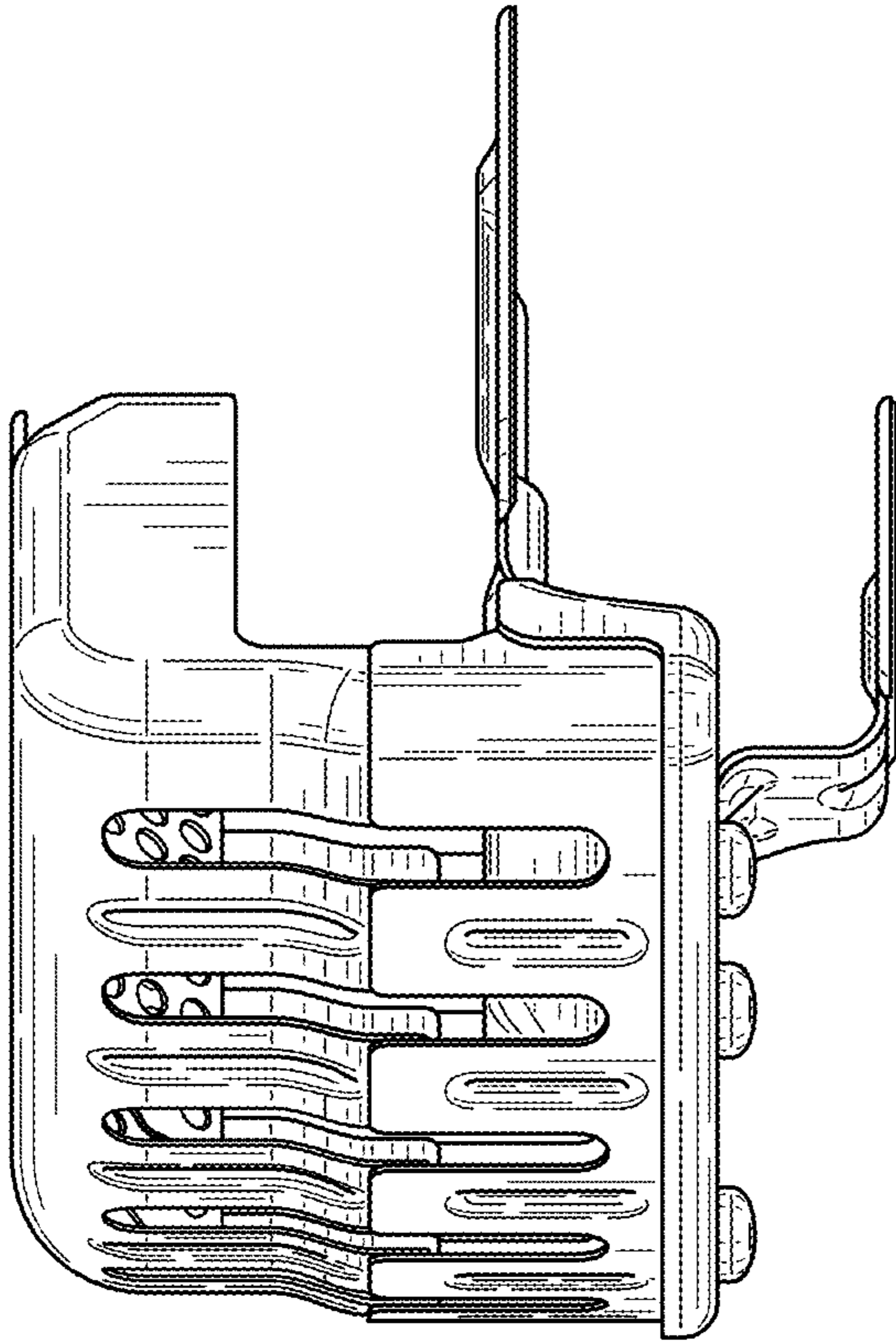


FIG. 4

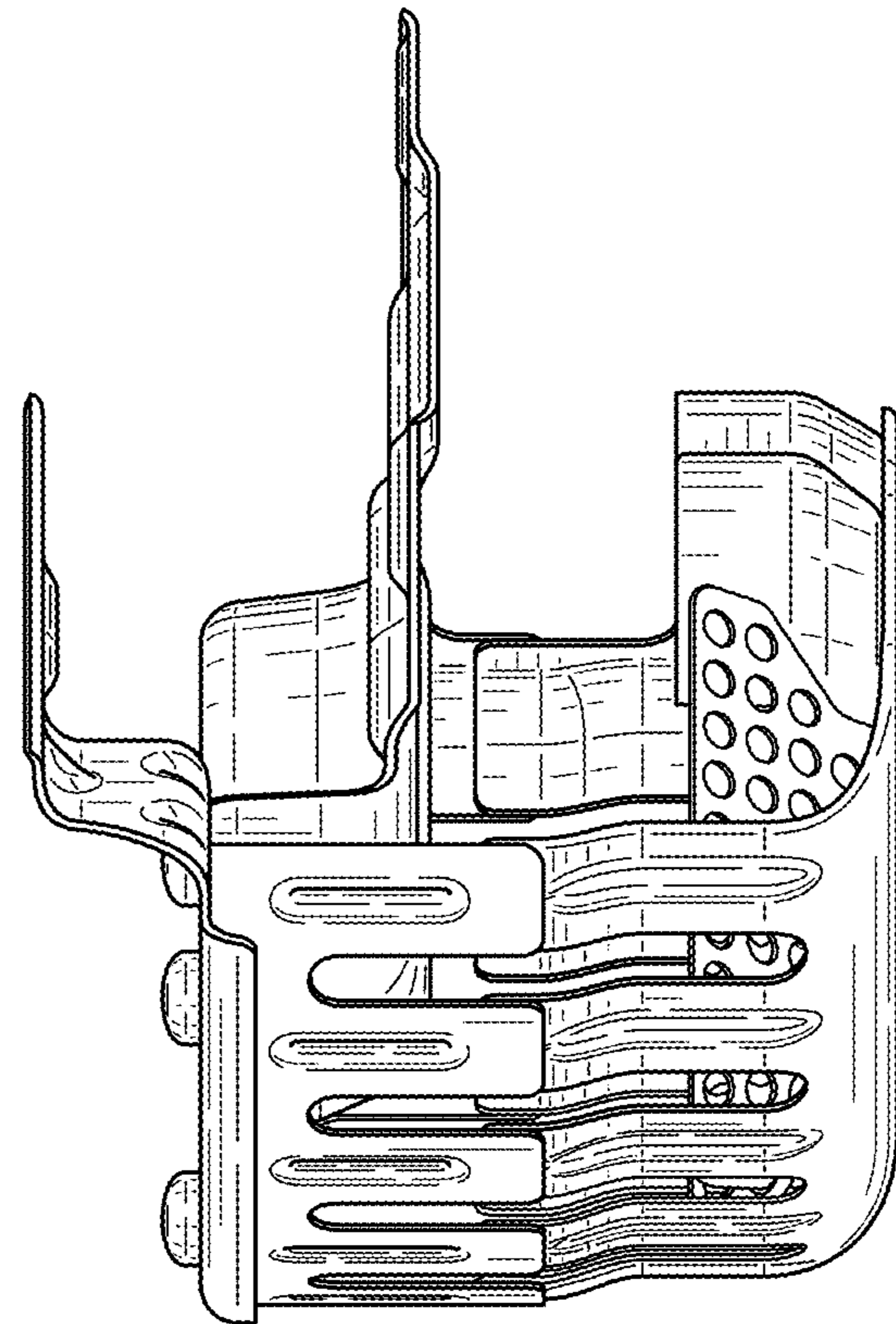


FIG. 5

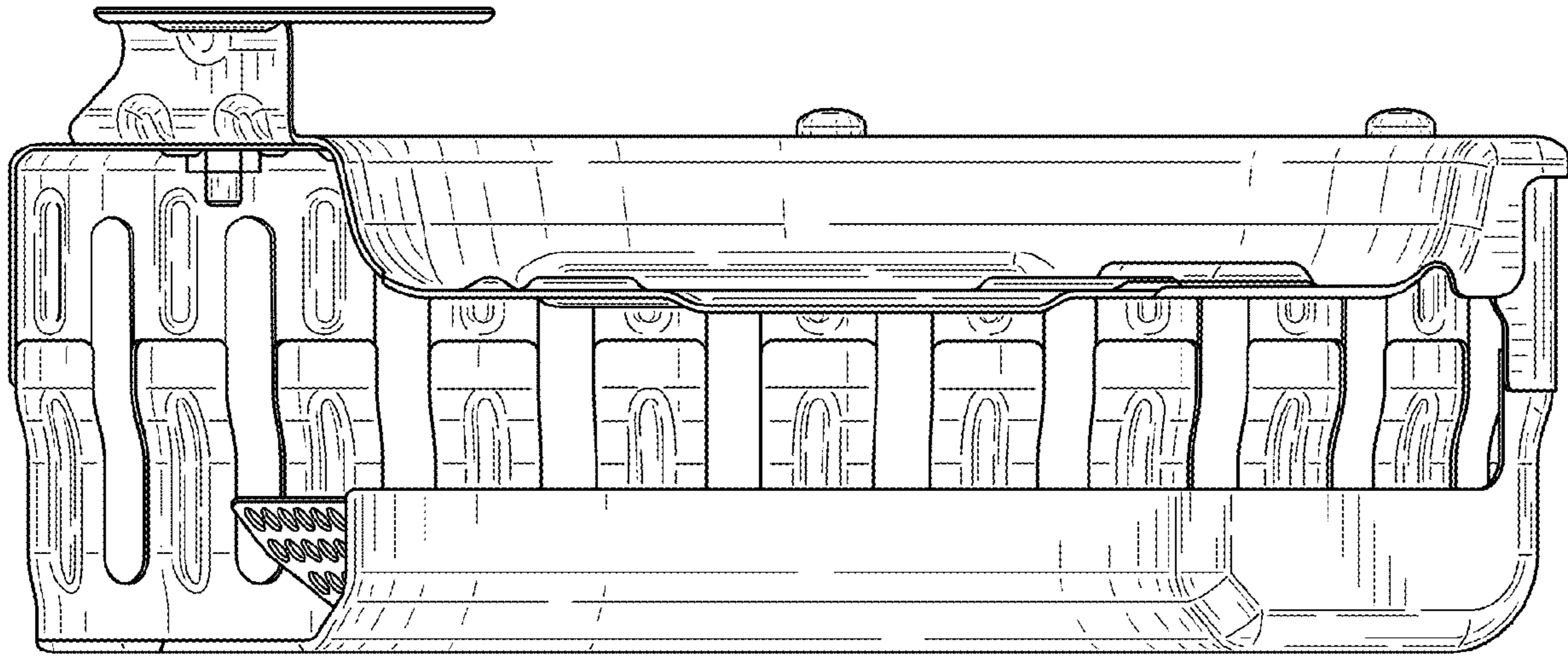


FIG. 6

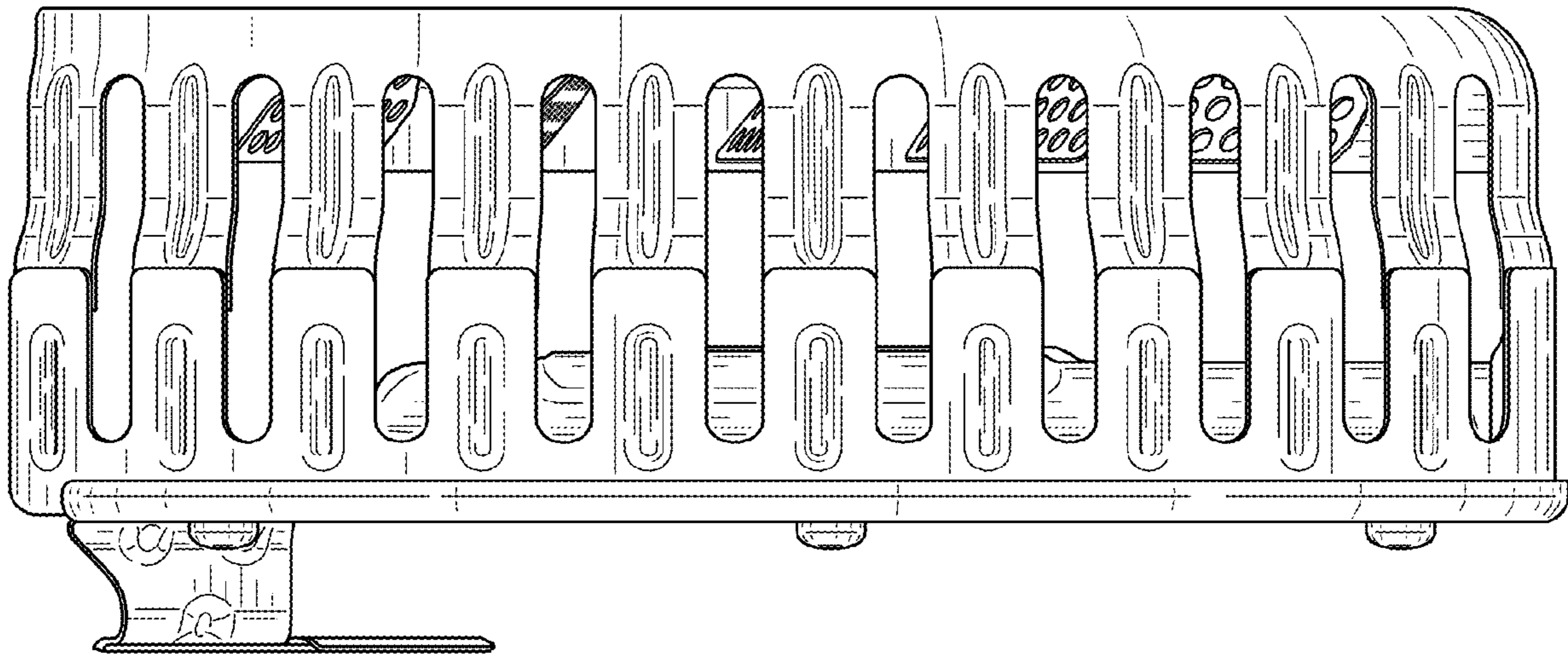


FIG. 7