

(No Model.)

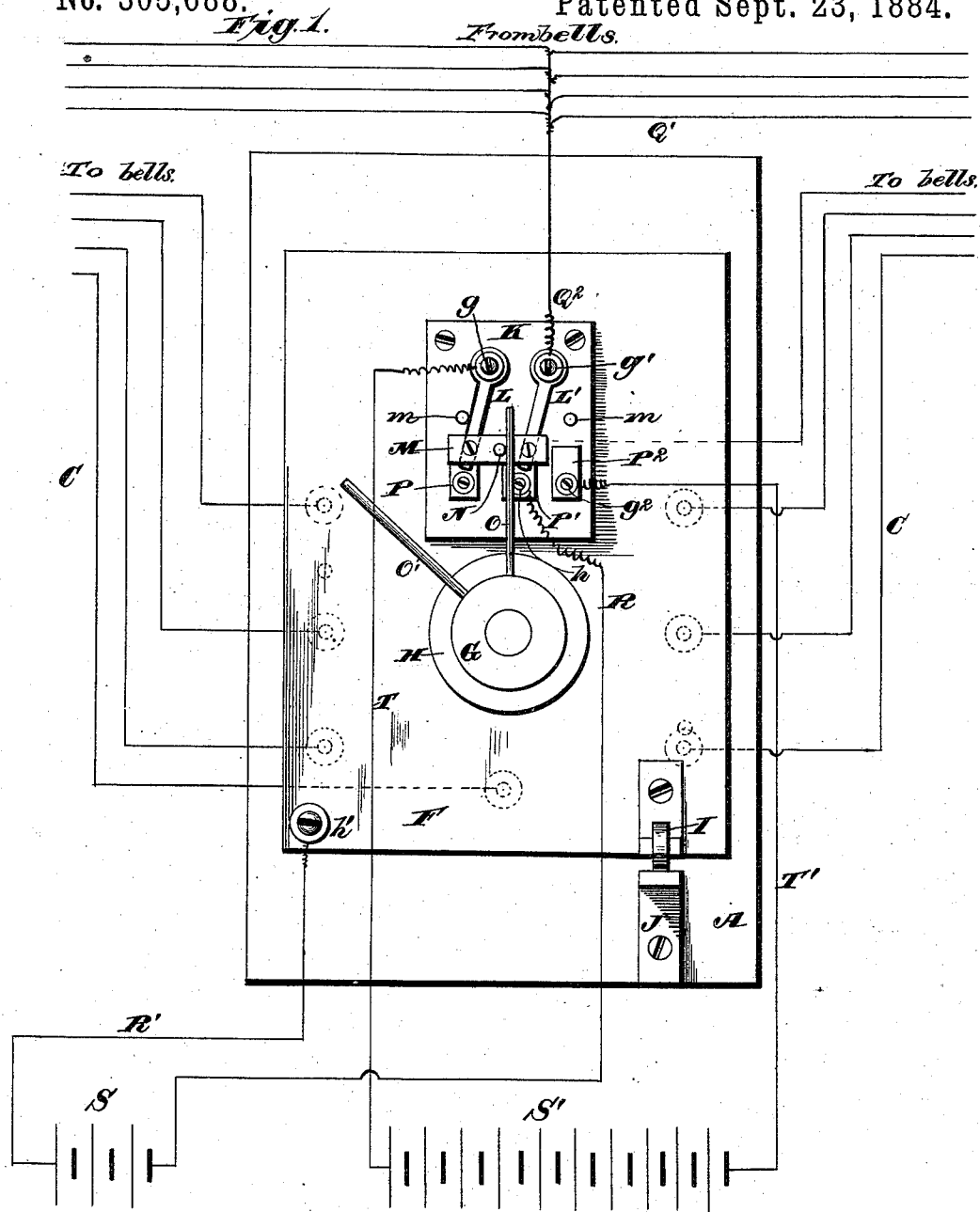
2 Sheets—Sheet 1.

P. GUGERTY.

ELECTRIC FIRE ALARM AND CALL BELL SYSTEM.

No. 305,688.

Patented Sept. 23, 1884.



*Witnesses.*

*Robert Curlett,*

*J. A. Rutherford*

*Inventor.*

*Patrick Gugerty.*

*By James L. Norris.*

*Atty.*

P. GUGERTY.

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Fig. 2.

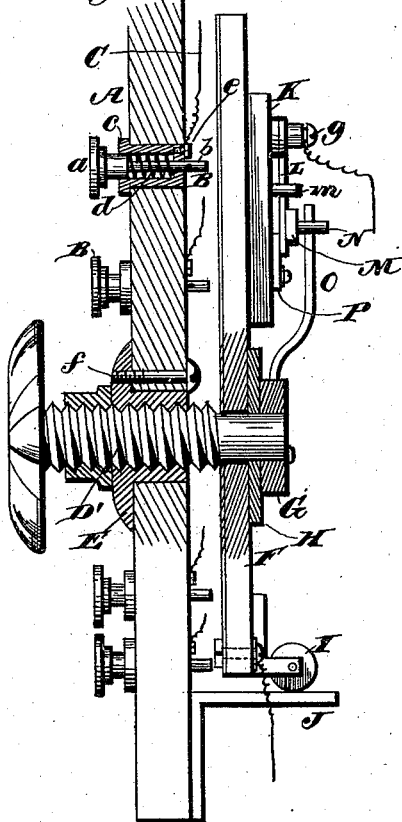


Fig. 3.

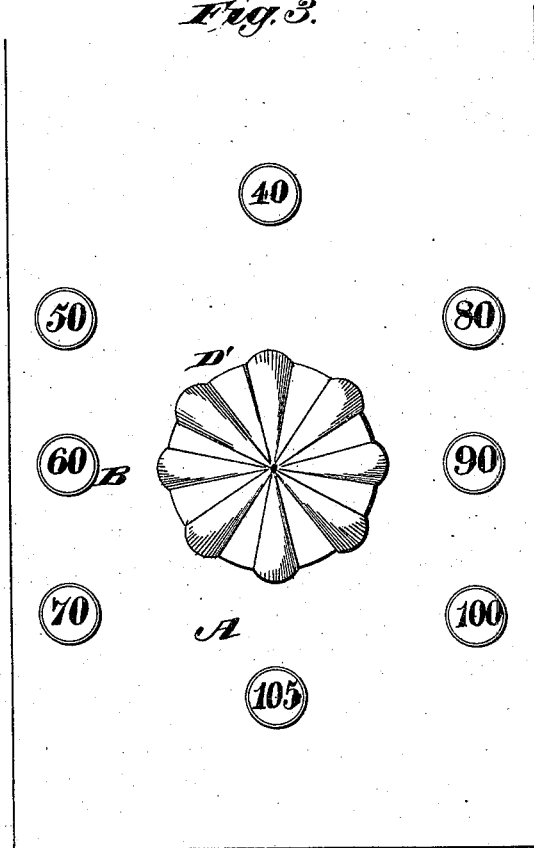
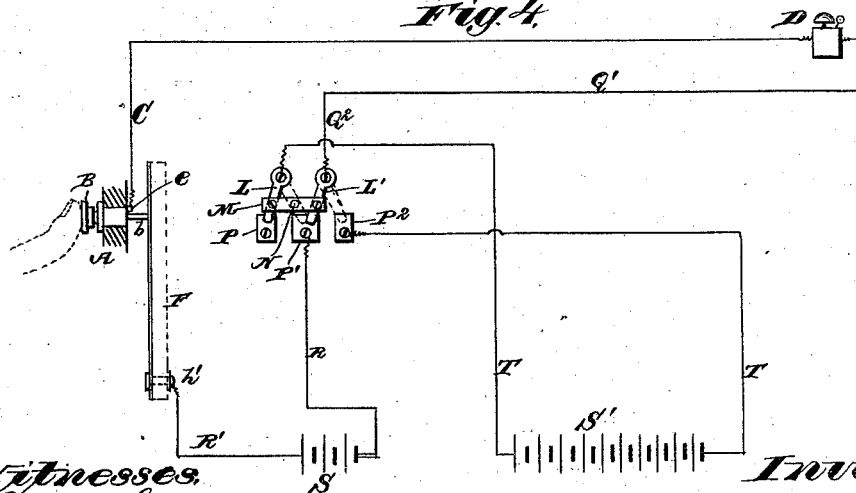


Fig. 4.



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# UNITED STATES PATENT OFFICE.

PATRICK GUGERTY, OF WATERFORD, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO MARY E. GUGERTY, OF SAME PLACE.

## ELECTRIC FIRE-ALARM AND CALL-BELL SYSTEM.

SPECIFICATION forming part of Letters Patent No. 305,688, dated September 23, 1884.

Application filed February 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK GUGERTY, a citizen of the United States, residing at Waterford, in the county of Saratoga and State of New York, have invented new and useful Improvements in Electric Fire-Alarm and Call-Bell Systems, of which the following is a specification.

My invention relates to that class of electric fire-alarm and call-bell systems used in hotels and other buildings for sounding an alarm in any one room to awaken a guest at the hour he desires, or in all the rooms at one time in the event of a fire, or for other reasons when necessary; and it has for its object to simplify such systems, and also to provide means whereby the power or strength of the current can be increased or decreased at will, and as the exigency may arise, whereby the points and coils may be saved from injury and their usefulness prolonged; and to the foregoing ends it consists in means, of which a particular description will be hereinafter given, and illustrated in the accompanying drawings, in which—

Figure 1 is a rear view of part of the mechanism employed; Fig. 2, a vertical cross-section through the same; Fig. 3, a front view of the button-board. Fig. 4 is a diagram.

The letter A designates a button-board, in which are secured as many push-buttons or contact-points, B, as there are rooms, with conducting-wires C leading from said buttons to a bell, D, in each room having connection with the annunciator and alarm. The buttons have an insulated head, *a*, and metallic point *b*, extending through a conducting-socket, *c*, incased in the board and containing a spring, *d*, to actuate the button, and a screw, *e*, to secure the conducting-wire to the socket *c*. An insulated screw, *D*, is passed through a nut, *E*, secured by a screw, *f*, to the board A, and then loosely through a conducting-plate, *F*, acting as a switch, to which it is held on one side by a collar, *G*, and insulating washer *H*, and on the other side by the thread of the screw, as shown. This plate *F* is provided at its lower end with an insulating roller, *I*, which runs upon a bracket, track, or support, *J*, secured to the back of the board A. By such means the weight of the plate *F* rests

upon the bracket instead of upon the screw, which is free to turn in its nut, so as to slide the plate toward or from the board A, as desired. An insulated block, *K*, is secured by screws to the back of the plate *F*, and has pivoted to it by pivots *g* and *g'* two conducting switch-arms, *L* and *L'*, which are connected together at their free ends by an insulated bar, *M*, from which projects a pin, *N*, against which an arm, *O* or *O'*, connected rigidly to the collar *G* of the screw *D*, is brought to bear to move the switch-arm *L* from the plate *P* to plate *P'*, and the arm *L'* from plate *P'* to plate *P*<sup>2</sup>. A conducting-wire, *Q*<sup>2</sup>, connects the arm *L'* through post *g'* with the series of wires *Q'*, leading from the bells in the several rooms of the building, and a wire, *R*, connects the plate *P'* through post *h* with the carbon or negative plate of a set of batteries, *S*, while a wire, *R'*, connects the positive or zinc plate of said batteries with the plate *F* through post *h'*. A conducting-wire, *T*, through post *g*, connects switch-arm *L* with the positive or zinc plate of another series of batteries, *S'*, while a wire, *T'*, connects the negative or carbon plate of said batteries with the plate *P*<sup>2</sup> through post *g*<sup>2</sup>.

In operation, when the system is to be used only as an annunciator to sound an alarm in any one room, the several parts will bear the relation to one another shown in full lines in Figs. 1 and 4. Now, if a guest is to be awakened, the clerk in the office presses upon the button corresponding in number to the number of the room in which the bell is to be rung, so as to bring the point of the button in contact with the plate *F*, as illustrated in Fig. 4, whereby the circuit is established and the alarm sounded and ceases as soon as the contact of the point with the plate is broken and the circuit thus broken. For such purpose it is only necessary to use a battery of sufficient strength to ring one bell at a time, and therefore a comparatively weak battery will answer, and as a consequence the points will last longer. On the other hand, when in case of an emergency it becomes necessary to ring the bells in all the rooms at the same time and a strong battery becomes necessary, the screw *D* is turned by the office-clerk so as to slide the plate *F* toward the board A, and thereby bring the plate *F* into contact with the points of the

buttons, and in turning the screw to effect that result one arm of the collar G is turned away from the projecting pin of the switch-arm connecting-arm, and the other arm of the collar brought to bear against said pin so as to shift the switch-arms L and L', respectively, from plates P and P' to plates P' and P<sup>2</sup>, respectively, thereby establishing the circuit with the batteries T' and bringing their increased strength into use for the purpose of ringing all the bells at the same time, and when the necessity of ringing the combined bells is over the screw can be reversed so as to slide back the plate and break the circuit and leave the parts in position to ring a single bell at a time. It will thus be seen that the necessity of using a stronger battery than is necessary for general use is obviated, and that there will result consequently a great saving in the wear of the system. It will also be observed that another advantage gained is the simplicity of the system and mechanism employed, which can easily and with little expense be put up and not easily get out of order.

Stop buttons or pins *m* may be attached to the block K to limit the throw of the switch-arms L L', so as to prevent them from passing beyond the plates P and P<sup>2</sup>.

Having thus described my invention, what I claim is—

1. The combination of two batteries or sets of cells, a series of buttons, a series of conducting wires leading from said buttons to separate alarms, a switch, F, for closing the circuit between the battery and the said buttons, wires leading from corresponding poles of the two batteries to separate contact-points, a switch connecting with the wires leading from the other poles of the two batteries, and means for moving said switch to establish the circuit through one or both sets of cells to strengthen or weaken the force of the current as it is desired to transmit the same through one or more of said negative conducting-wires, substantially as described.

2. The combination of the two batteries or sets of cells, the series of buttons, the series of conducting-wires leading from said buttons to separate alarms, the sliding switch-plate for closing the circuit between the battery and said buttons, the screw for moving said switch-plate, conducting-wires leading from corresponding poles of said batteries to separate contact-points, a pivoted switch connecting with conducting-wires leading from the other poles of the two batteries, and arms connecting said screw with said sliding switch-plate, so that as said screw is turned to close the circuit between more than one of said buttons and battery the pivoted switch will be simultaneously shifted to establish the circuit between the two sets of cells, substantially as described.

3. The combination of the button-boards, the series of push-buttons therein, the sliding switch-plate, the screw passed through said board and connected with said plate, and a battery, substantially as described.

4. The combination of the button-board, the series of push-buttons therein, the sliding switch-plate, the screw passing through said board and connected to said switch-plate, the arms connected with said screw, and the pivoted switch acted on by said arms to shift the same, substantially as described.

5. The combination of the button-board, the series of push-buttons therein, the sliding switch-plate, the screw for operating said switch-plate, the insulated block connected to said plate, the pivoted switch-arms secured to said block and connected together, and the arms operated by said screw to actuate said pivoted switch-arms, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PATRICK GUGERTY.

Witnesses:

MICHL. POWERS,  
WM. NATTALL.