

No. 629,215.

Patented July 18, 1899.

G. G. SNYDER & M. L. WEST.
ACETYLENE GAS LAMP.

(Application filed Dec. 22, 1898.)

(No Model.)

Fig. 1.

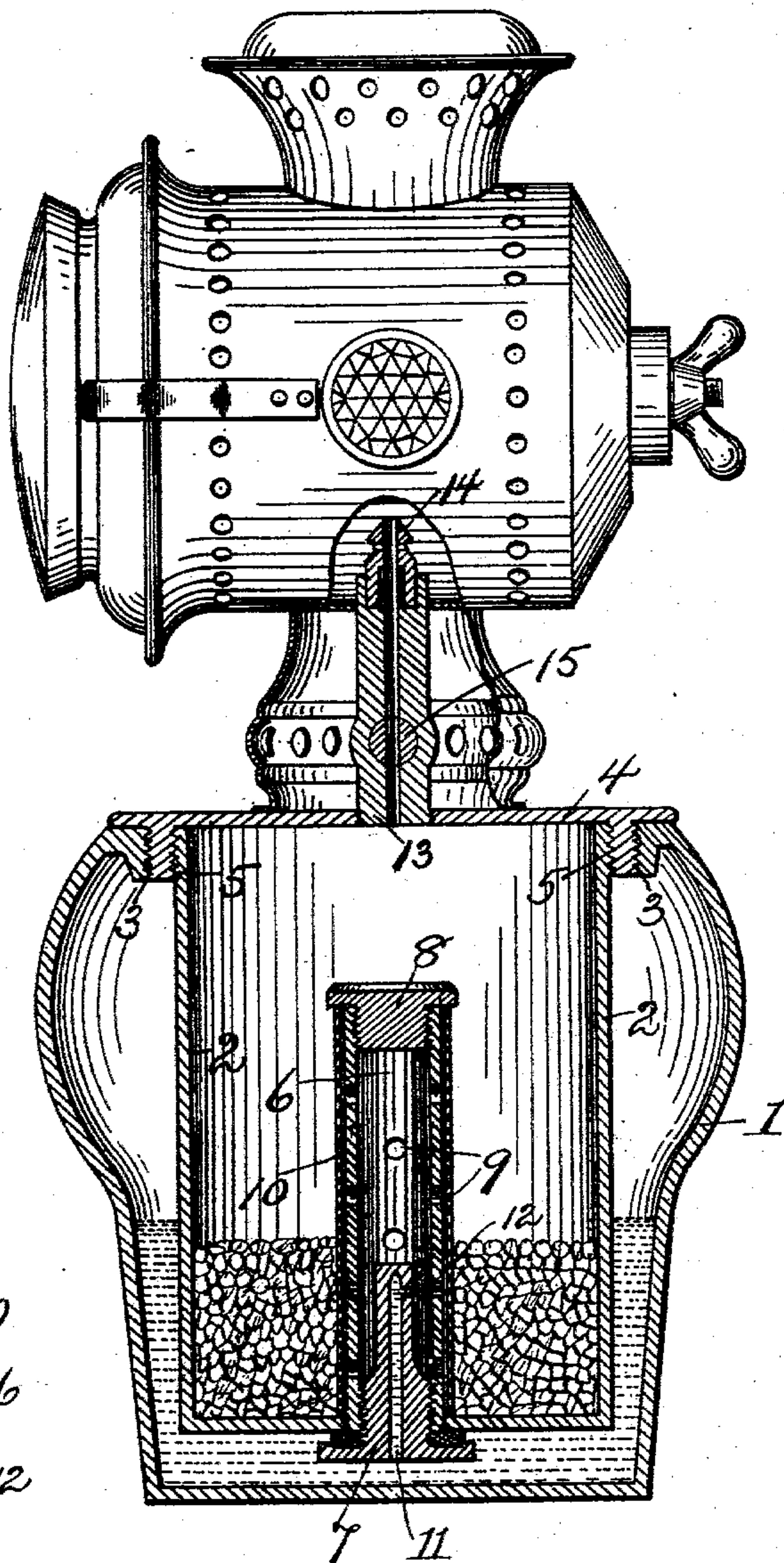
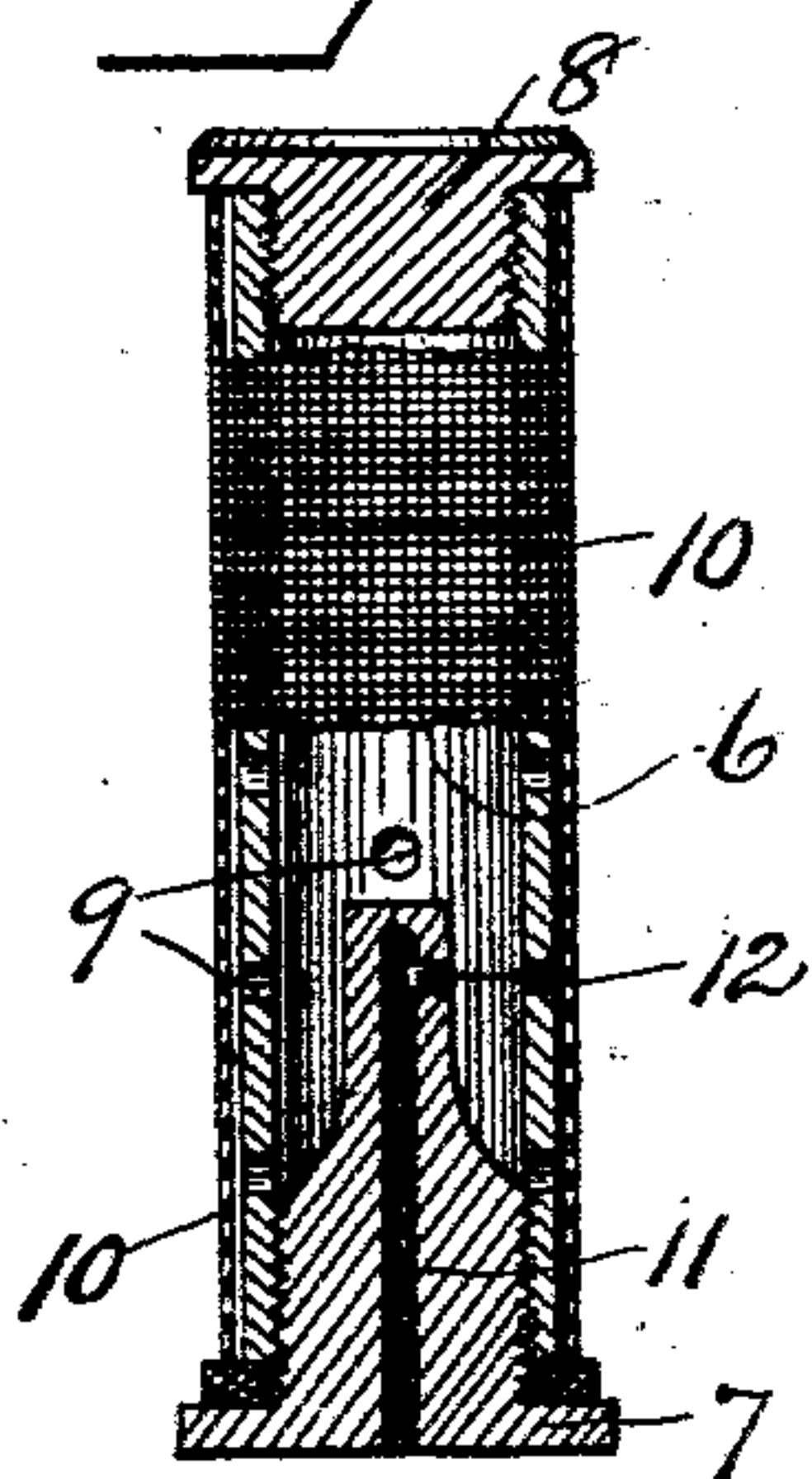


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE G. SNYDER AND MARCUS L. WEST, OF EASTON, PENNSYLVANIA.

ACETYLENE-GAS LAMP.

SPECIFICATION forming part of Letters Patent No. 629,215, dated July 18, 1899.

Application filed December 22, 1898. Serial No. 700,034. (No model.)

To all whom it may concern:

Be it known that we, GEORGE G. SNYDER and MARCUS L. WEST, citizens of the United States, residing at Easton, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Acetylene-Gas Lamps; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to acetylene-gas lamps; and its primary object is to provide a lamp of the character named which will be specially adapted for use upon bicycles and like vehicles.

The novel features of the invention will be fully described hereinafter and defined in the appended claims.

In the accompanying drawings, Figure 1 is a central vertical section of a lamp embodying our invention. Fig. 2 is an enlarged detail view of the plug or valve which controls the admission of water to the lamp.

The reference-numeral 1 designates the water-chamber of the lamp, which may be of any desired shape; but we preferably make the lower end cylindrical and the upper end globular. Within the water-chamber 1 is located the carbid holder or chamber 2. The water-chamber 1 is preferably screw-threaded at its upper end to engage the outer threads 3 of a flange 5, depending from the base 4 of the burner, and the carbid-chamber 2 is also threaded at its upper end to engage the inner threads of the flange 5. The carbid-chamber is thus suspended within the water-chamber so that the water entirely surrounds the gas-generating chamber, keeping the gas cool, which is a matter of importance.

Within the carbid-chamber is supported a perforated tube 6, internally threaded at both of its ends to receive screw-plugs 7 and 8. The tube is provided with a number of holes 9 to permit of the flow of water and gas, and over this tube is arranged a cylinder of wire-gauze 10, which is supported removably by the flanged head of the plug 8 and bottom of

carbid-chamber. The plug 7 at the lower end of the tube 6 is provided with a water-passage 11, which extends centrally through the plug from the lower end or head to a point near the upper end, where it communicates with a lateral opening 12, which constitutes the water-discharge opening.

Above the carbid-chamber and communicating therewith by a suitable pipe 13 is a burner 14, provided with the usual cock 15.

The operation of the lamp as thus constructed will be readily understood by those skilled in the art of generating acetylene gas. A quantity of calcium carbid is placed in the chamber 2 before the latter is screwed to place. The water-chamber is then supplied with water and screwed to position. The water feeds through the passages 11 and 12 in the plug 7 and mixes with the carbid to generate the gas. The flow of water is controlled automatically by the gas-pressure. When the burner is not being used, the pressure of gas within the carbid-chamber exceeds that of the water and prevents the discharge of water through the opening 12. As soon as the burner is lighted the gas-pressure is reduced and the water is permitted to flow.

We have found that supplying the water from the bottom of the carbid-chamber results in a steady and uniform flow of gas and a consequent steady light.

It will be noted that the water-supply plug is protected by the perforated tube and its wire-gauze covering and that all of these parts are readily removable for renewal and cleansing.

Inasmuch as the details of the burner employed and the size and shape of the chambers for water and carbid may be varied to suit special conditions of use, we do not restrict the invention in these particulars, but reserve the right to make all such changes as may properly fall within the scope of the following claims.

We claim as our invention—

1. In an acetylene-gas generator, the combination with a water-chamber, of a carbid-chamber supported within the water-chamber, a tube within the carbid-chamber, provided with openings, a gauze covering for said tube, a flanged plug at the upper end of the tube for closing the tube and supporting

the gauze cover in place, and a plug closing the lower end of the tube and formed with a vertical and a lateral opening constituting a water-passage, substantially as described.

5 2. The combination with a generator, having a cover adapted to fit the top of the generator, said cover having a depending annular flange threaded externally and internally, of a water-chamber threaded at its upper end
10 to engage said flange, a carbid-chamber also threaded to engage said flange, a tube within the carbid-chamber, a gauze covering for said tube, a flanged plug for closing the upper end

of said tube and supporting the gauze covering in position, and a plug at the lower end 15 of said tube, provided with a vertical opening and a lateral opening, said openings constituting a water-passage, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE G. SNYDER.

MARCUS L. WEST.

Witnesses:

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