998,607.

H. E. DROUGHT.

ACETYLENE LAMP.

APPLICATION FILED JAN. 30, 1911.

Patented July 25, 1911.

2 SHEETS—SHEET 1.

FIG. 1.

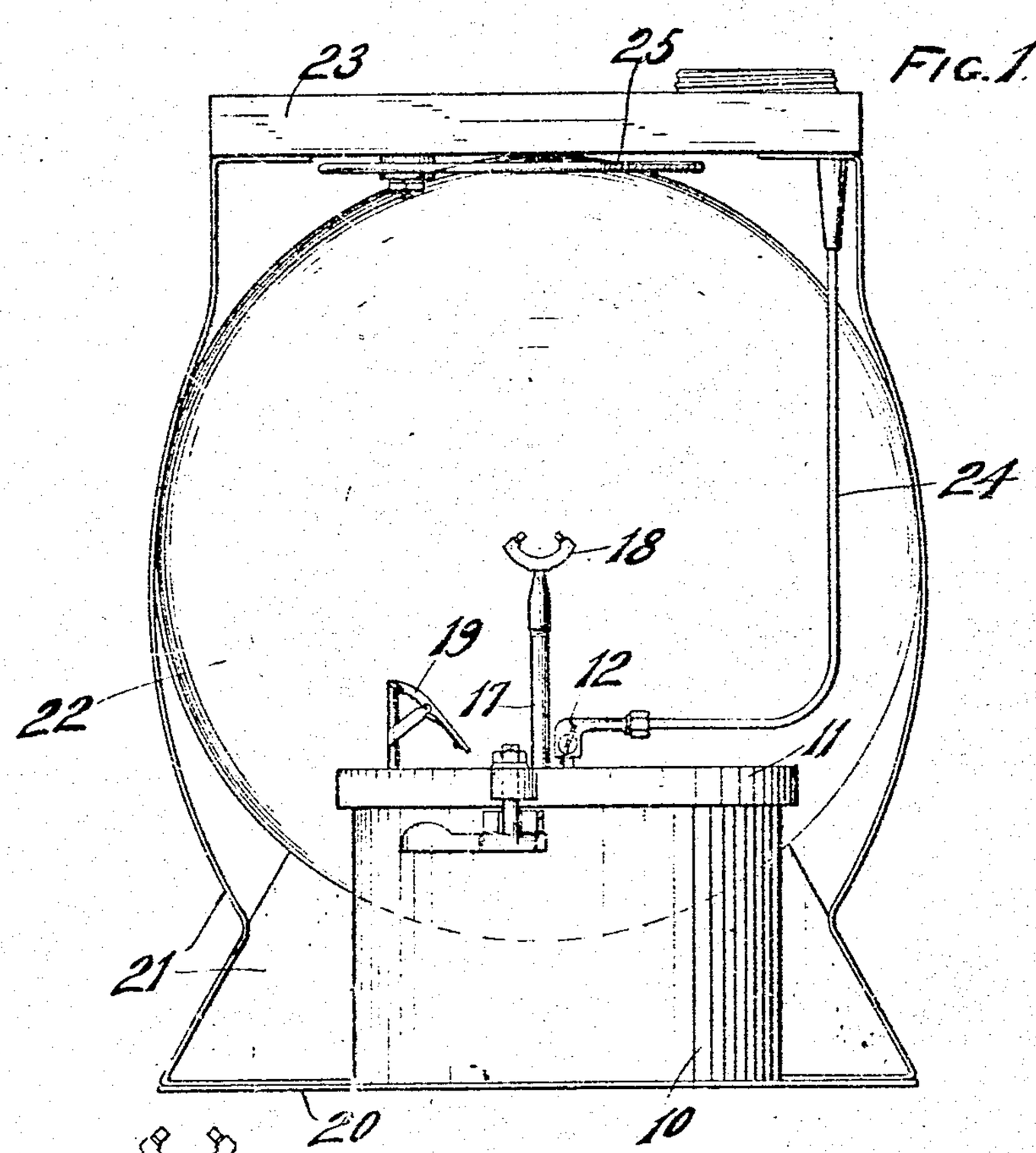


FIG. 2.

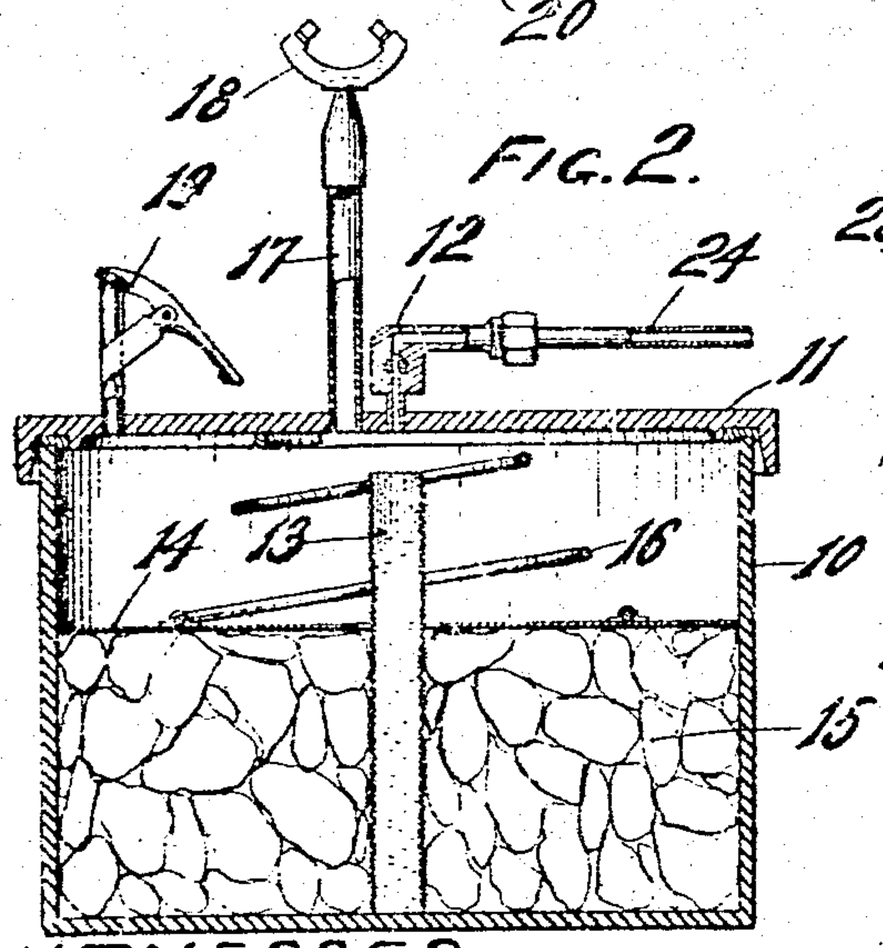
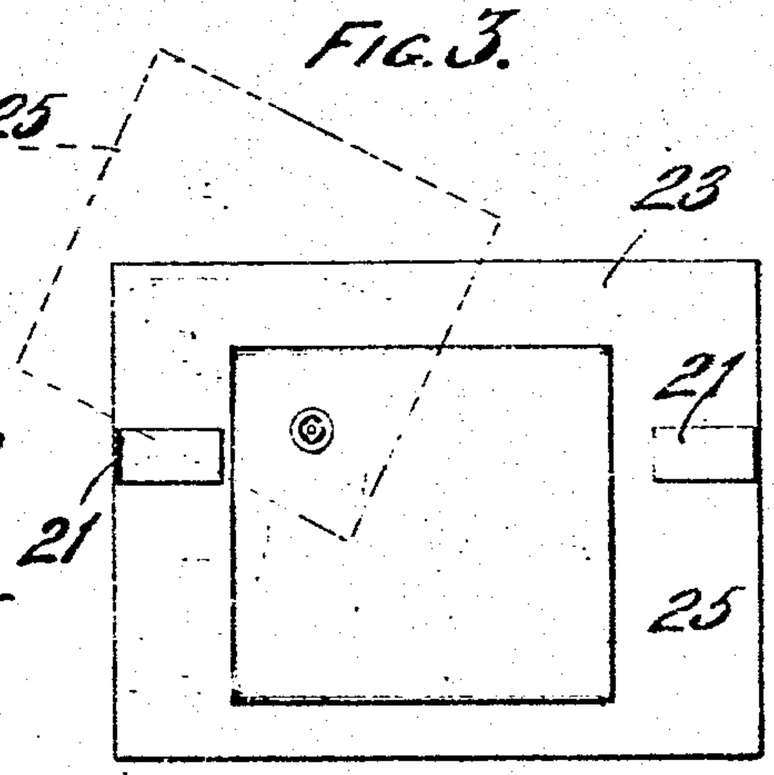


FIG. 3.



WITNESSES

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2 SHEETS—SHEET 2.

FIG. 4.

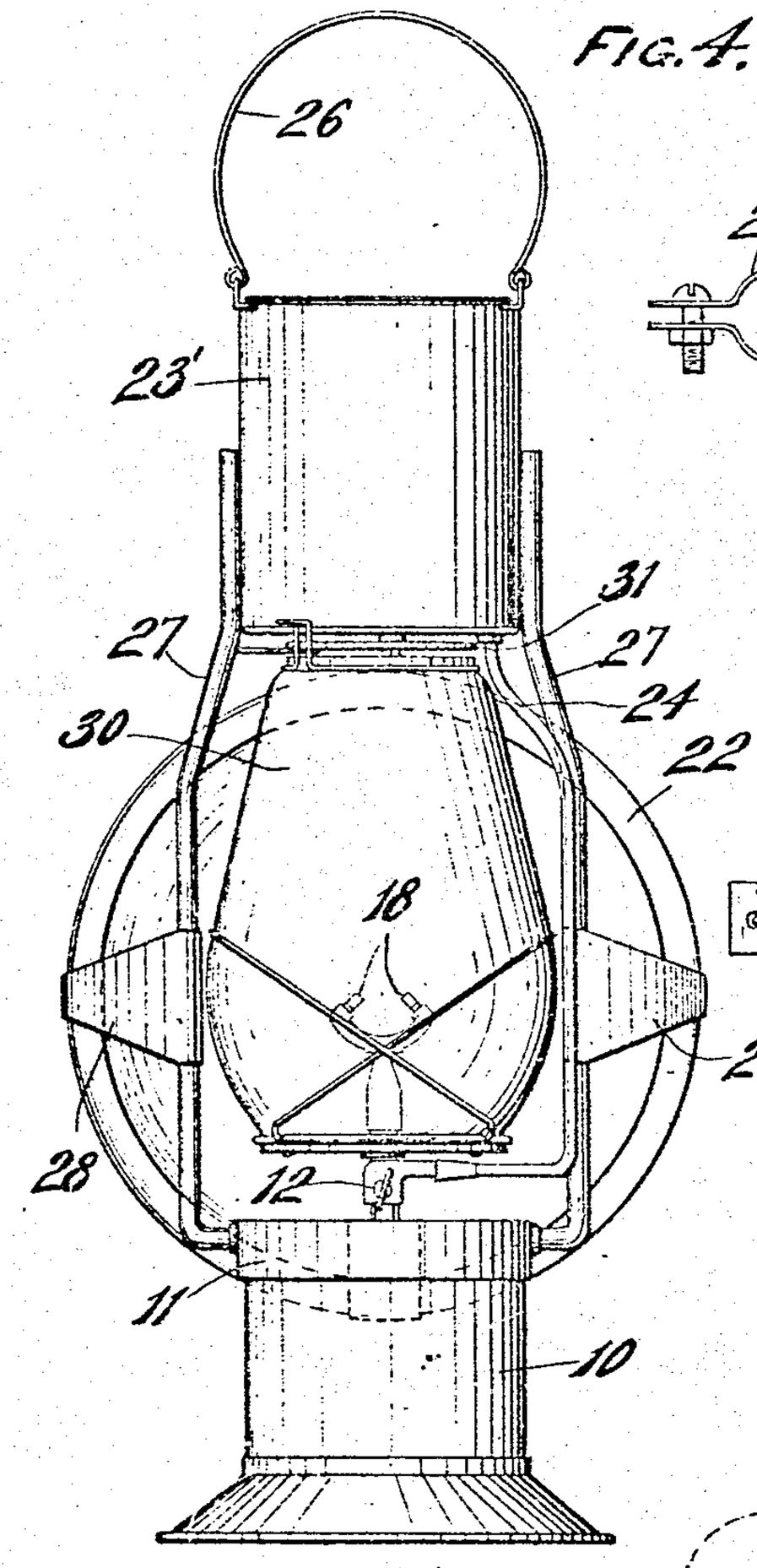

FIG. 7.

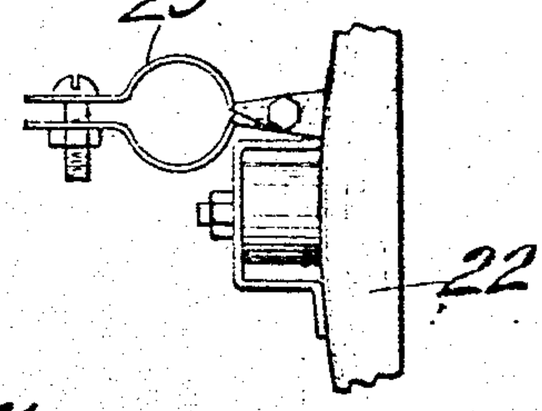

FIG. 5.

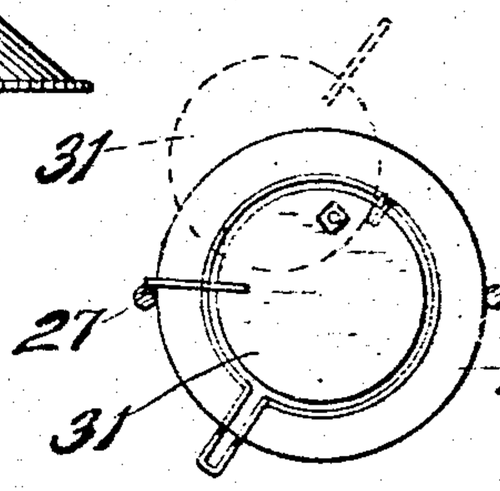

FIG. 6.

WITNESSES.

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UNITED STATES PATENT OFFICE.

HARRY E. DROUGHT, OF WAUKESHA, WISCONSIN.

ACETYLENE-LAMP.

998,697. Specification of Letters Patent. Patented July 25, 1911.

Application filed January 30, 1911. Serial No. 605,432.

To all whom it may concern:

Be it known that I, HARRY E. DROUGHT, a citizen of the United States, residing in Waukesha, in the county of Waukesha and State of Wisconsin, have invented new and useful Improvements in Acetylene-Lamps, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide an acetylene lamp which may be in the form of a lantern or a headlight for locomotives, automobiles and the like, or in any other form adapted for outdoor use, such lamps being so constructed that their water reservoirs are located above the flame where they will be heated thereby and thus prevent the water from freezing.

With the above and other objects in view the invention consists in the acetylene gas lamp as herein claimed and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate similar parts in the several views: Figure 1 is a front elevation of a headlight constructed in accordance with this invention: Fig. 2 is a sectional view of the generator thereof: Fig. 3 is a plan view of the water reservoir inverted, showing the guard therefor: Fig. 4 is a front elevation of a lantern constructed in accordance with this invention: Fig. 5 is a sectional side elevation thereof: Fig. 6 is a plan view of the water reservoir inverted, showing the guard therefor: and, Fig. 7 is a detail view of the reflector mounting and the attaching clip thereof.

In these drawings 10 indicates a generator casing which has a sealed cover 11, as usual, at the center of which is a valved elbow pipe-connection 12 for delivering water drop by drop to a woven wire cylindrical core 13 standing upright on the bottom of the generator casing directly beneath the pipe connection. A disk shaped follower plate, 14 surrounds the core 13 and is forced downwardly upon the calcium carbid 15 contained in the bottom of the generator casing, by means of a coil spring 16 confined between it and the cover 11. Near the center of the cover is an upstanding burner tube 17 having a burner tip 18 thereon, whereby the gas generated may pass through the tube 17 and burn at the tip 18. A spring-pressed safety valve 19 is also located on the cover 11 to relieve the pressure of gas in the generator when such pressure becomes excessive.

In that form of the invention illustrated in Figs. 1, 2 and 3, the generator casing 10 rests upon a shelf 20 of a headlight frame 21, said frame supporting a reflector 22 behind the burner tip 18 and also supporting a water reservoir 23 directly above the burner tip, a water supply tube 24 leading from said reservoir connecting with the valved pipe connection 12 to supply water to the generator. With the water reservoir thus located above the flame of the lamp, it receives the heat from the flame and the water therein is prevented from freezing. When the lamp is used during the summer or there is danger of the water in the reservoir becoming overheated by the flame, a guard plate 25 of asbestos or other heat insulating material may be provided, preferably movably mounted on the bottom of the reservoir so as to be capable of swinging more or less over the flame to protect the reservoir from the heat thereof.

A headlight for automobiles or locomotives thus constructed may be used in the winter without danger of the water freezing and such headlight is far superior to the ordinary headlight burning oil, by reason of the stronger white light produced by the acetylene burner and its ability to resist the action of winds which would extinguish the flame of an oil lamp.

In adapting this invention for use as a lantern, the water reservoir 23′ is preferably made of a cylindrical form, as shown in Figs. 4, 5 and 6, and provided with a bail handle 26 and downwardly extending rods 27 which connect with the cover 11 of the casing 10 of the generator which is of the same construction as previously described. The burner 18 is connected with the cover and stands in front of a reflector 22, and a tube 21 delivers water from the water reservoir 23′ to the valved pipe-connection 12, as before. The reflector is held in position by means of arms 28 connecting it with the rods 27 and with the cover 11 and is provided with an attaching clip 29 for connecting the lantern to a vehicle of any sort. A lamp chimney 30 is mounted between the generator and the water reservoir and is held in place by suitable spring clip means. By locating the water reservoir 23′ above the burner, the water therein is prevented from freezing and in order that the heating effect may not become too great, the bottom of the water reservoir is provided with a heat in-

sulating guard 31, as before, which is capable of swinging out of position, as shown by dotted lines in Fig. 6. A lantern of this construction is adapted for handling in the manner usual with ordinary lanterns and is capable of use as an attachment to a vehicle, while possessing the advantages of an acetylene gas lamp over the ordinary kerosene lamp without having the usual objectional feature of acetylene lamps, their liability of having the water in the reservoir freeze during very cold weather.

What I claim as new and desire to secure by Letters Patent is:

An acetylene lantern, comprising an acetylene gas generator, a burner connected therewith, a water reservoir located directly above the burner to receive heat therefrom, a valved tubular connection between the water reservoir and the generator, and an asbestos guard movably mounted on the bottom of the water reservoir and adapted to be moved over the burner to regulate the temperature of the water in the reservoir.

In testimony whereof, I affix my signature, in presence of two witnesses.

HARRY E. DROUGHT.

Witnesses:

LAURA A. KELLEY,

KATHERINE HOLT.