

(No Model.)

W. CARTER, J. W. DAWSON & J. MEYRICK, Jr.
SIGNAL LIGHT FIXTURE.

No. 520,820.

Patented June 5, 1894.

FIG. 1.

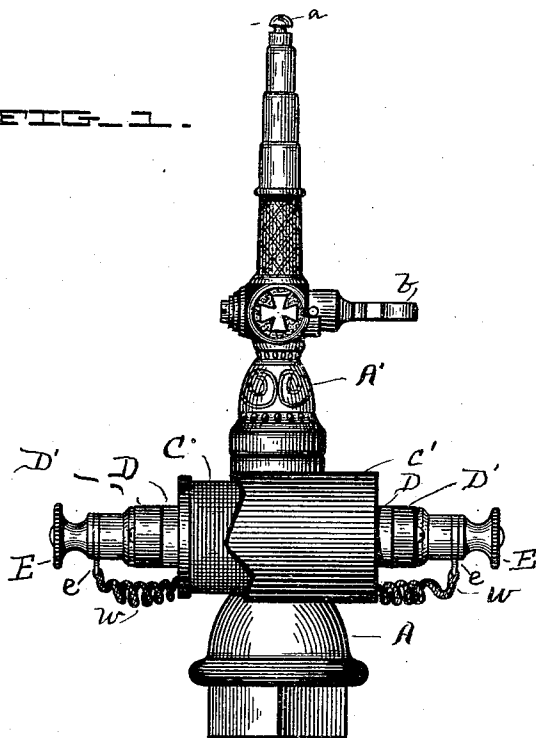


FIG. 2.

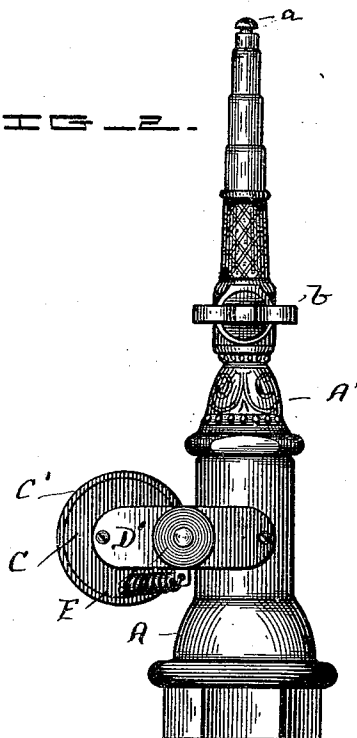


FIG. 4.

FIG. 3.

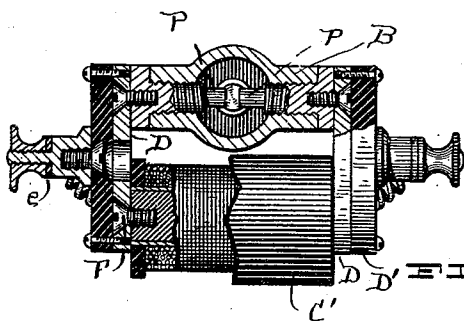
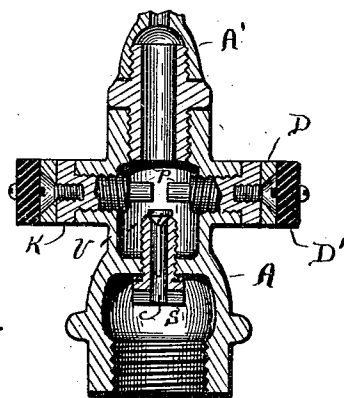


FIG. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM CARTER, JOHN W. DAWSON, AND JOSEPH MEYRICK, JR., OF LOUISVILLE, KENTUCKY, ASSIGNORS OF ONE-FOURTH TO HENRY F. DONEGAN, OF SAME PLACE.

SIGNAL-LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 520,820, dated June 5, 1894.

Application filed April 5, 1893. Serial No. 469,236. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM CARTER, JOHN W. DAWSON, and JOSEPH MEYRICK, Jr., of Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Signal-Light Fixtures, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in flash-lamps designed to burn illuminating gas, and consists in certain peculiarities of construction and operation of parts all as hereinafter more fully set out in the specification and particularly pointed out in the claims.

In the annexed drawings similar letters of reference denote corresponding parts in all the views, in which—

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig. 3 is a transverse section, and Fig. 4 is a vertical section, while Fig. 5 is a detail view of the pin-valve which stops the flow of gas at predetermined times.

—A— is a main shell of suitable non-magnetizable material.

—C— is an electro-magnet supported exterior to said shell —A—.

D—D— are pole pieces fixed one at each end of said magnet, and extending forward to the open exterior ends of the lateral extensions —B—B— of the main shell —A—.

K—K— are metallic plugs of soft iron or other magnetizable material rigidly connected in metallic contact with the pole pieces —D—D—, and fitted into the arms —B—B— of the shell —A—, preferably by screw-thread connections to insure stability, at the same time permit of removal when desirable.

P—P— are the inner ends of the plugs —K—K— which become on excitation of the magnet —C— the poles thereof.

—b— is the thumb piece for turning and opening an ordinary valve in the stem —A'— on the upper end of the shell —A—, and —a— is the lava tip of the burner from which issues the burning gas.

—S— is a valve-seat held in the lower portion of the shell —A— by a screw-threaded

connection so as to be removable when it is desired to clean the channel —c— there-through, or, the valve —V— which has its stem within said channel —c— and has a head portion shaped like an inverted cone resting in the open upper end of the valve seat —S—.

—v— is a diminutive channel cut into the face of the tapering portion of the valve so as to permit of the passage at all times of a small quantity of gas through the same.

—D'—D'— are the blocks of insulating material at each side exterior of the armatures —D—D—.

—E—E— are binding posts, —e—e—, contact collars, and —w—w— circuit wires running to the magnet to carry to it the necessary current.

The thumb piece —b— is shown in the position taken when the valve of the burner-stem is closed, but under ordinary conditions of use the valve is left entirely open, and the amount of flame is regulated entirely by the operative parts of the device.

The channel —v— permitting a minimum flow of gas to keep the flame constantly burning, the necessary electrical connections being established a current passed into the windings of the magnet —C— will induce magnetic energy in the poles —P—P— within the shell —A— and the valve —V— will be drawn by magnetic attraction into contact with such poles, when the channel —c— will be opened, thus permitting an excessive flow of gas and producing a flash at the tip —a—. Breaking the circuit will cause demagnetization of the poles —P— and the valve —V— will drop by gravity into its seat, being guided by the depending stem of said valve in its descent, and only the minimum amount of gas will be permitted to flow. Upon each passage of current and stoppage of the same this will occur and the duration and number of flashes may be easily controlled.

Where it is desired to operate the device on a closed circuit the operation is the same, except that the normal flow then will be its greatest light and this will be visible, upon breaking the circuit the flame will diminish

with each successive break, thus sending the signal by diminishing the flame instead of by increasing its volume.

Having described the invention, what is claimed as new is—

1. In an electric-flash lamp, a valve seat within an outer shell, a gravity valve in said seat, a diminutive channel between said valve-seat and valve and an electro-magnet supported on said outer shell with its poles in convenient proximity to said valve, all in combination substantially as specified.

2. In an electric flash-lamp, an outer shell of non magnetic material, an electro-magnet supported on said shell with its helix apart therefrom, the poles of said electro-magnet within the shell, a valve or armature normally in contact with the poles of said electro-magnet on a closed circuit, a depending stem from said valve and a hollow valve seat surrounding said valve stem, all combined substantially as specified.

3. In an electric-flash lamp consisting of a main shell, with a movable valve therein, hol-

low arms projecting laterally therefrom, an electro-magnet supported on said main shell at its exterior, pole-pieces extending from said magnet into said hollow arms through the main shell in convenient proximity to said valve, all combined substantially as specified.

4. In an electric-flash-lamp, an electro-magnet supported at the exterior of the main shell, a movable valve supported in its seat within the main shell, a pair of hollow arms projecting from the main shell and extensions from fixed pole pieces, one at each side, projecting through said main shell into the interior thereof in convenient proximity to said movable valve, all combined substantially as specified.

In testimony whereof we have hereunto set our hands this 5th day of January, 1893.

WILLIAM CARTER.
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JOSEPH MEYRICK, JR.

Witnesses:

FREDERICK H. GIBBS,
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