

(No Model.)

H. W. KNAPP & L. E. GERRETY.
ELECTRIC ALARM CLOCK.

No. 537,829.

Patented Apr. 23, 1895.

Fig. 1.

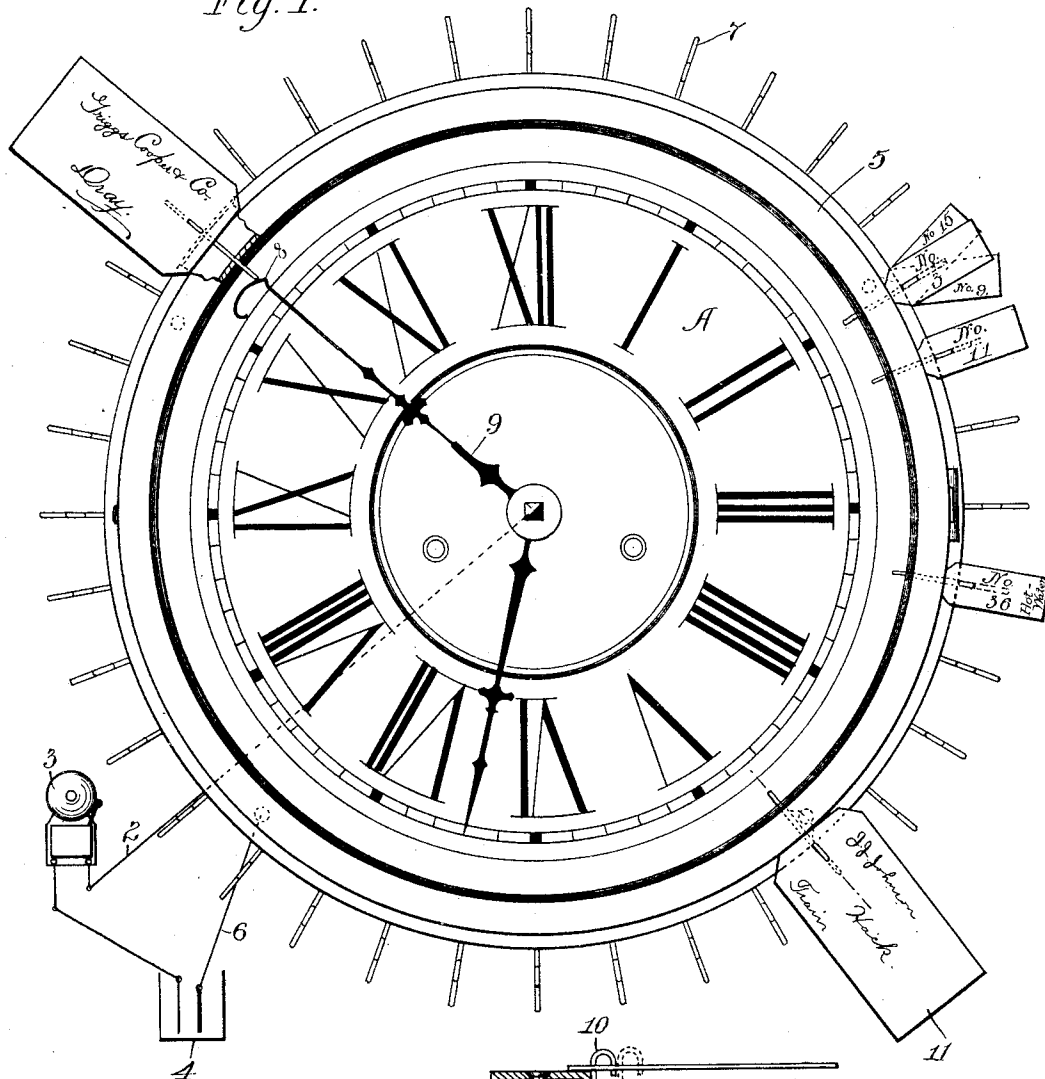
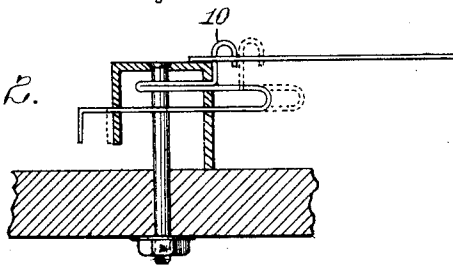


Fig. 2.



Witnesses:

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A. S. Johnson

Inventors:-

Henry W Knapp and
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per: J. D. Morrow
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UNITED STATES PATENT OFFICE.

HENRY W. KNAPP AND LAWRENCE E. GERRETY, OF ST. PAUL, MINNESOTA.

ELECTRIC ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 537,829, dated April 23, 1895.

Application filed October 25, 1894. Serial No. 526,993. (No model.)

To all whom it may concern:

Be it known that we, HENRY W. KNAPP and LAWRENCE E. GERRETY, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Electrical Alarm Attachments for Timepieces, of which the following is a specification.

Our invention relates to improvements in electric alarm attachments for time pieces, its object being to provide a simple means for automatically giving a signal at a predetermined future hour, which shall be simple in construction and easily manipulated, and which shall also indicate to the eye the character of the call or alarm.

To this end our invention consists in surrounding the dial of the time piece with a metallic ring, in which are arranged any desired number of contact fingers adapted to be thrust inward into position to be touched by the hour hand of the time piece, the operating parts of the time piece and the ring in which the fingers are arranged being connected respectively with the opposite poles of an open circuit battery. We also provide means for attaching tags or other marking devices, to the contact fingers which indicate the character of the call or alarm.

Our invention further consists in the construction and combination hereinafter particularly described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a front elevation of a clock shown fitted with our improved attachment; and Fig. 2 is a detail of one of the contact fingers and attached tag.

In the drawings, A represents the clock or other time piece of ordinary construction, the works of which are connected by means of the wire 2 through the call bell 3 to one pole of the battery 4. Surrounding the dial of the clock, but insulated therefrom is a metallic ring 5 connected to the other pole of the battery by the wire 6. Arranged in the ring 5 is a series of contact fingers 7 adapted to be thrust inward toward the clock face into position to be struck by the contact wire 8 arranged upon the hour hand 9. We prefer to provide these fingers with hooks 10, to which tags or other marking devices 11 may be attached when the fingers are set so that when

an alarm is sounded the assistant by glancing at the time piece can instantly determine the character of the call.

It is evident that the alarm bell or signaling device may be placed at any point desired for the giving of the signal, and that by means of proper switch mechanism the apparatus may be connected to any one of a plurality of alarm bells so as to serve for different persons in the same establishment or for day and night service. This multiplying of signaling devices not being essential to the invention, only one is shown.

We claim—

1. The combination with the clock having its operating parts connected to one pole of an open circuit battery, of the series of contacts surrounding said clock and slidable toward and from the same and connected to the other pole of the battery, and the hook or bend upon each of said contacts for holding a marking tag.

2. In combination with an electric alarm clock in circuit with one pole of an electric battery, of the annular ring surrounding said clock in circuit with the other pole of said battery, and the series of contacts carried by and adjustable transverse of said ring and having hooks for holding designating tags.

3. In an electric alarm clock of the class described, the combination with the surrounding ring insulated from the time piece, of the contact making fingers passing through said ring and having three or more points of bearing therein, and the hook upon said fingers for holding tags or marking devices, substantially as described.

4. In an electric alarm clock of the class described, the combination of the surrounding ring or annulus of substantially inverted U shape in cross section, and the contact-making fingers sliding in apertures in said ring, substantially as shown and described.

5. In an electric alarm clock of the class described, the combination with the surrounding ring of substantially inverted U shape in cross section, of the contact-making fingers passing through said ring, and means for attaching a tag or marking device to each of said fingers, substantially as described.

6. In an electric alarm clock of the class de-

scribed, the insulated conducting ring surrounding the time piece, and the contact-making fingers passing through guides in the downwardly projecting sides of said ring and
5 adjustably therein, substantially as described.

7. In an electric alarm clock of the class described, the time piece having one of its pointers connected to one pole of an open circuit battery, the ring of substantially inverted U
10 shape in cross section surrounding but insulated from said time piece, and connected to the other pole of the battery, the contact fingers sliding through said ring and adapted to be set to be struck by said pointer in its rotation, and the means for attaching a tag or
15 marking device to each of said fingers.

8. The combination with the clock having one of its hands connected to one pole of an open circuit battery, of the series of sliding

contacts connected to the other pole of the battery, means for attaching a card or tag to each of said contacts, and the tongue upon said hand adapted to engage one of said contacts when adjusted inward and to hold the circuit closed a length of time proportionate
25 to the length of the tongue.

In testimony whereof we affix our signatures in presence of witnesses.

HENRY W. KNAPP.

LAWRENCE E. GERRETY.

Witnesses as to signature of Henry W. Knapp:

W. M. KNAPP.

GEO. A. BASSETT.

Witnesses as to signature of Lawrence E. Gerrety:

M. L. THANWALD,

H. S. JOHNSON.