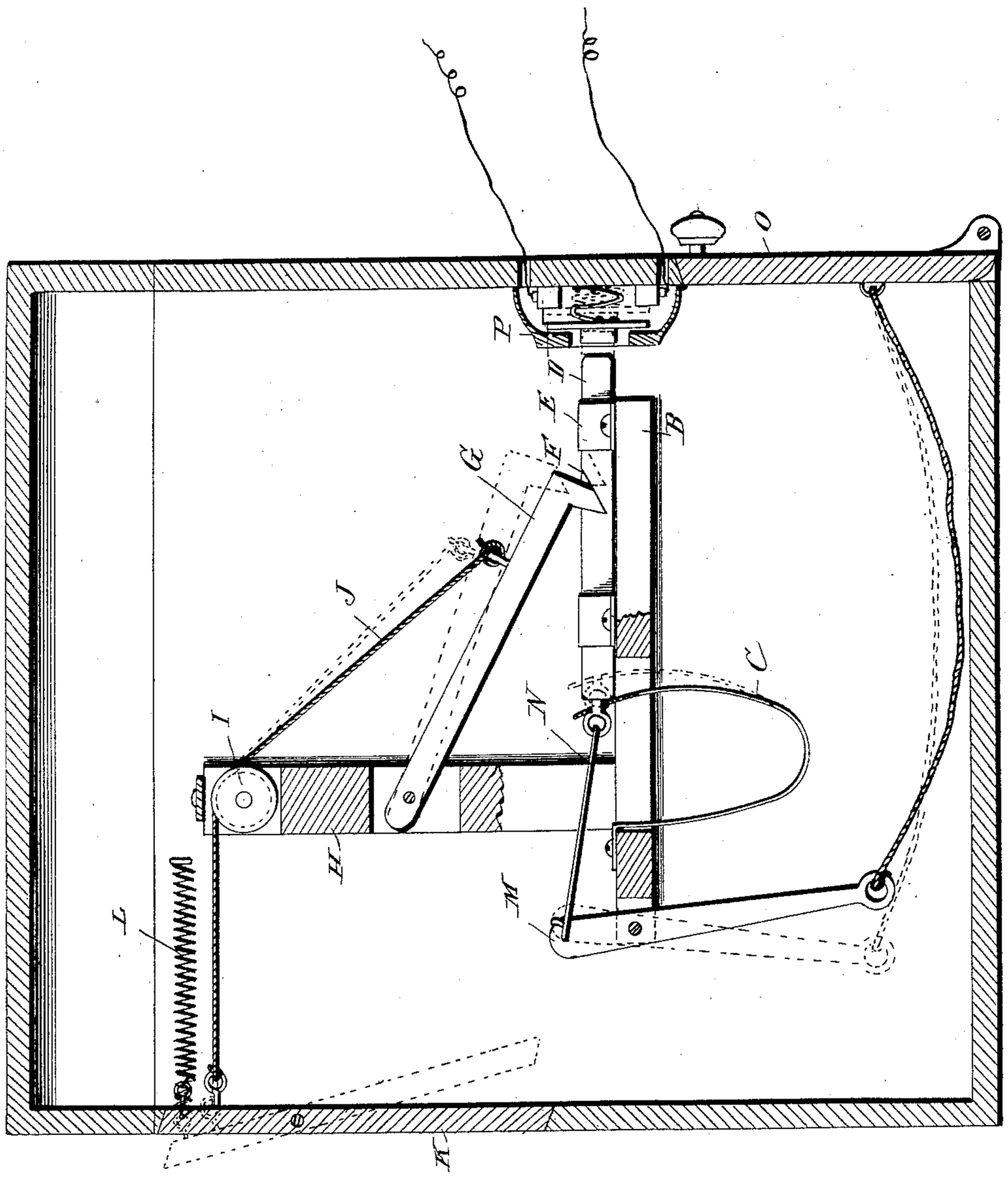
(No Model.)

W. B. DETWILLER.

ELECTRIC ALARM LETTER BOX.

No. 433,560. Patented Aug. 5, 1890.



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UNITED STATES PATENT OFFICE.

WILLIAM B. DETWILLER, OF RADNOR, OHIO.

ELECTRIC-ALARM LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 433,560, dated August 5, 1890.

Application filed February 28, 1890. Serial No. 342,176. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. DETWILLER, a citizen of the United States, residing at Radnor, in the county of Delaware and State of Ohio, have invented certain new and useful Improvements in Alarm Mail-Boxes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in alarm letter-boxes; and the novelty will be fully understood from the following description and claims, when taken in connection with the accompanying drawing, in which the figure is a vertical sectional view of my improved letter-box, showing the interior mechanism thereof partly in section and partly in elevation.

In carrying out my invention the box A may be of any preferable configuration, and may be constructed of any material desired.

At a suitable point of altitude upon the inside of one of the side walls of the box I secure a bracket-platform B, to which are attached the several elements of my improved automatic mechanism, presently to be described. This platform B is provided at a point adjacent to one of its ends with a longitudinal slot, as illustrated, which is of a suitable width to receive a pressure-spring C, which plays therein. This flat pressure-spring C has one of its ends bent at an angle and attached to the top of the platform adjacent to one end thereof, and it is then bent downwardly and upwardly to form a loop, the free end of which is attached to the inner end of the plunger-rod by a screw or otherwise. The plunger-rod D, which is attached to the top of the platform and guided by metallic straps E, is preferably of a rectangular contour, and it is adapted, when released from a trigger, to be pressed by the spring C against an electric button, where a bell is rung to inform persons in the building that a letter has been deposited in the box. This plunger-rod D is provided in its top side at a suitable point intermediate of its length with an angular notch F, in which is normally seated the angular end of a trigger-arm G, presently to be described.

Rising from the platform B adjacent to the end thereof, is a standard H, which is vertically slotted at a point adjacent to its middle to receive the pivoted end of the arm G, which engages the plunger-rod. The standard H is also provided at a point adjacent to its top with another vertical slot, in which is journaled a sheave-pulley I, over which passes a pull-cord J, one end of which is suitably fastened to the trigger-arm G and the other to a pivoted door K, swinging in the front wall of the box and adjacent to the top thereof. This swinging door K, which is provided with a suitable pivot-pin, has suitably attached to it at a point adjacent to its top, one end of a tension-spring L, the other end of which is secured to the wall of the box, whereby the door K is normally held closed.

Fulcrumed in a recess at the end of the platform B and in line with the plunger-rod D, is a lever-arm M, the upper end of which is connected by a rod N, which passes through a slot in the standard H to the inner end of the plunger-rod by an eye or other means, and the other or lower end of said lever M is connected by a rope or other suitable means to the discharge or inner door O. This door O, which has its lower end hinged to the bottom of the box, is designed to allow the letters to be taken out by a person within the house.

The electric button P may be of any preferable construction, and may carry any approved form of contact devices desired; but I prefer to employ the form shown, whereby the circuit is completed by the connecting-plate being pressed against the negative and positive elements, and the bell will consequently ring.

It is obvious that the galvanic battery and bell may be placed at any suitable point within either the box or the building where the box is placed.

In operation, when the door K is opened for the deposit of a letter the arm G is disengaged from the plunger D, which being pressed by spring C presses the electric button and the bell rings until the door O is opened to remove the letter, when through the medium of the connecting-rope, the lever-arm M, and connecting-rod N, the plunger is pulled away from the electric button and the trigger-arm drops into the notch thereof and retains the plunger in a position away from the button, and thus stops the ringing.

Having described my invention, what I claim is—

1. In an alarm letter-box, the combination, with the door K, of the plunger-rod D, backed by a spring and provided in its top with a notch, a trigger-arm pivoted in the standard and connected to the door K, adapted to engage said plunger-rod, and a bell-button arranged in line with said plunger, whereby when the door K is opened a bell is rung, substantially as specified.

2. The combination, with a letter-box carrying an electric alarm, of a hinged door to receive letters, a hinged door to remove letters from the box, a spring normally holding the receiving-door closed, a sliding spring-pressed bolt adapted to make and break contact with the alarm, a cord and trigger connecting the receiving-door with the sliding bolt, and a pivoted arm or lever connected at one end with said bolt and at its opposite end with the door through which the contact of the box is removed, substantially as specified.

3. The combination, with an electric alarm and letter-box, of a sliding bolt adapted to make electric connection with said alarm, a door for receiving letters and a door for removing letters, respectively connected with the sliding bolt, whereby when the receiving-door has been opened the alarm may be sounded and when the removing-door has been opened the alarm will be reset, substantially as specified.

4. The combination, with a letter-box having a door for receiving letters and also a door for removing letters, of an electric alarm connected with said box, the bracket B, the notched slide-bolt arranged thereon, the spring backing said bolt, so as to normally hold it in contact with the alarm mechanism, the lever M, pivoted to the bracket and connected at its upper end to the slide-bolt, and its lower end flexibly connected with the removing-door, the trigger, the rope J, connecting the trigger with the receiving-door and passing over a guide I, and the spring L for normally holding the receiving-door in a closed position, substantially as specified.

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

WILLIAM B. DETWILLER.

Witnesses:

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