

(No Model.)

G. S. TILTON.
AUTOMATIC FIRE ALARM.

No. 467,212.

Patented Jan. 19, 1892.

Fig. 1

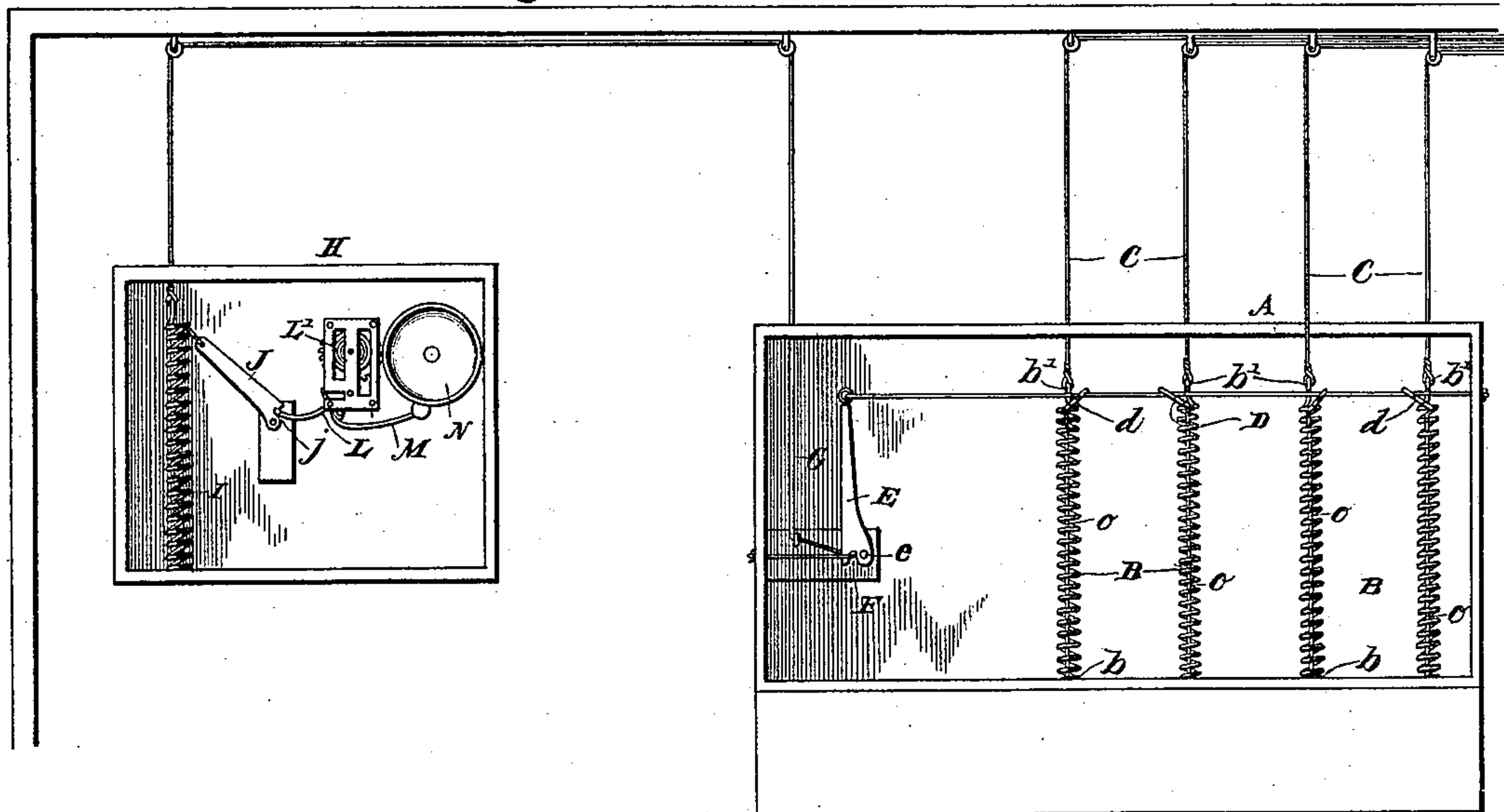


Fig. 2.

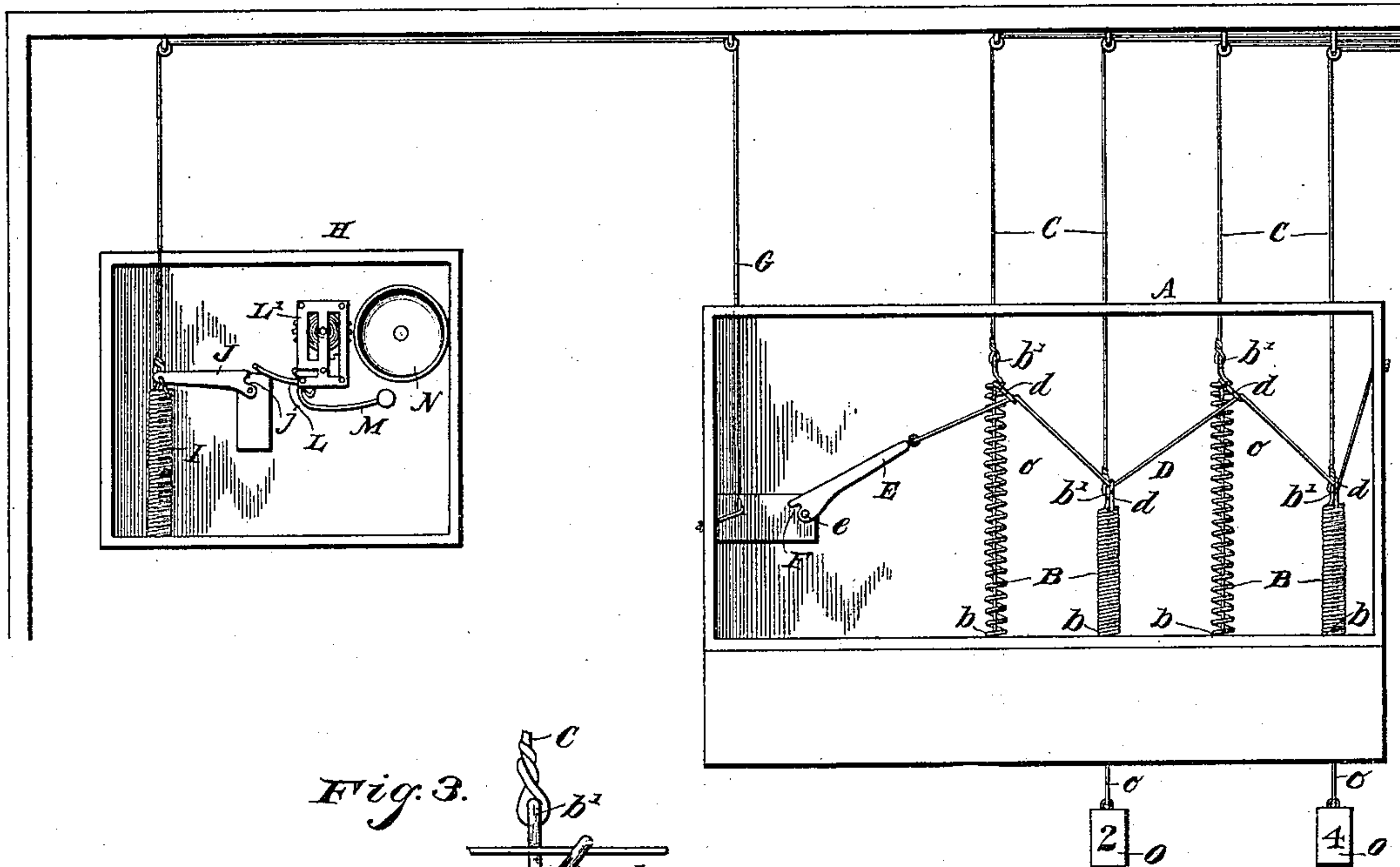
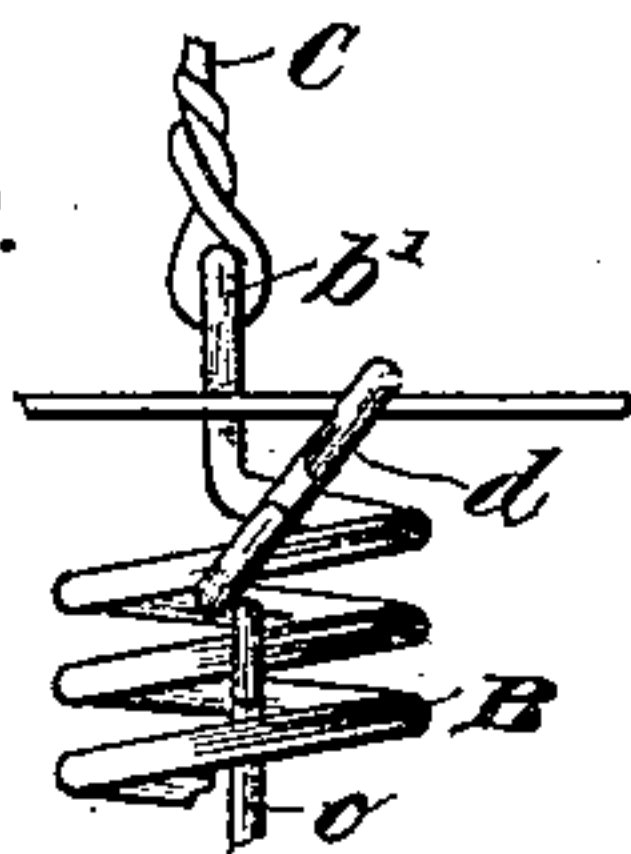


Fig. 3.



Witnesses;

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By his Attorneys,

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Inventor,
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UNITED STATES PATENT OFFICE.

GEORGE SCOTT TILTON, OF BRISTOL, NEW HAMPSHIRE.

AUTOMATIC FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 467,212, dated January 19, 1892.

Application filed November 2, 1891. Serial No. 410,637. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SCOTT TILTON, a citizen of the United States, residing at Bristol, in the county of Grafton and State of New Hampshire, have invented a new and useful Automatic Fire-Alarm, of which the following is a specification.

My invention relates to automatic fire alarms and indicators; and it has for its object to provide an automatic fire-alarm which shall be constructed in such a manner as to provide means whereby an alarm will be immediately given when a fire has started in a building, and at the same time will indicate in which portion of the building the fire has emanated, and to this end to provide a combined indicator and alarm which will be simple in construction and effective in operation.

With these and other objects in view the invention consists in the novel construction of an indicator and the alarm mechanism, hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of an automatic fire alarm and indicator constructed in accordance with my invention, the front of the casing inclosing the various parts removed and the devices in their set positions. Fig. 2 is a similar view showing the device in operation. Fig. 3 is a detail view of the spring connections.

Referring to the accompanying drawings, A represents the indicator used in connection with my improved alarm, and which is provided with the various parts operating said alarm, and comprises an ordinary boxing or casing, in which is located the various parts of the indicating mechanism. Within the boxing or casing is located a series of coiled retractile springs B, securely fastened to the bottom of the indicator at *b* and connected at their free ends by means of eyes *b'*, formed on the upper ends of the springs, to the fire ropes or cords C, extending through the top of the indicator-casing and tightly drawn through the various rooms of the building in which the apparatus is located, and are made fast at their extreme ends, thereby drawing said springs out and up to the top of the indicator-casing. The upper ends of the said springs B are also connected with the cord or wire D by means of links *d* and secured to

one end of said indicator and extending along near the top thereof, connecting all the springs in series, and is secured at its other end, near the opposite end of the indicator, to the top of the lever E, pivotally secured at *e* within the boxing or casing. Said lever, at a point adjacent to its pivotal connection, is provided with a horn or hook F, around which is wound the alarm-cord G, secured at one end to said indicator-casing, and passing around said hook or horn holds the lever E in its vertical normal position, and extending therefrom through the top of said indicator-casing is suitably conducted to and passed within the alarm-box H and is connected therein to the free ends of a coiled retractile spring I, which, under the tension of said cord, is drawn tightly within a short distance of the top of said alarm-box. Pivotally secured within said box or casing H is the alarm-lever J, of similar construction to the lever E within the indicator, and is also provided with the hook or horn *j*, adjacent to its pivotal point within said box, and its upper end is connected with the upper end of said coiled spring I, while its lower hook or horn end *j* is adapted to normally engage the arm L, connected with the escapement device of an ordinary clock mechanism L', and holds the same out of operation and controls the movement of the clapper-arm M, also connected with the escapement device of said clock mechanism and adapted to play against the alarm-bell N.

It can be readily seen that when a fire has started in any one of the rooms of a building one or more of the fire ropes or cords C is burned off, and thus released allows the spring or springs B, to which the inner ends thereof are attached, to retract and draw downward the operating-cord D, secured within the top of the indicator-box. This movement allows the indicator blocks or tags O to fall below the bottom of the indicator and display the number or numbers, according to the number of springs released, of the rooms in which the fire has started, said tags being connected with the upper end of said springs by a cord or rope *o* passing up through the bottom of the indicator and through the springs. The drawing down of the operating-cord D throws the lever E from its vertical position and liberates the taut alarm-cord

G, which thus allows the spring I within the alarm-box to retract and draw the alarm-lever J out of engagement with the alarm-clock mechanism referred to, and thus permits the alarm to be at once sounded at the same time that the room or rooms are indicated to be on fire.

The construction and operation of my improved fire alarm and indicator are now thought to be apparent without further description.

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

1. In an automatic fire alarm and indicator, the combination of the indicator-casing having a series of coiled retractile springs secured to the bottom thereof, a series of fire ropes or cords secured to the upper end of said springs and drawn taut through a building, an operating-cord secured within said casing and connected with the ends of each spring, a trip-lever pivoted within said casing and connected with the free end of said operating-cord, an alarm-cord connected with said lever and holding the same in a normal vertical position, an alarm operated and connected with said alarm-cord, and indicator tags or blocks connected with said springs, substantially as set forth.

2. In an automatic fire alarm and indicator, the combination of the indicating-casing having a series of coiled retractile springs secured to the bottom thereof, a series of fire ropes or cords secured to the upper ends of said springs and drawn taut through a building, an operating-cord secured within said

casing and connected with the ends of each spring, a trip-lever pivoted within said casing and connected with the free end of said operating-cord and provided with a horn or hook, an alarm-cord connected with said hook or horn and holding the lever in its normal vertical position, an alarm operated by and connected with said alarm-cord, and indicator tags or blocks suspended from the top ends of said springs and below the bottom of said indicator, substantially as set forth.

3. In an automatic fire alarm and indicator, the combination of the indicating-casing having a series of coiled retractile springs secured to the bottom thereof, a series of fire-ropes connected to the upper ends of said springs, an operating-cord secured within said casing and connected with the ends of each spring, a trip-lever pivoted within said casing and connected with the free end of said operating-cord, an alarm-box, a retractile spring located in said alarm-box, an alarm-cord connected with the upper end of said spring and with said trip-lever, and an alarm-lever pivoted within said box and connected to the free end of the retractile springs therein and provided with a hook or horn that is adapted to normally hold the alarm mechanism out of operation, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE SCOTT TILTON.

Witnesses:

GEO. A. EMERSON,
HOMER ROBY.