(No Model.)

F. MEYERS.

FIRE LIGHTER.

No. 565,492. Patented Aug. 11, 1896.

Fig. 1.

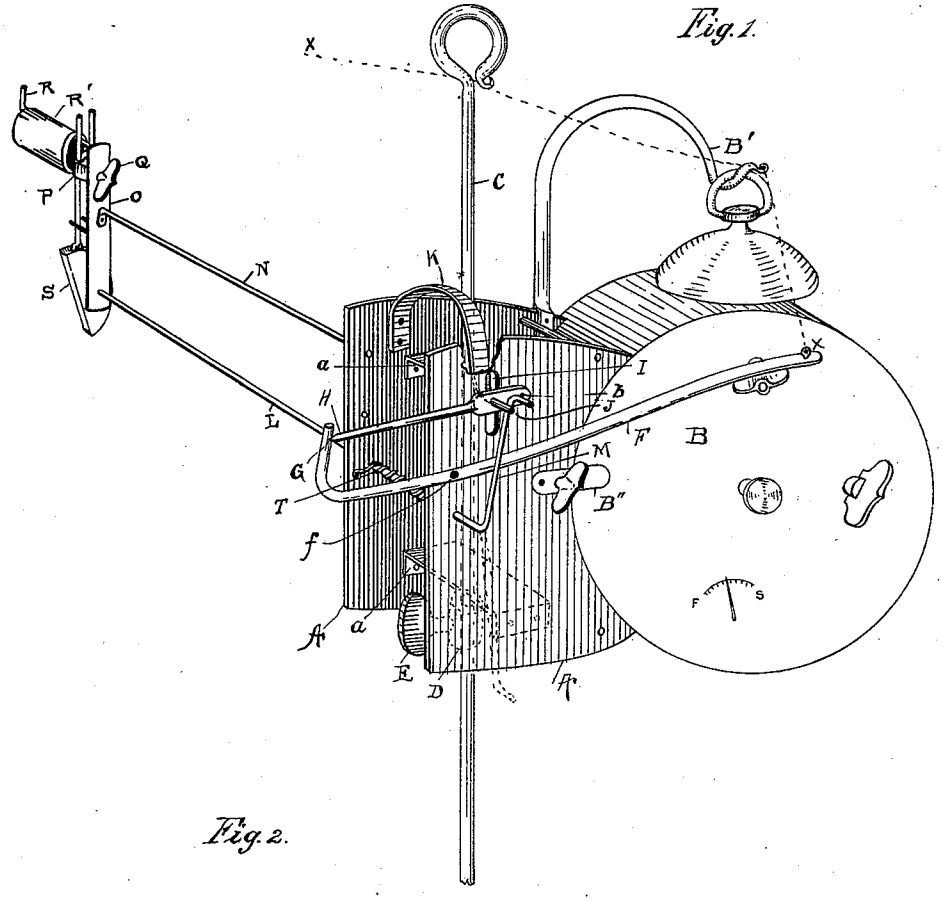
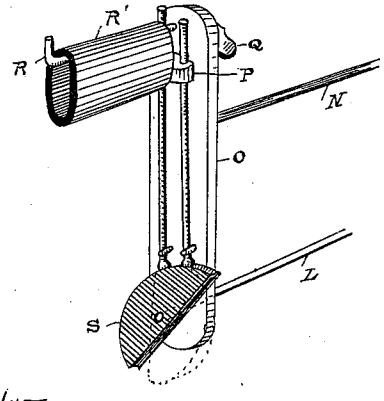


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK MEYERS, OF LINCOLN, ILLINOIS.

FIRE-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 565,492, dated August 11, 1896.

Application filed May 13, 1896. Serial No. 591,334. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK MEYERS, a citizen of the United States, residing at Lincoln, in the county of Logan and State of Illinois, have invented certain new and useful Improvements in Fire-Lighters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fire-lighters for stoves and other heaters.

The object of my invention is to provide a device for lighting fires in stoves, &c., at any hour either automatically or by setting up the device and operating same by means of the hand, with the aid of a cord or wire, from a distance. The idea of course is to have the fire materials already laid in the grate and place an igniting device thereunder, which shall be fired by either of the methods above set out.

I am perfectly aware of the fact that clocks have been used for the purpose of lighting fires, in conjunction with suitable mechanism, but it is my purpose to simplify construction in devices of this character and to also provide means whereby the clock need not of necessity be used.

In the drawings herewith, Figure 1 is a perspective view of an alarm-clock and the fire-lighting mechanism. Fig. 2 is a perspective view of the portion of the fire-lighting mechanism which holds the match and torch.

Letters correspond in the specification and drawings.

A A represent the two sides of the frame forming the body of the lighting mechanism, which has an ordinary alarm-clock B hung therefrom by a hook B′ and held firmly by a clamp B″ on either side of the clock, but only one of which is shown. The said body A is mounted adjustably upon a perpendicular rod C, set in a suitable base, by means of a sliding sleeve D, with its screw E.

The body A is made rigid in itself by means of two bridges *a a*, as shown, and other suitable braces. Upon one side of the body A is pivoted a lever F by the pivot *f*, one end of which is turned upwardly, as shown, and provided on its inner side with a notch G. The opposite end of this lever F is adapted to engage the alarm-key of the clock.

Above the lever F is an arm H, which is pivoted to the side of the body A at *b* and the free end of said arm or trigger being pointed to engage the notch G in the upturned end of the lever F. A slot I is cut in the side A near the pivoted end of the arm or trigger H, and a pin J on the end of a spring K, which is secured to the body A, is passed through the said slot and through the arm H. A rod L passes through the sides of the body A at right angles to the lever F and is bent upwardly at one end at right angles to its length, as shown at M, and in practice this portion M is placed behind the pin J of the spring K; but this will be described presently.

A match and torch carrier is held at some distance from the body A by a rod N, and consists of a plate O, having a clamp P, operated by a screw Q, which is designed to hold the match or matches. A projecting arm R holds an absorbent non-burning material R′, which is soaked in an inflammable fluid for use.

The free outer end of the rod L passes through the plate O and carries a semicircular plate S, having a roughened grooved edge, which is designed to ignite the match by friction.

In use the matches are let downwardly through the clamp P, with their heads in contact with the grooved surface.

A coil-spring T surrounds that portion of the rod L which lies within the body A, and one end thereof is secured to the body A and the other end to the rod in such manner as to cause the said rod, by tension of the spring, to revolve for a portion of a revolution when released from its position when set for work.

Having described the general construction of the device, I will describe its operation.

The clock is set for alarm at any chosen hour. The alarm-spring is wound as usual, the lever F resting upon the alarm-key. The arm or trigger H is brought down against the tension of the spring K and its point engaged with the notch G of the lever F, after raising the arm M and placing behind the pin J, which passes through arm or trigger H. The position of the friction-plate S with relation to the match is shown in both figures. When the

alarm is being sounded, the alarm-key turns, and at the very first movement thereof the lever F at that end is raised, thus lowering its opposite extremity, and this movement releases the trigger H, which flies upward by the strain of the spring K, and as the pin J in the said trigger passes upwardly the arm M is released, and by the opening of the coil-spring T the said arm M and its rod is given a semirevoluble movement, thus carrying the friction-plate S around, and being in contact with the match-head the friction ignites the said match or matches, which set fire to the torch R′, and the torch in turn lights the fire in the grate.

It is evident that the device may be operated from a distance by hand and without using the clock by attaching a string to the free end of the lever F, as shown by dotted lines *x x*, and accomplish the same purpose.

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

1. In a fire-lighter, a frame or support adjustably mounted upon a standard, a lever pivoted on the frame and turned up at one end, such upturned end having a notch cut therein, the opposite end of said lever being free, but adapted to be operated by suitable means for the purpose set forth, an arm or trigger H pivoted at one end to the frame or support, its free end engaging the aforesaid lever by its notch, a spring secured at one end to the frame or support, a pin carried on the opposite end of said spring and engaging the arm or trigger H, a revoluble rod having bearings in the said frame or support, an arm bent at right angles to said rod to engage the pin in said trigger, a coil-spring surrounding the said rod for operating same, a friction device on the free end of said rod, a match-holder secured to the frame or support and adapted to hold a match in contact with the friction device and a torch adapted to be lighted by said match substantially as shown and described.

2. In automatic fire-lighters, a frame or support mounted on a standard, a clock mounted in said frame or support, a lever pivoted on the frame and turned up at one of its ends, such upturned end having a notch cut therein, the opposite end of said lever being free but adapted to be operated by said clock for the purposes set forth, an arm or trigger H, pivoted at one end to the frame or support, its free end engaging the aforesaid lever by its notch, a spring secured to one end to the frame or support, a pin carried on the opposite end of said spring and engaging the arm or trigger H, a revoluble rod having bearings in the frame or support, an arm bent at right angles to said rod to engage the pin in said trigger H, a coil-spring surrounding the said rod for operating same, a friction device on the free end of said rod, a match-holder secured to the frame or support and adapted to hold a match in contact with the friction device and a torch adapted to be lighted by said match substantially as shown and described.

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

FREDERICK MEYERS.

Witnesses:
J. D. WARD,
J. W. FELTER.