



US0D1007414S

(12)

United States Design Patent

Jansen et al.

(10)

Patent No.:

US D1,007,414 S

(45)

Date of Patent:

** Dec. 12, 2023

- (54)

BATTERY MODULE
- (71)

Applicant: Transportation IP Holdings, LLC,
Norwalk, CT (US)
- (72)

Inventors: Patrick Lee Jansen, Schenectady, NY
(US); Neil Bradley, Erie, PA (US);
Gregory Badders, Erie, PA (US);
Michael Jay Grutkowski, Erie, PA
(US)
- (73)

Assignee: TRANSPORTATION IP HOLDINGS,
LLC, Norwalk, CT (US)
- (**)

Term: 15 Years
- (21)

Appl. No.: 29/792,519
- (22)

Filed: Apr. 4, 2022

Related U.S. Application Data

- (62)

Division of application No. 29/775,481, filed on Mar.
23, 2021, now Pat. No. Des. 953,254, which is a
division of application No. 29/693,882, filed on Jun.
5, 2019, now Pat. No. Des. 919,561, which is a
division of application No. 29/595,064, filed on Feb.
24, 2017, now Pat. No. Des. 855,562.
- (51)

LOC (14) Cl. 13-02
- (52)

U.S. Cl.
USPC D13/103
- (58)

Field of Classification Search
USPC D13/102–110, 118–119, 184, 199
CPC Y02E 60/10; Y02E 60/13; Y02E 60/50;
H01M 50/10; H01M 50/107; H01M
50/557; H01M 50/209; H01M 50/20;
H01M 50/213; H01M 50/502; H01M
2220/30

See application file for complete search history.

- (56)

References Cited
- U.S. PATENT DOCUMENTS

D419,131 S

1/2000

Andrews et al.

D516,503 S

3/2006

Takeshita et al.

D533,832 S *

12/2006

Hock D13/103

D602,857 S

10/2009

Melzner et al.

D604,696 S

11/2009

Tasai

8,034,476 B2

10/2011

Ha et al.

8,257,855 B2

9/2012

Ijaz et al.

8,409,744 B2

4/2013

Ijaz et al.

D682,778 S

5/2013

Baumgartner et al.

D686,148 S

7/2013

Inaba

(Continued)

FOREIGN PATENT DOCUMENTS

WO 2016208925 A1 12/2016

OTHER PUBLICATIONS

Berman, B., “The Hybrid Car Battery: A Definitive Guide,” Hybrid
Cars Website, Available Online at <https://www.hybridcars.com/hybrid-car-battery>, Available as Early as Nov. 6, 2008, 10 pages.
(Continued)

Primary Examiner — Alison M Ofstun
(74) Attorney, Agent, or Firm — McCoy Russell LLP

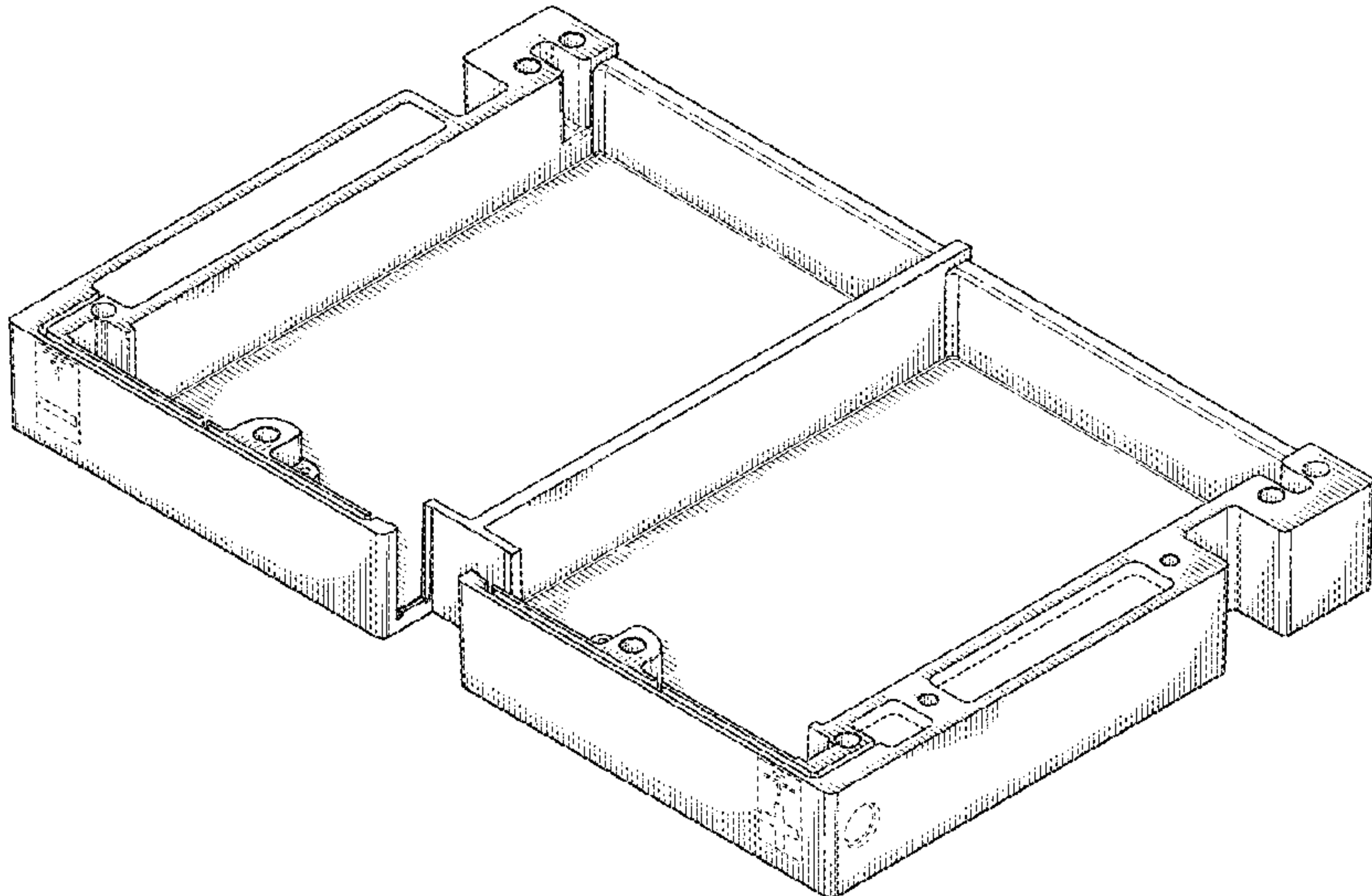
- (57)

CLAIM
- The ornamental design for a battery module, as shown and
described.

DESCRIPTION

FIG. 1 is a perspective view of a battery module depicting
our new design;
FIG. 2 is another perspective view thereof;
FIG. 3 is another perspective view thereof;
FIG. 4 is a top plan view thereof;
FIG. 5 is a bottom plan view thereof;
FIG. 6 is a front view thereof;
FIG. 7 is a rear view thereof;
FIG. 8 is a side view thereof; and,
FIG. 9 is an opposite side view thereof.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

8,852,781 B2 10/2014 Merriman et al.
 D719,088 S 12/2014 Koebler
 8,922,157 B2 12/2014 Simonazzi
 D727,254 S 4/2015 Kinoshita et al.
 D742,307 S 11/2015 DeKeuster et al.
 D757,645 S 5/2016 Oliver et al.
 D762,566 S 8/2016 Tea et al.
 D772,816 S 11/2016 DeKeuster
 D784,920 S 4/2017 Walker
 D794,554 S 8/2017 Chang
 D797,660 S 9/2017 Oliver et al.
 D811,996 S 3/2018 Genoa et al.
 10,276,847 B2 4/2019 Cho et al.
 D855,562 S 8/2019 Jansen et al.
 D858,434 S 9/2019 Park et al.
 D861,593 S 10/2019 Nakajima et al.
 D875,046 S 2/2020 Waddell
 D884,598 S 5/2020 Ebisawa et al.
 D900,183 S * 10/2020 Bengtsson D15/199
 D919,561 S 5/2021 Jansen et al.
 D921,579 S 6/2021 Park et al.
 D949,869 S * 4/2022 Liao D14/441
 D953,254 S * 5/2022 Jansen D13/103
 2006/0281002 A1 12/2006 Aoki et al.
 2008/0241675 A1 10/2008 Enari et al.
 2010/0209743 A1 8/2010 Koh et al.
 2011/0076521 A1 3/2011 Shimizu et al.
 2011/0293973 A1 12/2011 Kim
 2014/0120390 A1 5/2014 Merriman et al.
 2014/0174150 A1 6/2014 Yajima
 2015/0013150 A1 1/2015 Kitagawa et al.
 2015/0111083 A1 4/2015 Kim et al.
 2015/0364727 A1 12/2015 Kim
 2017/0170438 A1 6/2017 Jansen et al.
 2018/0145289 A1 * 5/2018 Yu H01M 50/591
 2018/0337394 A1 11/2018 Matsui et al.

2019/0123334 A1 * 4/2019 Kataoka H01M 50/507
 2019/0296317 A1 * 9/2019 Sakurai H01M 50/593
 2019/0334154 A1 * 10/2019 Bollmann H01M 50/264
 2021/0175557 A1 6/2021 Person et al.
 2022/0314827 A1 * 10/2022 Podolski H01R 13/62

OTHER PUBLICATIONS

Anderson, D., "Lowering costs of lithium-ion batteries for EV power trains," Fabricators & Manufacturers Association, International Website, Available Online at <https://www.fmanet.org/blog/2010/10/01/lowering-costs-lithium-ion-batteries-ev-power-trains>, Oct. 1, 2010, 17 pages.

"Johnson Controls ie: 3 concept car makes its European debut / Vehicle demonstrates innovation in seating, electronics, interiors and batteries (mit Bild)," Press Portal Website, Available Online at <https://www.presseportal.de/en/pm/19526/2111317>, Sep. 13, 2011, 7 pages.

Ingram, A., "500 Mile Electric Cars? New Lithium-Air Tech Has Potential," Green Car Reports Website, Available Online at https://www.greencarreports.com/new/1071654_500-mile-electric-cars-new-lithium-air-tech-has-potential, Jan. 12, 2012, 5 pages.

"Ather Energy," AtherEnergy Website, Available Online at <https://www.atherenergy.com/>, Available as Early as Dec. 6, 2013, 15 pages.

Crowe, P., "Spark is Named IIHS Top Safety Pick," GM Volt Website, Available Online at <http://gm-volt.com/2013/12/26/spark-is-named-iihs-top-safety-pick/>, Dec. 26, 2013, 17 pages.

Dillard, T., "Rare Look Inside A Tesla Model S Battery Pack," Inside EVs Website, Available Online at <https://insideevs.com/news/323682/rare-look-inside-a-tesla-model-s-battery-pack/>, Sep. 23, 2014, 9 pages.

Automotive Energy Supply Corporation, Envision AESC Website, Available Online at https://www.envision-aesc.com/en/product/liion_hev, Available as Early as Jan. 2017, 4 pages.

* cited by examiner

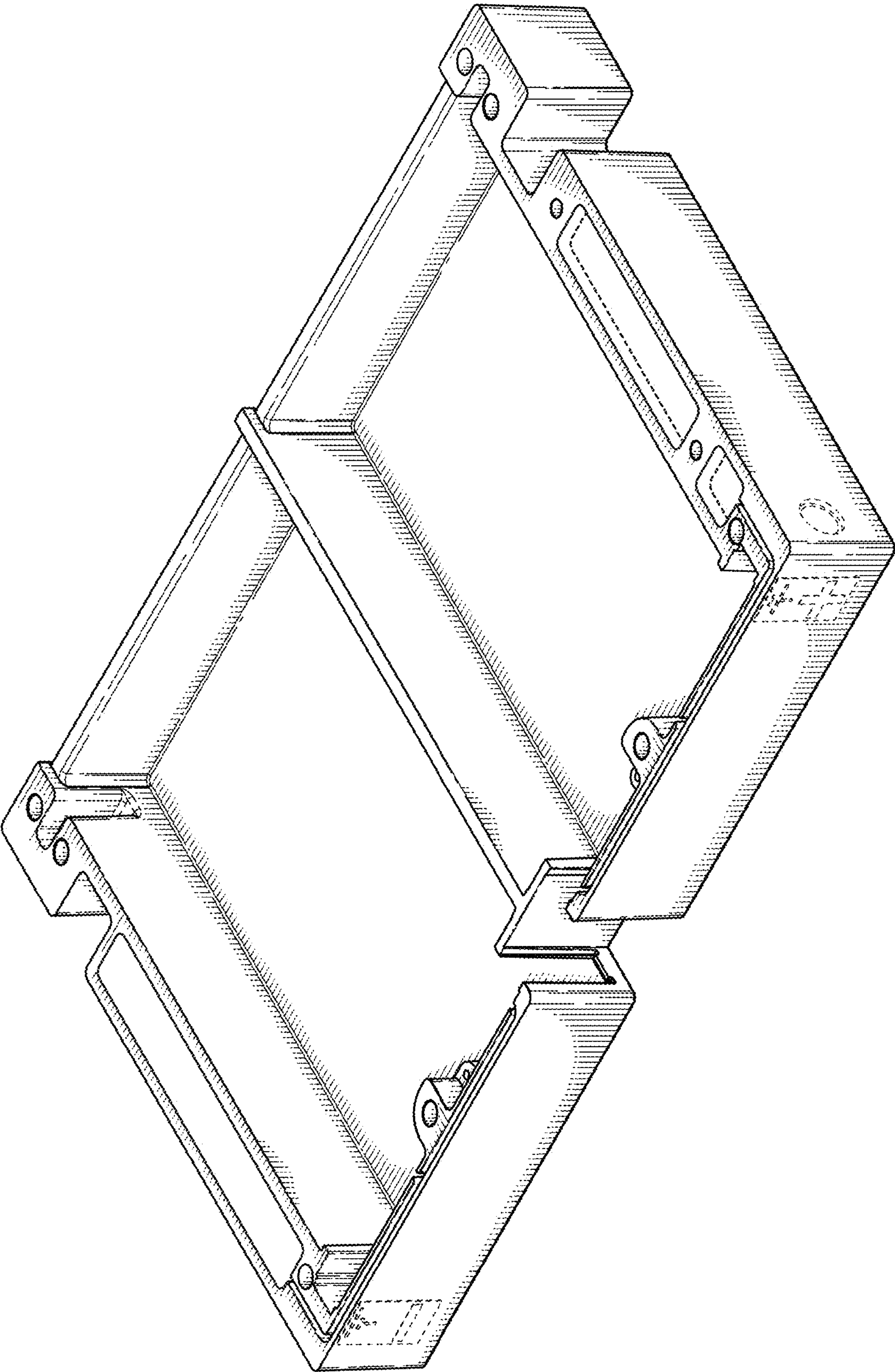


FIG. 1

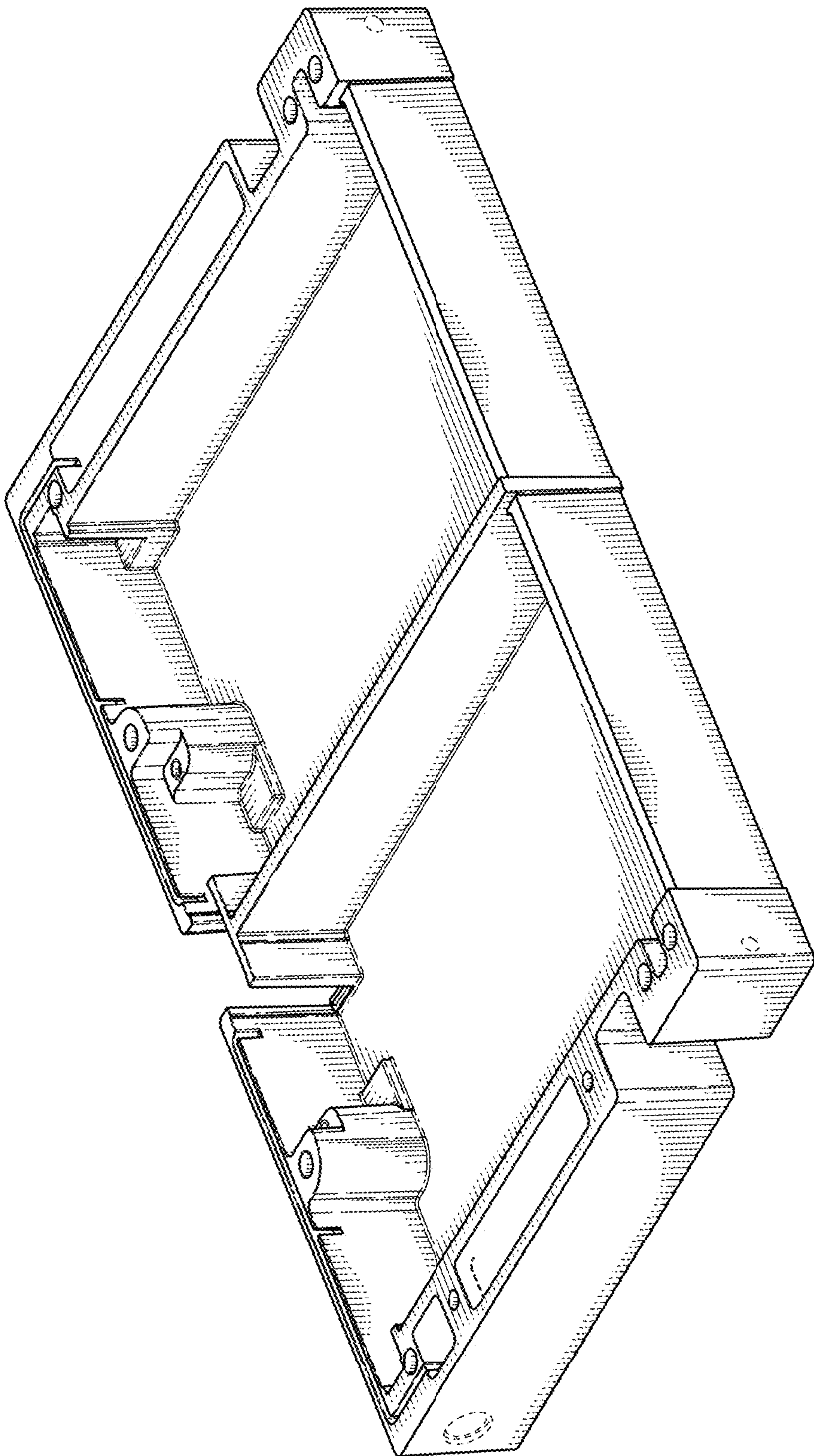


FIG. 2

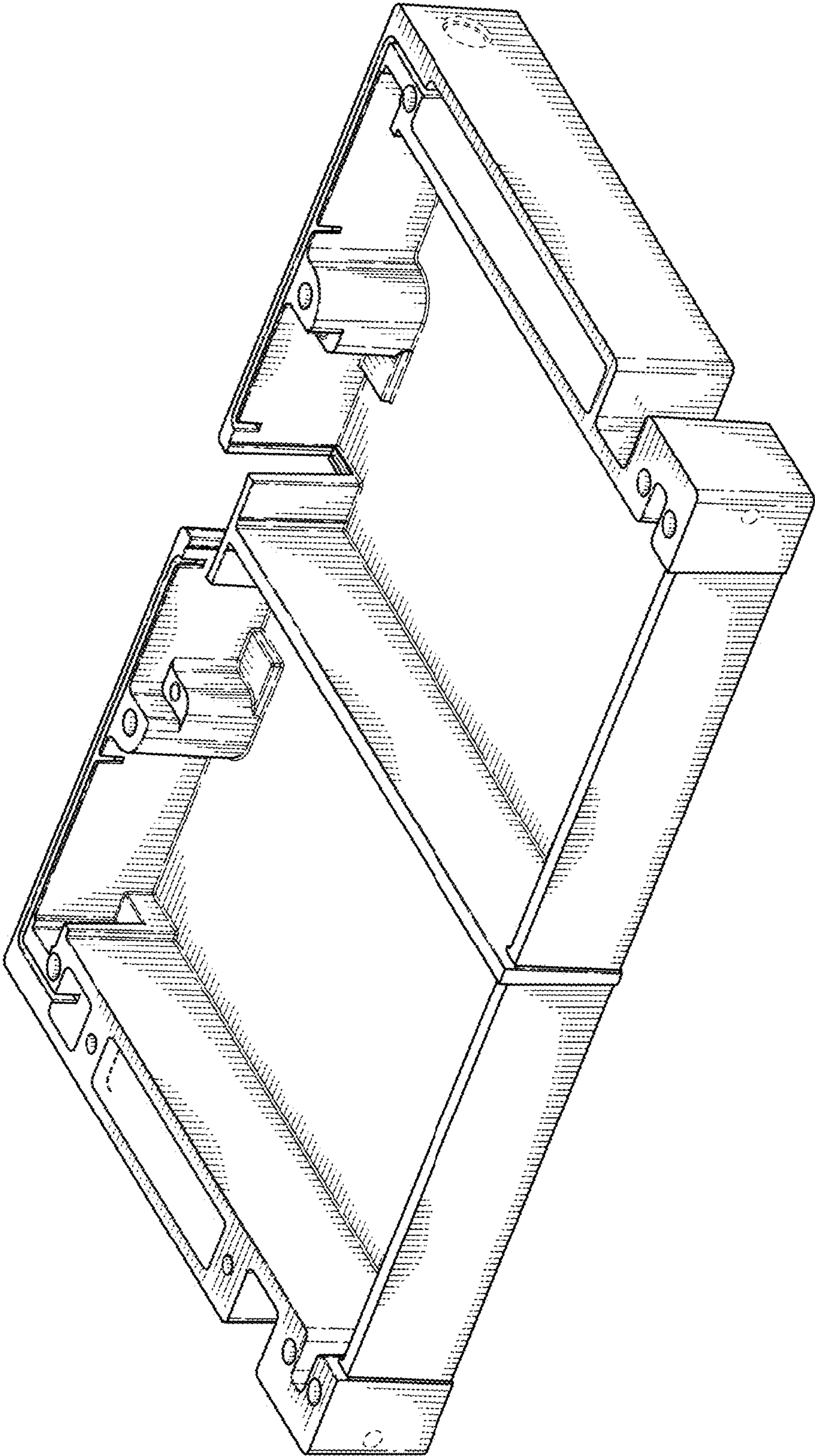


FIG. 3

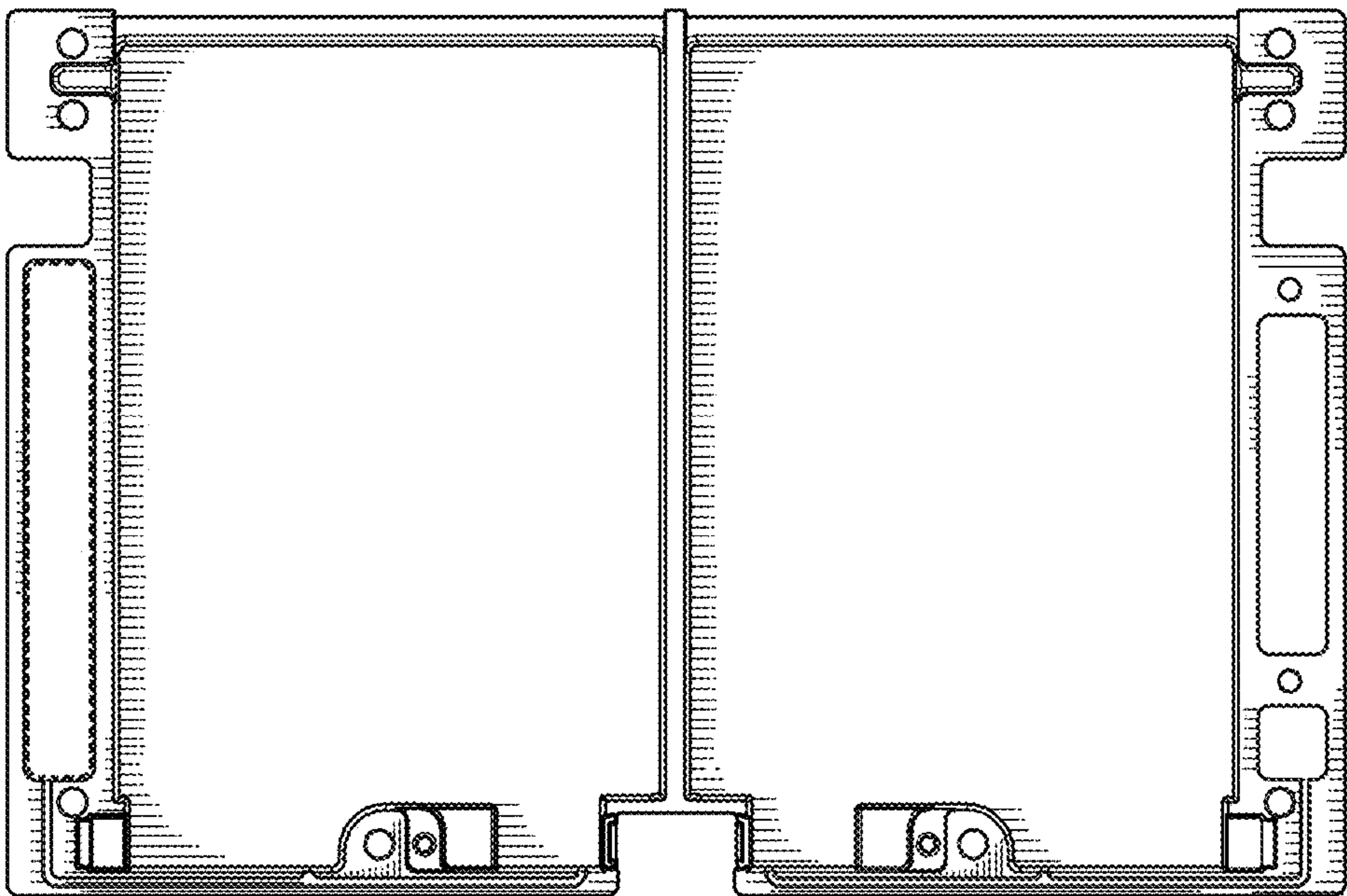


FIG. 4

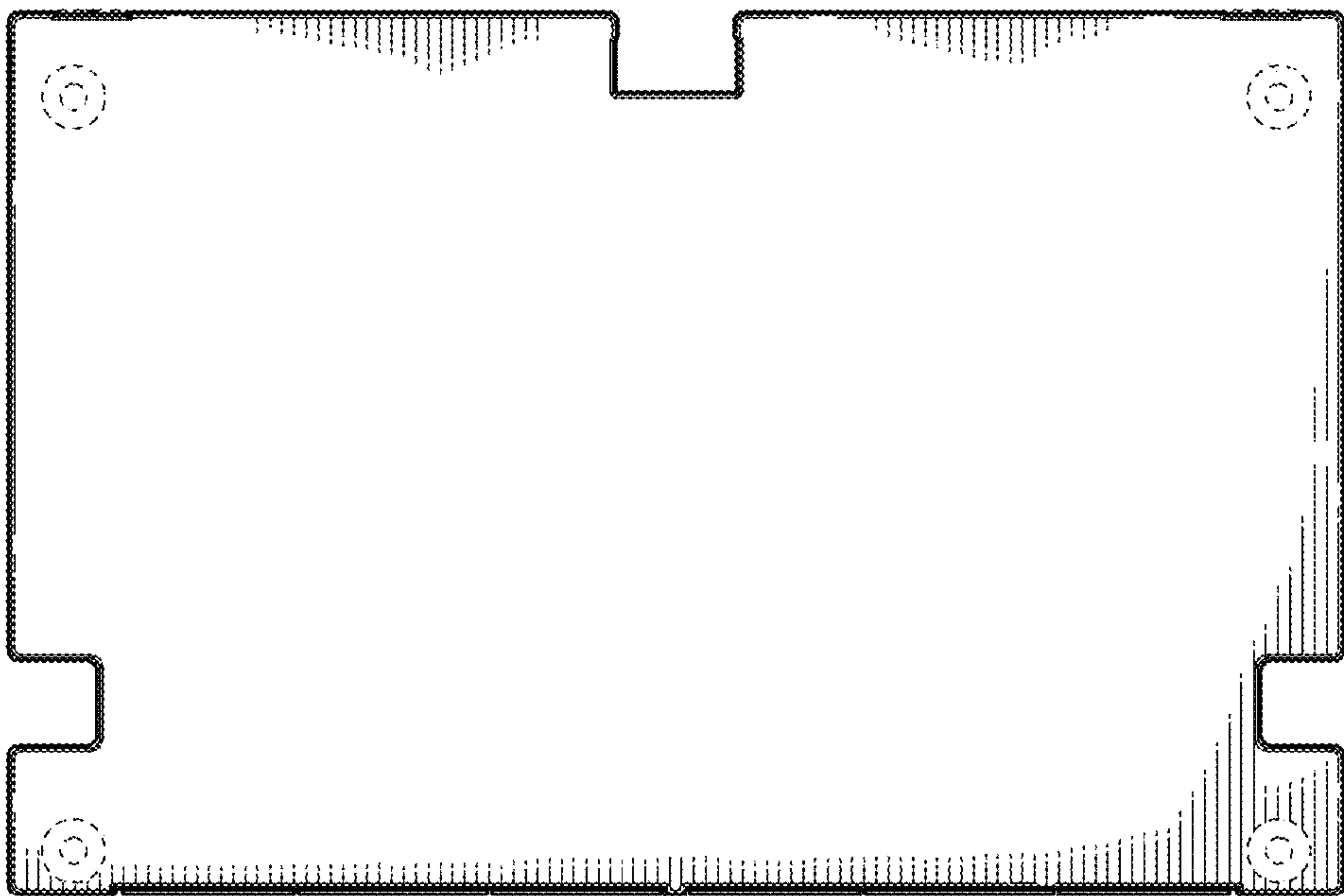


FIG. 5

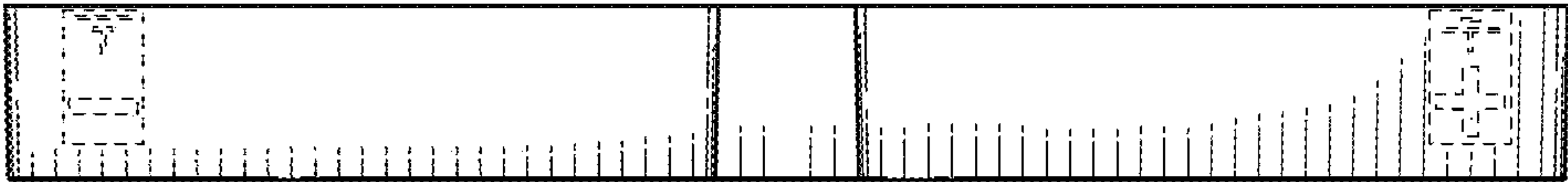


FIG. 6

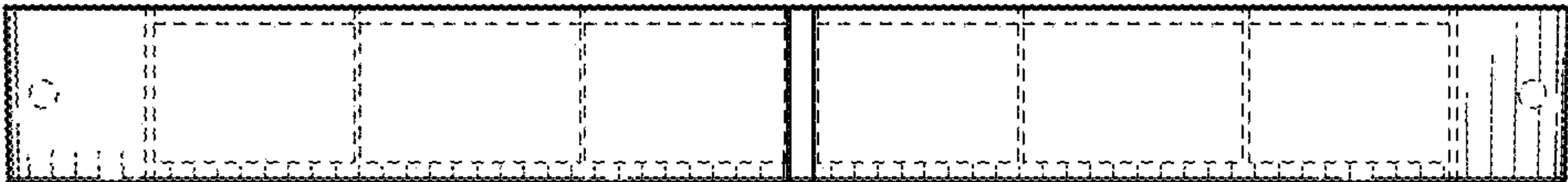


FIG. 7

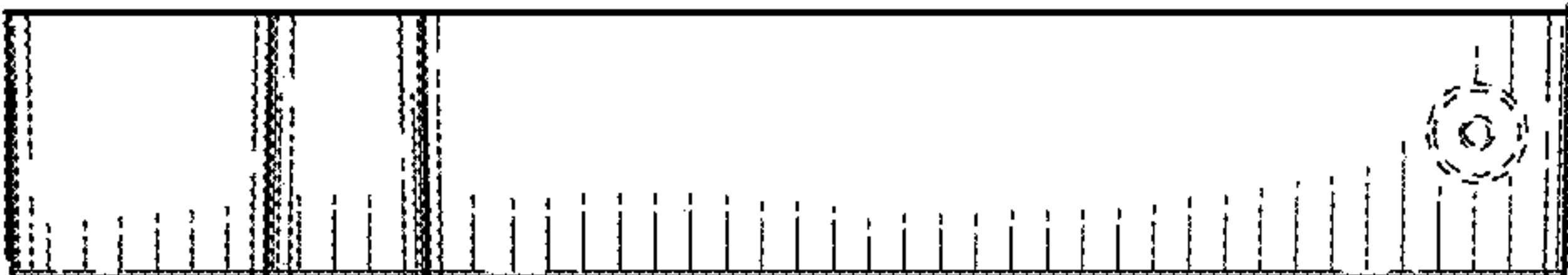


FIG. 8

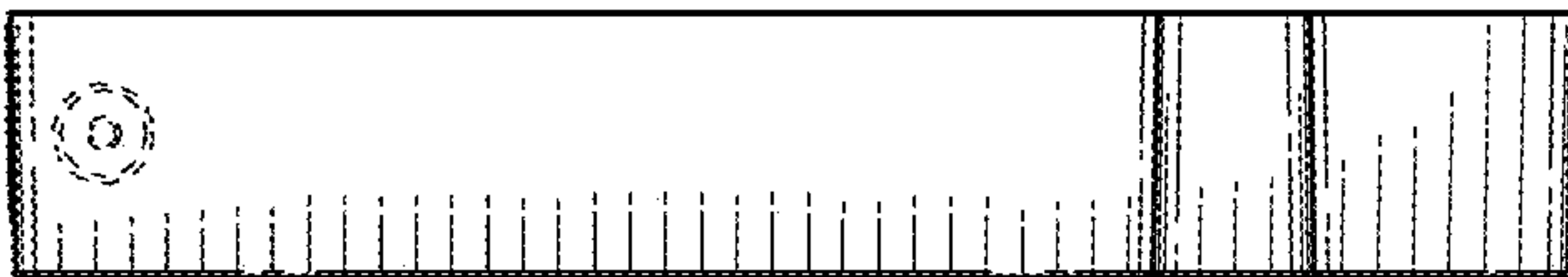


FIG. 9