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(12) **United States Design Patent** (10) **Patent No.:** **US D776,630 S**
Rooyackers et al. (45) **Date of Patent:** **** Jan. 17, 2017**

(54) **BACKPLANE FOR AN INDUSTRIAL CONTROL SYSTEM (ICS)**

D271,100 S 10/1983 Hollfelder
D303,958 S 10/1989 Cranston, III et al.
D311,737 S 10/1990 Westwood et al.

(Continued)

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FOREIGN PATENT DOCUMENTS

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TW D151438 1/2013

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OTHER PUBLICATIONS

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

Search Report dated Oct. 24, 2014 for Taiwan Design Appln. No. 103300684.

(21) Appl. No.: **29/567,841**

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Assistant Examiner — Harold Blackwell, II

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(74) *Attorney, Agent, or Firm* — Advent, LLP

(57) **CLAIM**

Related U.S. Application Data

The ornamental design for a backplane for an industrial control system (ICS), as shown and described.

(62) Division of application No. 29/462,572, filed on Aug. 6, 2013, now Pat. No. Des. 758,978.

DESCRIPTION

(51) **LOC (10) Cl.** **13-99**

(52) **U.S. Cl.**
USPC **D13/184**

(58) **Field of Classification Search**
USPC D14/435, 356, 242, 436, 433, 474, 240,
D14/496, 385, 358, 480.1–480.7, 432;
360/97.01, 685, 686, 752, 737, 732, 784,
360/803; 439/135, 144, 139–141, 147,
360/136, 439/638, 518, 131; 365/51, 63,
365/131; 710/52, 710/300, 313, 305;
711/115, 103, 154, 161–162; 70/58;
323/210; 713/186, 1; 382/124; 235/492;
D13/147, 110, 103, 108, 184; 211/26;
312/223.1; 307/104; D24/138
CPC H01F 41/00
See application file for complete search history.

FIG. 1 is a first isometric view of a backplane for an industrial control system (ICS);
FIG. 2 is a top plan view of the backplane for an industrial control system (ICS) of FIG. 1;
FIG. 3 is a first side elevation view of the backplane for an industrial control system (ICS) of FIG. 1;
FIG. 4 is a first end elevation view of the backplane for an industrial control system (ICS) of FIG. 1;
FIG. 5 is a second side elevation view of the backplane for an industrial control system (ICS) of FIG. 1;
FIG. 6 is a second end elevation view of the backplane for an industrial control system (ICS) of FIG. 1;
FIG. 7 is a bottom plan view of the backplane for an industrial control system (ICS) of FIG. 1; and,
FIG. 8 is a second isometric view of the backplane for an industrial control system (ICS) of FIG. 1.

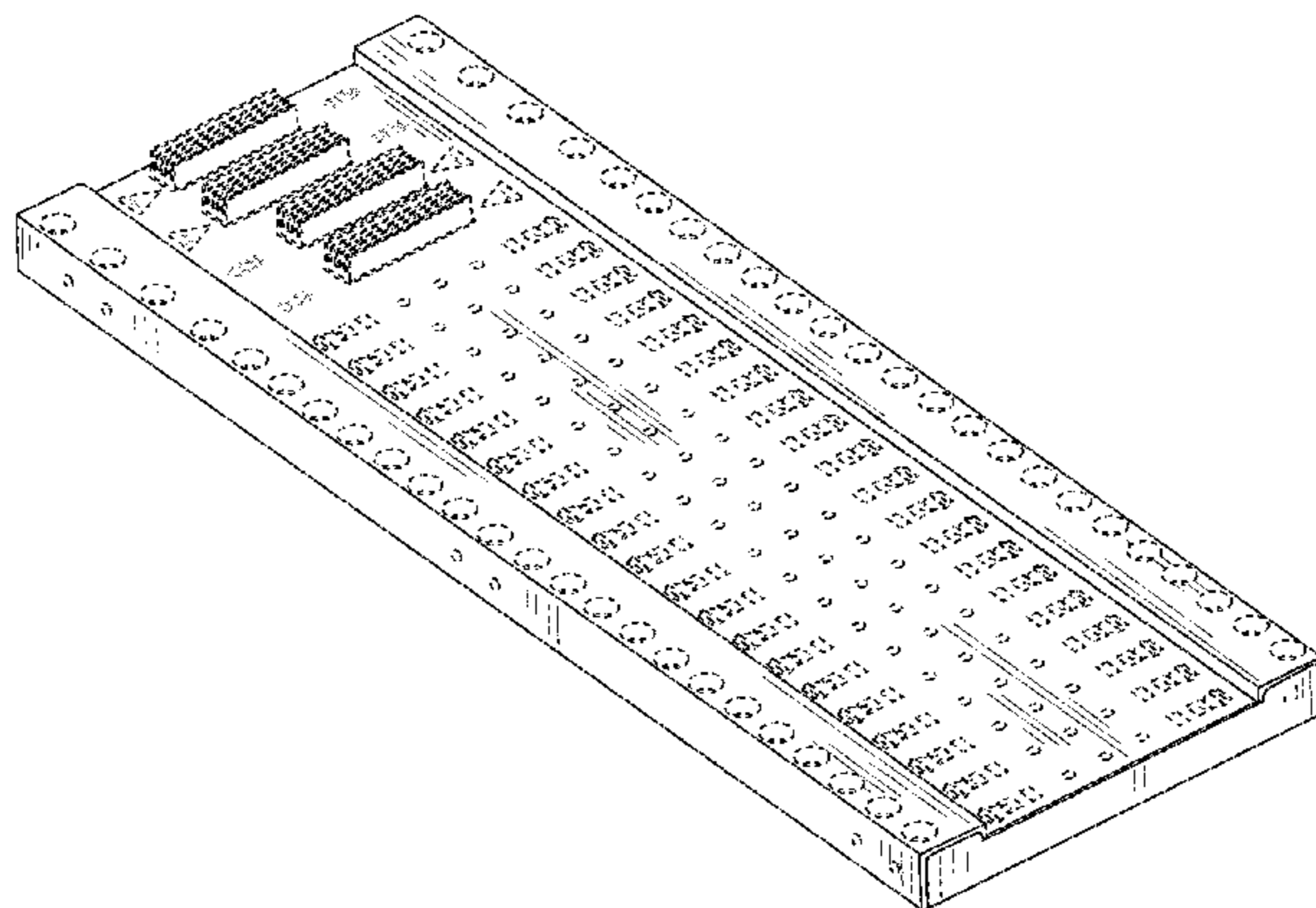
The broken lines in the drawings illustrate portions of the backplane for an industrial control system (ICS) which form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D261,644 S 11/1981 McKinsey et al.
4,339,049 A 7/1982 Gillespie

1 Claim, 5 Drawing Sheets



(56)

References Cited**U.S. PATENT DOCUMENTS**

- | | | | | | |
|--------------|---------|-------------------|-------------------|---------|------------------------------------|
| D316,546 S | 4/1991 | Pedinielli et al. | D585,441 S | 1/2009 | Alfonso et al. |
| 5,057,971 A | 10/1991 | Hautvast et al. | 7,489,522 B2 | 2/2009 | Hoshino et al. |
| D331,391 S | 12/1992 | Furuta et al. | 7,504,799 B2 | 3/2009 | Hamada et al. |
| 5,204,800 A | 4/1993 | Wasney | D591,230 S | 4/2009 | Tasai |
| D336,081 S | 6/1993 | Morgan et al. | D592,129 S | 5/2009 | Masuda et al. |
| D336,082 S | 6/1993 | Morgan et al. | 7,586,745 B1 | 9/2009 | Szelong et al. |
| D338,458 S | 8/1993 | Guo | D608,776 S | 1/2010 | Kang et al. |
| D338,674 S | 8/1993 | Fogarty, Sr. | 7,656,671 B2 | 2/2010 | Liu et al. |
| 5,251,106 A | 10/1993 | Hui | 7,660,112 B2 | 2/2010 | Carr et al. |
| 5,288,251 A | 2/1994 | Sumida | 7,715,199 B2 | 5/2010 | Chou |
| D348,257 S | 6/1994 | Wingate | D616,876 S | 6/2010 | MacCormac et al. |
| 5,335,144 A | 8/1994 | Maroushek | D622,267 S | 8/2010 | Tong et al. |
| 5,544,222 A | 8/1996 | Robinson et al. | D630,598 S | 1/2011 | Bleau et al. |
| 5,645,434 A | 7/1997 | Leung | 7,898,787 B2 | 3/2011 | Johnsen et al. |
| D383,732 S | 9/1997 | Haley et al. | D637,563 S | 5/2011 | Reed |
| D393,632 S | 4/1998 | Sherry | D638,827 S | 5/2011 | Daniel |
| D395,015 S | 6/1998 | Horn et al. | D642,978 S | 8/2011 | Sato et al. |
| 5,766,798 A | 6/1998 | Bechtold et al. | D645,813 S | 9/2011 | Yamauchi et al. |
| 5,800,942 A | 9/1998 | Hamada et al. | D651,167 S | 12/2011 | Lemelman et al. |
| 5,838,548 A | 11/1998 | Matz et al. | 8,081,480 B2 | 12/2011 | Tsai |
| D402,641 S | 12/1998 | Heijnen | D654,066 S | 2/2012 | Yi et al. |
| 5,864,467 A | 1/1999 | Recchia et al. | D660,828 S | 5/2012 | Petsch |
| D412,326 S | 7/1999 | Gianfagna et al. | 8,189,337 B2 | 5/2012 | Peng et al. |
| 5,958,030 A | 9/1999 | Kwa | D664,544 S | 7/2012 | Yi et al. |
| 6,008,985 A | 12/1999 | Lake et al. | 8,212,399 B2 | 7/2012 | Besser et al. |
| 6,033,800 A | 3/2000 | Ichiyangi et al. | D664,917 S | 8/2012 | Taguchi |
| 6,038,126 A | 3/2000 | Weng | 8,289,696 B2 | 10/2012 | Peng et al. |
| 6,041,956 A | 3/2000 | Kao | 8,305,183 B2 | 11/2012 | Young |
| 6,045,883 A | 4/2000 | Akiyama et al. | D673,570 S | 1/2013 | Wallace et al. |
| 6,102,232 A | 8/2000 | Lin et al. | D674,333 S | 1/2013 | Lemelman et al. |
| 6,198,633 B1 | 3/2001 | Lehman et al. | D676,039 S | 2/2013 | Wallace et al. |
| D441,375 S | 5/2001 | Hisatsune et al. | D678,185 S | 3/2013 | Horiuchi et al. |
| 6,328,612 B1 | 12/2001 | Chung | D679,272 S | 4/2013 | Frost et al. |
| 6,350,140 B1 | 2/2002 | Gallagher et al. | D680,950 S | 4/2013 | Nam et al. |
| D455,723 S | 4/2002 | Vackar | D684,955 S | 6/2013 | Deck et al. |
| 6,456,203 B1 | 9/2002 | Schomaker et al. | 8,472,179 B1 | 6/2013 | Lima |
| D464,647 S | 10/2002 | Goto | D685,728 S | 7/2013 | Hoshi et al. |
| D465,782 S | 11/2002 | Johnsen et al. | D685,943 S | 7/2013 | Duquette et al. |
| D470,498 S | 2/2003 | Argumedo et al. | 8,553,382 B2 | 10/2013 | Coffey |
| 6,555,264 B1 | 4/2003 | Hamada et al. | 8,561,814 B2 | 10/2013 | Elwany |
| D476,977 S | 7/2003 | Gao et al. | D695,681 S | 12/2013 | Nam et al. |
| D481,008 S | 10/2003 | Wade | 8,609,274 B2 | 12/2013 | Paolazzi et al. |
| D485,835 S | 1/2004 | Ritson et al. | D698,791 S | 2/2014 | Woodman et al. |
| 6,698,851 B1 | 3/2004 | Ludl | D699,671 S | 2/2014 | Walz et al. |
| D489,059 S | 4/2004 | Dendou et al. | D699,718 S | 2/2014 | Kuehn et al. |
| 6,719,149 B2 | 4/2004 | Tomino | D701,505 S | 3/2014 | Terwilliger et al. |
| D492,248 S | 6/2004 | Gregory et al. | 8,703,316 B2 | 4/2014 | Motohashi |
| 6,760,218 B2 | 7/2004 | Fan | D704,625 S | 5/2014 | Tsutsumi et al. |
| 6,780,538 B2 | 8/2004 | Hamada et al. | D705,184 S | 5/2014 | Takahashi et al. |
| 6,786,415 B2 | 9/2004 | Yiu | D705,202 S | 5/2014 | Silva |
| 6,812,803 B2 | 11/2004 | Goergen | D705,762 S | 5/2014 | Yu |
| 6,839,238 B2 | 1/2005 | Derr et al. | 8,714,368 B2 | 5/2014 | Tichy |
| D507,783 S | 7/2005 | Phipps et al. | D713,337 S | 9/2014 | Hakala et al. |
| D508,026 S | 8/2005 | Phipps et al. | D714,213 S | 9/2014 | Rooyackers et al. |
| D508,897 S | 8/2005 | Phipps et al. | D715,932 S | 10/2014 | Mirrer et al. |
| 6,968,958 B2 | 11/2005 | Lauchner et al. | D715,933 S | 10/2014 | Mirrer et al. |
| 6,988,162 B2 | 1/2006 | Goergen | D715,934 S | 10/2014 | Mirrer et al. |
| 7,005,996 B2 | 2/2006 | Cabrera et al. | 8,862,802 B2 | 10/2014 | Calvin et al. |
| 7,035,103 B2 | 4/2006 | Araki et al. | 8,868,813 B2 | 10/2014 | Calvin et al. |
| D523,859 S | 6/2006 | Deckers | D721,706 S | 1/2015 | Rooyackers et al. |
| D529,892 S | 10/2006 | Weidinger | D721,707 S | 1/2015 | Rooyackers et al. |
| 7,123,123 B2 | 10/2006 | Isurin et al. | D737,209 S * | 8/2015 | Wang D13/147 |
| 7,164,255 B2 | 1/2007 | Hui | D745,852 S * | 12/2015 | Harper, Jr. D13/147 |
| 7,166,390 B2 | 1/2007 | Hamada et al. | D746,236 S * | 12/2015 | Horchler D13/154 |
| D536,696 S | 2/2007 | McRae et al. | D751,507 S * | 3/2016 | Horchler D13/147 |
| D537,816 S | 3/2007 | Maruyama | D758,978 S * | 6/2016 | Rooyackers D13/184 |
| 7,189,474 B2 | 3/2007 | Hamada et al. | 2002/0020682 A1 * | 2/2002 | Broome H05K 7/186
211/26 |
| D543,206 S | 5/2007 | Maruyama et al. | 2003/0102785 A1 * | 6/2003 | Tsai G06F 1/184
312/223.1 |
| D548,176 S | 8/2007 | Eto et al. | 2003/0202330 A1 | 10/2003 | Lopata et al. |
| D548,685 S | 8/2007 | Eto et al. | 2003/0203278 A1 | 10/2003 | Hamada et al. |
| 7,265,997 B2 | 9/2007 | Jing | 2006/0038650 A1 | 2/2006 | Mehrotra et al. |
| 7,379,303 B2 | 5/2008 | Miyamura et al. | 2006/0068277 A1 | 3/2006 | Kim et al. |
| 7,403,383 B2 | 7/2008 | McGuff et al. | 2007/0076399 A1 | 4/2007 | Barina et al. |
| 7,440,262 B2 | 10/2008 | Coffey et al. | 2010/0143786 A1 | 6/2010 | Kim |
| 7,455,375 B2 | 11/2008 | Coffin et al. | 2010/0297484 A1 | 11/2010 | Kim |
| | | | 2012/0171525 A1 | 7/2012 | Guen |
| | | | 2012/0274273 A1 | 11/2012 | Jacobs et al. |

(56)

References Cited

U.S. PATENT DOCUMENTS

2014/0009894 A1 1/2014 Yu
2014/0327318 A1* 11/2014 Calvin H01F 38/14
307/104
2014/0335703 A1 11/2014 Calvin et al.

* cited by examiner

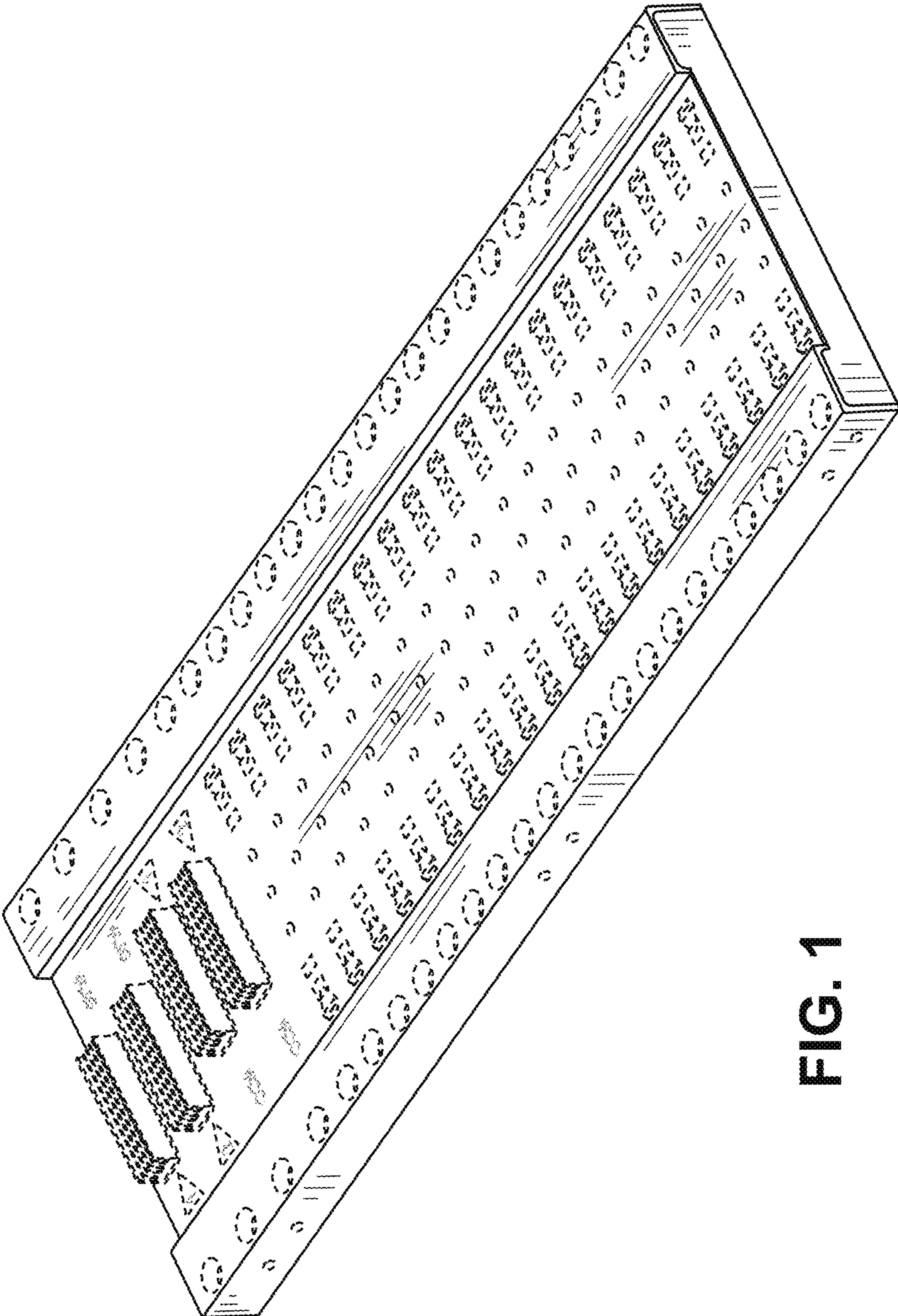


FIG. 1

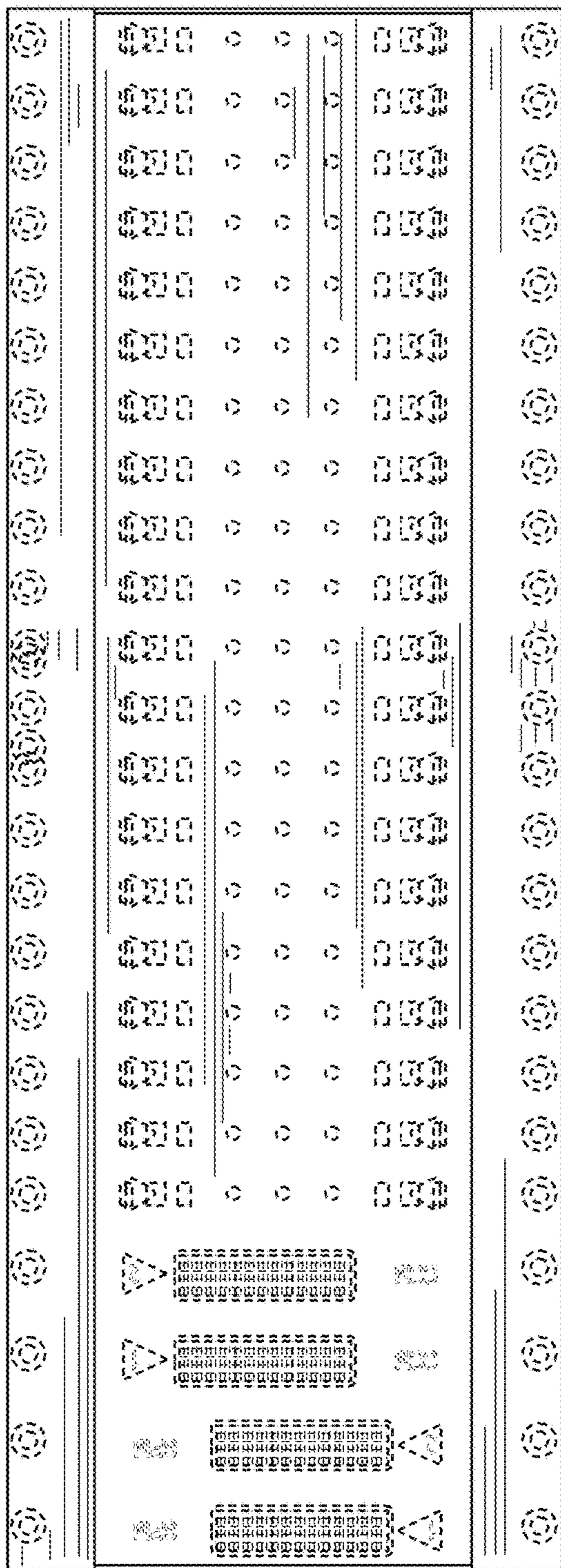


FIG. 2

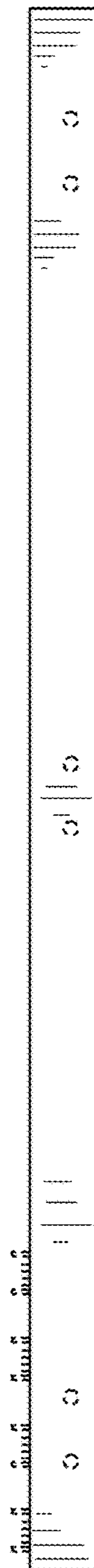


FIG. 3

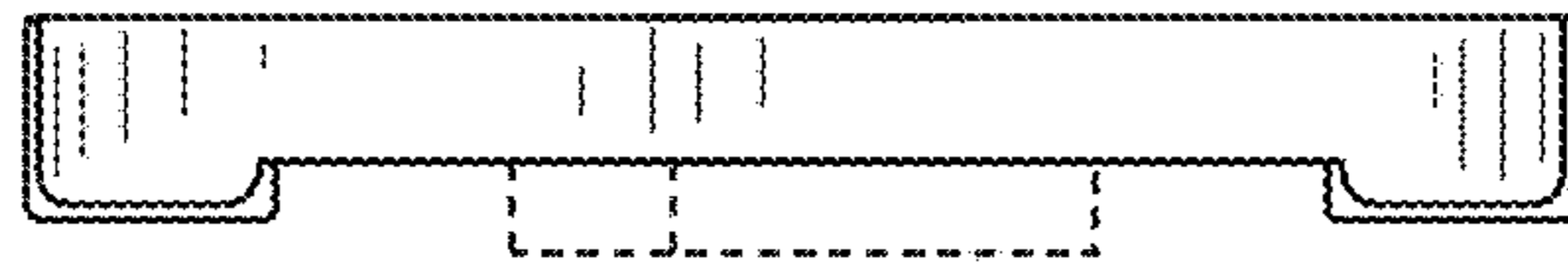


FIG. 4

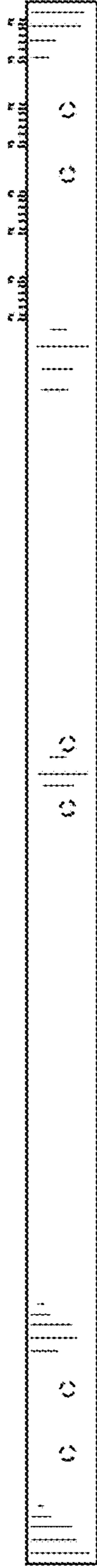


FIG. 5

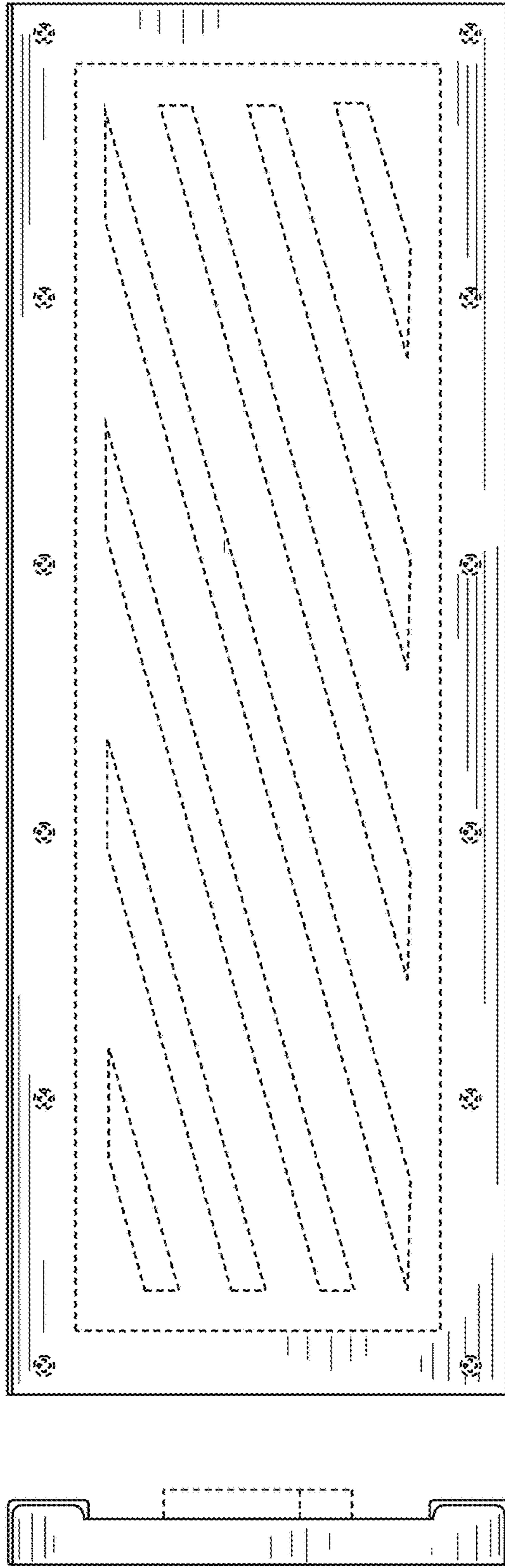


FIG. 6

FIG. 7

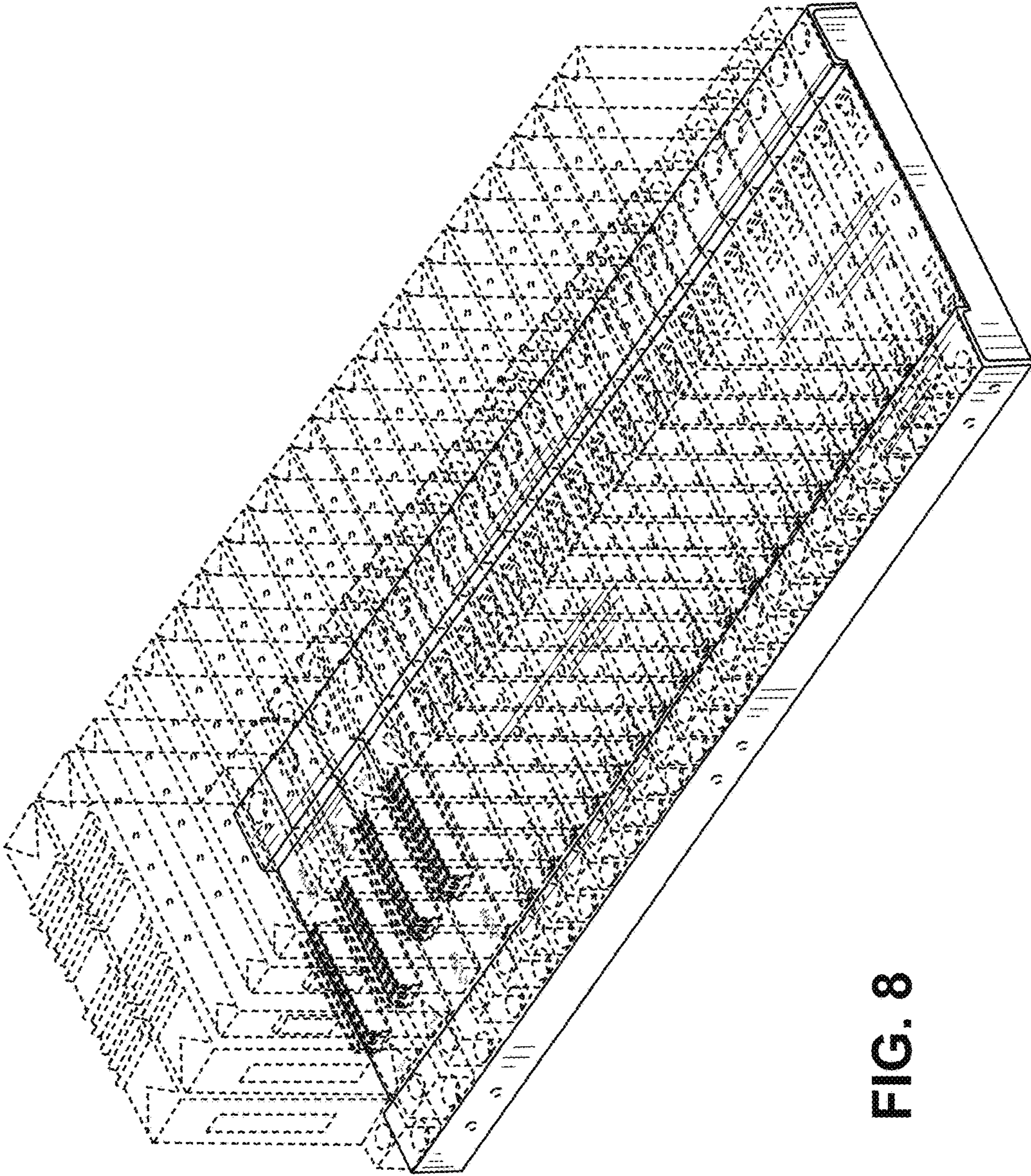


FIG. 8