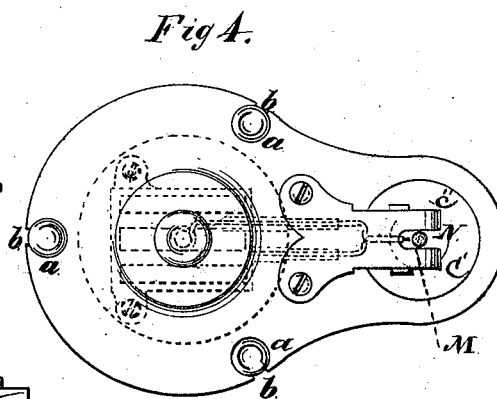
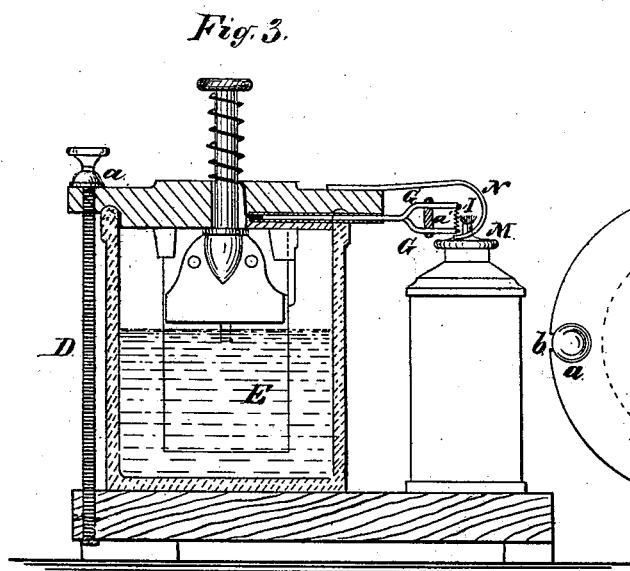
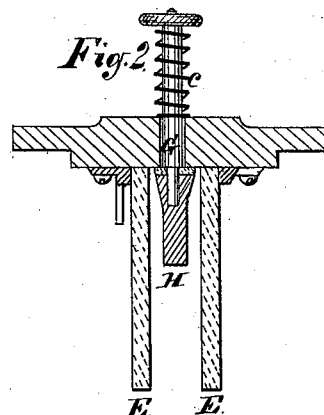
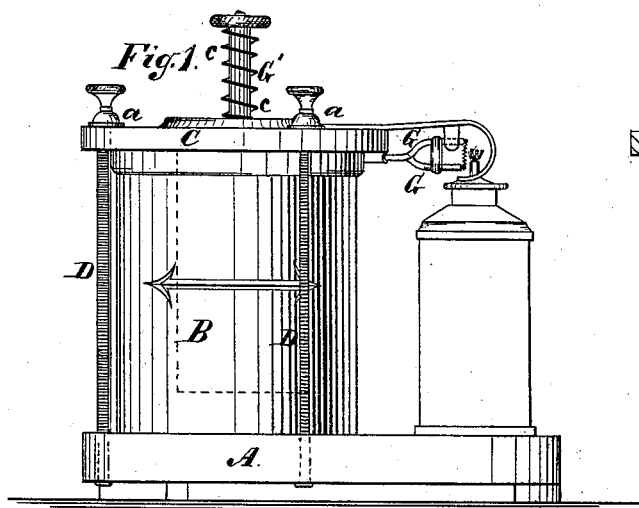


E. M. COINTEPAS & J. M. ROUCHEL.
Electric Apparatus for Lighting.

No. 215,722.

Patented May 27, 1879.



Witnesses:
Henry Eichling
H. Wells

Inventors:
E. Mark Cointepas & John M. Rouchel.
per James A. Whitney
Atty.

UNITED STATES PATENT OFFICE.

E. MARK COINTEPAS AND JOHN M. ROUCHEL, OF NEW YORK, N. Y.

IMPROVEMENT IN ELECTRIC APPARATUS FOR LIGHTING.

Specification forming part of Letters Patent No. **215,722**, dated May 27, 1879; application filed September 7, 1878.

To all whom it may concern:

Be it known that we, E. MARK COINTEPAS and JOHN M. ROUCHEL, both of the city, county, and State of New York, have invented certain Improvements in Electric Apparatus for Lighting, of which the following is a specification.

This invention is designed for lighting lamps, and, with modifications of proportions merely, for lighting gas-jets; and it comprises an electric lighting device of novel construction, cheap, simple, and efficient.

Figure 1 is a side view of said device; Fig. 2, a sectional view of certain parts thereof; Fig. 3, a vertical sectional view of said device; and Fig. 4, a plan view thereof.

A is a base, upon which is placed the vessel B, the cover C of which is held in place by spiral springs D, attached at their lower ends to the base A, and having buttons *a* at their upper ends. The upper end portions of the springs D pass into radial slots or notches *b* in the periphery of the cover, with the buttons resting upon the upper edges of said slots or notches. By this means the cover is held firmly in position, at the same time that provision is made for its ready removal and replacement, when required.

Depending from the cover are the fixed carbon plates E, extended into the exciting-liquid in the vessel B, and connecting with one of the wires G. The stem G' works up and down through the center of the cover, and in its normal position is pushed upward by a spring, *c*. At the lower end of this sliding stem is the zinc H, connecting in any suitable manner with the other of the wires G. The said wires may be insulated from each other by a brace, *a'*, of glass or porcelain, but are con-

nected by the smaller wire, I, of platinum. The vessel is partially filled with a solution of chromic salt. When the stem maintains its normal condition the zinc is lifted above the surface of the liquid and no action occurs. By depressing the stem the zinc is immersed in the liquid, and the battery being thus put in operation the small platinum wire I is rendered incandescent and capable of igniting the wick of a lamp held thereto, or, if the device be properly proportioned for that purpose, a jet of gas.

In order that the wick of a lamp, as shown at M, may be caused to come readily into proper juxtaposition with the incandescent wire, there is attached to the cover a bifurcated guide, N, between the tines *c''* of which the wick-tube is placed and pushed inward when the lamp is to be lighted, the lamp being placed on a projecting portion of the base A, and then pushed laterally inward.

What I claim as my invention is—

1. The bifurcated guide N, placed in relation with the wire I, wires G, zinc H, carbons E, and stem G', the whole combined for use and operation substantially as and for the purpose set forth.

2. The combination of the spiral springs D, attached to the base A, and provided with buttons *a*, the vessel B, and the cover C, having slots or notches *b*, and carrying the zinc H, all substantially as and for the purpose set forth.

E. MARK COINTEPAS.
JOHN M. ROUCHEL.

Witnesses:

H. WELLS, Jr.,
GEO. W. TRUITT.