

S. BROWN.
ELECTRIC BELL.

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1,018,162.

Patented Feb. 20, 1912.

Fig. 1.

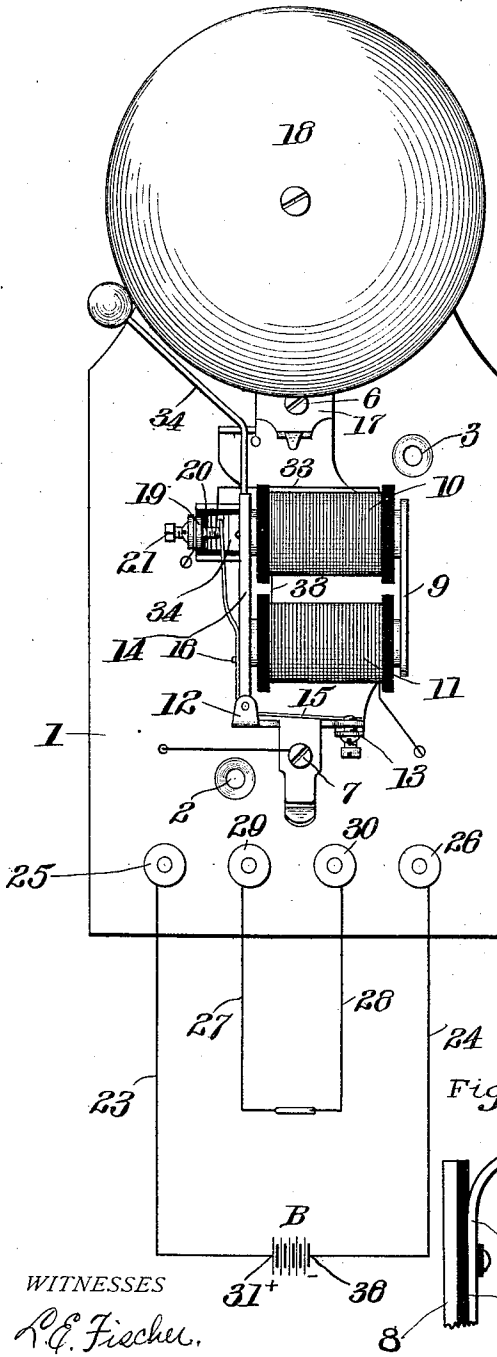


Fig. 2.

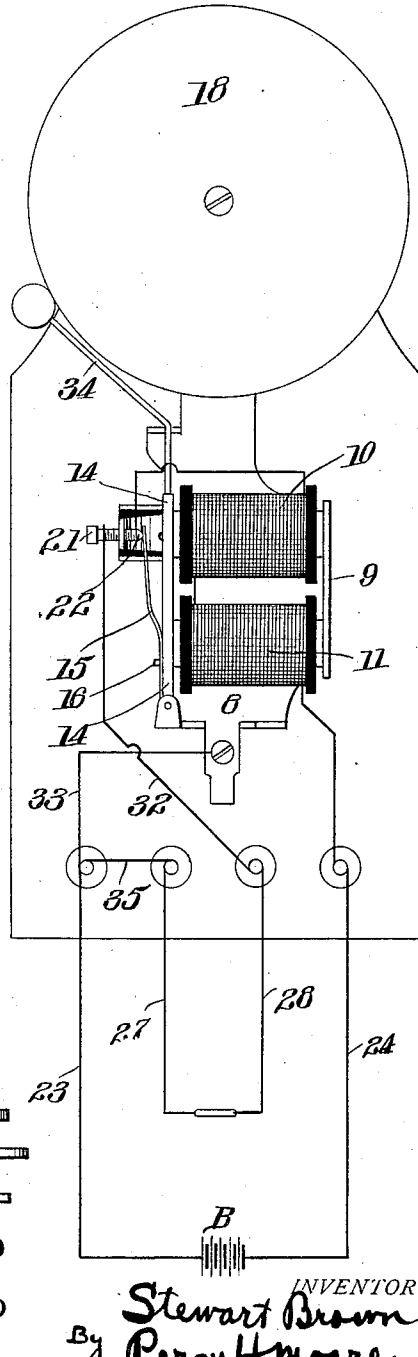
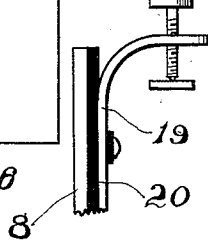


Fig. 3.



WITNESSES
R. E. Fischer,
J. T. Walker,

INVENTOR
Stewart Brown
By Percy H. Moore
Attorney

UNITED STATES PATENT OFFICE.

STEWART BROWN, OF ALEXANDRIA, VIRGINIA.

ELECTRIC BELL.

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To all whom it may concern:

Be it known that I, STEWART BROWN, a citizen of the United States, residing at Alexandria, in the county of Alexandria and State of Virginia, have invented certain new and useful Improvements in Electric Bells, of which the following is a specification.

My invention relates to electric bells and more particularly to alarm devices for use in wiring the doors, windows, etc., of a house as a protection against unauthorized entrance.

The object of my invention is to provide a simple and effective arrangement of wiring which can be readily connected to a source of power by an inexperienced person.

My invention consists broadly in providing an electric bell with two circuits, one of which when broken will cause the bell to ring constantly or until the source of electric power becomes exhausted.

In the drawings forming a part of this specification Figure 1 is a plan view, and Fig. 2 is a diagrammatic view showing the electric circuits. Fig. 3 is a detail view of arched arm 19.

Referring more specifically to the drawings in which like reference numerals designate corresponding parts in all the views, 1 represents the base plate preferably of wood having suitable openings 2 and 3 to receive screws or other suitable fasteners not shown by means of which the base plate and the entire bell may be attached to the wall or other support. Secured to the base plate 1 by screws 6 and 7 is a metallic frame 8 comprising a yoke-piece 9, which supports the bobbins 10 and 11, posts 12 and 13 to which are attached respectively the armature 14 and the armature-carrying spring 15, the latter two members being connected together as at 16, and a forwardly extending arm 17 carrying the bell 18. An arched arm 19 is secured to the frame 8 and is insulated therefrom as shown at 20. The arm 19 carries an adjustable screw 21 having a contact point 22 normally in engagement with the free end of the armature-carrying spring 15. A series of binding-posts, four in number and all of

usual construction are secured to one end of the base plate.

At B is shown the battery, which may be placed at any convenient place to permit connections being made with the electric bell 18. As best illustrated in Fig. 2, the direct circuit to the battery is illustrated by wires 23 and 24 connected to opposite poles of the battery and to the binding posts 25 and 26, and the alarm circuit is shown by wires 27 and 28 each of which are connected at one end to intermediate binding-posts 29 and 30 respectively and as will readily be seen from the following the bell and battery are in both circuits. When the alarm circuit is closed, the flow of current will be from the positive pole 31 of the battery B through wire 23 to binding-post 25 across the connecting wire 35 to binding-post 29, from where it flows through wires 27 and 28 to binding-post 30 and to and through wire 32 connected to the arched arm 19. As previously mentioned the arched arm 19 is insulated from the metallic frame 8. The winding 33 of the bobbins 10 and 11 is connected at one end to the horizontal portion 34 of the arched arm 19, thus conducting the current through the windings to the binding-post 26 and back to the battery by wire 24. While the current is flowing in this circuit the armature 14 is held tightly against the bobbins or magnets.

In practice the wires 27 and 28 forming the alarm circuit are arranged across a window or concealed in some other part of a building to guard against unauthorized entrance. Should these wires become parted an alarm would be instantly given by reason of the fact that the current instead of crossing from the binding-post 25 to the post 29 will flow through the continuation wire 33 of the wire 23 to the metallic frame 8, through the armature 14 and across to the contact point 22 of screw 21 causing the bell striker 34 to vibrate. The course taken by the current from this point is similar to that described in the previous paragraph, to wit, through the bobbins back to binding-post 26 and from the binding-post 26 to the negative pole of the battery. The bell will continue to ring until the alarm

circuit is closed or until the battery plays out.

From the foregoing it will be seen that I have devised an alarm bell of comparatively few parts and one which can be readily used and installed by the most inexperienced person.

Having thus described my invention, what I claim is:

- 10 In an alarm device, the combination with a base plate of a metallic frame, comprising a yoke, a pair of magnets supported from and connected to said yoke, an arched arm on said frame and insulated from said
15 frame, a bell, an adjustable contact screw in said arched arm, an armature in electrical contact with the frame, a spring on said armature having make and break contact with said adjustable contact point, a
20 pair of binding-posts, an electric battery, a wire leading from the positive pole of

said battery connected to one of said binding-posts and to said frame, a wire leading from the negative pole of the battery connected to the other of said binding-posts 25 and to said magnets and thence to said arched arm, an alarm circuit comprising a pair of binding-posts, a pair of wires connected to said posts at one end and connected to each other at their opposite ends, a 30 wire connecting one of said binding posts to said adjustable contact screw and a wire extending between the other of said binding-posts and the binding-post connected 35 to the positive pole 31 of the battery.

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

STEWART BROWN.

Witnesses:

N. C. STAFFORD,
P. H. MOORE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."