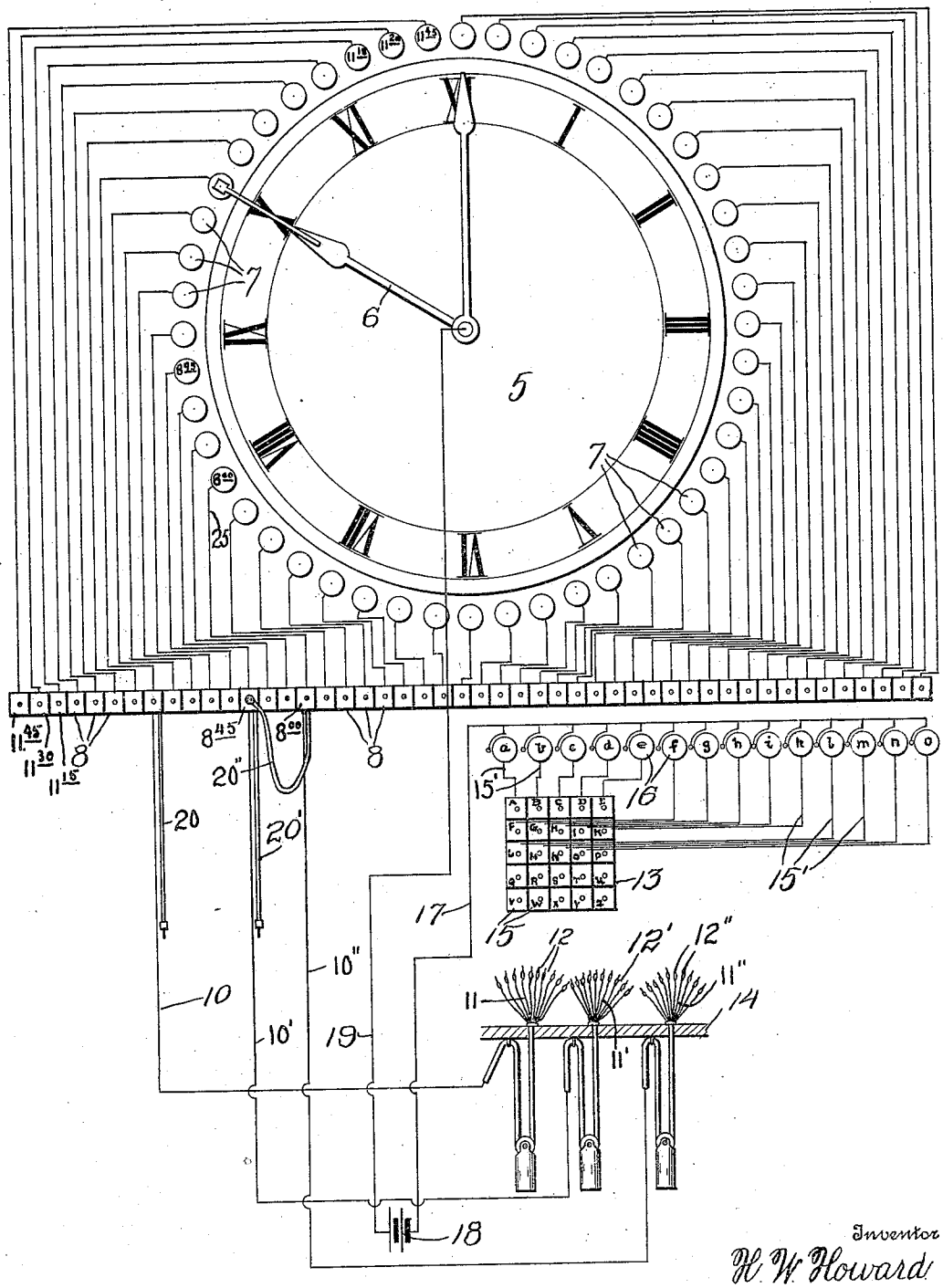
H. W. HOWARD.

TIME CONTROLLED ALARM MECHANISM.

APPLICATION FILED JAN. 27, 1906.

940,692. Patented Nov. 23, 1909.



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HILBERT W. HOWARD, OF SCRANTON, PENNSYLVANIA.

TIME-CONTROLLED ALARM MECHANISM.

940,692. Specification of Letters Patent. Patented Nov. 23, 1909.

Application filed January 27, 1906. Serial No. 298,203.

To all whom it may concern:

Be it known that I, HILBERT W. HOWARD, a citizen of the United States, residing at Scranton, in the county of Lackawanna, State of Pennsylvania, have invented certain new and useful Improvements in Time-Controlled Alarm Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in time-controlled alarm mechanism and more particularly to a selective alarm system.

The object of the invention is to provide a system of this nature by means of which any one of a number of alarms may be sounded or any desired number of alarms, simultaneously, even to the entire number of alarms. The system is particularly well adapted for use as a call bell system in hotels or the like where it is desired to awaken the occupants of certain rooms at certain designated times, and it will be understood that one, any number, or all of the guests in the hotel may be awakened at any desired time. There is thus provided both an individual call system and a fire alarm system.

This invention includes means whereby the hotel-clerk may arrange the system to awaken the various guests at the times designated by them, the system, after such arrangement, requiring no further attention until the next day.

In the accompanying drawings there is shown a diagrammatic view of the system.

Referring now to the drawing, there is shown an ordinary type of clock 5, with the exception that the hour hand 6 thereof is continued beyond the outer edge of the clock face and is adapted to successively engage the contact points of an annular series of contact points 7, the contact points being spaced to correspond to any predetermined time intervals. Thus they may be arranged so that the hour hand will engage one of them every fifteen minutes. For each contact point 7, there is provided a plug plate 8.

Connected with each of the plug plates 8 is a flexible cord or wire, but three of such cords or wires being illustrated in the present instance, at 10, 10′ and 10″ respectively, to avoid complications and obscurity in the drawing. The free end of each cord is provided with any number of branches shown at 11, 11′ and 11″ respectively, which branches in the present instance are ten in number and each of these branches has a terminal plug, the plugs of branches 11 being indicated by the reference numeral 12, those of branches 11′ by the reference numeral 12′ and those of the branches 11″ by the reference numeral 12″.

Conveniently located with respect to the clock, is a plug board 13 having a cabinet base 14 in which are disposed the cords or wires 10, 10′ and 10″ with their free ends projecting upwardly through the top of the cabinet through suitable openings therein, and each of which openings may be marked with the time (not shown) corresponding to that at which its connected contact point 7 will be engaged by the extension of the hour hand of the clock. The plug-board 13 embodies plug plates 15 corresponding in number to the rooms of the hotel and which are correspondingly lettered. From each plug-plate upon the plug-board there leads a wire 15′ to a bell or other signal 16 in the corresponding room of the hotel, there being a wire 17 leading from all of the said signals to a central battery 18, which is connected by a wire 19 with the hour hand spindle of the clock. In the present instance, but three plug plates 8 of the clock are illustrated as wired up.

In the drawing, to make the system more clear, some of the contact points on the clock face have been marked with the times they represent, for example, 8 o'clock, 8:45, 11:15, 11:30, and 11:45, and the plug plates 8 wired to these contacts have been similarly marked. Also the plug-plates 13 have been marked arbitrarily with letters indicating the corresponding rooms in the hotel.

In the use of this system, supposing that a guest in room A wishes to be called at eight o'clock, then one of the plugs 12″ in circuit through a branch 11″ and the wire 10″ with the eight o'clock plug-plate, is engaged in the plug-plate A of the board 13 and when the contact finger on the hand 6 moves into contact with the eight o'clock contact point on the clock face, correspondingly marked in the drawing, the circuit will be from the battery 18 through wire 19, hand 6 to contact point marked 8.00, and thence through wire 25 to the plug-plate marked 8.00 and thence through the connecting wire 10″ to the corresponding plug 11″ engaged in the plug-plate A, thence to bell *a*

and by wire 17 to battery, thus ringing the bell. The bell will then of course be sounded. If ten guests are to be called at eight o'clock, then all of the ten plugs 12″ are engaged in the corresponding plug-plates 15 of the board 13, thus connecting the corresponding bells in multiple in the circuit of the battery 18 as soon as the hour hand reaches the eight o'clock contact point.

Supposing that there are fifteen people who wish to be called at eight o'clock. Then the ten plugs 12″ are engaged in the plug-plates of the board 13 corresponding to ten of the rooms in which the calls are to be made and five of the plugs 12′ are engaged in the remaining five plug-plates on the board 13 and the plug of the cord 20″ hanging from the eight o'clock plug plate below the clock face is engaged in that one of the plug-plates 8 corresponding to a later hour than eight o'clock. In the drawing, the cord 20″ connected with the eight o'clock plug-plate has its plug engaged in the plug plate corresponding to 8:45. The two wires 10″ and 10′ with their corresponding branches 11″ and 11′ and their plugs 12″ and 12′ respectively are thus connected in the multiple so that a part of the current from the battery 18 after passing from the wire 25 to the eight o'clock plug-plate, flows down the wire 10″ to the plugs 12″ and part flows along the cord 20″ to the 8:45 plug plate and thence by wire 10′ to branches 11′ and plugs 12′ and thence to the five plug-plates of the board 13 in which the said five of the plugs 12′ are engaged. Fifteen bells are thus rung at eight o'clock in the corresponding rooms of the hotel.

What is claimed is:

In a system of the class described, the combination with a clock comprising a contact hand, and a series of contacts disposed for successive engagement by the hand, of a plug-plate in circuit with each of the contacts, a flexible conductor connected to each of said plug-plates and having a terminal plug adapted for engagement in any one of the other plug-plates of the series, a plug-board having a second series of plug-plates each corresponding to a location at which a signal is to be sounded, a signal connected with each of the last named plug-plates, a battery connected between all of the signals and the contact hand of the clock, and a flexible conductor connected with each of the first named plug-plates and having a series of terminal branches in electrical connection with the conductor, each of which branches is provided with a plug adapted to engage any one of the second series of plug-plates which are carried by the said plug-board.

In testimony whereof, I affix my signature, in presence of two witnesses.

HILBERT W. HOWARD.

Witnesses:

WILLIAM BEVEN,

GEO. H. CHANDLEE.