



US00D861839S

(12) **United States Design Patent** (10) **Patent No.:** **US D861,839 S**
Sakae (45) **Date of Patent:** **** Oct. 1, 2019**

(54) **HEAT EXCHANGER TUBE**
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(73) Assignee: **Kobe Steel, Ltd.**, Kobe-shi (JP)
(**) Term: **15 Years**

2002/0000312 A1* 1/2002 Brand F28F 13/187
165/179
2010/0263161 A1* 10/2010 Lee A47L 5/362
15/347
2013/0062041 A1* 3/2013 Sakae B21C 3/04
165/154
2017/0221383 A1* 8/2017 Karol A63H 33/042
2017/0292053 A1* 10/2017 Zaggl C09K 5/14
2018/0030889 A1* 2/2018 Yoshizawa F01B 1/10

(21) Appl. No.: **29/545,337**
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FOREIGN PATENT DOCUMENTS

JP 05-164496 6/1993
RU 85319 5/2013

(30) **Foreign Application Priority Data**

* cited by examiner

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Primary Examiner — T Chase Nelson

(51) **LOC (12) Cl.** **23-03**

Assistant Examiner — Ania Aman

(52) **U.S. Cl.**

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USPC **D23/323**; D23/341

Maier & Neustadt, L.L.P.

(58) **Field of Classification Search**

USPC D23/314, 318, 322, 323, 332, 341;
D15/4, 6

(57) **CLAIM**

CPC F28F 1/16; F28F 1/18; F28F 1/12; F28F
1/105; F28F 1/10; F28F 2255/16; F28F
1/20; B23P 15/26; B29C 47/908; F28D
1/00; Y10T 29/4938; Y10T 29/49378;
Y10T 29/49382; Y10T 29/49385

The ornamental design for a heat exchanger tube, as shown
and described.

See application file for complete search history.

DESCRIPTION

(56) **References Cited**

U.S. PATENT DOCUMENTS

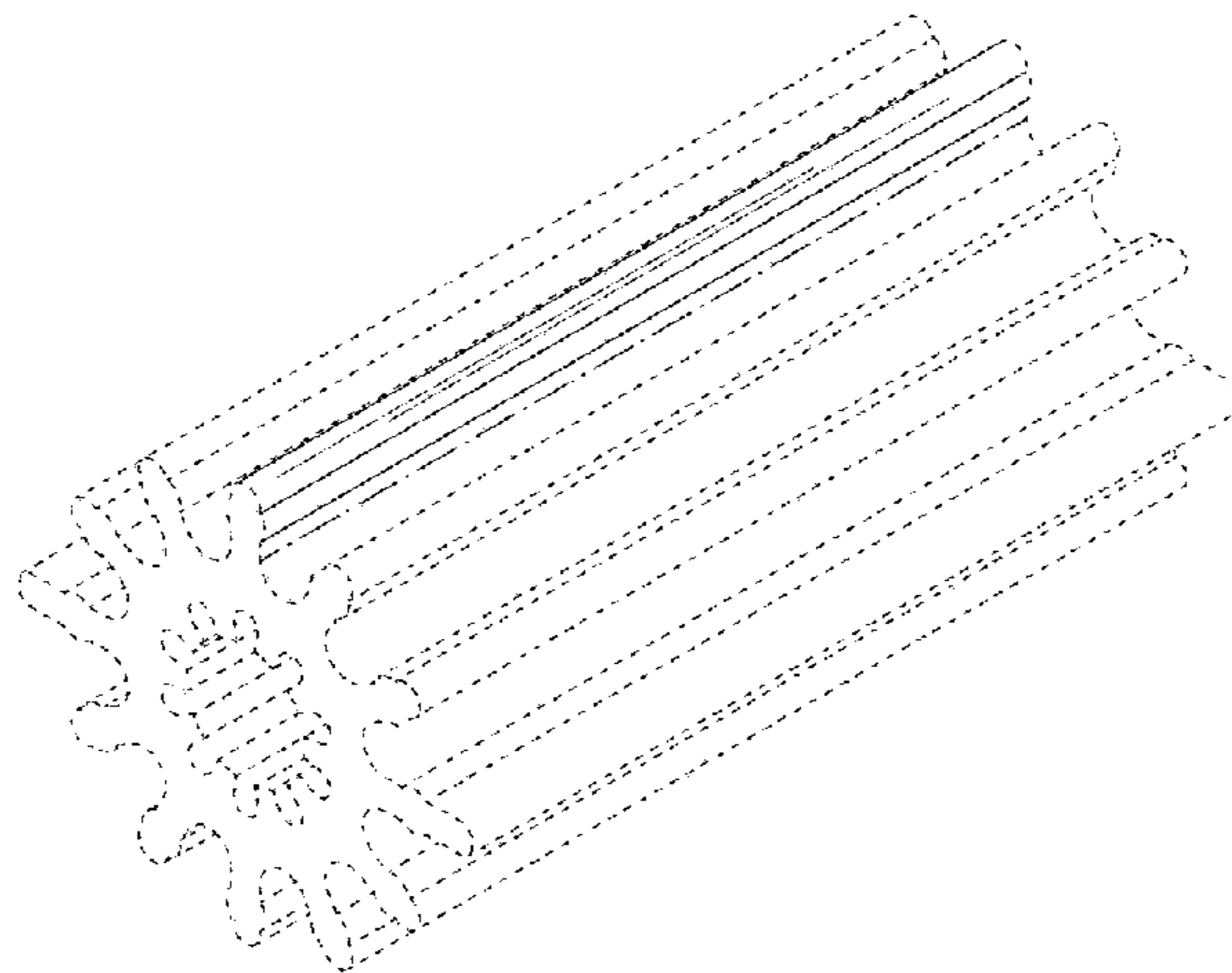
1,804,465 A * 5/1931 Govers F28F 1/16
165/177
3,282,335 A * 11/1966 De Haller F28F 1/16
165/181
4,215,454 A * 8/1980 Anthony B23K 1/14
29/890.046
6,216,675 B1 * 4/2001 Bennett B60K 15/03006
123/514
D816,136 S * 4/2018 Karol D15/148

FIG. 1 is a perspective view of a heat exchanger tube;
FIG. 2 is a front view thereof, the opposite side being an
identical image of the side shown herein;
FIG. 3 is a left side view thereof, the opposite side being an
identical image of the side shown herein; and,
FIG. 4 is a top view thereof.

In the drawings, the broken lines depict portions of the heat
exchanger tube that are environmental subject matter only
and form no part of the claimed design.

The dashed lines show a boundary between the claimed
design and unclaimed portions.

1 Claim, 3 Drawing Sheets



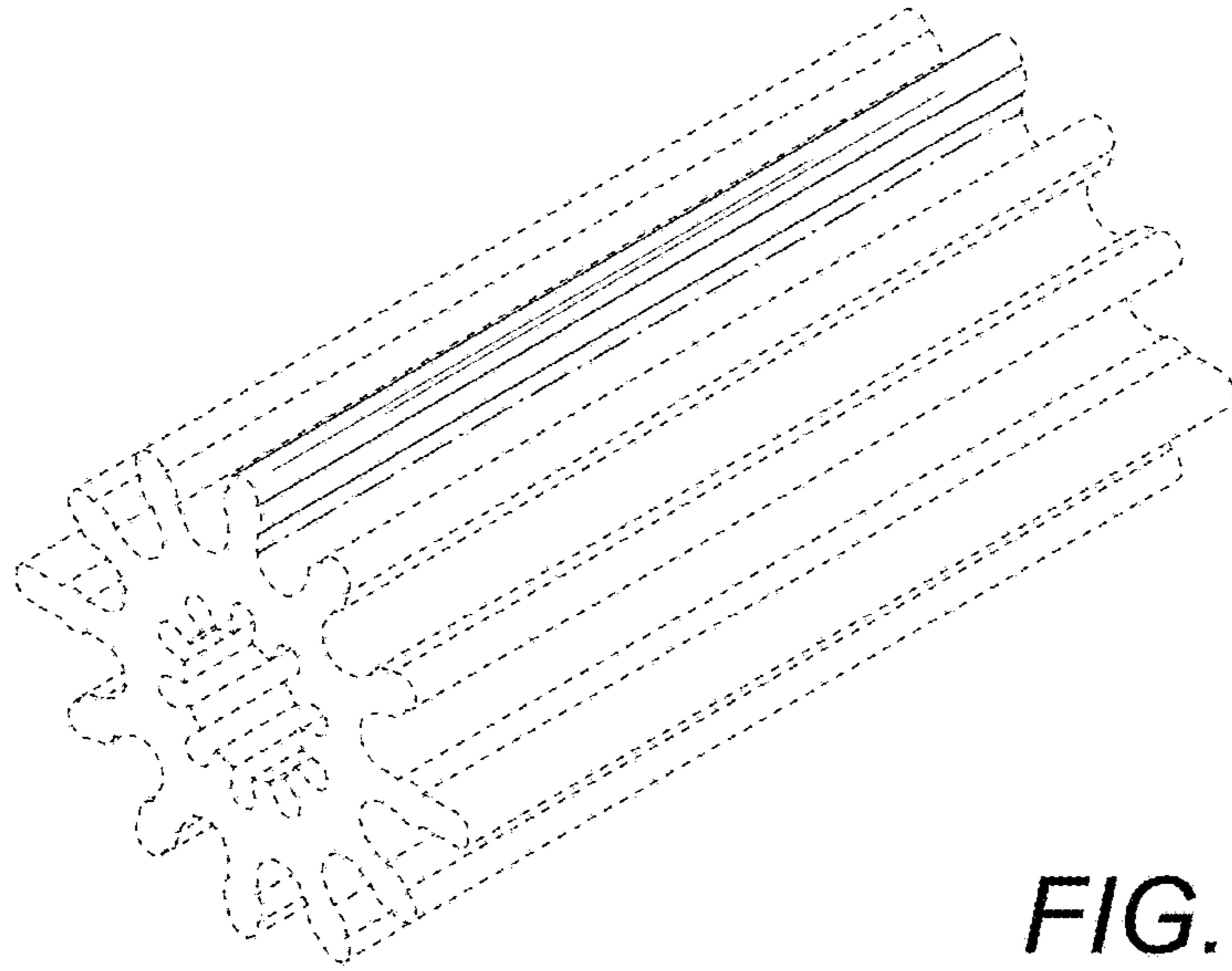


FIG. 1

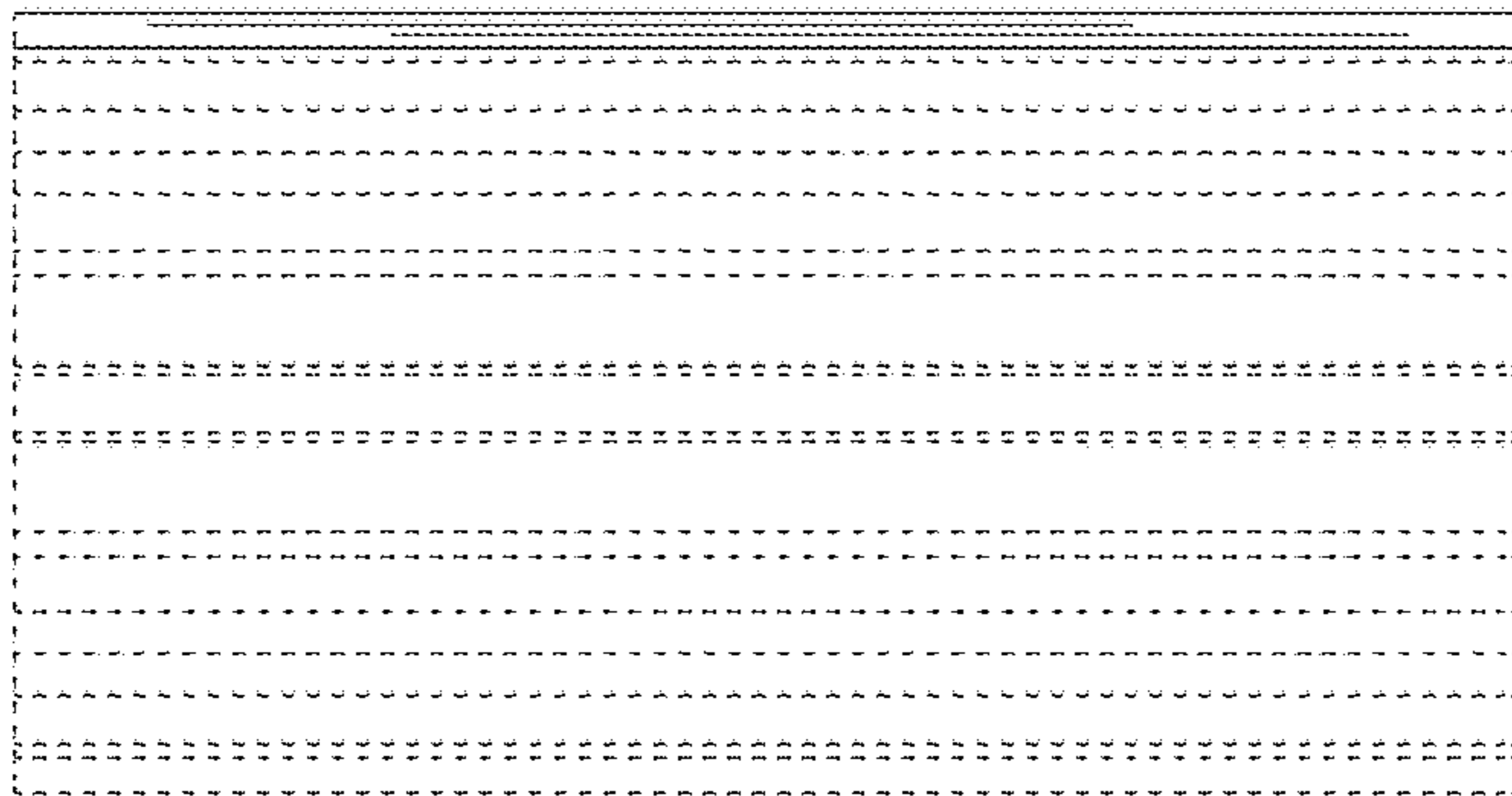


FIG.2

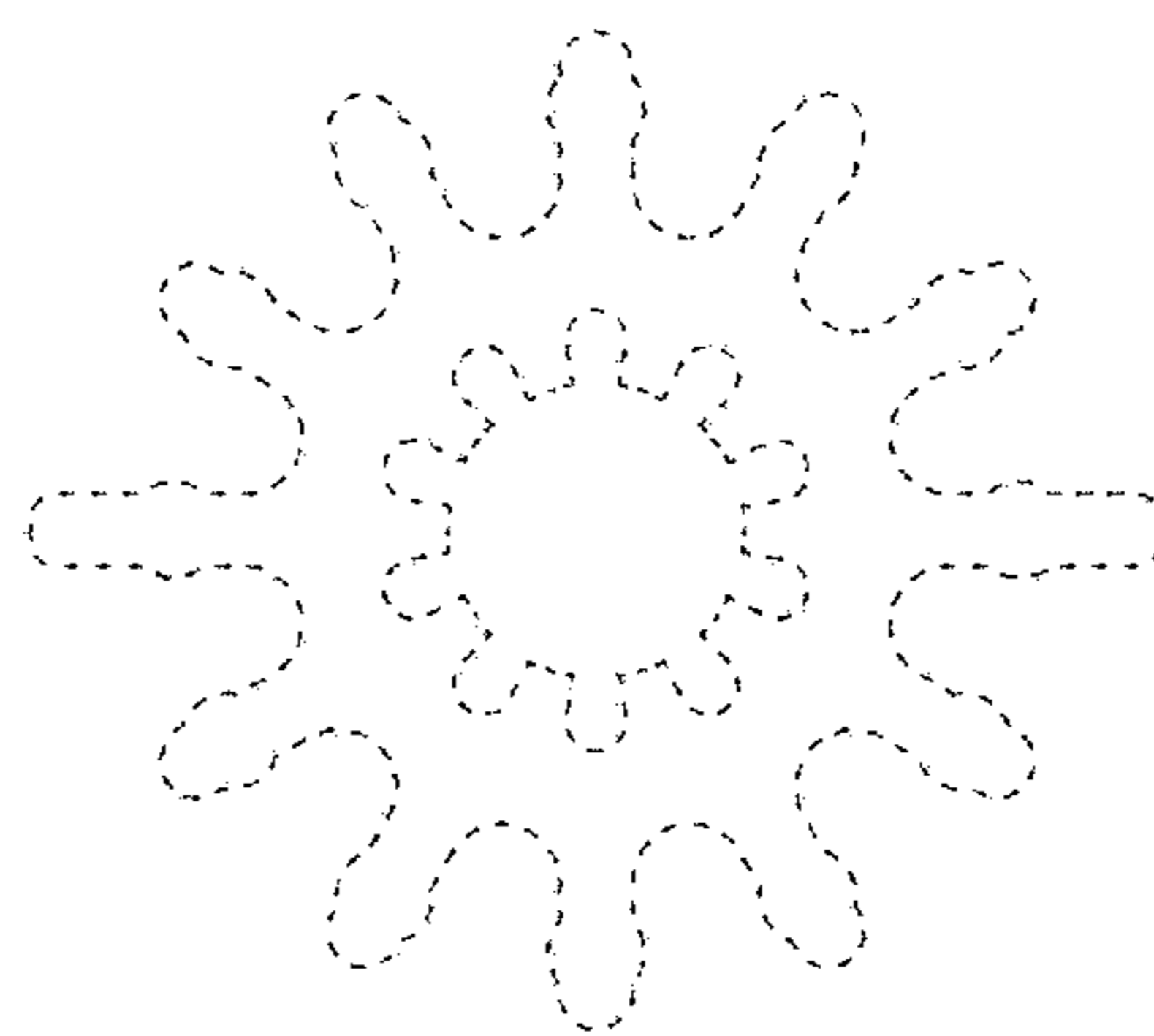


FIG.3

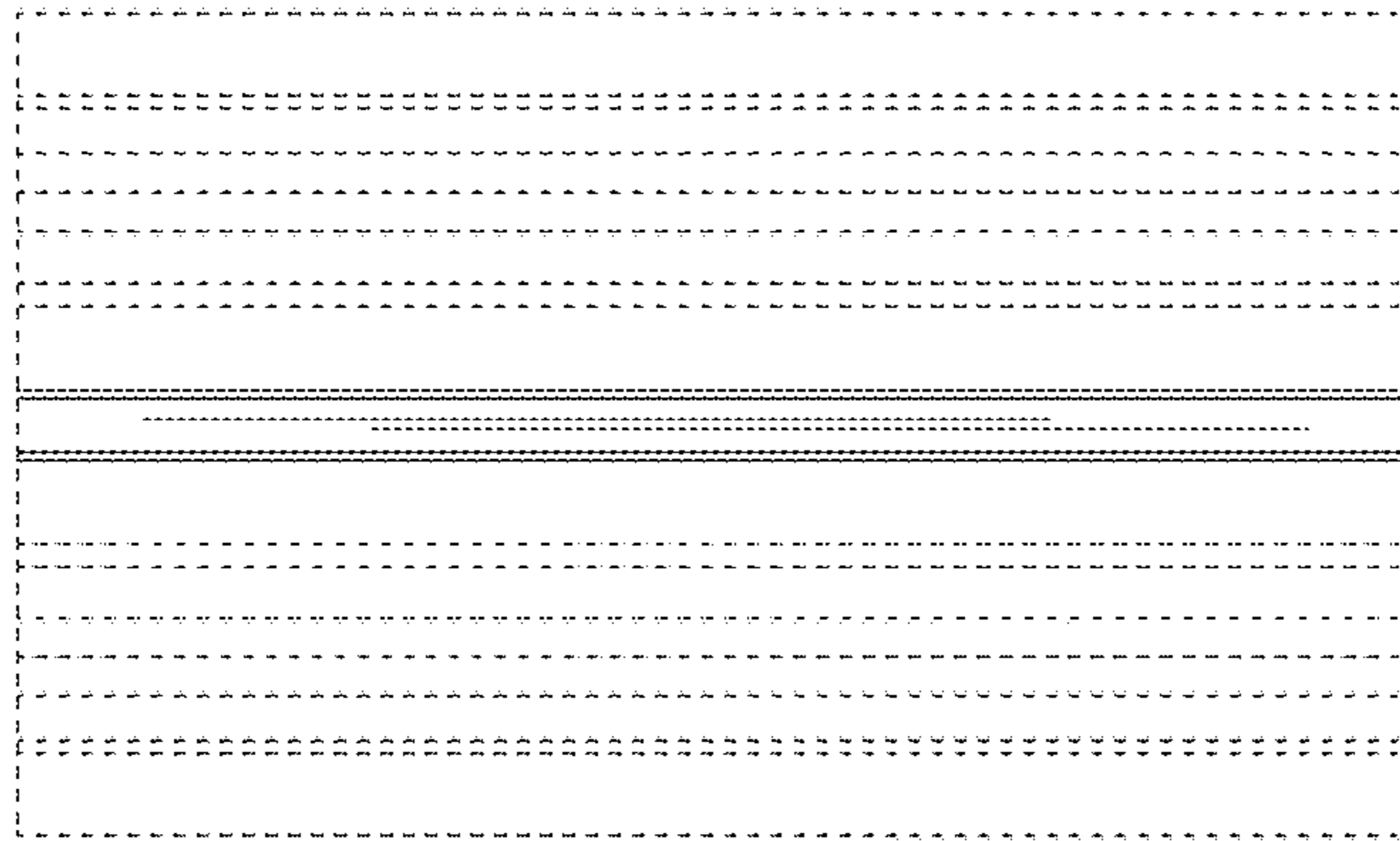


FIG. 4