

No. 621,334.

Patented Mar. 21, 1899.

P. J. FITZGERALD.
LIGHTING ATTACHMENT FOR LAMPS.

(Application filed June 21, 1898.)

(No Model.)

Fig. 1.

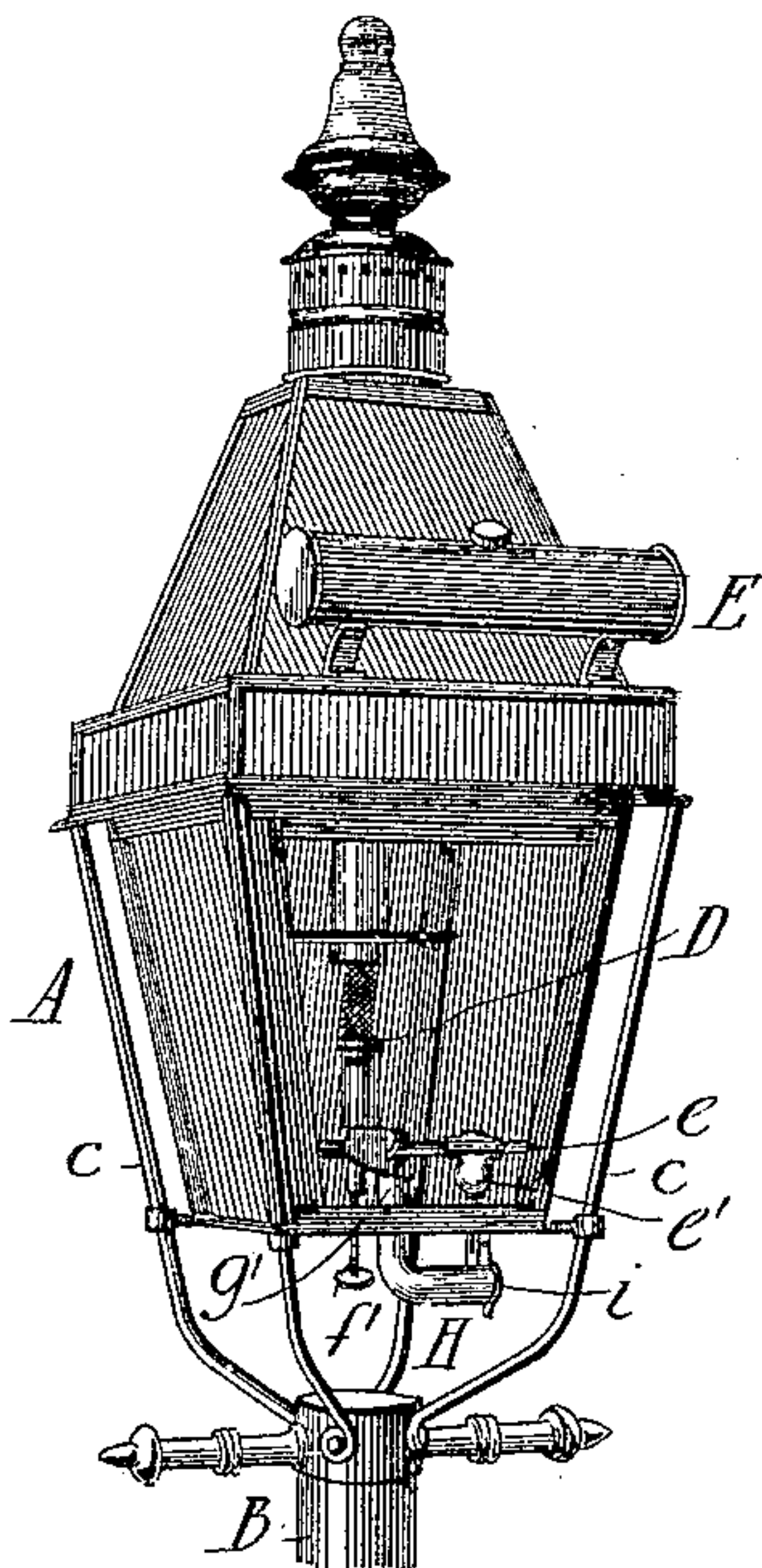
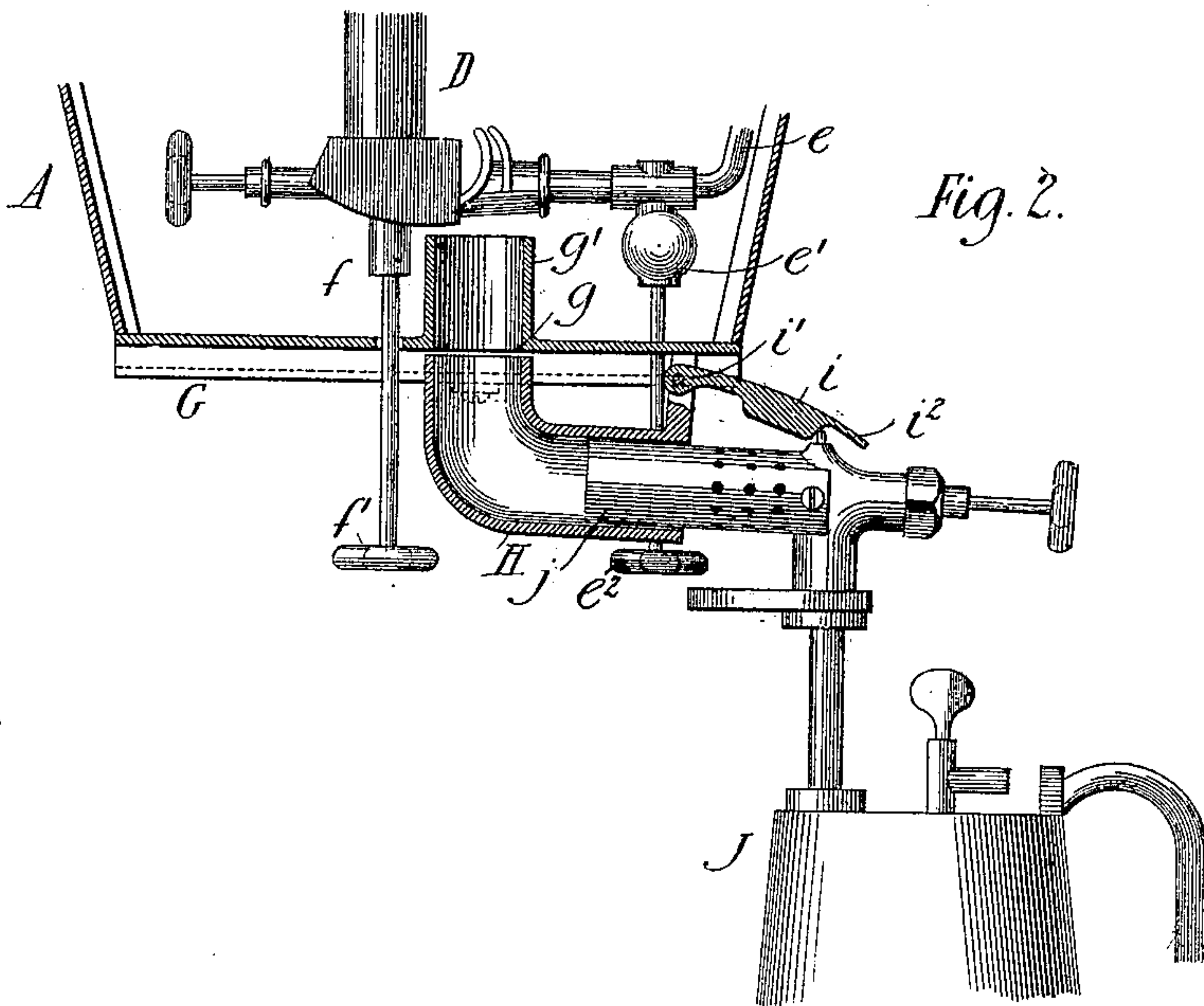


Fig. 2.



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LIGHTING ATTACHMENT FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 621,334, dated March 21, 1899.

Application filed June 21, 1898. Serial No. 684,096. (No model.)

To all whom it may concern:

Be it known that I, PETER J. FITZGERALD, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lighting Attachments for Lamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention is directed to improvements in lighting attachments for lamps and the like, and while the invention is susceptible of adaptation to lamps generally certain features thereof render it especially applicable to the character of lamp employing the incandescent gas-burner. In this type of lamp it is necessary that the mantle of the burner, owing to its extremely fragile nature, be protected both against sudden drafts of air and contact with the hand or with the cleaning, repairing, and lighting devices usually employed, and while heretofore certain safeguards for the protection of the mantle have been devised it has never been suggested, so far as I am aware, to provide an attachment by which the burner may be lighted without the attendant danger of contact with the mantle and the consequent destruction of the latter.

In street-lamps of the incandescent gas-burner type employing liquid hydrocarbons extraordinary care must be taken to preserve the mantle owing to the necessity of heating the retort preliminarily to the lighting of the burner, which is usually accomplished by the use of a torch or by burning a small quantity of the oil in a cup provided below the retort, such an operation requiring a considerable length of time, during which the casing of the lamp must be opened and the mantle subjected to a succession of sudden drafts and to the constant danger of contact with the hands or implements of the operator.

My invention is designed to overcome all of the difficulties and dangers attending the

lighting of lamps, and especially lamps of the character last referred to, by providing means whereby heating of the retort and lighting of the burner are accomplished without the necessity of introducing the lighting devices into the lamp-casing, my improvements consisting generally in a tube one end of which is adjacent to the burner, while the other end is without the lamp-casing, the tube serving as a passage for the flame coming from a torch, which is projected a short distance into the outer tube end.

In the accompanying drawings I have, for example, shown my invention as applied to a street-lamp of the type employing the incandescent liquid hydrocarbon-burner.

Figure 1 of said drawings shows in perspective view a lamp of this character fitted with my attachment, and Fig. 2 shows in enlarged sectional view a portion of the lamp with the attachment and also the preferred form of torch to be employed in connection therewith.

Referring to the said drawings by letter, A denotes the lamp-casing, which is preferably supported on the usual post B by uprights *c c*, and D denotes the burner, which is located within the casing and is supplied with hydrocarbon liquid through a pipe *e*, leading from a liquid-reservoir E. The pipe *e* is provided with a valve *e'*, the handle *e²* of which is projected through and beyond the casing, whereby the supply to the retort may be governed from without.

f is a valve for regulating the flow to the burner, the handle *f'* of which is also without the casing for a similar purpose. By this arrangement the valves of the burner may be regulated without opening the casing, an advantage which is obvious when it is considered that sudden drafts of air on the mantle are to be avoided.

In the bottom of the casing is a plate G, which is slotted to receive the valve-handles *e²* and *f'*, and at *g* in said plate is an opening, against which is fitted one end of a tube H, the latter being secured, preferably, by lugs and screws, as shown. Around the opening *g* is an integral cylindrical extension *g'*, which forms practically a continuation of the tube H and which terminates adjacent to the re-

tort and the point of ignition of the burner. The tube H may be of any desired form, but is preferably L-shaped for a purpose to be presently explained. At the outer end of the
5 tube is a closure *i* in the form of a hinged cover. This closure is pivoted at its upper end, as at *i'*, and is provided at its lower end with a lip *i''*, by which it may be raised. The closure normally rests against the tube and
10 prevents the admission of air at this point.

J denotes a torch which is adapted for use in connection with my invention. The burner of the torch is provided with a cylindrical extension *j*, which is in practice inserted a
15 short distance into the tube, and the flame thereof, passing through the tube and extension *j'*, comes into contact with the retort and at the same time reaches the point of ignition of the lamp-burner. The torch is held in this
20 position a length of time sufficient to heat the retort and cause initial vaporization of the liquid, and the burner-valve being opened the burner is lighted, after which the torch is withdrawn. The cylindrical extension *j* of
25 the torch is perforated to admit air, and its diameter is somewhat smaller than that of the tube, and when the torch is applied there is provided an annular passage for air, which
30 assists in carrying the torch-flame through the tube to the burner. By this construction

the lamp-burner is entirely protected both against air-currents and from contact with the hand or with lighting devices, and as a consequence the life of a mantle is greatly prolonged. The tube is preferably of right-
35 angle or similar form, as with such a construction it is impossible to insert an instrument sufficiently far to reach the burner and injure the mantle, and the employment of the self-closing cover renders the mantle safe
40 against the injurious effects of sudden drafts, such as are occasioned by high winds.

I claim as my invention—

A lighting attachment for lamps and the like consisting of a tube one end of which
45 projects into the lamp-casing and terminates in close proximity to the lamp-burner, and the other end of which extends approximately horizontally from said casing, said tube being
50 adapted to receive and convey the flame of a torch or the like to the lamp-burner, and a pivoted self-closing cover for the outer tube end, substantially as described.

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

PETER J. FITZGERALD.

Witnesses:

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