

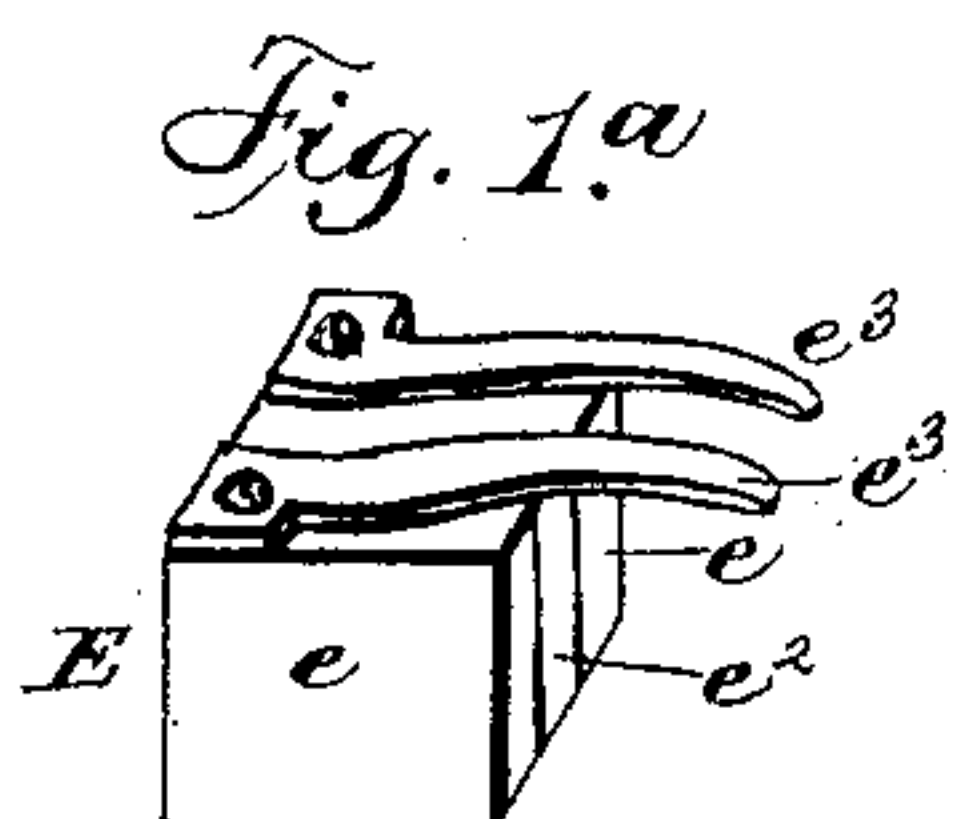
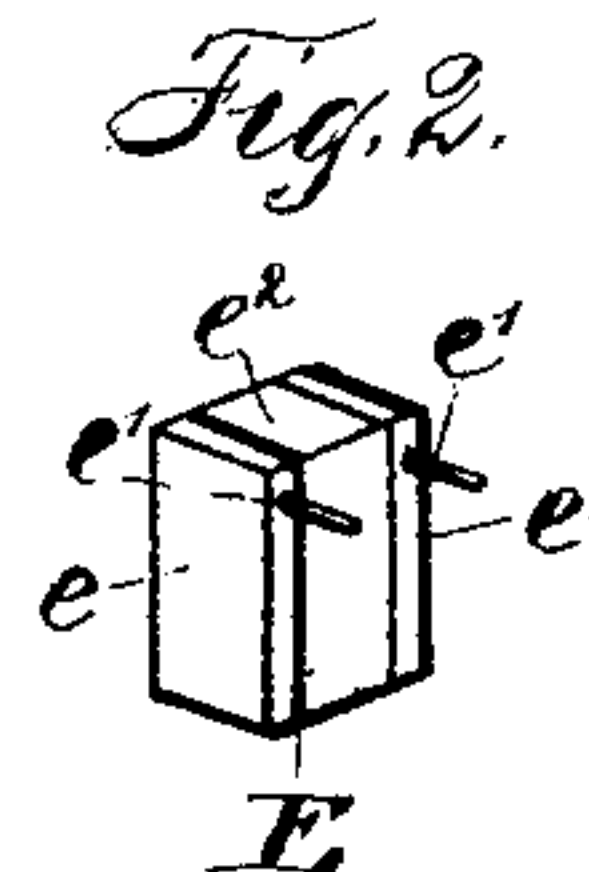
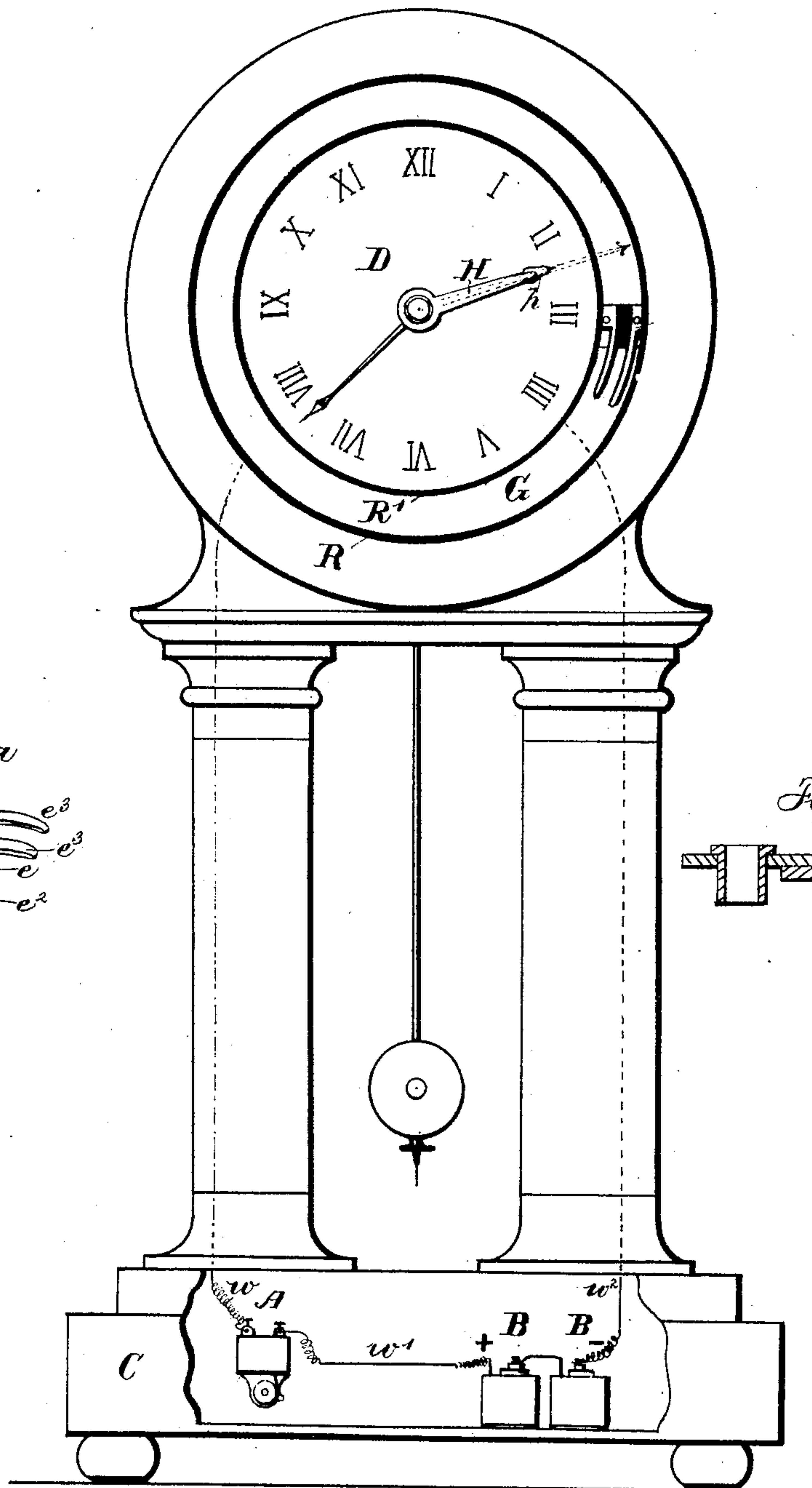
(No Model.)

V. GALLET.
ELECTRIC ALARM CLOCK.

No. 318,612.

Patented May 26, 1885.

Fig. 1.



Witnesses:-
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Inventor:-
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per Henry Orth
his atty.

UNITED STATES PATENT OFFICE.

VICTOR GALLET, OF BREST, FRANCE.

ELECTRIC ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 318,612, dated May 26, 1885.

Application filed September 25, 1884. (No model.) Patented in France February 19, 1884, No. 160,391.

To all whom it may concern:

Be it known that I, VICTOR GALLET, a citizen of the French Republic, residing at Brest, in said French Republic, have invented certain new and useful Improvements in Alarm-Clocks, (for which I have obtained Letters Patent in France, No. 160,391, under date of February 19, 1884,) of which the following is a specification.

10 This application relates to means whereby any ordinary clock with but slight alterations in the construction of the dial and the hour-hand thereof may be converted into an alarm-clock, and the usual mechanism employed in
15 the ordinary alarm-clocks dispensed with and the alarm-giving devices located at any desired distance from the clock.

To these ends the invention consists in the combination and arrangement of parts whereby the desired results are obtained, all substantially as hereinafter more fully described, and as shown in the accompanying drawings, in which—

25 Figure 1 illustrates the essential elements of my invention by a front elevation of a clock to which the same are applied. Fig. 1^a is a perspective view of the circuit-closer. Fig. 2 is a like view of a modified form thereof, and Fig. 3 is a section of the extensible hour-hand
30 on an enlarged scale.

B B indicate a battery composed of a couple of Leclanché or other cells, A, an alarm mechanism of any desired construction and arrangement in electrical connection with one
35 of the poles of the battery, and as this class of alarm mechanisms or electric bells is well known I have deemed it unnecessary either to illustrate or describe the same in detail, as any suitable or desired mechanism of this class
40 may be employed that will sound an alarm upon a gong or bell for a given time when the circuit is closed. This battery and alarm mechanism I have shown as arranged in the base C of a clock case or support, though it is obvious that they may be located at any other desired point on or distant from the clock-support or clock-case.

Upon the dial D of the clock, which is made of a non-conductor of electricity, I arrange
50 two concentric metallic rings, R R', that project from said dial a suitable distance and form between them an annular channel or

groove, G. One of said rings, R, is connected through the alarm mechanism by wires *w* and *w'* with, say, the positive pole, and the ring R' by wire *w*² with the negative pole of the
55 battery B.

The hour-hand H of the clock is preferably made of an isolating material, and is in that case provided with an adjustable metallic extension, *h*, arranged to slide on the hand H toward and over and from the groove G.

If desired, the hand H may be made of metal and isolated from its arbor, and the extension *h* may be dispensed with by making
65 the hand H of such a length as to extend over and some distance above the groove; or an extensible hand of metal isolated from its arbor may be employed.

E indicates a circuit-closing device composed of two metallic plates, *e*, each provided with a contact-pin, *e'*, projecting therefrom, said plates being isolated from each other by an intervening plate, *d*², of rubber or other
70 suitable isolating substance. The form of this contact-piece is segmental, so as to adapt it to slide in the groove G, in which it is held by frictional contact with the plates R and R'.

It is obvious that when the contact-piece E is adjusted within the groove G, so that its
80 pins *e'* will stand opposite an hour-indication on the dial or opposite an indication marking a fraction of an hour, the moment the metallic hand H or its extension *h* passes over the pins in frictional contact therewith the circuit will
85 be closed and the alarm mechanism set in operation.

The simple removal of the contact-piece E or the sliding of the extension *h* of the hour-hand H within the inner ring will leave the
90 clock in its normal condition of operation and cut the alarm mechanism out of operation.

Any suitable means may be employed to make the hour-hand extensible. For instance, as shown in Fig. 3, the extension *h* of the hand
95 H carries a band or loop, *h'*, that embraces the hand H and slides thereon, while said extension is arranged to slide in a like band or loop, *h*², secured to the hand H.

These devices may be variously modified
100 without departing from the nature of my invention. For instance, instead of rings R R' metallic strips may be arranged to form a duodecagon, the groove of which has therefore

twelve subdivisions which may be arranged to extend from hour to hour, and a square or polygonal contact-piece, E, Fig. 2, may then be employed and set into any one of the subdivisions in which it may be adjusted to the hour or half-hour, as the case may be. When the contact-piece E has contact-pins *e'*, it is necessary to adjust the hour hand with great nicety, so that said hand will pass in frictional contact over the pins, as it is evident that if the hand is not set to the proper elevation the pins *e'* may stop its further movement, or said hands may pass over the pins without contacting therewith. To avoid this, instead of the pins, flat contact-springs may be employed having sufficient pliability to enable the hand H or its extension *h* to overcome their resistance. The said springs may also be secured horizontally to the metallic plates *e*, and made to curve upwardly into the path of the hand, which latter may then slide in frictional contact over said springs.

The alarm mechanism may be arranged on top of the clock-case, and the battery at any other convenient point distant from the clock; or both the battery and alarm mechanism may be located at a point or points distant from the clock.

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

1. In a time-piece, the combination, substantially as described, with one of the hands

thereof constructed to operate as a time-index and circuit-closer, or a time-index only, of an electric circuit the isolated terminals of which are arranged in and adjustable along the path of the said hand, and an alarm mechanism interposed in said electric circuit, for the purpose specified.

2. In a time-piece, an electric circuit having its terminals in the path of one of the hands of said time-piece and an alarm mechanism interposed in said electric circuit, in combination with one of the hands of the time-piece, constructed to be extended or lengthened and act as a circuit-closer, as described, for the purpose specified.

3. In a time-piece, the combination of the dial and two metallic rings arranged thereon, an electric circuit connected with the rings, and an alarm mechanism interposed in said circuit with contacts constituting the terminals of the circuit arranged to slide between the rings, and one of the hands of the time-piece constructed to be extended over the contacts or retracted therefrom, as described, for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of 60 May, 1884.

VICTOR CALLET.

Witnesses:

LOUIS TOUSSAINT,
FREDERIC BIATRE.