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(12) **United States Design Patent** (10) **Patent No.:** **US D1,040,117 S**  
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(54) **LIGHT-EMITTING DIODE DEVICE**  
(71) Applicant: **EPISTAR CORPORATION**, Hsinchu (TW)  
(72) Inventors: **Yao-Ning Chan**, Hsinchu (TW); **Tzu-Yun Feng**, Hsinchu (TW); **Yun-Ya Chang**, Hsinchu (TW)  
(73) Assignee: **EPISTAR CORPORATION**, Hsinchu (TW)  
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D648,287 S 11/2011 Hsu  
8,188,505 B2 5/2012 Shen  
D680,977 S \* 4/2013 Hsu ..... D13/180  
8,450,758 B2 \* 5/2013 Liu ..... H01L 33/38  
257/E33.012  
8,466,487 B2 \* 6/2013 Emura ..... H01L 33/38  
257/E33.066  
D694,723 S 12/2013 Wu  
D707,641 S 6/2014 Lu  
D716,238 S 10/2014 Yeh  
8,872,204 B2 10/2014 Yang  
D737,228 S 8/2015 Chen  
9,130,125 B2 \* 9/2015 Hwang ..... H01L 33/38  
9,373,751 B2 \* 6/2016 Sato ..... H01L 33/36  
9,401,456 B2 7/2016 Lee  
D764,421 S 8/2016 Kao  
9,412,906 B2 \* 8/2016 Chung ..... H01L 33/22  
9,472,724 B2 \* 10/2016 Emura ..... H01L 24/00

(Continued)

**Related U.S. Application Data**

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*Primary Examiner* — Selina Sikder

(74) *Attorney, Agent, or Firm* — MUNCY GEISSLER OLDS & LOWE P.C.

(30) **Foreign Application Priority Data**

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(51) **LOC (14) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/180**

(58) **Field of Classification Search**  
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See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

6,614,056 B1 9/2003 Tarsa  
D604,256 S \* 11/2009 Liu ..... D13/180

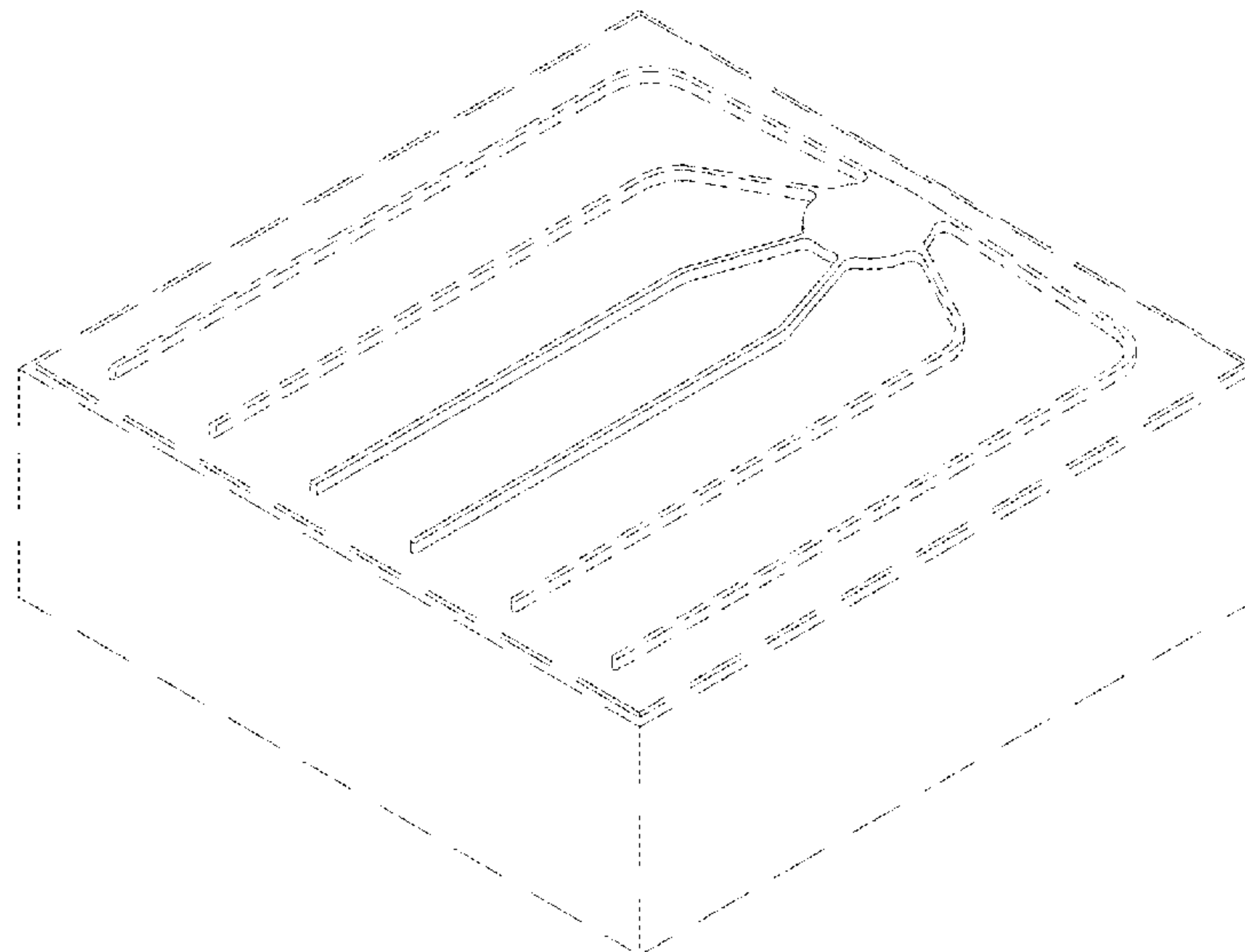
(57) **CLAIM**

The ornamental design for a light-emitting diode device, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a light-emitting diode device showing our new design;  
FIG. 2 is a front elevational view thereof;  
FIG. 3 is a rear elevational view thereof;  
FIG. 4 is a left side elevational view thereof;  
FIG. 5 is a right side elevational view thereof;  
FIG. 6 is a top plan view thereof; and,  
FIG. 7 is a bottom plan view thereof.  
The broken line showing is for the purpose of illustrating environmental structure only and forms no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D770,397 S \* 11/2016 Wang ..... D13/180  
 9,666,779 B2 \* 5/2017 Jin ..... H01L 33/0016  
 D795,206 S 8/2017 Yeh  
 9,905,729 B2 \* 2/2018 Kim ..... H01L 33/145  
 D818,974 S 5/2018 Kao  
 10,199,542 B2 2/2019 Chou  
 D853,340 S 7/2019 Wang  
 D894,850 S 9/2020 Tsai  
 10,930,701 B2 \* 2/2021 Ou ..... H01L 27/15  
 11,011,675 B2 5/2021 Park  
 11,164,994 B2 11/2021 Kopp  
 11,239,392 B2 \* 2/2022 Kopp ..... H01L 33/14  
 11,276,801 B2 \* 3/2022 Kitahama ..... H01L 33/44  
 11,456,399 B2 \* 9/2022 Wei ..... H01L 33/0095  
 D1,008,198 S \* 12/2023 Chan ..... D13/180  
 2007/0114564 A1 5/2007 Lee  
 2007/0228388 A1 10/2007 Ko  
 2007/0284606 A1 12/2007 Sugimori  
 2009/0159909 A1 6/2009 Lee  
 2009/0283787 A1 11/2009 Donofrio  
 2011/0156086 A1 6/2011 Kim  
 2011/0163346 A1 \* 7/2011 Seo ..... H01L 33/42  
 257/E33.064  
 2011/0198641 A1 8/2011 Yahata  
 2012/0074438 A1 3/2012 Hwang  
 2013/0134867 A1 \* 5/2013 Yang ..... H01L 33/08  
 313/499  
 2014/0034981 A1 2/2014 Hung  
 2014/0231853 A1 8/2014 Uemura  
 2014/0231859 A1 \* 8/2014 Kim ..... H01L 33/32  
 257/99  
 2014/0367730 A1 \* 12/2014 Kim ..... H01L 33/387  
 257/99  
 2015/0179890 A1 6/2015 Sano

\* cited by examiner

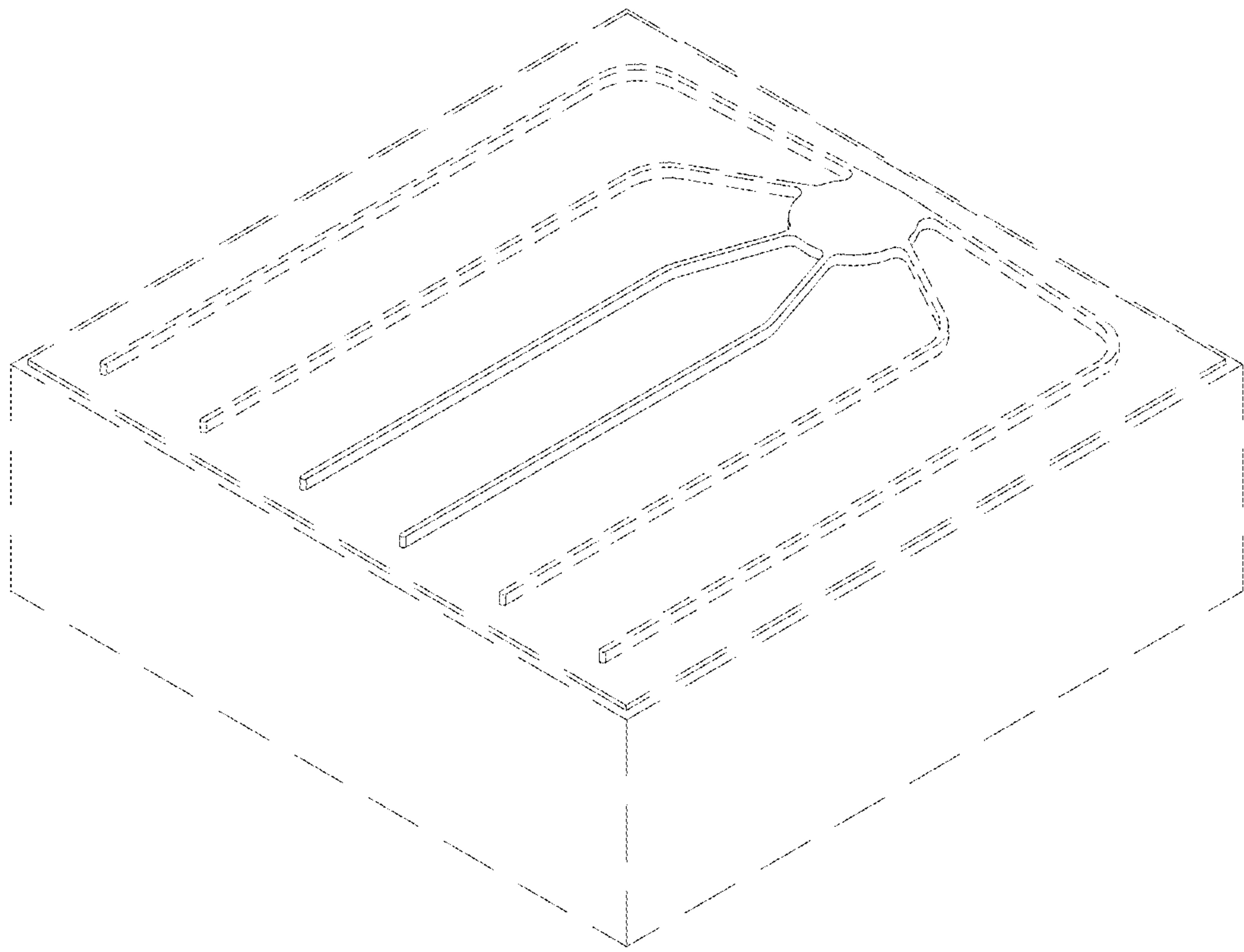


FIG. 1

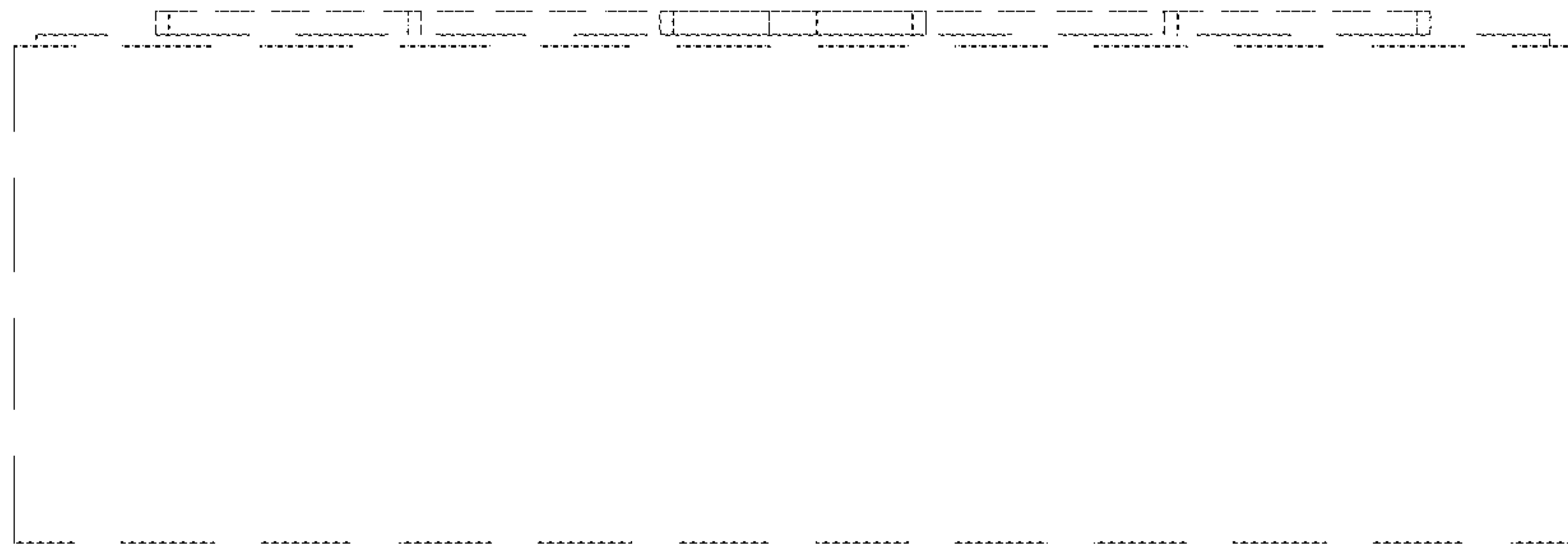


FIG. 2

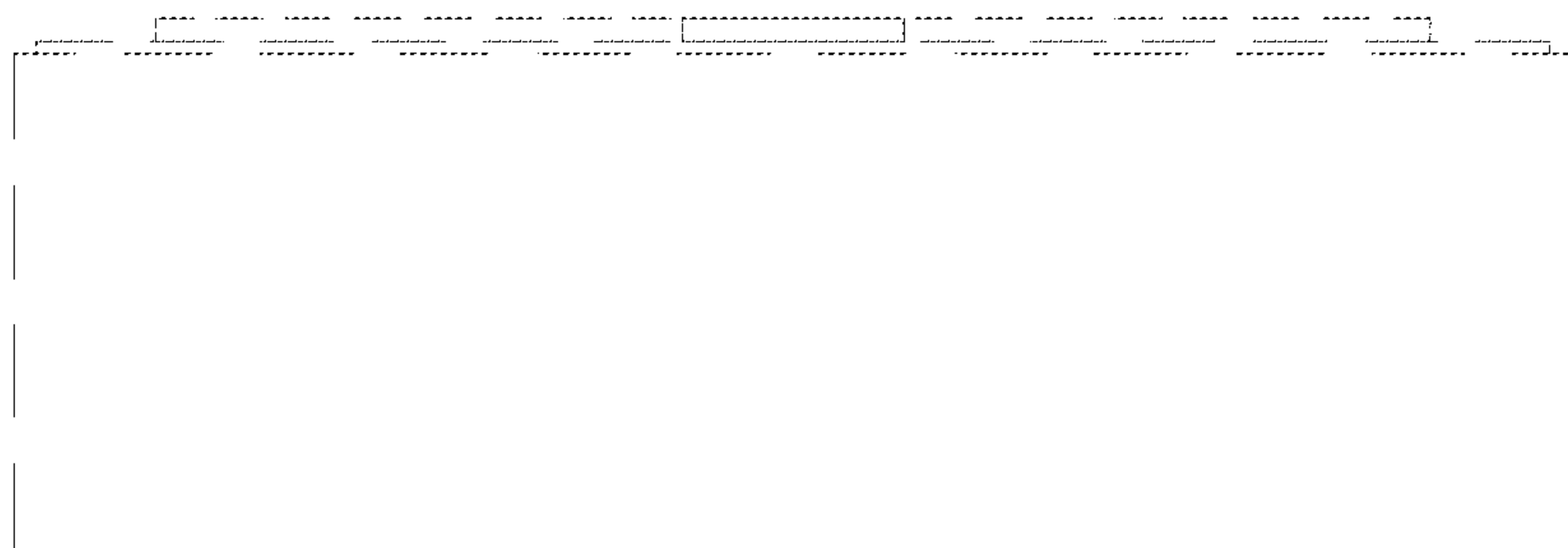


FIG. 3

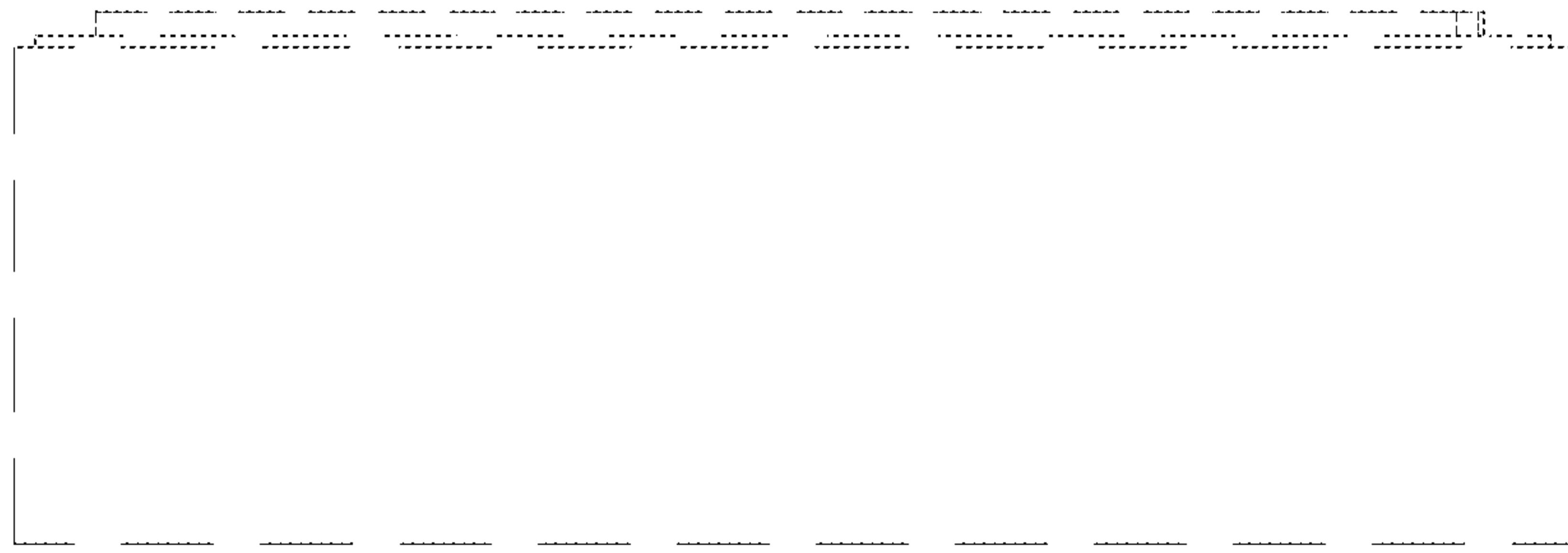


FIG. 4



FIG. 5

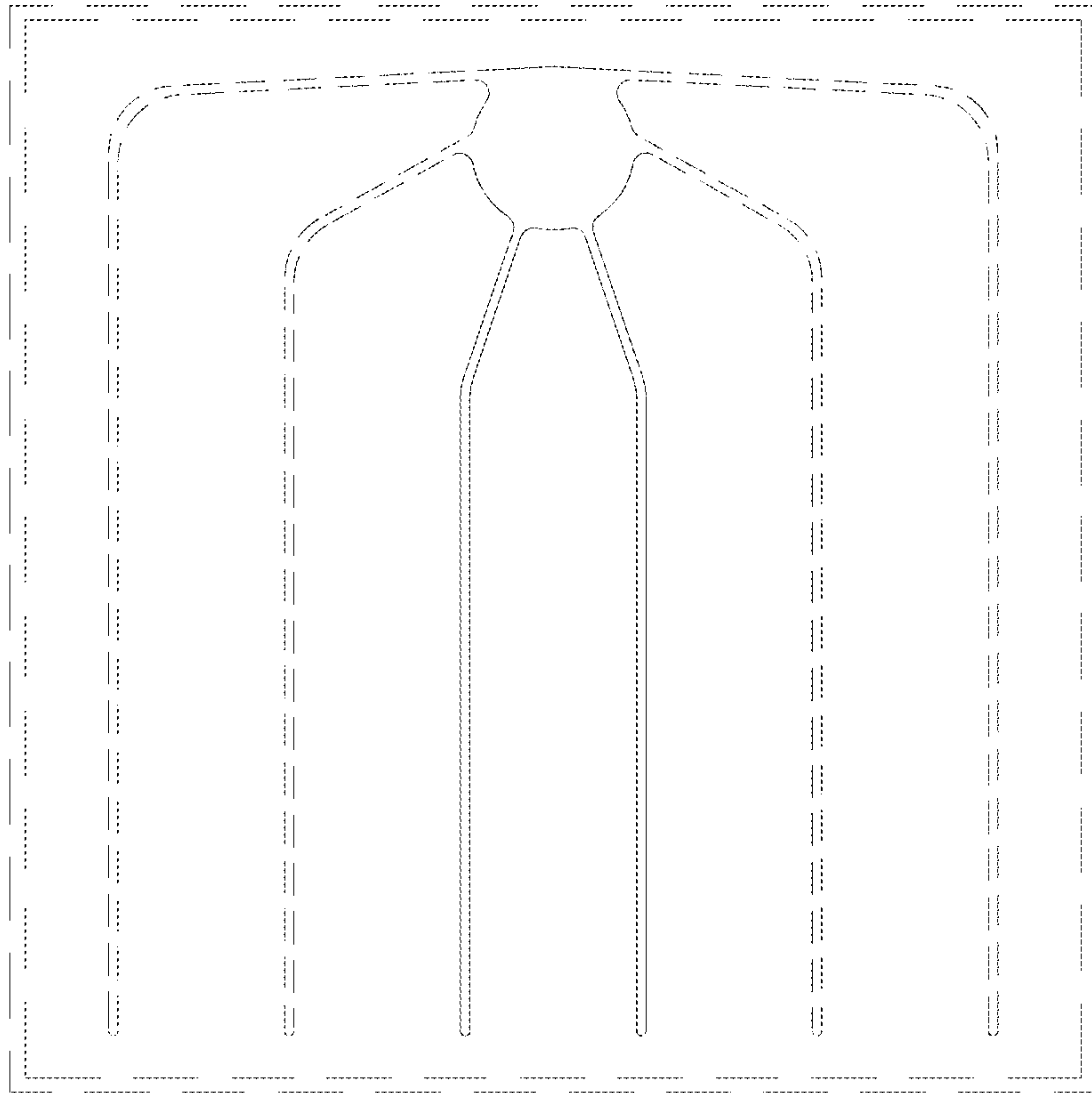


FIG. 6



**FIG. 7**