(No Model.)

A. GRUNER.

SIGNAL BOX ATTACHMENT.

No. 539,511. Patented May 21, 1895.

Fig. 1.

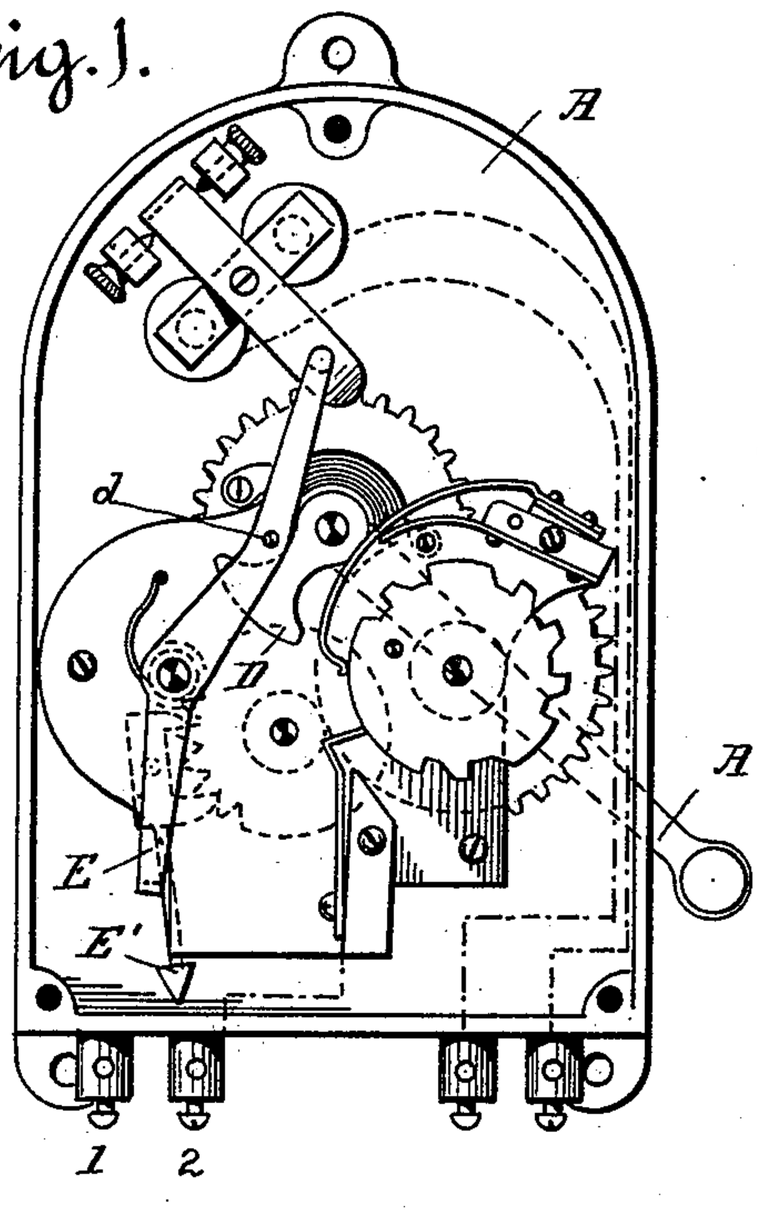


Fig. 2.

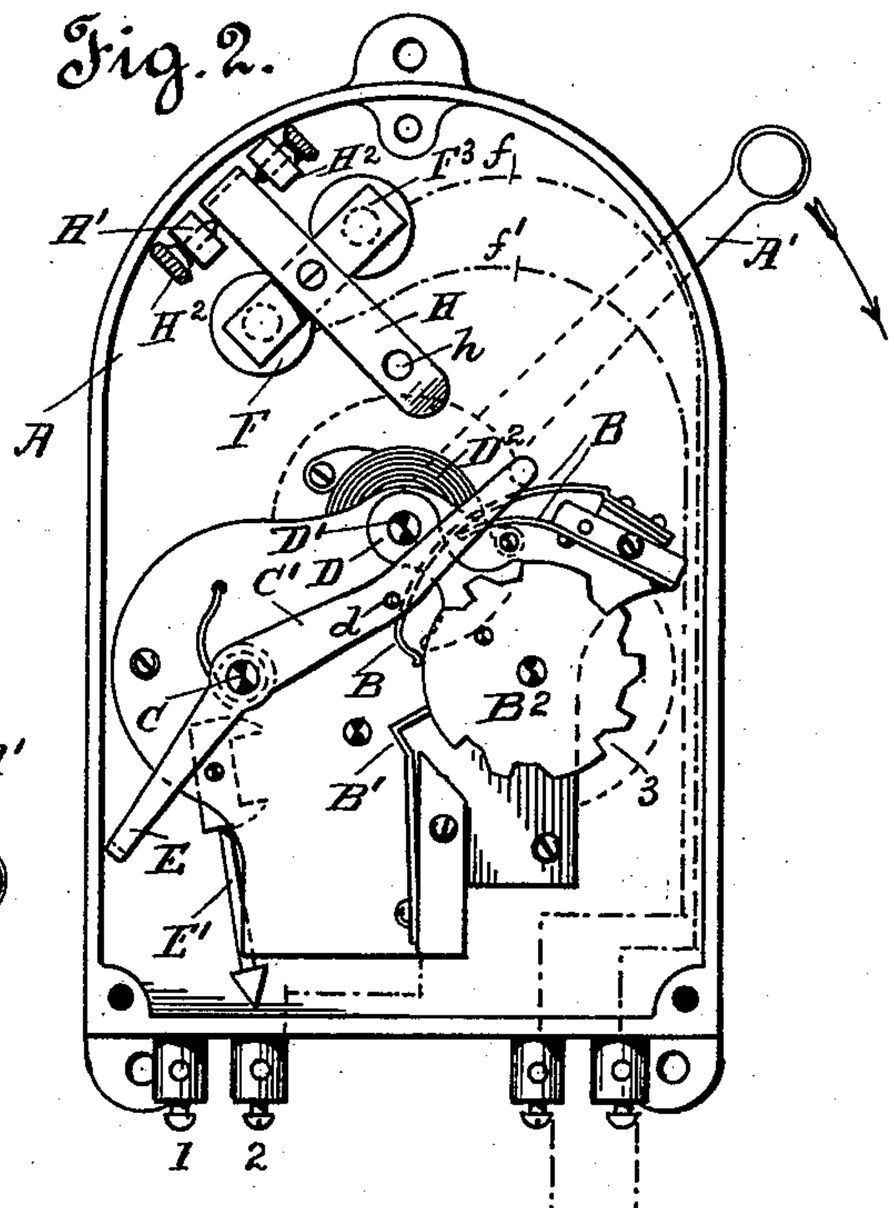
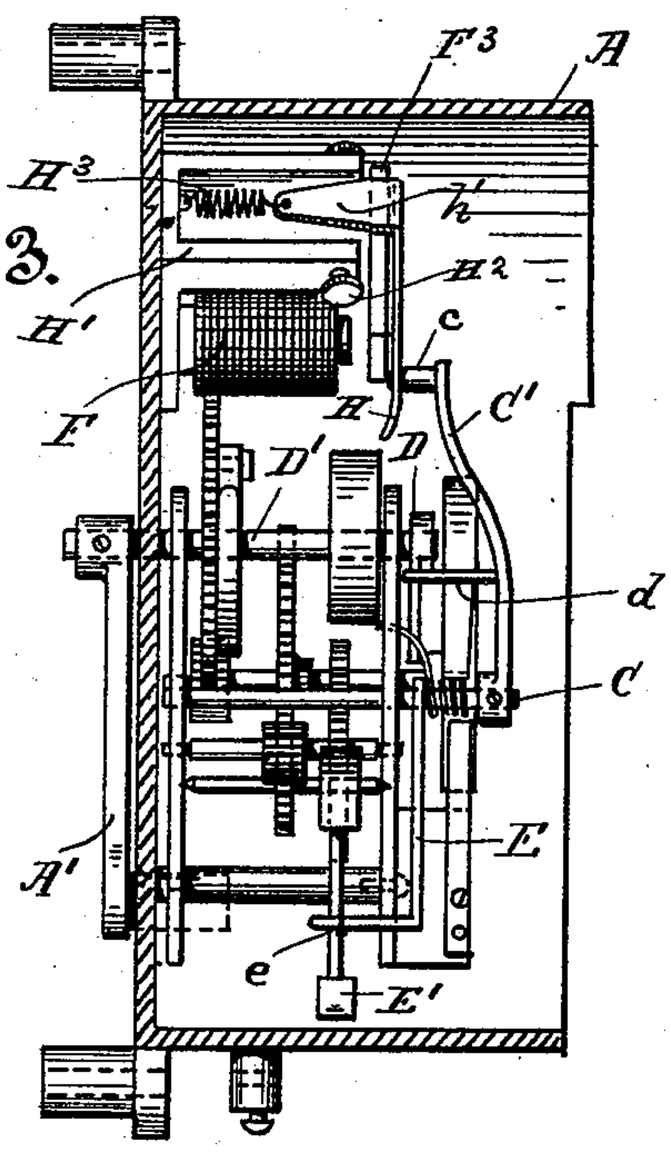
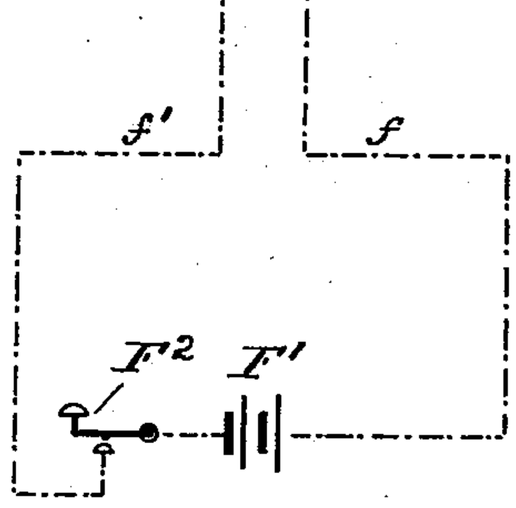


Fig. 3.





Witnesses.

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SIGNAL-BOX ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 539,511, dated May 21, 1895.

Application filed July 28, 1894. Serial No. 518,871. (No model.)

To all whom it may concern:

Be it known that I, ALOIS GRUNER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Signal-Box Attachments; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

The present invention relates to an improved signal box attachment, the purpose of which is to so lock the operating lever, after being set, that the box will be inoperative until such time as it is desired to transmit an alarm or signal, when the same may be released automatically by the opening or closing of an electric circuit, the device being of such a nature as to permit of the operating lever being released at any desired distance from the signal box, consequently not necessitating the sender being in close proximity to the box, all as will hereinafter more fully appear.

This invention is more especially intended for use in connection with district and burglar alarm service, and the main object thereof is to permit of the signal box being located in any portion of a building, such as a store, bank, office, or residence, and operated at any distance therefrom, so that in case of a person being suddenly intruded upon, the alarm may be given without requiring the sender to go near the signal box, thus permitting of an alarm being transmitted or secret signal forwarded, to police station, &c., without the intruder being made aware of the fact.

In order to more fully understand my invention, reference must be had to the accompanying sheet of drawings, which form a part of this application.

Figure 1 is a top plan of a signal-box with my device fastened therein, showing position of operating-lever when locked, the spring mechanism being wound and signal-box set; Fig. 2, a view similar to Fig. 1, showing position of operating-lever after an alarm has been transmitted; and Fig. 3 is a side elevation of the signal-box with the casing in section.

The letter A indicates the casing of an ordinary signal box which has secured therein the usual spring actuated mechanism, wound by the downward movement of handle A′. This portion of the device forming no part of my invention and being of ordinary construction calls for no specific description herein. As usual in this class of inventions the signal is transmitted over wires which run from terminal points 1, 2, as the spring contacts B, B′ pass over indents 3, of character wheel or disk B^2.

To the inner end of shaft C, is fastened the operating lever C′, from the upper end of which inwardly projects the pin *c*. This lever is raised or thrown upward by means of the cam D, secured to inner end of shaft or axle D′, which is rotated by the handle A′, fastened to the outer end of said axle, and as the handle is moved downward, in order to wind the spring D^2, the unwinding of which sets the gear mechanism in operation, the cam D, is thrown upward, which contacting with pin *d*, projecting from lever C′, carries the operating lever therewith.

From axle or shaft C, downwardly extends the angular tail piece E, the arm *e*, of which engages with escapement E′ and prevents the movement thereof when lever C′ is thrown upward, hence prevents working of the gear mechanism until said lever is released from its raised position. See Fig. 1.

In the upper portion, preferably, of the box is located the electro-magnet F, from which run the wires *f*, *f*′, one of which leads directly to the battery F′, located at any distance therefrom, and the circuit is completed with wire *f*, through the medium of push button or key F^2. It is my intention to connect the push button or key, when the device is located within an office, bank, counting-room or similar places, directly with the desk, thus permitting the circuit to be completed and the signal box set in operation, in order to transmit an alarm, without the clerk leaving his desk, in this manner permitting the box to be located in one portion of the building and the alarm given at any distance therefrom.

To the armature F^3, is fastened the metallic plate H, the outer end of which is perforated, as shown at *h*. As the operating lever is thrown upward the inwardly projecting end

or pin *c*, enters the perforation *h*, and holds the lever in its raised position until released. This spring plate is held between bracket H′, by means of set screws H², which pass through ears, not shown, downwardly projecting from said plate. The outer end *h*′, of this plate is bent downwardly and extends between the bracket H′, and is connected to the base thereof by means of the spring H³. The resiliency of this spring serves to draw the outer end of the plate downward and throw the inner end upward. Consequently as the end or pin of operating lever moves the spring plate downwardly while moving thereover, the same readily springs upward and engages or locks the lever in its raised position when the pin *c*, or end of lever moves within perforation *h*.

As before stated the operating lever is thrown upwardly by the downward movement of the handle A′. When the lever has been thrown upward, the signal box is set and ready to transmit or send an alarm when the lever is unlocked in order to release the gear mechanism.

When the electro-magnet circuit is closed, by inward movement of push button, the armature F³, will be drawn inward and likewise carrying the plate H therewith will cause the plate H to move from locked engagement with operating lever. The lever being free the signal box will operate in the usual manner, there being no longer any resistance to the movement of the escapement.

My improved signal box will be found of the utmost importance when used in connection with such places as handle large sums of money, such as banks, inasmuch as an alarm may be sent, in case of danger, without any one being aware of the fact, except the operator himself.

In the foregoing I have only described my invention when used in connection with offices, &c., and operated through the medium of a push button or key, for closing the circuit manually, but it is obvious that the device may be used in connection with windows, doors, safes, &c., and automatically operated by the opening or handling of the window, door, safe, &c. When thus used as a burglar alarm, the connecting wires are run in the usual manner, and the alarm given by the breaking or opening of the circuit. It will thus be seen that my device operates automatically or not as desired.

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

1. In a call box, the combination with its mechanism, and an exterior setting means, of an electro-magnet, a local circuit therefor, a spring actuated pivoted lever in the box, an extension on the lever for retaining the mechanism in a set condition, a spring actuated armature for the magnet, having a curved free end normally in the path of the lever and an interlocking connection between the armature and lever, released upon the downward movement of the armature, substantially as described.

2. In a call box, the combination with the containing mechanism, of means for setting the mechanism, a spring actuated locking lever C′ having a stopping projection at its lower end, a magnet, a local circuit therefor, a spring actuated armature for the magnet having a recess therein, and a curved end beyond the recess, and a projection on the lever arranged to engage the curved end of the armature and project into the recess, substantially as described.

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

ALOIS GRUNER.

Witnesses:
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