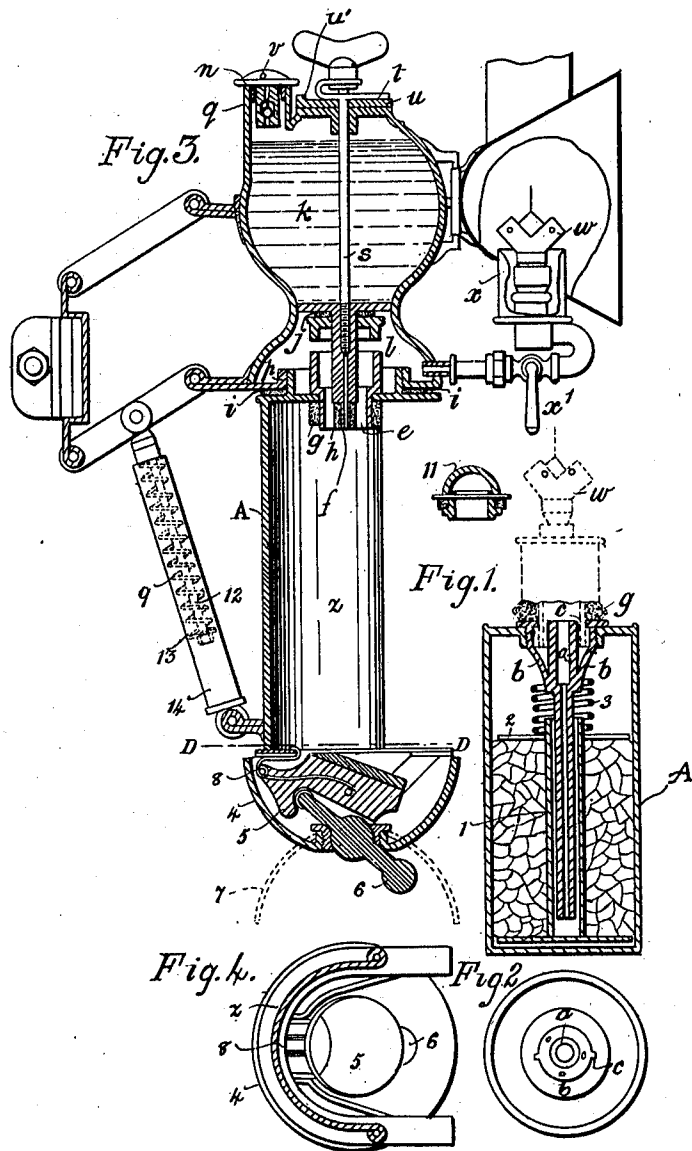


J. PHALP.
ACETYLENE LAMP.
APPLICATION FILED JULY 2, 1910.

988,810.

Patented Apr. 4, 1911.

2 SHEETS—SHEET 1.



Witnesses
Howard F. Costello.

Inventor
James Phalp.

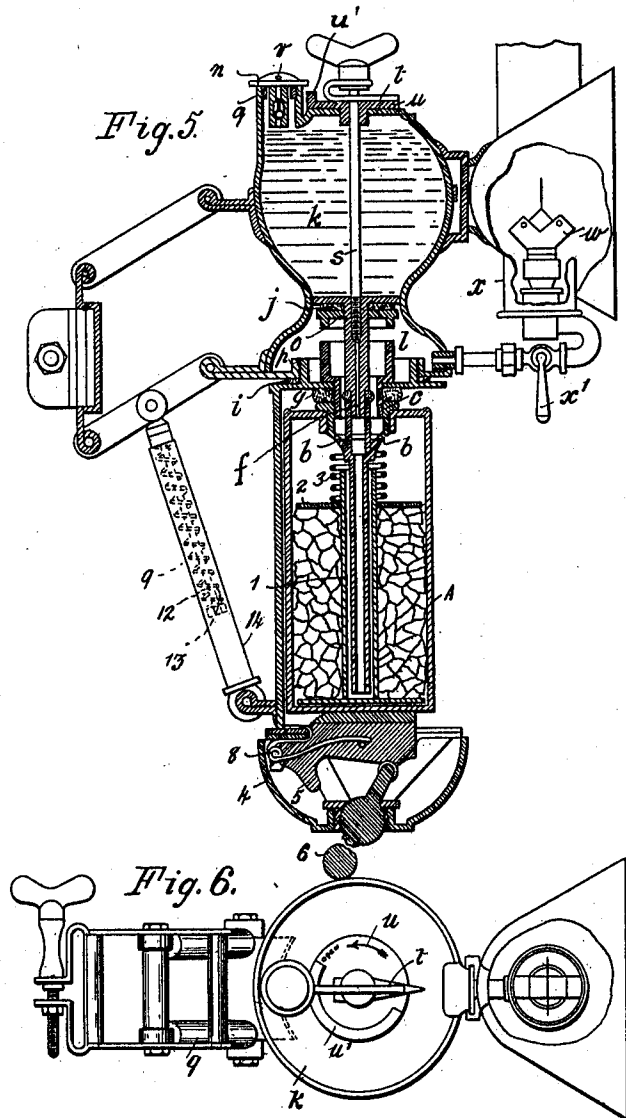
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UNITED STATES PATENT OFFICE.

JAMES PHALP, OF DURHAM, ENGLAND.

ACETYLENE-LAMP.

988,810.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed July 2, 1910. Serial No. 570,183.

To all whom it may concern:

Be it known that I, JAMES PHALP, of 11 Blandford Place, Seaham Harbour, Durham, England, merchant and engineer, have
5 invented new and useful Improvements in Acetylene-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a
10 part hereof.

This invention relates to acetylene generators for automobile, cycle and other lamps and lanterns of the kind in which the generating chamber containing the calcium carbide is capable of being readily attached to
15 or detached from the body portion of the lamp comprising the water reservoir, burner, and other adjacent and necessary parts.

My invention has for its objects to improve
20 and simplify the construction of lamps of this kind and to provide a lamp which may be readily charged or emptied of spent carbide without (in the case of a cycle lamp for example) dismounting from the machine.

In accordance with my invention the generator consists of a circular or other shaped vessel fitted with female mechanisms, one for the water inlet, and one for the gas outlet. These are fitted together or formed in one
30 and fit into a male mechanism in the lamp and are provided with circular rubber junction pieces for producing air tight connections between the gas outlet and the water inlet. Each is adapted to fit into the other.
35 The female portion of the mechanism is attached to the carbide container or generator, and is pressed up into position by means of a lever which produces a gas and water tight connection by means of the rubber junction
40 pieces, on the male mechanism of the lamp. The generator can be released and taken out at any time by pressing back the lever and a new charged generator can be inserted. The generator can also be converted into a
45 temporary acetylene candle by inserting a male piece mechanism similar to that in the lamp with burner attached, and placing a small quantity of water in the generator. For motor lamps two or more generators can
50 be used simultaneously, or they can be released instantly and be used as a candle or be replaced by new charges. And in order that my invention may be fully understood, I will proceed to describe same with refer-
55 ence to the accompanying drawings and figures and letters of reference marked thereon.

Figure 1 is a sectional elevation of the generator. Fig. 2 is a plan of the same. Fig. 3 is an elevation (partly in section) of the lamp showing the generator detached. 60 Fig. 4 is a plan of the same, partly in section through line D. D. Fig. 3, showing the lever released. Fig. 5 is a part sectional elevation of the lamp showing the generator fixed and locked in position, and Fig. 6 is a
65 plan of the upper part of the lamp together with its anti-vibration mechanism.

a is the female orifice for conveying the water to the bottom of the generator to attack the carbide. 70

b is the female portion of the gas outlet through perforations. 75

c are notches for inserting the male piece for the burner *w*, when used as a candle, also for the cap 11 to produce an air tight joint to prevent decomposition of the carbide before being used. 80

e is the male orifice for outlet of gas to the burner.

f is the male orifice for conveying the water from the reservoir to the bottom of the generator. 85

g and *h* are the circular rubber junction pieces for producing air tight connections between the male and the female orifices, 85 when the generator is in position.

Referring particularly to Figs. 1 and 5, A is the generator and 1 is a slit cylinder with a disk attached at its lower end, and placed inside the generator for the carbide 90 to rest on. 2 is a second disk placed within the cylinder and resting on the top of the carbide to keep the same in position. 3 is a coiled spring attached to the disk 2 to keep it pressed down on the carbide. *i* and *j* are
95 rubber packings for insuring air tight joints between the reservoir *k* and the gas chamber *l* leading to the burner *w*. The parts *o* and *p* are screwed and serve to render the bottom part of the lamp detachable from the reser- 100
voir. *k* is the reservoir with exit orifice. The reservoir *k* is provided with a filling orifice *q* closed by a screwed cap *n* with air inlet hole *v*, and fitted with a ball or clack stopper, to prevent the escape of gas should 105
there be an excessive flow through the valve outlet, when the water is low in the reservoir. *s* is the valve screwed at the bottom for regulating the water supply to the generator. The upper portion is provided with 110
an index pointer *t* which moves radially around an index disk *u* with a collar *u'* at-

tached. A portion of the collar *u'* is removed to form a stop for the pointer *t* so as to limit the inflow of water passing into the generator, and prevent any excess of gas being generated. *x* is a circular draft screen screwed on to the gas burner socket which fits in to the lamp front. 4 is an inverted dome casing inclosing the lower mechanism of the lever 6. 5 is the lever press. 7 shows the dome piece inverted to serve as a lamp-stand when the lamp is detached. 8 are springs for the lever press 5. 9 indicates (see Fig. 6) the anti-vibration mechanism attached to the lamp bracket which mechanism consists of the screwed rod and nut 12, and the spring 13 inclosed in a casing marked 14. *x'* is the stop tap for regulating the supply of gas to the burner, and *z* is a semi-circular guide in which the generator is placed.

What I claim as my invention and desire to receive by Letters Patent is:—

1. A lamp comprising a water reservoir, a casing secured to the lower portion of said reservoir, a platform hinged to the lower portion of said casing, an abutment shoulder formed near the rear portion of the bottom of

said platform, a lever slidably engaging the under surface of the bottom of said platform, said abutment preventing said lever from swinging beyond said platform, and a spring normally holding said platform in a depressed position.

2. A lamp comprising a body portion having a water reservoir in its upper portion and a gas chamber in its lower portion, a casing connected with the lower portion of said gas chamber, a gas pipe passing from said chamber into said casing, a carbide receptacle provided with an opening through which said gas pipe passes, a gasket placed upon said pipe between said carbide reservoir, and the bottom of said gas chamber, a hinged platform supporting said carbide reservoir, a spring normally holding said platform in a lowered position, and means for raising said platform to clamp said gasket.

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

JAMES PHALP.

Witnesses:

H. NIXON,

FRED H. DUKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."