

(No Model.)

H. A. HULL.
ELECTRIC ALARM.

No. 486,338.

Patented Nov. 15, 1892.

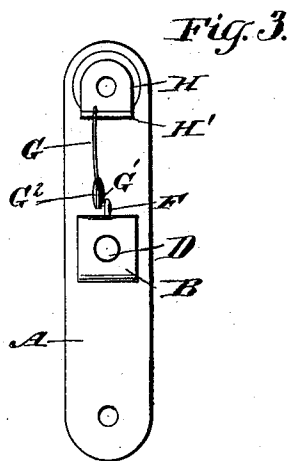
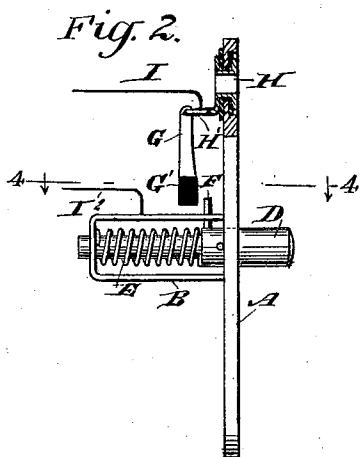
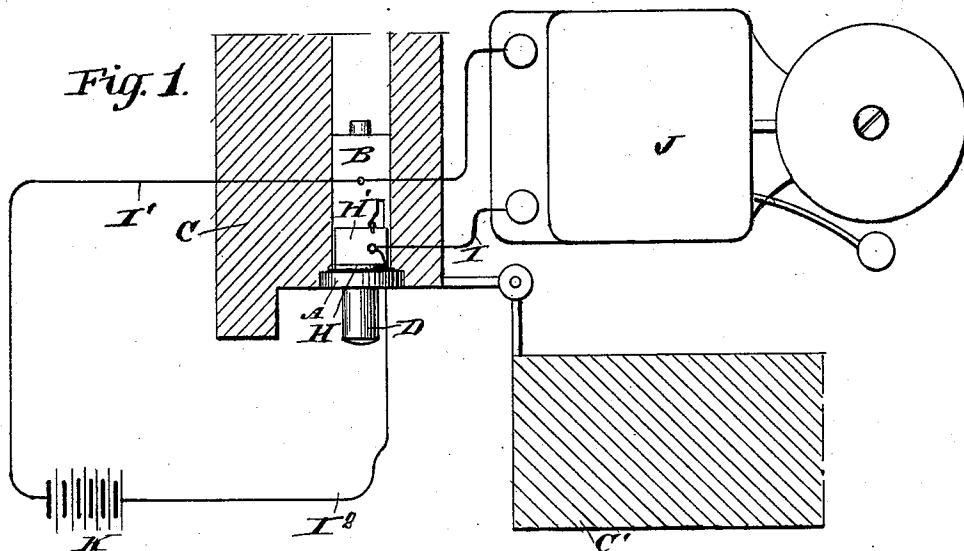
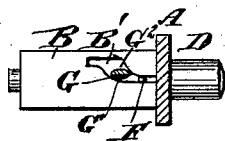


Fig. 4.



WITNESSES:

J. B. Crivell
to Sedgwick

INVENTOR

H. A. Hull
BY *Munn & Co*

ATTORNEYS,

UNITED STATES PATENT OFFICE.

HENRY A. HULL, OF NEW BRUNSWICK, NEW JERSEY.

ELECTRIC ALARM.

SPECIFICATION forming part of Letters Patent No. 486,338, dated November 15, 1892.

Application filed April 20, 1892. Serial No. 429,871. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. HULL, of New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and Improved Electric Alarm, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved electric alarm which is simple and durable in construction and more especially designed for use on doors to give an alarm for a certain length of time only on the opening of the door, thus preventing the continuous sounding of the alarm as long as the door is open and remains open, as is the case in electrical alarms of this class now constructed.

The invention consists of a rod or button having a contact-point adapted to pass successively over the opposite faces of a contact-spring, one of the faces being insulated.

The invention also consists of certain parts and details and combinations of the same, as will be hereinafter described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement as arranged for and applied to a door. Fig. 2 is a side elevation of the improvement with parts in section. Fig. 3 is a rear elevation of the same, and Fig. 4 is a sectional plan view of the improvement on the line 4 4 of Fig. 2.

The improved electric alarm is provided with a plate A, from which projects rearward a frame B, adapted to be let into the door-jamb C, as plainly shown in Fig. 1. In the rear end of the frame B and in the plate A is mounted to slide and to turn a rod or button D, on the rear reduced end of which is coiled a spring E, pressing with one end on the frame B and with its other end on the shoulder formed by the reduced end of the rod D. The spring E serves to hold the outer enlarged end of the button D in an outermost position, so that the button projects from the face of the plate A and is adapted to be engaged by the door C' when the latter is closed. In closing the door the rod or button D is pressed rearward, so as to compress the spring E,

and when the door is opened the compressed spring returns the button or rod D to its normal position. (Shown in Figs. 1 and 2.) From the rod or button D extends a pin F, passing through a slot B', formed in the top plate of the frame B and of about the shape illustrated in Fig. 4. When the button or rod D is pressed rearward, it is turned to one side by the pin F, traveling in the slot B', and on the return movement of the said rod or button it is turned in the opposite direction back to its former position, as shown in Fig. 4.

The upper projecting end of the pin F is adapted to pass over the two faces G' and G² of a contact-spring G, secured on a flange H', projecting from a ring H, insulated from the plate A. The flange H' of the said insulated ring H is connected with a wire I, leading to the alarm J of the usual construction, and the said alarm is connected by a wire I' with the battery K, connected by the wire I² with the frame B or the plate A, so as to complete the circuit, as hereinafter more fully described.

When the button D is in an outermost position, as shown in Figs. 1, 2, and 4, then the pin F is in front of the contact-spring G, and when the door is closed and the button or rod is pressed rearward then the contact-pin F, traveling in the slot B', passes over the insulated face G' of the contact-spring G, the said spring being bent to one side until the pin has passed into the rear end of the slot B'. On the return movement of the button D—that is, when the door C' is opened—the pin F engages the other face G² of the contact-spring G and remains in contact with the latter until it passes over the front edge of the said face G² to finally disengage the contact-spring entirely on the final complete outward movement of the button or rod D. Now it will be seen that when the door C' is closed then the pin F is in the rear end of the slot B'—that is, out of contact with the contact-spring G. Now when the door is opened the spring E moves the rod or button D outward, so that the contact-pin F passes onto the face G² of the contact-spring G, whereby the circuit is completed and the alarm J is sounded. The alarm sounds as long as the pin F is in contact with the face G² of the contact-spring G—that is, until the door C' has been opened far enough to finally

disengage the outer end of the rod or button D. When this latter takes place, the spring E moves the rod or button into an outermost position, so that the pin F is disengaged from
5 the contact-spring, and the alarm then ceases.

In closing the door the rod or button D is pushed rearward and the pin F travels over the insulated face G' of the contact-spring G, so that no alarm is sounded on the closing of
10 the door. At the same time the button or rod D is turned by the pin F traveling into the rearmost end of the slot B', so that when the door is again opened the pin passes over the face G² of the contact-spring G to again
15 sound the alarm for a certain length of time—that is, as long as the pin passes over the said face G².

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an electric alarm, the combination, with a contact-spring having two faces, one of which is insulated, of a rod which is provided with a pin and adapted to slide, whereby
25 when the rod reciprocates the said pin passes in contact with one side and then the other side of said spring, as shown and described, for the purpose specified.

2. An electric alarm provided with a rod
30 mounted to slide and to turn and carrying a contact-pin and a contact-spring provided on its free end with two faces, of which one is in-

35 sulated, and both faces adapted to be alternately engaged by the said contact-pin, as set forth.

3. In an electric alarm, the combination, with a spring-pressed rod or button mounted to turn and to slide and a contact-pin arranged on the said rod or button, of a contact-spring formed at its free end with two
40 faces, of which one is insulated, the faces extending in the path of the said pin in such a manner that when the rod is pressed the pin passes over the insulated face and when the pressure is released the pin passes over the
45 other face, substantially as shown and described.

4. In an electric alarm, the combination, with a plate supporting a frame and connected with a battery, of a spring-pressed rod or button fitted to slide in the said plate and frame,
50 a pin held on the said rod or button, a contact-spring insulated on the said plate and connected with the alarm and the other pole of the battery, the said contact-spring being
55 formed with two faces, of which one is insulated, and both adapted to be alternately engaged by the pin on the pressing and releasing of the said button, substantially as shown and described.

HENRY A. HULL.

Witnesses:

W. EDWIN FLORANCE,
J. B. KIRKPATRICK.