

No. 700,496.

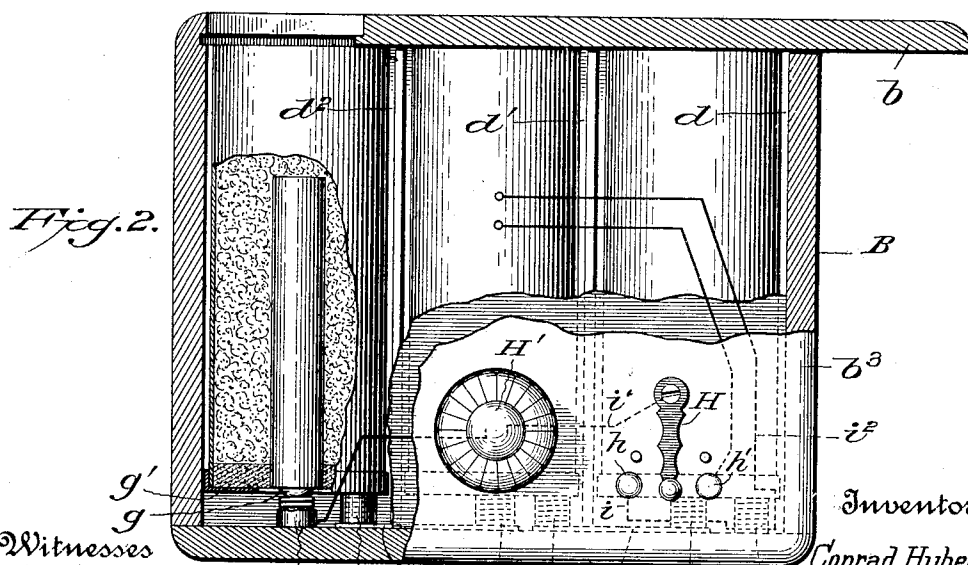
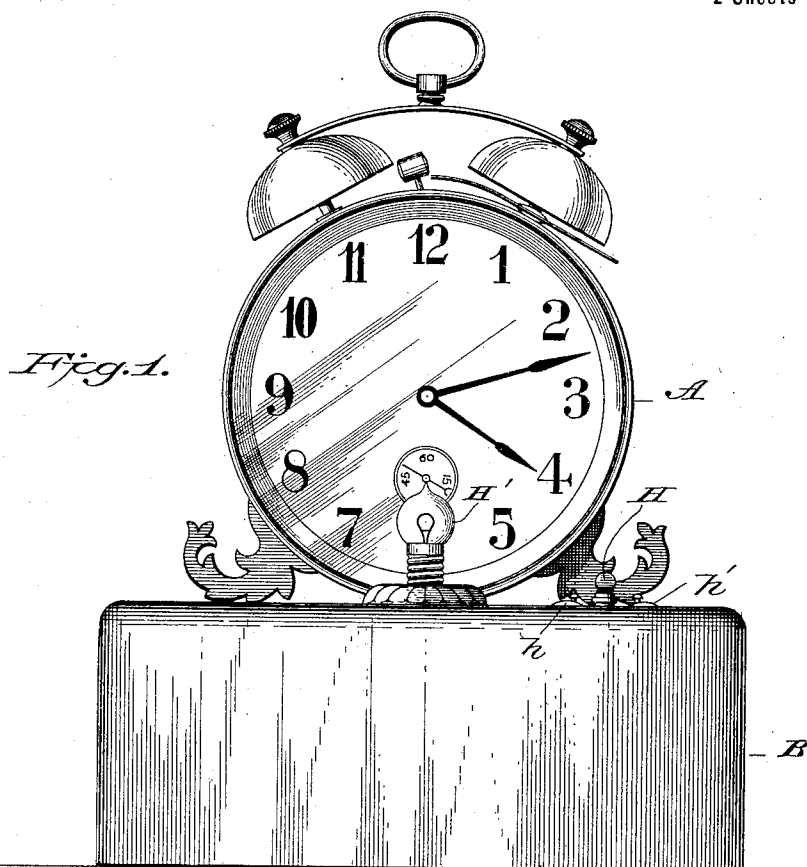
Patented May 20, 1902.

C. HUBERT.
ELECTRIC TIME ALARM.

(Application filed Sept. 8, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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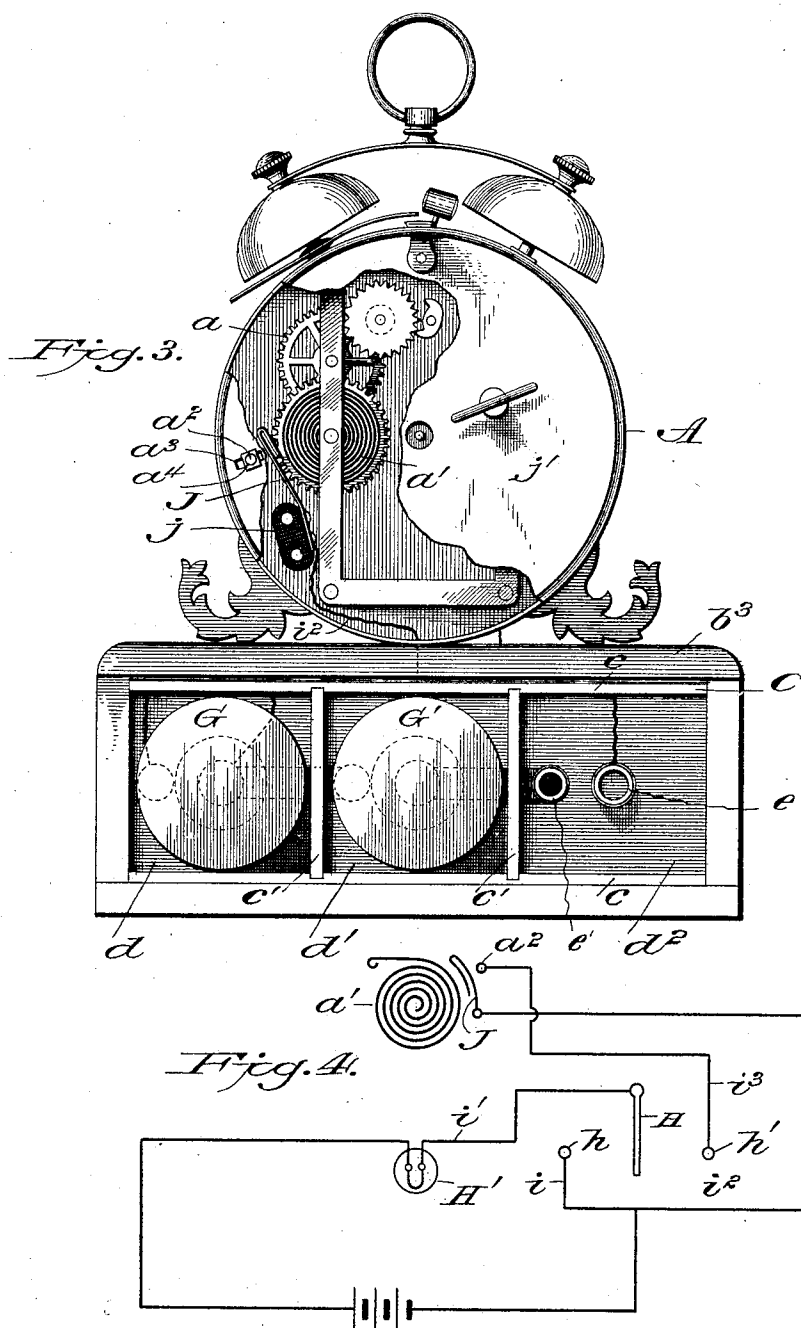
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UNITED STATES PATENT OFFICE.

CONRAD HUBERT, OF NEW YORK, N. Y.

ELECTRIC TIME-ALARM.

SPECIFICATION forming part of Letters Patent No. 700,496, dated May 20, 1902.

Application filed September 8, 1900. Serial No. 29,409. (No model.)

To all whom it may concern:

Be it known that I, CONRAD HUBERT, a citizen of the United States of America, and a resident of New York city, borough of Manhattan, in the county and State of New York, have invented certain new and useful Improvements in Electric Lamps and Circuit-Closing Devices Therefor, of which the following is a specification.

10 The object of this invention is to provide an electric lamp so constructed that it may be lighted either at will or automatically at any designated hour.

15 The several features of my invention and the several combinations thereof that I consider to be novel will be hereinafter particularly referred to in the claims.

Referring to the accompanying drawings, in which corresponding parts are designated 20 by corresponding marks of reference, Figure 1 is a front elevation of a device embodying all the features of my present invention. Fig. 2 is a plan view of the base with a part of the cover of one cell broken away for the purpose 25 of illustration. Fig. 3 is a rear elevation with the slide open and one of the cells removed and the rear of the clock-case partly broken away. Fig. 4 is a diagrammatic representation of the circuit employed by me.

30 Train *a* is mounted on the rear of the top of a hollow base B, preferably of wood or insulating material. A framing C, consisting of top and bottom pieces *c* and intermediate pieces *c'*, forming a series of compartments 35 *d d' d''*, is located in the interior of the base, the rear of which is closed by a sliding door *b*. To the front *b'* of the base in each compartment spring contact-points *e* and *e'* are secured, the contacts *e* being located in the 40 line of the center of the compartments and the contacts *e'* being disposed to one side thereof. The central contact *e* of the first compartment *d* is connected by a conducting-strip *f* with the side contact *e'* of the second 45 compartment *d'*, and the contact *e* of the second compartment *d'* is connected by a similar strip *f'* to the side contact *e'* of the third and last compartment *d''*.

50 The cells G are of a construction particularly described and claimed in another application filed by me April 1, 1901, serially num-

bered 53,929, as a division of my application filed August 9, 1900, serially numbered 26,397, and therefore need no further description herein other than to say that one 55 element of each of such cells terminates in a button *g*, centrally placed at one end of the cell, while the other element of the cell terminates in an annulus *g'*, located concentrically in respect to the button and on the 60 same end of the cell. A cell is inserted in each compartment, with the button *g* and annulus *g'* toward the closed end of the compartment, so that when the cells are pushed 65 home in the several compartments the button *g* and annulus *g'* therein will contact with the points *e* and *e'*, respectively, located in the same compartments. The door *b* when slid closed serves to afford the necessary pressure 70 to make these contacts, and it will be noted that by this construction it is only necessary to insert the cells and to close the door to effect all the connections necessary to couple the cells in series with each other in an open 75 circuit.

A switch-point H is pivoted on top of the base, and two contacts *h* and *h'* are located adjacent thereto. The left-hand contact-points *h* are connected by a conductor *i* with the contact-points *e'* of the first compartment *d*, and 80 the switch-point H is connected by the wire *i'* with the contact-points *e* of the last compartment *d''*, an incandescent electric lamp H' being connected in the wire *i'*, so that by throwing the switch to make contact with point *h* 85 the circuit will be closed between the battery-cells and the lamp, and as the latter is situated in front of the clock-face the dial of the clock will be illuminated. An insulated wire 90 *i''* is also branched from the contact-point *e'* of the first cell and after passing along between the top *b''* of the base and the top *c* of the framing (the wires *i i'* being also located between these two points) passing up through the casing of the clock and is connected to a 95 spring-arm J, mounted on insulating-block *j* on the back *j'* of the clock-casing. The end of the arm J is in proximity to the spring *a'* of the alarm-train and between it and a post *a''*, mounted on and in contact with the back 100 of the clock, and thus in contact with the metallic casing of the clock. The spring-arm is

so located as to be out of contact with both the driving-spring and the post when the spring is fully wound, but is so located as to be pressed against the post when the spring becomes unwound on the release of the alarm-train. The clock-casing is connected by the wire i^3 , extending between the top b^3 of the base and the top c of the framing to the right-hand binding-post h' . It is obvious that a more or less perfect electrical connection exists between the driving-spring and clock-casing and that the contact of the spring with the arm J will serve to complete a circuit of more or less conductivity between the wire i^2 and the wire i^3 ; but as contacts between the several wheels and their bearing in such a circuit will be more or less foul I prefer to provide for the direct circuit by means of the direct post a^2 , as before described. By mounting the post a^2 in a slot a^3 in the back of the lamp it may be adjusted therein by the clamping-nuts a^4 , as may be desired.

From the above-described connection it follows that if the switch be open at the point h' the closure of the circuit between the arm J and post a^2 upon the release of the alarm mechanism will not close the lamp-circuit and that if the spring a' of the alarm-train be wound up the closure of the switch at the point h' will not close the circuit, that being still open at the arm J. If, however, the release mechanism of the alarm-train should be set so that the latter will be released at a designated hour and the switch be closed on point h' , while the circuit will be incomplete until the release of the alarm upon the occurrence of the latter, the unwinding of the driving-spring thereof to sound the alarm will result in a contact between the arm J and post a^2 , closing the circuit from the battery through the point e' , contacting with the cell in the first compartment d , wire i^3 , arm J, post a^2 , wire i^3 , point h' , switch H, wire i' , and lamp to the point e , contacting with the cell in the last compartment d^2 , and lighting the lamp as well as sounding the alarm.

It will be seen that I have provided an arrangement in which two circuits are placed in shunt with each other and in series with the lamp and battery, one of such shunt-circuits being provided with a manually-controlled contact-point, whereby the lamp can be lighted at will, and the other shunt-circuit containing not only a manually-controlled contact, but also a time-controlled contact, whereby the lamp-circuit may be automatically completed through such shunt and whereby such circuit may be broken by hand to prevent the automatic lighting of the lamp and to prevent the exhaustion of the battery that would result from the circuit being left closed after an alarm had sounded and before the alarm-spring had been rewound.

I do not in this application make any claim to the battery-cells and the inclosing case

therefor except in combination with a clock and a time-controlled switch therein, as the construction of the cell here shown is claimed in my application Serial No. 53,929, above referred to, and the combination of the cells and casing is claimed in my application, Serial No. 90,198, filed on January 17, 1902, as a renewal of my said application Serial No. 26,397.

Having thus described my invention, what I claim is—

1. The combination with a clock having an alarm-train, of a lamp and battery, two circuits in series therewith and in shunt with each other, a spring-arm, adjacent to the driving-spring of the alarm-train, a fixed contact-point with which the spring-arm makes contact upon the unwinding of the driving-spring, a manually-controlled contact, the arm, post and manually-controlled contact being located in one of the said shunt-circuits, and a manually-controlled contact located in the other shunt-circuit, substantially as described.

2. The combination with a clock having an alarm-train, of a battery and a lamp, a spring-arm adjacent to the driving-spring of the alarm-train, a fixed contact-point with which the spring makes contact upon the unwinding of the driving-spring, and a manually-controlled contact, the battery, lamp, arm, post and manually-controlled contact being in the same circuit, substantially as described.

3. The combination with a clock, of a hollow base therefor, a series of battery elements contained in the base, an electric lamp located upon the base, and having its one terminal connected to one terminal of the battery, a switch-point located upon the base connected to the opposite terminal of the lamp, two contact-points with which the switch-point makes contact and connected to the opposite terminal of the battery, a spring-arm and a contact-post connected between one of the contact-points and the said last-named terminal of the lamp, and an alarm-train having a driving-spring, released by the clock for bringing the spring-arm and the post into contact, substantially as described.

4. The combination with a clock and a hollow base therefor, of a framing forming a series of compartments, contained in the base, a clock, a lamp, a switch-point and two contact-points all mounted on the base, a spring-actuated alarm-train contained in the clock and released by the time-train thereof, two contact-points located at the same end of each compartment, a battery-cell contained in each compartment and having the elements thereof in contact with the contact-points in that compartment, a spring contact-arm and contact-post therefor adjacent to each other and to the driving-spring of the alarm-train, and conductors passing between the top of the base and the top of the casing and connect-

ing a contact in one of the compartments with
one of the contact-points upon the base and
with the spring-arm, connecting the opposite
point upon the base with the contact-post,
5 and connecting, through the lamp, a contact-
point in one of the compartments with the
switch-point, substantially as described.

Signed by me in New York city, borough of
Manhattan, this 6th day of September, 1900.

CONRAD HUBERT.

Witnesses:

THOMAS EWING, Jr.,
SAMUEL W. BALCH.