



US00D744078S

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

(10) **Patent No.:** **US D744,078 S**

(45) **Date of Patent:** **** Nov. 24, 2015**

(54) **PARTICULATE FILTER**

(75) Inventors: **Kentaro Iwasaki**, Niihama (JP);
Tatsuro Kawauchi, Niihama (JP);
Hajime Yoshino, Niihama (JP); **Teruo**
Komori, Niihama (JP)

(73) Assignee: **SUMITOMO CHEMICAL**
COMPANY, LIMITED, Tokyo (JP)

(**) Term: **14 Years**

(21) Appl. No.: **29/423,942**

(22) Filed: **Jun. 6, 2012**

(30) **Foreign Application Priority Data**

Dec. 7, 2011 (JP) D2011-028455
Dec. 7, 2011 (JP) D2011-028456
Dec. 7, 2011 (JP) D2011-028458
Dec. 7, 2011 (JP) D2011-028459

(51) **LOC (10) Cl.** **23-04**

(52) **U.S. Cl.**
USPC **D23/365**

(58) **Field of Classification Search**
USPC D23/365, 209, 363, 358, 386, 354, 341,
D23/364; 55/385.3, 502, 497, 506, 505,
55/521, 495, 422, 493, DIG. 30; 210/435,
210/130, 136, 248, 339, 448, 452, 497.1;
D15/5
CPC C04B 40/00; C04B 35/638; F27B 9/12;
F27B 9/34; F27B 9/045; F27B 9/30; F27B
2009/124

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,443,798 A * 8/1995 Kerrebrock 422/129
D464,129 S * 10/2002 Xu et al. D23/365
D505,194 S * 5/2005 Komori et al. D23/365
D519,197 S * 4/2006 Komori et al. D23/365

D522,117 S 5/2006 Komori et al.
D534,264 S * 12/2006 Komori et al. D23/365
D538,911 S 3/2007 Komori et al.
7,247,184 B2 7/2007 Frost
7,601,194 B2 10/2009 Beall et al.

(Continued)

OTHER PUBLICATIONS

Communication dated Dec. 2, 2014, issued by the U.S. Patent and
Trademark Office in U.S. Appl. No. 29/423,937.

(Continued)

Primary Examiner — David Muller

Assistant Examiner — Nathan Johnston

(74) *Attorney, Agent, or Firm* — Sughrue Mion, PLLC

(57) **CLAIM**

The ornamental design for a particulate filter, as shown and
described.

DESCRIPTION

FIG. 1 is a front view of an embodiment of a particulate filter
showing my new design;

FIG. 2 is a rear view thereof;

FIG. 3 is a top plan view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a left side view thereof;

FIG. 7 is a perspective view thereof;

FIG. 8 is an enlarged view of 8-1-8-1, 8-2-8-2 portion thereof;

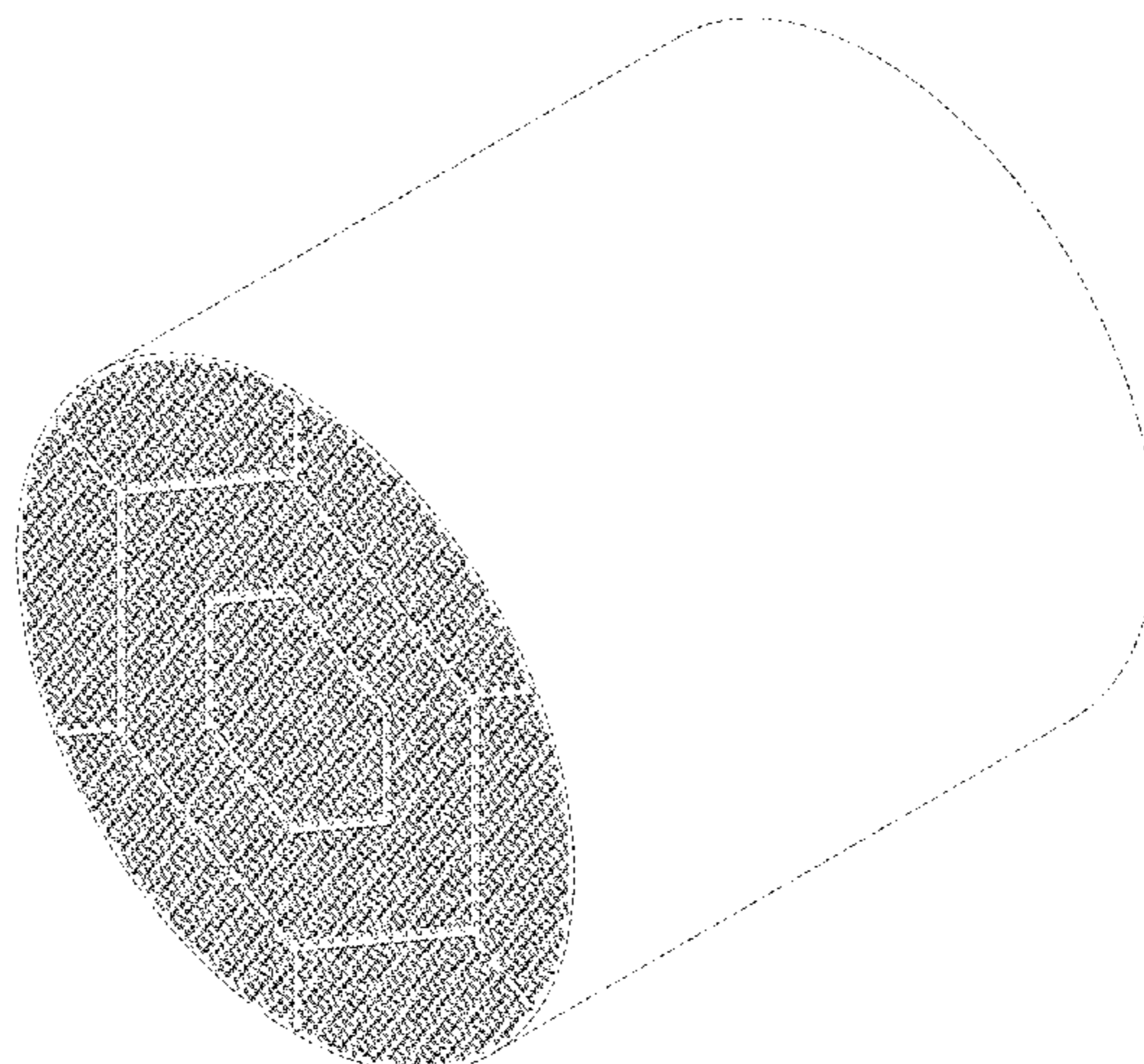
FIG. 9 is a 9-9 sectional view thereof; and,

FIG. 10 is an enlarged view of 10-10 portion thereof.

Dotted lines in the drawing figures are used to show portions
of the filter that are not claimed, and thus form no part of the
claimed invention.

Lines consisting of alternating long and short dashes in the
drawing figures only indicate lines dividing our inventive
design which is claimed herein from the other part which is
not claimed.

1 Claim, 10 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D609,319 S 2/2010 Ohno et al.
D609,320 S 2/2010 Ohno et al.
7,691,167 B2 4/2010 Tokumaru
D647,607 S 10/2011 Ohno et al.
D675,718 S * 2/2013 Komori et al. D23/365
D676,120 S * 2/2013 Komori et al. D23/365
D676,121 S * 2/2013 Komori et al. D23/365
D681,678 S * 5/2013 Portillo D15/5
D700,693 S * 3/2014 Komori et al. D23/365
D701,297 S * 3/2014 Komori et al. D23/365

2003/0165662 A1 9/2003 Suwabe et al.
2003/0167755 A1 9/2003 Nakatani et al.
2004/0161596 A1 8/2004 Taoka et al.
2013/0327712 A1* 12/2013 DelGiaccio et al. 210/645
2014/0290197 A1* 10/2014 Iwasaki et al. 55/529

OTHER PUBLICATIONS

Communication dated Nov. 18, 2014, issued by the U.S. Patent and Trademark Office in U.S. Appl. No. 29/423,934.

Communication dated Aug. 31, 2015 from the United States Patent and Trademark Office in counterpart U.S. Appl. No. 29/514,687.

* cited by examiner

FIG. 1

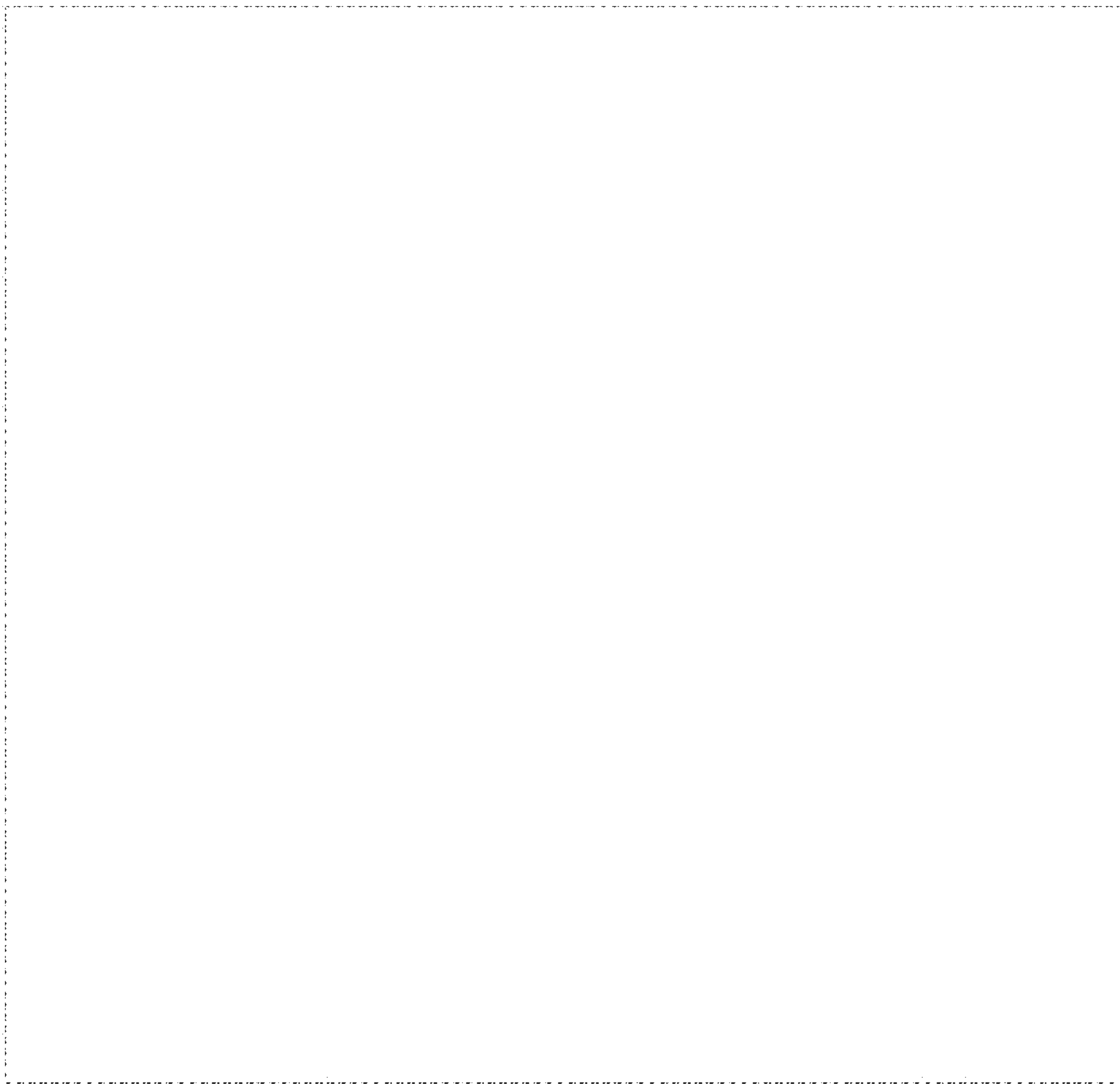


FIG.2

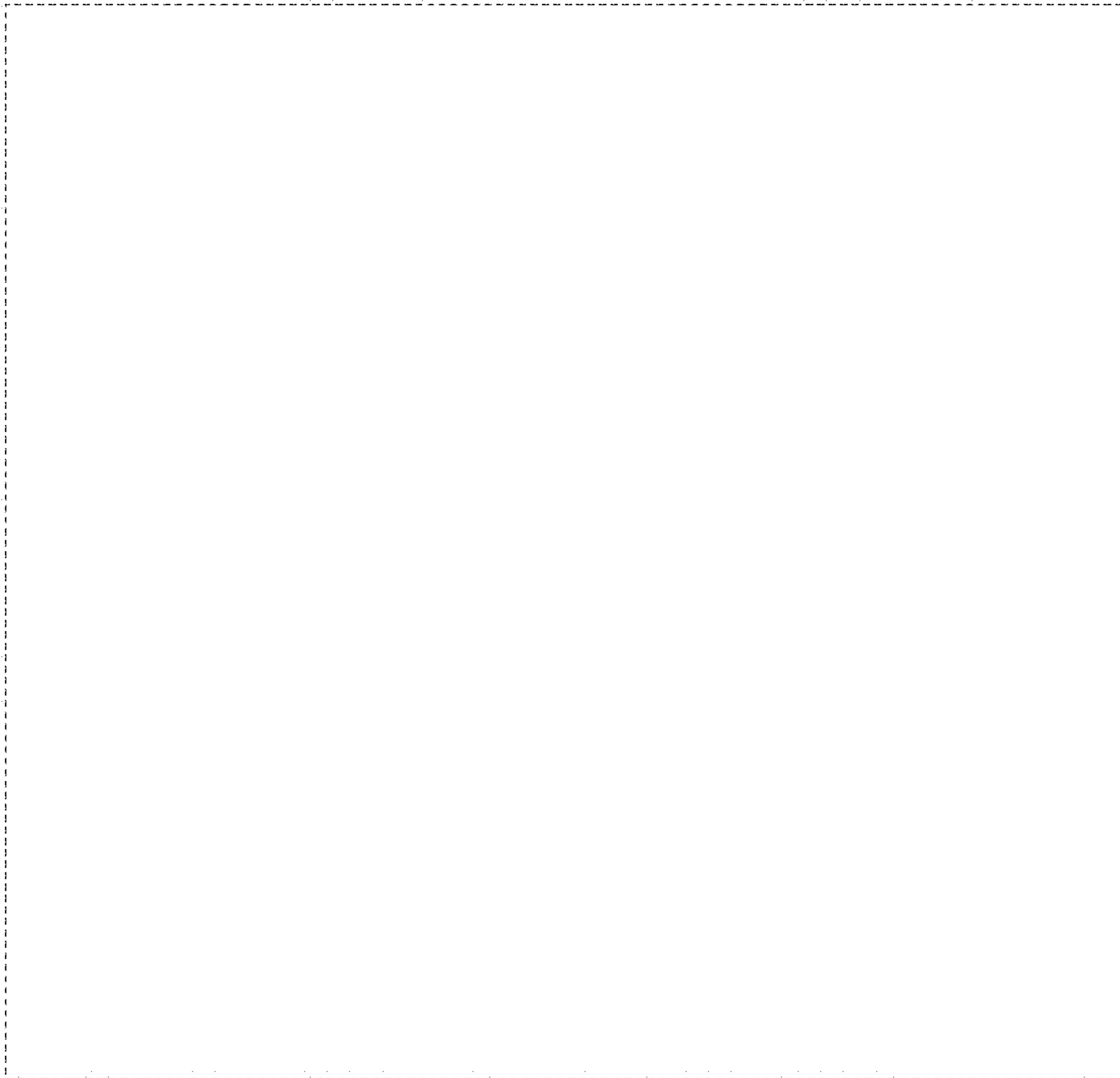


FIG.3

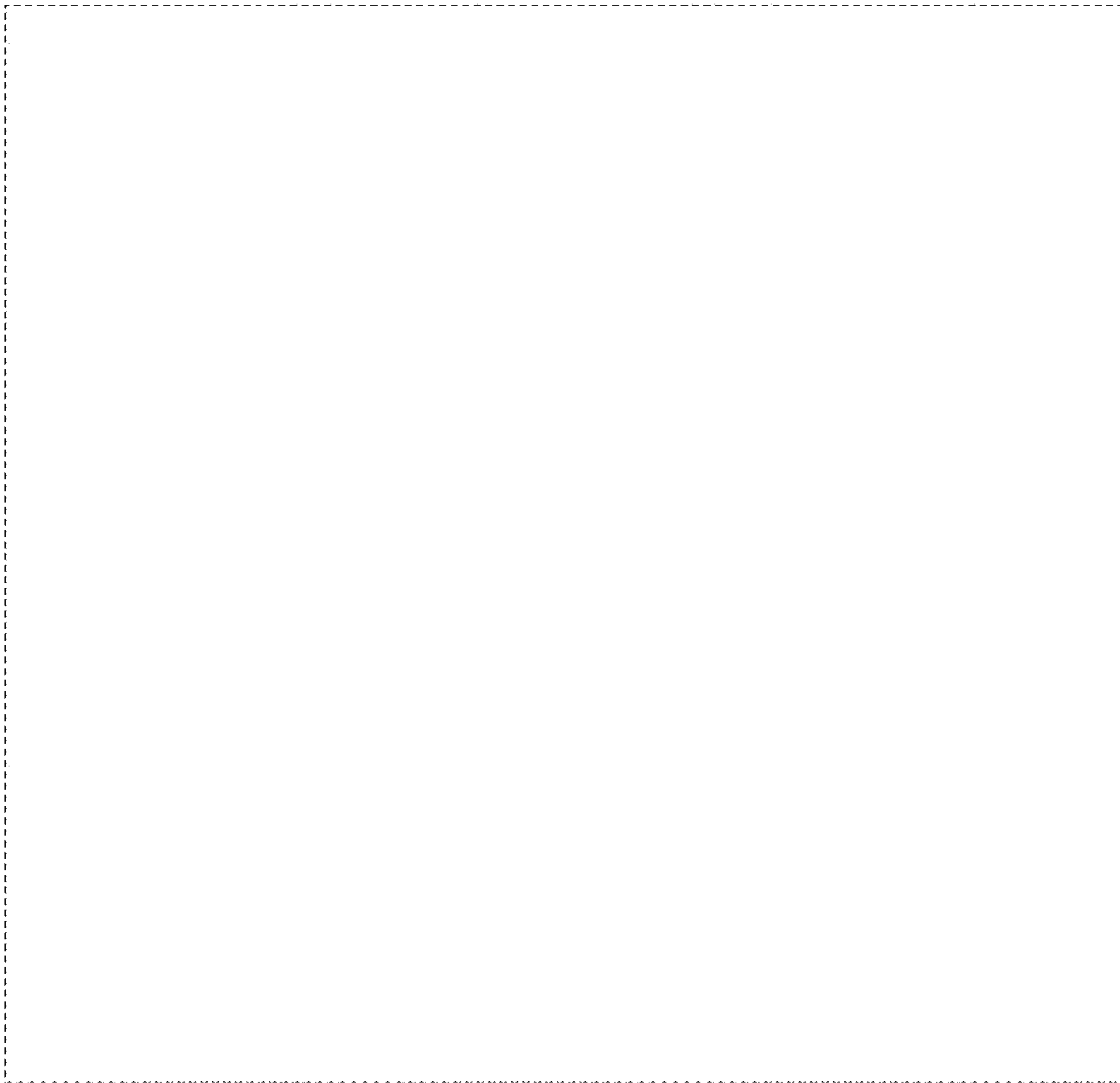


FIG.4



FIG.5

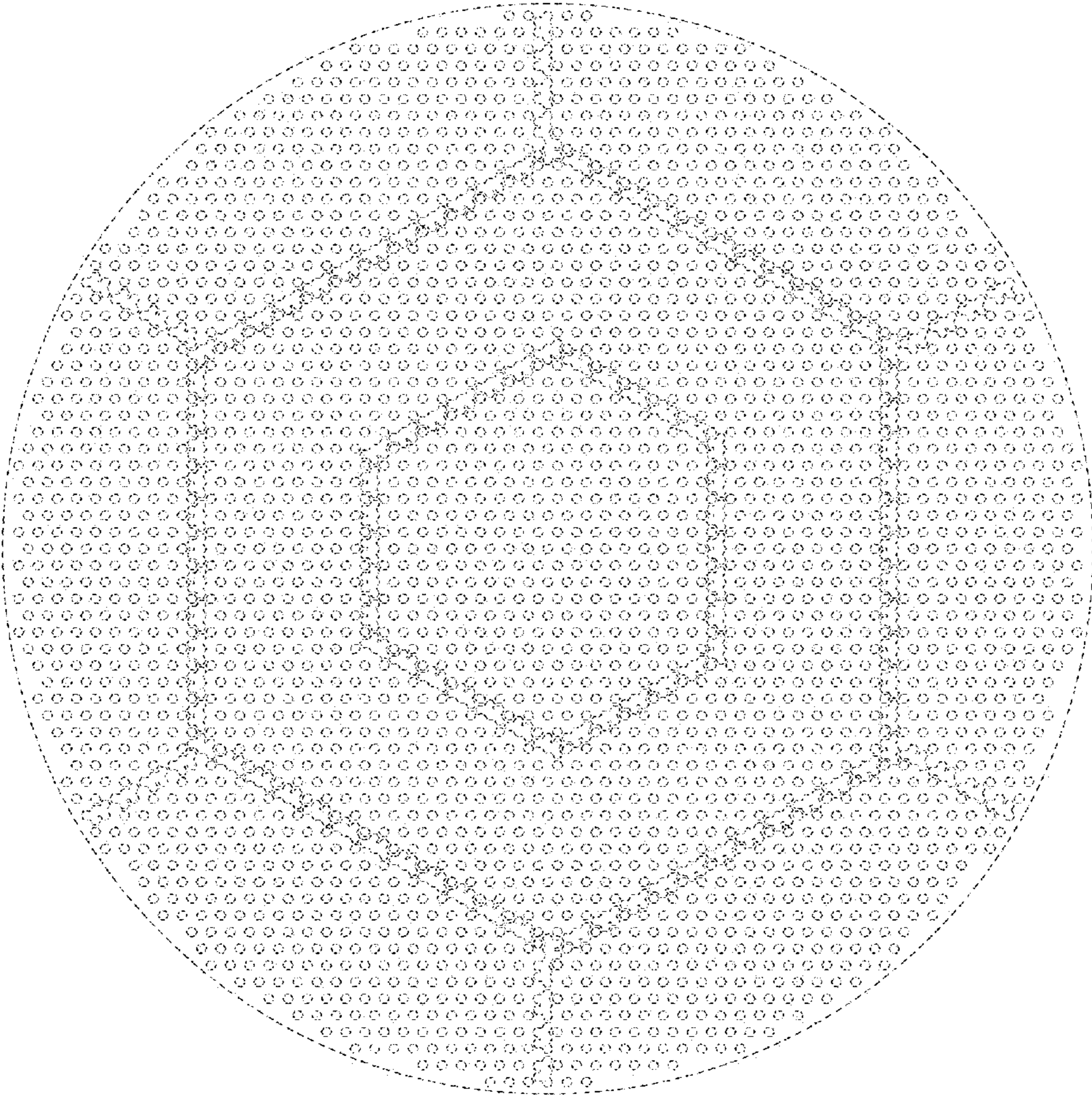


FIG.6

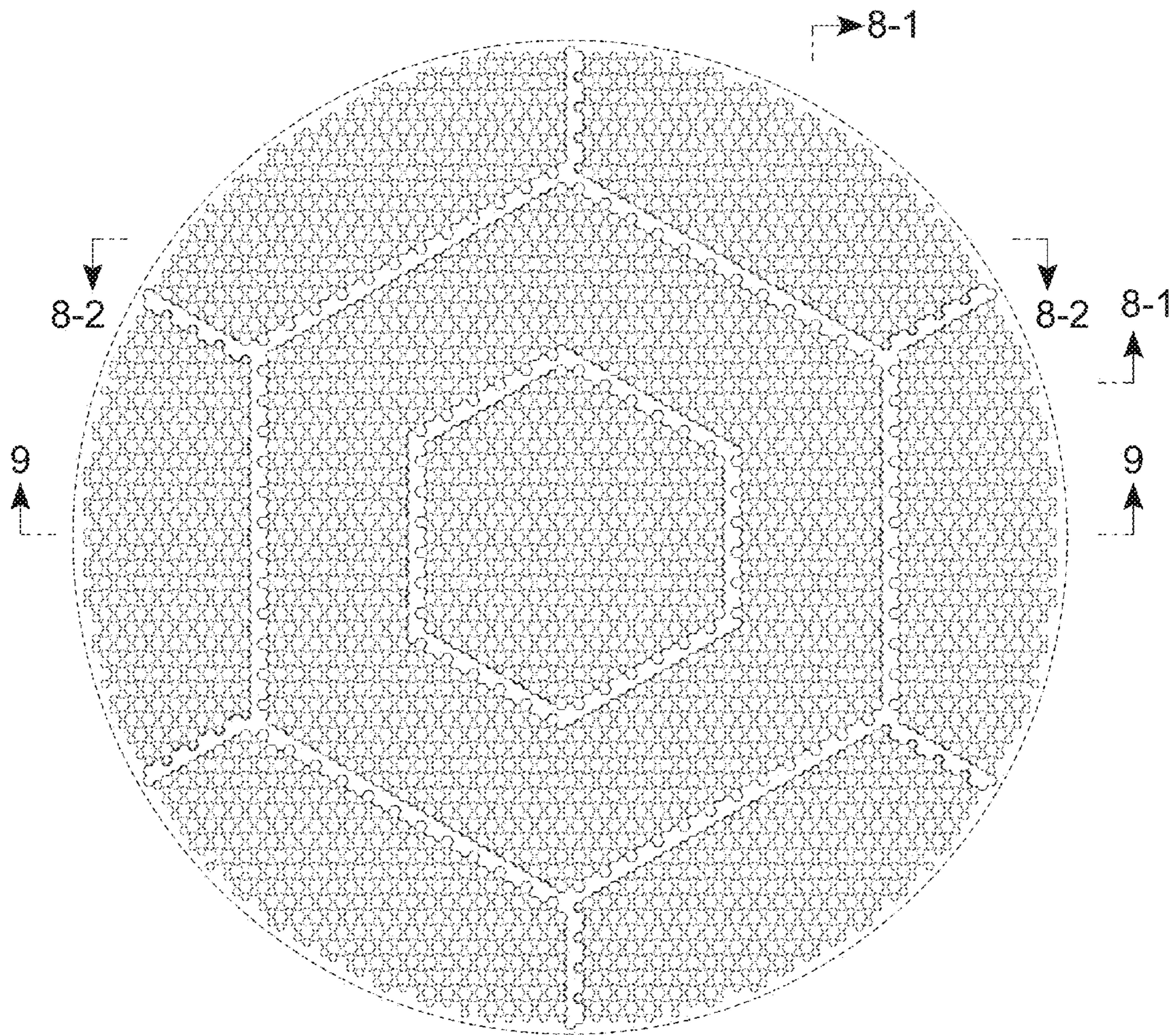


FIG.7

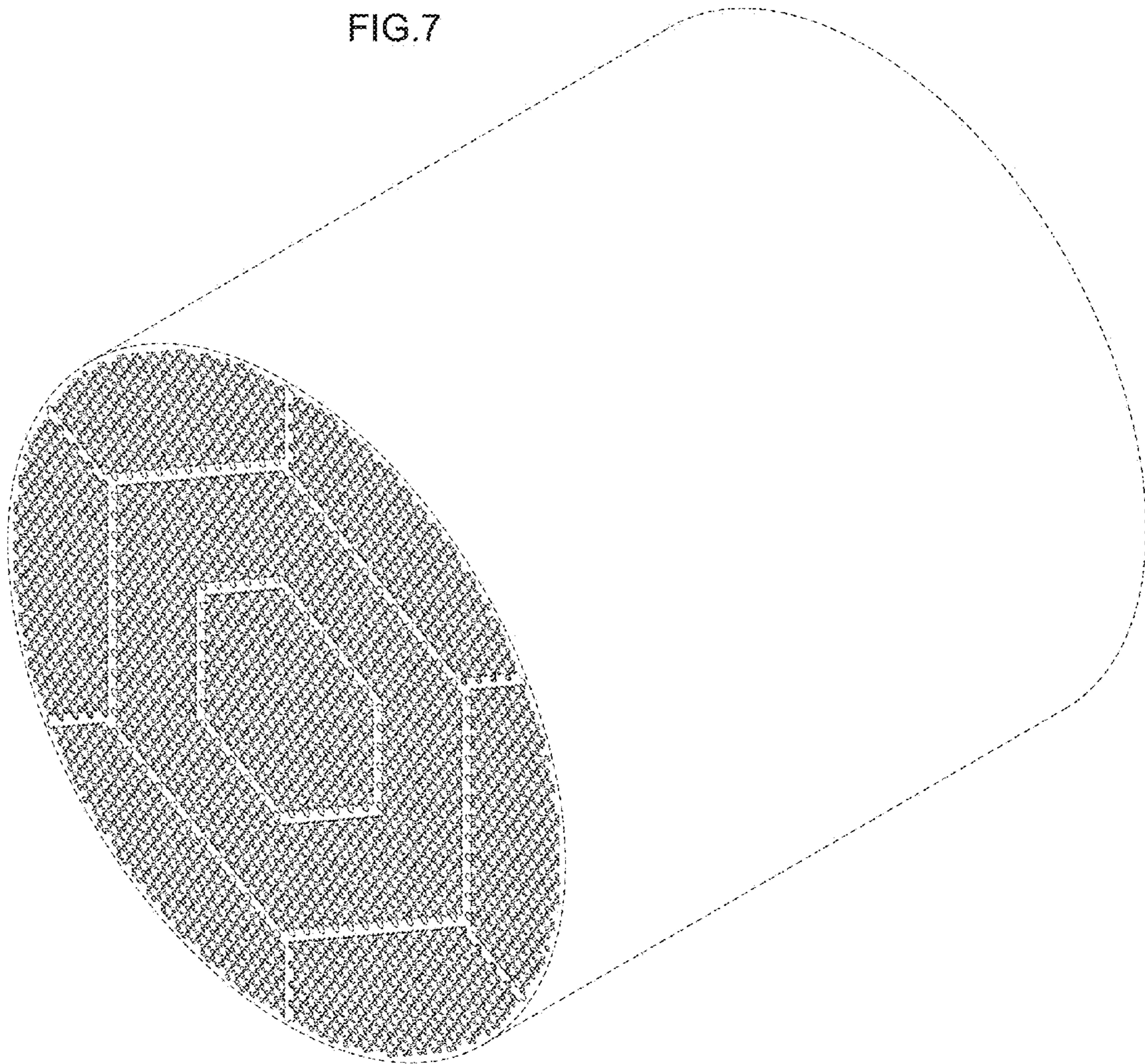


FIG.8

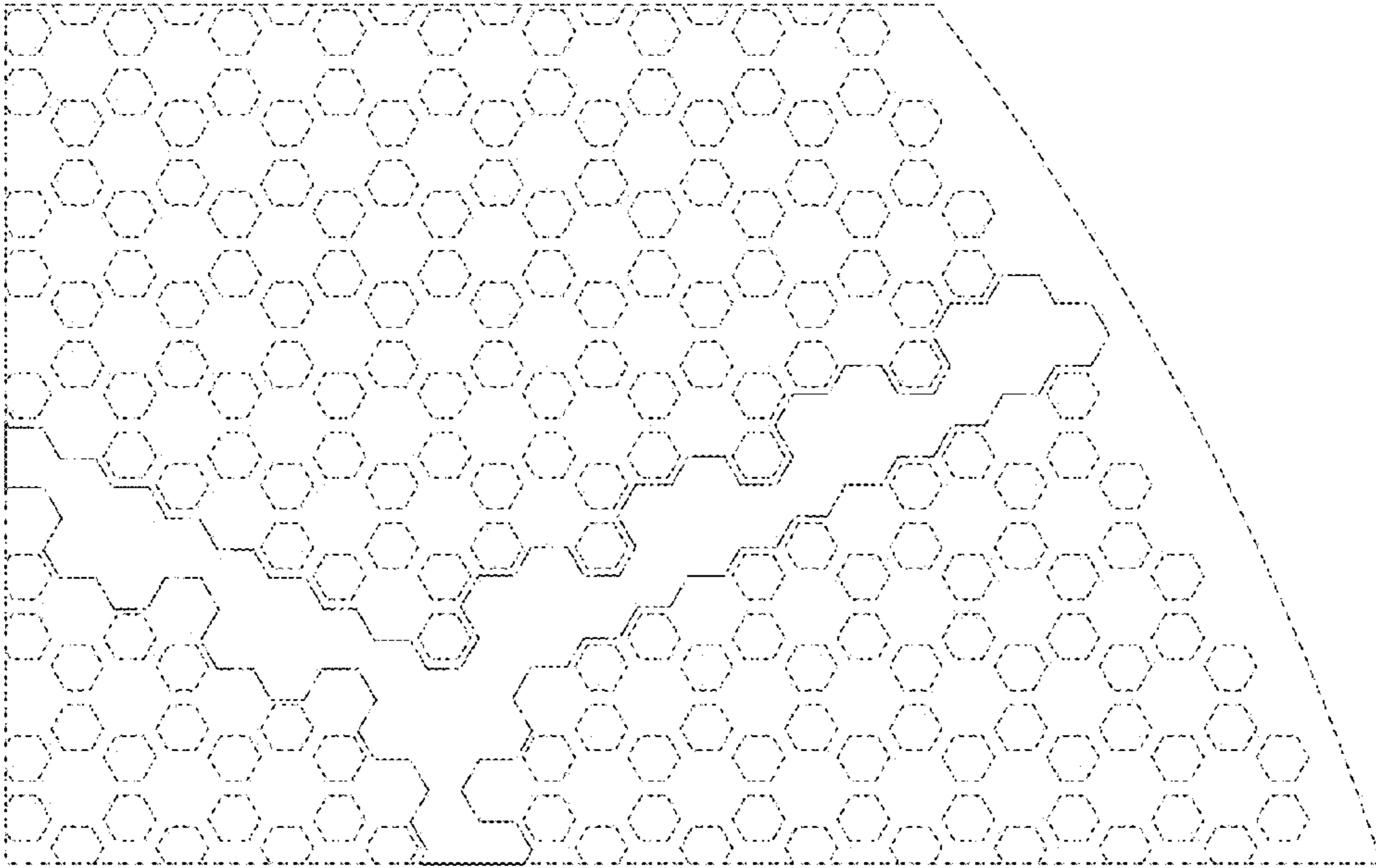


FIG. 9

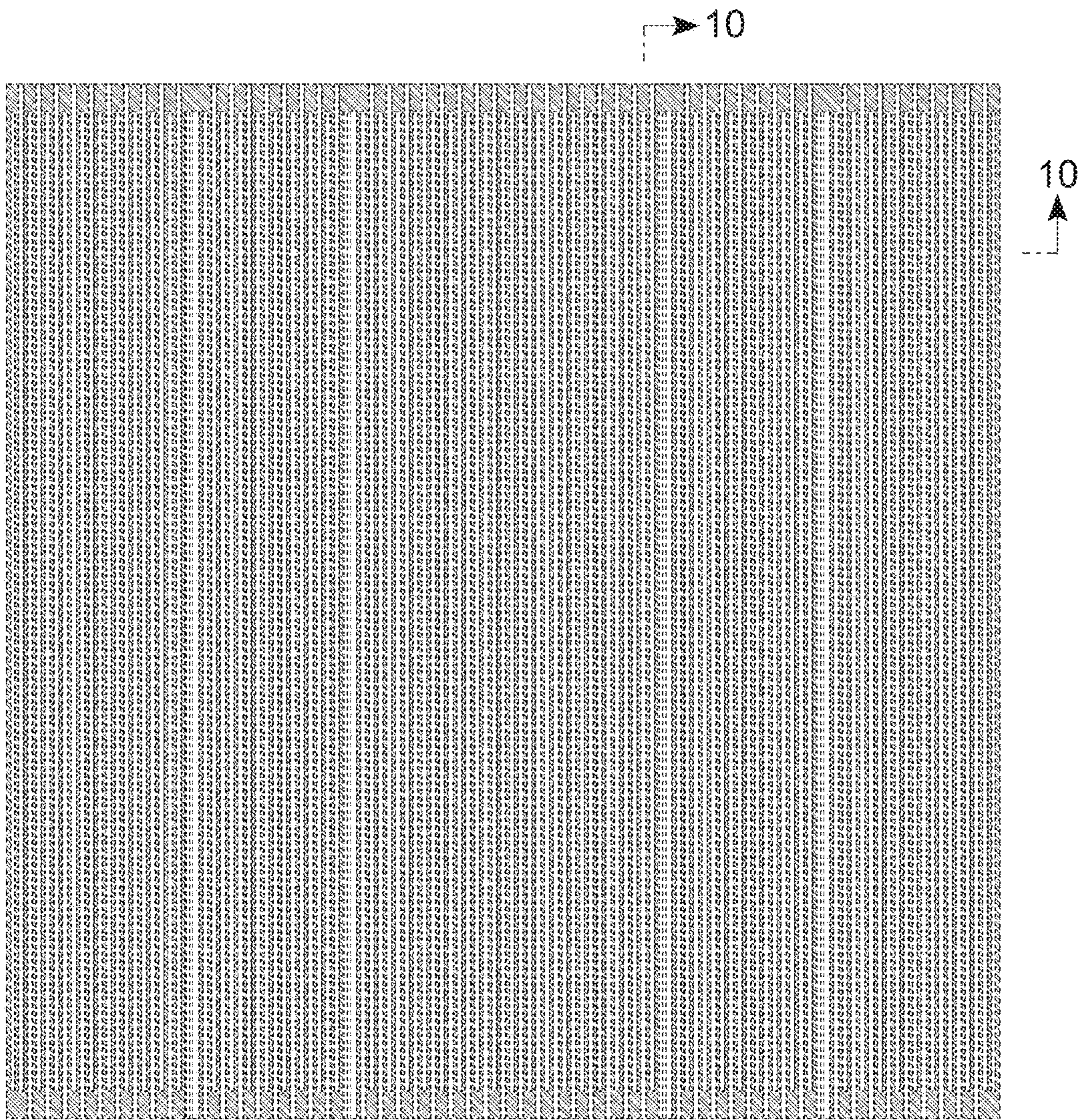


FIG.10

