

No. 736,538.

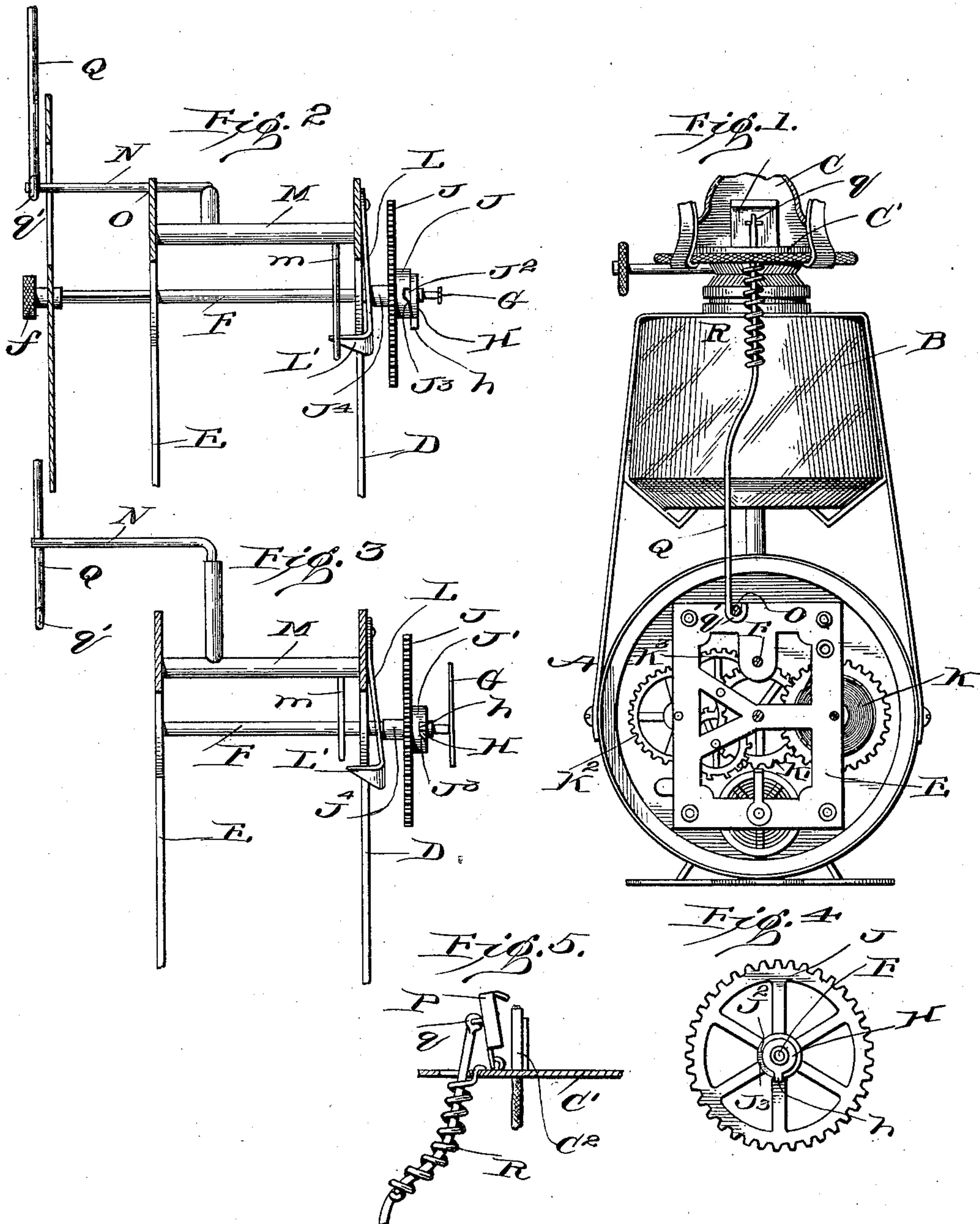
PATENTED AUG. 18, 1903.

P. E. NEWSOM.
AUTOMATIC APPARATUS FOR EXTINGUISHING LAMPS.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Allen Foote
Fred K. Henderson

P. E. Newsom INVENTOR
BY Duell, Megath & Warfield ATTORNEYS

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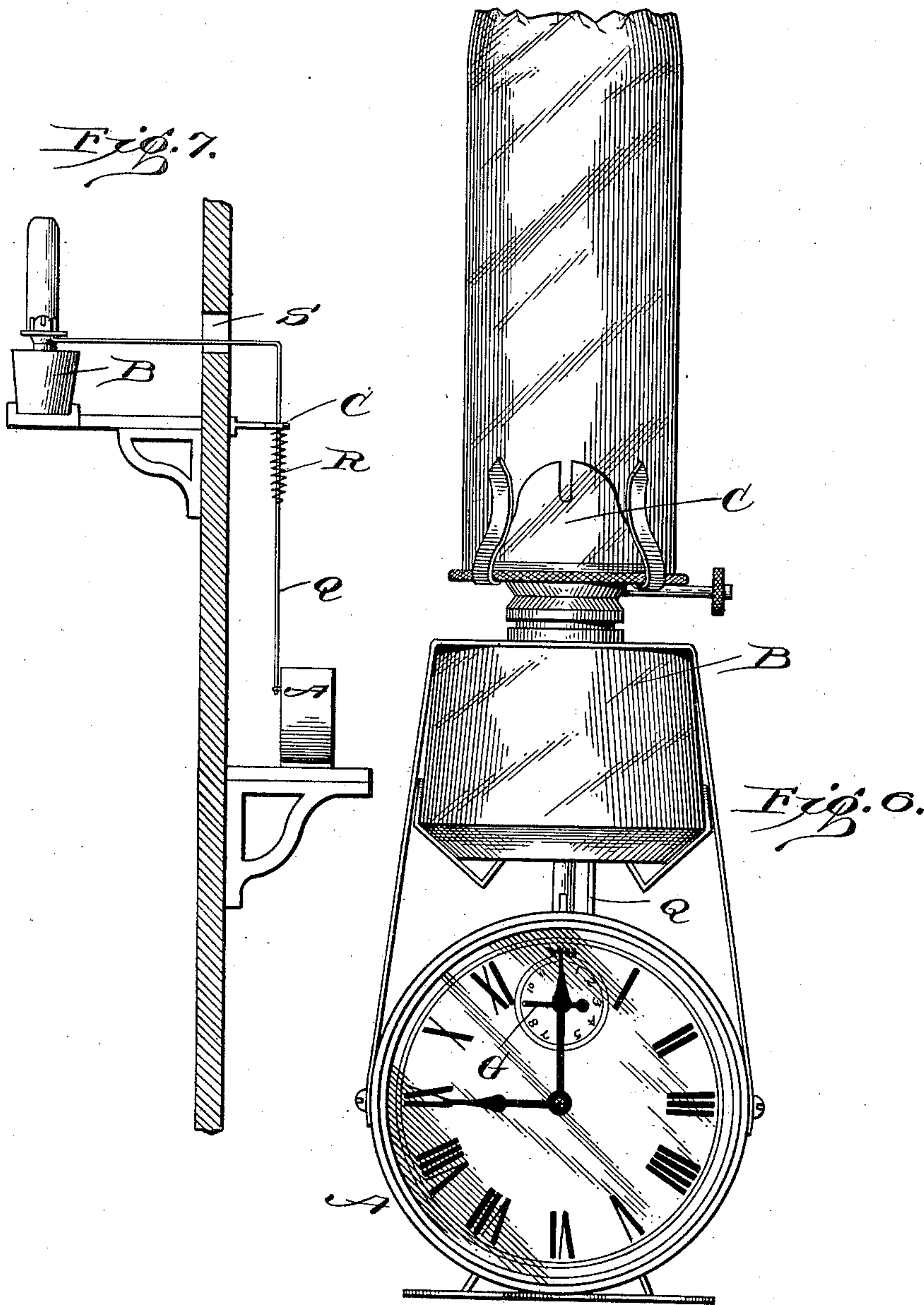
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Fred. K. Henderson

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UNITED STATES PATENT OFFICE.

PHILIP E. NEWSOM, OF NEW YORK, N. Y.

AUTOMATIC APPARATUS FOR EXTINGUISHING LAMPS.

SPECIFICATION forming part of Letters Patent No. 736,538, dated August 18, 1903.

Application filed February 20, 1903. Serial No. 144,225. (No model.)

To all whom it may concern:

Be it known that I, PHILIP E. NEWSOM, residing at the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Automatic Apparatus for Extinguishing Lamps, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to apparatus for automatically extinguishing a light, and especially an oil-lamp, at a predetermined time, and has for its object to provide a simple, inexpensive, and easily-operated device of this character. Other objects will appear from the hereinafter description.

The invention consists in certain novel features of constructions and combinations of parts, all as hereinafter fully described and claimed.

Referring now to the drawings which form a part of this specification, and in which I have illustrated my device as applied to an oil-lamp, Figure 1 is a rear elevation of the apparatus. Fig. 2 is a detail view of certain parts thereof. Fig. 3 is another detail view with certain parts in different position from that shown in Fig. 2. Fig. 4 is a front view of certain parts shown in Figs. 2 and 3. Fig. 5 is an illustration of the extinguisher as applied to the lamp-burner. Fig. 6 is a front view of the device shown in Fig. 1, and Fig. 7 illustrates a modification.

Referring now to the drawings, in which the same reference-letters indicate the same parts in the different views, A represents a clock, by the mechanism of which the extinguisher is released.

B represents a lamp, and C represents the burner of the lamp.

The clock consists of the usual mechanism by which the extinguisher, hereinafter to be described, carried by the lamp-burner, is released.

D is the front frame, and E is the rear frame, of the clock mechanism.

F is a shaft mounted in the frame, having on the rear end thereof a key *f*, by which it may be turned. To the front end of this shaft is attached the hand G, shown on the face of

the clock, adapted to be set at an hour at which the light is to be extinguished.

H is a disk also secured to the shaft inside of the face of the clock and having connected thereto a finger or lug *h*.

J is a gear-wheel loosely sleeved on the shaft F inside of the disk H and is driven by the mainspring K of the clock mechanism through the series of gear wheels and pinions K' K² K³, &c.

J' is a ring or band connected to the gear J, having a recess J² in the outer edge thereof, which has an inclined face J³. The internal diameter of this band is such that it will fit over the disk H when the finger *h* of the disk is in the recess J² of the band.

J⁴ is a sleeve secured to the inside face of the gear J and against which the spring L rests. This spring is attached to the frame D and has the free end thereof intumed into a finger, as shown at L'. The spring rests against the sleeve J⁴ and tends to force the gear toward the forward end of the shaft E. The finger *h*, bearing against the edge of the band J' except when the notch or recess J² is opposite the finger *h*, keeps the spring pressed in.

M is a rock-shaft pivoted between the frames D and E. *m* is an arm connected near the front end of this shaft in such position that it comes in contact with the finger of the spring when the finger is pushed in. N is an arm connected near the other end of the rock-shaft M. The free end of this arm rests in a notch O of the rear frame E of the clock mechanism.

C' is the bottom plate of the burner, and C² is the wick-tube secured thereto.

P is the extinguisher pivoted to the burner-plate C'.

Q is a rod, one end of which is connected to the extinguisher at *q*, and the other end is bent or curved, as indicated by *q'*, in such manner that the rod can be held by the arm N, heretofore described. R is a coil-spring surrounding this rod, one end of the spring being connected to the burner-plate C' and the other secured to the rod, so that it tends to move the rod upwardly and throw the extinguisher over the top of the wick-tube.

The apparatus operates as follows: Sup-

pose it is decided to extinguish the light at nine o'clock, for example. The shaft F is turned by the key *f* until the small hand on the face of the clock (shown in Fig. 6) points to "9." When in this position, the finger *h* of the disk H will be on the outer edge of the collar J', and the gear J will be moved inwardly, pressing in the spring L, so that the finger L' thereof will be in the path of movement of the arm *m*, so that the shaft M cannot be rocked. In this position the arm N will be seated in the notch O of the rear frame E, as shown in Fig. 1 of the drawings. The rod Q is now pulled down, and the bent end *q'* catches under the arm N, whereby the rod is held down against the tension of the spring R, and the extinguisher P is pulled down from over the lamp-wick, so that the light will burn in the usual manner. The parts will stay in this position until the hour of nine arrives. At this time the gear J will have been rotated by the clock mechanism, and the recess J² in the edge thereof will come opposite the finger *h*, when the spring L will force the gear J out to the position shown in Fig. 3, with the finger *h* of the disk H in the recess J² of the ring J'. The spring-finger L' is now out of engagement with the arm N, and the lever may now be rocked. The spring R will then pull on the rod Q, and the arm N will be raised out of its seat O, permitting the rod to be released and pulled up, whereupon the extinguisher P will be thrown over the upper end of the wick-tube and extinguish the light. To reset the device, the shaft F is again turned by the key *f* to the right, whereupon the finger will ride out of the recess J² on the incline surface J³ of the recess, when the gear will be forced inwardly, moving with it the spring L, so that the finger L' thereof will again come in contact with the arm M to hold the arm N in its seat O, so that the rod can be again held down by the curved lower end *q'* thereof hooking over the arm and holding the extinguisher away from the light against the tension of the spring R.

In the modification that I have illustrated in Fig. 7 the clock mechanism is placed in one room and the lamp B in another, and the rod Q is bent, so that it will pass from one room to the other through an opening, as shown at S. The spring R in this case has its upper end secured to a bracket C⁴ and the lower end secured to the rod, as shown in Fig. 5. In this construction the operation is the same as the other. When the clock-hand reaches the hour set, the rod is released and the spring R moves the rod upwardly to throw the extinguisher over the end of the wick-tube in the manner hereinbefore described.

While I have shown a certain construction, yet I do not intend to limit myself to the exact details here shown and described; neither do I intend to limit myself to the kind of light illustrated and described, for it is clear

that I may use the same device for extinguishing electric and other lights.

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

1. In a device for extinguishing a light, an extinguisher connected to the light, a clock, an arm, devices for controlling the arm by the clock mechanism, means for releasing the arm, and means between the arm and the extinguisher whereby, upon the release of the arm, the extinguisher will be operated to extinguish the light.

2. In a device for extinguishing a light, a burner, an extinguisher pivoted to said burner, a rod connected to said extinguisher, means for holding the rod so that the extinguisher will be out of contact with the burner, said means adapted to release the rod at a predetermined time, and means for moving the rod when released so that the extinguisher will operate to extinguish the light.

3. In a device of the class described, a burner, an extinguisher for said burner, a rod having one end thereof connected to the extinguisher, a spring connected to the rod and adapted to move the rod to throw the extinguisher over a light, a clock mechanism, an arm carried thereby and adapted to engage the rod to hold the rod against the tension of the spring, the said rod adapted to be released when the clock mechanism reaches a certain point, as and for the purpose set forth.

4. In an apparatus of the class described, a clock mechanism, a shaft mounted therein, said shaft carrying a disk on one end, said disk having a finger connected thereto, a gear loosely mounted on the shaft and adapted to be driven by the clock mechanism, means on the gear adapted to be controlled by the finger of the disk, a spring adapted to be controlled by the position of the gear, a rock-shaft having a finger thereon controlled by the position of the spring, another arm carried by the shaft, a burner, an extinguisher for the burner, a rod connected to the extinguisher, a spring connected to the rod and adapted to move it to normally hold the extinguisher over the light, said rod being adapted to be engaged by the arm as and for the purpose set forth.

5. In an apparatus of the class described, a clock mechanism carried by a frame, a shaft mounted in the frame, a disk secured to said shaft having a finger thereon, a gear loosely sleeved on the shaft adapted to be driven by the clock mechanism, a collar carried by the gear, said collar having a recess in which the finger is seated when the gear is moved to a certain position by the clock mechanism, a sleeve carried by the gear, a spring adapted to move the gear laterally on the shaft when the gear is moved so that the recess thereof will come opposite the finger of the disk, the said spring having an intumed finger adapted to be moved inwardly when the shaft is turned so that the finger of the disk is out of

said recess, a rock-shaft also mounted in the clock mechanism, an arm carried by said rock-shaft and adapted to be engaged by the finger of the spring, another arm carried by the rock-shaft adapted to be seated in a recess in the frame when the spring-finger is in engagement with the other arm, a burner, an extinguisher adapted to be moved over the burner to extinguish the light, a rod connected to said extinguisher, a spring connected to said rod and adapted to move it so that the extinguisher will be thrown over the light, the said rod having the other end thereof bent so that it may be engaged by the arm of the shaft, said parts operating in the manner as and for the purpose heretofore described.

6. In a device for extinguishing a light, a burner, an extinguisher, a clock, an arm, a catch for holding the arm controlled by the

clock mechanism, and means between the arm and the extinguisher whereby upon the movement of the clock mechanism, the arm will be disengaged and the extinguisher operate to extinguish the light.

7. In a device for extinguishing a light, a burner, an extinguisher to cover the burner, a clock, an arm controlled by the clock mechanism, means for releasing the arm, and means between the arm and extinguisher and automatically detachable from said arm, whereby upon the release of the arm, the extinguisher will operate to extinguish the light.

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

PHILIP E. NEWSOM.

Witnesses:

H. M. SEAMANS,
M. E. HALL.