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(12) **United States Design Patent** (10) **Patent No.:** **US D934,341 S**  
**Olsen et al.** (45) **Date of Patent:** **\*\* Oct. 26, 2021**

(54) **INK CARTRIDGE**

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

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(52) **U.S. Cl.**  
USPC ..... **D18/56**

(58) **Field of Classification Search**  
USPC ..... D15/122, 135-138, 141, 66, 73, 76-78;  
D18/53, 59, 50, 14, 19, 54-57, 36-45,  
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(56) **References Cited**

U.S. PATENT DOCUMENTS

D275,966 S \* 10/1984 Worrell ..... D18/19  
4,907,018 A \* 3/1990 Pinkerpell ..... B41J 2/1752  
346/139 R

(Continued)

FOREIGN PATENT DOCUMENTS

EP 1122078 8/2001

OTHER PUBLICATIONS

United States Patent and Trademark Office, "Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated May 25, 2018, 13 pages.

(Continued)

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(57) **CLAIM**

The ornamental design for an ink cartridge, as shown and described.

**DESCRIPTION**

FIG. 1 is a left, front perspective view of an ink cartridge showing the new design in a first embodiment. A portion of the grip is shown encircled.

FIG. 2 is a front view of the ink cartridge of FIG. 1.

FIG. 3 is a left, front perspective view of the ink cartridge in a second embodiment. A portion of the grip is shown encircled.

FIG. 4 is a front view of the ink cartridge of FIG. 3.

FIG. 5 is a left, front perspective view of the ink cartridge in a third embodiment. A portion of the grip is shown encircled.

FIG. 6 is a front view of the ink cartridge of FIG. 5.

FIG. 7 is an enlarged perspective view of the encircled portion of the grip of the ink cartridge of FIGS. 1, 3, and/or 5; and,

FIG. 8 is a front view of the portion of the grip portion of FIG. 7.

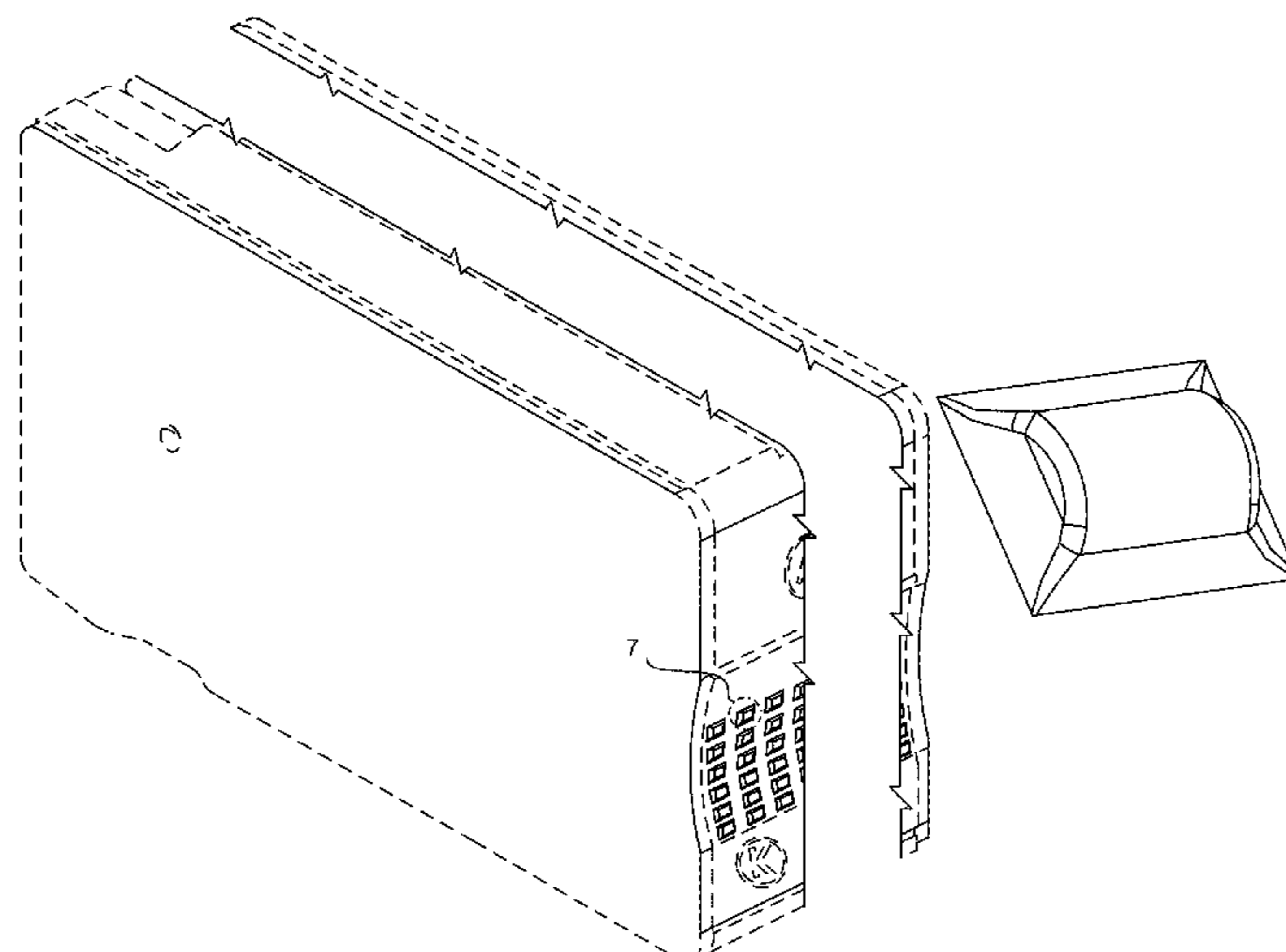
FIGS. 1 and 2 show the ink cartridge with a symbolic break in its length. The appearance of any portion of the ink cartridge between the break lines forms no part of the claimed design.

The rear, top, bottom, left side, and right side views of the ink cartridge of FIGS. 1-6 form no part of the claimed design.

The features of the ink cartridge shown in broken lines form no part of the claimed design.

The dot-dashed broken lines shown in FIGS. 1, 3, and 5 correspond the enlarged details shown in FIGS. 7 and 8 and form no part of the claimed design.

**1 Claim, 8 Drawing Sheets**



(58) **Field of Classification Search**

USPC ..... D18/34.4, 34.5, 34.6, 18, 51;  
 D14/301-303, 307, 345; D6/691.4, 675,  
 D6/708; D13/107, 108  
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 17/38; B28B 1/001; G03G 15/08; G03G  
 15/0891; G03G 15/0875; G03G  
 2215/0827; G03G 2215/0855; G03G  
 21/1842

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D313,426 S \* 1/1991 Berriman ..... D18/56  
 5,411,343 A \* 5/1995 Childers ..... B41J 2/17513  
 347/50  
 D372,266 S \* 7/1996 Tokuda ..... D18/56  
 D392,671 S \* 3/1998 Sasaki ..... 347/86  
 D395,445 S \* 6/1998 Tokuda ..... D18/56  
 5,975,688 A 11/1999 Kanaya et al.  
 6,155,678 A 12/2000 Komplin et al.  
 6,238,038 B1 \* 5/2001 Gilham ..... G07B 17/00314  
 347/49  
 D454,363 S \* 3/2002 Seino ..... 347/86  
 6,435,662 B2 8/2002 Kline et al.  
 D464,672 S 10/2002 Shinano et al.  
 D468,347 S \* 1/2003 Yamada ..... 347/86  
 D468,766 S \* 1/2003 Yamada ..... 347/86  
 D468,767 S \* 1/2003 Yamada ..... 347/86  
 D489,757 S 5/2004 Matsumoto  
 6,955,422 B2 10/2005 Miyazawa et al.  
 6,959,980 B2 \* 11/2005 Heberling ..... B41J 2/17513  
 347/50  
 7,018,027 B2 3/2006 Harada et al.  
 D530,740 S \* 10/2006 Engel ..... D18/56  
 7,125,108 B2 10/2006 Toba et al.  
 D534,582 S \* 1/2007 Tajima ..... 347/86  
 D535,688 S \* 1/2007 Tajima ..... 347/86  
 D549,280 S 8/2007 Morino  
 D556,258 S 11/2007 Morino  
 D570,905 S \* 6/2008 Yuen ..... 347/86  
 D571,396 S \* 6/2008 Nip ..... 347/86  
 D585,090 S 1/2009 Ishizawa  
 7,506,973 B2 3/2009 Steinmetz et al.  
 7,552,997 B2 6/2009 Suzuki et al.  
 D598,050 S 8/2009 Nozawa  
 D611,532 S 3/2010 Nanjo et al.  
 D655,423 S \* 3/2012 Nielsen ..... D24/216  
 D656,183 S 3/2012 Nanjo et al.  
 D656,186 S 3/2012 Oya et al.  
 8,251,493 B2 \* 8/2012 Sekino ..... B41J 2/17513  
 347/49  
 D675,252 S \* 1/2013 Harvey ..... D18/56  
 D680,582 S \* 4/2013 Harvey ..... D18/56  
 D699,785 S 2/2014 Harvey et al.  
 D705,232 S \* 5/2014 McClelland ..... D14/444  
 D705,233 S \* 5/2014 McClelland ..... D14/444  
 D706,273 S \* 6/2014 Kuehn ..... D14/441  
 D707,290 S \* 6/2014 Harvey ..... D18/56  
 D712,464 S 9/2014 Harvey et al.  
 D729,312 S \* 5/2015 Harvey ..... D18/56

9,221,258 B2 \* 12/2015 Akama ..... B41J 2/1752  
 D785,087 S \* 4/2017 Hayashi ..... D18/56  
 D787,586 S \* 5/2017 Van Den Broecke ..... D18/56  
 D794,708 S \* 8/2017 Inuma ..... D18/56  
 D809,596 S \* 2/2018 Ishizawa ..... D18/56  
 D815,200 S \* 4/2018 Ishizawa ..... D18/56  
 D823,941 S \* 7/2018 Pomfret ..... D18/56  
 D829,816 S \* 10/2018 Takahashi ..... D18/56  
 D875,828 S \* 2/2020 Harvey ..... D18/56  
 2002/0080216 A1 \* 6/2002 Dowell ..... B41J 2/17556  
 347/85  
 2003/0222940 A1 12/2003 Seino et al.  
 2005/0001888 A1 1/2005 Seino et al.  
 2005/0128262 A1 \* 6/2005 Studer ..... B41J 2/17513  
 347/86  
 2005/0157037 A1 7/2005 Silverbrook et al.  
 2005/0162490 A1 7/2005 Katayama et al.  
 2006/0012651 A1 \* 1/2006 Lee ..... B41J 2/17546  
 347/86  
 2007/0126819 A1 6/2007 Silverbrook et al.  
 2008/0151016 A1 6/2008 Petranek et al.  
 2008/0165232 A1 7/2008 Yuen  
 2008/0180495 A1 7/2008 Gonzales  
 2008/0187385 A1 8/2008 Yamamoto  
 2008/0211892 A1 \* 9/2008 Kotaki ..... B41J 2/17553  
 347/86  
 2009/0141097 A1 6/2009 Nakamura et al.  
 2009/0141103 A1 6/2009 Takagi  
 2011/0310187 A1 12/2011 Kanbe et al.  
 2012/0062663 A1 3/2012 Usui et al.  
 2013/0050359 A1 2/2013 Kanbe et al.  
 2013/0155150 A1 \* 6/2013 Miyazaki ..... B41J 2/135  
 347/50  
 2013/0250024 A1 \* 9/2013 Kakishima ..... H05K 5/0204  
 347/108  
 2014/0307027 A1 \* 10/2014 Toda ..... B41J 2/045  
 347/33  
 2015/0343775 A1 \* 12/2015 Kudo ..... B41J 2/14  
 347/47  
 2015/0343776 A1 \* 12/2015 Tsujiuchi ..... B41J 2/14  
 347/50  
 2017/0021622 A1 \* 1/2017 Takahashi ..... B41J 2/14  
 2017/0210128 A1 \* 7/2017 Wagner ..... B41J 2/17533

OTHER PUBLICATIONS

United States Patent and Trademark Office, "Non-Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated Nov. 17, 2017, 12 pages.

United States Patent and Trademark Office, "Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated Dec. 11, 2013, 11 pages.

United States Patent and Trademark Office, "Non-Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated Aug. 28, 2013, 12 pages.

United States Patent and Trademark Office, "Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated May 2, 2013, 9 pages.

United States Patent and Trademark Office, "Non-Final Office action," issued in connection with U.S. Appl. No. 29/402,509, dated Dec. 19, 2012, 10 pages.

\* cited by examiner

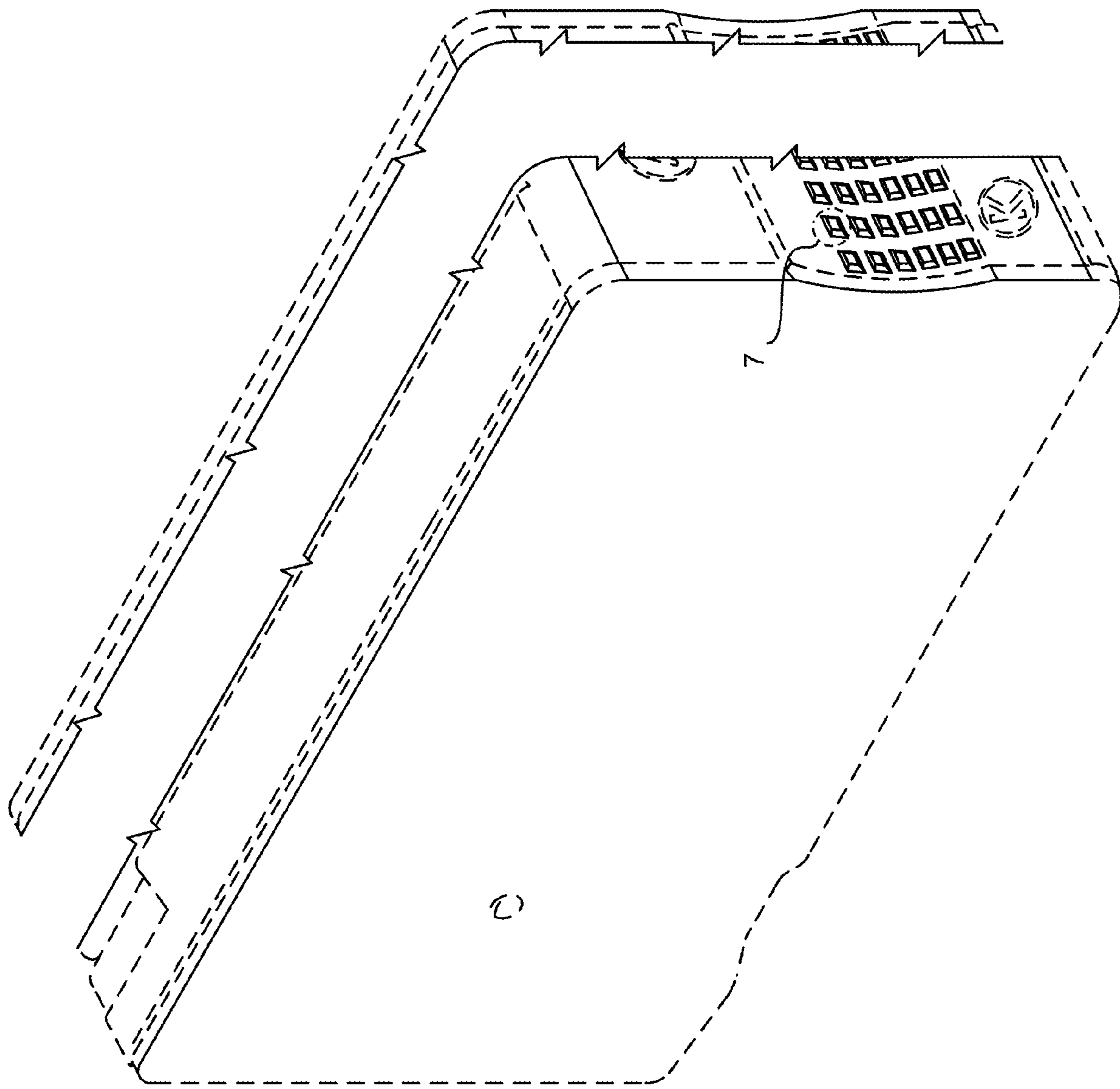


FIG. 1

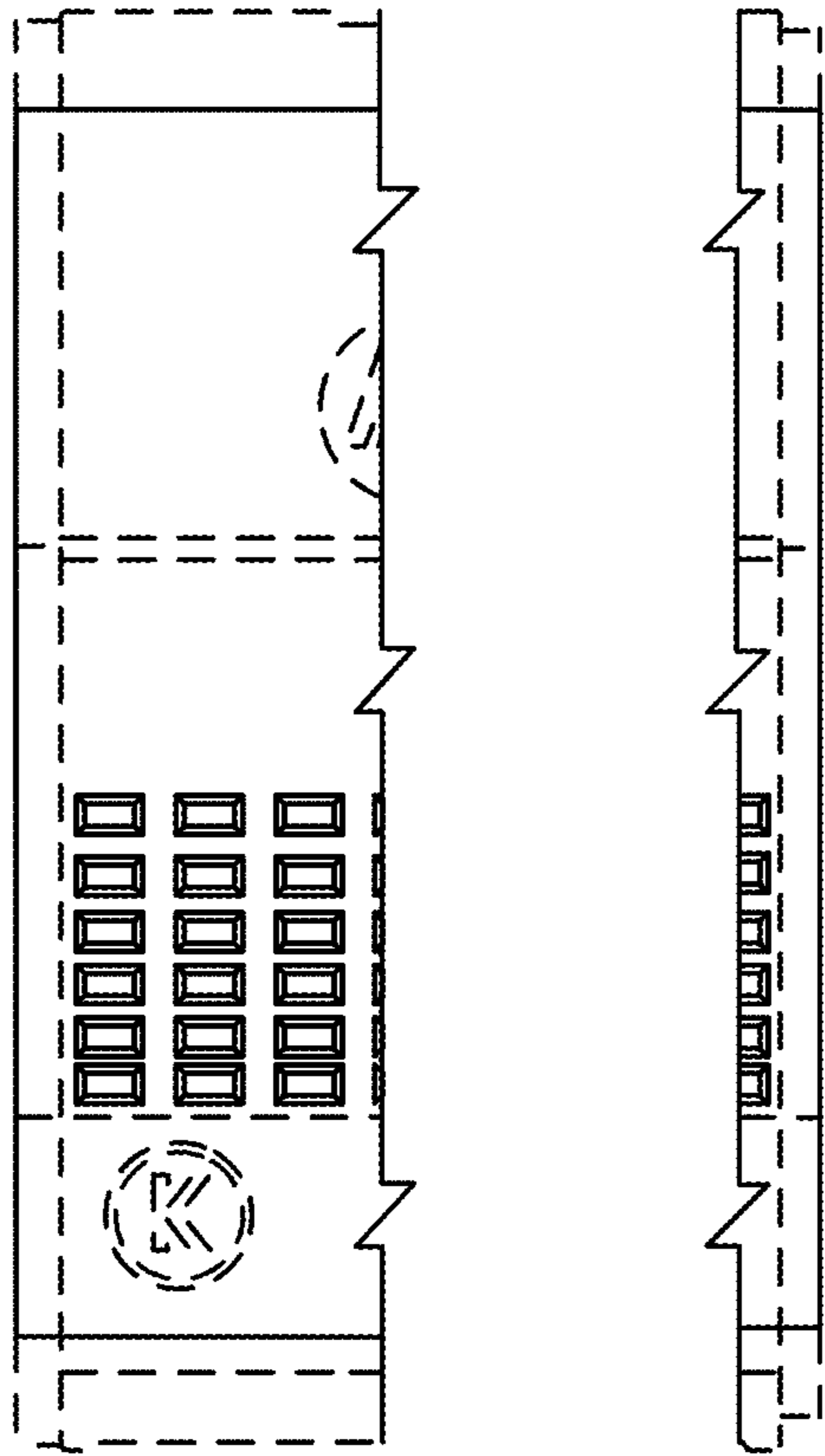


FIG. 2

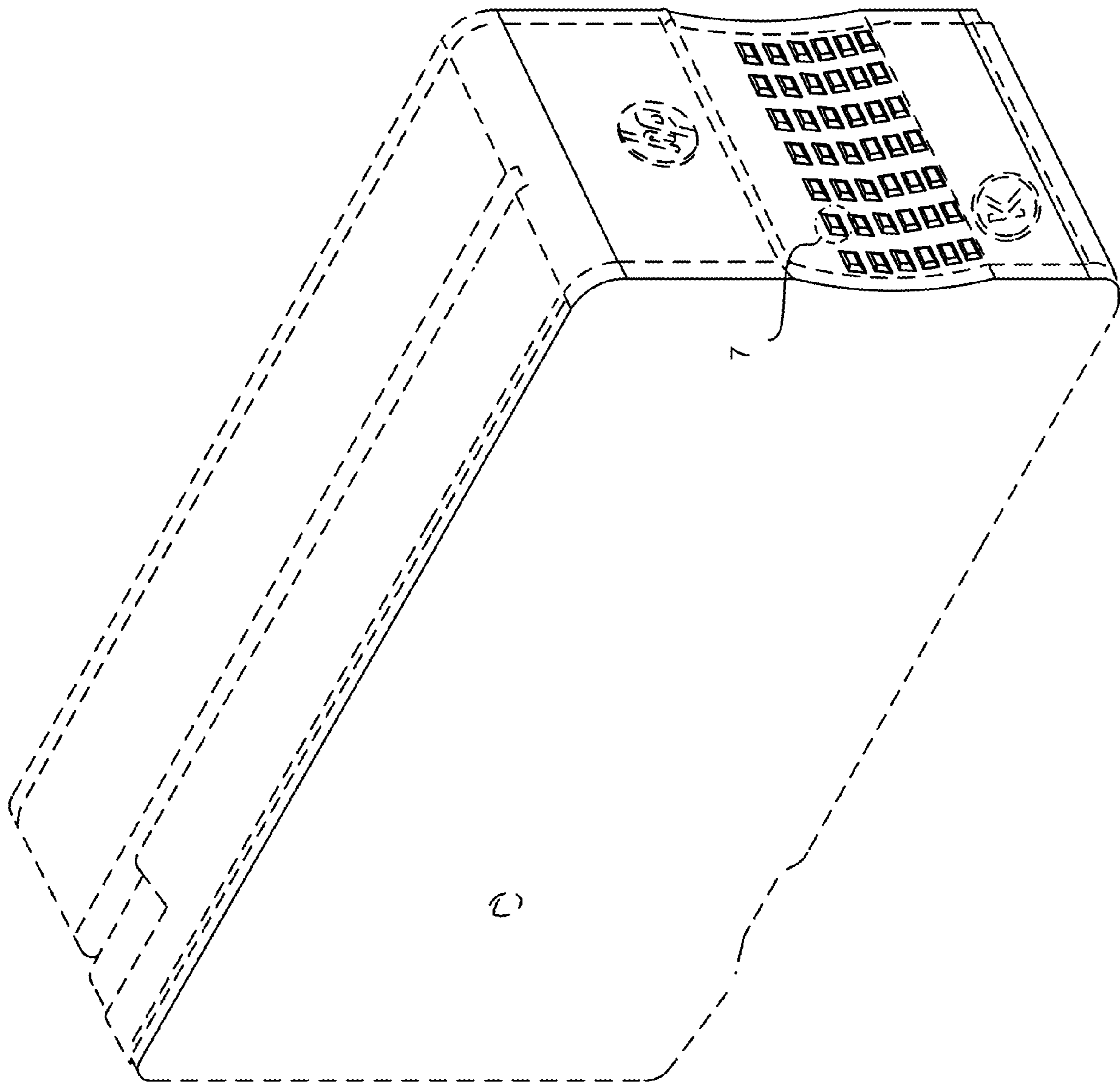


FIG. 3

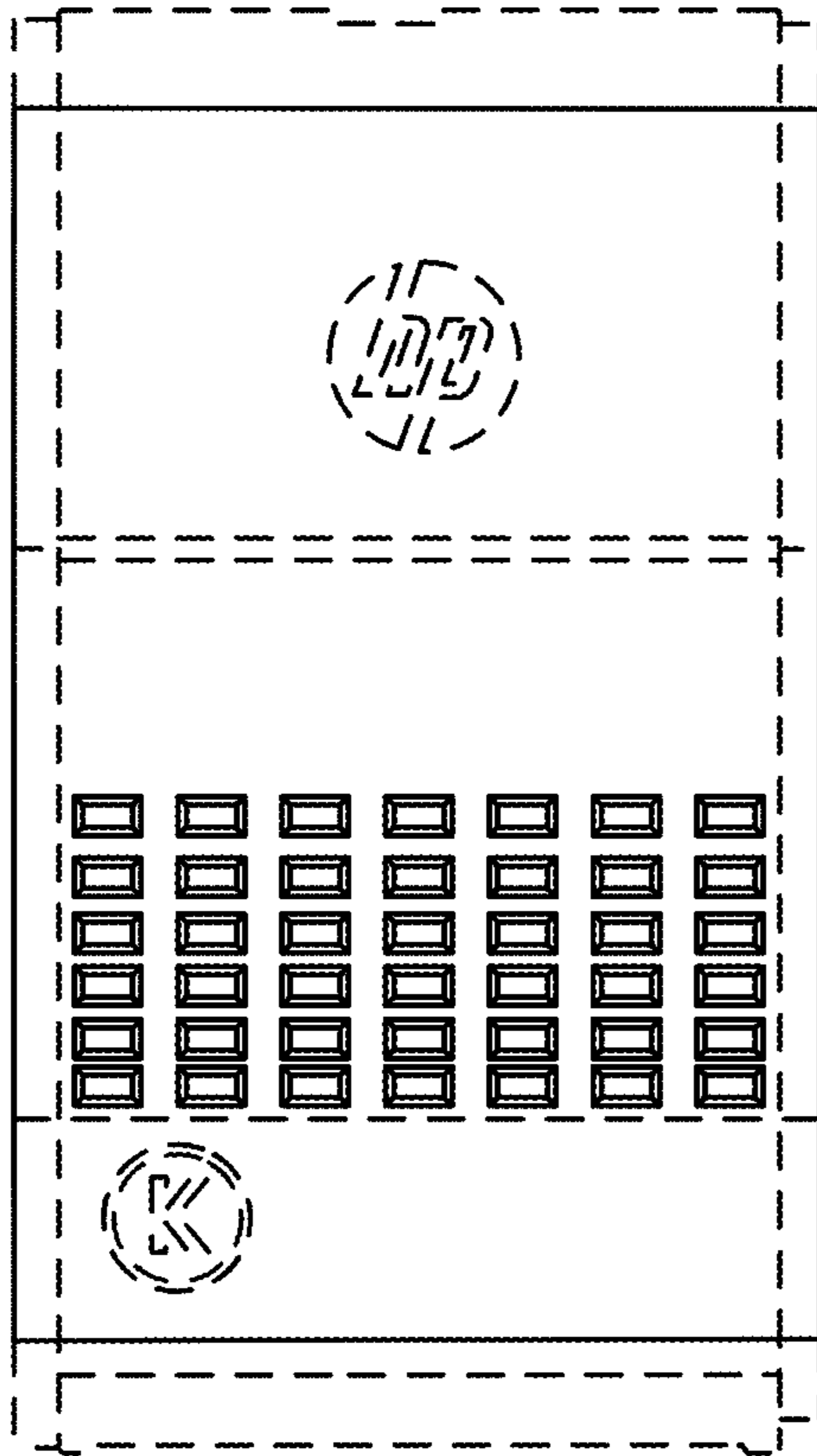


FIG. 4

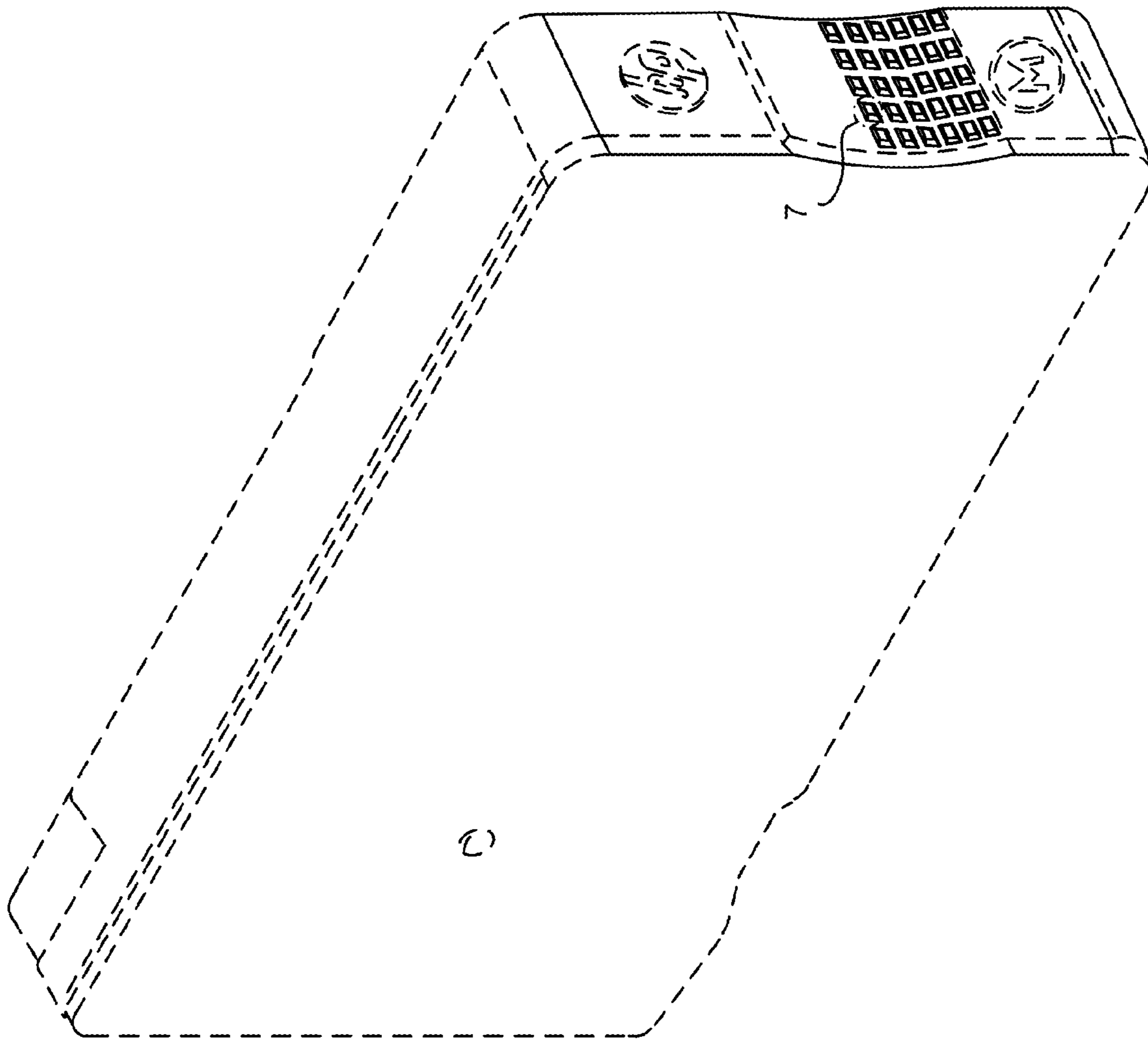


FIG. 5

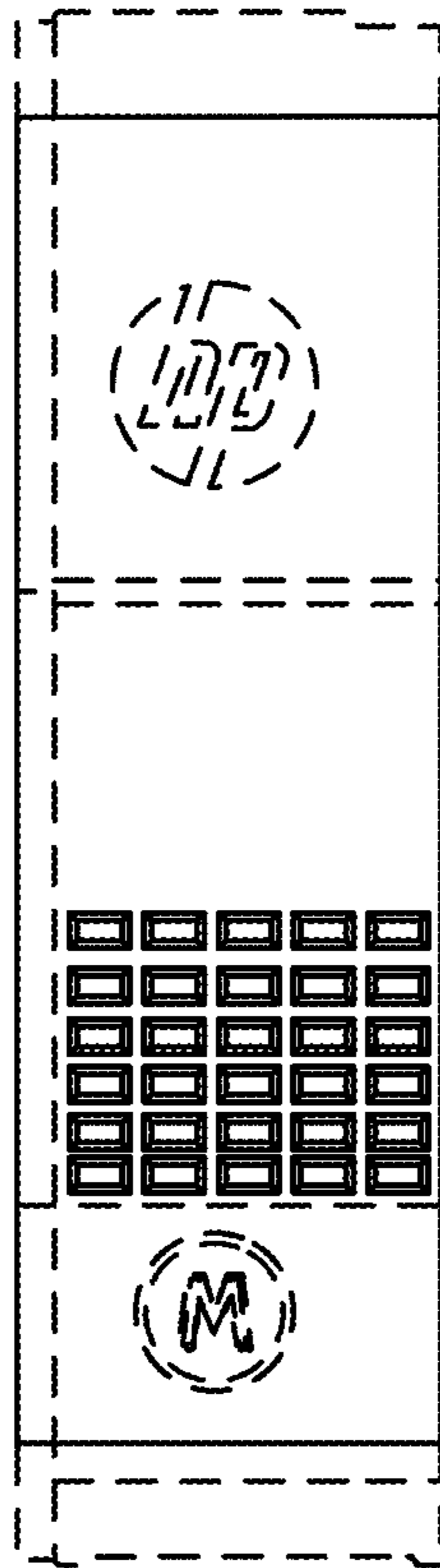


FIG. 6



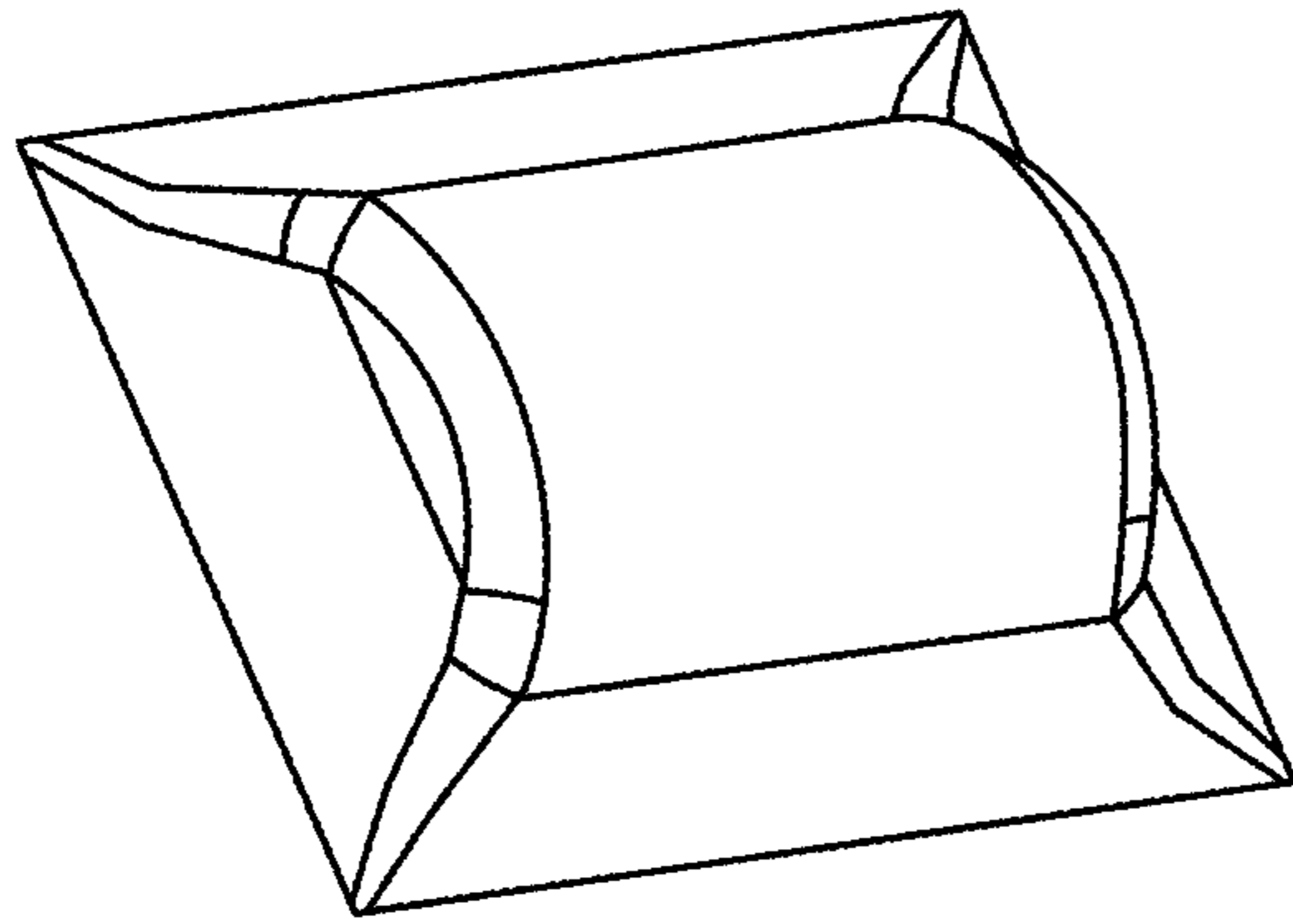


FIG. 7

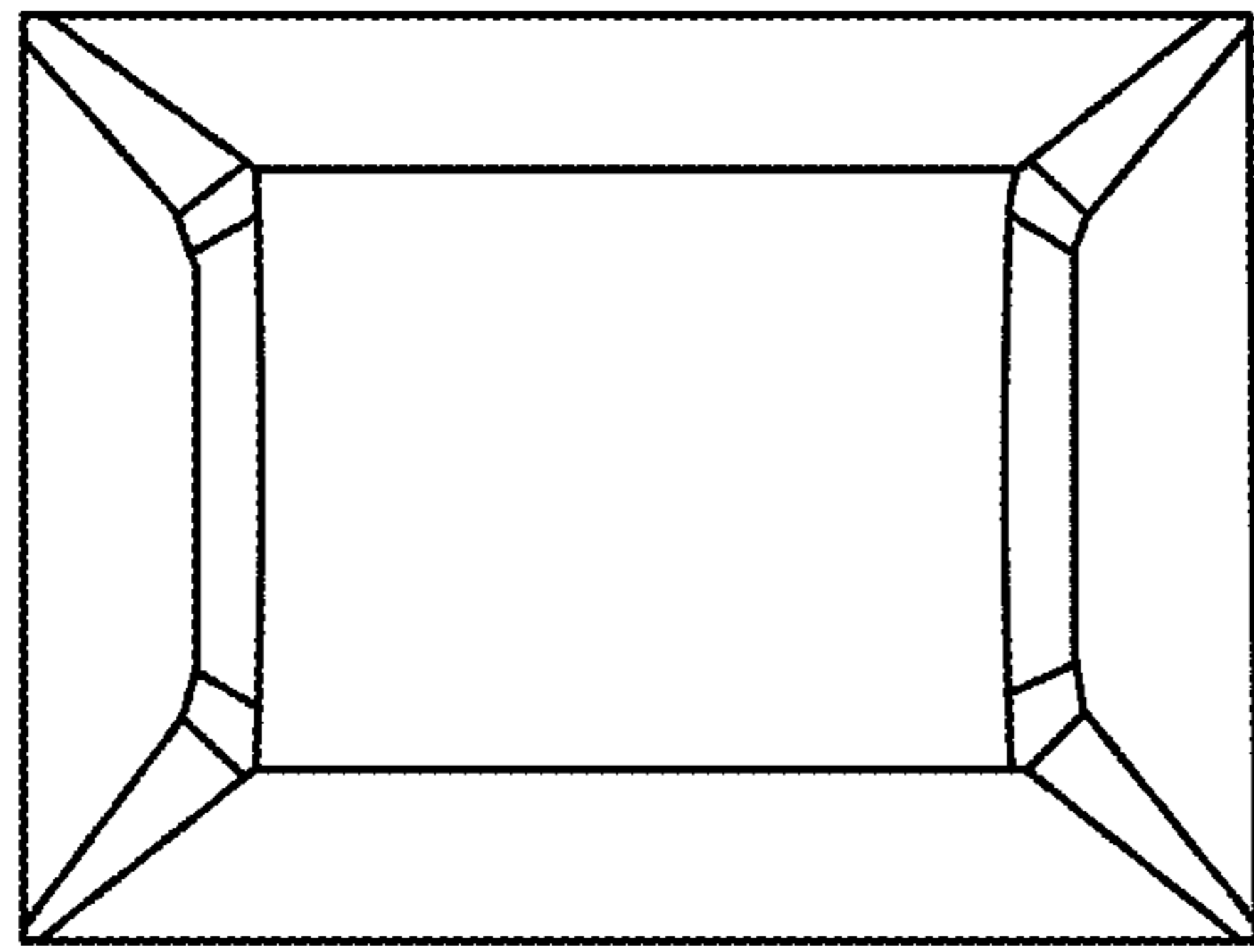


FIG. 8