



US00D935425S

(12) **United States Design Patent** (10) **Patent No.:** **US D935,425 S**
Ikejiri (45) **Date of Patent:** **** Nov. 9, 2021**

(54) **SUSCEPTOR FOR USE IN PRODUCTION OF A SEMICONDUCTOR**

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(71) Applicant: **TOYO TANSO CO., LTD.**, Osaka (JP)

(57) **CLAIM**

(72) Inventor: **Takahiro Ikejiri**, Kanonji (JP)

The ornamental design for a susceptor for use in production of a semiconductor, as shown and described.

(73) Assignee: **TOYO TANSO CO., LTD.**, Osaka (JP)

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

DESCRIPTION

(21) Appl. No.: **35/509,019**

Fig. 1.1 is a Perspective view of a susceptor showing my new design;

(22) Filed: **Apr. 4, 2019**

Fig. 1.2 is a Front view of the susceptor of Fig. 1.1;

(80) **Hague Agreement Data**

Int. Filing Date: **Apr. 4, 2019**

Int. Reg. No.: **DM/206930**

Int. Reg. Date: **Apr. 4, 2019**

Int. Reg. Pub. Date: **Apr. 10, 2020**

Fig. 1.3 is a Back view of the susceptor of Fig. 1.1;

Fig. 1.4 is a Left side view of the susceptor of Fig. 1.1;

Fig. 1.5 is a Right side view of the Susceptor of Fig. 1.1;

Fig. 1.6 is a Top view of the susceptor of Fig. 1.1;

Fig. 1.7 is a Bottom view of the susceptor of Fig. 1.1;

Fig. 1.8 is an Enlarged perspective view of the susceptor of Fig. 1.1;

(30) **Foreign Application Priority Data**

Oct. 4, 2018 (JP) 2018-021799

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

(52) **U.S. Cl.**
USPC **D13/182; D15/144**

(58) **Field of Classification Search**

USPC D13/158–177, 179, 180, 182, 199;
D10/104.1, 108; D11/143, 144, 152;
(Continued)

Fig. 1.9 is an Enlarged view of the claimed portion of the susceptor of Fig. 1.1;

Fig. 1.10 is an End view of a pocket part of the susceptor of Fig. 1.1;

Fig. 1.11 is an End view of a pocket part of the susceptor of Fig. 1.1;

Fig. 1.12 is a Cross-sectional view of the susceptor of Fig. 1.1;

Fig. 1.13 is a Cross-sectional view of the susceptor of Fig. 1.1;

Fig. 1.14 is a Cross-sectional view of the susceptor of Fig. 1.1;

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,366,830 B2 * 2/2013 Nakamura C30B 25/12
118/725
8,372,204 B2 * 2/2013 Nakamura H01L 21/67103
118/725

(Continued)

Fig. 1.15 is a Reference view of the susceptor of Fig. 1.1;

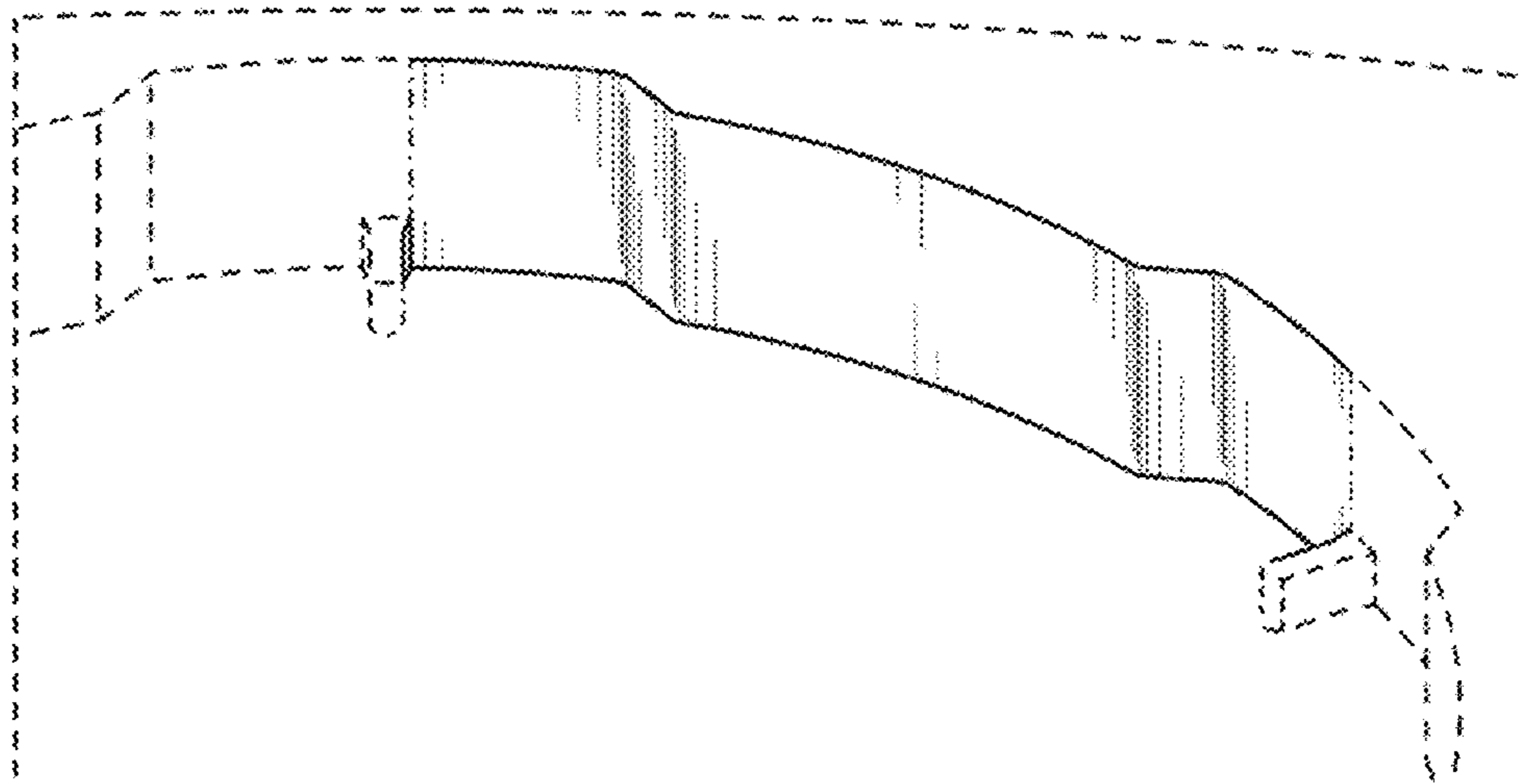
Fig. 1.16 is a Reference view showing the state of use of the susceptor of Fig. 1.1 with a wafer placed on a pocket part.

In the drawings, thin lines drawn on curved surfaces do not indicate any patterns, but indicate the shapes of stereoscopic surfaces; the broken lines in the figures are directed to environment and are for illustrative purposes only; the broken lines form no part of the claimed design; the chain lines depict only boundaries between the subject matter and the remaining parts of the claimed design.

FOREIGN PATENT DOCUMENTS

JP 2013-138224 7/2013

1 Claim, 16 Drawing Sheets



(52) **U.S. Cl.**
CPC *C23C 16/4585* (2013.01)

(58) **Field of Classification Search**
USPC D14/216, 240, 356, 509; D17/22;
D23/323, 328, 333, 335-341, 352, 357,
D23/370, 385, 386, 399, 400, 499;
D12/303, 315; D9/452, 454, 500;
D15/122, 138, 199; 118/728, 500
CPC C23C 16/4581; C23C 16/4585; C23C
16/481; H01L 21/68785; H01L 21/68728;
H01L 21/68735; H01L 21/68721
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D694,790 S * 12/2013 Matsumoto D15/144
D694,791 S * 12/2013 Matsumoto D15/144
8,801,857 B2 * 8/2014 Aggarwal H01L 21/68785
118/728
9,612,215 B2 * 4/2017 Fujita G01N 23/2258
D810,705 S * 2/2018 Krishnan D13/182
D819,580 S * 6/2018 Krishnan D13/182

* cited by examiner

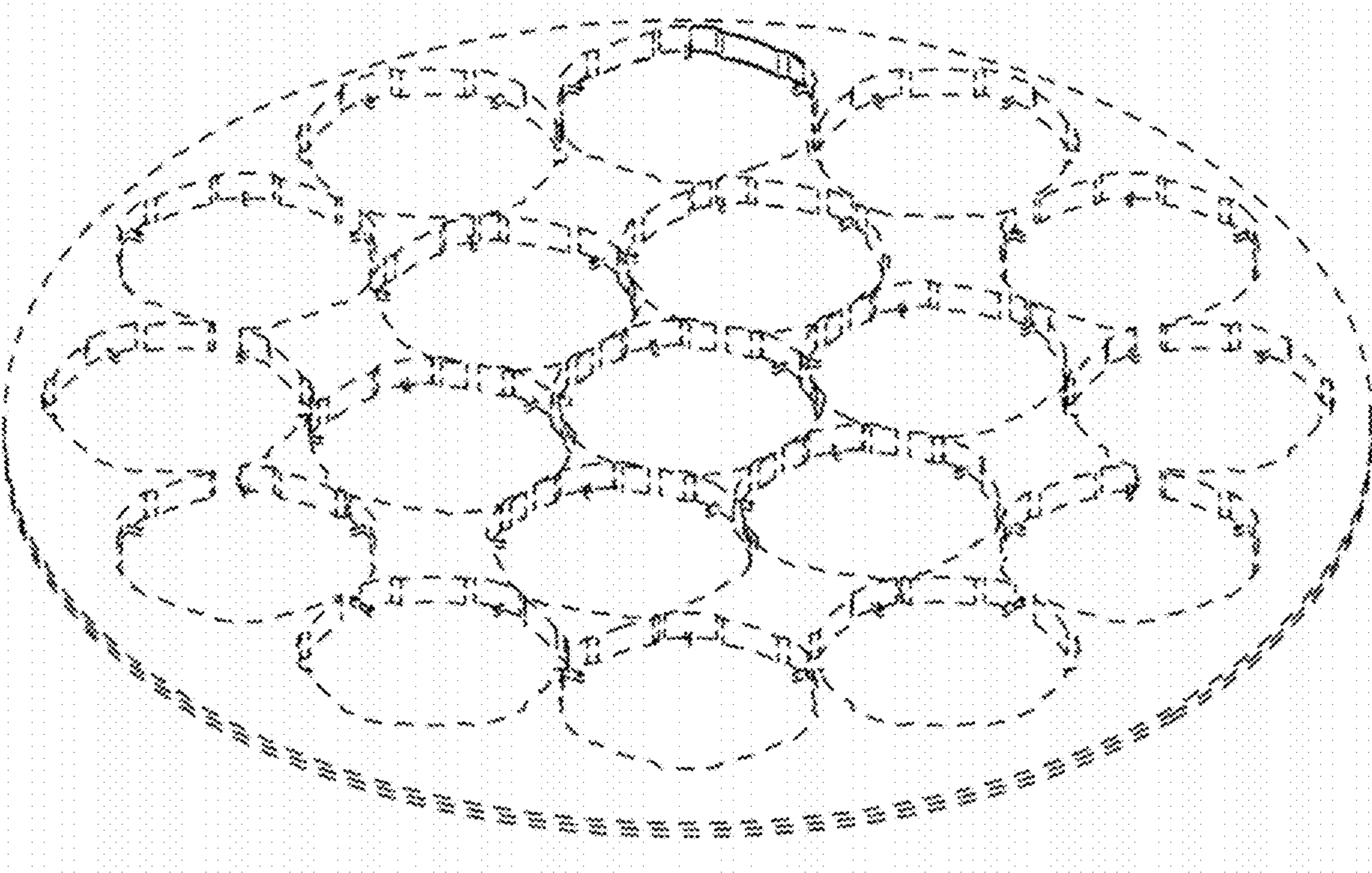


FIG. 1.1

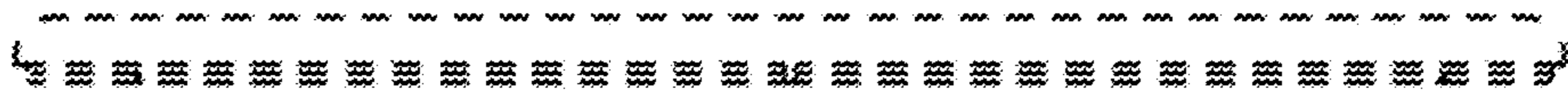


FIG. 1.2



FIG. 1.3



FIG. 1.4



FIG. 1.5

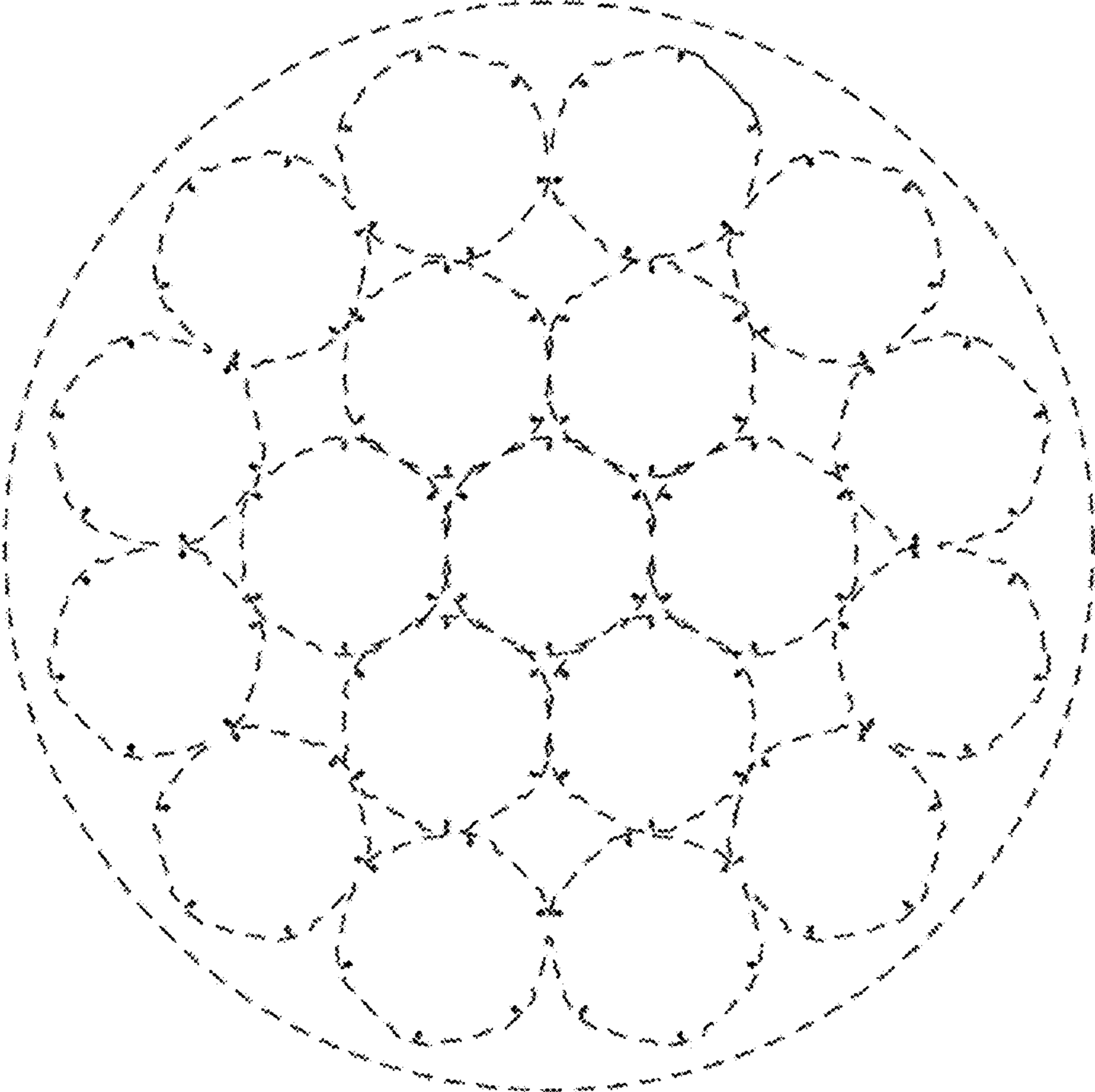


FIG. 1.6

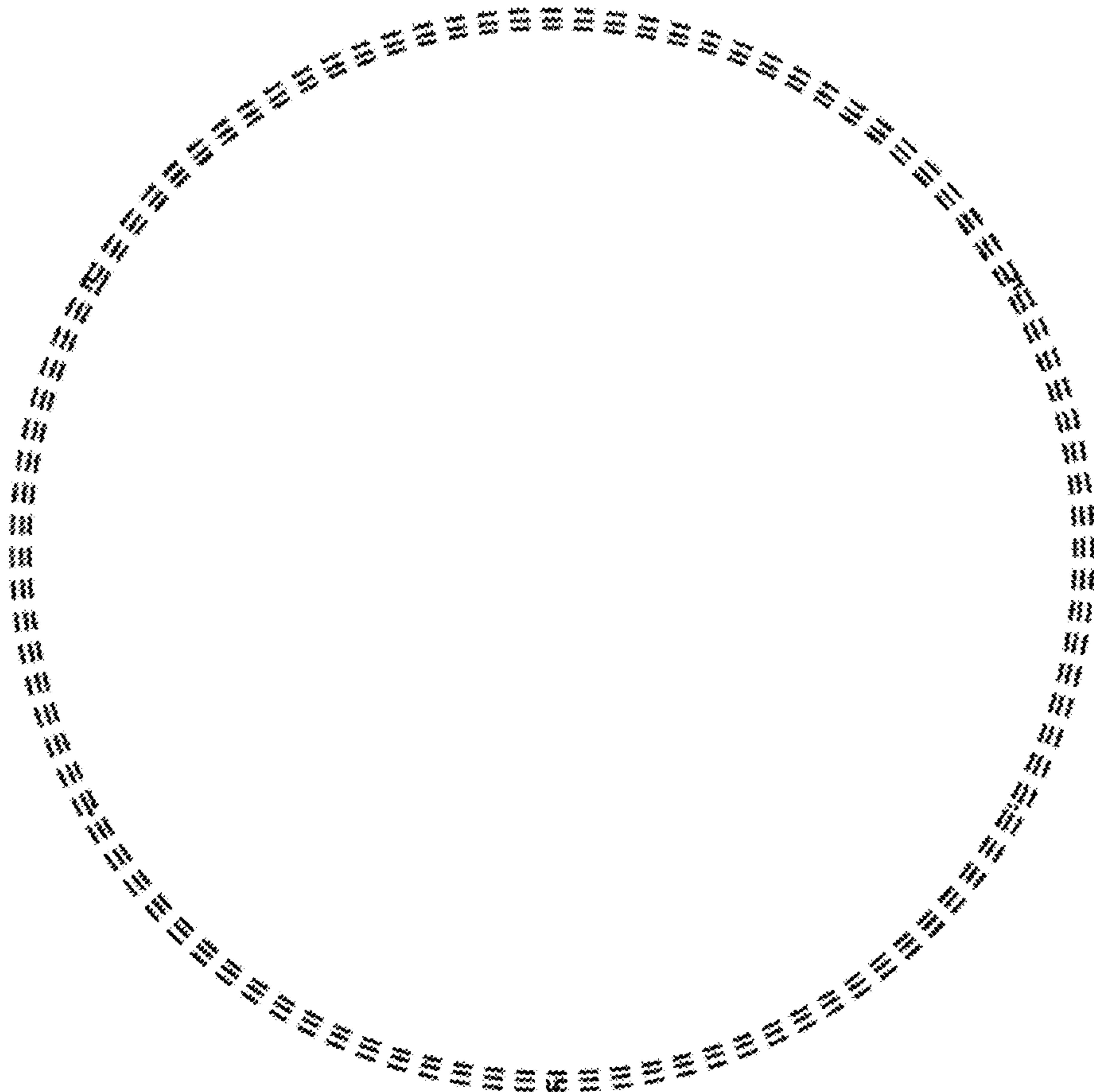


FIG. 1.7

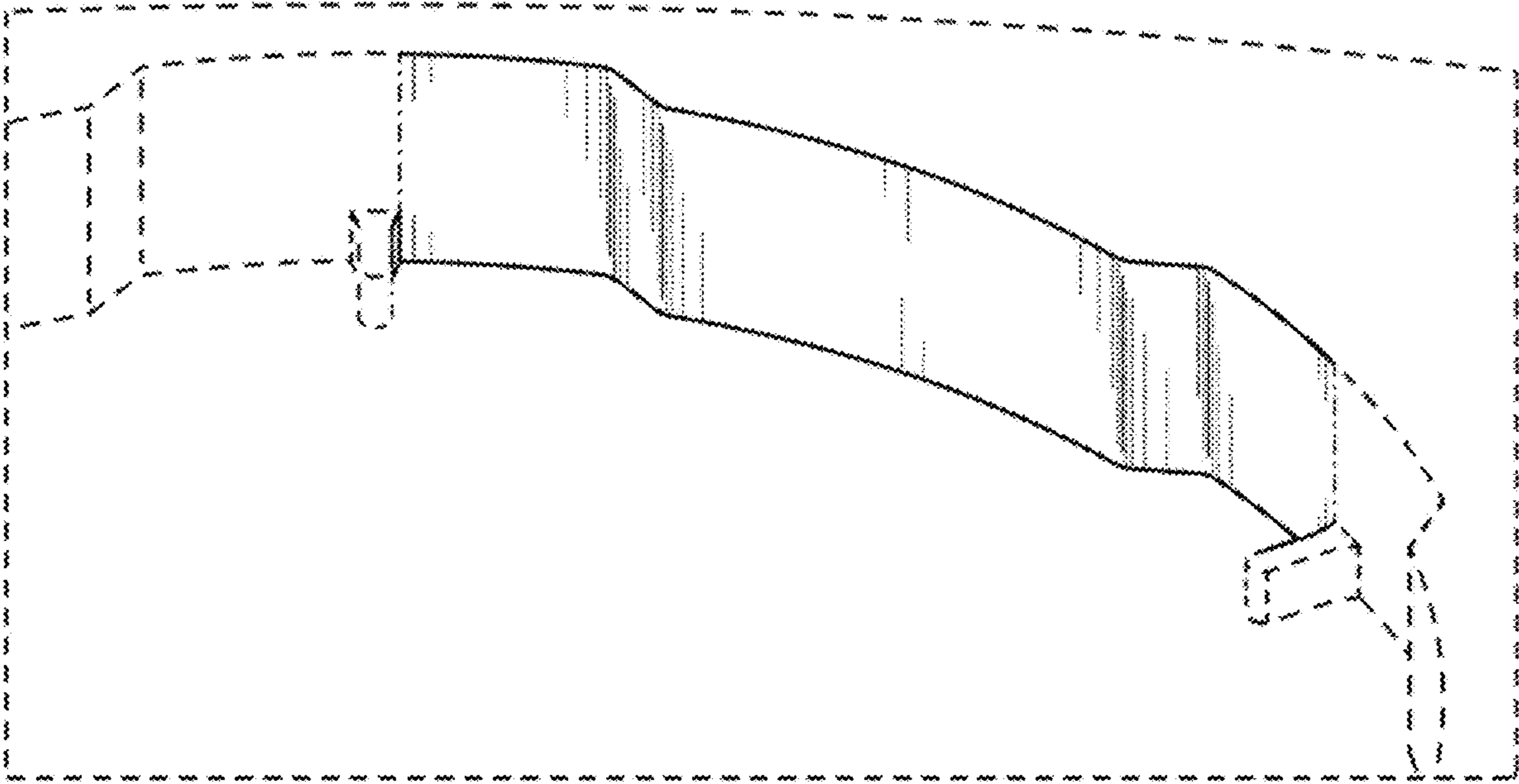


FIG. 1.8

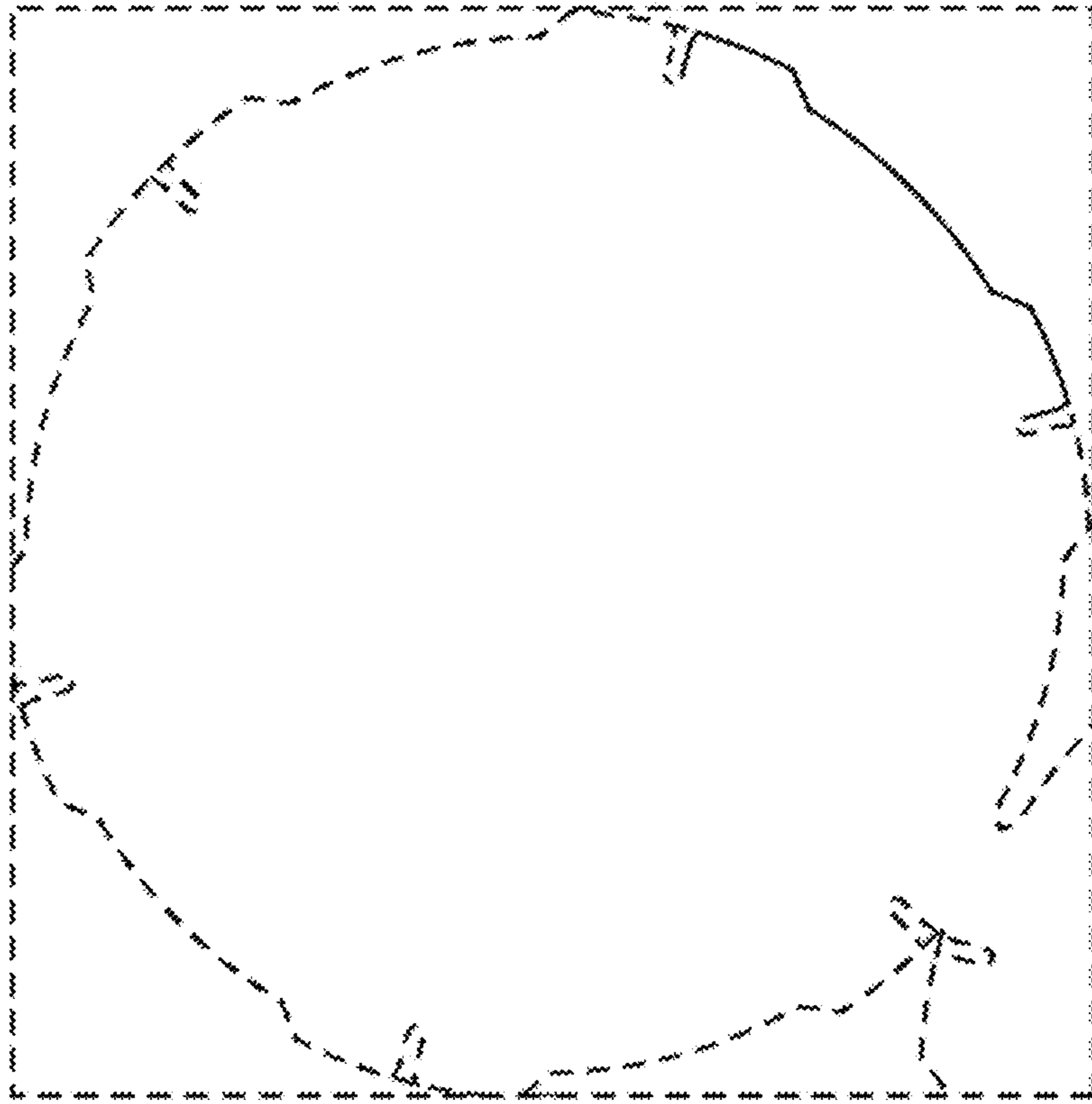


FIG. 1.9

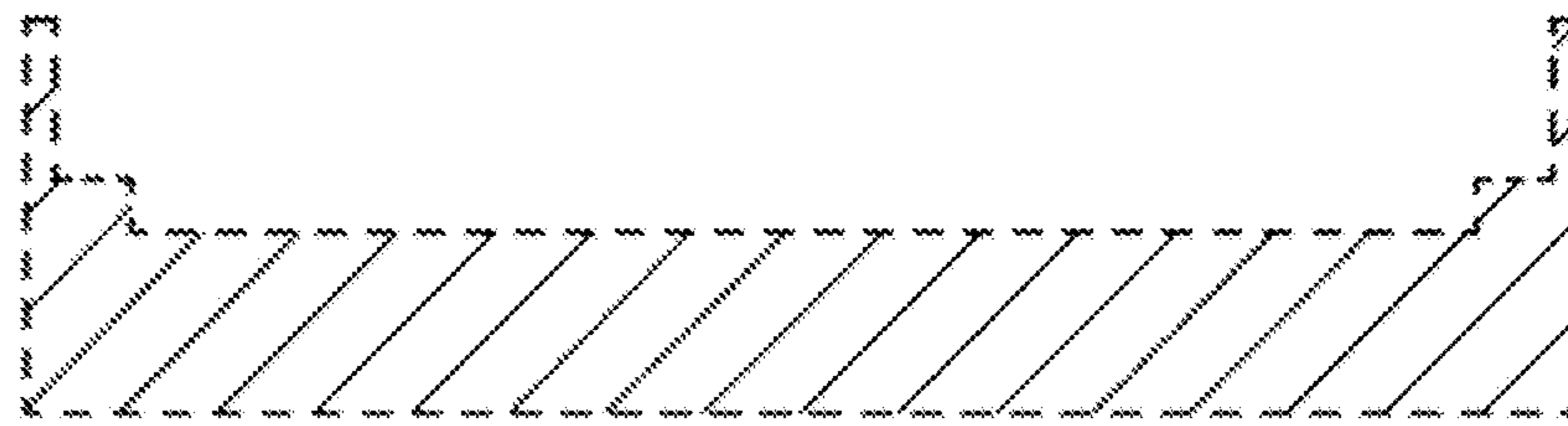


FIG. 1.10

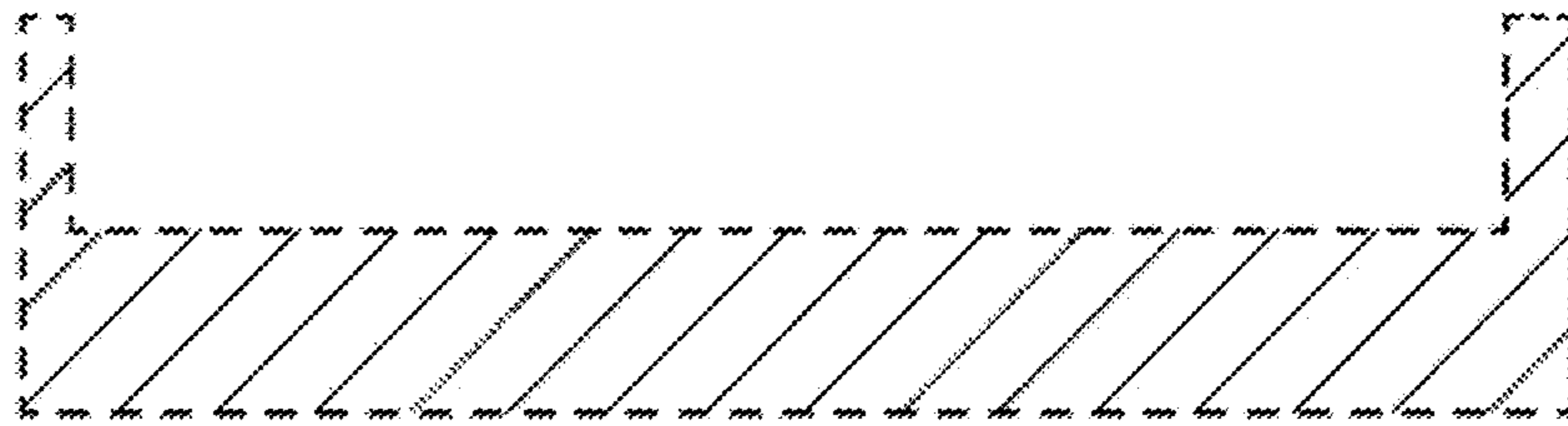


FIG. 1.11

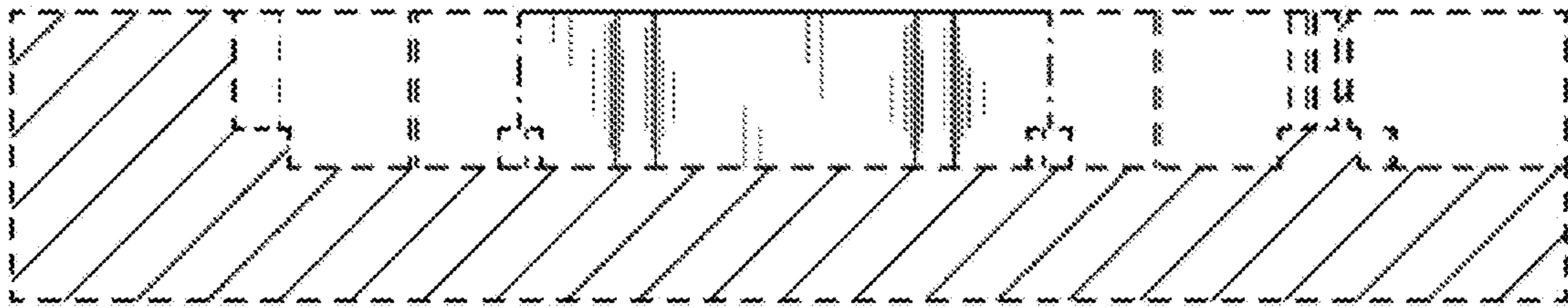


FIG. 1.12

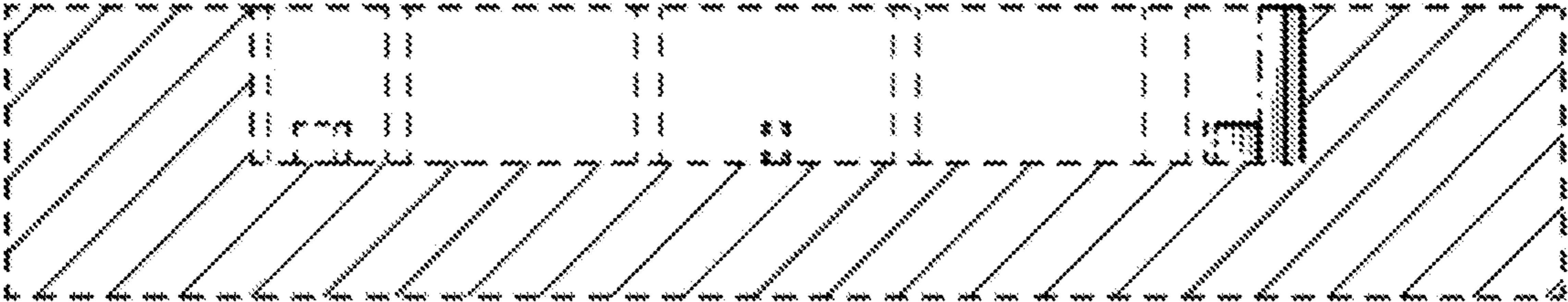


FIG. 1.13



FIG. 1.14

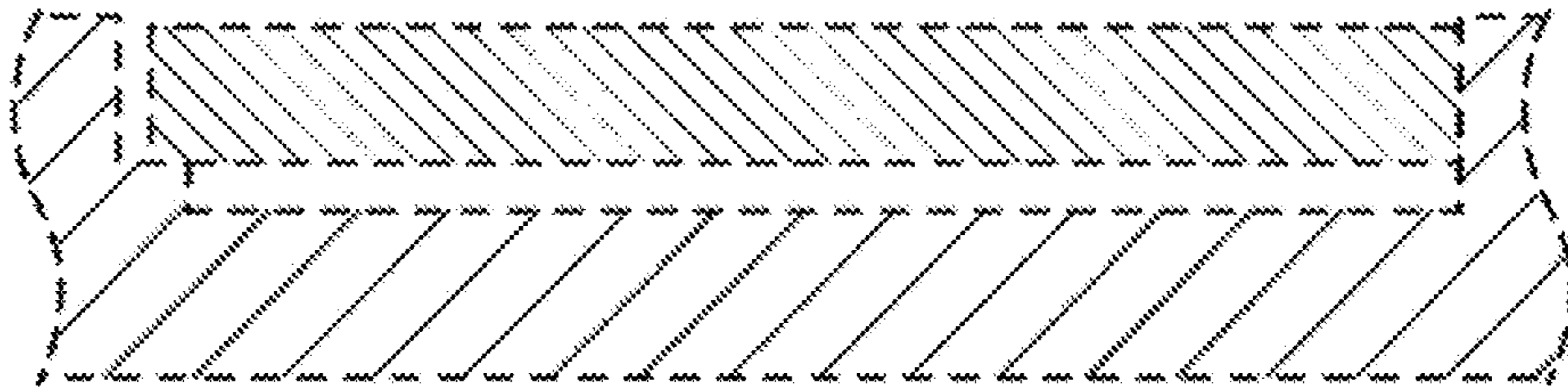


FIG. 1.15

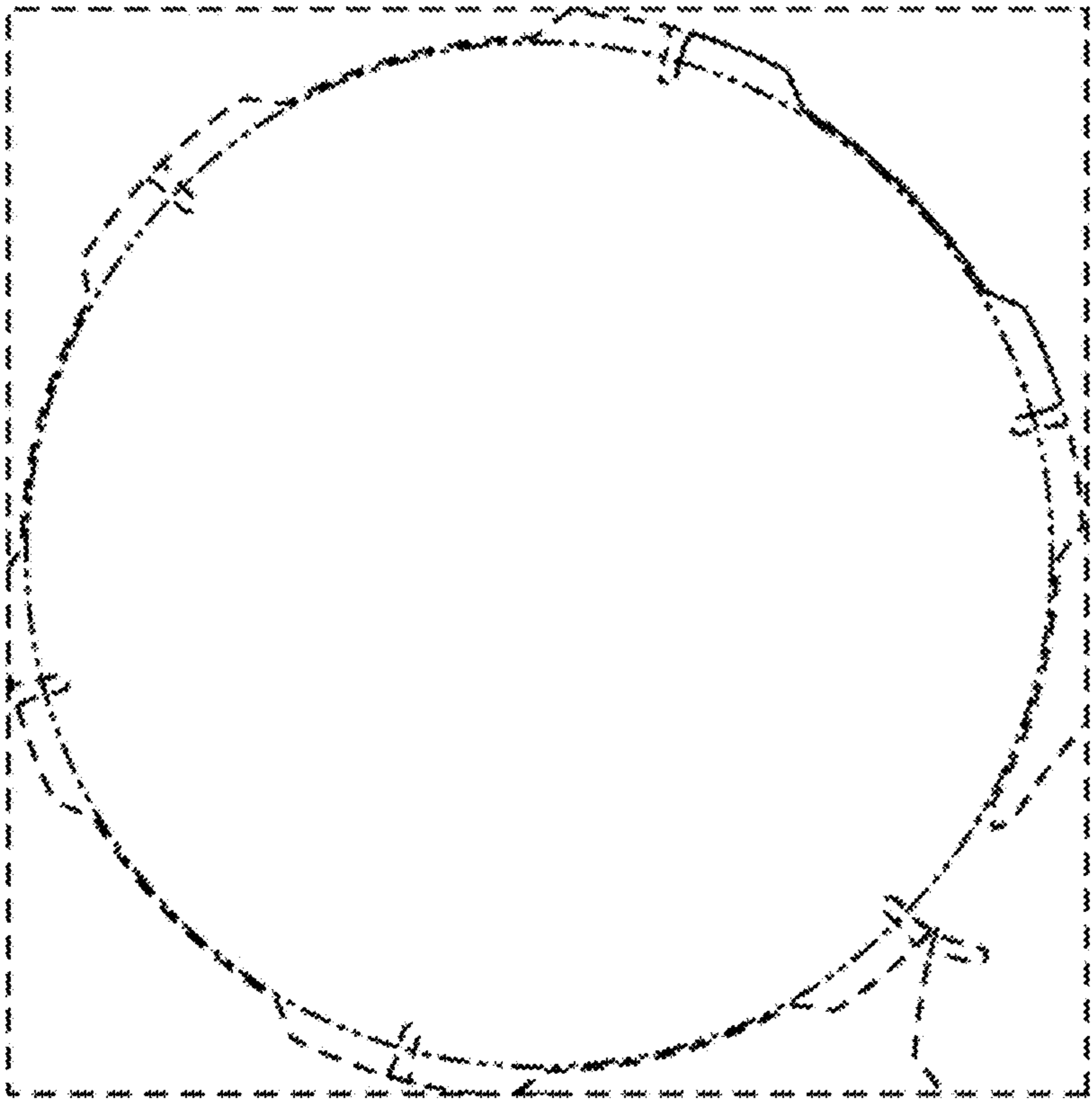


FIG. 1.16