

No. 650,164.

Patented May 22, 1900.

C. W. BERNSON.
AUTOMATIC GAS LIGHTER.

(Application filed Jan. 19, 1900.)

(No Model.)

Fig. 1.

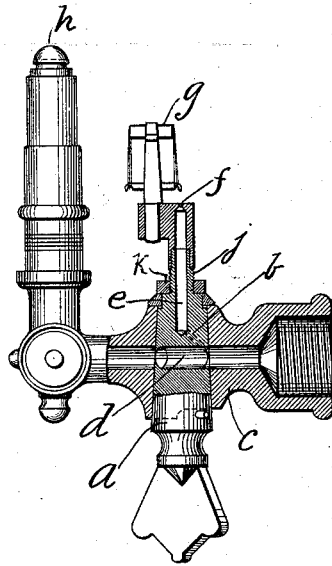


Fig. 2.

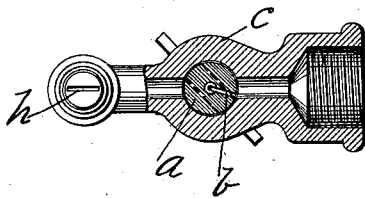
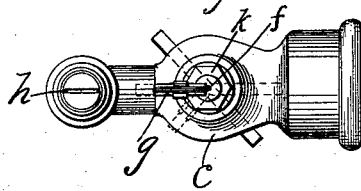


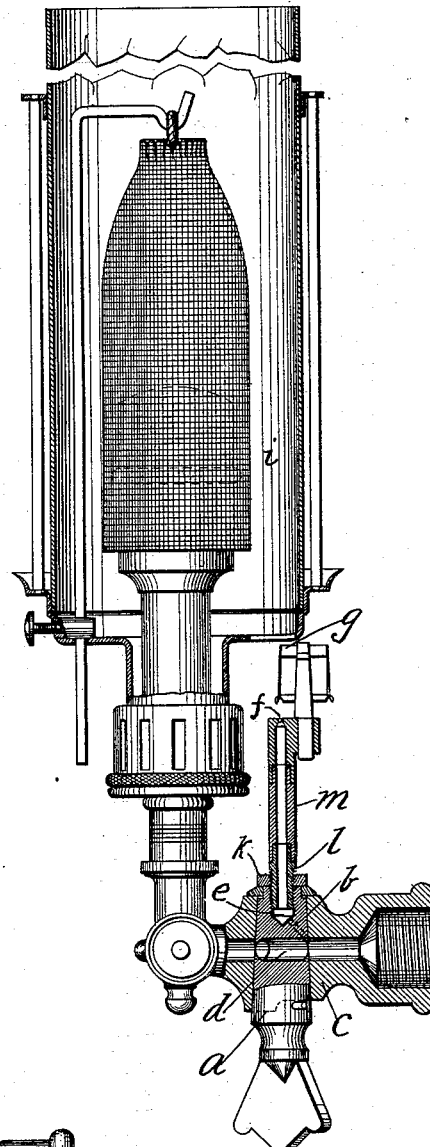
Fig. 3.



WITNESSES

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Fig. 4.



INVENTOR

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AUTOMATIC GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 650,164, dated May 22, 1900.

Application filed January 19, 1900. Serial No. 2,015. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BERNSON, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Automatic Gas-Lighters, of which the following is a specification.

My invention relates to automatic gas-lighters in which an igniting-body having the property of occluding gas and generating heat is used for first igniting a small jet issuing from a by-pass of the gas-cock before opening the main passage, which ignites the main gas-jet when the cock is further opened and is cut off when the main passage is sufficiently opened for use; and my invention consists in an improved construction of the apparatus whereby it is simpler, cheaper, and neater than as heretofore constructed, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a vertical sectional elevation of a gas-cock constructed and provided with the igniting devices in accordance with my invention and applied to an ordinary burner. Fig. 2 is a horizontal section of the cock. Fig. 3 is a top view. Fig. 4 is a vertical sectional elevation in a modified form of construction and applied to an incandescent burner.

The essential feature of my invention is in the construction of the plug *a* of the gas-cock with the by-pass *b* for the igniting-jet formed in said plug and leading directly into a socket or center bore of the upper end of the plug for attachment of the igniting-burner directly to the end of the plug, thus making simpler construction and better appearance and at the same time permitting the usual adjusting-nut for the plug to be used. To this end I provide the small passage *b* from the exterior surface of the plug a little in advance of the opening end of the main passage *d* into a center bore *e* of one end of the plug, from which there is communication with the igniting-burner tip *f*, with which the igniting-body *g* is mounted in such relation to it and the main burner-tip *h*, the incandescent burner *i*, or other burner to be lighted that

when the cock is partly opened, as represented in the drawings, the igniting-jet will escape through the by-pass and be ignited by the body *g*. The main jet will be ignited by the igniting-jet when the cock is further opened and the igniting-jet will be cut off.

In Fig. 1 the plug *a* is constructed with an integral tubular extension *j* for the connection of the burner *f*, and the nut *k* for tightening the plug is perforated and screws onto such extension in lieu of the usual tap-screw screwing into a socket of the plug. In Fig. 3 the extension-piece *l* is formed separately from the plug and is screwed into a tapped hole in the end of the plug, and nut *k* is similarly perforated and screwed onto the extension-piece. Either of these constructions may be used, as preferred. The cock so constructed is alike adapted for low burners, as in Fig. 1, or higher ones, as in Fig. 4, with an intermediate extension-piece *m* for the high burners. The igniter, which turns with the plug, is to be so mounted on the plug that it will occupy the best relation to the main jet for lighting it when the cock is partly opened. That it is turned away from such position when the cock is further opened is of no consequence. In this construction no change whatever is made with the shell of the cock, and the plug may be made as easily and cheaply as the ordinary plug.

What I claim as my invention is—

In an automatic gas-lighter comprising an igniting-burner supplied with an igniting-jet through a branch issue of the cock controlling the main jet, and provided with an igniting-body located in suitable proximity to the main burner-tip for igniting the main jet, the passage for the igniting-jet formed in the plug and communicating with a socket or center bore of the upper end of the plug and the igniting-burner attached directly to the end of the plug.

Signed by me at New York, N. Y., this 18th day of January, 1900.

CHARLES W. BERNSON.

Witnesses:

A. P. THAYER,
C. SEDGWICK.