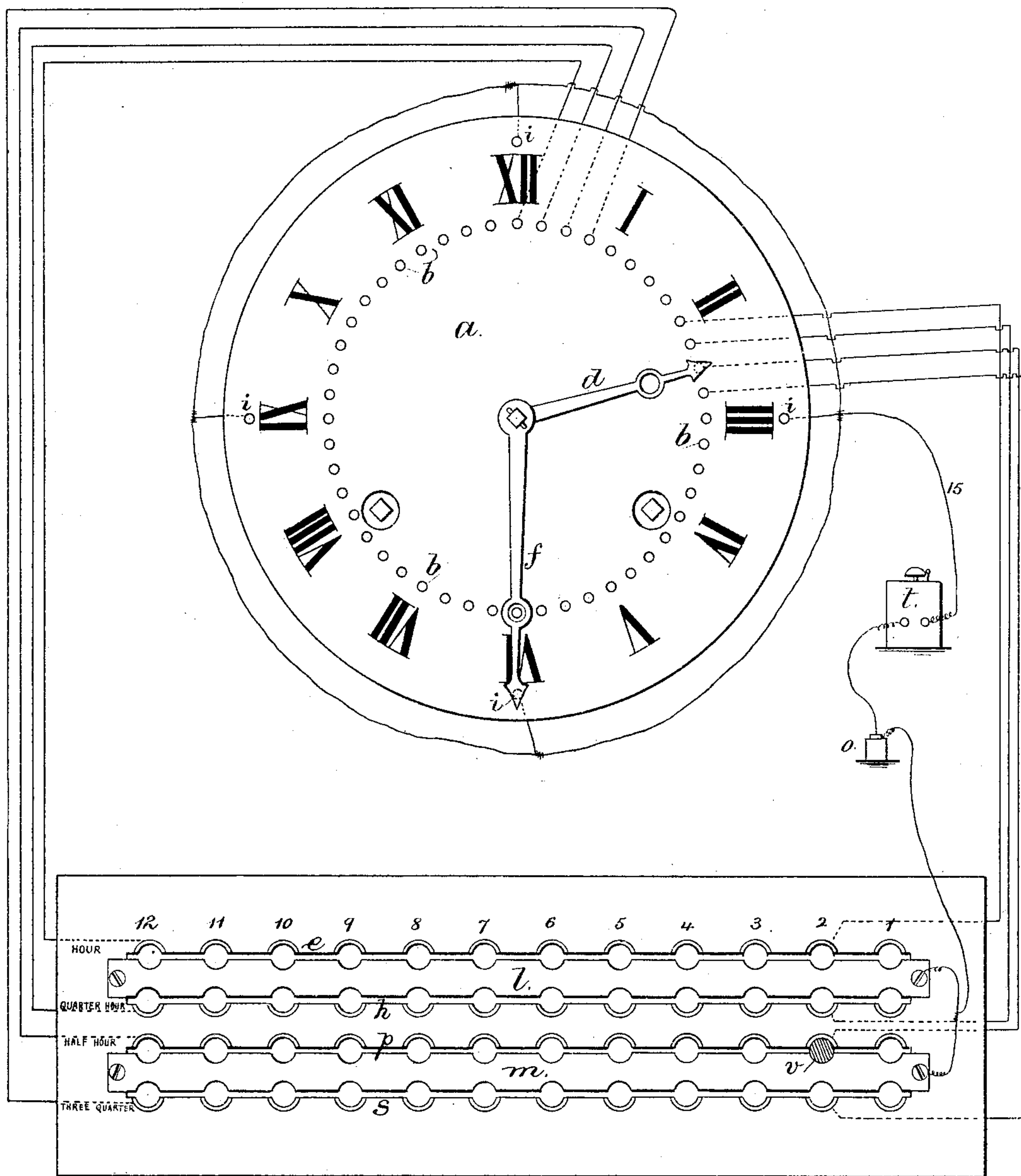


(No Model.)

J. I. CONKLIN, Jr.
ELECTRIC ALARM CLOCK.

No. 270,639.

Patented Jan. 16, 1883.



Witnesses

Chas H. Smith
Harold Ferrell

Inventor

Joseph I. Conklin Jr
per Lemuel W. Ferrell

cut

UNITED STATES PATENT OFFICE.

JOSEPH I. CONKLIN, JR., OF NEW YORK, N. Y.

ELECTRIC ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 270,639, dated January 16, 1883.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH I. CONKLIN, JR., of the city, county, and State of New York, have invented an Improvement in Electric Alarm-Clocks, of which the following is a specification.

I make use of the hands of the clock for closing the circuit to a vibrator that rings an alarm-bell. Around the dial is a circular range of circuit-closing studs, with which the hour-hand comes into contact as it revolves over them. There are also four circuit-closing studs that the minute-hand comes into contact with at the quarter-hours. The studs of the row first named are connected to switch-plate studs in such a manner that by the insertion of conducting-pegs the alarm-bell can be rung at any one or more hours or quarter-hours. This is very useful in cases where night-watchmen and others want to be aroused at particular times, because said alarm can be set to ring every quarter of an hour, or at any one or more times during the twelve hours, by the simple insertion of the pins at the switch-plates corresponding to the hour or other time when it is desired to ring the alarm.

In the drawing I have represented the dial and the switch-board and connections to several of the dial-pins, and the circuit-connections to the battery and the repeating-bell.

The dial *a* is provided with a circular row of circuit-closing pins, *b*. These are placed at equal distances apart. If the clock is made so that it can be set to ring every half-hour, there will be twenty-four such pins; if every quarter-hour, there will be forty-eight such pins; if every ten minutes, there will be seventy-two such pins.

I have represented the improvement as adapted to an alarm every fifteen minutes. The hour-hand *d* passes across these studs or circuit-closing pins, and it has a little spring of platina that rubs upon them to produce electric contact. The minute-hand *f* is similarly provided with a contact-spring to rub against the contact-pins *i*, that are placed farther out on the dials, and with half-hour alarms there will be two studs (at 12 and 6) for the spring of the hand to come into contact with. I have shown four such studs for quarter-

hour circuit-closers, and these are connected by branch wires to one of the circuit-wires, 15. The strips or bars *l* and *m* are connected to one pole of the battery *o*. The other pole goes by the automatic alarm or magnetic vibrator *t*, thence to the wire 15 and four studs or contact-pins, *i*. There are four ranges of switch-studs, one range at each side of each bar *l m*, and each range is to be twelve in number for the whole twelve hours. Each switch-stud is made in any known way. I have shown them each as a section of a pipe at one side of a hole for the reception of a conducting switch-pin. The circular range of studs or pins *b* is connected to the ranges of studs at the sides of the switch-plates *l m*—that is to say, all the studs in the circular row corresponding to the hour-marks are brought in succession to the studs *e* in the top row, all the quarter-hour pins to the second row, *h*, the half-hour pins to the third row, *p*, and the three-quarter-hour pins to the fourth row, *s*, indicated by some of the wires that are shown on the drawing. The electric circuit cannot be completed except through some one or more of the conducting switch-pins. If, for instance, there is a pin in the hole corresponding with half-past two, as shown, the hour-hand will rest upon the corresponding stud, *b*, for several minutes; but the bell will only ring during the time that the minute-hand is passing across the stud or pin *i* at the outside edge of the figure 6 on the dial, the current passing from the battery by the switch-bar *m*, conducting-pin *v*, and wire to the hour-hand, thence through the minute-hand and the stud *i* (at 6) to the wire 15 and alarm-bell.

All that is required in setting this clock is to place one of the conducting-pins into the hole of the switch-board corresponding to the particular time—and any number of these pins can be inserted—and the alarm will be given when that time arrives.

I do not claim a clock-movement with a circuit-closing arm traversing a circular range of circuit-closing plates, nor switch-plates connected to such circular ranges of plates. Neither do I claim a dial in which there are movable circuit-closing pins.

Where a circuit-closing arm has been employed to traverse a circular range of pins to

which circuit-wires and switch-pins are applied, the hands of the clock do not perform any duty and the circuit is not in any manner connected with them. In instances where the hands have been employed to close the circuit movable pins and similar devices have been used. These are liable to become misplaced and to interfere with the movement of the hands.

10 In my improvement the dial-pins are all fixed, and no changes or adjustments have to be made at or near the hands; hence the clock is not liable to be stopped or the hands misplaced, and the hands have a uniform series of con-
15 tacts, regardless of the direction in which the circuit may be connected.

I claim as my invention—

The combination, with the clock-dial and circuit-closing hands, of two circular ranges of dial-pins, one range for each hand, the bat- 20 tery connected with one range of pins for one of the hands, switch-bars also connected to the battery, and circuit-connections from the range of dial-pins for the other hand to the opposite sides, respectively, of the switch-bars 25 and the movable switch-pin, substantially as specified.

Signed by me this 18th day of February, A. D. 1882.

J. I. CONKLIN, JR.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.