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(12) **United States Design Patent** (10) **Patent No.:** **US D860,134 S**
Narita et al. (45) **Date of Patent:** **** Sep. 17, 2019**

(54) **ELECTRODE FOIL FOR CAPACITOR**

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

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(51) **LOC (12) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/121**; D13/182

(58) **Field of Classification Search**
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118/500, 728, 729; 156/345.51, 345.52,
156/345.53; D5/53, 60
CPC H01L 21/68707; H01L 21/68721; H01L
21/68728; H01L 21/68735; H01L
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21/67309; C23C 16/45565; C23C
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H01M 10/0436

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D268,961 S * 5/1983 Erickson D5/53
D414,345 S * 9/1999 Barnholtz D5/53

D490,988 S * 6/2004 Delaney D5/53
D510,327 S * 10/2005 Smith D13/182
D516,821 S * 3/2006 Wu D5/53
D572,018 S * 7/2008 Bridges D5/30
D577,691 S * 9/2008 Ohsawa D13/182
D615,927 S * 5/2010 Kuriki D13/133
8,076,027 B2 * 12/2011 Honda H01M 2/16
29/623.5

(Continued)

FOREIGN PATENT DOCUMENTS

JP 2013-153024 A 8/2013

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(57) **CLAIM**

The ornamental design for an electrode foil for capacitor, as shown and described.

DESCRIPTION

FIG. 1 is a front elevational view of an electrode foil for capacitor showing our new design;

FIG. 2 is a top plan view thereof;

FIG. 3 is a right side elevational view thereof;

FIG. 4 is a left side elevational view thereof;

FIG. 5 is a rear elevational view thereof; and

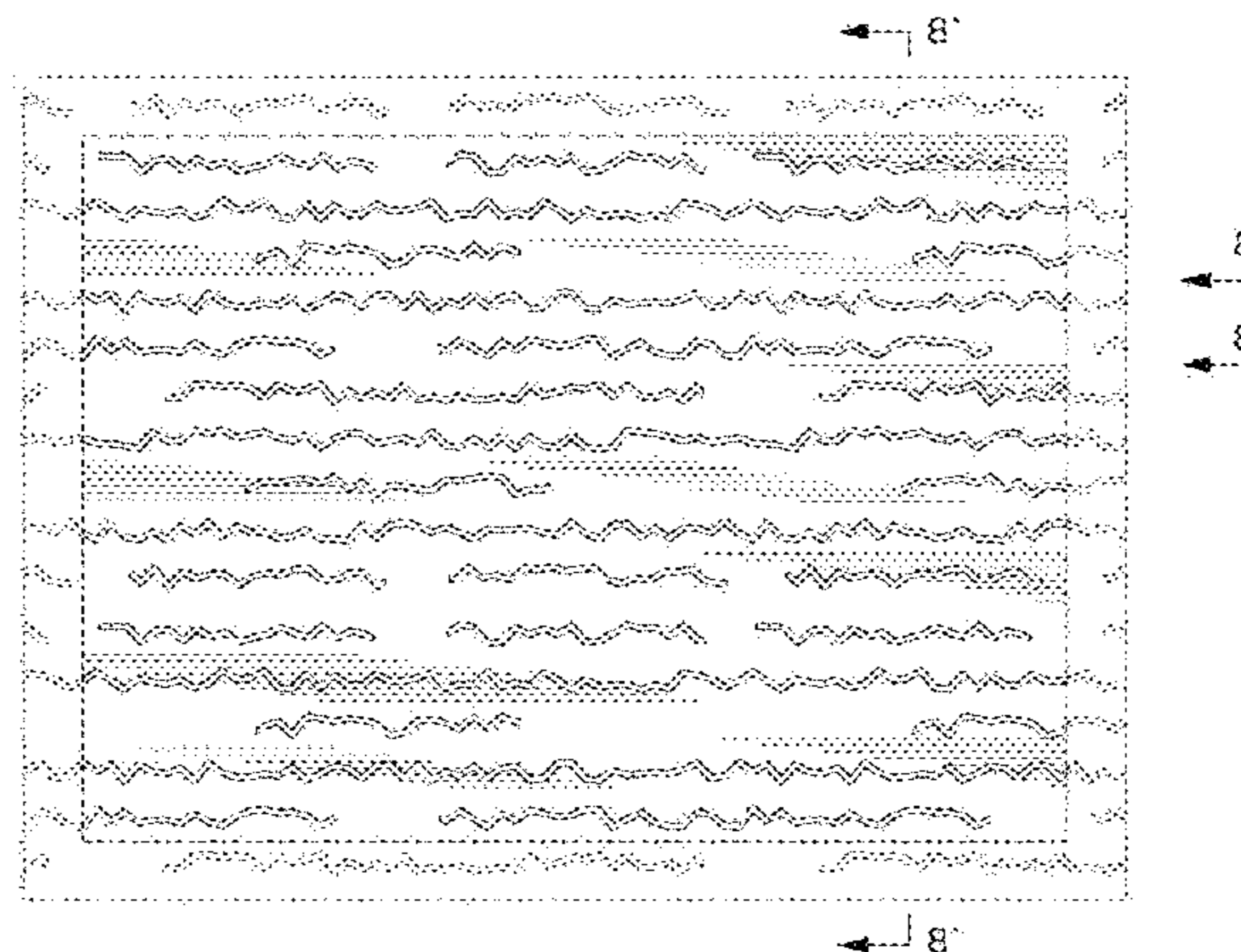
FIG. 6 is a bottom plan view thereof.

FIG. 7 is a partially enlarged top plan view thereof taken along lines 7-7 and 7'-7' of FIG. 2; and,

FIG. 8 is a partially enlarged cross sectional view thereof taken along lines 8-8 and 8'-8' of FIG. 7.

The broken lines shown represent portions of the electrode foil for capacitor that form no part of the claim. Where the dot-dash broken lines about the shaded surface it is understood that those broken lines represent an unclaimed boundary between claimed and unclaimed surfaces. None of the broken lines form any part of the claimed design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

8,530,081 B2 * 9/2013 Hayashida H01M 4/0404
429/122
D696,029 S * 12/2013 Seyler D5/1
D701,182 S * 3/2014 Plant D13/182
8,986,882 B2 * 3/2015 Ito H01M 4/66
427/58
D725,916 S * 4/2015 Haverfield D5/60
D818,721 S * 5/2018 Delaney D5/53
2002/0149902 A1 * 10/2002 Yamazaki H01G 9/055
361/509
2006/0076243 A1 * 4/2006 Aoyama C25D 5/44
205/153
2006/0134501 A1 * 6/2006 Lee H01M 8/0204
429/457

* cited by examiner

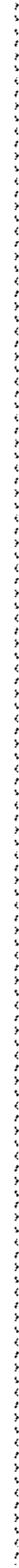


FIG. 1

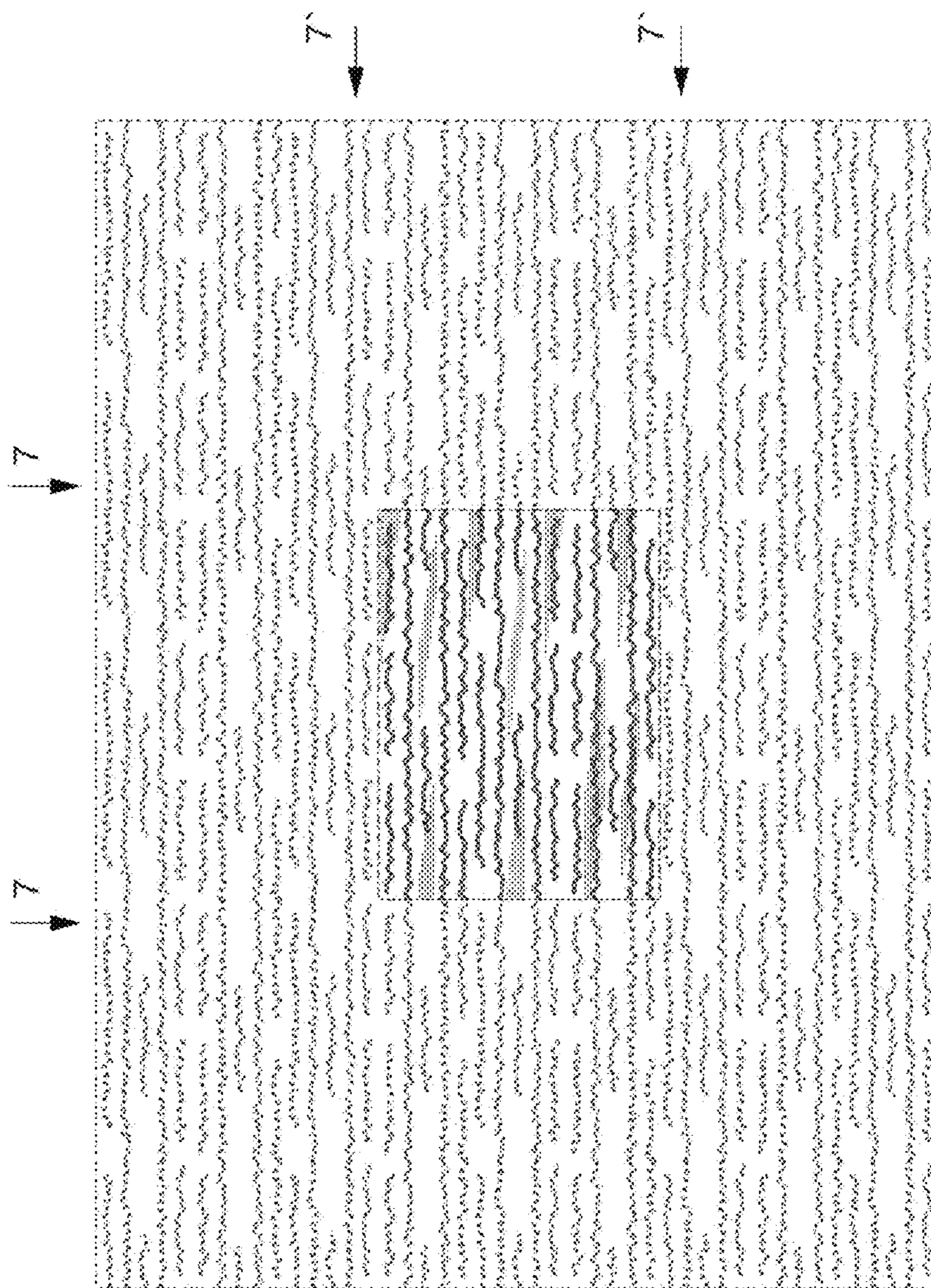


FIG. 2

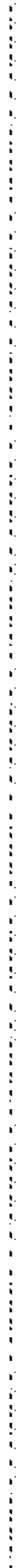


FIG. 3



FIG.4



FIG. 5

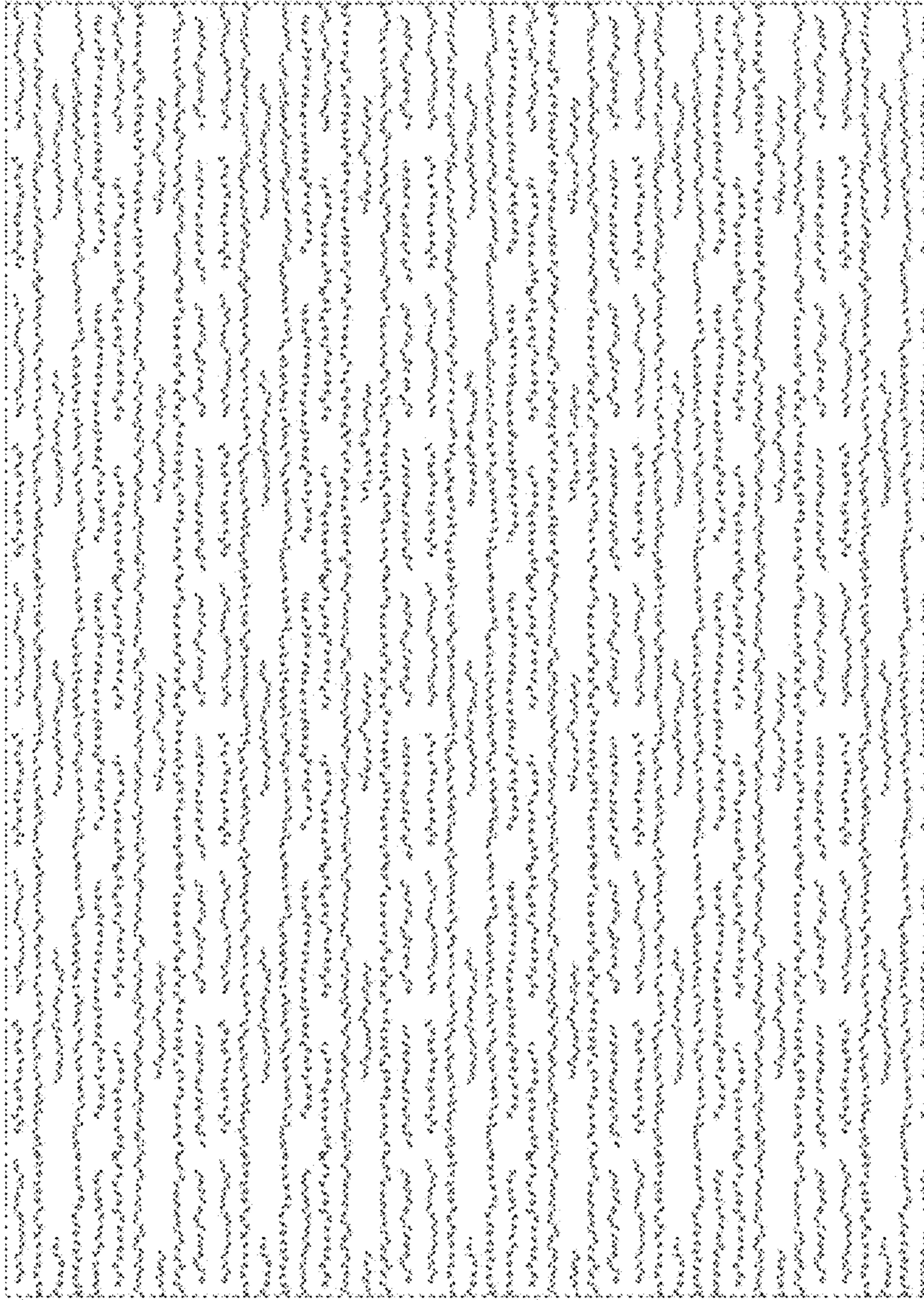


FIG.6

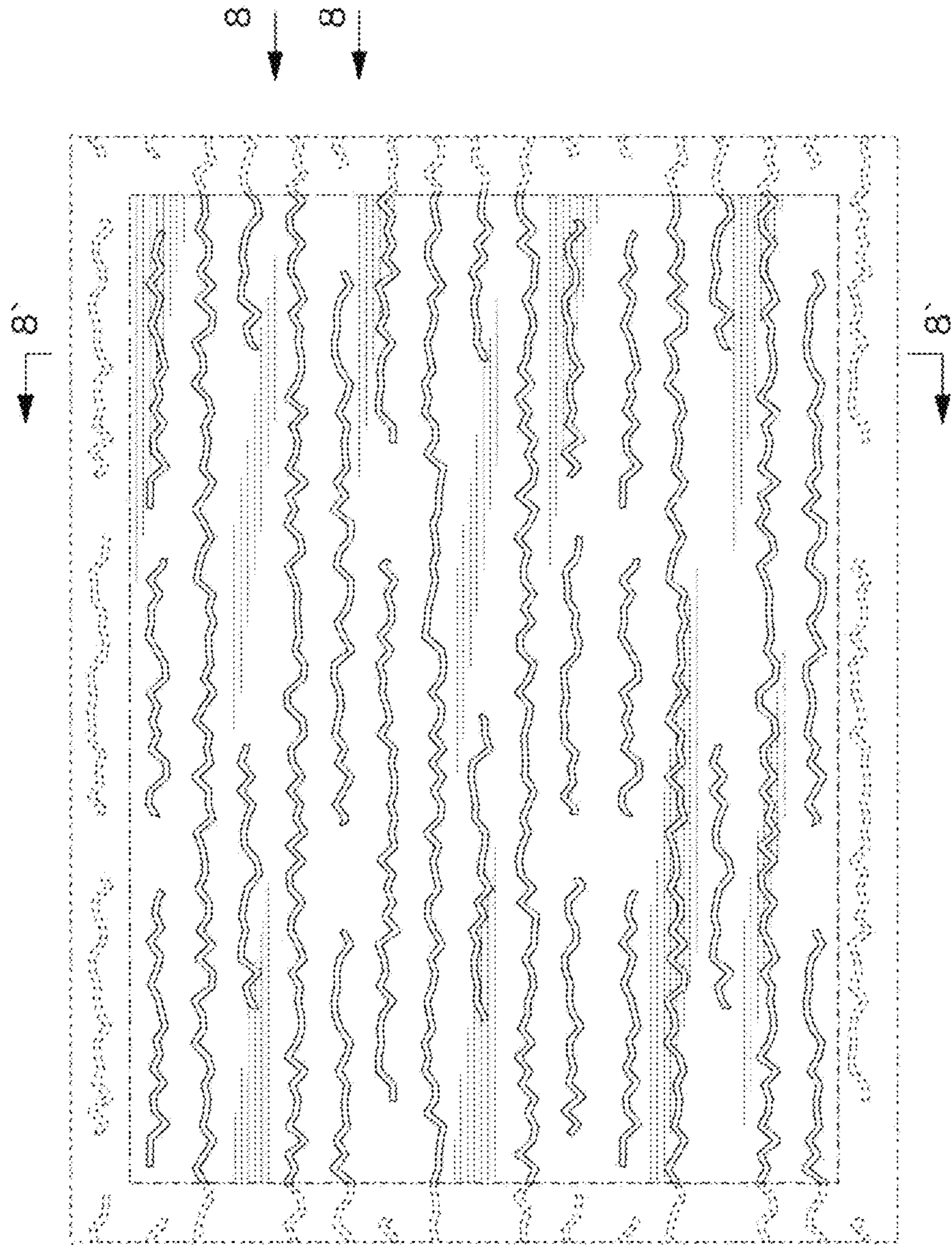


FIG. 7

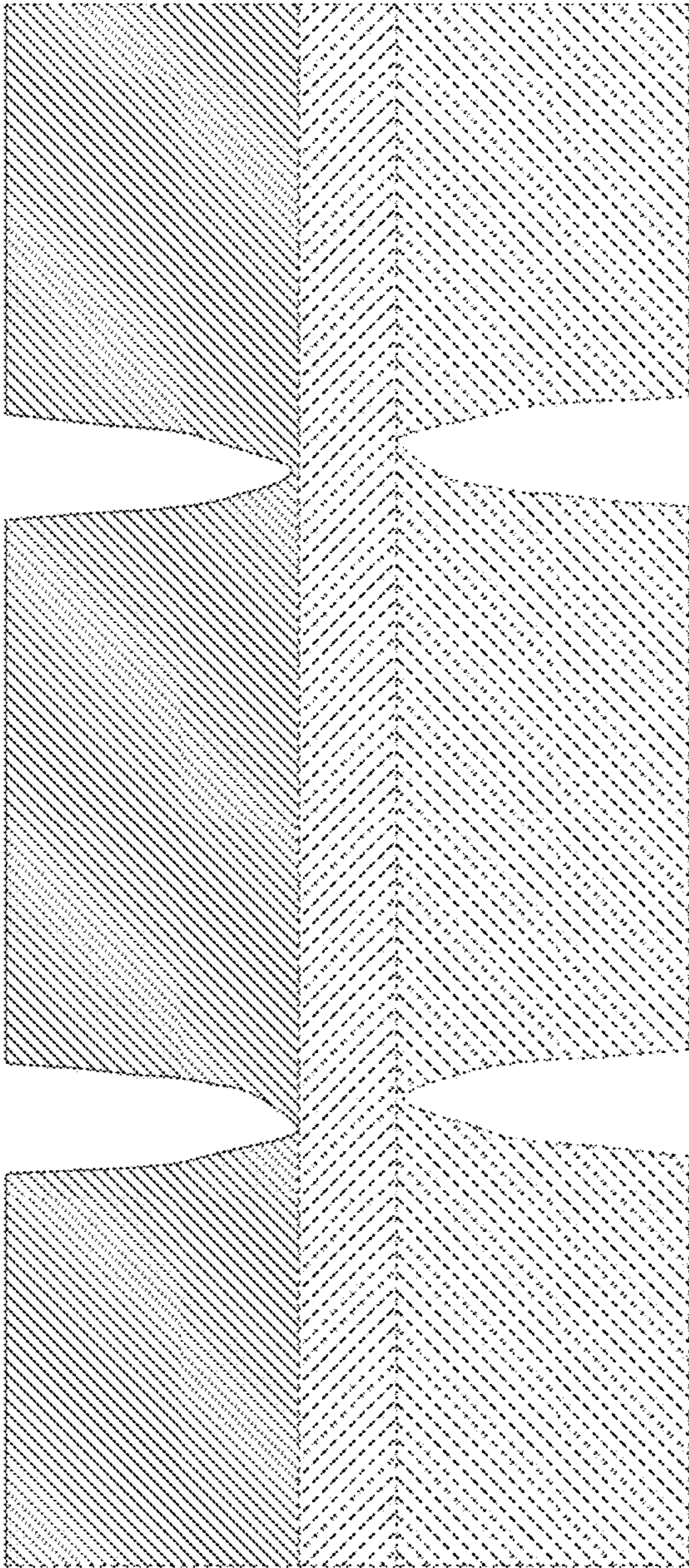


FIG.8