

W. H. WEEKS.
Lighting Lamps.

No. 103,110.

Patented May 17, 1870.

Fig. 1

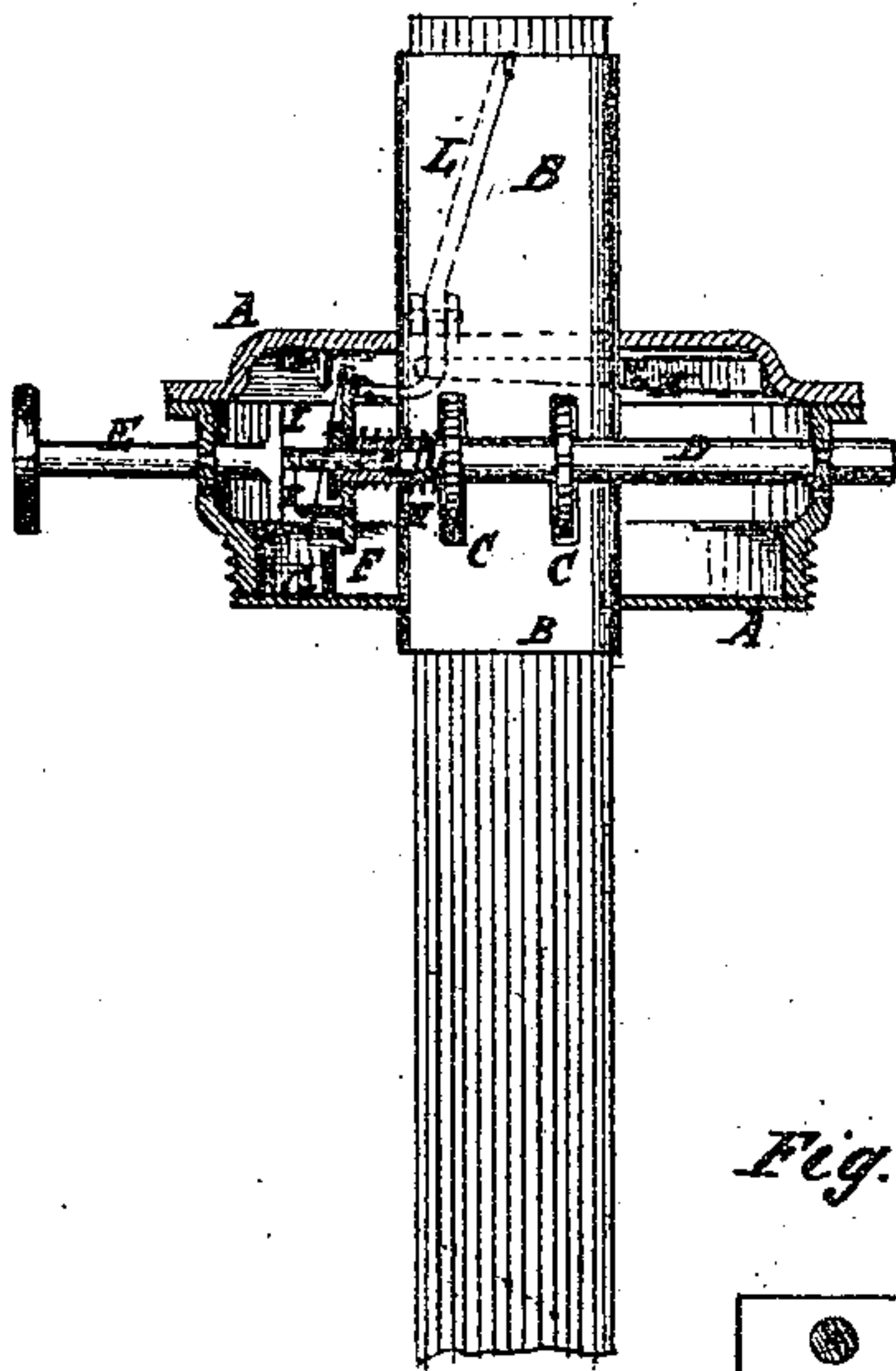


Fig. 2

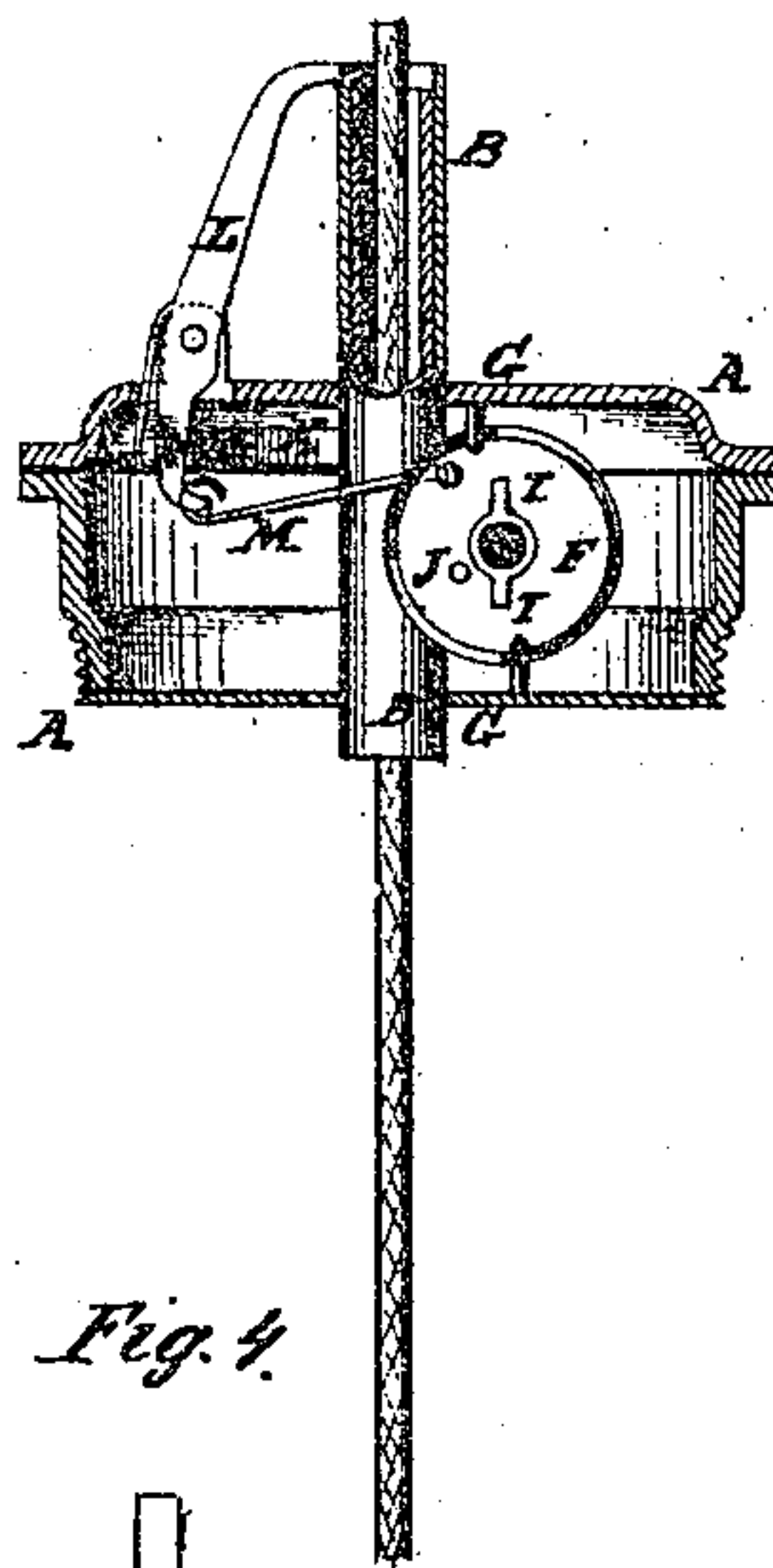


Fig. 3

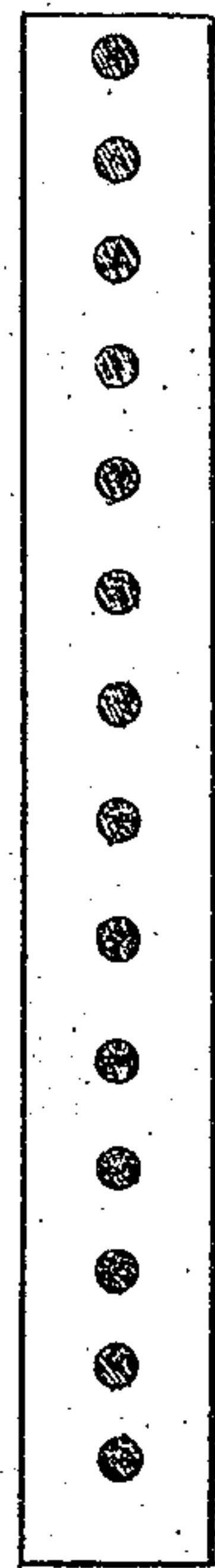


Fig. 4



Witnesses:

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Inventor:

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PER *[Signature]*
Attorneys.

United States Patent Office.

WILLIAM H. WEEKS, OF NEW YORK, N. Y.

Letters Patent No. 103,110; dated May 17, 1870.

IMPROVEMENT IN AUTOMATIC LIGHTING-WICKS FOR LAMPS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM H. WEEKS, of the city, county, and State of New York, have invented a new and useful Improvement in Fulminate for Lamp-Wicks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

Figure 1 is a detail vertical section of my improved device.

Figure 2 is a detail vertical section of the same, taken at right angles to the section shown in fig. 1.

Figure 3 is a side view of the wick.

Figure 4 is an edge view of the same.

The fulminate is placed in indentations or holes, or in a continuous longitudinal groove in the wick. A slight variation in the ingredients of the fulminate will prevent the fire from following the line of the fulminate down into the wick-tube.

My invention relates to fulminates for lamp-wicks, and consists in a new composition of matter, whose ingredients will be specifically pointed out hereinafter.

In order more clearly to show the mode of applying my invention, I will describe the mechanical means which I preferably employ.

A is the body of the burner, which is screwed into the mouth or cap of the lamp or the taper reservoir, in the ordinary manner, and to which is attached a wick-tube, B.

C are the spur-wheels, by which the wick is raised and lowered, and which work through slots in the tube B.

The spur-wheels C are attached to the shaft D E, which is made in two parts.

The part D of the shaft, to which the spur-wheels C are attached, has a square hole formed through it, to receive the squared inner end of the other part E of said shaft, to the outer end of which part is attached the button by which the shaft is operated.

Upon the inner end of the part D of the shaft D E revolves loosely a disk or wheel, F, having two cams or inclined flanges formed upon it, which rest against the stop-pins G attached to the upper and lower parts of the body A.

The cam-wheel F is held forward against the stop-pins G by a coiled spring, H, coiled around the part D of the shaft D E, one end of the said spring resting against the said cam-wheel F, and the other end against one of the spur-wheels C.

To the part E of the shaft D E is attached, or upon it is formed, a cross-bar, I, which, when the

said bar E is pushed inward, strikes against the face of the cam-wheel F, so that, when the said part of the shaft is revolved to turn up the wick, the end of the cross-bar I may strike against a stop-pin, J, attached to the face of the cam-wheel F, so that the cam-wheel will be turned with and by the said shaft.

As the cam-wheel F is turned, it is forced back by its cams pressing against the stop-pins G, which push the cam-wheel F back upon the part D of the shaft D E, and release the said cam-wheel from the cross-bar I, allowing the said cam-wheel to be revolved back by the spring K.

One end of the spring K is attached to the body A, and its other end presses against the lower end of the lever L.

The lower end of the lever L is connected with the cam-wheel F by the connecting-rod M, one end of which is connected with the said cam-wheel, and the other end with the end of the said lever L.

The lever L is pivoted to the body A, and its upper end is turned inward, formed into a point, and so arranged that, when the cam-wheel is released, the upper end of the lever L will be thrown forward to pass through a notch in the upper edge of the wick-tube B to ignite the wick.

By drawing the part E of the shaft D E outward, so that the cross-bar I cannot come in contact with the stop-pin J of the cam-wheel F, the wick may be turned up and down without operating the lever L.

The wick is prepared for use as follows:

An ordinary wick is taken, and holes or indentations are formed in it at such a distance apart that one of them may be struck at each blow of the lever L, as the wick is turned up, and in such positions that they will not be struck by the spur-wheels C.

In these holes or indentations is placed a drop of a fulminate, prepared as follows:

Acacia, three parts.

Amorphous phosphorus, three parts.

Sulphur, two parts.

These ingredients are mixed in water, and one part of chlorate of potassa is added, enough water being used to make the mixture of about the thickness of molasses.

If desired, the fulminate may be colored by the admixture of one part of minium or Chinese blue, or other suitable coloring material.

This preparation will not be affected by the oil in the lamp or the wax of the taper.

The wick-tube B is made a little larger than the wick, and a paper or other fibrous lining is interposed between the tube and wick, so as to conduct the oil up around the wick, and guard against the

possibility of the fulminates being ignited by the accidental over-heating of the upper part of the said tube by the flame of the lamp.

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

The fulminate, formed of the ingredients, in the proportions and manner herein shown and described,

to prevent the injurious effect of the oil or wax in contact with said wick.

The above specification of my invention signed by me this 8th day of February, 1870.

WM. H. WEEKS.

Witnesses:

GEO. W. MABER,
JAMES T. GRAHAM.