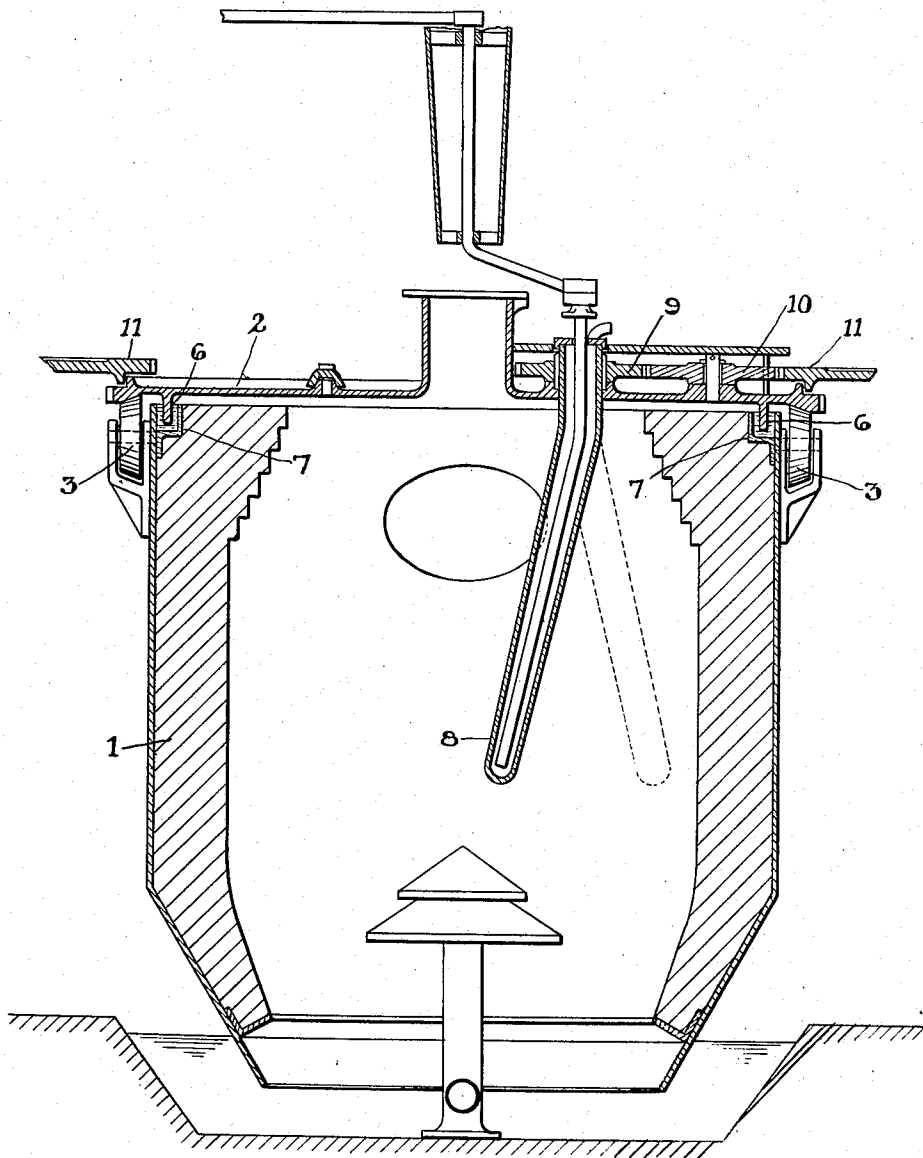


R. B. KERNOHAN.
GAS PRODUCER.
APPLICATION FILED SEPT. 23, 1908.

936,636.

Patented Oct. 12, 1909.
3 SHEETS—SHEET 1.

FIG. 1.



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936,636.

Patented Oct. 12, 1909.
3 SHEETS—SHEET 2.

FIG. 2.

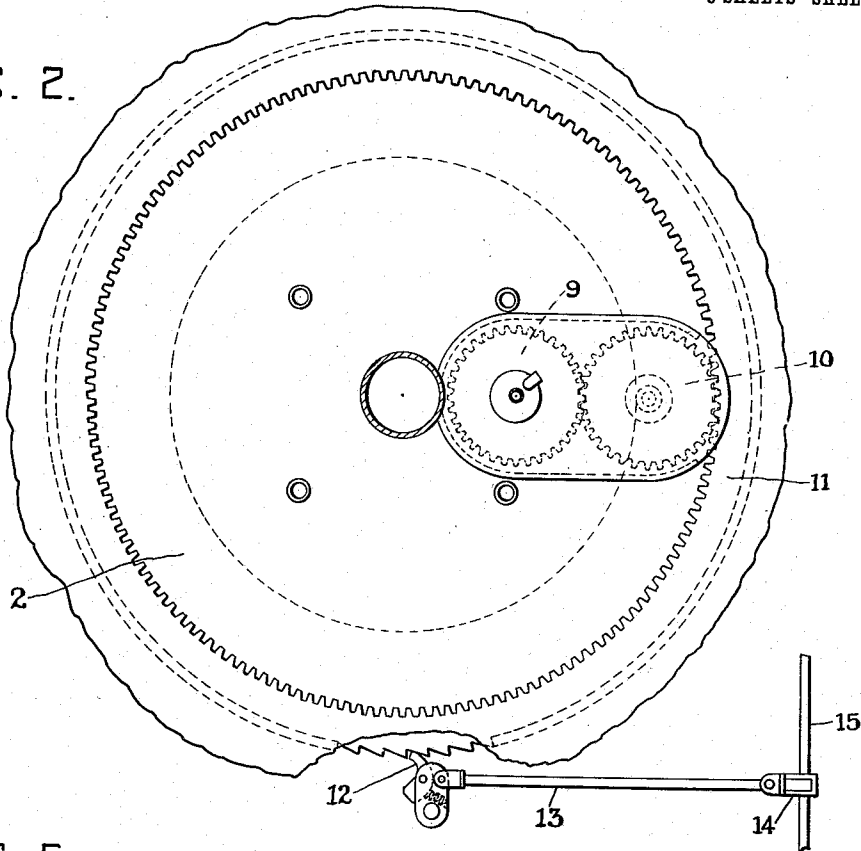
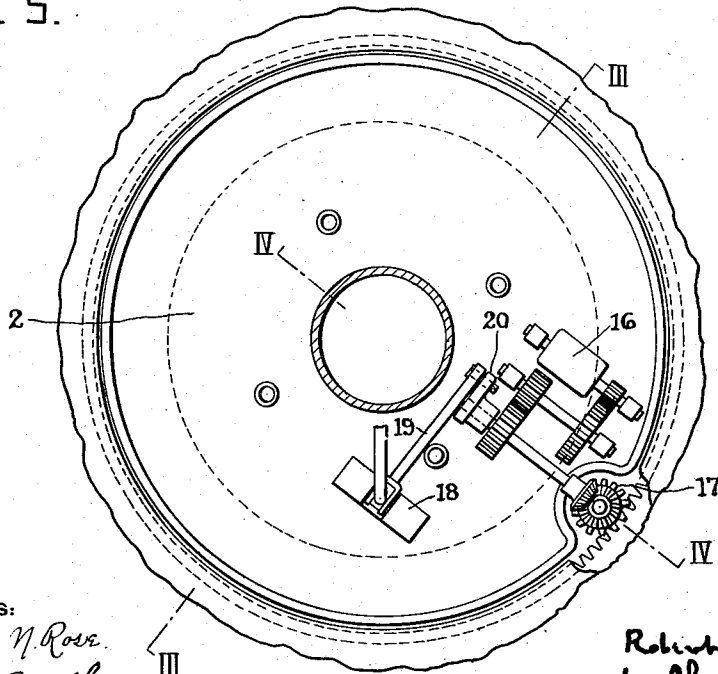


FIG. 5.



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3 SHEETS—SHEET 3.

FIG. 3.

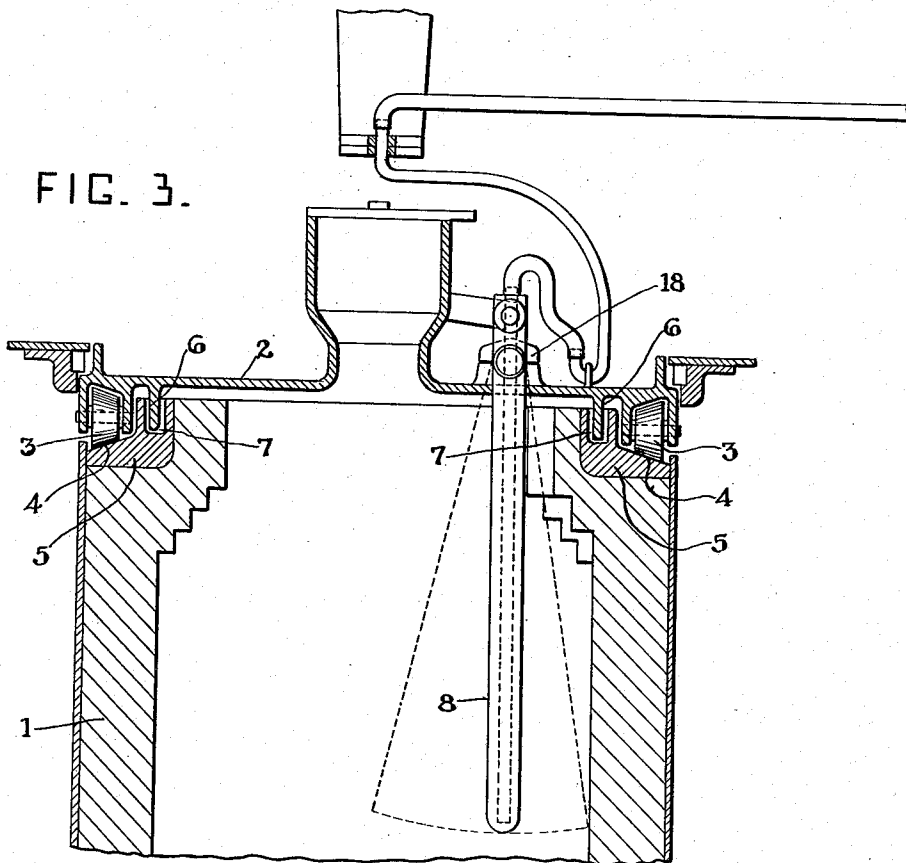
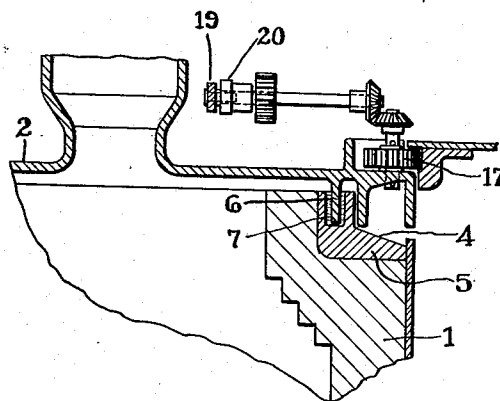


FIG. 4.



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GAS-PRODUCER.

936,636.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed September 23, 1908. Serial No. 454,300.

To all whom it may concern:

Be it known that I, ROBERT B. KERNOHAN, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Gas-Producers, of which improvements the following is a specification.

The invention described herein relates to certain improvements in means for stirring the charge in gas producers, and is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification Figure 1 is a sectional elevation of a producer having my improvement applied thereto; Fig. 2 is a top plan view of the same; Fig. 3 is a sectional elevation on a plane indicated by the line III—III Fig. 5; Fig. 4 is a sectional view of a portion of the producer shown in Fig. 3, the plane of section being indicated by the line IV—IV Fig. 5; and Fig. 5 is a top plan view of the structure shown in Figs. 3 and 4.

The producer may be constructed, as regards the body 1, the manner of supporting the charge and removing ashes and introducing the blast in any suitable manner. The top of the producer is formed by a metal plate 2 supported adjacent to its perimeter by rollers 3 preferably carried by the shell of the producer, as shown in Fig. 1. If preferred the rollers 3 may be mounted in suitable bearings on the underside of the top plate and travel around on a bearing surface 4 formed on a ring 5 embedded in the brick work at the top of the producer, as shown in Figs. 3 and 4. In order to prevent the escape of gas between the producer body and the movable cover, a flange 6 on the cover projects into a liquid contained in a groove 7 on the producer.

The poker 8 projects through an opening in the cover, its upper end being secured in a sleeve forming the journal of a pinion 9 by which the poker can be rotated. This poker can be rotated in any suitable manner, as by a pinion 10, intermeshing with the pinion 9 and also with teeth on the perimeter of the opening in the charging platform 11 of the producer, said opening being concentric with the axis of the producer. The portion of the poker within the producer is bent so that the portion below the bend will move in a circle concentric with the axis of rotation of the poker. The latter is made hollow as

shown for the circulation of a cooling medium through it. The cover or top 2 may be rotated in any suitable manner. As for example in Figs. 1 and 2, the periphery of the cover is provided with teeth with which a pawl 12 carried by a rod 13 adapted to be reciprocated by an eccentric 14 on the driven shaft 15. As the cover is rotated the poker will be carried around in a circle concentric with the axis of the producer. At the same time the poker is rotated the portion within the producer describing circles concentric with the axis of rotation of the poker.

As shown in Figs. 3, 4 and 5 the cover may be rotated by a motor 16 mounted on the cover, the motor driving through suitable gearing a pinion 17 intermeshing with teeth in the inner periphery of an opening in the charging platform of the producer. The poker may be so mounted as to swing to and fro in the charge. In this form the poker is provided with trunnions mounted in bearings 18 on the producer top as shown in Figs. 3 and 5, and the upper end of the poker is connected by a pitman 19 to a crank pin 20 on a shaft driven by the motor 16.

It will be readily understood by those skilled in the art, that the top or cover can be rotated by a motor mechanism mounted on the top and the poker rotated by a train of gearing operated by engagement with the teeth on the periphery of the opening in the charging platform as shown in Figs. 1 and 2. As is customary the poker is made hollow for the reception of a pipe 2 connected to a fluid supply and the poker is also provided with an outlet 23.

I claim herein as my invention:

1. A gas producer having in combination a stationary body portion, a movable top or cover, means for rotating the cover, a poker rotatably mounted on the cover and having the portion within the producer bent and means for rotating the poker on its axis.

2. A gas producer having in combination a stationary portion, a top or cover, means for rotating one of said parts relative to the other, a poker rotatably mounted in the cover and having the portion within the producer bent and means for rotating the poker on its axis.

3. A gas producer having in combination a body portion, a top or cover, means for rotating one of said parts relative to the other, a poker eccentrically mounted on the cover

and extending down into the body portion, its lower end being movable in the arc of a circle eccentric to the axis of the producer and means for operating the poker.

5 4. A gas producer having in combination a body portion, a top or cover, means for rotating one of said parts relative to the other, a poker eccentrically mounted on the cover and extending down into the body portion
10 and means for moving the inner end of the poker in the arc of a circle eccentric to the axis of the producer.

5 5. A gas producer having in combination a body portion, a top or cover, means for rotating the top or cover, a poker eccentrically
15 mounted on the cover and extending down into the body of the producer and means for moving the inner end of the poker in the arc

of a circle concentric with the axis of the poker where it is supported by the cover. 20

6. A gas producer having in combination a body portion, a top or cover, means for rotating one of said parts relative to the other, a poker eccentrically mounted on the cover and extending down into the body of the
25 producer and means for moving the inner end of the poker in an arc of a circle eccentric with the axis of the poker where it is supported by the cover.

In testimony whereof, I have hereunto set 30 my hand.

ROBERT B. KERNOHAN.

Witnesses:

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J. HERBERT BRADLEY.