



US00D865141S

(12) **United States Design Patent** (10) **Patent No.:** **US D865,141 S**
Sakae (45) **Date of Patent:** **** Oct. 29, 2019**

(54) **HEAT EXCHANGER TUBE**
(71) Applicant: **Kobe Steel, Ltd.**, Kobe-shi (JP)
(72) Inventor: **Akira Sakae**, Kobe (JP)
(73) Assignee: **Kobe Steel, Ltd.**, Kobe-shi (JP)
(**) Term: **15 Years**

(21) Appl. No.: **29/545,885**
(22) Filed: **Nov. 17, 2015**

(30) **Foreign Application Priority Data**

May 21, 2015 (JP) D2015-011153

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

(52) **U.S. Cl.**
USPC **D23/323**; D23/341

(58) **Field of Classification Search**
USPC D23/314, 318, 322, 323, 332, 341;
D15/4, 6
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
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,804,465 A * 5/1931 Govers F28F 1/16
165/177
2,244,800 A * 6/1941 Pascale F22B 37/06
122/367.2
3,282,335 A * 11/1966 De Haller F28F 1/16
165/181
5,775,411 A * 7/1998 Schuez B21C 37/207
165/133

6,216,675 B1 * 4/2001 Bennett B60K 15/03006
123/514
D816,136 S * 4/2018 Karol D15/148
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

FOREIGN PATENT DOCUMENTS

JP 05-164496 6/1993
JP 08176562 A * 7/1996 F28F 1/42
JP 2008202652 A * 9/2008 F28F 1/40
JP 2012007872 A * 1/2012 B21C 3/04
WO WO-2011148608 A1 * 12/2011 B21C 3/04

* cited by examiner

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Maier & Neustadt, L.L.P.

(57) **CLAIM**

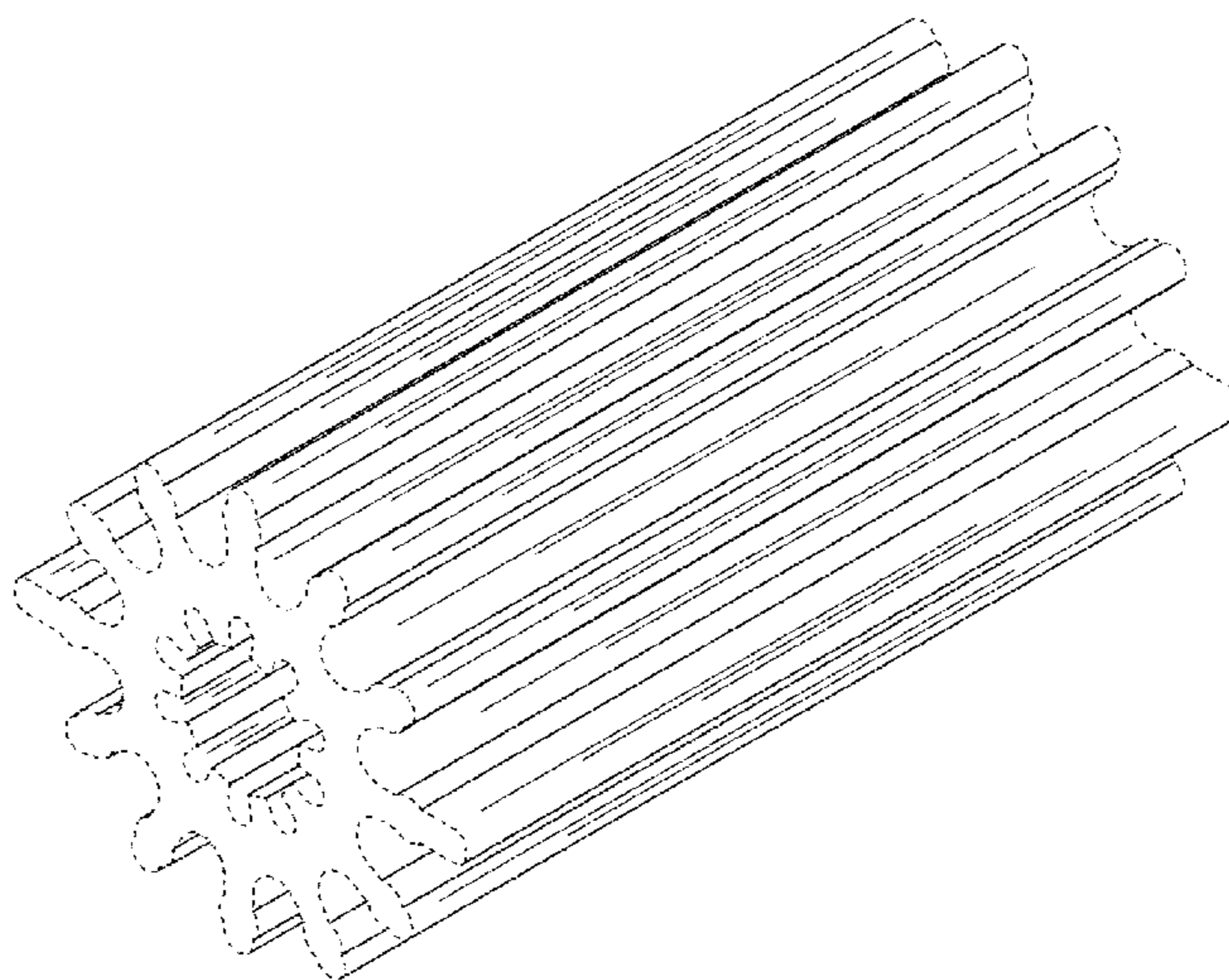
The ornamental design for a heat exchanger tube, as shown and described.

DESCRIPTION

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;
FIG. 4 is a top view thereof, the opposite side being an
identical image of the side shown herein; and,
FIG. 5 is a cross-sectional view taken along line 5-5 in FIG.
2 thereof.

In the drawings, the broken lines depict unclaimed portions
of the design only and form no part of the claimed design.

1 Claim, 3 Drawing Sheets



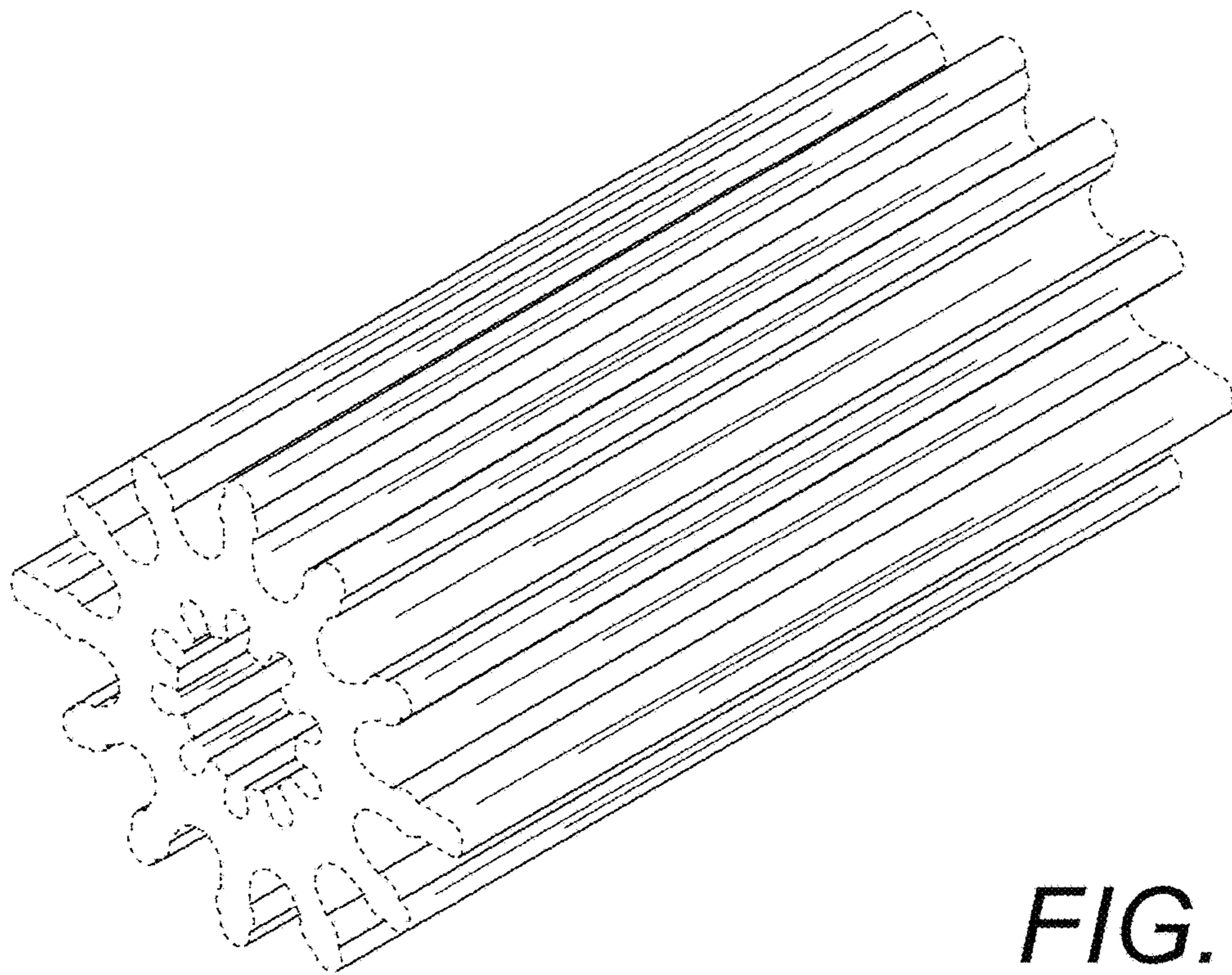
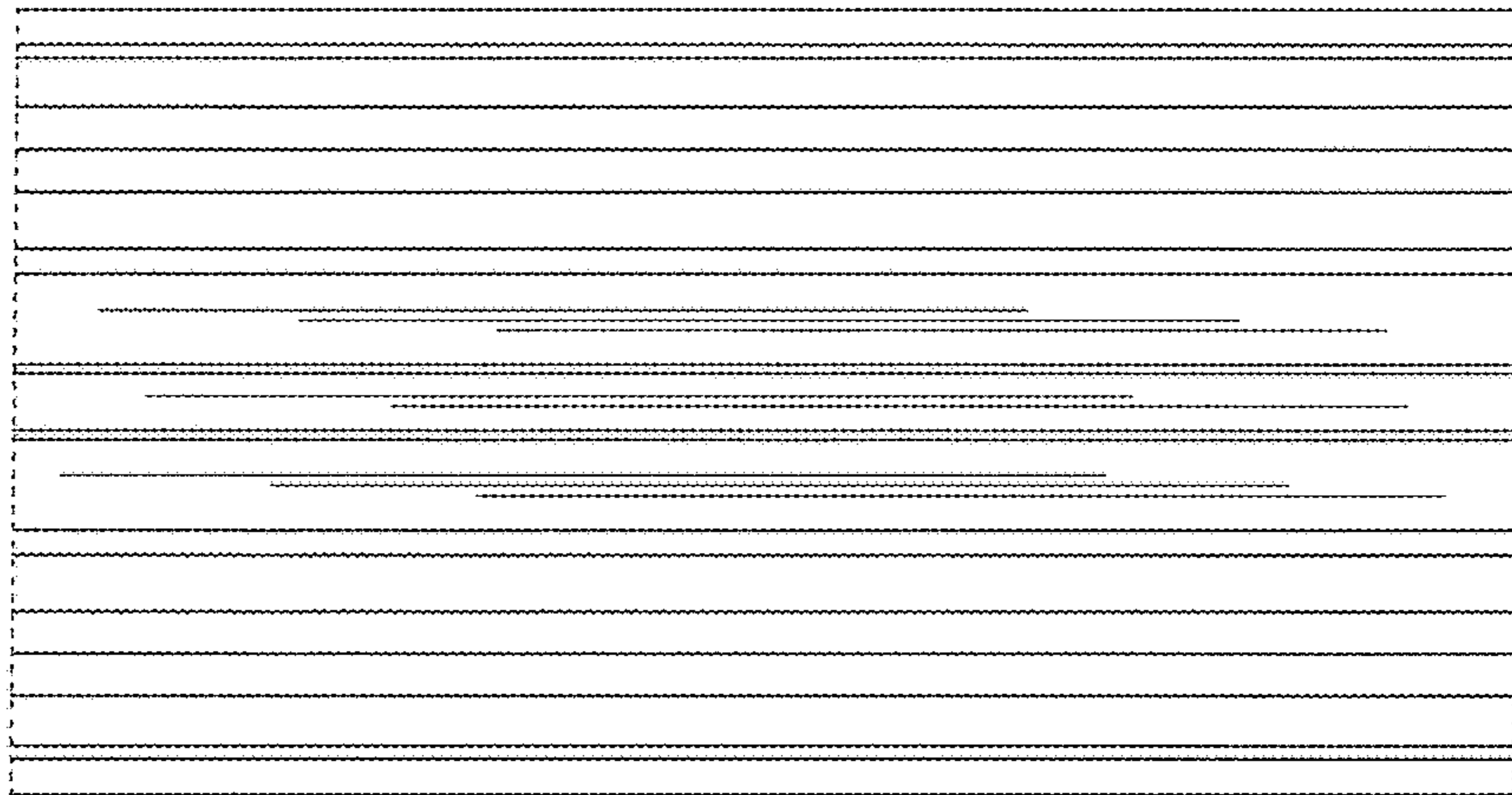


FIG. 1

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FIG. 2

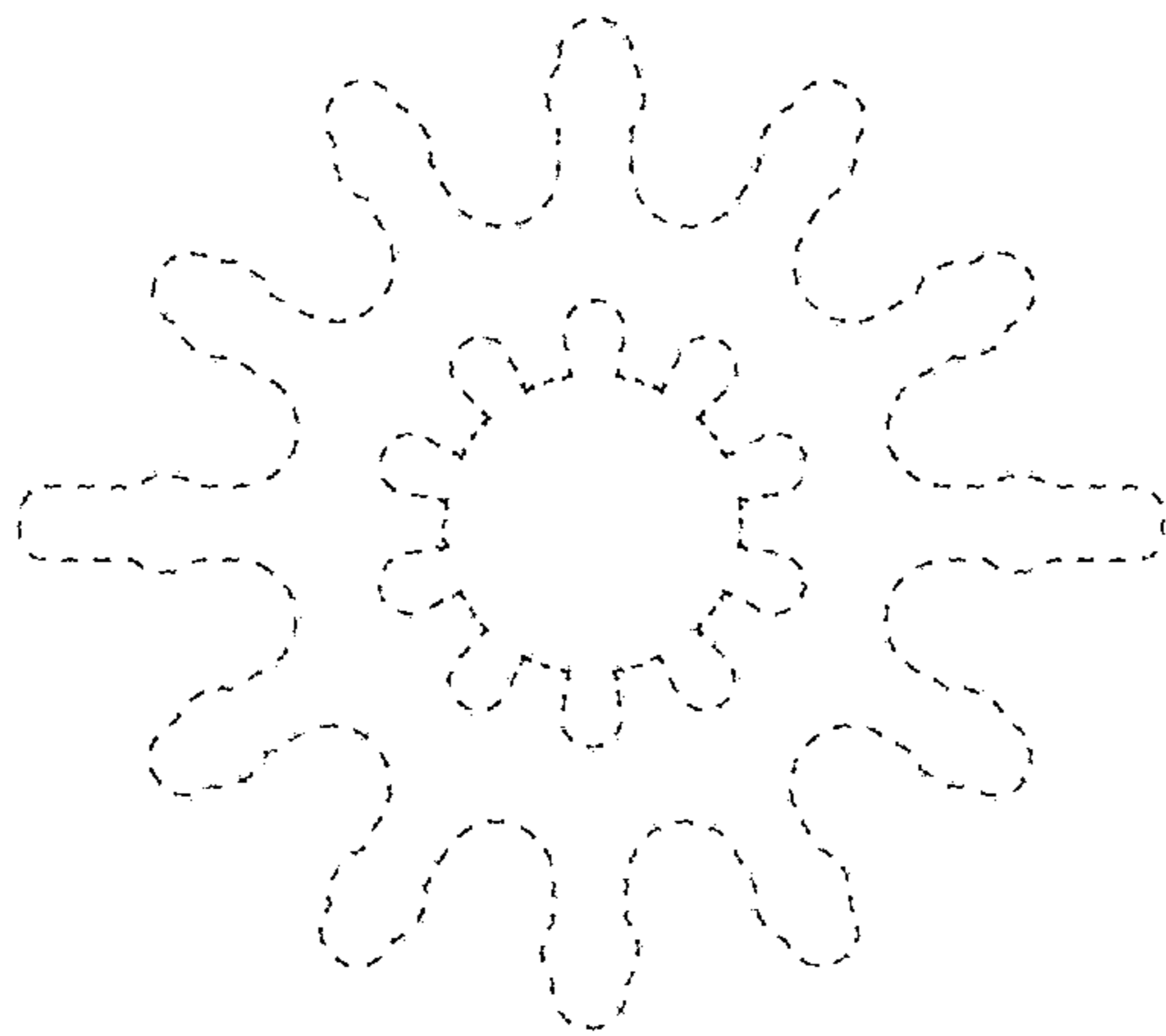


FIG. 3



FIG. 4

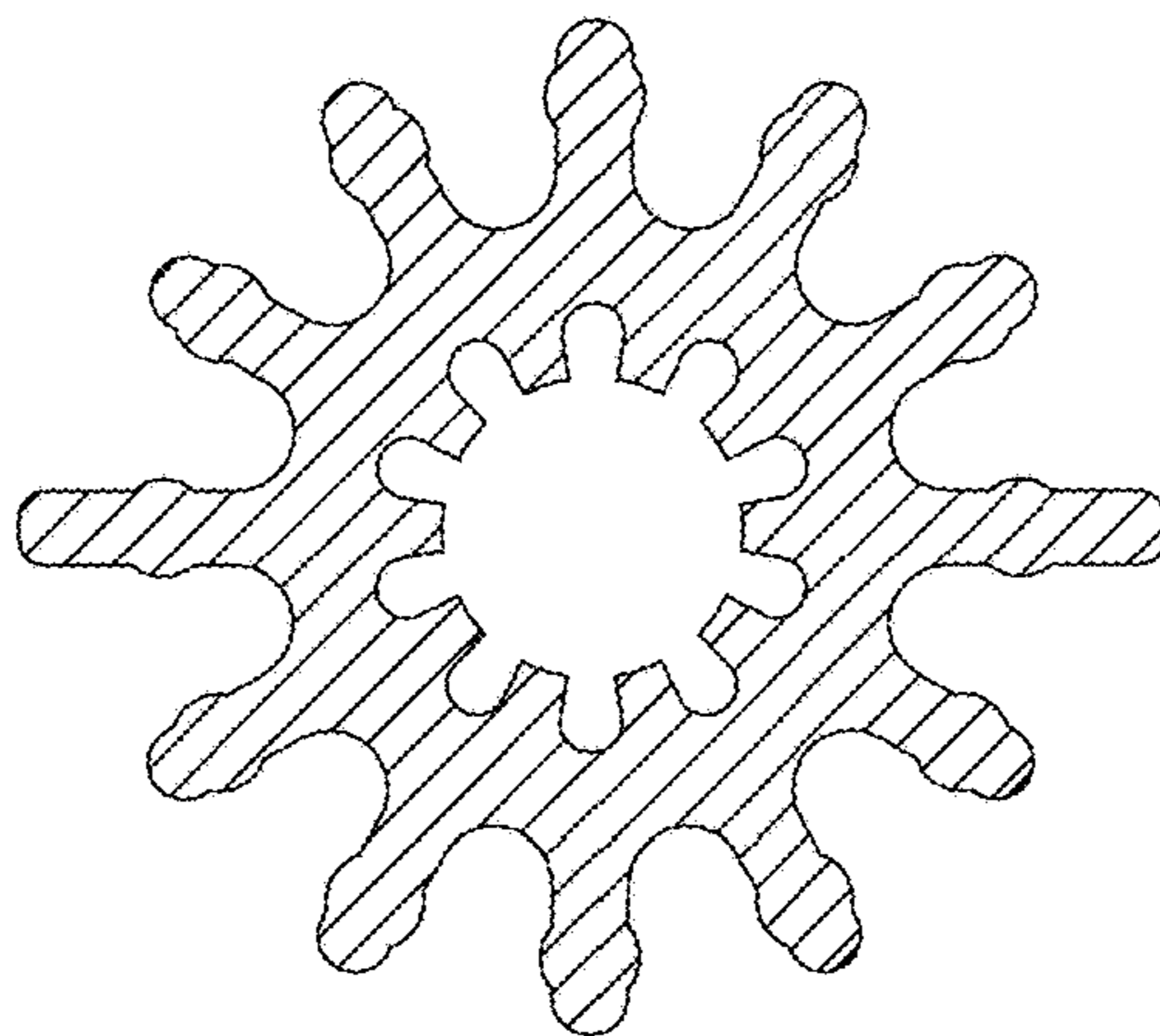


FIG. 5

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : D865,141 S
APPLICATION NO. : 29/545885
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INVENTOR(S) : Akira Sakae

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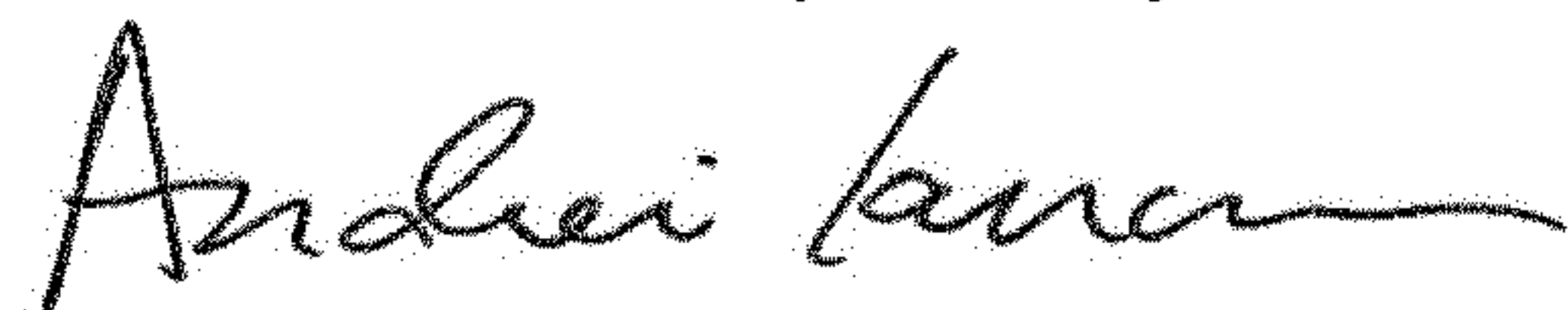
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

Item (73), the Assignee's name is incorrect. Item (73) should read:

-- (73) Assignee: **Kabushiki Kaisha Kobe Seiko Sho (Kobe Steel, Ltd.)**, Kobe-shi (JP) --

Signed and Sealed this
Fourteenth Day of July, 2020



Andrei Iancu
Director of the United States Patent and Trademark Office