O. A. LOVELESS.

PORTABLE ACETYLENE GAS GENERATOR.

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956,384. **Patented Apr. 26, 1910.**

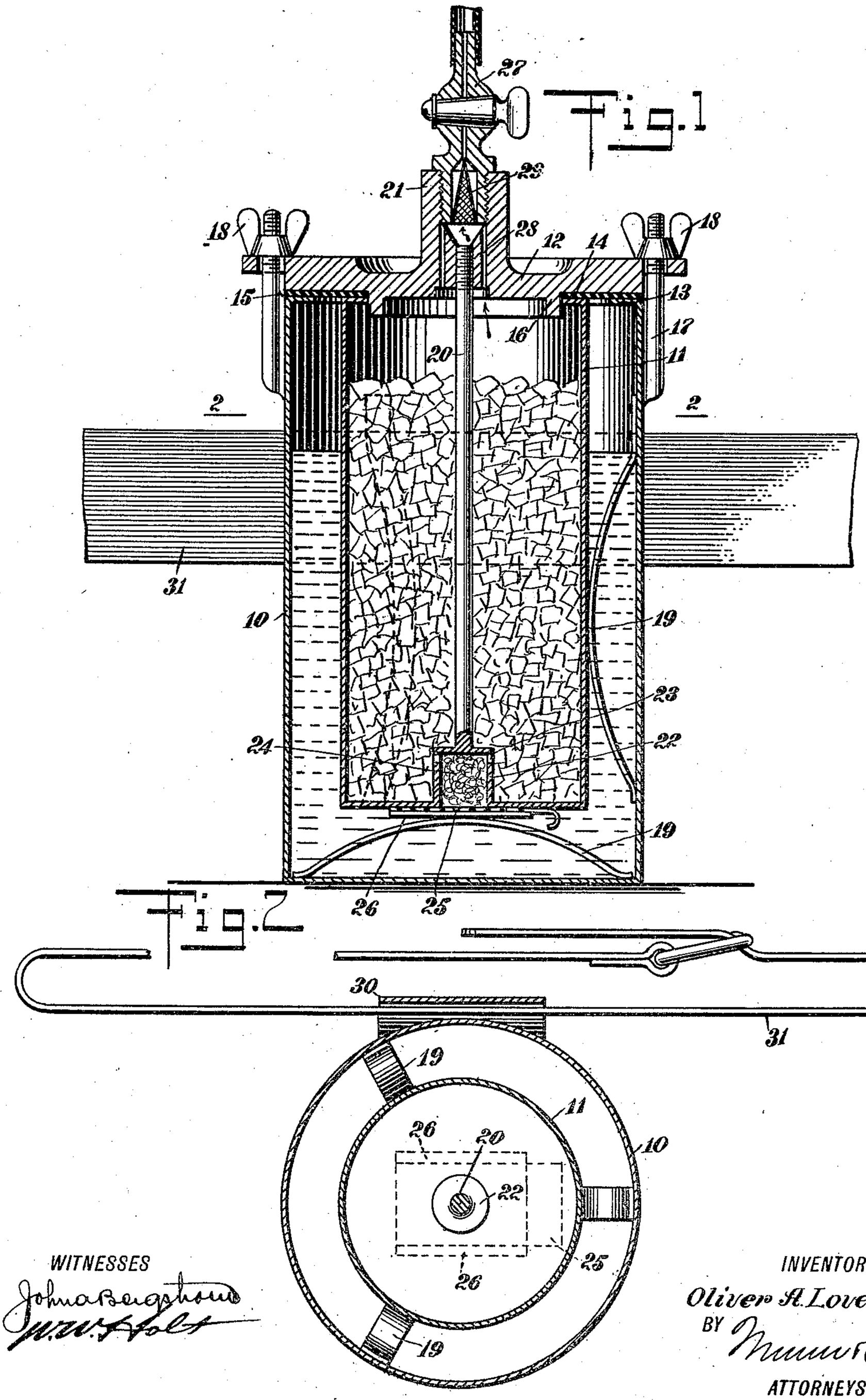

Fig. 1

Fig. 2

WITNESSES

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PORTABLE ACETYLENE-GAS GENERATOR.

956,384. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed June 16, 1909. Serial No. 502,462.

To all whom it may concern:

Be it known that I, OLIVER A. LOVELESS, a citizen of the United States, and a resident of Watersmeet, in the county of Gogebic and State of Michigan, have invented a new and Improved Portable Acetylene-Gas Generator, of which the following is a full, clear, and exact description.

The invention has reference to improvements in portable generators for acetylene gas and embodies in its construction an outer water tank, an inner carbid tank and a cover common to both tanks removably applied, the water tank having bowed springs yieldingly supporting the carbid tank, the carbid tank having a central stem adjustably connected to the cover and provided with an enlarged pocketed portion at its lower end through which the water from the water tank percolates into the carbid tank, and the cover having a conical screen for straining the gas as it leaves the generator, with the screen pointing outwardly.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a central vertical section through an acetylene gas generator embodying my invention; and Fig. 2 is a cross-section of the same substantially on the line 2—2 of Fig. 1.

More specifically described, the preferred embodiment of the generator consists of an outer water tank 10, an inner carbid tank 11 and a cover 12, the tanks having inwardly-turned flanges 13 and 14 at the top, forming a substantial seat for a gasket 15 arranged under the cover, the gasket fitting close about an annular flange 16 depending from the under side of the cover. The cover is forced to the water tank by a number of upwardly-extending studs 17, suitably secured to the sides of the water tank and projecting through openings in the margin of the cover and provided with thumb-nuts 18.

On the inside of the water tank at both the sides and bottom are a number of bowed springs 19 bearing on and yieldingly supporting the carbid tank, this last-named tank being further supported from the cover and forced against the gasket 15 by a central rod or stem 20, the upper portion of the stem being threaded into an outwardly-projecting central boss 21 of the cover and rigidly connected at its opposite and lower end to the bottom of the carbid tank through the intermediary of an enlarged tubular portion or pocket 22, the same opening at the bottom into the water tank and provided with one or more perforations 23 at the upper portion of the sides, serving as inlets for the water to the carbid tank. The pocket is filled with a fibrous absorbent material 24 which is retained in place by a perforated plate 25, slidable underneath the pocket in ways 26 attached to the under side of the carbid tank. The plate admits of the free passage of the water into the pocket, and when withdrawn, access to the fibrous material is had for renewing, cleansing or other purposes.

The outer portion of the boss 21 of the cover is counterbored and internally threaded to receive a cock 27, a number of gas outlet openings 28 connecting with the counterbored portion and arranged in the cover around the threaded portion of the stem 20. The inner threaded end of the cock 27 is also counterbored and is provided with a conical screen 29 for the straining of the gas as it passes from the generator, with the point of the screen directed outwardly, and the base of the screen terminating at the top of the outlet openings 28 and fitting close to the enlarged recessed or counterbored portion of the cock, whereby all of the gas is enforced to pass through the screen before passing through the cock.

The generator is designed to be carried on the person, for which purpose the water tank is provided along its length with a loop 30 through which a belt 31 is passed for strapping the generator to the waist.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A portable acetylene gas generator comprising a water tank, a calcium carbid tank arranged within and spaced from the water tank, a removable cover seating on and wholly closing the tops of both of said tanks and a central stem carried by the carbid tank and supporting the said carbid tank from the cover.

2. A portable acetylene gas generator comprising a water tank, a cover removably secured over the water tank, and a calcium carbid tank arranged within and spaced from the water tank and having a central

stem threaded into the cover and provided with a pocket at its lower end portion for the passage of the water from the water tank into the calcium carbid tank.

3. A portable acetylene gas generator comprising a water tank, a calcium carbid tank arranged within and spaced from the water tank, having a pocket at the bottom thereof opening into the water tank and provided with perforations leading into the carbid tank, a fibrous material filling the pocket, and a perforated slide covering the bottom of the pocket and retaining said material therein.

4. A portable acetylene gas generator comprising a water tank, a calcium carbid tank arranged within and spaced from the water tank, a cover common to both of said tanks, a stem secured to the carbid tank and adjustably connected to the cover, and means for removably securing the cover to the water tank.

5. A portable acetylene gas generator comprising a water tank, a calcium carbid tank arranged within and spaced from the water tank, a cover for both of the tanks, means carried by the water tank to secure the cover thereto, a stem connected to the bottom of the carbid tank and threaded into the cover, said stem having a pocket at its lower end in communication with both the water tank and carbid tank, an absorbent material arranged within the pocket, and a perforated member covering the lower end of the pocket and retaining the absorbent material therein.

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

OLIVER A. LOVELESS.

Witnesses:
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