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(12) **United States Design Patent** (10) **Patent No.:** **US D970,036 S**
Jeffrey-Coker et al. (45) **Date of Patent:** **** Nov. 15, 2022**

- (54) **REAGENT CARTRIDGE**
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- D632,803 S 2/2011 Motadel et al.
 - 8,182,763 B2 5/2012 Duffy et al.
 - D673,293 S 12/2012 Demas et al.
 - D674,112 S 1/2013 Demas et al.
 - 8,361,385 B2 1/2013 Glezer et al.
- (Continued)

FOREIGN PATENT DOCUMENTS

- CN 202230133571.8 * 7/2022
 - GB 2560161 A 9/2018
- (Continued)

OTHER PUBLICATIONS

MiSeq FGx Sequencing System. Online, published date Feb. 2021. Retrieved on Aug. 1, 2022 from URL: <https://verogen.com/wp-content/uploads/2021/02/miseq-fgx-system-reference-guide-vd2018006-f.pdf>.*

(Continued)

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(57) **CLAIM**

The ornamental design for a reagent cartridge, as shown and described.

DESCRIPTION

FIG. 1 is a front, top, and right side perspective view of a reagent cartridge of our design;
FIG. 2 is a front view thereof;
FIG. 3 is a rear view thereof;
FIG. 4 is a right side view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a top view thereof; and,
FIG. 7 is a bottom view thereof.
The dash-dash broken lines illustrate portions of the reagent cartridge that form no part of the claimed design.

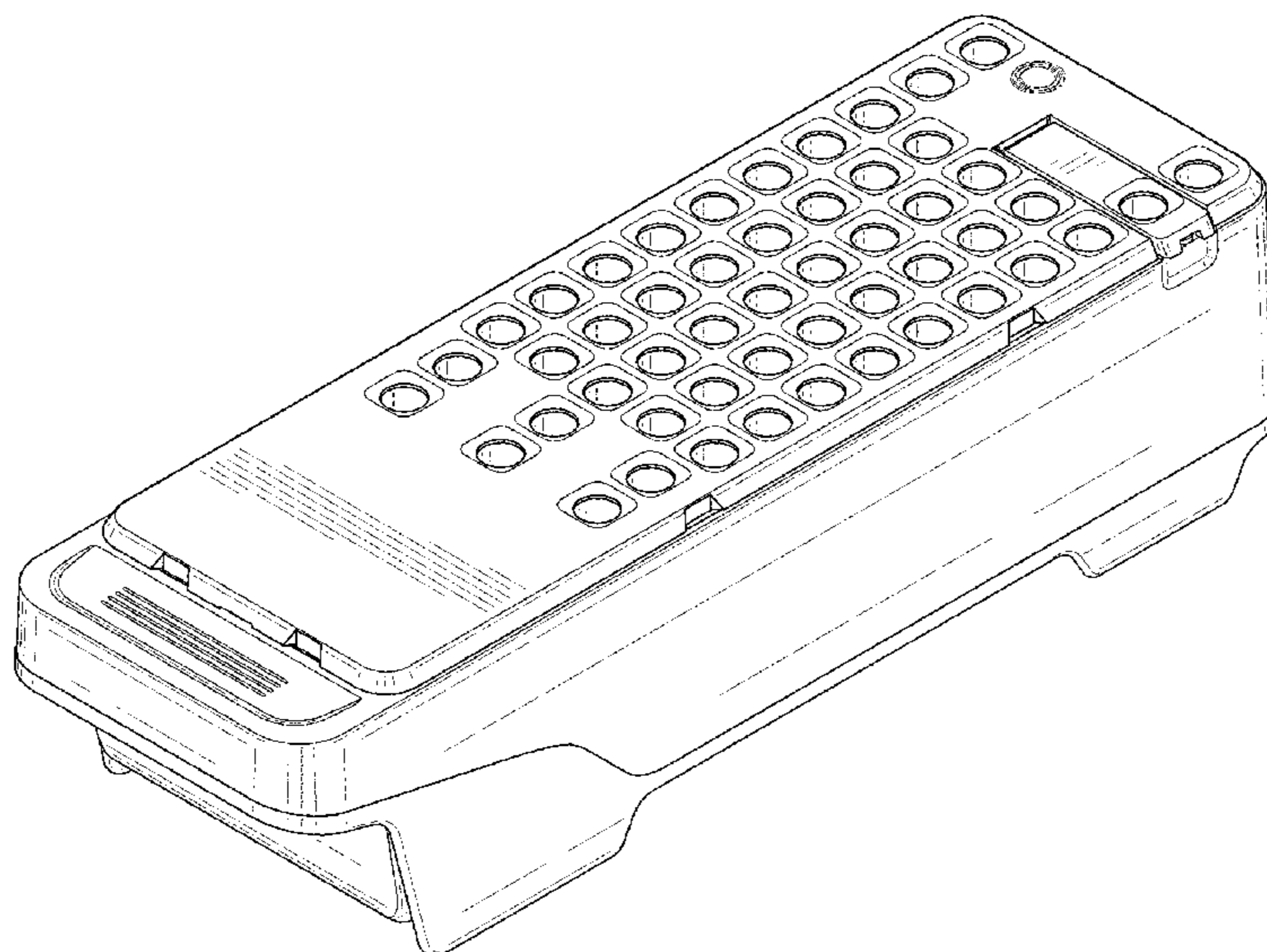
1 Claim, 4 Drawing Sheets

- (**) Term: **15 Years**
- (21) Appl. No.: **29/837,497**
- (22) Filed: **May 5, 2022**
- (51) **LOC (13) Cl.** **24-02**
- (52) **U.S. Cl.**
USPC **D24/224**
- (58) **Field of Classification Search**
USPC D24/216, 217, 219, 220, 224–227, 232, D24/233; D9/424, 425, 732, 735, 755, D9/758; D7/550.1, 553.1–553.5, 554.3; D3/294–295; D18/43, 44
CPC A47G 23/06; A16B 50/20; A61B 50/30; A61J 1/00; C07K 1/26; B01L 3/52; B01L 7/00
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- D302,294 S * 7/1989 Hillman D24/223
- D359,126 S 6/1995 Hovatter
- 6,096,562 A 8/2000 Bunn et al.
- 6,190,300 B1 2/2001 Demsia et al.
- 6,190,878 B1 2/2001 Pierson et al.
- D438,632 S * 3/2001 Miller D24/224
- D438,633 S * 3/2001 Miller D24/224
- D453,573 S 2/2002 Lafond et al.
- 7,854,896 B2 12/2010 Tyndorf et al.



(56)

References Cited

OTHER PUBLICATIONS

U.S. PATENT DOCUMENTS

D687,567 S 8/2013 Jungheim et al.
 D691,733 S 10/2013 Demas et al.
 D699,370 S 2/2014 Motadel et al.
 8,701,913 B2 4/2014 Pack et al.
 D709,625 S 7/2014 Baum et al.
 D732,186 S * 6/2015 Burroughs D24/226
 9,080,207 B2 7/2015 Handique et al.
 D735,881 S 8/2015 Thomas
 9,180,461 B2 11/2015 Edens et al.
 9,260,763 B2 2/2016 Thomas et al.
 9,267,890 B2 2/2016 Kawata et al.
 D759,835 S 6/2016 Baum et al.
 9,488,648 B2 11/2016 Neely et al.
 9,519,000 B2 12/2016 Wilson et al.
 9,702,852 B2 7/2017 Lowery, Jr. et al.
 9,931,635 B1 4/2018 Ho
 10,071,381 B2 9/2018 Welch et al.
 D840,049 S 2/2019 Schulz et al.
 D840,050 S 2/2019 Schulz et al.
 D840,051 S 2/2019 Schulz et al.
 D843,007 S 3/2019 Schulz et al.
 10,220,392 B2 3/2019 Baum et al.
 10,241,054 B2 3/2019 Williams et al.
 D848,637 S 5/2019 Schulz et al.
 D852,977 S 7/2019 Suchocki et al.
 D854,707 S 7/2019 Jakobsen et al.
 10,335,787 B2 7/2019 Haghgooie et al.
 10,351,843 B2 7/2019 Belz et al.
 D856,527 S 8/2019 Kaplan et al.
 D857,228 S 8/2019 Kaplan et al.
 D857,229 S 8/2019 Kaplan et al.
 10,376,889 B1 * 8/2019 Masquelier C12M 29/04
 10,377,538 B2 8/2019 Crivelli et al.
 D861,914 S 10/2019 Blake et al.
 D864,412 S 10/2019 Dangelo et al.
 D865,213 S 10/2019 Dangelo et al.
 D865,214 S * 10/2019 Dangelo D24/224
 D865,215 S 10/2019 Dangelo et al.
 D902,431 S 11/2020 Sims et al.
 10,921,336 B2 2/2021 Hansen et al.
 D919,115 S 5/2021 Kaplan et al.
 11,000,851 B2 5/2021 Knight
 11,199,538 B2 12/2021 Burd et al.
 D942,034 S * 1/2022 Osmus D24/216
 11,254,942 B2 2/2022 Tian et al.
 D949,432 S * 4/2022 Osmus D24/216
 11,293,021 B1 4/2022 Bernate et al.
 2003/0044323 A1 * 3/2003 Diamond G01N 35/10
 211/74
 2004/0238401 A1 12/2004 Greenstein et al.
 2008/0257882 A1 10/2008 Turner
 2013/0309147 A1 11/2013 Yu et al.
 2014/0234182 A1 8/2014 Motadel et al.
 2017/0036207 A1 2/2017 Wright et al.
 2017/0197213 A1 7/2017 Nielsen et al.
 2020/0122141 A1 4/2020 Haghgooie et al.
 2020/0290037 A1 9/2020 Salomon et al.
 2021/0324445 A1 10/2021 Buse et al.
 2022/0080425 A1 3/2022 Bashar et al.
 2022/0112452 A1 4/2022 Garst et al.
 2022/0112508 A1 4/2022 Garst et al.

FOREIGN PATENT DOCUMENTS

KR 3020200053066 * 2/2022
 WO WO-01/60519 A1 8/2001
 WO WO-2020/183195 A1 9/2020
 WO WO-2021/126420 A1 6/2021

Quiagen—QIASymphony® DNA Maxi Handbook located at <<https://www.google.com/imgres?imgurl=x-raw-image%3A%2F%2Ffae1930bd2bc06f496a635e47dff671c1818eff4edfb5a5123e3a71ff012524a&imgrefurl=https%3A%2F%2Fwww.qiagen.com%2Fde%2Fresources%2Fdownload.aspx%3Fid%3D71390d4f-115f-4368-ba2e-5f6cf7936b21%26lang%3Den&tbnid=9Aa80guT4fqjvM&vet=10CAoQMyjUAWoXChMI8LLzioel9wIVAAAAAB0AAAAAEAQ..i&docid=7suzloSWWcuBtM&w=1109&h=439&q=DNA%20sequencer%20reagent%20cartridges&ved=0CAoQMyjUAWoXChMI8LLzioel9wIVAAAAAB0AAAAAEAQ>> last accessed May 5, 2022.

Quiagen—RNA kit located at <<https://www.qiagen.com/us/products/discovery-and-translational-research/dna-rna-purification/rna-purification/total-rna/qiasymphony-rna-kit/>> last accessed May 5, 2022.

Removable 8 Well PCR Tube Strip located at <<https://www.azenta.com/products/removable-8-well-pcr-tube-strip>> last accessed May 5, 2022.

Axygen® PCR-strips of 8 tubes located at <<https://www.mls.be/en/p/tubes-racks-pcr/analyser-cups-microtubes-pcr-disposables/axygen-microtubes-pcr-range/axygen-pcr-range/>> last accessed May 5, 2022.

NovaSeq Reagent Kits, Illumina, located at <<https://www.illumina.com/products/by-type/sequencing-kits/cluster-gen-sequencing-reagents/novaseq-reagent-kits.html>> last accessed May 5, 2022.

The Illumina Sequencing Protocol and the NovaSeq 6000 System | SpringerLink, located at <<https://www.google.com/imgres?imgurl=x-raw-image%3A%2F%2F288cbe228cbff5322455626b5c91534-5d4afdb>> last accessed May 5, 2022.

NextSeq 500/550 v2.5 Kits located at <<https://www.illumina.com/products/by-type/sequencing-kits/cluster-gen-sequencing-reagents>> last accessed May 5, 2022.

MiSeq Reagent Kit v3 located at <<https://www.illumina.com/systems/sequencing-platforms/miseq/products-services.html>> last accessed May 5, 2022.

Hitachi—Compact CE Sequencer DS3000 located at <<https://www.hitachi-hightech.com/global/science/products/bio-systems/sequencer/ds3000.html>> last accessed May 5, 2022.

Ion 540™ Kit-Chef (2 sequencing runs per initialization) located at <<https://www.thermofisher.com/order/catalog/product/A30011>> last accessed May 5, 2022.

LabX Ion S5 Semiconductor Sequencer + Ion Chef System | For Sale | Labx Ad 14035113, located at <https://www.google.com/imgres?imgurl=https%3A%2F%2Fcheckout.labx.com%2Fpub%2Fmedia%2Fcatalog%2Fproduct%2Fi%2Fm%2Fimg-20220202-092431058.jpg&imgrefurl=https%3A%2F%2Fwww.labx.com%2Fitem%2Fion-s5-semiconductor-sequencer-ion-chef-system%2F14035113&tbnid=CtQy2sSs_zECkM&vet=10CK0BED-MotgFqFwoTCPCy84qHpfcCFQAAAAAdAAAAABAD..i&docid=18bcwsY5Nbi5hM&w=1600&h=1200&q=DNA%20sequencer%20reagent%20cartridges&ved=0CK0BEDMotgFqFwoTCPCy8-4qHpfcCFQAAAAAdAAAAABAD> last accessed May 5, 2022.

Stellar Scientific—SeeMore 0.2ml Optically Clear PCR Strip Tube with Separate Dome Caps, located at <<https://www.stellarscientific.com/seemore-0-2ml-optically-clear-pcr-strip-tube-with-separate-dome-caps-sterile-125-pack/#&gid=1&pid=1>> last accessed May 5, 2022.

Capp 0.1 and 0.2 ML PCR Strip Tubes, located at <<https://www.capp.dk/product/expell-pcr-strip-tubes>> last accessed May 5, 2022.

T320-2 & T320-3 Amplitube™ 8 Tube Strips With Individually Attached Caps, located at <<https://www.simport.com/en/products/224-t320-2.html>> last accessed May 5, 2022.

Fischer Scientific—Eppendorf™ PCR Tube Strips and Domed Cap Strips, 0.1 mL, located at <<https://www.fishersci.se/shop/products/eppendorf-0-1ml-pcr-tubes-cap-strips/10146704>> last accessed May 5, 2022.

* cited by examiner

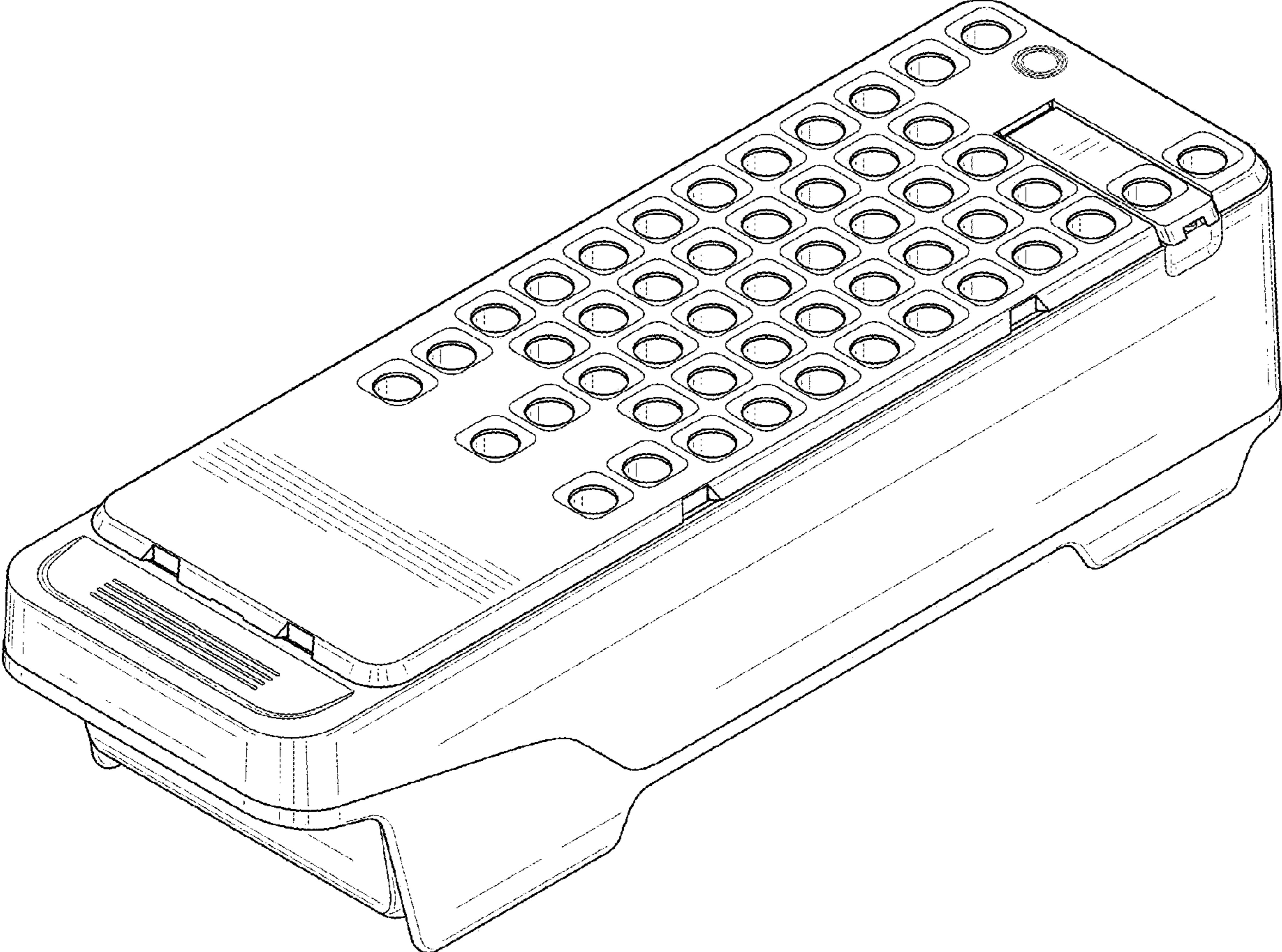


FIG. 1

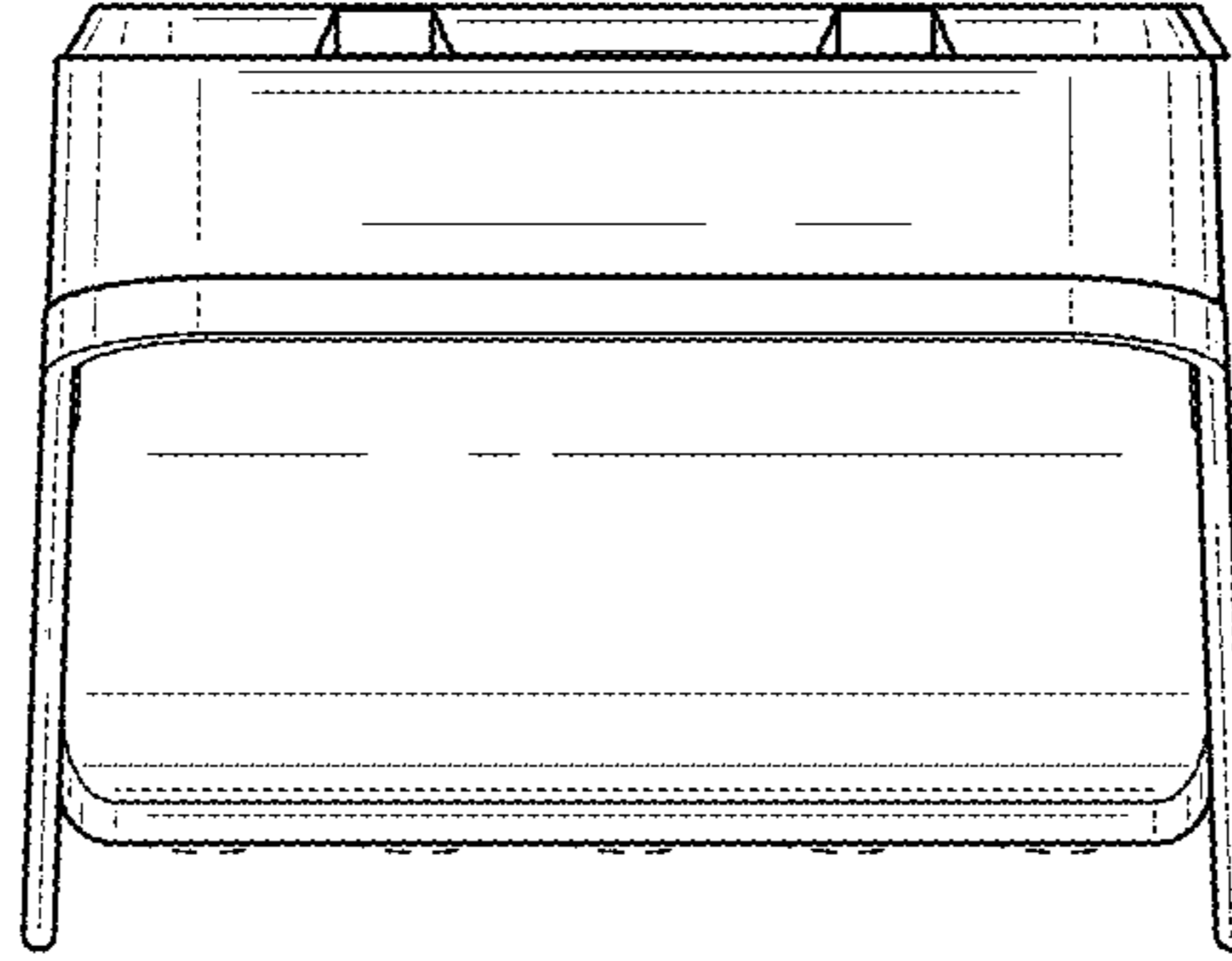


FIG. 2

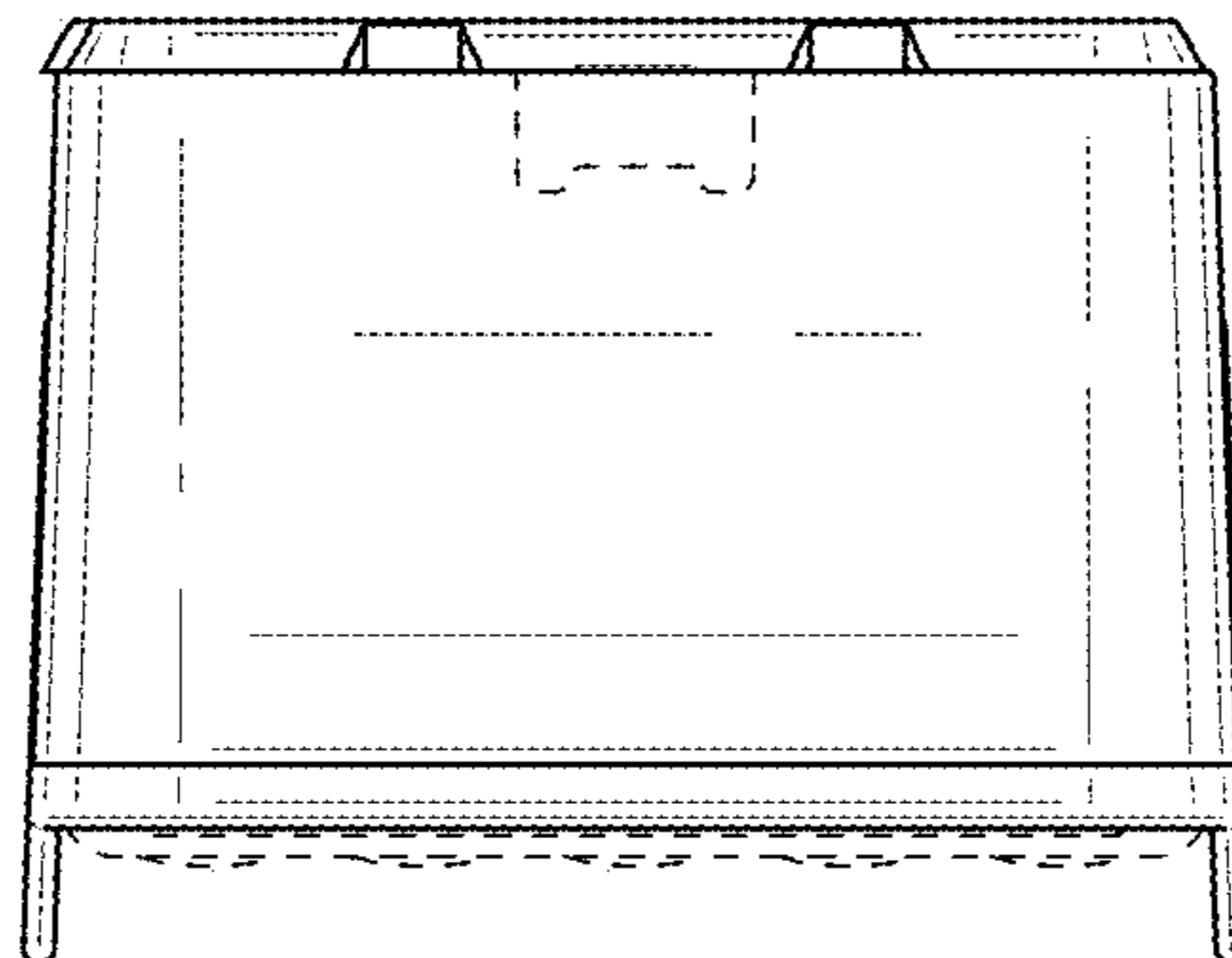


FIG. 3

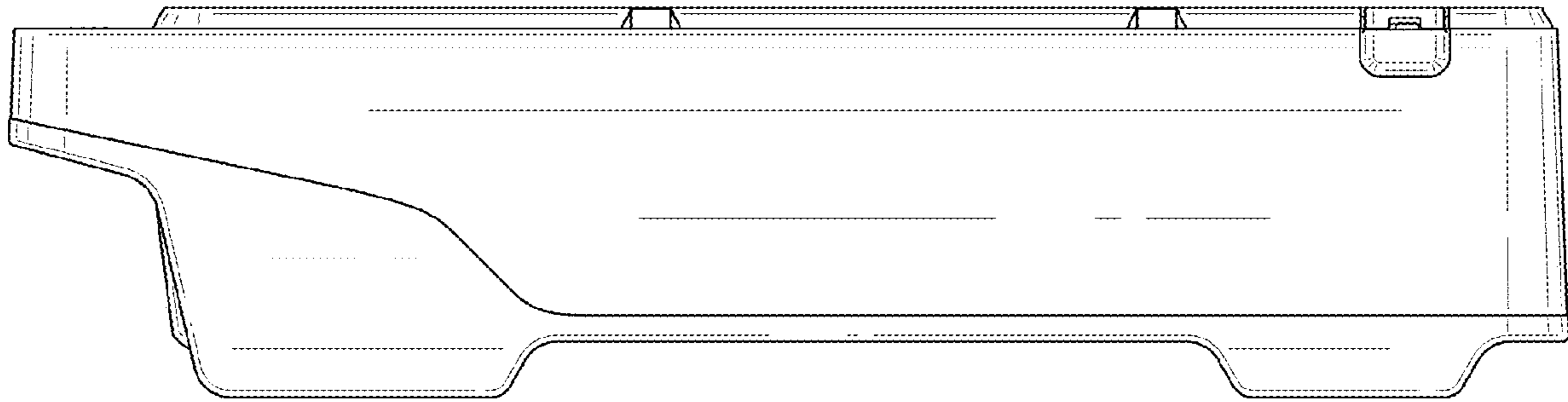


FIG. 4

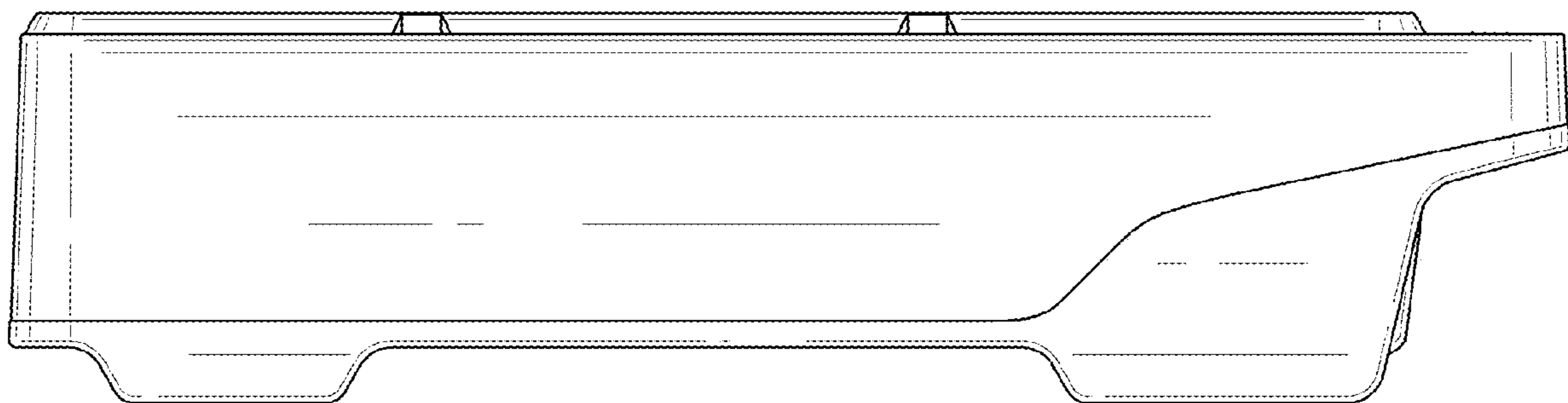


FIG. 5

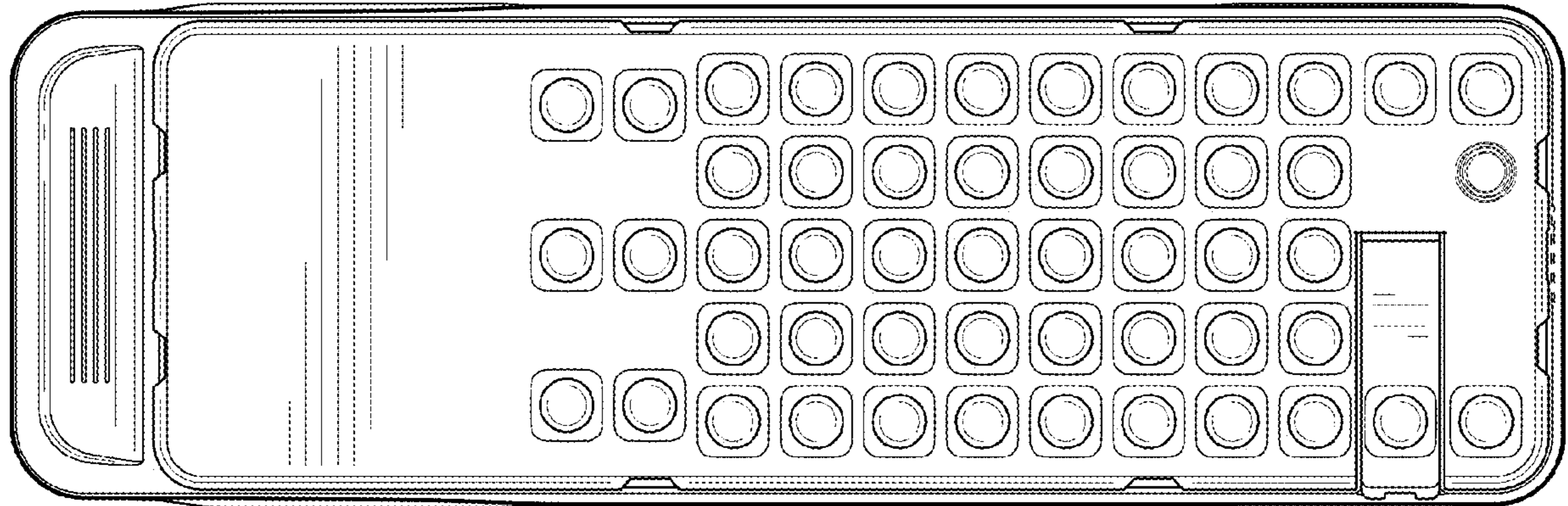


FIG. 6

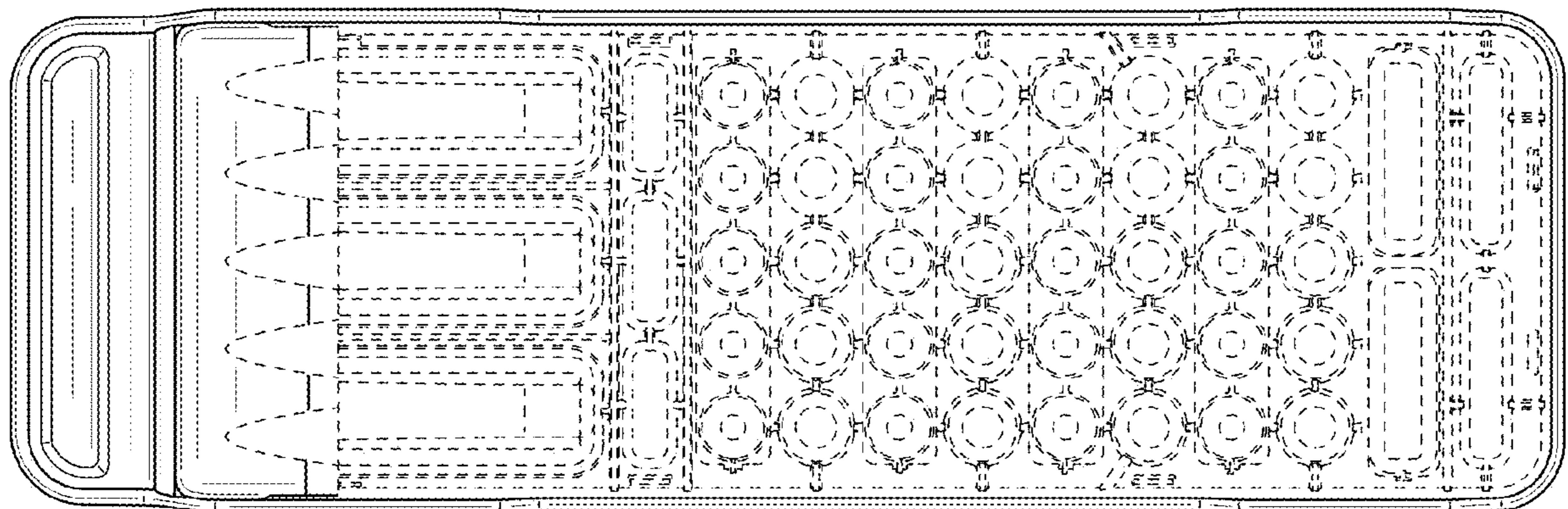


FIG. 7