

No. 629,609.

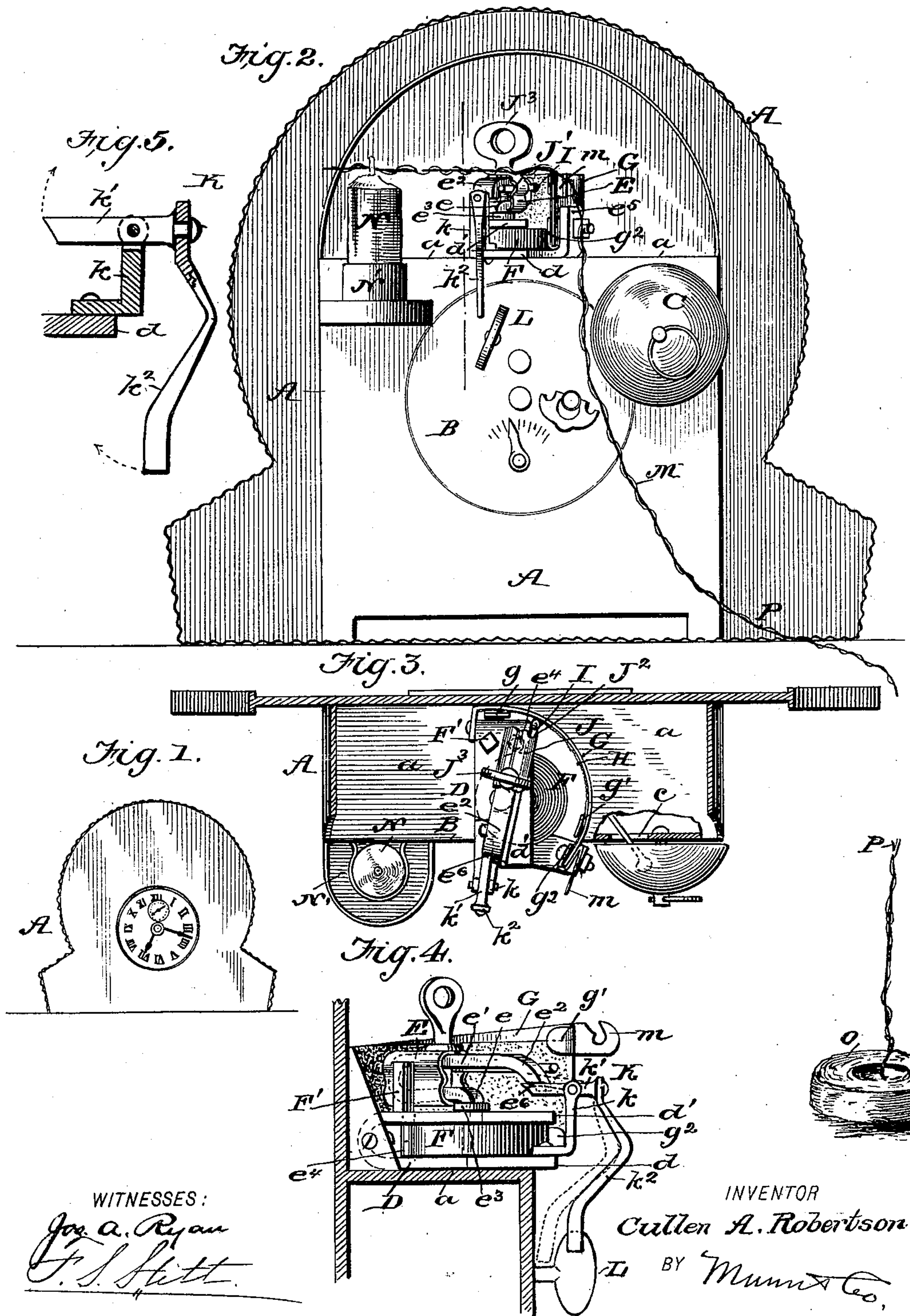
C. A. ROBERTSON.

Patented July 25, 1899.

LIGHTING ATTACHMENT FOR ALARM CLOCKS.

(Application filed Mar. 2, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

CULLEN A. ROBERTSON, OF MILLEDGEVILLE, GEORGIA, ASSIGNOR OF ONE-HALF TO CHARLES W. ENNIS, OF SAME PLACE.

LIGHTING ATTACHMENT FOR ALARM-CLOCKS.

SPECIFICATION forming part of Letters Patent No. 629,609, dated July 25, 1899.

Application filed March 2, 1899. Serial No. 707,472. (No model.)

To all whom it may concern:

Be it known that I, CULLEN A. ROBERTSON, of Milledgeville, in the county of Baldwin and State of Georgia, have invented a new and useful Improvement in Lighting Attachments for Alarm-Clocks, of which the following is a specification.

My invention relates to that class of devices by which a candle or a fire, or both, may be automatically lighted at a predetermined time, the lighting being actuated from the alarm mechanism of a clock; and it has for its object an attachment for an alarm-clock which will be sure to ignite the candle or fire at the set time and in a very simple manner.

The invention consists in the peculiar construction of the match-holder and tripping device and the arrangement of the latter with respect to the winder for the alarm mechanism. The invention further consists in certain details of construction and combination of the parts, which I shall first describe and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of the clock. Fig. 2 is a rear elevation of the same. Fig. 3 is a plan view with parts broken away. Fig. 4 is an enlarged detail perspective view of the match-lighting devices, and Fig. 5 is an enlarged detail section illustrating the locking-lever and its tripping-arm.

The alarm-clock is held in a suitable casing A, so that its rear face B will come flush with the rear face of the casing, the gong C being fastened on such rear face, as shown, and its hammer projecting through an opening c. On the upper ledge a of the casing is held a bracket D, with lower and upper plates d d', respectively, and journaled to rotate about a vertical axis in said plates is the match-holder E, consisting, preferably, of a single piece of metal bent to form a shaft or axial portion e, doubled-up portion e', and rearwardly-extending arm e². A washer e³ preferably fits around the axial portion or shaft e and rests upon the upper plate d'. A strong spring F has one end secured to the shaft e and encircles

said shaft and has its other end secured to a post e⁴. The tension of the spring F is exerted to turn the match-holder E positively—that is, with its rearward extension moving from the front of the plate d' toward and against a stop in the form of an upright F', which latter prevents further movement of said holder. A curved plate G is attached in proximity to the match-holder by having one end secured by a bolt to an arm e⁵, extending from the lower plate d, and its other end bent around the rear of the bracket and held thereto also by a bolt. On the curved plate G are formed clips g g', in which pieces of sandpaper H are adapted to be held for the purpose of contact with the head of a match I, secured in the holder E. The match is preferably held by a case J, of suitable material, fitted over the doubled portion e' of the holder and provided with an interior longitudinal groove J' and a forward aperture J², through which the head of the match projects. A clamping-screw J³ fastens the match in its place.

Now it will be seen that when the match-holder rotates the match-head is scraped along the sandpaper in the curved holder and the lighted match is presented beyond the holder. In order to prevent the rotation of the holder until a predetermined time, I mount a tripping device K on an arm k, extending upwardly from the lower plate d, the said tripping device consisting of a lever k', pivoted between its ends to swing in a vertical plane and whose free end is adapted to engage a recess e⁶ in the rearwardly-extending arm e² of the match-holder, as shown, whereby the lever prevents the movement of the holder until tripped. The opposite end of the lever k' has pivoted thereto a freely-swinging tripping-arm k², which is bent inwardly and hangs over the wing of the winder L for the alarm mechanism for a purpose to be hereinafter described.

A fuse M is adapted to be held in a clip m, secured to the curved plate G near the upper edge thereof, the said fuse when in place extending in a slight curve above the ignition end of the match-holder across to a candle N, held in a candlestick N', attached to the rear

face of the casing A. The other end of the fuse has a ball O, of combustible material, attached to it, as shown.

Now when the parts are in the position 5 shown with the tripping-arm k^2 hanging down in the path of rotation of the wing of the winder L, and the alarm is set off just so soon as the said wing comes in contact with the end of the tripping-arm and raises the 10 said arm the lever k' will be tripped and disengaged from the extension e^2 of the match-holder E, allowing the latter to rotate until it is stopped by the upright F' , thereby presenting the lighted match underneath the 15 fuse, lighting the same, and causing it in turn to light the candle and the combustible ball. It is to be understood that the ball is to be placed under the grate of a stove or in other suitable proximity to the same to kindle a fire 20 therein.

It is especially to be observed that after the lever k' has been tripped the tripping-arm will swing clear of the winder by reason of its bent portion, as shown in dotted lines, 25 thereby not interfering with the further and complete rotation of the said wing until the alarm mechanism has run down.

In preparing my fuse for ignition I wind it 30 helically about a non-fusible wire P, so that the fuse will not drop after it has been lighted and before it has accomplished its end.

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

1. An attachment for alarm-clocks consisting of a spring-actuated match-holder arranged to ignite a match, a tripping-lever loosely pivoted between its ends to swing in a vertical plane and having one end arranged for engagement with said holder whereby to 40 hold the latter in inoperative position and a bent tripping-arm pivoted to and depending from the other end of said lever and with its lower end normally resting in the path of rotation of the alarm-mechanism winder where- 45 by the lever will be tripped when the winder rotates and will then swing clear of the same, as and for the purpose set forth.

2. An attachment for alarm-clocks, comprising a spring-actuated match-holder arranged 50 to ignite a match, a device for holding said match-holder against the action of said spring, and a tripping-arm connected with said device to trip the same to release the holder, 55 said arm being pivoted to swing freely and normally resting with its free end above and in the path of rotation of the alarm-mechanism winder, as set forth.

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Witnesses:

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