(No Model.)

E. N. DICKERSON.

ACETYLENE GAS GENERATING APPARATUS.

No. 604,139. Patented May 17, 1898.

Fig. 1,

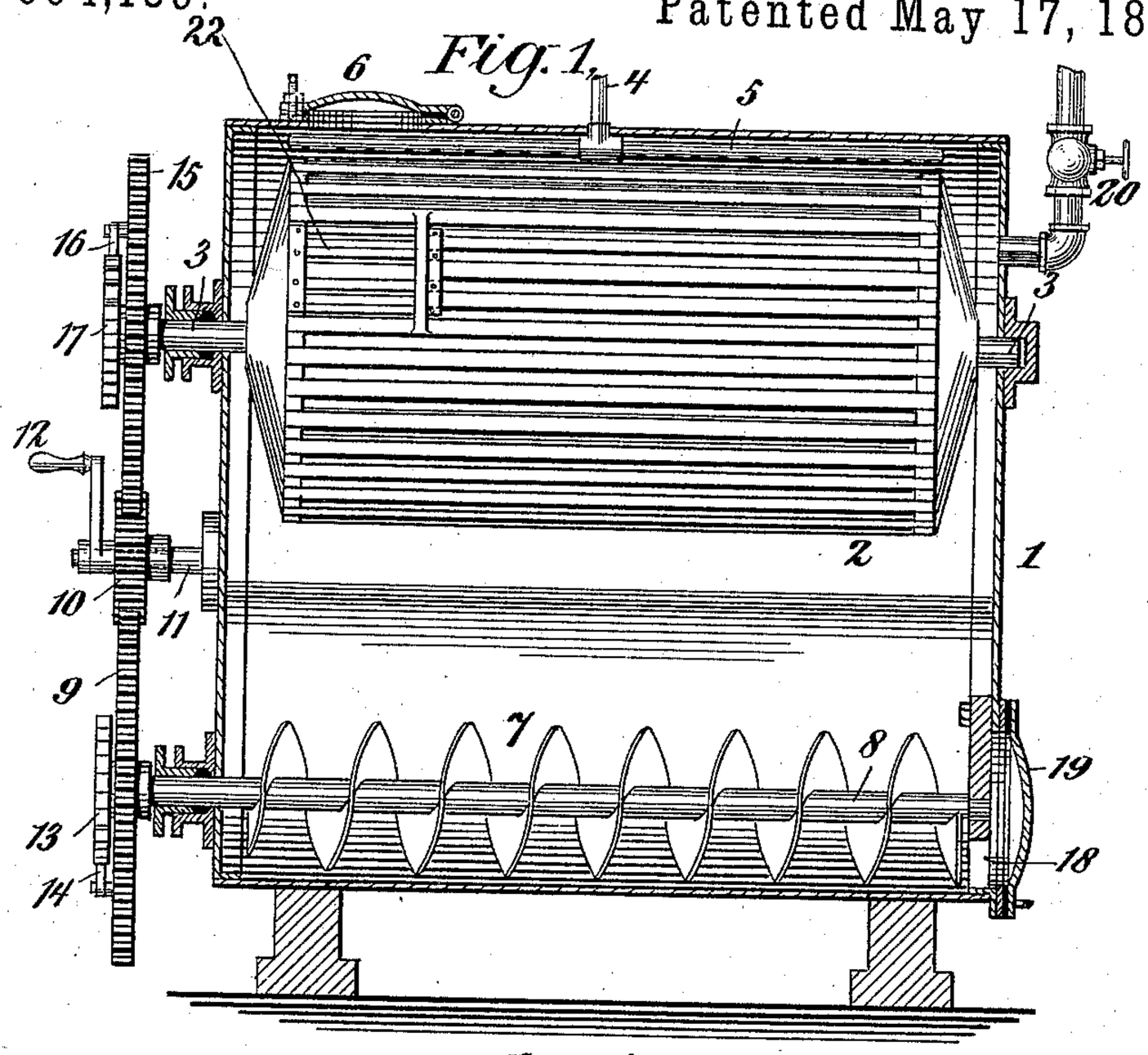
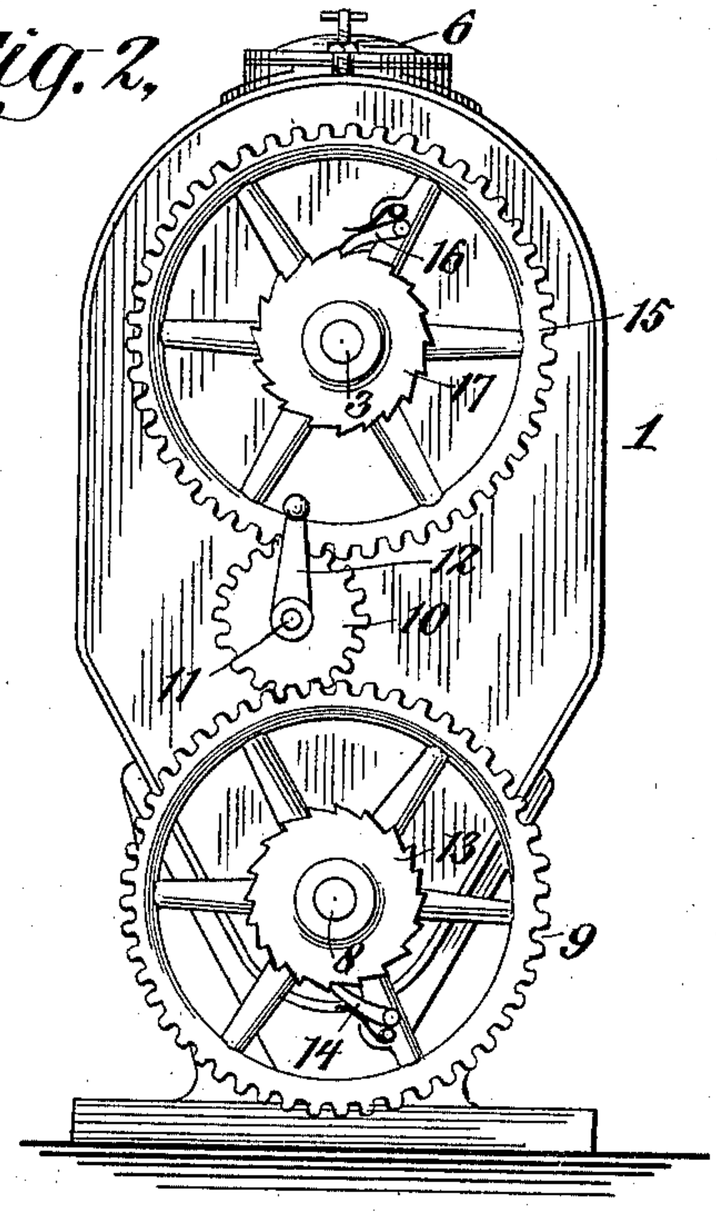


Fig. 2,



WITNESSES:

O. F. Hayford.

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EDWARD N. DICKERSON, OF NEW YORK, N. Y.

ACETYLENE-GAS-GENERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 604,139, dated May 17, 1898.

Application filed June 18, 1897. Serial No. 641,381. (No model.)

To all whom it may concern:

Be it known that I, EDWARD N. DICKERSON, of the city, county, and State of New York, have invented a certain new and useful Improvement in Acetylene-Gas-Generating Apparatus, of which the following is a specification.

The present invention relates to improvements in apparatus for generating acetylene gas.

The object of the invention herein described is to provide a simple form of generating apparatus, consisting of a closed vessel in which is mounted a receptacle for the carbid, which receptacle is adapted to be rotated in order that the carbid contained therein may be agitated and caused to present new surfaces to the action of the fluids supplied to it for the purpose of generating the gas and at the same time discharge the refuse into the lower portion of the receptacle, from which the refuse is discharged by means of a feed-screw.

In the drawings I have illustrated a construction embodying my invention, in which—

Figure 1 is a central vertical longitudinal section, certain parts being shown in full; and Fig. 2 is an end elevation.

Like figures of reference refer to like parts throughout both views of the drawings.

Referring to the drawings in detail, 1 designates the vessel within which the acetylene gas is to be generated. In the upper part of this vessel is mounted a carbid-receptacle 2, which consists of a rotatable cage suitably journaled by the journal-points 3. Fluid is admitted to the carbid by means of a supply-pipe 4, communicating with a longitudinal spraying-tube 5. The carbid is placed in the cage 2 through the manhole 6, which is adapted to be closed fluid-tight. A suitable opening 22 in the cage 2 is provided, which can be closed at will, for placing the carbid therein. A feed-worm 7 is mounted on the lower portion of the vessel on a shaft 8. Loosely mounted on the portion of the shaft 8 and projecting to the outside of the receptacle is a gear-wheel 9, which is in mesh with the gear-wheel 10, mounted on the shaft 11, said gear-wheel 10 being adapted to turn by means of a hand-crank 12. Mounted fast on the shaft 8 is a ratchet-wheel 13, the teeth of which are adapted to be engaged by a pawl 14, carried on the gear-wheel 9. Loosely mounted on the journal-point 3, projecting to the outside of the vessel 1, is a gear-wheel 15, carrying a pawl 16, adapted to engage with a ratchet-wheel 17, keyed to the journal-point 3, the teeth of the ratchet-wheel 17 being oppositely directed to those of the ratchet-wheel 13. It will be seen that when the gear-wheel 10 is turned to the left by the hand-crank 12 the carbid-receptacle will be rotated, so as to agitate the contents, thereby presenting new surfaces of carbid to the action of the fluid and shaking out the refuse into the bottom of the vessel. During this operation the gear-wheel 9 runs free on the shaft 8. By turning the gear 10 in an opposite direction the gear 9 engages with the ratchet-wheel 13 and operates the feed-screw 7 to discharge the refuse accumulated on the bottom of the vessel through the discharge-opening 18. During this operation it will be seen that the gear-wheel 15 rotates freely on the journal 3 without causing any movement of the carbid-receptacle. The discharge-opening 18 is normally closed fluid-tight by means of a cover 19.

20 designates a service-pipe for drawing off the generated gas.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of a closed vessel, a carbid-receptacle rotatably mounted therein, a discharge screw or conveyer located beneath the carbid-receptacle, the said carbid-receptacle and discharge-screw being each provided with geared wheels having ratchets engaging in opposite directions, and a single intermediate gear and mechanism for turning the same, thereby enabling either the carbid-receptacle or the screw to be rotated at will, while the other remains at rest, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

E. N. DICKERSON.

Witnesses:

W. LAIRD GOLDSBOROUGH,

H. COUTANT.