



US00D984279S

(12) **United States Design Patent**  
**McCree et al.**

(10) **Patent No.:** **US D984,279 S**  
(45) **Date of Patent:** **\*\* Apr. 25, 2023**

(54) **CARRIER**

(71) Applicant: **Graphic Packaging International, LLC**, Atlanta, GA (US)

(72) Inventors: **Justin McCree**, Bristol (GB); **Brian Smalley**, Bristol (GB); **Steve M. Gould**, Bristol (GB)

(73) Assignee: **Graphic Packaging International, LLC**, Atlanta, GA (US)

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

(21) Appl. No.: **29/692,992**

(22) Filed: **May 30, 2019**

(51) **LOC (14) Cl.** ..... **09-03**

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

USPC ..... **D9/752**

(58) **Field of Classification Search**

USPC ..... D9/737, 751-756, 455, 456, 517, 716, D9/719; D7/553.1, 553.4, 553.5, 553.8, D7/555, 701, 708; D3/310-315

CPC ..... B65B 17/025; B65D 71/42; B65D 71/00; B65D 71/44; B65D 71/46; B65D 71/48

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

1,527,399 A 2/1925 Davidson  
2,289,859 A 7/1942 Arthur  
2,320,440 A 6/1943 Kruea

(Continued)

**FOREIGN PATENT DOCUMENTS**

AT 399701 B 7/1995  
CA 2133827 10/1993

(Continued)

**OTHER PUBLICATIONS**

PR Newswire KeelClip, available Oct. 17, 2019, [online], [site visited Aug. 25, 2022]. Available from internet, URL: <https://www.prnewswire.com/news-releases/graphic-packaging-international-develops-keelclip-an-innovative-paperboard-packaging-solution-for-food-and-beverage-cans-300940191.html> (Year: 2019).\*

(Continued)

*Primary Examiner* — W. A. Teddy Falloway

(74) *Attorney, Agent, or Firm* — Womble Bond Dickinson (US) LLP

(57) **CLAIM**

The ornamental design for a carrier, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a carrier showing my new design according to an exemplary embodiment and in a first arrangement.

FIG. 2 is a front elevation view of the carrier of FIG. 1, the rear elevation view is a mirror image.

FIG. 3 is a right elevation view of the carrier of FIG. 1, the left elevation view is a mirror image.

FIG. 4 is a top plan view of the carrier of FIG. 1.

FIG. 5 is a bottom plan view of the carrier of FIG. 1.

FIG. 6 is a perspective view of the carrier of FIG. 1 in a second arrangement.

FIG. 7 is a front elevation view of the carrier of FIG. 6, the rear elevation view is a mirror image.

FIG. 8 is a right elevation view of the carrier of FIG. 6, the left elevation view is a mirror image.

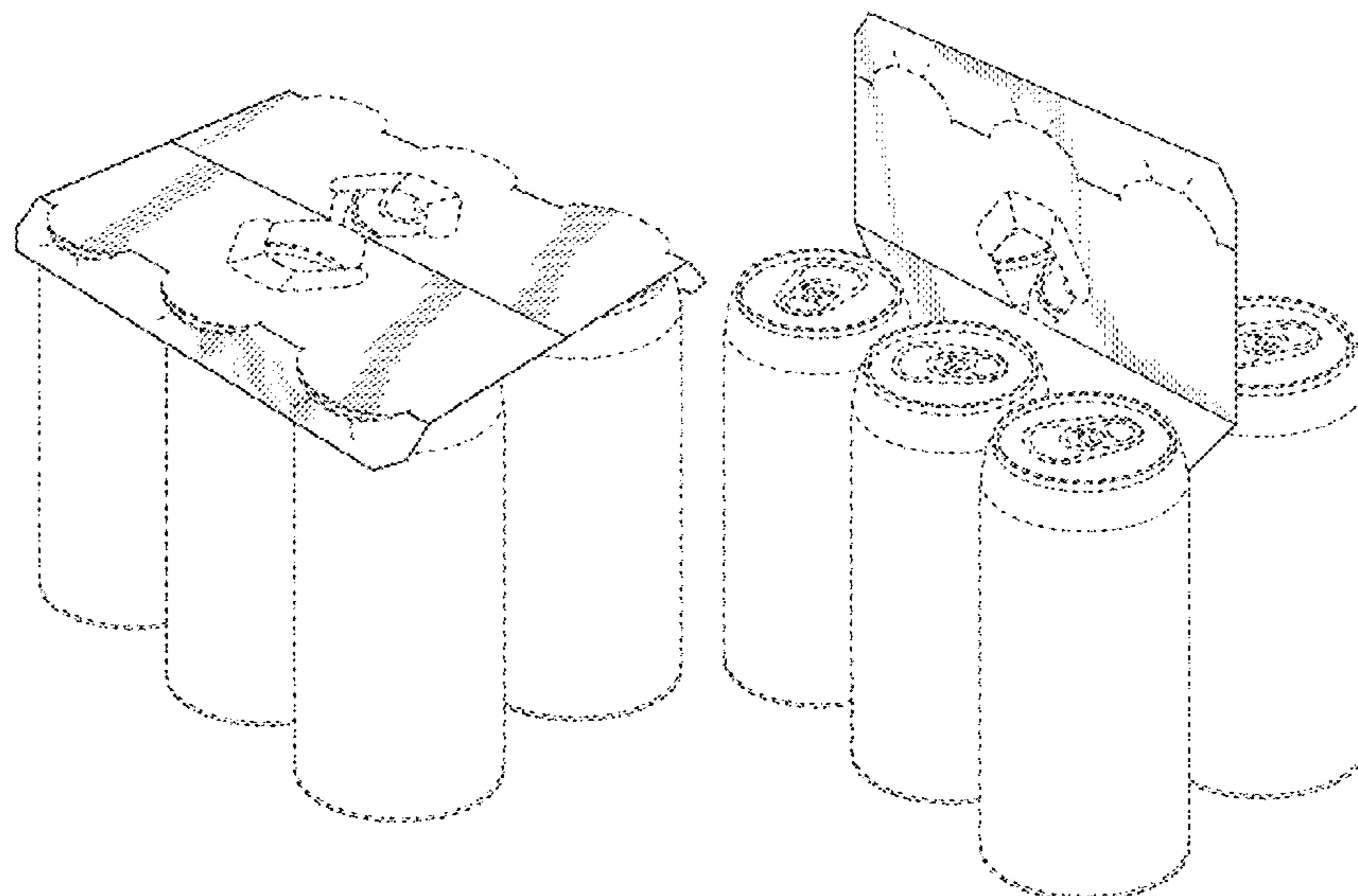
FIG. 9 is a top plan view of the carrier of FIG. 6.

FIG. 10 is a bottom plan view of the carrier of FIG. 6; and,

FIG. 11 is a plan view of the carrier of FIG. 1 shown in an unfolded arrangement.

The broken lines showing cans illustrate environmental structure. All other broken lines represent portions of the carrier. The broken lines form no part of the claimed design.

**1 Claim, 11 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

|               |         |                   |                         |              |         |                       |
|---------------|---------|-------------------|-------------------------|--------------|---------|-----------------------|
| 2,331,038 A   | 10/1943 | Meller            |                         | 5,002,225 A  | 3/1991  | Bienaime              |
| 2,397,376 A   | 3/1946  | Caldwell          |                         | 5,065,862 A  | 11/1991 | Mousseau              |
| 2,397,716 A   | 4/1946  | Wendler           |                         | 5,103,971 A  | 4/1992  | Schuster              |
| 2,522,950 A   | 9/1950  | Keith             |                         | 5,125,506 A  | 6/1992  | Galbierz et al.       |
| 2,594,376 A   | 4/1952  | Arneson           |                         | 5,135,104 A  | 8/1992  | Jorba                 |
| 2,594,377 A   | 4/1952  | Arneson           |                         | 5,139,147 A  | 8/1992  | Sutherland            |
| 2,737,326 A   | 3/1956  | Toensmeier        |                         | D329,807 S   | 9/1992  | Heider                |
| 2,798,603 A   | 7/1957  | Grinspoon         |                         | 5,188,225 A  | 2/1993  | Jorba                 |
| 2,950,041 A   | 8/1960  | Stone             |                         | 5,193,673 A  | 3/1993  | Rathbone et al.       |
| 2,965,410 A   | 12/1960 | Hughes            |                         | 5,201,412 A  | 4/1993  | Schuster et al.       |
| 3,001,647 A   | 9/1961  | Liss              |                         | 5,230,425 A  | 7/1993  | Edqvist et al.        |
| 3,046,711 A   | 7/1962  | Harrison          |                         | 5,246,113 A  | 9/1993  | Schuster              |
| 3,061,141 A   | 10/1962 | Cote              |                         | 5,263,299 A  | 11/1993 | Galbierz et al.       |
| 3,094,210 A   | 6/1963  | Van Der Berg      |                         | 5,267,644 A  | 12/1993 | Tsao                  |
| 3,099,475 A   | 7/1963  | Manizza           |                         | 5,282,348 A  | 2/1994  | Dampier et al.        |
| 3,118,537 A   | 1/1964  | Copping           |                         | 5,297,673 A  | 3/1994  | Sutherland            |
| 3,128,034 A   | 4/1964  | Weiss             |                         | 5,310,050 A  | 5/1994  | Sutherland            |
| 3,137,109 A   | 6/1964  | Rapata            |                         | 5,310,051 A  | 5/1994  | Sutherland            |
| 3,146,885 A   | 9/1964  | Grantham          |                         | 5,314,224 A  | 5/1994  | Bates                 |
| 3,156,358 A * | 11/1964 | Randrup           | B65D 71/48<br>206/192   | 5,318,178 A  | 6/1994  | Davies et al.         |
|               |         |                   |                         | 5,323,895 A  | 6/1994  | Sutherland et al.     |
| 3,200,944 A   | 8/1965  | Rapata            |                         | 5,328,024 A  | 7/1994  | Sutherland            |
| 3,223,308 A   | 12/1965 | Weiss             |                         | 5,335,774 A  | 8/1994  | Ganz                  |
| 3,245,711 A   | 4/1966  | Dantoin           |                         | 5,351,815 A  | 10/1994 | Fogle et al.          |
| 3,257,066 A   | 6/1966  | Williams          |                         | 5,351,816 A  | 10/1994 | Sutherland et al.     |
| 3,281,180 A   | 10/1966 | Spery             |                         | 5,351,817 A  | 10/1994 | Sutherland            |
| 3,302,784 A   | 2/1967  | Copping           |                         | 5,355,999 A  | 10/1994 | Sutherland            |
| 3,387,879 A   | 6/1968  | Wood              |                         | 5,360,104 A  | 11/1994 | Sutherland            |
| 3,404,912 A   | 10/1968 | Watts             |                         | 5,390,784 A  | 2/1995  | Sutherland            |
| 3,410,596 A   | 11/1968 | Slevin, Jr.       |                         | 5,407,065 A  | 4/1995  | Sutherland            |
| 3,432,202 A   | 3/1969  | Ebelhardt         |                         | 5,415,278 A  | 5/1995  | Sutherland            |
| 3,463,535 A * | 8/1969  | Beart             | B65D 71/44<br>294/87.28 | 5,425,446 A  | 6/1995  | Weaver                |
|               |         |                   |                         | 5,443,153 A  | 8/1995  | Sutherland            |
| 3,528,697 A   | 9/1970  | Wood              |                         | 5,445,262 A  | 8/1995  | Sutherland            |
| 3,587,847 A   | 6/1971  | Graser            |                         | 5,452,799 A  | 9/1995  | Sutherland            |
| 3,601,439 A   | 8/1971  | Poupitch          |                         | 5,484,053 A  | 1/1996  | Harris                |
| 3,612,266 A * | 10/1971 | Graser            | B65D 71/48<br>206/161   | 5,485,914 A  | 1/1996  | Martin                |
|               |         |                   |                         | 5,487,464 A  | 1/1996  | Galbierz et al.       |
| D222,579 S    | 11/1971 | Oglesbee          |                         | 5,490,593 A  | 2/1996  | Gordon et al.         |
| 3,627,121 A   | 12/1971 | Deasy             |                         | 5,503,267 A  | 4/1996  | Sutherland            |
| 3,653,503 A   | 4/1972  | Arneson           |                         | 5,520,283 A  | 5/1996  | Sutherland            |
| 3,693,787 A   | 9/1972  | Duerr             |                         | 5,524,756 A  | 6/1996  | Sutherland            |
| 3,698,550 A   | 10/1972 | Graser            |                         | 5,551,566 A  | 9/1996  | Sutherland            |
| 3,701,416 A   | 10/1972 | Lawrence          |                         | 5,553,704 A  | 9/1996  | Gordon et al.         |
| 3,722,945 A   | 3/1973  | Wood              |                         | 5,553,705 A  | 9/1996  | Bakx                  |
| 3,726,558 A   | 4/1973  | Klygis            |                         | 5,573,111 A  | 11/1996 | Gordon                |
| 3,734,278 A   | 5/1973  | Kerrigan          |                         | 5,590,776 A  | 1/1997  | Galbierz              |
| 3,876,066 A   | 4/1975  | Klygis            |                         | 5,593,027 A  | 1/1997  | Sutherland            |
| 3,897,873 A   | 8/1975  | Graser            |                         | 5,609,247 A  | 3/1997  | Appleton              |
| 3,924,739 A   | 12/1975 | Gravesteijn       |                         | 5,609,251 A  | 3/1997  | Harris                |
| 3,942,631 A   | 3/1976  | Sutherland et al. |                         | 5,609,379 A  | 3/1997  | Harrelson             |
| 4,029,204 A   | 6/1977  | Manizza           |                         | 5,639,137 A  | 6/1997  | Bakx                  |
| 4,111,298 A   | 9/1978  | Mascia            |                         | 5,682,982 A  | 11/1997 | Stonehouse            |
| 4,120,396 A   | 10/1978 | Mascia            |                         | 5,706,936 A  | 1/1998  | Bernstein             |
| 4,136,772 A   | 1/1979  | Mascia            |                         | 5,711,419 A  | 1/1998  | Beales et al.         |
| 4,155,502 A   | 5/1979  | Forte             |                         | 5,735,394 A  | 4/1998  | Harrelson             |
| 4,190,149 A   | 2/1980  | Oliff et al.      |                         | 5,746,310 A  | 5/1998  | Slomski               |
| D257,001 S    | 9/1980  | Oliff             |                         | 5,762,193 A  | 6/1998  | Marco                 |
| 4,244,617 A   | 1/1981  | Manizza           |                         | 5,791,463 A  | 8/1998  | Negelen               |
| 4,304,329 A   | 12/1981 | Graser            |                         | 5,816,391 A  | 10/1998 | Harris                |
| D265,292 S *  | 7/1982  | Killy             | D9/433                  | 5,845,776 A  | 12/1998 | Galbierz et al.       |
| 4,339,032 A   | 7/1982  | Wood              |                         | 5,878,876 A  | 3/1999  | Galbierz et al.       |
| D265,979 S    | 8/1982  | Arfert            |                         | 5,960,945 A  | 10/1999 | Sutherland            |
| 4,372,599 A   | 2/1983  | Kiedaisch et al.  |                         | 6,039,181 A  | 3/2000  | Whiteside             |
| 4,378,879 A   | 4/1983  | Killy             |                         | 6,059,099 A  | 5/2000  | Galbierz              |
| 4,382,505 A   | 5/1983  | Sutherland et al. |                         | 6,082,532 A  | 7/2000  | Miess                 |
| 4,441,611 A   | 4/1984  | Sommariva         |                         | 6,145,656 A  | 11/2000 | Marco                 |
| 4,453,630 A   | 6/1984  | Helms             |                         | 6,293,392 B1 | 9/2001  | Galbierz              |
| 4,471,870 A   | 9/1984  | Uhlig             |                         | 6,315,111 B1 | 11/2001 | Sutherland            |
| 4,523,676 A   | 6/1985  | Barrash           |                         | 6,394,272 B1 | 5/2002  | Domansky              |
| D294,331 S    | 2/1988  | Panazzolo         |                         | 6,896,130 B2 | 5/2005  | Theelen               |
| 4,784,266 A   | 11/1988 | Chaussadas        |                         | D506,925 S   | 7/2005  | Plumer                |
| D304,017 S *  | 10/1989 | Oliff             | D9/433                  | 7,011,209 B2 | 3/2006  | Sutherland et al.     |
| 4,911,288 A   | 3/1990  | Dantoin, Jr.      |                         | 7,690,507 B2 | 4/2010  | Sutherland            |
| 4,974,726 A   | 12/1990 | Klygis et al.     |                         | 7,721,878 B2 | 5/2010  | Requena               |
|               |         |                   |                         | 7,762,397 B2 | 7/2010  | Coltri-Johnson et al. |
|               |         |                   |                         | 7,789,231 B2 | 9/2010  | Requena               |
|               |         |                   |                         | 7,823,721 B2 | 11/2010 | Sutherland et al.     |
|               |         |                   |                         | 8,096,413 B2 | 1/2012  | DePaula               |



(56)

References Cited

U.S. PATENT DOCUMENTS

8,162,135 B2 4/2012 Oliveira  
 8,353,398 B2 1/2013 DePaula et al.  
 8,387,784 B2 3/2013 Gonzalez et al.  
 8,443,968 B2 5/2013 DePaula  
 8,464,866 B2 6/2013 Sutherland et al.  
 8,469,184 B2 6/2013 Spivey, Sr.  
 8,602,209 B2 12/2013 Jones et al.  
 8,631,932 B2 1/2014 Holley, Jr.  
 8,701,878 B2 4/2014 Spivey, Sr.  
 8,925,720 B2 1/2015 Sutherland et al.  
 8,936,149 B2 1/2015 Smalley  
 8,955,674 B2 2/2015 Spivey, Sr. et al.  
 9,079,699 B2 7/2015 Holley, Jr.  
 9,169,050 B2 10/2015 Spivey, Sr.  
 9,284,090 B2 3/2016 Lettre  
 9,359,093 B2 6/2016 DePaula et al.  
 9,376,250 B2 6/2016 Spivey, Sr.  
 D767,408 S 9/2016 Shuster  
 9,446,891 B2 9/2016 Jones et al.  
 9,511,916 B2 12/2016 Holley, Jr.  
 9,669,976 B2 6/2017 Kastanek et al.  
 9,676,535 B2 6/2017 Spivey, Sr.  
 10,077,131 B2 9/2018 Lettre  
 D881,021 S 4/2020 Bandinu  
 D881,718 S 4/2020 Bandinu  
 10,836,550 B2 11/2020 Zacherle  
 D918,057 S 5/2021 L'Heureux  
 D918,058 S 5/2021 L'Heureux  
 11,014,727 B2\* 5/2021 McCree ..... B31B 50/624  
 D920,809 S 6/2021 Chesnet et al.  
 D921,493 S 6/2021 Chesnet  
 D923,416 S 6/2021 Luciano  
 11,027,905 B2\* 6/2021 Ford ..... B65B 17/025  
 11,180,301 B2\* 11/2021 Smalley ..... B65D 71/42  
 D944,656 S\* 3/2022 Spivey, Sr. .... D9/752  
 D946,416 S\* 3/2022 Smalley ..... D9/752  
 D946,417 S\* 3/2022 Gonzalez Manzano ..... D9/752  
 D946,418 S\* 3/2022 Gonzalez Manzano .....  
 B65D 71/42  
 D946,419 S\* 3/2022 Gonzalez Manzano ..... D9/752  
 D946,420 S\* 3/2022 Gonzalez Manzano ..... D9/752  
 D946,421 S\* 3/2022 Gonzalez Manzano .....  
 B65D 71/42  
 D9/752  
 11,261,013 B2\* 3/2022 Smalley ..... B65B 17/025  
 11,286,094 B2\* 3/2022 Gonzalez Manzano .....  
 B65D 71/0085  
 D955,889 S 6/2022 Gonzalez Manzano  
 D955,890 S 6/2022 Gonzalez Manzano  
 11,401,095 B2 8/2022 Rosenbrien  
 11,420,802 B2 8/2022 Kooc  
 D962,789 S 9/2022 Noel  
 11,472,618 B2\* 10/2022 McCree ..... B65D 71/44  
 11,485,555 B2\* 11/2022 Gonzalez Manzano .....  
 B65D 71/42  
 11,492,185 B2\* 11/2022 Zammit ..... B65D 71/44  
 2002/0195371 A1 12/2002 Brown  
 2003/0080004 A1 5/2003 Olsen et al.  
 2003/0213705 A1 11/2003 Woog  
 2004/0206639 A1 10/2004 Karlsson  
 2004/0211695 A1\* 10/2004 Karlsson ..... B65D 71/44  
 206/139  
 2004/0226833 A1 11/2004 Daniel  
 2005/0127151 A1 6/2005 Johnson  
 2005/0199513 A1 9/2005 Bakx et al.  
 2006/0255114 A1 11/2006 Hand et al.  
 2007/0080084 A1\* 4/2007 Sutherland ..... B65D 71/46  
 206/434  
 2007/0163908 A1\* 7/2007 Sutherland ..... B65D 71/46  
 206/434  
 2009/0101526 A1 4/2009 Sutherland et al.  
 2009/0127147 A1 5/2009 Sutherland  
 2010/0078337 A1 4/2010 Sutherland et al.

2010/0264043 A1 10/2010 DePaula  
 2012/0138489 A1 6/2012 Holley, Jr.  
 2015/0191287 A1 7/2015 L'Heureux et al.  
 2016/0325899 A1 11/2016 L'Heureux et al.  
 2018/0111734 A1 4/2018 Jego  
 2018/0222650 A1 8/2018 Zacherle  
 2018/0362234 A1 12/2018 L'Heureux et al.  
 2019/0119019 A1 4/2019 Patton  
 2020/0010255 A1 1/2020 Zacherle et al.  
 2020/0079564 A1 3/2020 Ford  
 2020/0189817 A1\* 6/2020 Smalley ..... B65D 71/38  
 2020/0189818 A1\* 6/2020 McCree ..... B65D 75/04  
 2020/0189819 A1\* 6/2020 McCree ..... B31B 50/20  
 2020/0189821 A1\* 6/2020 Smalley ..... B65D 71/48  
 2020/0189822 A1\* 6/2020 Smalley ..... B65D 71/48  
 2020/0223612 A1 7/2020 Swenson  
 2021/0061502 A1 3/2021 Johnston  
 2021/0094742 A1\* 4/2021 Gonzalez Manzano .....  
 B65D 71/42  
 2021/0276776 A1 9/2021 Zammit  
 2021/0316921 A1 10/2021 Holtz  
 2021/0331847 A1 10/2021 Gonzalez Manzano  
 2021/0331848 A1 10/2021 Gonzalez Manzano  
 2021/0339928 A1 11/2021 Blin  
 2022/0009685 A1 1/2022 Thompson  
 2022/0340343 A1\* 10/2022 Van De Vegte ..... B65D 71/46

FOREIGN PATENT DOCUMENTS

DE 298 13 672 U1 11/1998  
 DE 203 19 247 U1 5/2004  
 DE 10 2009 059 047 A1 6/2011  
 EP 0 051 413 A1 5/1982  
 EP 0 060 504 A2 9/1982  
 EP 0 057 437 B1 5/1985  
 EP 0 496 807 6/1993  
 EP 0 636 096 2/1995  
 EP 0 715 593 A1 6/1996  
 EP 0 398 835 B1 10/1996  
 EP 2 067 713 A1 6/2009  
 EP 1 528 007 B1 10/2010  
 EP 2739547 B1 7/2017  
 EP 3 666 684 A1 6/2020  
 FR 2 737 196 A1 1/1997  
 GB 1 256 684 12/1971  
 GB 2 321 229 A 7/1998  
 GB 9006736716 8/2019  
 GB 2591535 A 8/2021  
 GB 6161591 9/2021  
 JP 10-297668 A 11/1998  
 JP 2001-519300 A 10/2001  
 JP 2003-146359 5/2003  
 JP 2004-189243 A 7/2004  
 JP 2015-048088 A 3/2015  
 KR 10-2005-0051616 A 6/2005  
 KR 10-2020-0106806 A 9/2020  
 KR 301130233 10/2021  
 WO WO 93/02941 2/1993  
 WO WO 93/21083 10/1993  
 WO WO 93/25439 A1 12/1993  
 WO WO 94/22738 A1 10/1994  
 WO WO 95/01289 A1 1/1995  
 WO WO 95/06604 3/1995  
 WO WO 96/26128 A1 8/1996  
 WO WO 96/32340 A1 10/1996  
 WO WO 2008/058294 A1 5/2008  
 WO WO 2010/006629 A1 1/2010  
 WO WO 2010/101852 A1 9/2010  
 WO WO 2021/168417 A1 8/2021  
 WO WO 2021/188751 A1 9/2021  
 WO WO 2021/262858 A1 12/2021

OTHER PUBLICATIONS

Packaging Insights Smurfit Kappa, available Mar. 4, 2020, [online], [site visited Aug. 26, 2022], Available from internet, URL: <https://www.packaginginsights.com/news/dat-is-topclip-grolsch-brings->



(56)

**References Cited**

## OTHER PUBLICATIONS

smurfit-kappas-plastic-alternative-beverage-carrier-to-market.html (Year: 2020).\*

International Search Report and Written Opinion for PCT/US2019/034491 dated Sep. 19, 2019.

International Search Report and Written Opinion for PCT/US2019/034490 dated Sep. 19, 2019.

International Search Report and Written Opinion for PCT/US2019/034494 dated Sep. 19, 2019.

International Search Report and Written Opinion for PCT/US2019/034489 dated Sep. 19, 2019.

International Search Report and Written Opinion for PCT/US2019/034493 dated Sep. 20, 2019.

U.S. Appl. No. 16/829,346, filed Mar. 25, 2020.

U.S. Appl. No. 16/937,043, filed Jul. 23, 2020.

U.S. Appl. No. 29/735,178, filed May 19, 2020.

U.S. Appl. No. 29/739,927, filed Jun. 30, 2020.

U.S. Appl. No. 29/739,929, filed Jun. 30, 2020.

U.S. Appl. No. 29/739,931, filed Jun. 30, 2020.

U.S. Appl. No. 29/739,933, filed Jun. 30, 2020.

U.S. Appl. No. 29/739,934, filed Jun. 30, 2020.

U.S. Appl. No. 17/478,025, filed Sep. 17, 2021.

U.S. Appl. No. 17/487,113, filed Sep. 28, 2021.

U.S. Appl. No. 17/487,131, filed Sep. 28, 2021.

U.S. Appl. No. 17/487,141, filed Sep. 28, 2021.

U.S. Appl. No. 17/487,262, filed Sep. 28, 2021.

International Search Report and Written Opinion for PCT/US2020/064472 dated Mar. 15, 2021.

International Search Report and Written Opinion for PCT/US2020/064471 dated Mar. 29, 2021.

International Search Report and Written Opinion for PCT/US2020/064473 dated Apr. 1, 2021.

European Search Report for EP 20 20 533 dated Mar. 23, 2021.

European Search Report for EP 20 21 5364 dated Jul. 1, 2021.

European Search Report for EP 20 21 5371 dated Jul. 1, 2021.

European Search Report for EP 20 21 5399 dated Jul. 1, 2021.

U.S. Appl. No. 29/775,557, filed Mar. 24, 2021.

U.S. Appl. No. 29/775,558, filed Mar. 24, 2021.

U.S. Appl. No. 29/775,559, filed Mar. 24, 2021.

U.S. Appl. No. 29/775,560, filed Mar. 24, 2021.

U.S. Appl. No. 29/818,355, filed Dec. 8, 2021.

U.S. Appl. No. 29/819,435, filed Dec. 15, 2021.

U.S. Appl. No. 29/819,437, filed Dec. 15, 2021.

U.S. Appl. No. 29/819,438, filed Dec. 15, 2021.

U.S. Appl. No. 29/819,440, filed Dec. 15, 2021.

U.S. Appl. No. 17/573,911, filed Jan. 12, 2022.

International Search Report and Written Opinion for PCT/US2021/052279 dated Jan. 5, 2022.

International Search Report and Written Opinion for PCT/US2021/052278 dated Jan. 5, 2022.

International Search Report and Written Opinion for PCT/US2021/052272 dated Jan. 7, 2022.

International Search Report and Written Opinion for PCT/US2021/052290 dated Jan. 21, 2022.

International Search Report and Written Opinion for PCT/US2020/054205 dated Jan. 20, 2021.

European Search Report for EP 19 18 0460 dated Jan. 13, 2020.

European Search Report for EP 19 18 0439 dated Jan. 10, 2020.

International Search Report and Written Opinion for PCT/US2020/024614 dated Sep. 15, 2020.

European Search Report for EP 20 16 8268 dated Oct. 2, 2020.

European Search Report for EP 19 18 0436 dated Jan. 22, 2020.

European Search Report for EP 19 18 0446 dated Feb. 3, 2020.

European Search Report for EP 19 18 0453 dated Feb. 10, 2020.

“Florida brewery unveils six-pack rings that spare sea turtles, not snare them,” by Thomas Leavy, CBSNews.com. Date posted: May 24, 2018. Site visited: Sep. 12, 2022. Available online: <https://www.cbsnews.com/news/florida-saltwater-brewery-non-plastic-six-pack-rings-spare-sea-turtles/> (Year: 2018).

“Pepsi trials molded pulp alternative to plastic rings” in BeverageDaily.com. Date posted: Feb. 28, 2020. Site visited: Sep. 12, 2022. Available online: <https://www.beveragedaily.com/Article/2020/02/28/Pepsi-trials-molded-pulp-alternative-to-plastic-rings#> (Year: 2020).

“Paperboard Can Handle Applicator,” as seen in Packaging World Online. Date first available: 2020. Site visited: Sep. 13, 2022. Available online: <https://www.packworld.com/news/sustainability/article/21202650/paperboard-can-handle-applicator> (Year: 2020).

“The ‘Ecogrip’ Corrugated Bottle Carrier is a Plastic Alternative” in Trendhunter.com. Date published: Jan. 20, 2021. Site visited: Sep. 12, 2022. Available online: <https://www.trendhunter.com/trends/corrugated-bottle-carrier> (Year: 2021).

\* cited by examiner

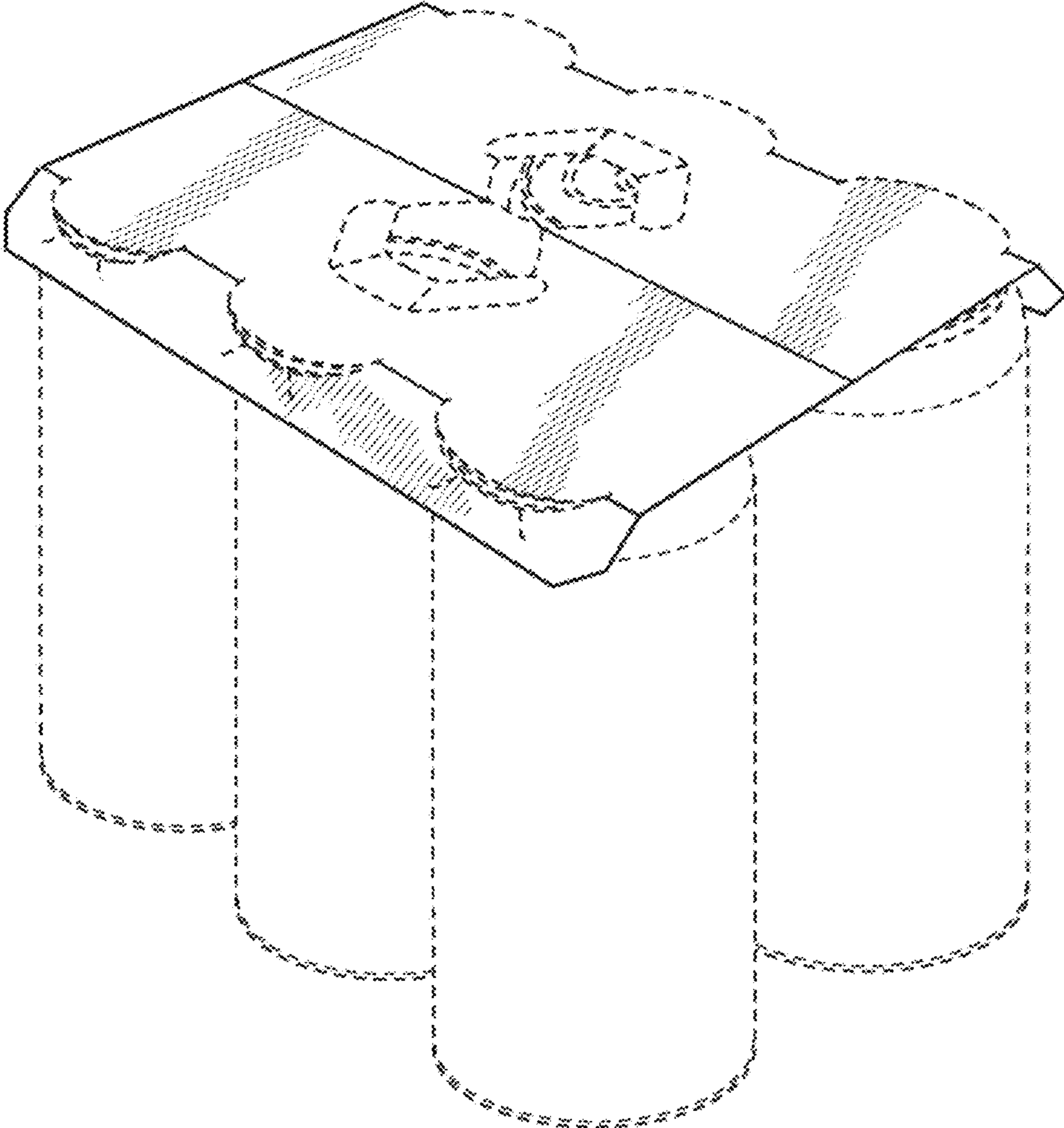


FIG. 1

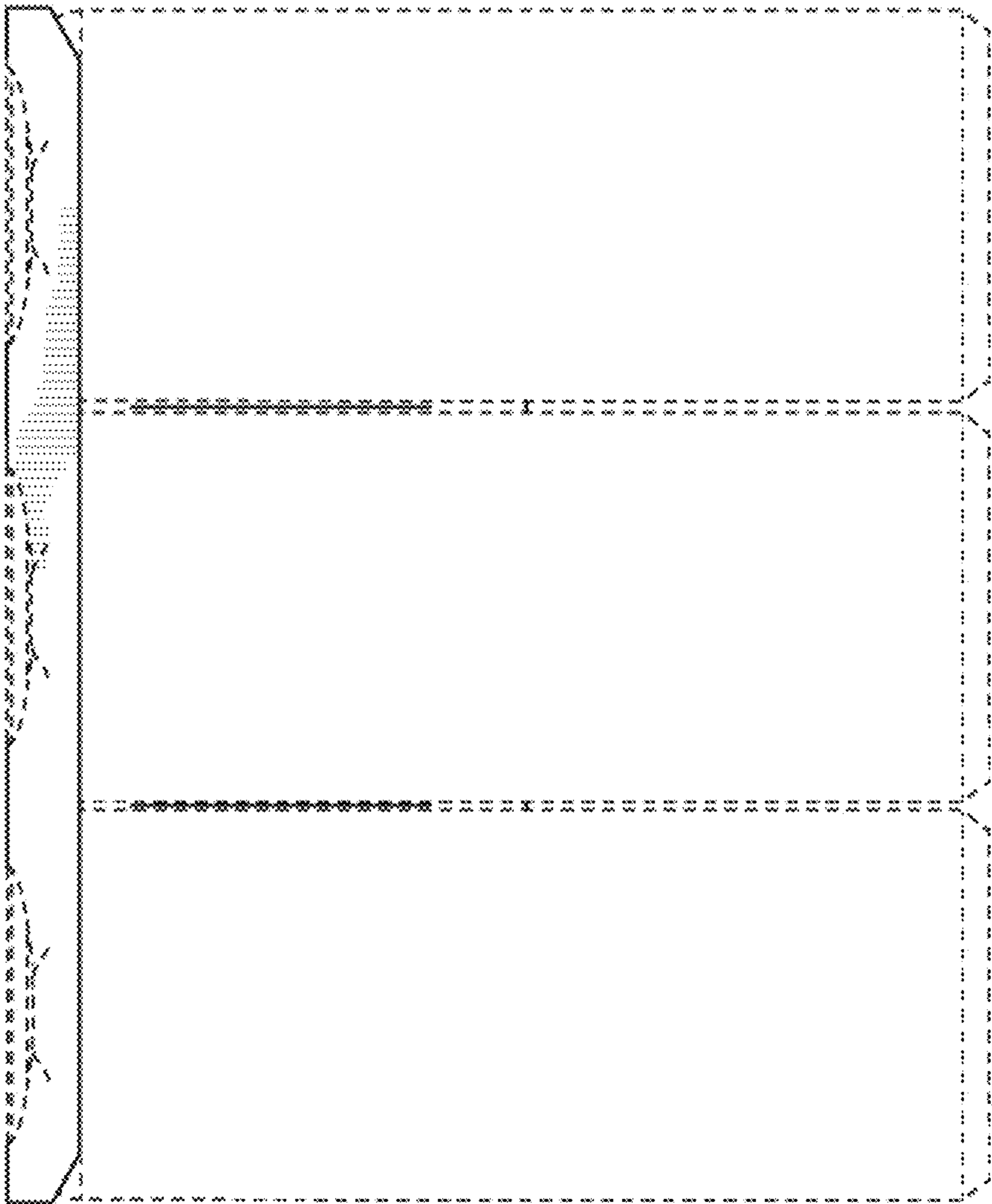
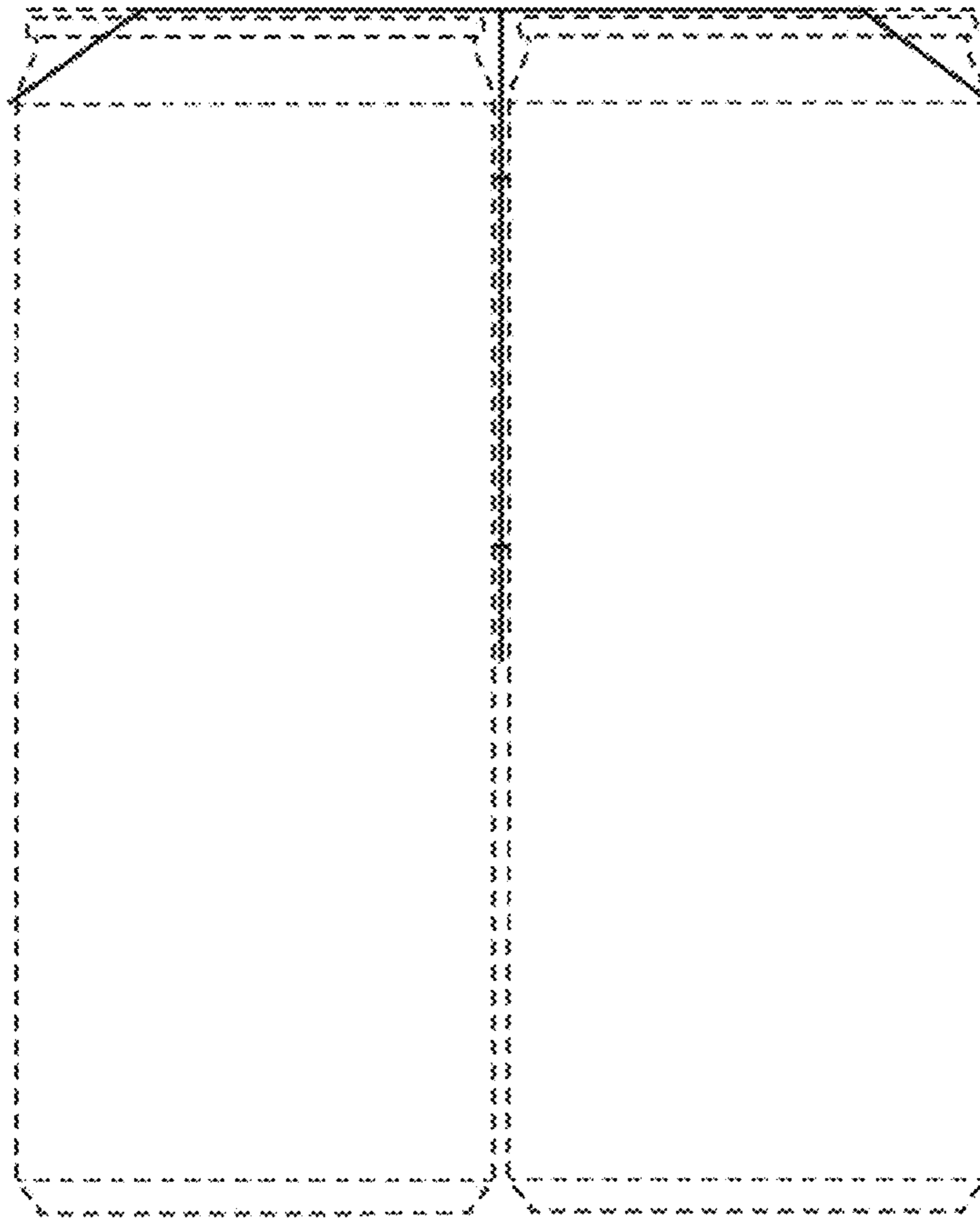


FIG. 2



**FIG. 3**

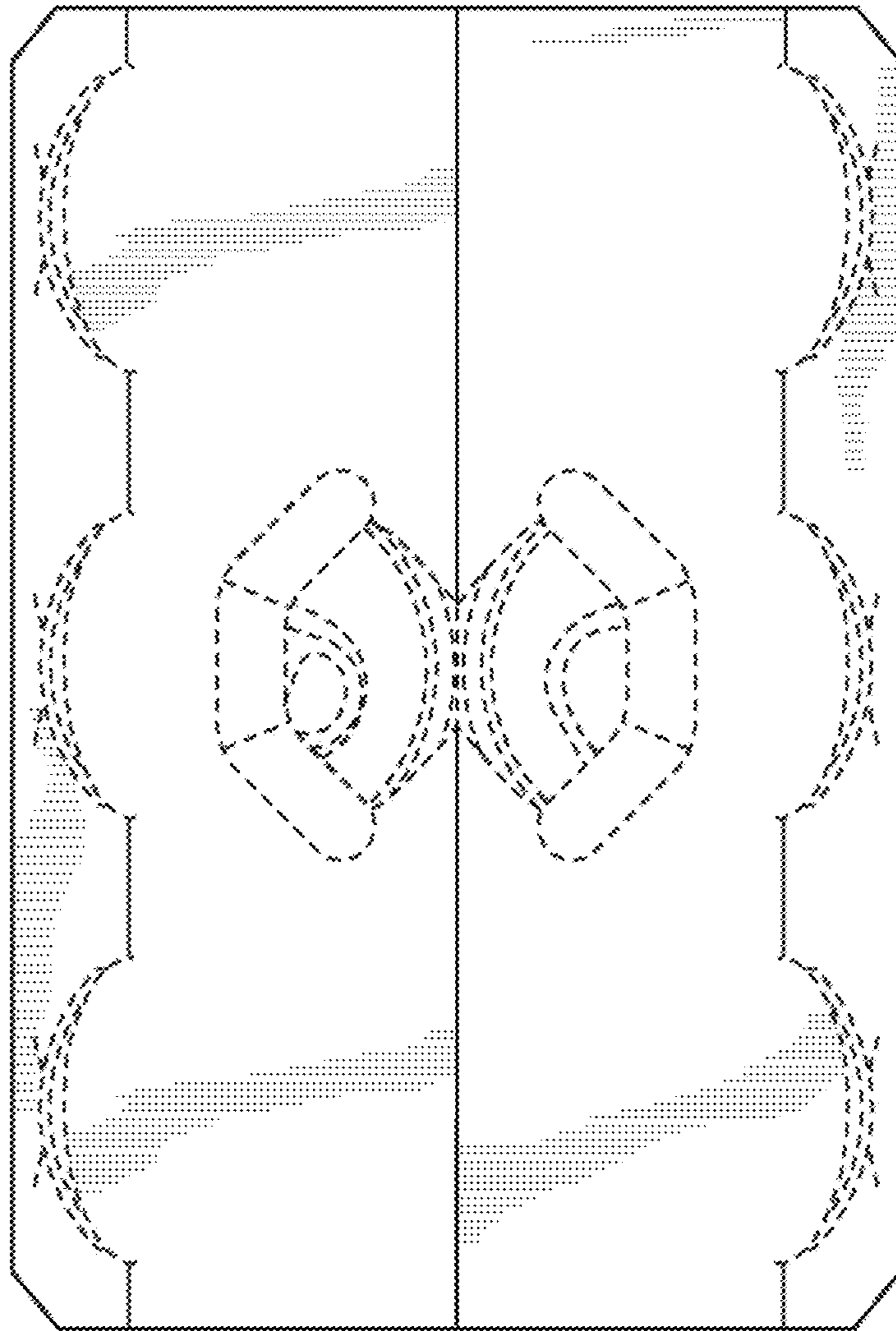


FIG. 4



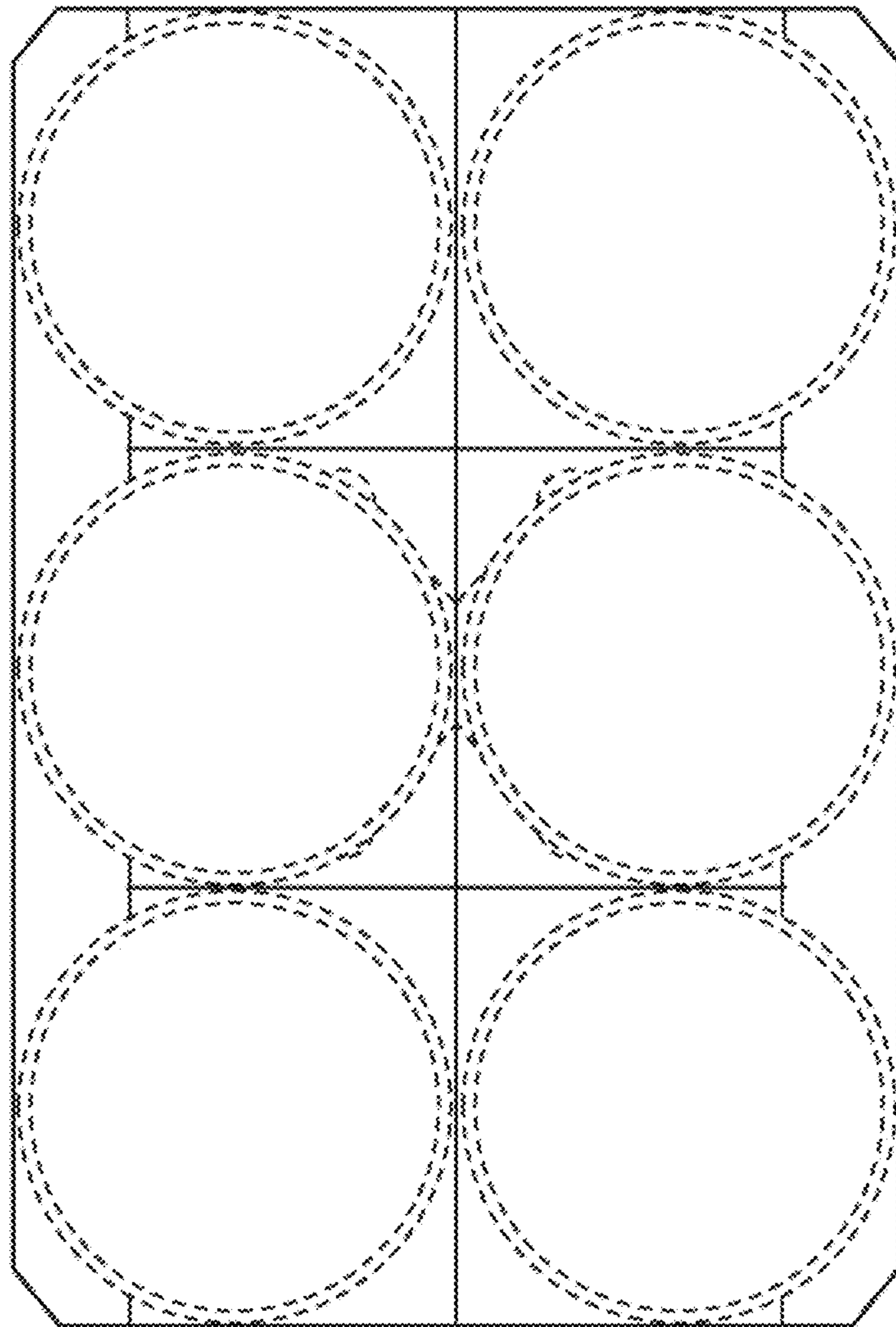


FIG. 5

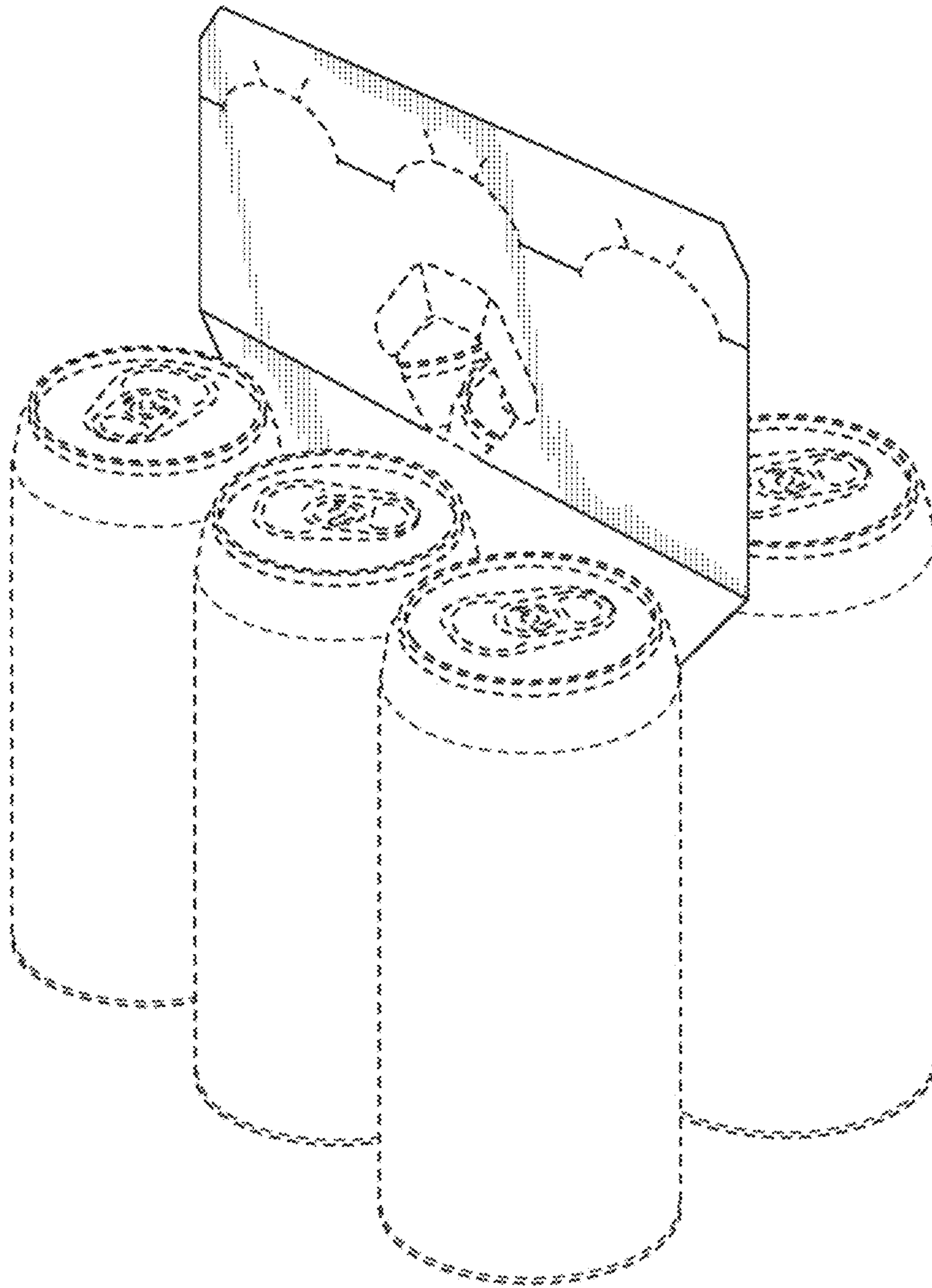


FIG. 6

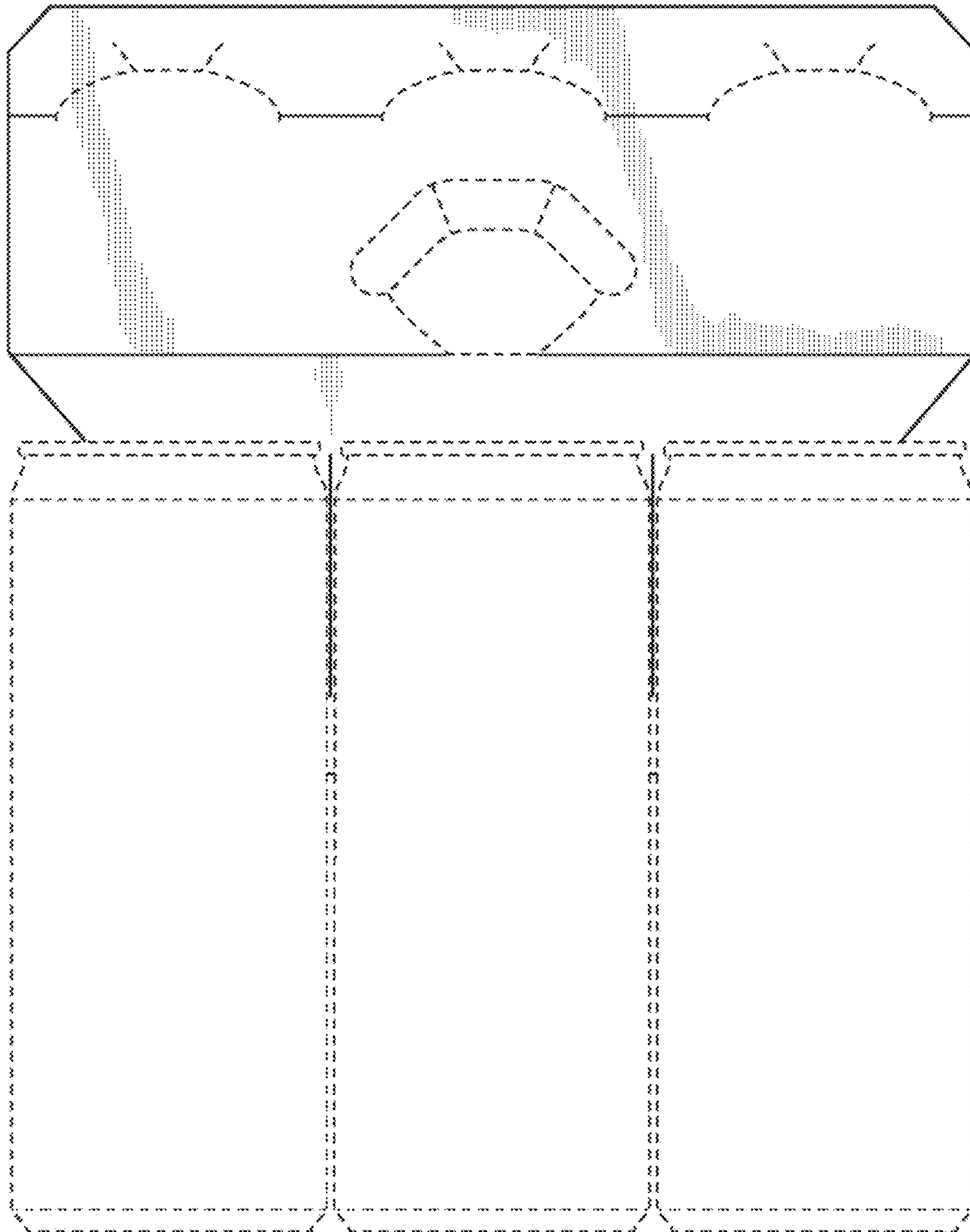
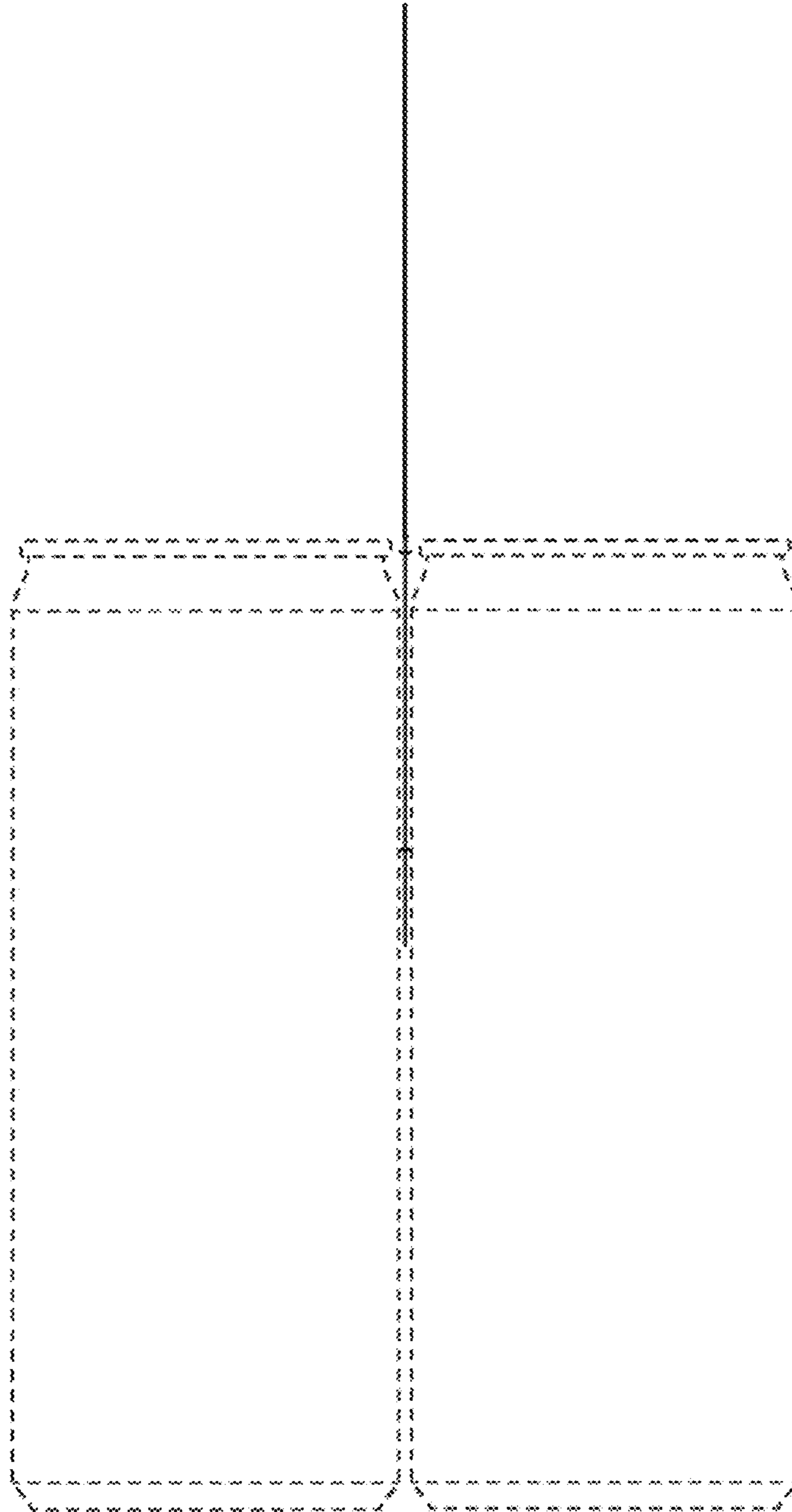


FIG. 7





**FIG. 8**

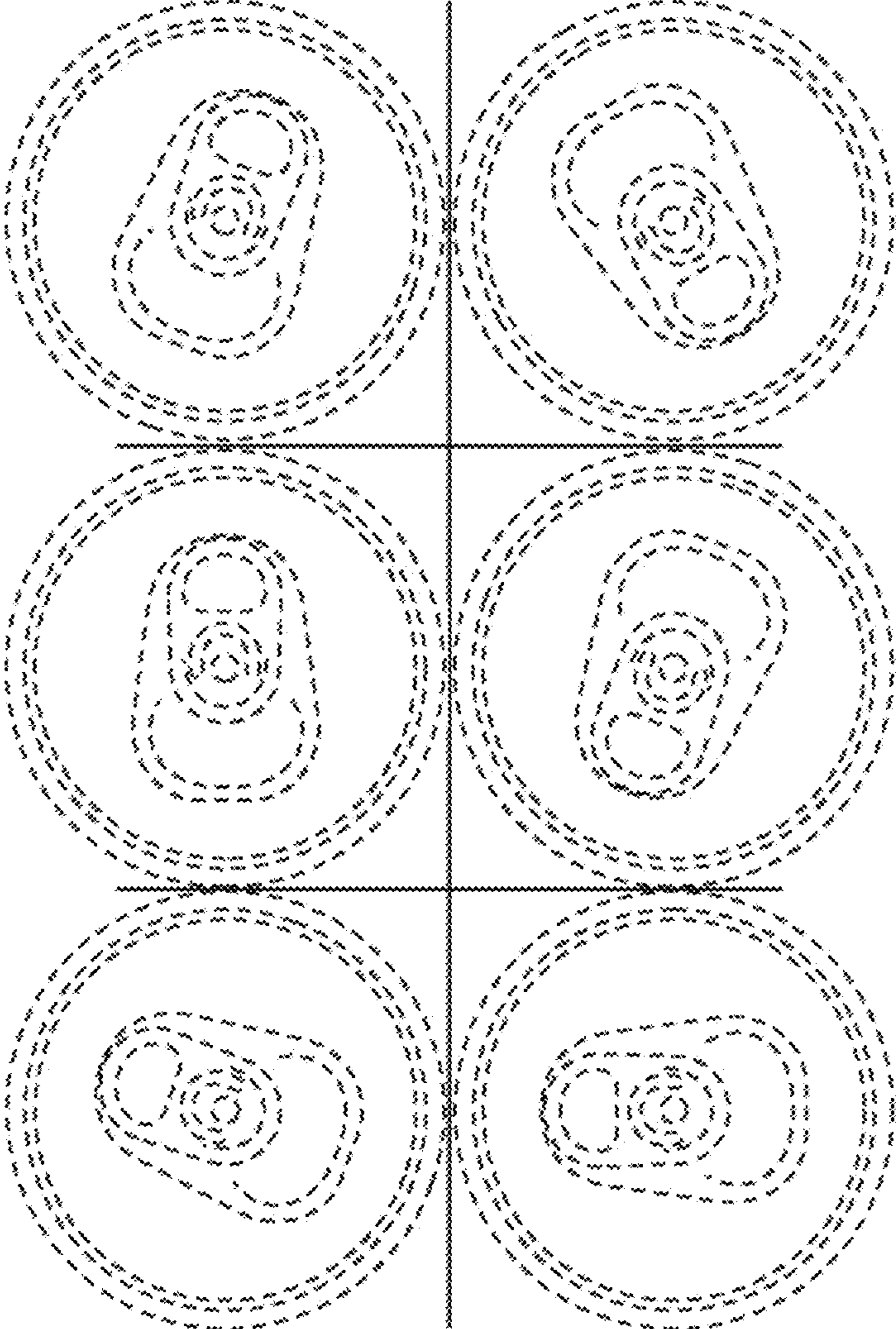


FIG. 9

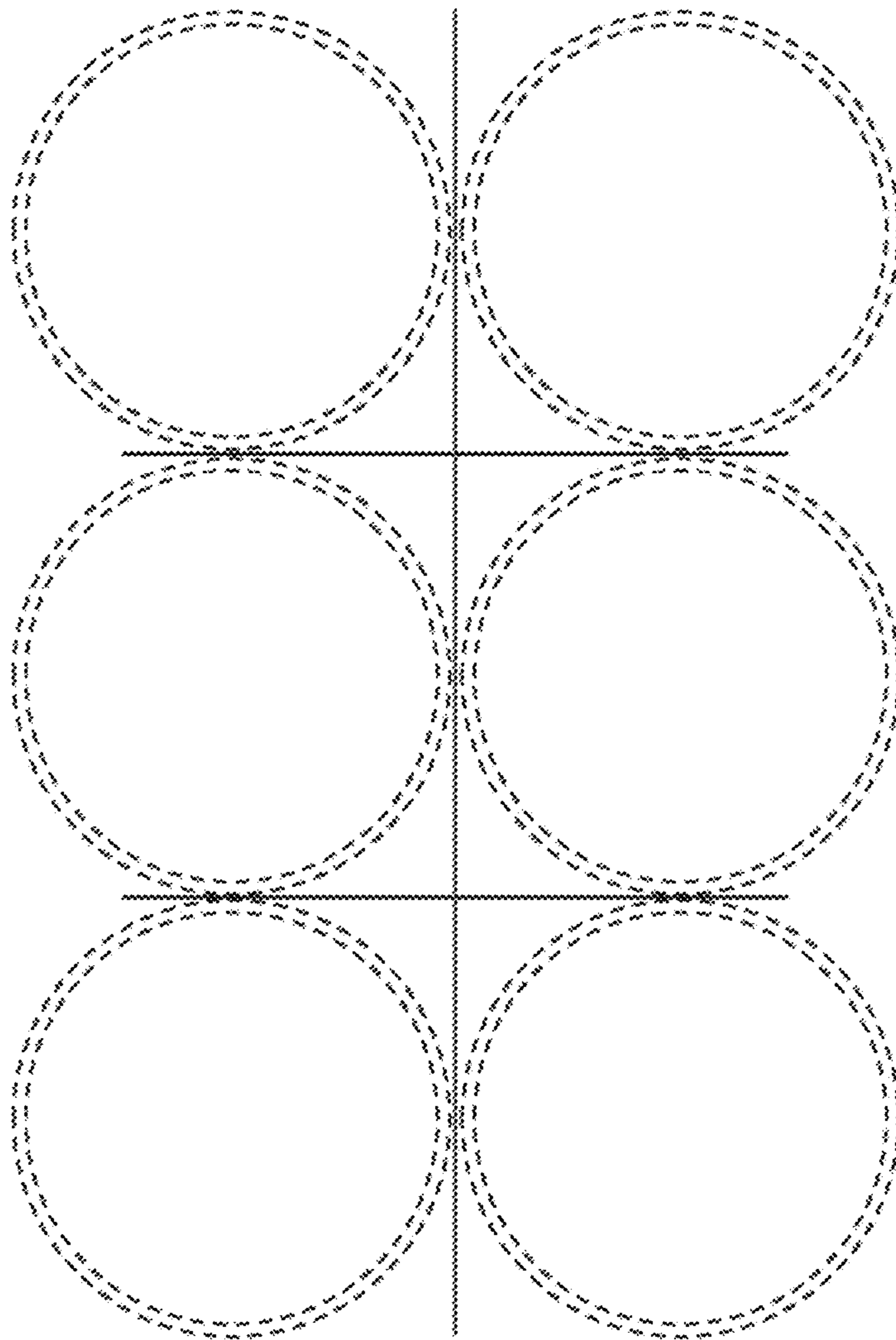


FIG. 10



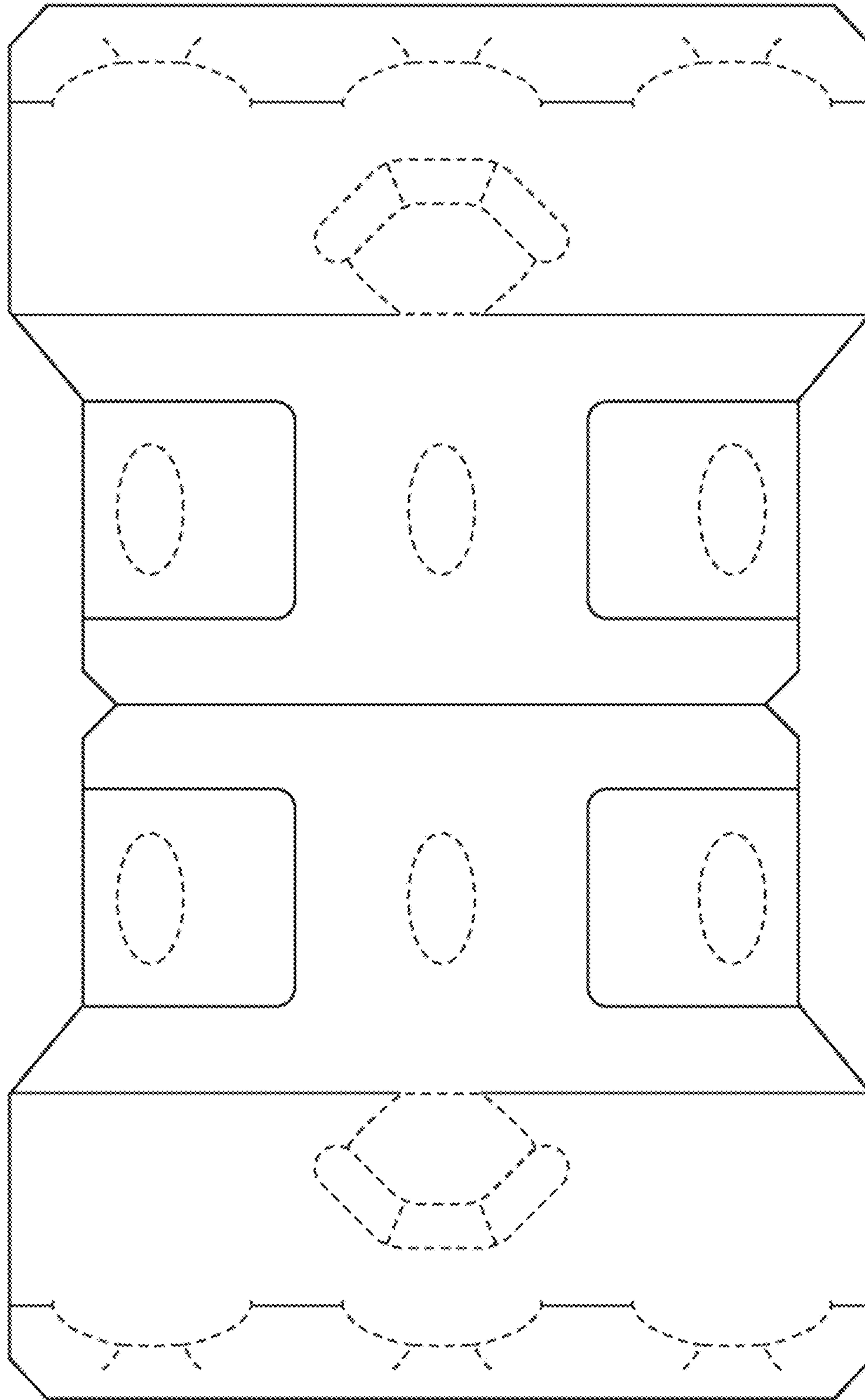


FIG. 11