

No. 725,106.

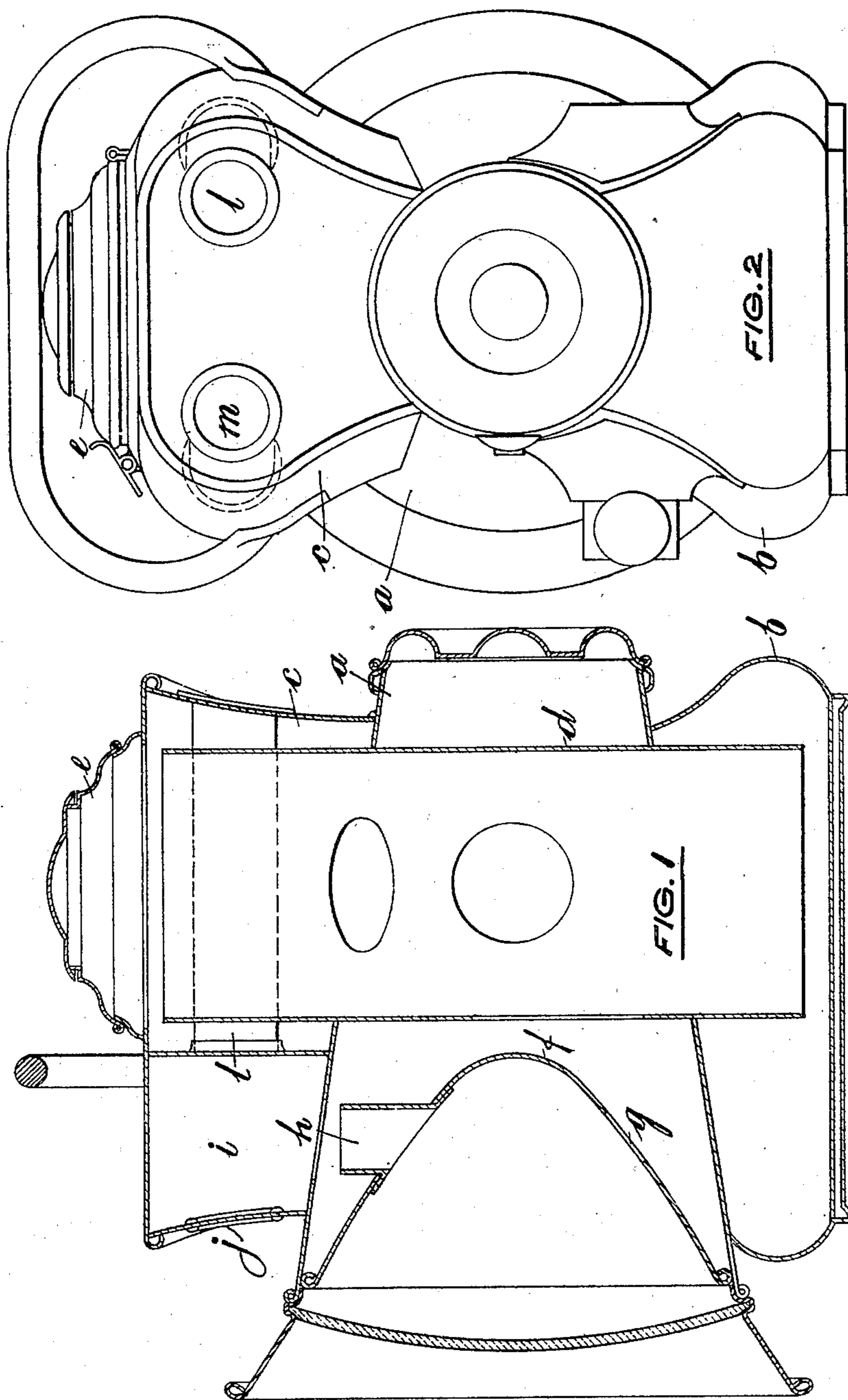
PATENTED APR. 14, 1903.

H. LUCAS.
ACETYLENE LAMP.

APPLICATION FILED JULY 28, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
L. M. Aldous
Carré Judge.

Inventor
Harry Lucas
by Richards & Co.
Attorneys

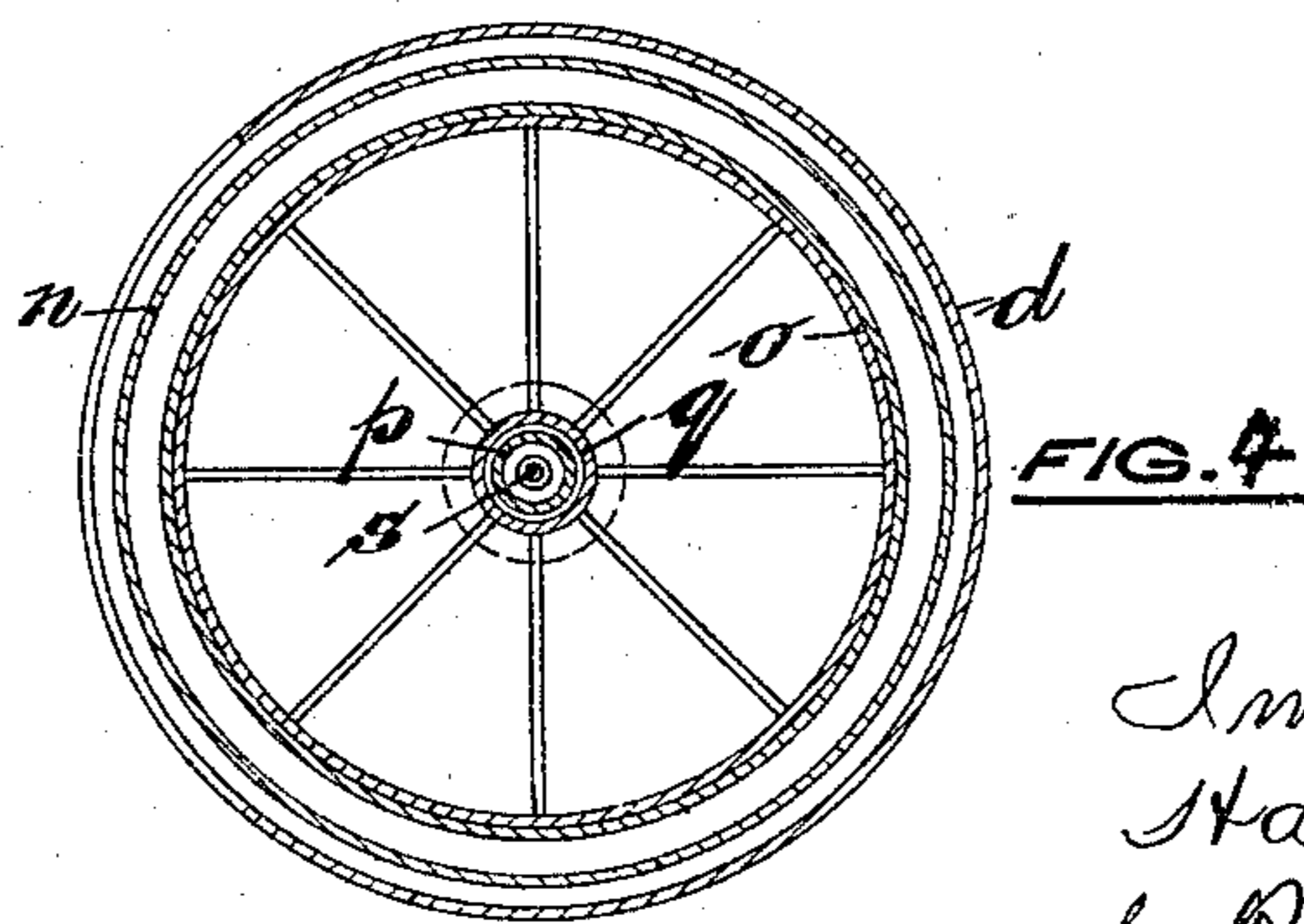
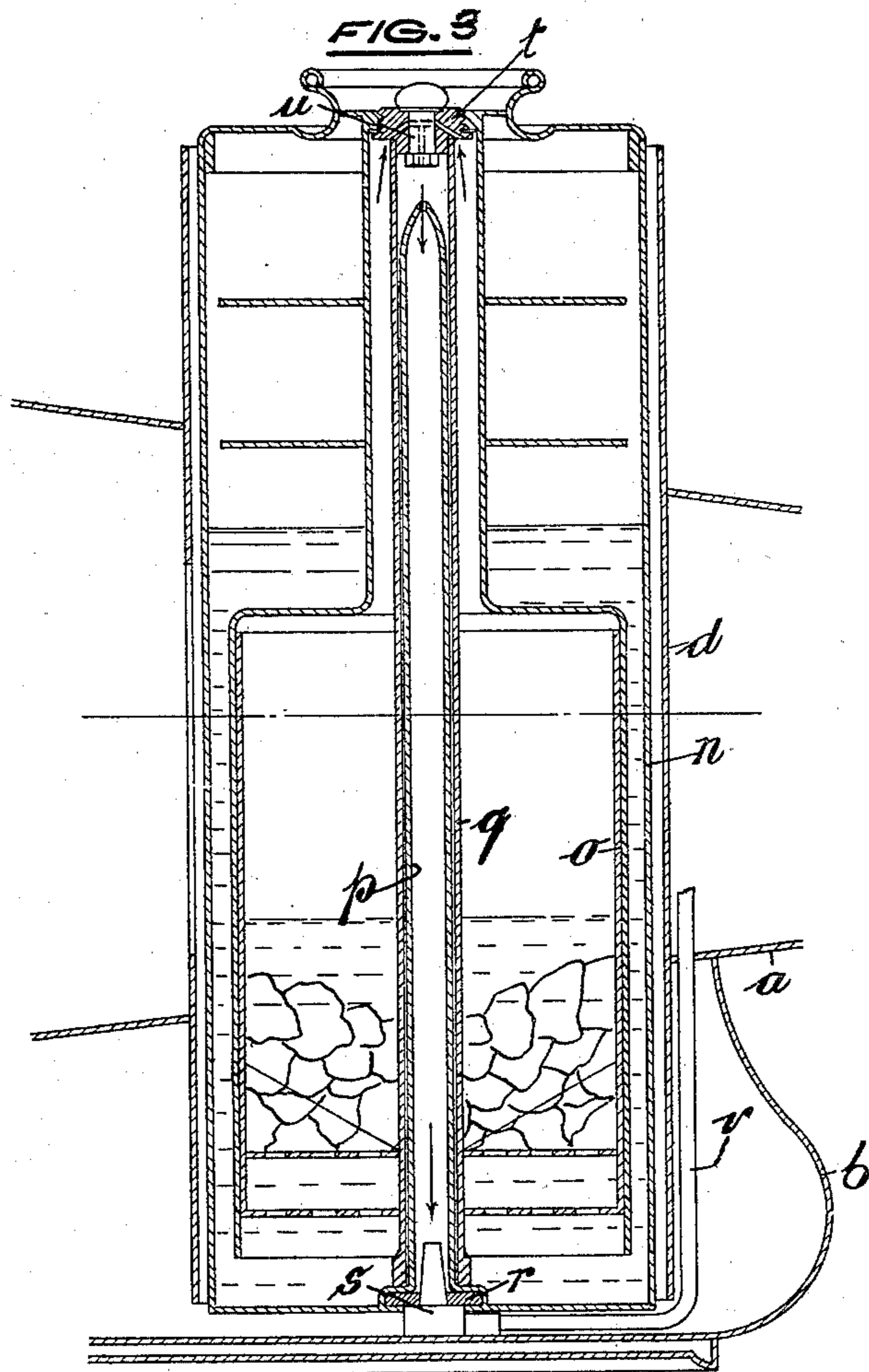
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UNITED STATES PATENT OFFICE.

HARRY LUCAS, OF BIRMINGHAM, ENGLAND.

ACETYLENE-LAMP.

SPECIFICATION forming part of Letters Patent No. 725,106, dated April 14, 1903.

Application filed July 28, 1902. Serial No. 117,308. (No model.)

To all whom it may concern:

Be it known that I, HARRY LUCAS, a subject of the King of Great Britain and Ireland, and a resident of Great King street, in the city of Birmingham, England, have invented certain new and useful Improvements Relating to Acetylene-Lamps for Motor-Cars and other Vehicles, (for which I have filed an application in Great Britain, No. 777, bearing date January 10, 1902,) of which the following is a specification.

This invention relates to acetylene-lamps for motor-cars and other vehicles, my object being to construct such lamps convenient and effective in form, with means whereby the insertion of the generator within the lamp-body and its withdrawal therefrom automatically joints and disjoins the connection between such generator and the gas-conduit or burner supply-pipe.

Referring to the three accompanying sheets of explanatory drawings, Figure 1 is a sectional side elevation, and Fig. 2 an end elevation, of the lamp. The generator is not shown in Fig. 1. Fig. 3 is a sectional elevation, and Fig. 4 a sectional plan, of the generator, illustrating the means whereby its insertion within the lamp-body and its withdrawal therefrom automatically joints and disjoins the connection between itself and the gas-conduit or burner supply-pipe. Figs. 3 and 4 are shown to a larger scale than Figs. 1 and 2.

The same reference-letters in the different views indicate the same parts.

I make the body part *a* of the lamp of a conical form from one or more metal sheets shaped and united in any ordinary manner. The said conical body is mounted and secured upon a saddle-base *b*, the sides of which are preferably tapered or inclined to correspond with the cone or taper of the body. In like manner I preferably taper the sides of the metal hood *c* on the upper part of the lamp-body.

In apertures formed vertically through the body of the lamp I insert the tube *d* to serve as the well-like receptacle for the gas-generator.

An entrance-aperture is provided in the hood immediately above the well-tube, and such aperture is fitted with a hinged lid *e*,

having an ordinary spring-catch or fastening device.

The front or larger end of the conical body is fitted with a reflector *f* in any ordinary manner, having an aperture *g* through its lower portion to admit the usual gas-supply pipe upon which the burners are mounted and a larger aperture *h* through its upper portion for the escape of the gaseous products of combustion. The ordinary small perforations are also provided for the admission of air.

The hood has an internal chamber, as *i*, for receiving the gaseous products of combustion aforesaid and opening directly to the atmosphere at the front end through the apertures *j* and *k*. The rear end of the chamber *i* also communicates with the atmosphere by way of the tubes or channels *l* and *m*, which are made to pass adjacent to the exterior of the well-tube *d*, hereinbefore referred to, and into which the generator is placed for the purpose of enabling the current or currents of air to cool the said well when the generator is in action.

The generator, which is placed within the tube *d*, hereinbefore referred to, is of a well-known type and comprises an outer casing or vessel *n*, containing the water necessary for the generation of the gas from the carbide contained within the two-part inner vessel *o*.

A gas-conveying tube *p* is fixed to the bottom of the outer casing *n* and projects within a tube *q*, in attachment with the aforesaid inner vessel *o*. The upper end of the tube, which terminates slightly below the top of the generator, is made to a conical or reduced form, as illustrated. The central portion of the bottom of the casing *n* is pierced or has an eye or aperture formed through it, and around such eye or aperture I fit a rubber or other jointing ring or washer *r*, which when the generator is in its service position, as shown at Fig. 3, seats upon a hollow nipple *s*, fixed upon the interior of the base part of the lamp, and thus being tightly pressed by the weight of the generator upon the said nipple prevents escape of the gas around the exterior of the same.

Within a screw-plug part *t*, secured to the upper end of the aforesaid tube *q*, I fit a valve or cock *u*, which when open, as in Fig. 3, permits the acetylene gas to pass, as indicated

by the arrows, from the exterior to the interior of the upper part of the tube *q*, down the tube *p*, through the nipple *s*, and finally by way of a small supply pipe or conduit *v* to the gas-burners or to a gas bag or holder at the rear of the end of the conical body *a*, serving as the burner supply-reservoir.

On closing the cock *u* the outflow of gas is prevented and its generation thereby arrested, as the pressure forces back the water from the carbide into the outer casing in the well-known manner. By adjusting the extent of the opening of the cock the rate of gas generation can be regulated to suit requirements.

By the mere act of dropping a generator as aforesaid into position within the well-tube *d* a gas-tight joint is automatically formed between its outlet end and the nipple *s*, forming part of the conduit *v*, in permanent attachment with the lamp. Similarly the connection between the said parts is automatically disjointed on the withdrawal of the generator. The usual preliminary mechanical jointing and disjointing are thus dispensed with.

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

1. In acetylene-lamps for motor-cars and other vehicles, the combination consisting of a vertically-disposed well-tube in permanent attachment with the lamp-body, a nipple at the bottom of the said well-tube, a gas-conduit in permanent connection with the said nipple, and a gas-generator having an outlet-aperture which automatically joints with the said nipple on the insertion of the generator within the said well-tube, and disjoints on the withdrawal of the same, the said joint being outside the water-chamber of the generator, substantially as described.

2. In acetylene-lamps for motor-cars and other vehicles, the combination consisting of a conical body part, a hood with air-tubes

fitted therein, a well-tube inserted vertically through and permanently secured with the said body, a nipple at the bottom of the said well-tube, a gas-conduit in permanent connection with the said nipple, a gas-generator, and a jointing-ring interposed between the gas-outlet of the generator and the said nipple, substantially as described.

3. In acetylene-lamps for motor-cars and other vehicles, the combination consisting of a conical body part, a hood with air-tubes fitted therein, a well-tube inserted vertically through and permanently secured with the said body, a nipple at the bottom of the said well-tube, a gas-conduit in permanent connection with the said nipple, a gas-generator, a jointing-ring interposed between the gas-outlet of the generator and the said nipple, and a gas-regulating cock fitted to the generator, substantially as described.

4. In acetylene-lamps for motor-cars and other vehicles, the combination consisting of a conical body part, hood and base parts secured to the said body and with sides tapered to correspond with cone of same, air-tubes fitted within the said hood, a well-tube inserted through and permanently secured with the body and projecting within the said hood and base parts, a nipple at the bottom of the said well-tube, a gas-conduit in permanent connection with the said nipple, a gas-generator, a jointing-ring interposed between the gas-outlet of the generator and the said nipple, a gas-regulating cock fitted to the generator, and a generator admission-aperture in the said hood part with a hinged lid and fastening device therefor, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HARRY LUCAS.

Witnesses:

EDWARD MARKS,
JOHN MORGAN.