

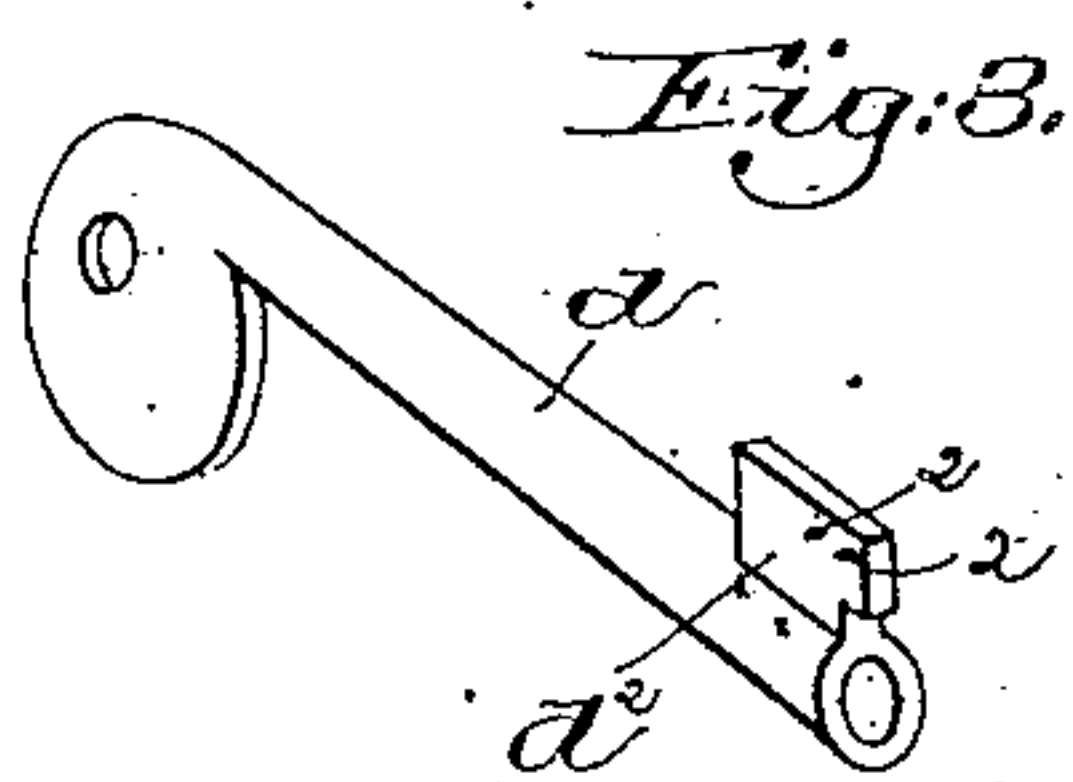
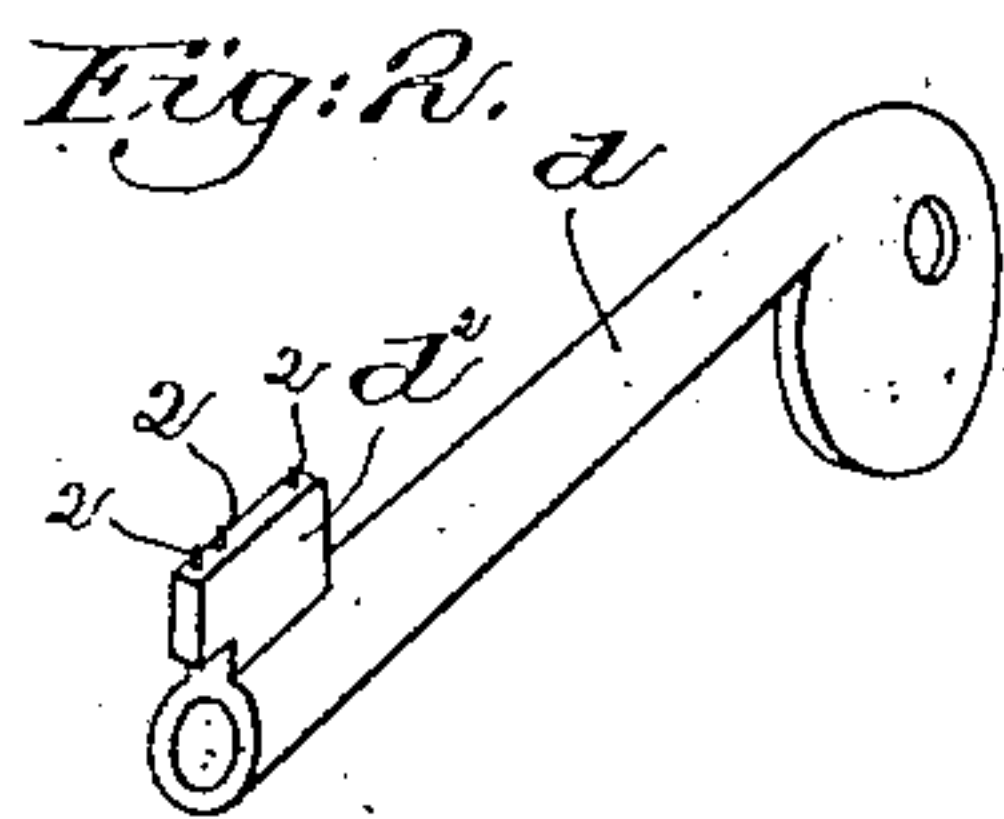
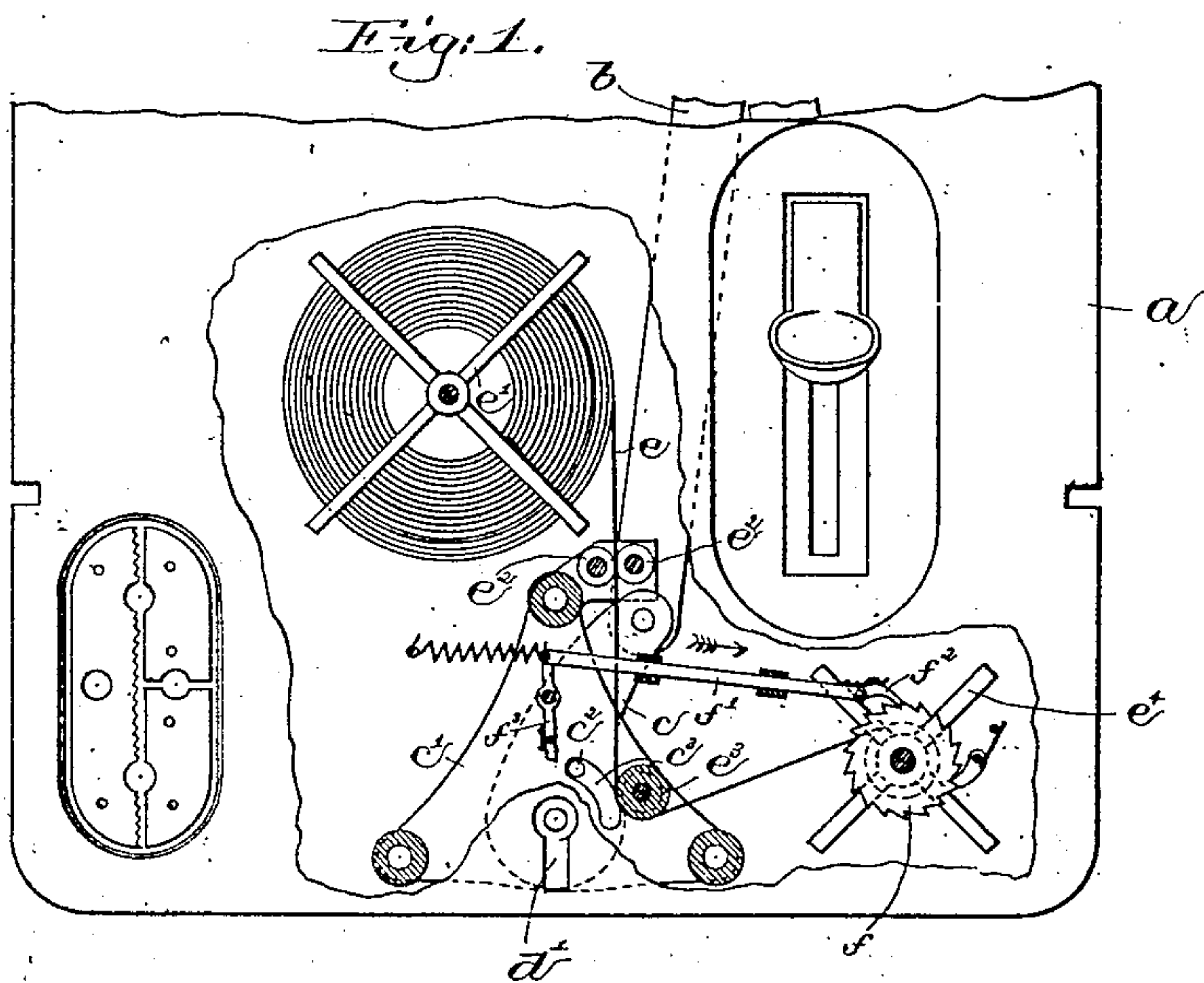
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(No Model.)

B. J. NOYES.
SIGNAL BOX.

No. 447,062.

Patented Feb. 24, 1891.



Witnesses,
Howard C. Eaton.
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Inventor:
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UNITED STATES PATENT OFFICE.

BERNICE J. NOYES, OF BOSTON, MASSACHUSETTS.

SIGNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 447,062, dated February 24, 1891.

Application filed September 11, 1889. Renewed December 5, 1890. Serial No. 373,642. (No model.)

To all whom it may concern

Be it known that I, BERNICE J. NOYES, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Signal-Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

Signal-boxes for police and fire-alarm telegraph purposes have heretofore been provided with suitable means by which a key may be employed to turn in a signal, said key being locked when once used for this purpose and retained until released by a proper person, the object being to prevent turning in alarms by malicious persons.

This invention has for its object to provide a signal-box with suitable means whereby an alarm may be turned in by a key and a number or character, code or otherwise, indicating the particular key used for the purpose, impressed, embossed, or printed upon a piece of paper or any equivalent or suitable material provided for the purpose, so that after the alarm has been turned in the key may be withdrawn, yet a correct indication or character is retained.

The invention consists in the combination, with a signal-transmitter and a key for operating it adapted to be inserted and withdrawn from the box containing the transmitter, of a piece of material arranged to be marked upon, embossed, or impressed by the key.

As a preferable way of carrying out the invention, the bit of the key has formed on it projections variously arranged to indicate code signals or numbers, and a strip of paper is arranged in the box, which is impressed or embossed by the key whenever inserted and an alarm turned in. Means are preferably provided for moving the paper forward intermittently as each impression is made.

Figure 1 shows a portion of the face-plate of a signal-box broken away to expose the operating parts by which the signal is turned in and means by which the key employed will be indicated; Fig. 2, a perspective view of a key which may be employed for turning in an alarm, and Fig. 3 a modification to be referred to.

The face-plate α may be of any suitable

size and shape—such, for instance, as shown in my application, Serial No. 245,499, filed July 28, 1887. The signal-transmitter not shown and having a suitable actuating or starting lever or arm will be employed, the said starting lever or arm being operatively connected with the bar b , which is loosely connected to the arm c , having its bearing in the frame c' . The frame c' has a pin c^2 , which passes through a curved slot c^3 , formed in the frame c' .

To turn in an alarm, a key—such, for instance, as shown at d , Fig. 2—is inserted in the key-hole d' , and as the key is turned the bit d^2 strikes against the pin c^2 , and by further rotation moves the arm c in its bearings, the pin c^2 moving in the slot c^3 . During such movement of the key the rod or bar b will be drawn down. As the key is turned back to its normal position the arm c is permitted to resume its normal position, a spring connected to the rod b , and not herein shown, being depended upon for this purpose.

The transmitter which I preferably employ has a winding-arm, which is moved by the rod or bar b first to wind the motor and thereafter to resume its normal position and permit the motor to operate. Hence with such form of transmitter the signal will be transmitted after or during the time the key is restored to its normal position.

The construction of parts thus far described is not of my invention, and no claim is herein laid specifically thereto.

A strip of paper e , wound on the reel e' , journaled in the frame-work, passes between suitable guide-rolls, as e^2 , and over a roll e^3 onto a reel e^4 . The keys are formed, as herein shown, with projections, as 2, on the bit, either on the side or edge thereof, and the surface of the roll e^3 substantially meets the path of movement of the edge of the bit as the key is turned, so that the projection thereof will impress, print, or emboss the paper e . Each key will have the projections differently arranged, so that a code indication is left on the paper, representing the particular key used in turning in the alarm.

To move the paper forward so as to present a blank space for the next alarm turned in by means of a key inserted in the key-hole d' , I have provided the reel e^4 with a

ratchet-toothed wheel f , and have provided a sliding rod f' with a spring-controlled pawl f^2 , which engages the said ratchet-toothed wheel f and a rod or bar f^3 , loosely connected with the sliding rod f' , one end of which rod or bar f^3 enters the path of movement of the bit of the key, so that as the key is rotated in one direction the arm f^3 is moved, or it may be a projection on the end of the arm f^3 only which is moved, while on returning the key to its normal position the arm f^3 is moved in the opposite direction, moving the sliding rod f' in the direction of the arrow, and thereby moving the ratchet-toothed wheel f one step in advance.

When a key having the indicating projections on the side of the bit instead of on the edge is employed, the roll e^3 will be located nearer the axis of the key, so that the projections will strike on it.

In lieu of the particular construction of feeding device for the paper herein shown, any other feeding device operated by movement of the key when employed in turning in the alarm may be used, and any such form I deem comes within the scope of this invention; nor do I desire to limit the invention to the employment of the paper in strip form and wound on reels, as shown, as various other forms may be devised to accomplish the same end.

I claim—

1. In a signal-box containing a signal-transmitter adapted to be operated by a key inserted through a key-hole, the combination, with the key formed to print, impress, or emboss a character indicating a number or equivalent by which the key is known, of a piece of material upon which the said char-

acter is printed or embossed, substantially as described.

2. In a signal-box containing a signal-transmitter, the combination, with a key adapted to turn in an alarm and formed to indicate a number or character by which it is known, of a movable piece of material upon which the said number or character is indicated, leaving a permanent record, substantially as described.

3. In a signal-box containing a signal-transmitter, the combination, with a key adapted to turn in an alarm and having projections formed on it indicating its number or equivalent by which it is known, of a piece of material marked, impressed, or embossed by said projections, substantially as described.

4. In a signal-box containing a signal-transmitter, the combination, with the key adapted to turn in an alarm and formed to mark, impress, or emboss a piece of material to indicate its number or equivalent by which it is known, of a feeding device for the said material, substantially as described.

5. In a signal-box containing a signal-transmitter, a key adapted to turn in an alarm, the bit of which has formed on it several projections, a strip of paper or equivalent adapted to be marked, impressed, or embossed by said projections, and a feeding device for the said paper, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BERNICE J. NOYES.

Witnesses:

GEO. W. GREGORY.

E. J. BENNETT.