

No. 618,595.

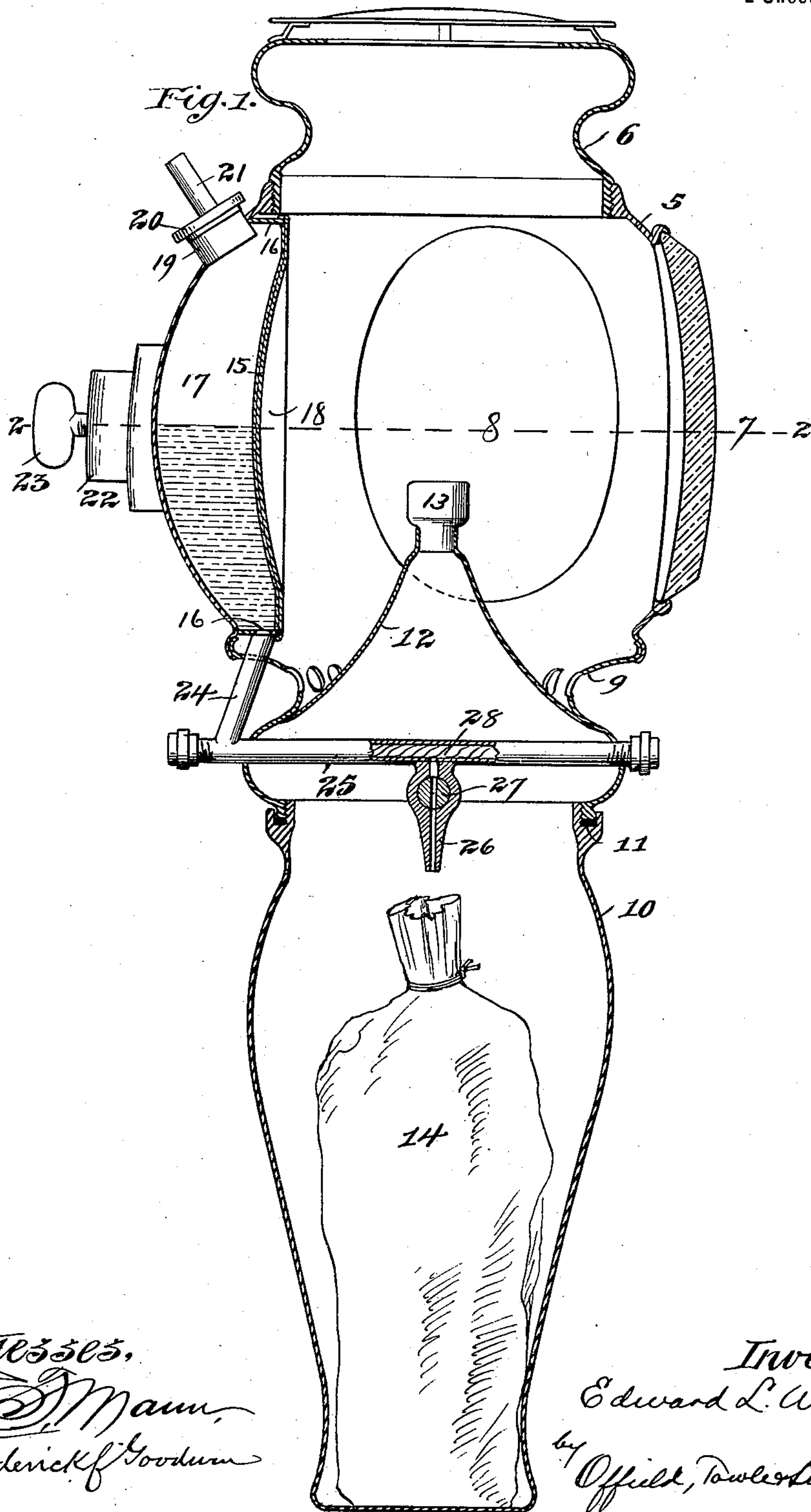
Patented Jan. 31, 1899.

E. L. WILLIAMS.
ACETYLENE GAS LAMP.

(Application filed June 24, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses,

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2 Sheets—Sheet 2.

Fig. 2.

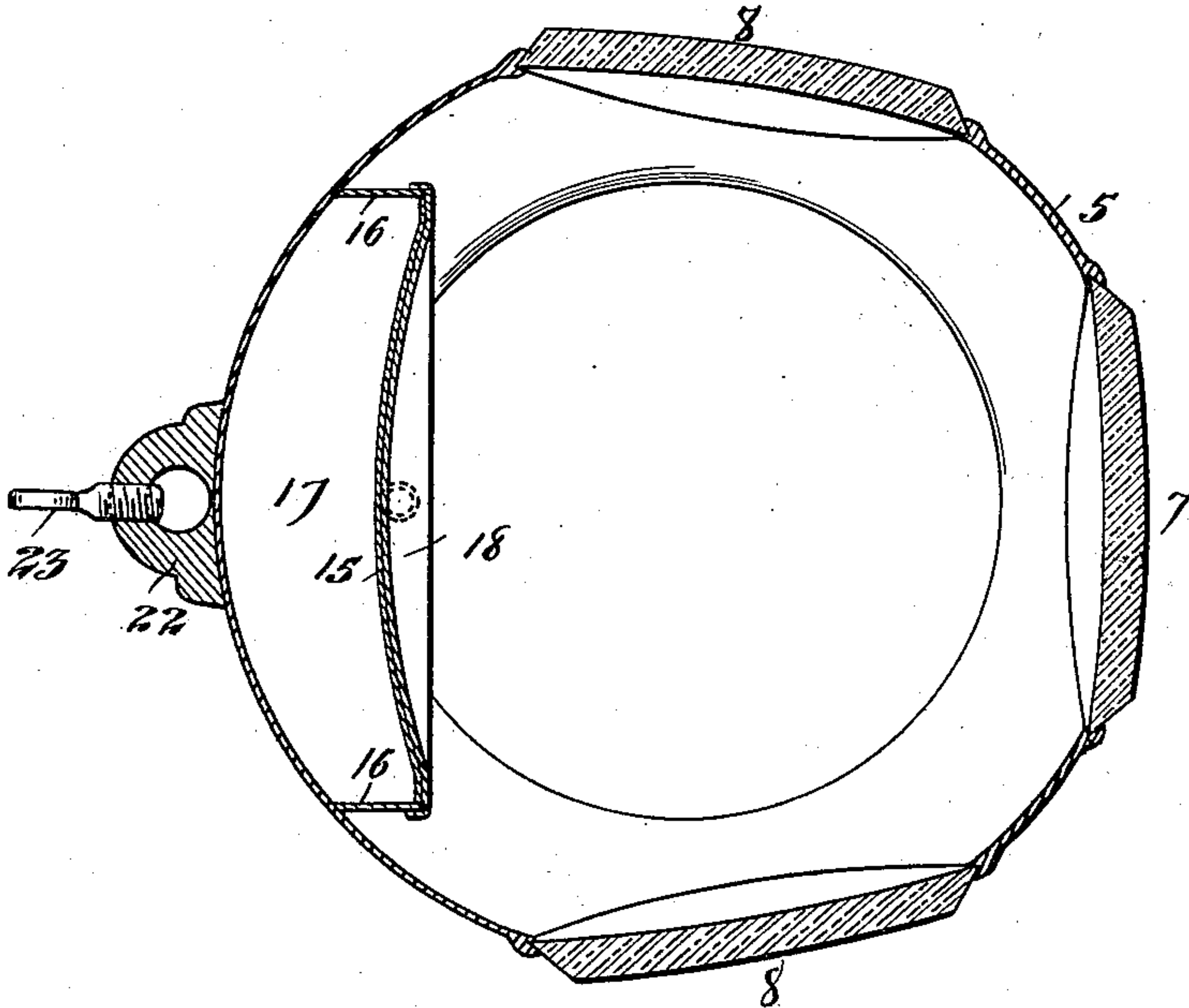
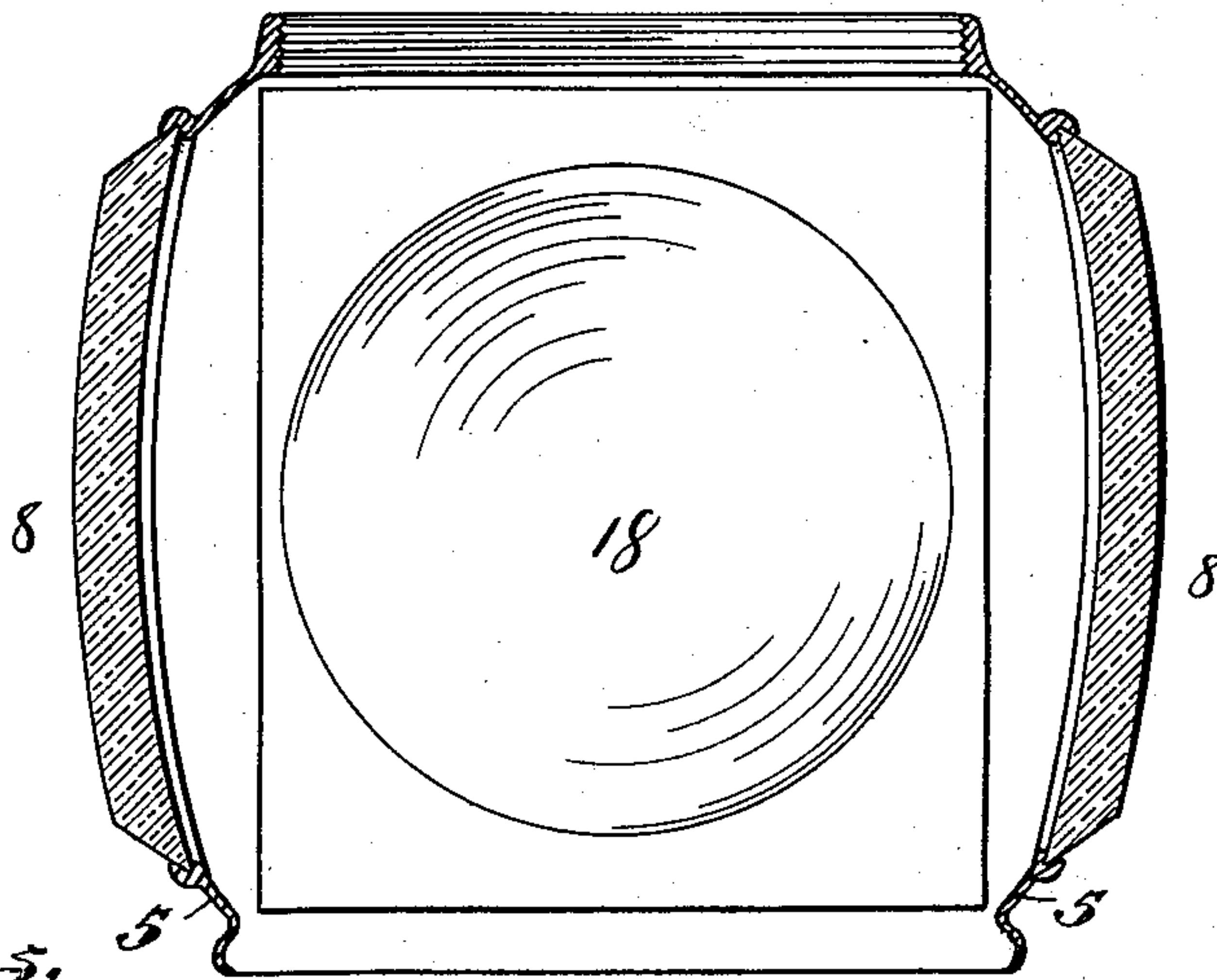


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ACETYLENE-GAS LAMP.

SPECIFICATION forming part of Letters Patent No. 618,595, dated January 31, 1899.

Application filed June 24, 1898. Serial No. 684,357. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. WILLIAMS, of Kenosha, in the county of Kenosha and State of Wisconsin, have invented certain
5 new and useful Improvements in Acetylene-Gas Lamps, of which the following is a specification.

This invention relates to an acetylene-gas lamp, but is more particularly applicable to
10 vehicle-lamps.

I have shown my invention as embodied in a lamp of that type usually employed upon cabs, carriages, and coaches.

In the drawings, Figure 1 represents a central sectional elevation of the lamp, taken
15 through the front lens and reflector. Fig. 2 is a sectional plan on the line 2 2 of Fig. 1, and Fig. 3 is a sectional plan through the body of the lamp at right angles to the view
20 shown in Fig. 1 and showing the reflector in front elevation.

The principal object of my invention is to provide a lamp of the general kind or style adapted for carriages to the burning of acetylene gas. To adapt the lamp for the burning of acetylene gas, it must have a carbid-chamber and a liquid-reservoir. The carbid-chamber I provide in the elongated bottom portion of the lamp which has heretofore
25 held the oil or a candle. The upper portion or body of the lamp is of globular form; and the novelty of my invention consists in applying to said globular body a water-reservoir in such manner as not to cause any undue obstruction in the flame-chamber or interfere with the operation of the lamp.
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In carrying out my invention I preferably construct the body of the lamp of globular form and of a single piece of sheet metal, which may be done by spinning. This globular body at the back of the lamp is made to serve for one wall of the liquid-chamber, and to complete the liquid-chamber I apply to the globular body a rectangular plate of metal
40 flanged at its edges, the flanges being united by solder or otherwise to the globular body near its top and bottom, such plate being dishd to receive a rectangular reflector which is of corresponding shape.

In the drawings, 5 represents the globe or spherical body of the lamp, which may be spun from a single sheet of metal, such spher-
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ical body being then cut away to provide an aperture to receive the neck of the smoke-cap 6 and the front and side lenses 7 8, respectively. The body has attached at the
55 lower opening the usual ventilating-ring 9, which at its bottom is connected with the carbid-holder 10, the joint being packed or otherwise made tight, as shown at 11. The conical or bell shaped part 12 is secured to the ventilating-ring below the apertures therein and at its top carries a burner-tip 13. The carbid is inclosed within the bag 14. In order to supply water to this carbid, I secure to the
60 curved back wall of the body 5 a plate 15, flanged at its edges, as shown at 16, so as to connect the plate to said curved wall, and thus affording a water-chamber 17. The central portion of the plate 15 is dishd or concave to receive a reflector 18. Said reflector may be of the same form as the plate 15, except that it need only have sufficient flange to properly secure it to said plate.
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19 represents a filling-tube having a screw-cap 20 and the air-tube 21. At the rear of the body is the usual perforated lug 22, with its set-screw 23 for securing the lamp to the vehicle. The water is conducted from the reservoir 17 through the pipe 24 and tube 25
80 to the drip or outlet pipe 26, the latter having a valve 27 therein and the tube 25 being packed with wicking 28. When the valve is opened, the water will flow by gravity through the packed tube 25 and drip onto the carbid-sack, the moisture generating a gas which is consumed at the burner-tip.
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I do not claim herein the peculiar construction of water-supply or the inclosing of the carbid in a fabric envelop, this invention
90 being intended to cover only the construction and adaptation of a coach or carriage lamp to the burning of acetylene gas by the provision of a water-chamber, as described. The particular location and construction of the water-chamber are important. In the first place it is highly desirable to retain the globular or spherical form of the lamp itself and to preserve the conventional and symmetrical form which these lamps usually have. It is desirable to have a coach or carriage lamp with a somewhat narrow and elongated dependent lower portion which has the requisite capacity to contain the carbid, but which, if made to
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contain the water above the carbid, would be uncouth in appearance and undesirable, particularly to the owners of the better class of vehicles, whose tastes are somewhat fastidious. Furthermore, a carriage-lamp having the water-chamber external to the body of the lamp would be equally objectionable, because it would so change the form and appearance of the lamp as to cause it to be rejected.

Many attempts have been made to overcome the inherent difficulties in the way of adapting a coach-lamp to the burning of acetylene gas, but heretofore, so far as I am aware, without commercial success. I have overcome the difficulties in a simple but effective manner, and my invention provides a lamp which may be used upon the finest class of carriages and which will be unobjectionable in its form and external appearance to the most fastidious. Furthermore, my invention has features of importance, considered in the structural or mechanical sense. By making the body from a single piece of metal and of substantially spherical form it is strong, yet light, and can be readily adapted to receive the lenses and other accessories. Then by utilizing the rear curved wall of the lamp-body as a portion of the reservoir for the water such reservoir can be economically completed by the attachment

of the simple flanged plate thereto. By placing the reservoir within the body of the lamp the symmetrical appearance of said body is preserved and at the same time the reservoir is located at an elevation above the generating-chamber, which is of course necessary with a gravity feed. Besides this the wall of the reservoir affords a convenient support for the reflector and keeps the latter cool, while the attachment of the flanged plate and the reflector to the curved back wall of the lamp-body strengthens the latter and enables the bracket for the support of the lamp to be connected directly thereto and at a single point, if desired.

I claim—

A carriage-lamp having a substantially globular body, whose curved back wall forms a portion of a chamber to contain a liquid, a flanged plate completing said chamber and adapted to support a reflector and a generating-chamber in the bottom of the lamp, and connected with said reservoir, substantially as described.

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