

W. FIX.  
Fire-Alarm Telegraphs.

No. 218,724.

Patented Aug. 19, 1879.

Fig. 2.

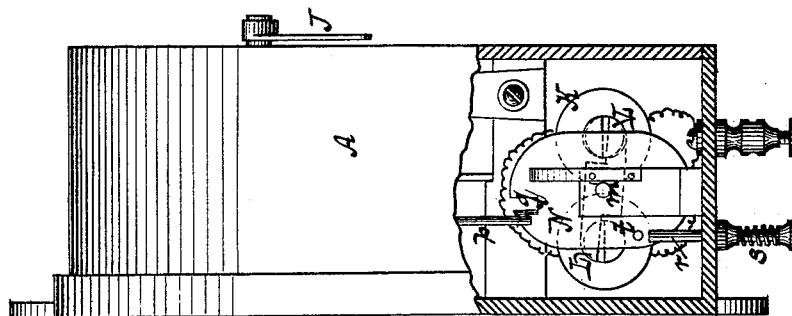
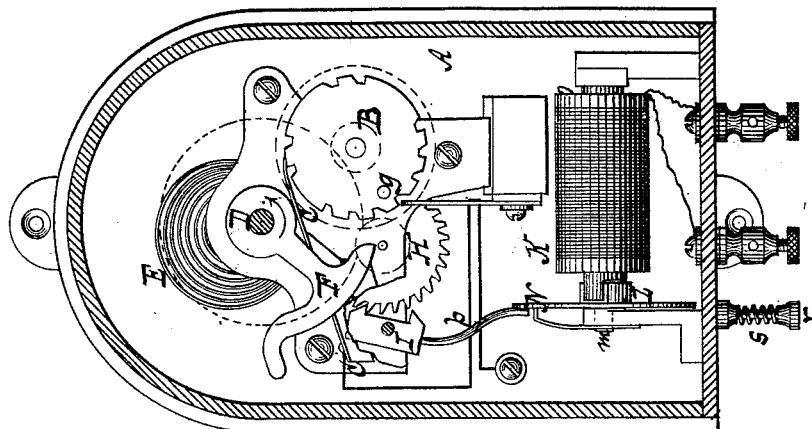


Fig. 1.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM FIX, OF NEW YORK, N. Y.

## IMPROVEMENT IN FIRE-ALARM TELEGRAPHS.

Specification forming part of Letters Patent No. 218,724, dated August 19, 1879; application filed June 26, 1879.

### *To all whom it may concern:*

Be it known that I, WILLIAM FIX, of the city, county, and State of New York, have invented a new and Improved Burglar-Alarm Attachment to Electro-Magnetic Signal-Instruments, which invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front view, partly in section, of an instrument embracing my invention. Fig. 2 is a sectional side view thereof.

Similar letters indicate corresponding parts.

My invention relates to attachments for the class of electro-magnetic instruments commonly stationed in offices, &c., and arranged in the circuit of a signal, for calling a messenger and other purposes.

The object of my invention is to adapt an instrument of this description to be set for giving a signal automatically, and thereby to convert the same into a burglar-alarm.

The invention consists in the combination, with an anchor or pallet, which regulates the escapement and is provided with a projecting stem, of an electro-magnet and an armature turning on a pivot or bearing and carrying a vertically-arranged stop-plate notched at its upper edge and arranged in the path of the stem which projects from the anchor or pallet in such manner that when the armature is moved back a solid portion of the stop-plate stands in the path of the said anchor-stem and locks the escapement, and when the electro-magnet attracts the armature, the notch in the stop-plate is brought into coincidence with the stem of the anchor or pallet, and the signal-instrument is permitted to operate and transmit the signal, as will be more fully hereinafter described in detail.

In the drawings, the letter A designates a case inclosing an electro-magnetic signal-instrument. This instrument is of well-known construction; but in order to render intelligible the operation of my attachment it will be necessary to give a brief description of the instrument. The instrument is arranged in the circuit of a signal, connections being made with such circuit through a break-wheel, B, and a spring, C, bearing on the break-wheel. The shaft of the break-wheel

B is geared with an arbor, D, which carries a clock-spring, E, and also carries an arm, F, adapted to engage a stop-pin, *g*, on the break-wheel. The shaft of the break-wheel B is also geared with the arbor of an escape-wheel, H, combined with an anchor, I.

The clock-spring E has a tendency to turn the arbor D in the direction of the arrow shown in Fig. 1; and if this arbor is set back a certain distance and then released, the break-wheel B is permitted and caused to revolve, thereby alternately closing and breaking the signal-circuit. The break-wheel B continues to revolve until the arm F, which becomes set back together with the arbor D, and which is shown in this position, engages the stop-pin *g*.

For the purpose of turning back the arbor D, the same is provided with a finger, J, (see Fig. 2,) on the outside of the case A, which latter is usually marked as with the words "messenger," "police," "fire," to guide one in setting the instrument.

In the lower part of the case A, I mount an electro-magnet, K, which is intended to be arranged in a circuit connecting with the doors and windows and other parts of a house, and which is independent of the signal-circuit before referred to. The armature L of said electro-magnet turns on a pivot, *m*, and is arranged to retract a stop, N, whose function is to arrest the signal-instrument. In this example the stop N consists of a plate which is attached to the armature L, and which acts on a stem, *p*, projecting from the anchor I of the escapement; but other arrangements of the stop will readily suggest themselves to a skilled mechanic.

The stop-plate N has a notch, *q*, on its upper part, and its operation is as follows: When the armature L is moved back or out of contact with the electro-magnet K, a solid portion of the plate N, immediately next the notch *q*, stands in the path of the stem *p*, as shown in Fig. 2, and the escapement being thus prevented from working the signal-instrument is arrested.

For the purpose of moving back the armature, and thereby setting the stop N, I make use of a push-bar, *r*, which is held back by a spring, *s*, and which acts on a pin, *t*, project-

ing from the stop-plate; but other devices may be substituted therefor.

If, when the parts are in the position shown Fig. 2, the circuit through the electro-magnet K is closed, the armature L is attracted, and the stop-plate N is shifted, so as to present the notch *q* to the stem *p*, thereby releasing the escapement.

In practice the arbor D of the signal-instrument is intended to be set back whenever the armature L is retracted, so that the signal-instrument is brought into play whenever the circuit through the magnet K is closed as by the opening of a window or any other part of the house in said circuit.

It may be here remarked that, by a slight modification, the stop N can be operated by the breaking of the circuit through the electro-magnet K instead of by the closing of such circuit; or, in other words, either an open or a closed circuit can be used. Attention is also called to the fact that my attachment is adapted to other instruments besides the one here represented.

It will be readily perceived that while the signal-instrument to which my invention is applied is adapted to perform its usual functions unaffected by the stop, the same is practically adapted to the uses of a burglar-alarm.

What I claim as new, and desire to secure by Letters Patent, is—

1. In an electro-magnetic signal apparatus, the combination, with the anchor or pallet of the escapement provided with a projecting stem, of an electro-magnet for arrangement in an independent circuit, an armature turning on a pivot or bearing, and a stop-plate secured in a vertical position to the armature, and having in its upper edge a notch which is adapted to be brought into and out of coincidence with the stem of the anchor or pallet, substantially as and for the purpose described.

2. In an electro-magnetic signal-instrument, an anchor or pallet provided with a projecting stem, in combination with an electro-magnet for arrangement in an independent circuit, an oscillating armature, a stop-plate secured in a vertical position to the armature and having a notch in its upper edge and a projecting pin, and a push-bar for acting on the pin, all substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of June, 1879.

WILLIAM FIX. [L. S.]

Witnesses:

W. HAUFF,

CHAS. WAHLERS.