No. 858,909. PATENTED JULY 2, 1907.

N. H. RAYMOND.

ELECTRIC BELL.

APPLICATION FILED AUG. 24, 1905.

Fig. 1.

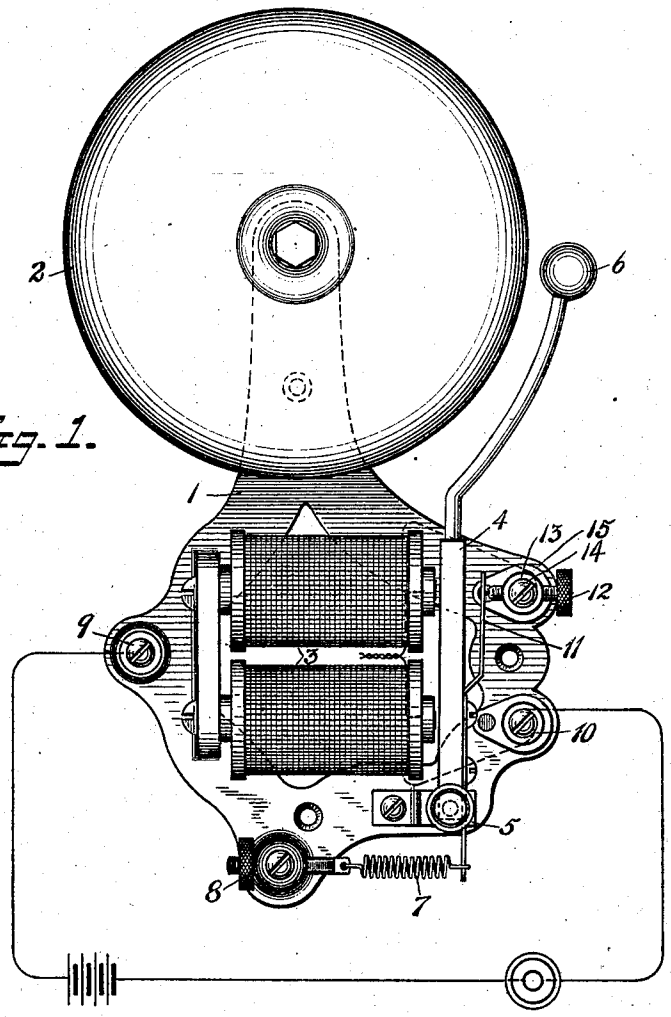
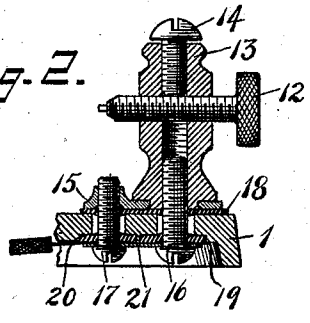


Fig. 2.



Witnesses

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ELECTRIC BELL.

No. 858,909. Specification of Letters Patent. Patented July 2, 1907.

Application filed August 24, 1905. Serial No. 275,647.

To all whom it may concern:

Be it known that I, NELSON H. RAYMOND, a citizen of the United States, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Electric Bells, of which the following is a full, clear, and exact description.

My invention relates to improvements in electrical apparatus, and particularly to a terminal construction for electric bells, etc.

The object of the invention is to provide a means of supporting a contact terminal for an electric bell so that it will remain in place even though subjected to considerable vibrations, so that electric wires may be secured without derangement of the parts, and so that insulation may be perfect.

Details of one form of construction embodying the principles of my invention are illustrated in the accompanying single sheet of drawings.

Figure 1 is a view showing an electric bell construction with improvements embodying my invention. Fig. 2 is a fragmentary cross sectional view showing the parts to which my invention most particularly relates.

1 indicates the frame or support for the bell construction, and which is formed of suitable material, for instance, cast iron.

2 represents the bell or gong.

3—3 are coils forming the magnet.

4 is the armature member pivotally supported in the bracket 5, and carrying the striker member 6.

7 is a spring connected to the armature member and normally under tension. 8 is an adjusting nut therefor.

9 represents one of the terminals or binding posts to which the line wire is connected, and which is electrically connected to the frame or support 1. 10 is the other terminal or binding post for the circuit.

11 is a spring blade member carried by the armature 4 and having a platinum disk contacting with a platinum point carried by the adjustable screw 12 as usual.

13 is the post, which carries the screw 12, and a clamping screw 14.

The circuit through the instrument may be traced from terminal post 9, through the frame to bracket 5, through the armature member 4, spring 11, contact screw 12, post 13, thence by a wire connection through the coils to the terminal post 10, both the posts 10 and 13 being insulated from the frame or support.

The contact carrying post 13 is subjected to considerable vibration by reason of the operation of the instrument, and is liable to become loosened.

15 is an extension from the post 13. In the form herein shown, it is formed by a plate separate from the post, but permanently secured thereto, for instance, by upsetting the end of the post on the lower side of the plate member 15. It is obvious, however, that this might be integral with the post. I have preferred to construct it in the form herein shown, since it is more practical and economical.

16 is a main attaching screw which takes directly into the post 13, to clamp it to the frame or support 1. The opening through the frame for the passage of the screw is of sufficient size to leave an air space around the screw.

17 is an auxiliary attaching screw which passes through the frame 1, being surrounded by an air space, and takes into the extension base plate 15. The extension 15 being permanently or rigidly secured to the post 13 it is impossible to turn the post 13, even if both screws 16 and 17 should happen to become slightly loosened.

To insulate the post 13 and extension 15 from the frame, a layer of insulating material 18 is interposed beneath, and insulating washers 19 and 20 are located in recesses beneath the frame.

21 is a clamping plate through which the screws 16 and 17 pass, and beneath which the circuit wire may be attached. This wire is preferably clamped by the auxiliary screw 17, so that while the screw 16 may be set up hard so as to hold the post 13 rigid, it is necessary to set up the screw 17 only sufficiently to obtain electrical contact, so that there is no danger of breaking the wire when screwing it in place. The clamping plate 21 need extend only beneath the head of the auxiliary screw 17, but I prefer to extend it beneath the head of screw 16, so as to protect the insulation 19 and afford a better electrical connection. The insulating washers 19 and 20 being located in recesses in the bottom of the frame, center the attaching screws 16 and 17, and being drawn into the passages through the frame prevent the screws from contacting with the frame. The post 10 is similarly attached to but insulated from the supporting frame.

The advantages of this construction other than those set forth will be apparent to one who is familiar with this class of apparatus.

What I claim is:

1. In a device of the character described, the combination of a metal supporting frame having perforations therein, a post having an extension at the base, a screw passing through one of said perforations and taking into said post, an auxiliary screw passing through the other perforation and taking into said extension, and insulating material above and below said frame, said perforations being larger than said screws and leaving air spaces around the same both of said screws being metallically connected above and below said frame.

2. In a device of the character described, the combination of a supporting frame, a post, a laterally projecting plate separately formed from said post but rigidly con-

nected thereto, a screw for clamping said post to said frame, and an auxiliary screw taking into said plate eccentrically of said post, both of said screws being metallically connected above and below said frame for the purpose specified.

3. In a device of the character described, the combination of a supporting frame, a post having a lateral extension at the base thereof, insulating washers fitted in recesses beneath said frame, and clamping screws passing freely through said frame and centered by said insulating material and taking into said post and said extension both of said screws being metallically connected above and below said frame.

NELSON H. RAYMOND.

Witnesses:
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