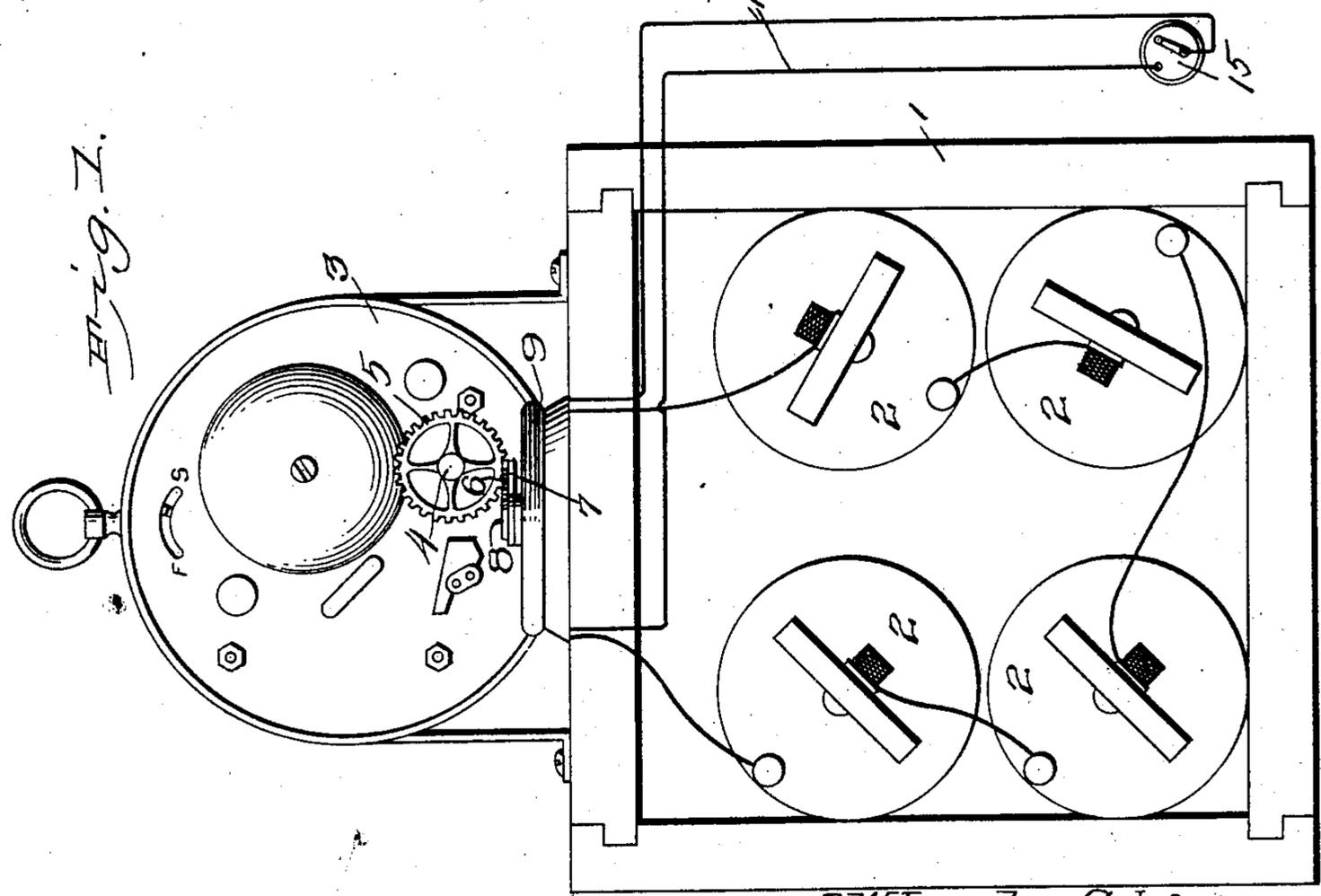
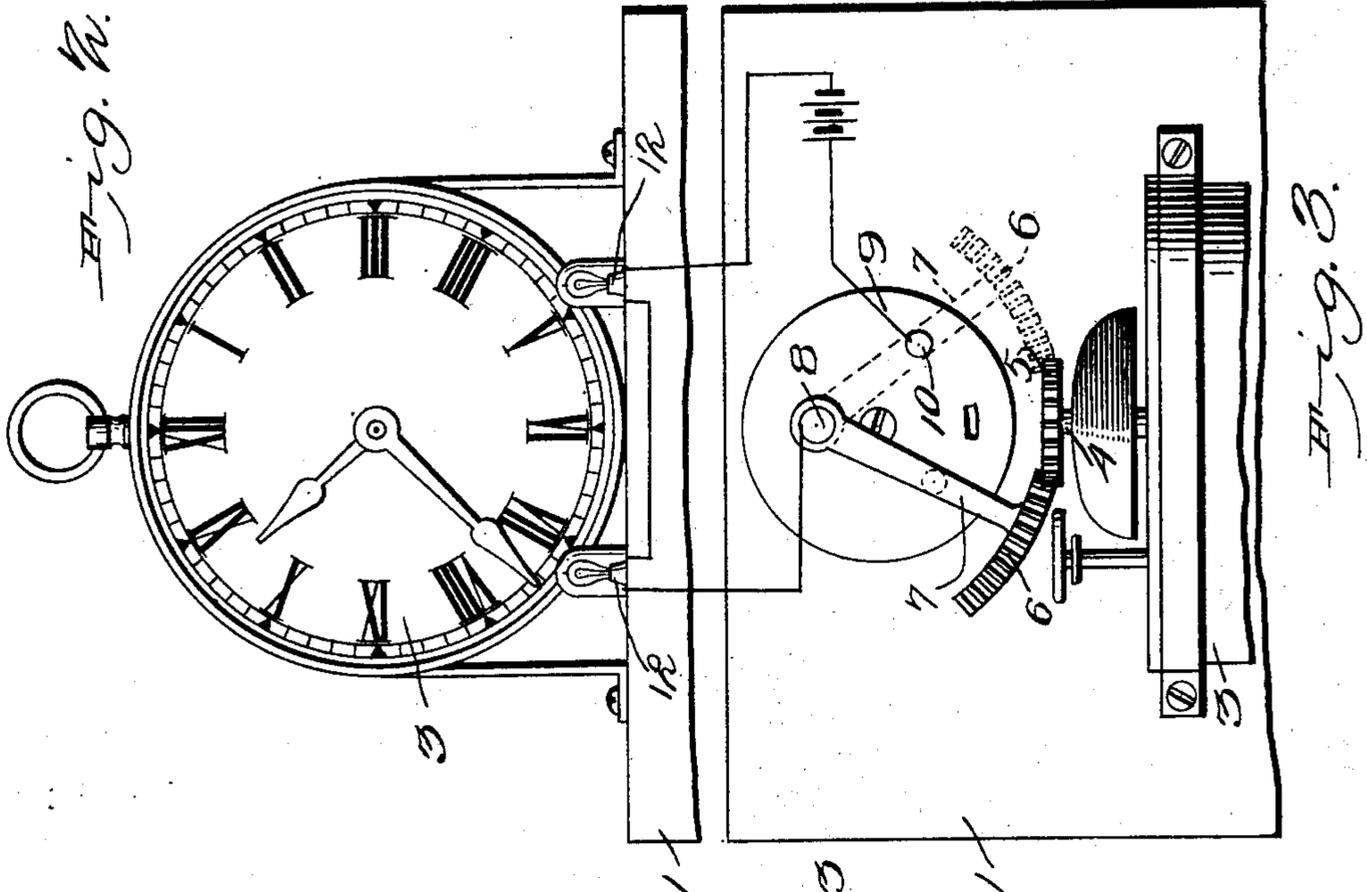


No. 721,205.

PATENTED FEB. 24, 1903.

A. W. LAUTER, SR.
ELECTRIC TIME SWITCH.
APPLICATION FILED MAY 26, 1902.

NO MODEL.



Witnesses
E. Stewart
Jno. E. Carter

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UNITED STATES PATENT OFFICE.

ALBERT W. LAUTER, SR., OF CHATTANOOGA, TENNESSEE.

ELECTRIC TIME-SWITCH.

SPECIFICATION forming part of Letters Patent No. 721,205, dated February 24, 1903.

Application filed May 26, 1902. Serial No. 109,027. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. LAUTER, Sr., a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Electric Time-Switch, of which the following is a specification.

My invention relates to certain improvements in devices for opening and closing electric circuits at a predetermined time, and has for its principal object to provide a device for closing an electric-lighting circuit by means of an ordinary clock. The clock may be of any desired character; but the device is especially applicable to alarm-clocks and is so arranged that when the alarm is sounded a circuit will be established through one or more lamps to illuminate the face of the clock or the room in which said clock is situated.

A still further object of the invention is to so arrange the device as to permit the closing of the circuit to illuminate the clock-dial by means of a push-button or switch located at a convenient point, as at the side of a bed, so that the time may be readily ascertained during the night.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is an elevation, looking from the rear, of an ordinary form of alarm provided with a time-actuated circuit-closing device in accordance with my invention. Fig. 2 is a face view of the clock, illustrating the arrangement of the pea-lamps which may be employed to illuminate the dial. Fig. 3 is a plan view of the device.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In carrying out the invention I may employ the ordinary electric-lighting circuit used in the house or other building where the clock is situated; but in case such a circuit is not available I prefer to employ a small box or casing 1 for containing a suitable number of dry batteries 2, the casing acting as a support for a clock 3 and the circuit-closing device, so that the apparatus as a whole may be

readily carried from place to place without the necessity of changing the position of the current-conducting wires each time the clock is moved. The clock herein shown is of the ordinary alarm type and provided with the usual setting mechanism for adjusting the time at which the alarm is released and the bell-clapper actuated, and in addition to the alarm mechanism there is provided an extra shaft 4, connected to the alarm mechanism and movable only when the latter is set into operation. This shaft extends out for some distance beyond the rear wall of the clock and is provided with a gear-wheel 5, which may intermesh with a segment 6, carried by a switch-arm 7. The arm 7 is formed of metal and is pivoted to a stud 8, mounted on a suitable base 9, formed of wood or other non-conducting material, the stud being connected to one of the terminal wires of the battery-circuit and the arm forming a conductor which may be moved into contact with a contact-block 10, connected to the opposite terminal of the circuit.

12 designates a pair of electric lamps, which may be of a size sufficient to illuminate only the face of the clock or may be of the usual size and employed to illuminate the room if sufficient battery power is available. As the device is intended principally for illuminating only the dial of the clock in such manner that the time may be ascertained, the pea-lamps are sufficient for the purpose and it is only necessary to employ a small number of dry batteries as the source of electrical energy.

From the stud 8 and contact-block 9 extend two current-conducting wires 13, leading to a switch or push-button 15, which may be located at the bedside or at other convenient points in the room, the closing of the circuit by means of this switch causing the current to flow through the lamps and illuminating the face of the dial. In this manner the time may be readily ascertained during the night, the device for this purpose being particularly valuable in order to determine the correct time for taking medicines or for similar purposes.

When the circuit is to be closed by means of the alarm mechanism, the segment 6 is moved into engagement with the gear-wheel 5, and when the alarm mechanism is actu-

ated the gear-wheel is turned and the segment and switch-arm are traveled in the direction of the contact-block 10, the circuit being closed through the switch-arm 7 and the lighting-circuit energized by the battery. As the arm 7 moves slowly over the contact-block, the circuit will be held closed and the clock-dial illuminated for any desired length of time, the switch-arm being stopped on the contact 10 to keep the circuit closed until the switch is moved by hand to cut off the current.

While the construction herein described, and illustrated in the accompanying drawings, is the preferred form of the device, it is obvious that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim is—

1. The combination with a clock having an alarm mechanism, of an auxiliary gear-wheel disposed outside the clock-casing, a switch having a gear-segment intermeshing with said gear-wheel and movable thereby to closed position, said switch being movable by hand to break the circuit and to readjust the switch, a lighting-circuit connected to the switch and including a source of electrical energy, and a lamp included in the lighting-circuit, the

segment and gear-wheel being so related that the revoluble movement of the gear-wheel will force the segment out of mesh with said wheel and thus maintain the switch in closed position, substantially as specified.

2. In a device of the class specified, the combination of the box or casing, a battery disposed within said box, an alarm-clock secured to the top of the box, a switchboard carried by the box at a point adjacent to the clock, an auxiliary gear-wheel disposed outside the clock-casing and having an operable connection with the alarm mechanism of the clock, a gear-segment carried by the switch and intermeshing with said gear-wheel, a lamp arranged in front of the clock-dial, current-conducting wires connecting the battery, a lamp and a switch the latter being moved to and retained in closed position by said auxiliary gear-wheel when the alarm mechanism of the clock is set into operation, and a secondary circuit including a distant-circuit-closing device for closing the circuit through the lamp independent of the alarm-actuating switch.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT W. LAUTER, SR.

Witnesses:

LEE BRIGGS,
L. B. JONES.