(No Model.)

C. LESTER.

ELECTRIC ALARM CLOCK.

No. 458,178. Patented Aug. 25, 1891.

Fig. 3.

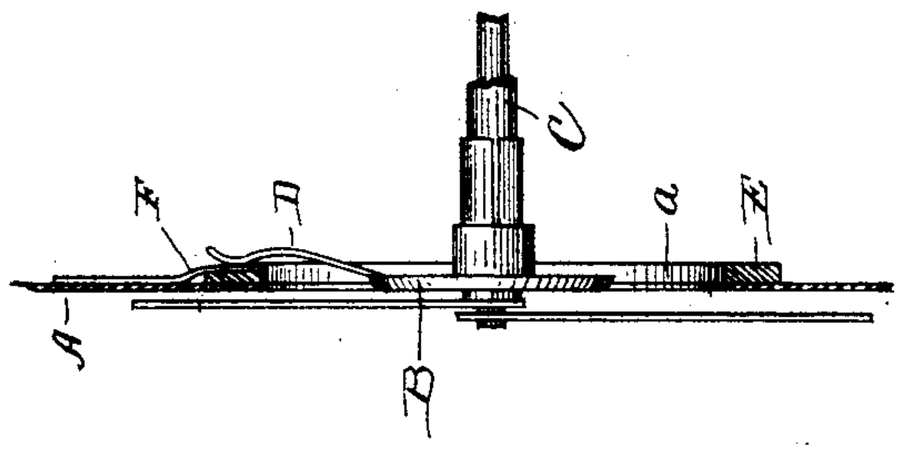

Fig. 2.

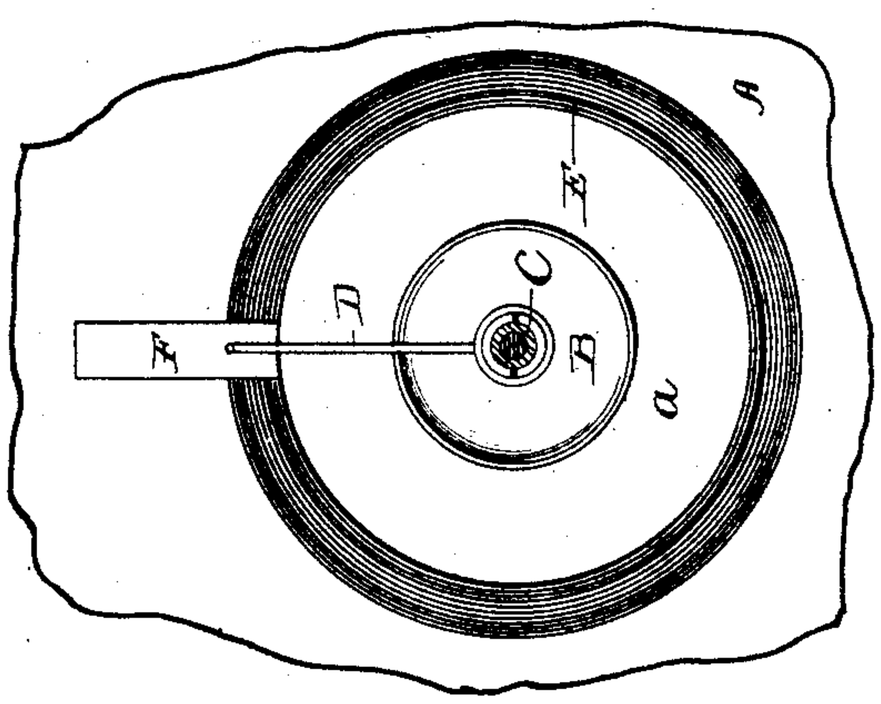

Fig. 1

Witnesses:
Lew. C. Curtis
A. W. Munday.

Inventor:
Charles Lester
By Munday Evarts & Adcock
His Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES LESTER, OF CHICAGO, ILLINOIS, ASSIGNOR TO GEORGE A. HARMOUNT, OF SAME PLACE.

ELECTRIC ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 458,178, dated August 25, 1891.

Application filed April 10, 1891. Serial No. 388,370. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LESTER, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Electric Alarm-Clocks, of which the following is a specification.

This invention relates to certain improvements in the construction of electric alarm-clocks; and the invention consists in providing the hour-hand shaft or sleeve with an adjustable disk or face-plate marked with a dial of the hours and provided with a spring contact-maker, projection, or finger in conjunction with a contact-strip lying in a portion of its path, an electric circuit including an alarm bell or bells and having one terminal at the contact-strip and the other at the contact-finger, above mentioned, and an annular strip of insulating material applied to the inner face of the clock-dial concentric with the hand-shaft and affording a path for the contact-finger to ride upon at all times, except when in contact with the strip.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a face view of the improved alarm-clock, together with a diagram of the circuit. Fig. 2 is a rear view of a portion of a clock-dial and the alarm contact apparatus, this figure and the following one being upon a somewhat larger scale than Fig. 1. Fig. 3 is a vertical section of the parts shown in Fig. 2, the clock-hands being added.

In said drawings, A is the ordinary clock-dial cut away at the center at the opening *a* to expose and to allow room for the alarm-disk or face-plate B, which alarm-disk is mounted frictionally upon the hour-hand shaft or sleeve C in the manner that some mechanical alarm-clocks have been made, and this alarm-disk is provided with dial-marks representing the various hours from 1 to 12, as seen at Fig. 1.

Attached to move with the alarm-dial B is a piece of spring-wire or contact-finger D. The outer end of this finger rests upon the insulating-ring E, secured to the inside face of the clock-dial, and as the hour-hand revolves this spring-finger rides around upon the insulating-ring E at the same speed as the hour-hand. At some point in the path of the finger D is located the terminal contact-strip F, which I prefer to make of considerable width, as indicated in the drawings, so that the contact-finger will be several minutes or even a half an hour in passing it.

G is a battery. H H are circuit-wires; J J, binding-posts; K, a switch for opening and closing the circuit; L, an electric gong of ordinary construction located in the circuit. There may be of course several of such gongs at different points in the circuit, if desired, to sound the alarm simultaneously at different points.

To set the alarm, the circuit is closed at the switch K and the alarm-dial B turned until the figure representing the hour at which it is desired the alarm shall sound is under the hour-hand of the clock, and the apparatus is then ready to sound the alarm when that hour is reached in the natural operation of the clock, for it will be seen that the finger D is attached to the alarm-disk opposite the figure 12 on the alarm-dial, and the contact-strip F is placed in line with the figure 12 on the clock-dial. Consequently when the hour-hand has reached the predetermined hour the finger D will have reached simultaneously the contact-strip F, and contact being thus made through the circuit, the electric gong will commence and continue to ring so long as the contact continues or until the switch K is thrown open. The object of a long-continued ringing, which may be stopped by throwing open the switch, is to induce the person awakened to get up and shut off the noise.

The mechanism and appliances constituting this improved alarm attachment for clocks are exceedingly simple in construction, cheap, and easily applied to almost any clock of ordinary construction.

I claim—

The electric alarm attachment for clocks, consisting of the alarm-dial adapted to move with the hour-hand and to be adjustably

turned or set in relation to said hour-hand, in combination with a spring contact-finger attached to move with and be adjusted with the alarm-dial, a contact-piece in the path of said finger placed opposite the figure 12 on the clock-dial, the insulating-ring upon which the finger rides, and the electric circuit including an electric alarm device, substantially as specified.

CHARLES LESTER.

Witnesses:
H. M. MUNDAY,
EMMA HACK.