

L. ANDERSON.
GASOLINE TORCH.

Patented July 20, 1897.

Fig. 1.

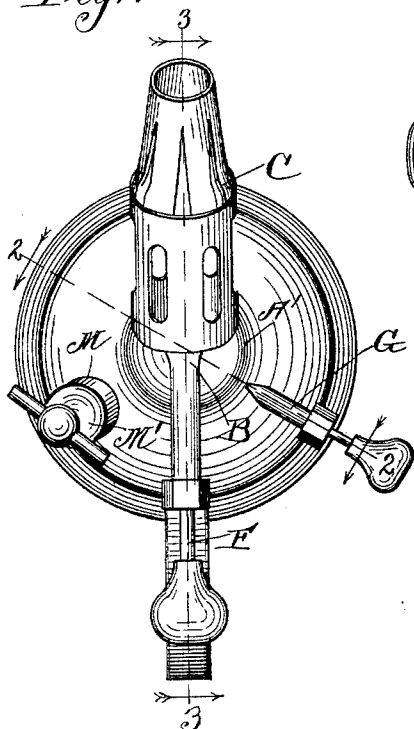


Fig. 2.

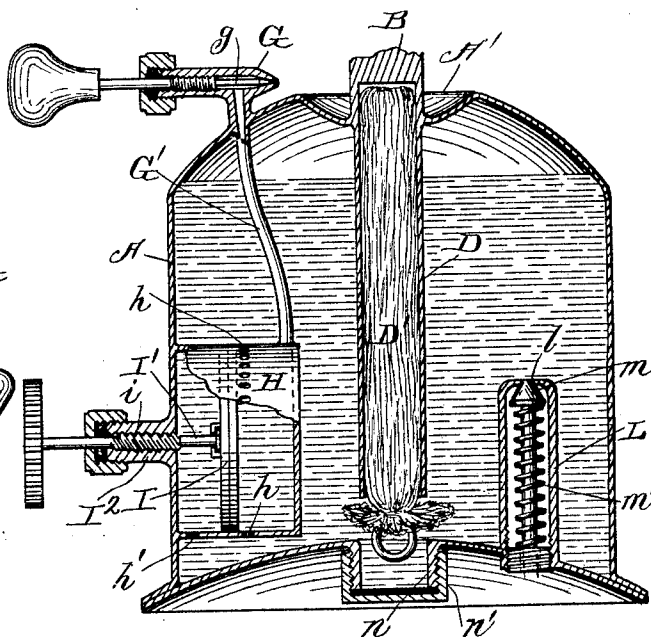
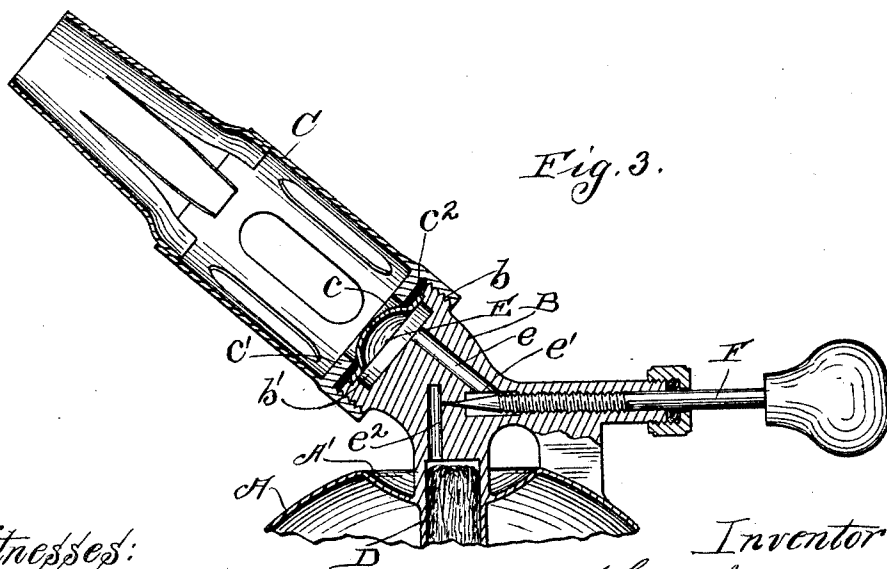


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

LARS ANDERSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO AXEL BLOMFELDT
AND OSCAR RAPP, OF SAME PLACE.

GASOLENE-TORCH.

SPECIFICATION forming part of Letters Patent No. 586,785, dated July 20, 1897.

Application filed November 30, 1896. Serial No. 613,977. (No model.)

To all whom it may concern:

Be it known that I, LARS ANDERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gasolene-Torches, of which the following is a specification.

This invention relates to improvements in that class of gasolene-torches used for lighting gasolene street-lamps, and for heating parts of machinery, and by plumbers and others for various purposes, in which the torch is provided with a reservoir for holding the oil or other liquid fluid, in the upper portion of which vapor is generated by heat and is emitted in the form of a jet into a burner, which surrounds and directs the flame when the said jet is ignited; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The object of my invention is to provide a torch which shall be simple and inexpensive in construction, strong and durable, safe against explosion, and easily filled and operated.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a plan view of the torch as it appears when ready for use. Fig. 2 is an enlarged central sectional view, partly in elevation, taken on line 2 2 of Fig. 1, showing the head of the reservoir broken away and the burner removed; and Fig. 3 is an enlarged sectional view, taken on line 3 3 of Fig. 1, showing the upper portion of the reservoir, the gas-generator, and the channels leading therefrom to the wick-tube of the reservoir and showing the burner in position.

Similar letters refer to like parts throughout the different views of the drawings.

A represents an oil reservoir or vessel which may be made of any suitable size, form, and material, but preferably of brass and cylindrical in shape, as shown in Figs. 1 and 2 of the drawings. The top of the vessel or reservoir A is provided with a head B, which rises vertically from the center of the top and then

extends at an angle therefrom and has its free end provided with screw-threads *b* to engage similar threads on the burner-tube C, which is of the ordinary construction. 55
Around the head B the top of the reservoir is formed with a depression or basin A' to receive and retain a sufficient quantity of oil to heat the head B to the necessary temperature to convert the gasolene or oil into vapor. 60
Extending from the head within the reservoir to near its bottom is a wick-tube D, in which a wick D' of any suitable kind is located for conveying the gasolene or oil to its upper portion. The free end of the head B is formed 65
with an annular recess *b'*, over which lies a perforated concave cap *c*, thus forming a vapor chamber or generator E, from which a channel *e* leads into an opening *e'*, which communicates with another channel *e*², opening 70
into the wick-tube.

As shown in Fig. 3, the opening *e'* is a horizontal one, and a portion thereof is screw-threaded to engage a screw-threaded valve-stem F, which is pointed at its inner end to fit within the passage leading from the opening *e'* to the channel or opening *e*² when it is desired to regulate or shut off the flow of vapor from the gasolene. The cap *c* is held in position by means of an internal annular 80
flange *c'* on the burner, between which flange and the cap is located a washer *c*², of mica or other heat-resisting material. On top of the reservoir A and near the basin A' is located a valve-chamber G, which is provided with a 85
tapering opening pointed toward the basin, within which is located a pointed valve *g*, used for opening and closing the same.

Connected and extending from the valve-chamber G is a tube G', which opens into a cylinder H on the interior of the reservoir. 90
The periphery of the cylinder is provided with openings *h*, and near the wall of the reservoir with another opening *h'*, for the passage of the oil, as will be presently explained. 95
Within the cylinder H is a piston I, to which is secured a screw-threaded stem I', which passes through and engages a screw-threaded opening *i* in a boss or enlargement I² on the exterior of the reservoir. 100

Extending vertically from the bottom of the reservoir is a tube L, which is formed in its

top with a small opening *l*, in which fits a tapered valve *m*, around the stem of which is secured a spring *m'*, which normally holds the valve within the opening of the tube, yet will under abnormal pressure yield sufficiently to allow vapor to escape through the tube to prevent an explosion, thus forming a safety-valve in the bottom of the vessel or reservoir. The central portion of the bottom of the reservoir is provided with a screw-threaded neck or opening *n*, on which fits a screw-threaded cap *n'* for closing the same. This opening is employed when it is desired to adjust the wick or remove it from its tube. The top of the reservoir is also provided with a neck *M*, through which the gasolene or oil is passed to the reservoir, which neck is closed by means of a screw-threaded cap *M'*, provided with a suitable handle.

From the foregoing and by reference to the drawings it will be seen and readily understood that by opening the valve *g* and forcing the piston *I* toward the tube *G'* the oil admitted into the cylinder through the open-

ings *h* will be forced through the tube *G'* into the valve-chamber *G* and from thence into the basin *A'*, where it may be ignited to heat the head, so as to generate vapor in the channels and generator. The passage of the fluid through the channels or openings *e*, *e'*, and *e²* may be regulated or shut off by means of the valve-stem *F*, as is apparent.

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

The combination of the reservoir *A*, having in its top the basin *A'*, surrounding the head *B*, with said head provided with the channels *e*, *e'*, and *e²*, and valve *F*, and having in its free end the generator *E*, comprising the recess *b'*, and the perforated concave cap *c*, and the wick-tube *D*, communicating with the generator, substantially as described.

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Witnesses:

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