



US00D754619S

(12) **United States Design Patent**
Feng

(10) **Patent No.:** **US D754,619 S**
(45) **Date of Patent:** **** Apr. 26, 2016**

(54) **LIGHT EMITTING DIODE CHIP**
(71) Applicant: **Formosa Epitaxy Incorporation,**
Taoyuan County (TW)
(72) Inventor: **Hui-Ching Feng,** Taoyuan County (TW)
(73) Assignee: **Formosa Epitaxy Incorporation,**
Taoyuan (TW)
(**) Term: **14 Years**

| | | | | |
|-----------|------|---------|-----------------------|-----------|
| D412,189 | S * | 7/1999 | Poulsen | D21/502 |
| 6,012,543 | A * | 1/2000 | Shimpo et al. | 181/286 |
| 6,764,196 | B2 * | 7/2004 | Bailey | 362/147 |
| 6,870,125 | B2 * | 3/2005 | Doi et al. | 219/121.6 |
| D510,912 | S * | 10/2005 | Asakawa | D13/180 |
| D511,329 | S * | 11/2005 | Suenaga | D13/180 |
| 7,621,654 | B2 * | 11/2009 | Nishimoto et al. | 362/241 |
| 7,690,809 | B2 * | 4/2010 | Tsai et al. | 362/147 |
| D616,506 | S * | 5/2010 | Kossmann | D21/501 |
| 7,710,014 | B2 * | 5/2010 | Lee et al. | 313/497 |
| 7,786,491 | B2 * | 8/2010 | Ueda et al. | 257/81 |

(Continued)

(21) Appl. No.: **29/489,896**
(22) Filed: **May 5, 2014**

FOREIGN PATENT DOCUMENTS

| | | |
|----|---------------|--------|
| KR | 3005294750002 | 6/2009 |
| TW | D127765 | 3/2009 |

(30) **Foreign Application Priority Data**

Jan. 28, 2014 (TW) 103300559

(51) **LOC (10) Cl.** **13-03**
(52) **U.S. Cl.**
USPC **D13/180**

(58) **Field of Classification Search**
USPC D13/180; D21/486, 501, 503; D25/152,
D25/155, 160, 163; D26/1
CPC ... H01L 25/167; H01L 25/0753; H01L 27/15;
H01L 27/156; H01L 31/02; H01L 33/000079;
H01L 33/04; H01L 33/08; H01L 33/10;
H01L 33/20; H01L 33/38; H01L 33/42;
H01L 33/44; H01L 33/48; H01L 33/483;
H01L 33/486; H01L 24/06; H01J 3/021;
H01S 5/34; F21K 9/00; F21K 9/30; F21K
9/54; B82Y 20/00; B82Y 40/00
See application file for complete search history.

OTHER PUBLICATIONS

“Office Action of Taiwan Counterpart Application,” issued on Jun. 25, 2015, p. 1-p. 3.

Primary Examiner — Selina Sikder
(74) *Attorney, Agent, or Firm* — Jianq Chyun IP Office

(56) **References Cited**

U.S. PATENT DOCUMENTS

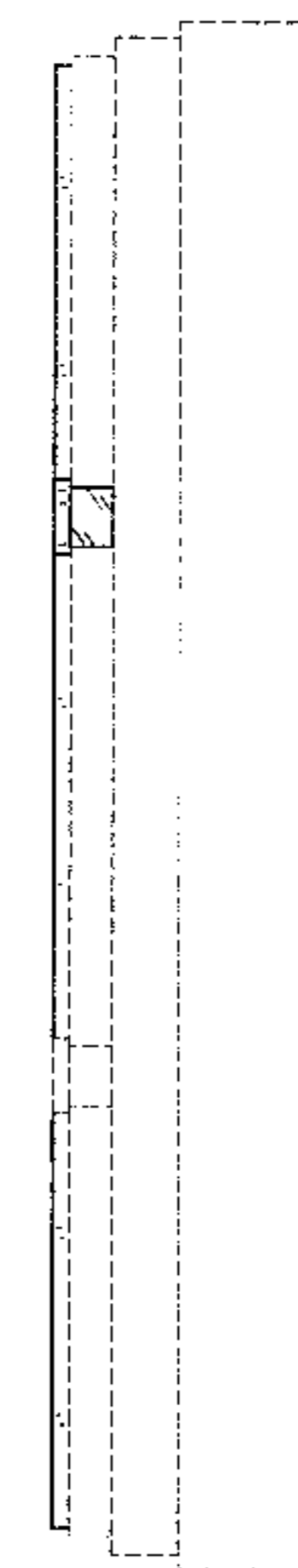
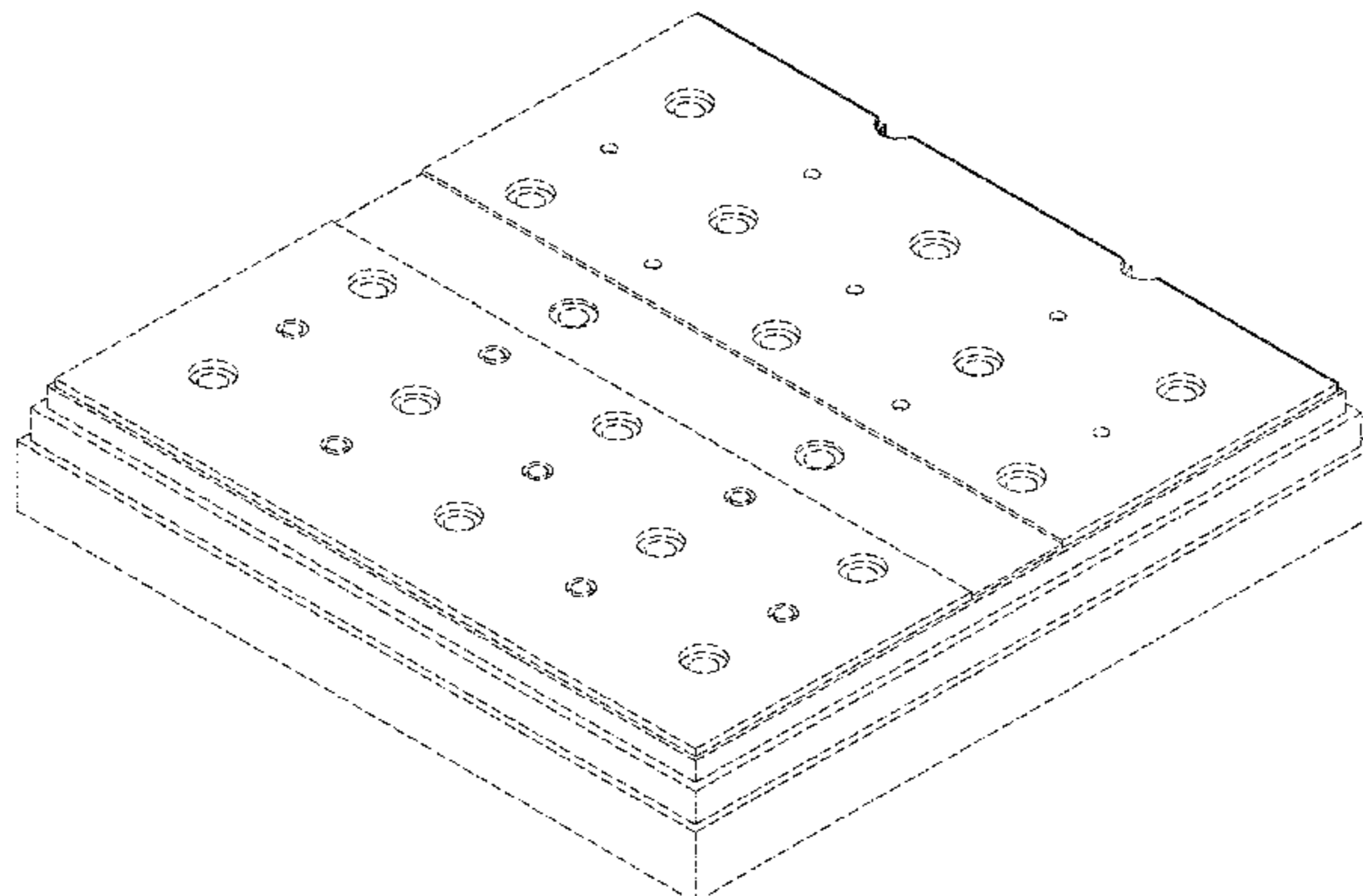
| | | | | |
|-----------|-----|--------|------------------------|---------|
| 2,280,631 | A * | 4/1942 | Coffey | 181/293 |
| 4,032,944 | A * | 6/1977 | van Dongen et al. | 257/88 |
| 4,189,027 | A * | 2/1980 | Dean et al. | 181/286 |
| D410,973 | S * | 6/1999 | Jensen | D21/486 |

(57) **CLAIM**
The ornamental design for a light emitting diode chip, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a light emitting diode chip showing an embodiment of my new design; FIG. 2 is a front view of the embodiment; FIG. 3 is a rear view of the embodiment; FIG. 4 is a left side view of the embodiment; FIG. 5 is a right side view of the embodiment; FIG. 6 is a top view of the embodiment; and, FIG. 7 is a bottom view of the embodiment. The broken line portions of the light emitting diode chip in FIGS. 1-7 represent unclaimed portions of the design and form no part thereof.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

| | | | | | | | |
|-------------------|---------|---------------------|------------|-------------------|---------|----------------------|-----------|
| D624,888 S | 10/2010 | Takahashi et al. | | | | | |
| D646,647 S * | 10/2011 | Chen et al. | D13/180 | | | | |
| 8,415,689 B2 * | 4/2013 | Lim | 257/91 | | | | |
| 8,569,739 B2 * | 10/2013 | Kim et al. | 257/14 | | | | |
| 8,704,249 B2 * | 4/2014 | Kamiya et al. | 257/91 | | | | |
| 8,749,263 B2 * | 6/2014 | Ohta et al. | 324/762.01 | | | | |
| D725,052 S * | 3/2015 | Chen et al. | D13/180 | | | | |
| 2003/0001477 A1 * | 1/2003 | Sasaguri | 313/310 | | | | |
| 2005/0184647 A1 * | 8/2005 | Chang | 313/497 | | | | |
| 2006/0022575 A1 * | 2/2006 | Ryu et al. | 313/495 | | | | |
| 2006/0160409 A1 * | 7/2006 | Shimizu et al. | 439/490 | | | | |
| 2006/0208628 A1 * | 9/2006 | Lee | 313/497 | | | | |
| | | | | 2006/0261725 A1 * | 11/2006 | Lee | 313/495 |
| | | | | 2007/0096624 A1 * | 5/2007 | Lee et al. | 313/496 |
| | | | | 2007/0176206 A1 * | 8/2007 | Choi et al. | 257/198 |
| | | | | 2008/0030117 A1 * | 2/2008 | Chen et al. | 313/311 |
| | | | | 2008/0116782 A1 * | 5/2008 | Kim et al. | 313/496 |
| | | | | 2010/0208761 A1 * | 8/2010 | Coleman et al. | 372/45.01 |
| | | | | 2011/0220872 A1 * | 9/2011 | Fukunaga et al. | 257/13 |
| | | | | 2011/0291070 A1 * | 12/2011 | Won et al. | 257/13 |
| | | | | 2011/0291120 A1 * | 12/2011 | Tak et al. | 257/88 |
| | | | | 2012/0056232 A1 * | 3/2012 | Fujimoto et al. | 257/99 |
| | | | | 2012/0153260 A1 * | 6/2012 | Kim et al. | 257/14 |
| | | | | 2013/0285105 A1 * | 10/2013 | Wei et al. | 257/99 |
| | | | | 2013/0321902 A1 * | 12/2013 | Choi | 359/344 |
| | | | | 2014/0191650 A1 * | 7/2014 | Lee et al. | 313/310 |
| | | | | 2014/0353709 A1 * | 12/2014 | Lee et al. | 257/99 |

* cited by examiner

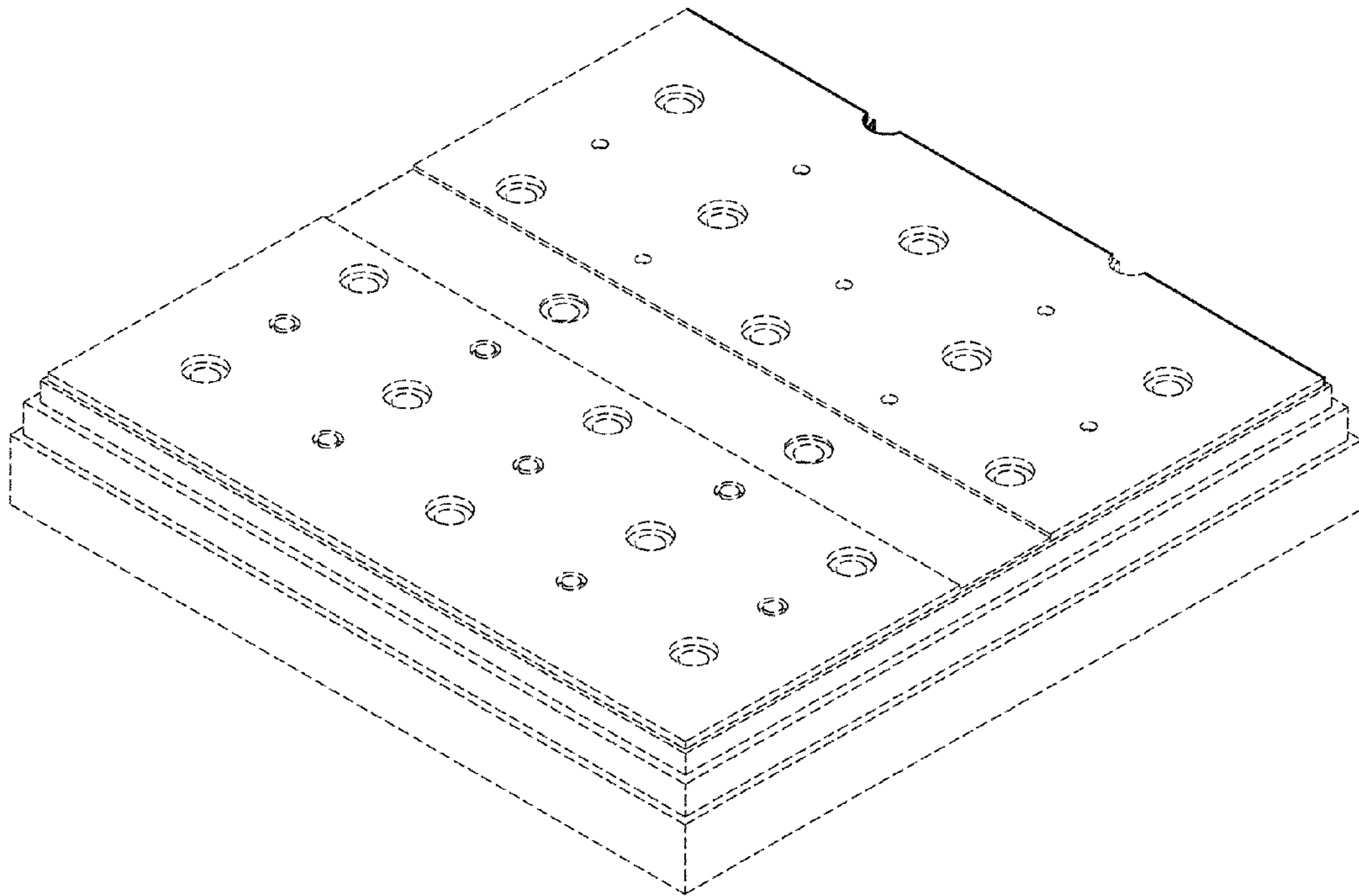


FIG. 1

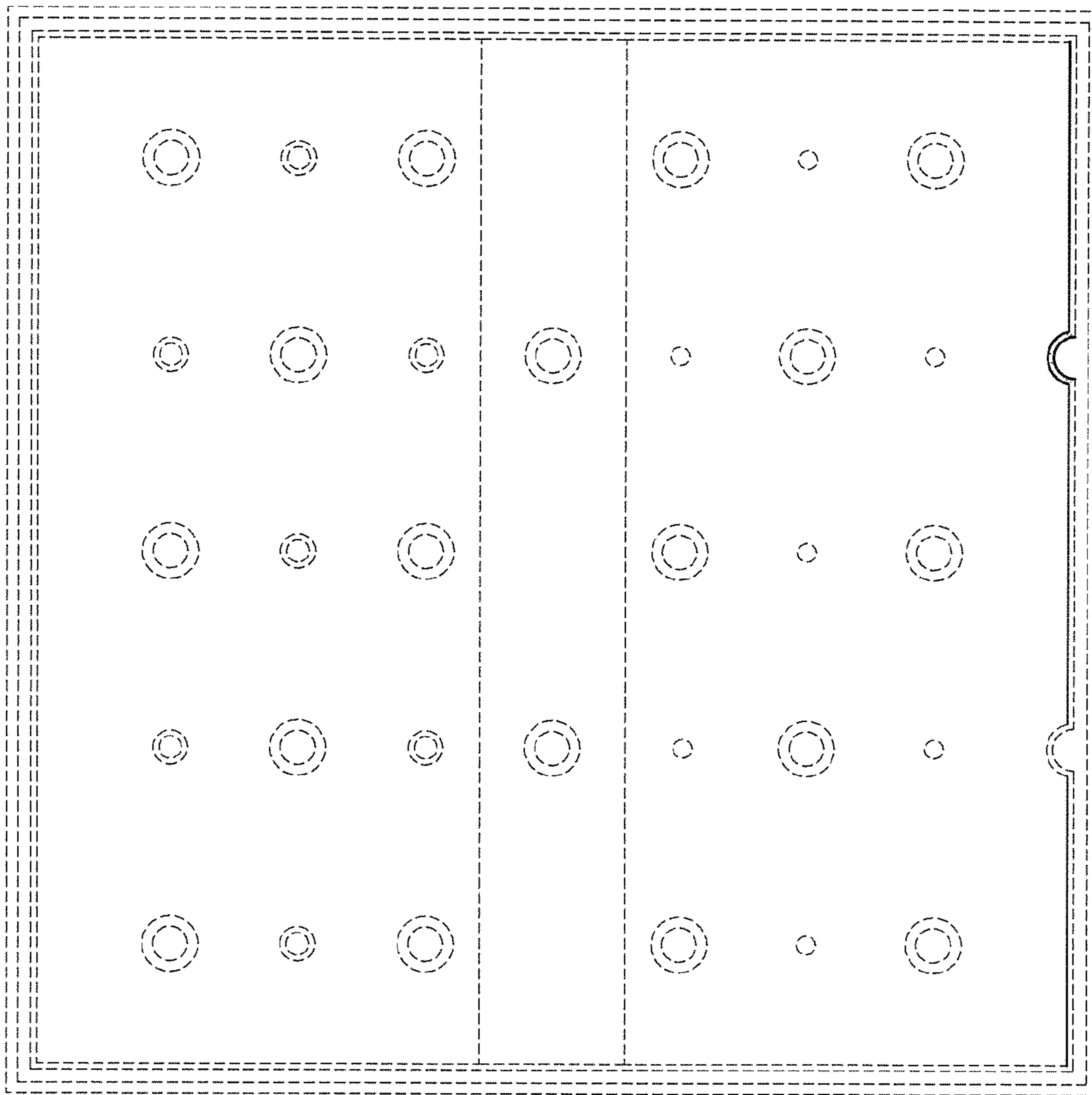


FIG. 2

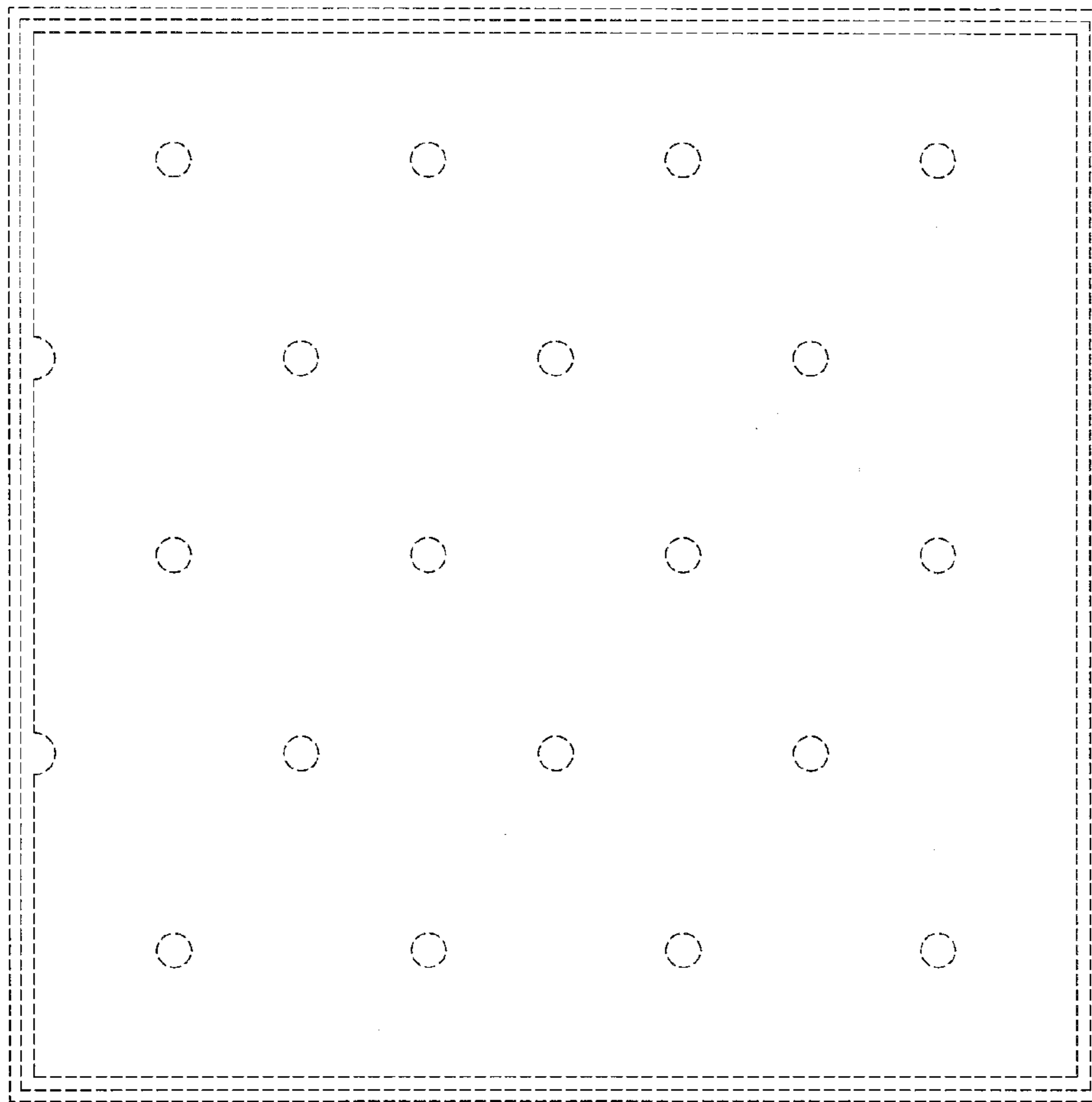


FIG. 3

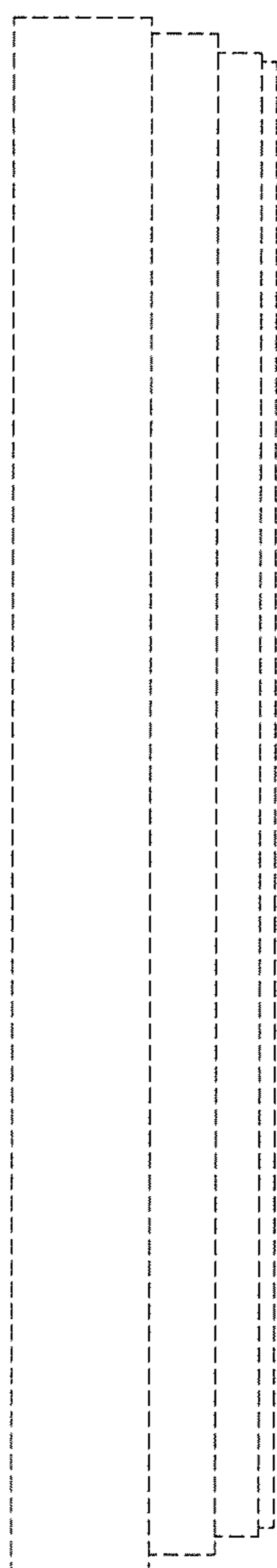


FIG. 4

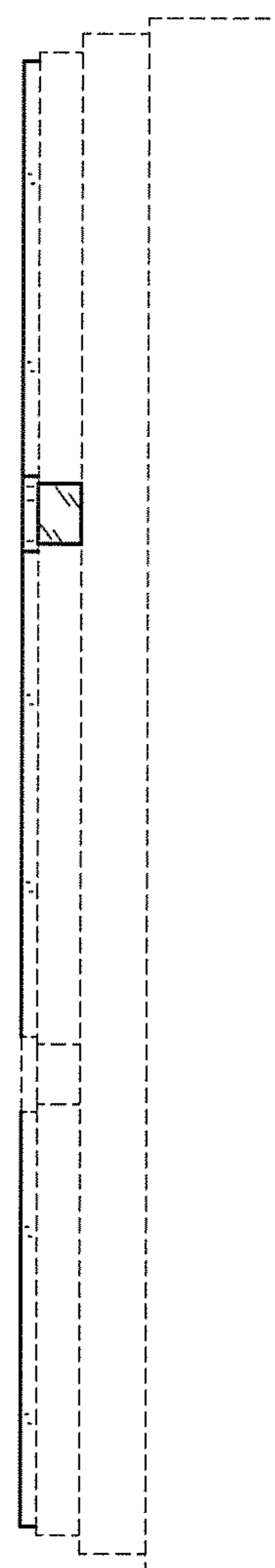


FIG. 5

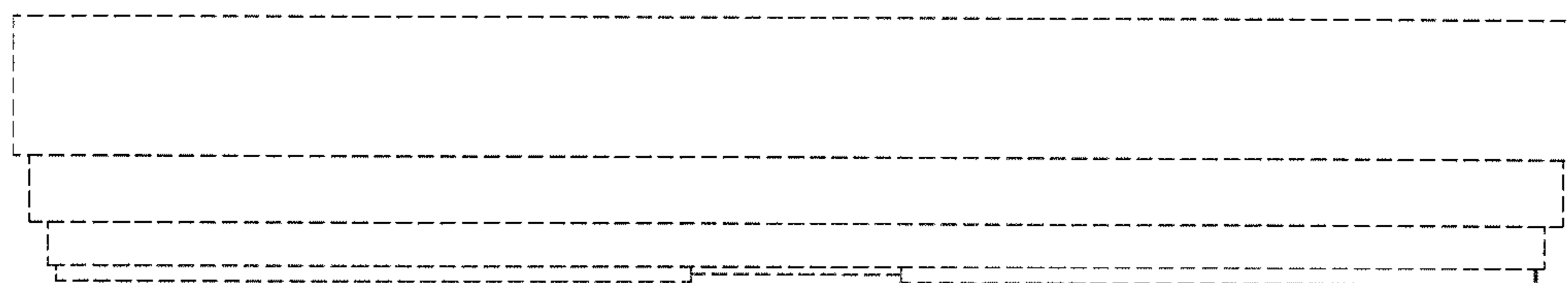


FIG. 6

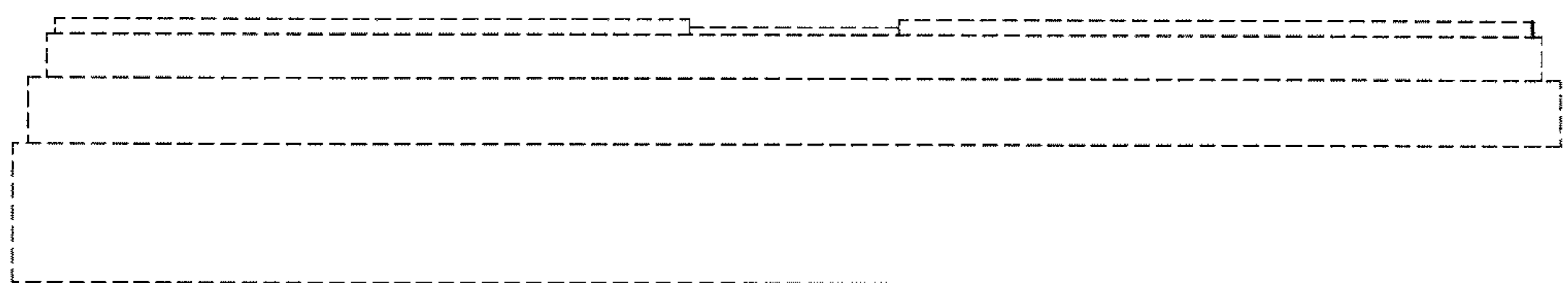


FIG. 7