

G. H. ISLEY.
 GAS PRODUCER.
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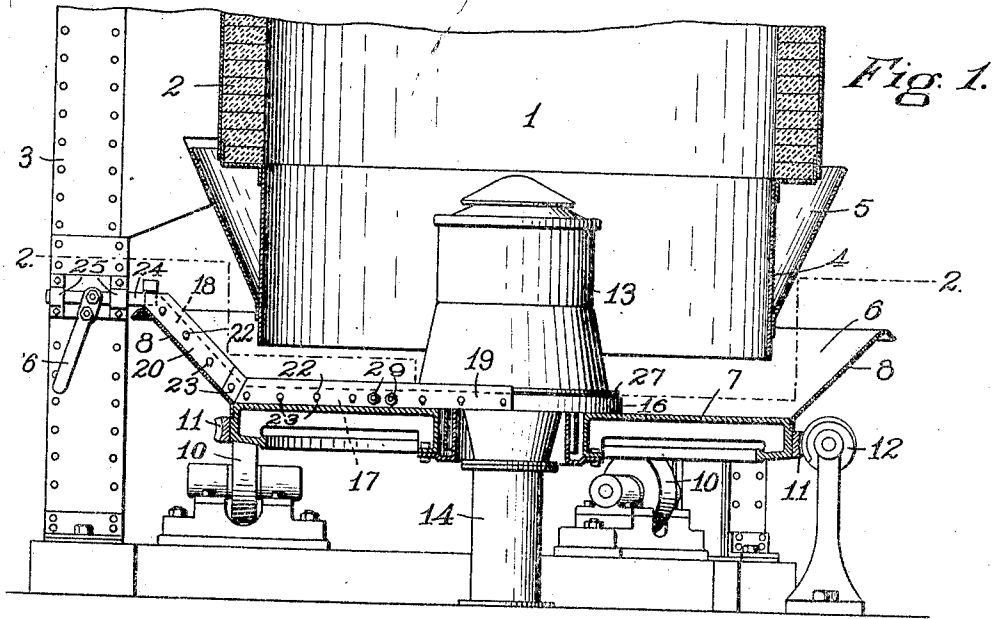


Fig. 1.

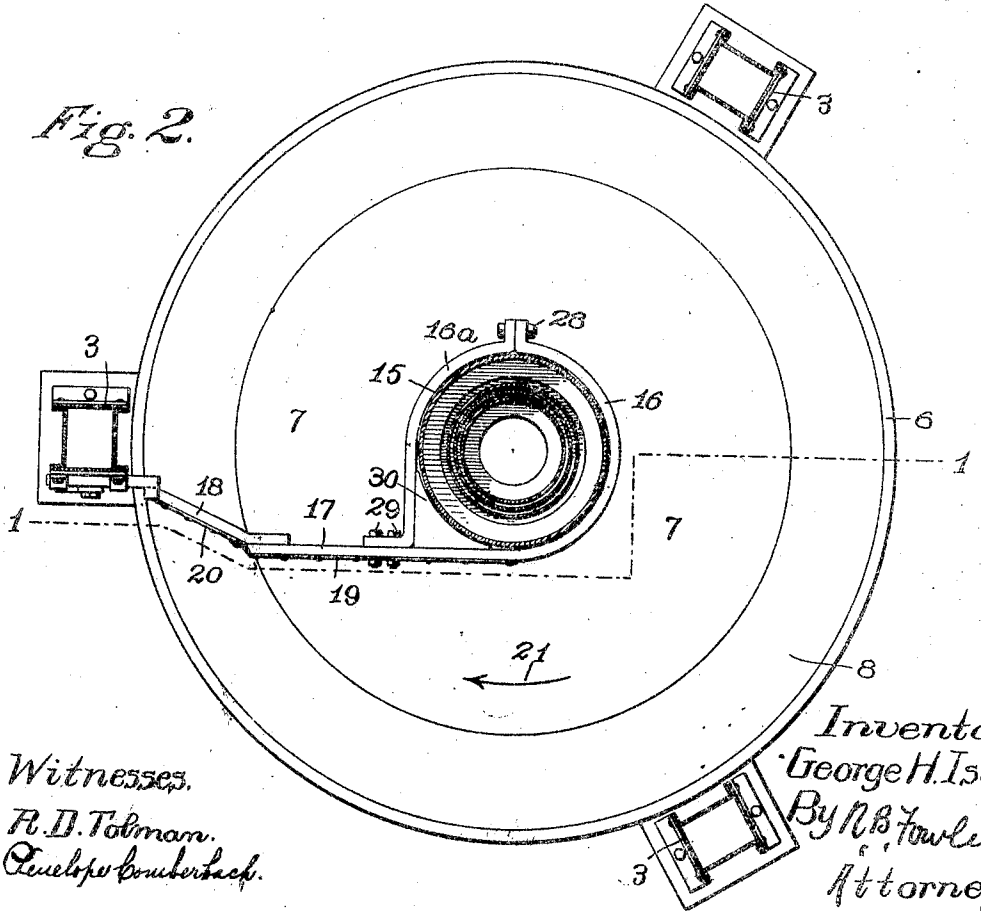


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

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GAS-PRODUCER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE H. ISLEY, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Gas-Producers, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 represents in elevation the lower portion of a gas producer shown in sectional view on the plane of the broken line 1—1, Fig. 2, and Fig. 2 is a plan view of the rotating ash pan, the central air inlet being shown in sectional view on the plane of the broken line 2—2, Fig. 1.

Similar reference characters refer to similar parts in the different views.

The object of my present invention is to provide an improved apparatus for removing the ashes from a gas producer, and it consists in the construction and arrangement of parts as hereinafter described and pointed out in the annexed claims.

Referring to the accompanying drawings, 1 denotes the lower portion of a gas producing chamber inclosed in an outer wall 2 and supported in a stationary position in the usual manner in structures of this class by means of posts 3. The lower portion of the inclosing wall of the chamber consists, in the present instance, of a metallic wall 4 surrounded by a trough 5, in which water is held to cool the metallic wall 4 and prevent the injurious action of heat and the formation of clinkers.

Spaced below the lower edge of the wall 4 is a rotating ash pan 6 having a horizontal bottom 7 and flaring sides 8. The ash pan is supported upon friction rollers 10 and is rotated by a worm 11 and a rotating worm gear 12. Concentric with the ash pan 6 is a shell 13 inclosing a chamber to which air under pressure is supplied through a pipe 14, and from which air is delivered to the gas producing chamber to support combustion. Inclosing the circular base 15 of the shell 13, and capable of rotating freely around it, is a strap 16 having an arm 17 extending tangentially from one side of the circular base 15 across the horizontal bottom 7 of the ash pan, and to the outer end of the arm 17 a bar 18 is attached at an angle corresponding with the angle of the flaring side of the ash pan. To the tangential arm 17

and angular bar 18 are attached plates 19 and 20. The lower edge of the plate 19 rests against the horizontal bottom 7 of the ash pan and the lower edge of the plate 20 bears against the flaring side 8 of the ash pan, said plates 19 and 20 forming scrapers when held in a stationary position during the rotation of the ash pan in the direction of the arrow 21, Fig. 2, causing the ashes resting upon the bottom of the ash pan to be forced outwardly by the plate 19 and upwardly over the edge of the ash pan by the plate 20. The movement of the lower stratum of ashes only is impeded by the plates 19 and 20, the ashes contained in the ash pan above the plane of the plates being carried freely around by the rotation of the pan. The delivery of ashes, therefore, from the ash pan, while the scrapers are held in a stationary position, will be governed by the width of the plates 19 and 20. The plates 19 and 20 may, therefore, be exchanged for others of different widths, or plates of the minimum width may be used attached to the arm 17 and bar 18 by bolts 22 passing through slots 23 in the plates.

The delivery of ashes may be checked entirely at any period in the operation of the gas producer by allowing the scrapers to rotate with the ash pan. The locking of the scrapers in a stationary position is accomplished by means of a sliding bolt 24, sliding in ways 25 attached to one of the posts 3 and operated by a lever handle 26. When the sliding bolt 24 is withdrawn, the scrapers are free to rotate with the ash pan, but when the sliding bolt is moved radially inward over the rim of the ash pan and into the path of the free end of the bar 18, the motion of the scrapers is stopped, and the continued movement of the ash pan will cause the lower stratum of ashes to be moved outwardly and upwardly over the rim of the ash pan.

The shell 13 is provided with an outward flange 27, which projects over the strap 16 in order to hold the latter from being lifted off the bottom of the ash pan and to prevent the admission of ashes and clinkers. A portion of the strap 16 is made integral with the tangential arm 17, and the other portion 16^a is attached at one end to the strap 16 by a bolt 28 and at the other end to the tangential arm 17 by a bolt 29. The triangular space 30 is preferably filled with

a block of wood to prevent the admission of ashes.

I claim,

1. In a gas producer, a rotating ash pan, a radial scraper in contact with the bottom and side of said pan and supported by said pan, said scraper capable of rotation with said pan, and means for locking said scraper in a stationary position during the rotation of said ash pan as desired.
2. In a gas producer, a rotating ash pan, a radial scraper resting upon said pan with the end of said scraper extending to the periphery of said pan, said scraper free to rotate with said pan, adjustable means beyond the periphery of said pan for engaging the end of said scraper, thereby holding it from rotation as desired.
3. In a gas producer, a rotating ash pan having a flaring side, an arm tangential to a concentric circle within said pan, an extension parallel with the flaring side of the pan, said arm and extension capable of rotating with the pan, and means for holding said arm and extension from movement at will.
4. In a gas producer, a rotating ash pan,

a radial scraper resting upon said pan with the end of said scraper extending to the rim of said pan, said scraper capable of rotation with said pan, and a sliding bolt beyond the rim of said pan arranged to engage the end of said scraper, thereby holding it in a stationary position during the rotation of said ash pan as desired.

5. In a gas producer, a rotating ash pan, a radial arm resting upon said pan, said arm capable of rotation with said pan, means for holding said arm in a stationary position as desired, and a plate detachably attached to said arm, thereby forming a scraper for said pan.

6. In a gas producer, a rotating ash pan having a flaring side, and a scraper acting simultaneously on the bottom and flaring side of said pan, said scraper comprising an arm and a bar supported by said pan and plates detachably attached to said arm and bar in contact with said pan.

Dated this third day of March 1910.

GEORGE H. ISLEY.

Witnesses:

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