(No Model.)

J. F. WOLLENSAK.

DOOR ALARM.

No. 421,339. Patented Feb. 11, 1890.

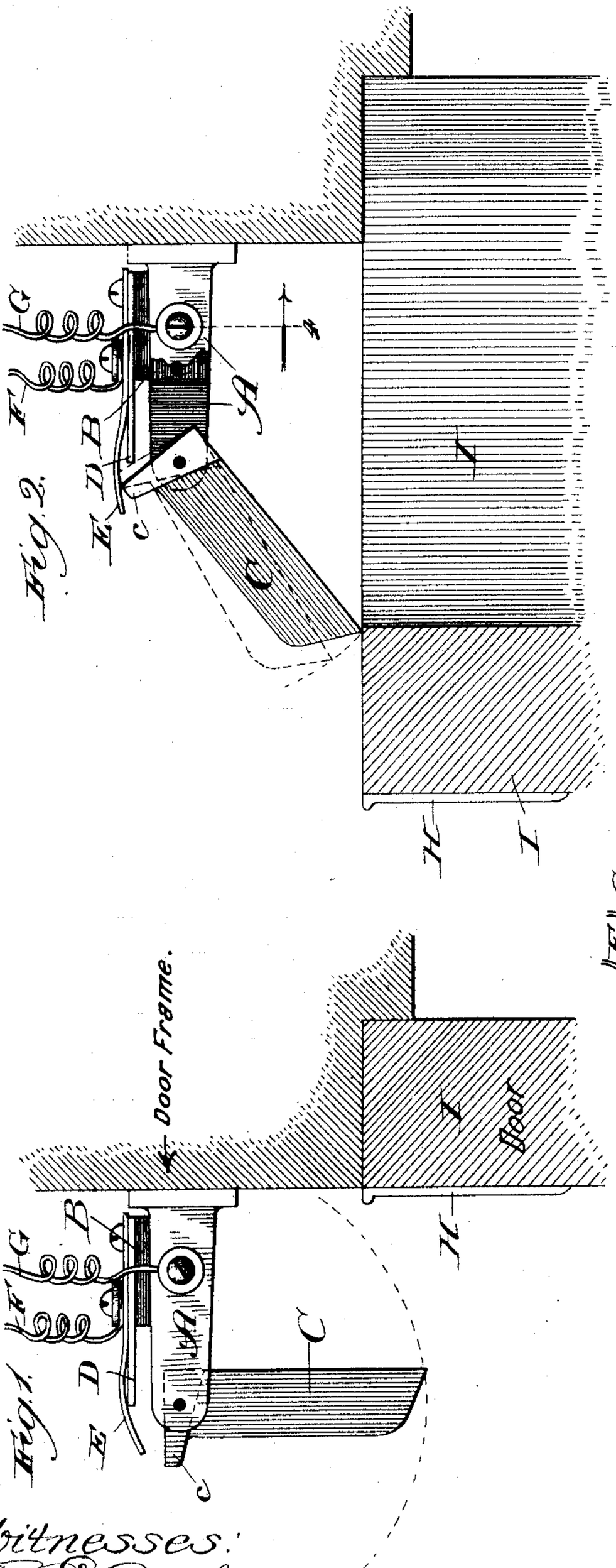

Fig. 1.

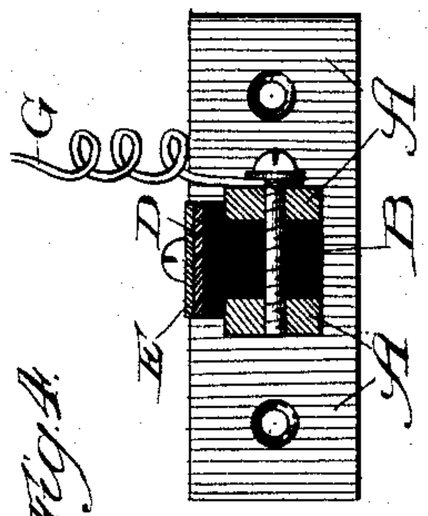

Fig. 4.

Fig. 2.

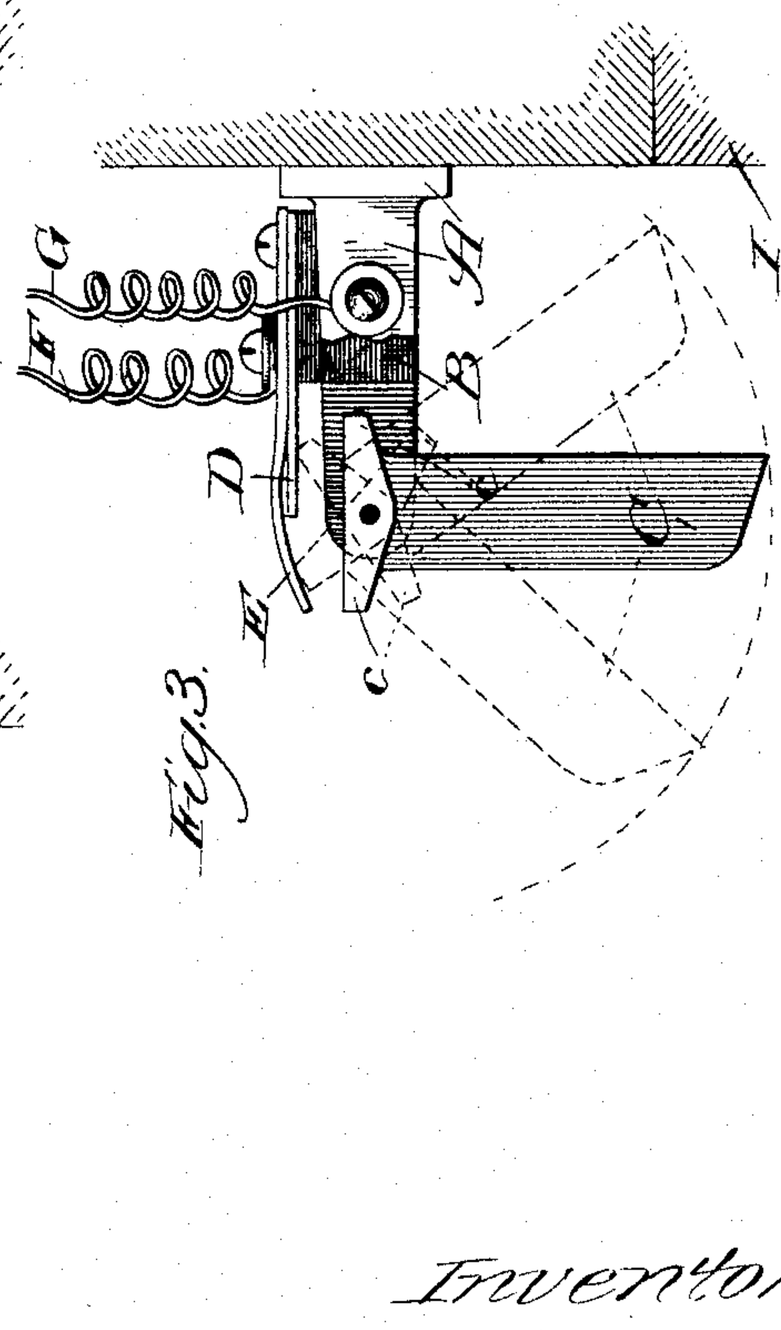

Fig. 3.

Witnesses:
Chas. E. Gaylord,
Clifford N. White.

Inventor.
John F. Wollensak,
By Banning & Banning & Payson,
Att'ys

UNITED STATES PATENT OFFICE.

JOHN F. WOLLENSAK, OF CHICAGO, ILLINOIS.

DOOR-ALARM.

SPECIFICATION forming part of Letters Patent No. 421,339, dated February 11, 1890.

Application filed October 17, 1889. Serial No. 327,322. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. WOLLENSAK, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Automatic Alarm Door-Bells, of which the following is a specification.

The object of my invention is to make a device that will close the electric circuit connecting with an alarm door-bell and cut off the same automatically as the door is opened or closed; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 represents a side elevation of my automatic alarm door-bell device made about normal size with a section of door closed. Fig. 2 represents the same with a section of door partially opened. Fig. 3 represents a modification of the trigger; and Fig. 4 is a front view of the device taken in the line 4 of Fig. 2.

In making my improved automatic alarm door-bell device, I make a plate A, that is intended to be screwed on or otherwise attached to the door-frame above the door. This plate is preferably made with two projecting arms and with a piece of insulating material B arranged between them. At the outer end of the plate is pivotally hung a trigger C. The lower end of this trigger hangs down enough in front of the top of the door to permit it to be struck by the door as it is being opened or closed and swung in the one direction or the other, as shown in Figs. 2 and 3. The upper end of the trigger is provided with a finger *c*, extending out at one or both sides, as may be desired. I have shown it arranged in both ways in the drawings. Above the plate A and resting on the insulating-piece B is arranged a rest-plate D, which is intended to form a rest for a spring E, and also a stop to limit the swinging movement of the trigger and prevent its passing the point where gravity will be insufficient to cause it to drop back into its normal position again. This rest-plate, however, may be dispensed with, if desired, and the insulating-piece extended out far enough to form both the support for the spring and the stop for the trigger, or the piece A may be provided with lugs to stop the movement of the trigger, or any other means may be adopted, if preferred. The spring is screwed or otherwise fastened through the plate to the insulating-piece. One wire F of an electric circuit leads to a binding-post passing through the spring and into the insulating-piece B. The current of electricity passing from the battery is carried by this wire into the spring E, where it is stopped until the circuit is completed. Another wire of the circuit G proceeds from a binding-post to the plate A and forms the continuation of the electric circuit. I also prefer to fasten a small plate H to the door to receive the contact with the trigger as the door is opened. This, however, may be dispensed with and the door itself allowed to bear directly against the trigger in opening or closing. If it be desired to ring the bell both in opening and closing, the trigger should be arranged somewhat as shown in Fig. 3, where the finger *c* is brought into contact with the spring in opening and against the rest-plate in closing the door, although, if preferred, the rest-plate may be shortened or dispensed with and the piece *c* brought directly against the spring in both directions.

I have designated the door as I, and in Fig. 1 I have shown it as closed and in Fig. 2 as being opened. The door is represented in the drawings as about its normal thickness. The finger of the trigger is kept in contact with the spring during the period that the lower end of the trigger is passing across the top of the door. In the ordinary process of opening the door this period will be very short, so that the circuit will not be closed long enough to unnecessarily exhaust the battery, but at the same time it will be sufficiently long to ring the bell and make the notice or alarm intended. As soon as the door has swung past the bottom of the trigger the trigger will fall into the position shown in Fig. 1, and thus automatically break the circuit. This will be true whether it be arranged to operate in one direction only or in both directions.

I desire to call attention to the fact that the trigger is pivoted at one end to one section of the electric circuit—namely, the plate A—and that in its normal position it hangs out of contact with the other section of the circuit—namely, the spring E—but that it is moved

into contact with such section by the door as it is swung on its hinges and permits it, voluntarily and automatically, to fall away from such contact as soon as the door has passed it as it is swung open or closed. In this way I am able to get an automatic breaking of the circuit without the use of a switch or other means requiring an operation on the part of the person.

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

1. The combination of an electric circuit, a door that may be opened and closed, and a free trigger pivoted to one section of the electric circuit and hanging by gravity out of contact with the other section of the circuit in its normal position, which latter section is adapted to yield under pressure, but moved into contact with such latter section as the door is swung on its hinges, and released from such contact as the door passes it, substantially as described.

2. The combination of an electric circuit, a door that may be opened and closed, a spring extending out from the section of the circuit above the door, and a trigger pivoted to the other section of the circuit and hanging out of contact with the spring in its normal position, but moved into contact therewith as the door is swung on its hinges, and released from such contact as the door passes it, substantially as described.

3. The combination of an electric circuit, a door that may be opened and closed, and a trigger provided with a projecting finger or fingers, such trigger being pivoted to one section of the electric circuit, with its finger or fingers out of contact with the other section of the circuit in its normal position, but moved into contact therewith as the door is swung on its hinges, and released from such contact as the door passes it, substantially as described.

JOHN F. WOLLENSAK.

Witnesses:
LATHROP P. FARNHAM,
GEORGE S. PAYSON.