

(No Model.)

A. BIAGGI Y DIAS.
AUTOMATIC TIME LIGHTING DEVICE.

No. 489,428.

Patented Jan. 3, 1893.

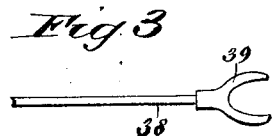
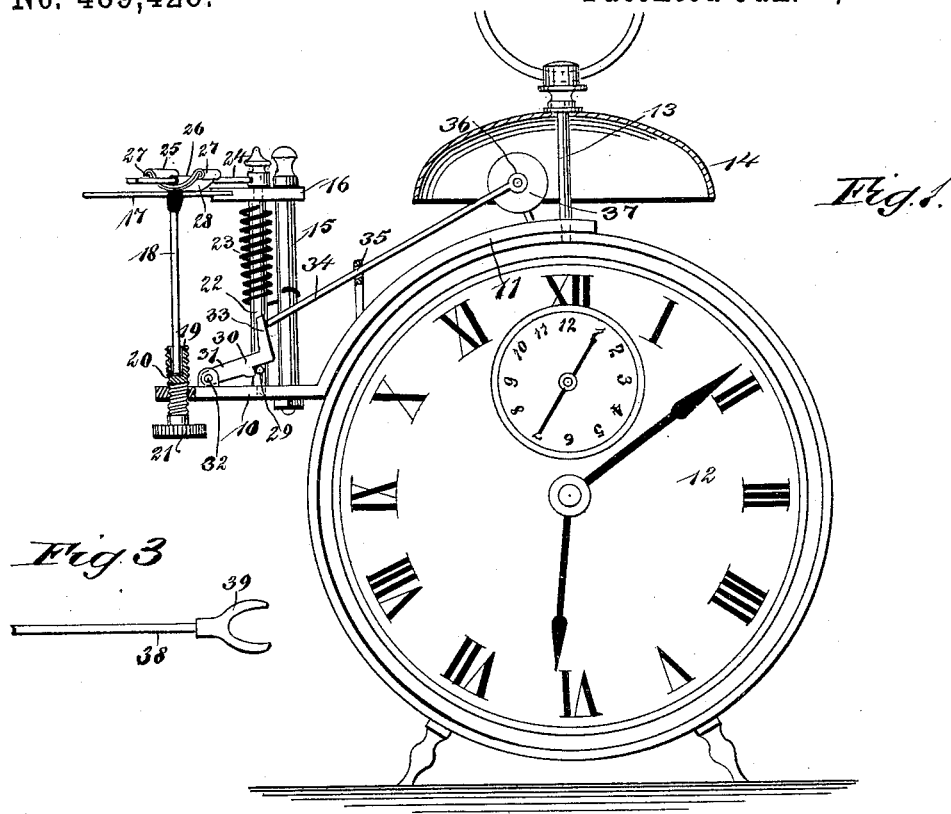


Fig. 2.

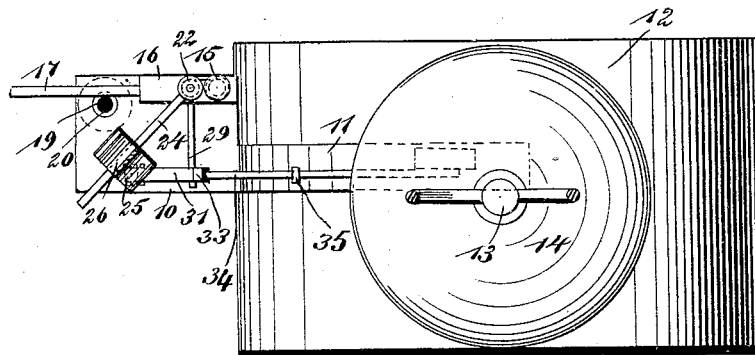
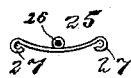


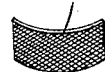
Fig. 4



WITNESSES:

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Fig. 5



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AUTOMATIC TIME LIGHTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 489,428, dated January 3, 1893.

Application filed July 7, 1892. Serial No. 439,222. (No model.)

To all whom it may concern:

Be it known that I, ANTONIO BIAGGI Y DIAS, of Havana, Cuba, have invented a new and Improved Automatic Lighting Device, of which the following is a full, clear, and exact description.

My invention relates to improvements in automatic lighting devices, and the object of my invention is to produce a simple device which may be applied to any alarm clock, and which when the alarm goes off, will, by the movement of the hammer of the clock or its key, automatically strike a match so that if it is dark, the person awakened by the alarm may see to rise, or the match may be arranged so that a fire may be ignited if desired.

To this end, my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation, partly in section, of the device embodying my invention, showing the same applied to a common alarm clock; Fig. 2 is a plan view of the same; Fig. 3 is a detail view of a modified form of trigger which may be used; Fig. 4 is a side elevation of the body of the striker; and Fig. 5 is a perspective bottom view of a modified form of striker.

The device is provided with a base plate 10, one end portion 11 of which is curved upward so as to fit the top of an alarm clock 12, but it will be understood that the plate may be secured to an alarm clock of any shape and of course the attaching portion of the plate will be shaped to fit the clock. The upper end of the curved portion or arm 11, is perforated so as to fit upon the standard 13 which supports the gong 14. The plate 10 carries a vertical stationary post 15, to the upper end of which is secured the outwardly-extending arm 16, which terminates in a reduced portion 17, adapted to form a support for the upper end or head of a match 18, so as to prevent the match from being broken by the striker, and the match is held in a vertical position, its lower end being retained in a socket 19, formed in the upper end of a screw holder

20, this screw being held to turn in a threaded portion of the base plate and having at its lower end a milled head 21, which enables it to be easily operated. By turning the screw up or down, it may be adjusted to a match of any length so that the head of the match will project slightly above the head of the arm 16.

A revoluble shaft 22 is journaled in the plate 10 and an arm 16, so as to extend parallel with the post 15, and this shaft is normally turned back, that is, to the left when looking upon the drawings in Fig. 1, by a spiral spring 23, which is coiled around the shaft and has one end secured to the shaft and the other to the post 15.

At the upper end of the shaft 22 is a laterally-extending striker arm 24, which carries the striker 25, this consisting of a curved plate having a convex lower portion, a sleeve 26 in the center and on the upper side to fit the arm, 24, although other means of fastening may be employed, and end hooks 27, formed by turning or bending under the ends of the striker. These hooks are adapted to retain a piece of sandpaper 28 (see Fig. 1) which when the arm is turned is thrown into contact with the head of the match 18, and ignites the same, but if desired, a metallic striker 25^a, shown in Fig. 5, may be used, this striker being simply a convex piece of metal with a roughened striking portion.

The shaft 22 has at its lower end a radially extending arm 29, which may be turned forward against the tension of the spring 23, into the position shown in Fig. 1, where it is adapted to be engaged and retained by a shoulder 30 on the latch or sear 31, which is pivoted at one end to the base plate, as shown at 32, and which has its free end bent upward, as shown at 33, so as to extend into the path of the trigger 34, which trigger is a straight rod held to slide in a keeper 35 secured to the curved portion 11 of the base plate, and the trigger has its upper end provided with an eye 36, which is secured to the hammer 37 of the alarm.

Instead of the form of trigger shown in Fig. 1, the trigger 38, shown in Fig. 3 may be used, this trigger having a fork 39 at its upper end instead of an eye, and the fork may be arranged so as to engage the hammer or the key of the alarm clock, but when the trigger 38 is

used, it is necessary to have two keepers 35 instead of one. It will be understood that this device may be secured to the back of the clock, so that the trigger may be operated by the alarm key as well as it is in its present position by the hammer of the alarm.

The operation of the device is as follows: To set it for use, the alarm is wound up as usual, the arm 29 is thrown forward into the position shown in Fig. 1, the latch or sear 31 drops into position to retain the arm 29 and lock the shaft 22, and this brings the arm 24 and striker 25 in front of the arm 16, as shown in Fig. 2. The match 18 is then inserted in the socket 19 of the match holder, and when the alarm goes off, the hammer 37 will advance toward one side of the gong 14, thus pushing upon the trigger 34, which lifts the sear 31 and releases the arm 29. The spring 23 then throws the shaft 22 quickly around and the shaft carries with it the striker 25, which passes across the head of the match, thus igniting the latter, and the striker passes on out of the way of the flame. The movement of the shaft is limited by the arm 29, which will bring up against the back side of the post 15.

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

1. The combination with the base or plate provided with a vertical shaft having a horizontally extending striker or scratch arm, a spring for turning said shaft, a latch for holding the striker or scratch arm retracted, and means for releasing the latch from a clock mechanism, of a vertically extending match holder beneath the striker arm, and consisting in a screw extending up through a thread-

ed aperture in the base and provided with a socket in its upper end to receive the match, substantially as set forth.

2. The combination with the match holder, of the spring pressed swinging striker or scratch arm provided with a transversely extending curved plate having its ends bent upon themselves to form parallel ways, and provided on its upper side with a transverse sleeve through which said striker or scratch arm passes and an abrading surface mounted in said ways, a latch for the said striker and means for releasing the latch from a clock mechanism, substantially as set forth.

3. In a lighting device, the combination with externally threaded match holder, extending through a threaded aperture in the frame or base and having a socket at its upper end, of a striker arm to swing thereacross, and means for retaining and releasing the striker arm, substantially as set forth.

4. The combination with the clock having a bell hammer 37, of the lighting attachment, comprising the attaching plate, the vertical post 15 having a stationary match steadying arm 17 at its upper end, the vertical shaft 22 having a spring 23, horizontal striker arm 24 carrying the striker 25, the arm 29 on the lower end of shaft 22, the vertically swinging latch 30 to engage said arm and hold the striker retracted and provided with a projection 33, a match holder beneath the striker arm, and the rod 35 connected with the bell hammer and bearing against the projection 33, substantially as set forth.

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Witnesses:

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