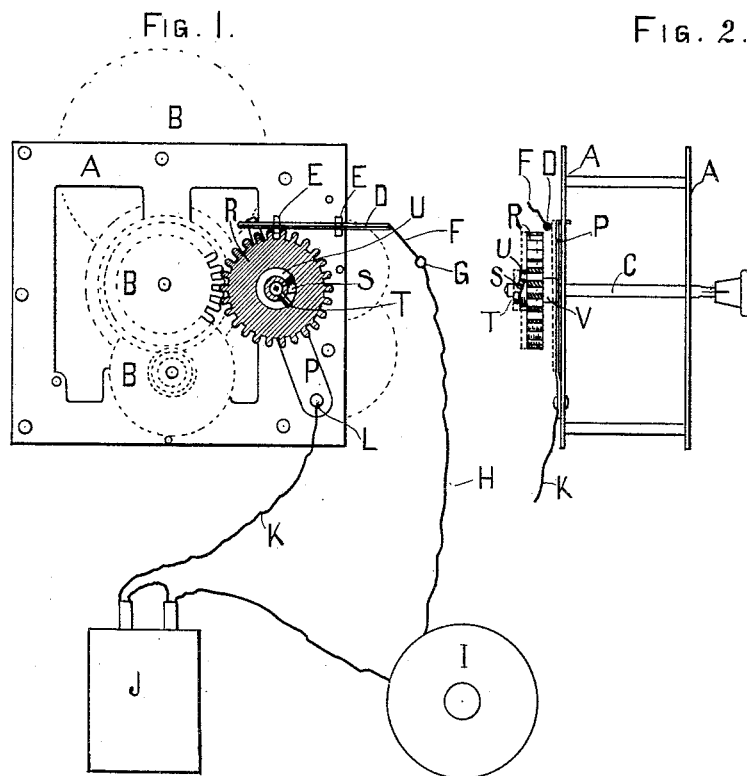


(No Model.)

E. J. COLBY.
ELECTRIC ALARM CLOCK.

No. 383,439.

Patented May 29, 1888.



Witnesses :-
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UNITED STATES PATENT OFFICE.

EDWARD J. COLBY, OF CHICAGO, ILLINOIS.

ELECTRIC ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 383,439, dated May 29, 1888.

Application filed February 1, 1888. Serial No. 262,690. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. COLBY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Electric Alarm-Clock, of which the following is a specification.

My invention relates to alarm-clocks, and has for its object to provide means whereby an ordinary alarm-clock may be used to start a
10 secondary or electrical alarm by closing the connection thereof. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 is a detail view of a portion of the
15 alarm mechanism of an ordinary clock, combined with a diagrammatic view of electrical circuit, bell, and battery. Fig. 2 is a detail sectional view of a portion of the alarm mechanism.

20 Like parts are indicated by the same letter in both figures.

A is a frame, and B B an ordinary mechanism of a clock.

C is an alarm-mechanism shaft. R is a pinion thereon, having a depression, S. T is a pin
25 on the outer end of said shaft and beyond the pinion R and adapted to engage the face-plate U on said pinion, and also to fall into the receptacle or recess S when reached.

30 P is a spring secured to the frame A and encompassing the shaft C and bearing at one end against the washer V, which in turn bears against the pinion R.

35 D is a terminal piece supported by the insulating-blocks E E and connected with the circuit-wire F.

G is a switch.

H is a further portion of the circuit-wire.

I is a bell in the circuit.

40 J is a battery, and K is the remaining portion of the circuit, which is connected with the spring P at the point L.

The use and operation of my invention are as follows: In my device there is geared to the
45 ordinary clock mechanism a pinion provided upon its surface with a depression, and its shaft has a pin which keeps the pinion in a certain position on the shaft until said pin reaches the depression, when the pinion is free to move

upon its shaft and thus free the alarm mechanism. A spring is provided which forces the
50 pinion out or along its shaft when the pin has reached this depression, this spring in the meantime being depressed into a certain normal position. It is clear that the motion of
55 this spring may be used to close the electric circuit and thus spring into operation an electric alarm, and this is the device which I have described, and seek to claim. I secure one end
60 of my circuit, in which an ordinary battery and bell are located, to the mechanism of the clock or to the spring-piece, while the other end of the circuit I attach to an insulated terminal piece, which is placed in the path of the
65 spring, so that when the spring is freed it rises and engages the insulated terminal, and thus closes the circuit. This puts the bell in operation, and it will continue to operate until the circuit is broken, which may be by means of a switch or other proper or convenient device.
70

Having thus described my invention, what I claim, and desire to secure by means of Letters Patent, is as follows:

1. The combination of an electric circuit
75 with a battery, a bell, a clock, a shaft, a sliding pinion thereon intermeshing with a clock-gear, a spring which tends to force such pinion outwardly and which forms one terminal of the circuit, an insulated contact-piece which
80 forms the other terminal located in the path of the spring, a pin on the shaft, and a recess on the pinion, so that at stated intervals the pinion is released and the spring permitted to move and engage the contact-piece and close
85 the circuit.

2. In an alarm-clock, the combination of a clock mechanism, a gear meshing with such mechanism, a spring flexed by said pinion, a contact in the path of such spring, said spring
90 and contact forming terminals of an electric circuit, and a pin on the pinion-shaft, and a recess on the pinion, so that at stated intervals the pinion can move on its shaft.

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Witnesses:

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