

C. M. PROCTOR.
ELECTRIC BELL.
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1,060,628.

Patented May 6, 1913.

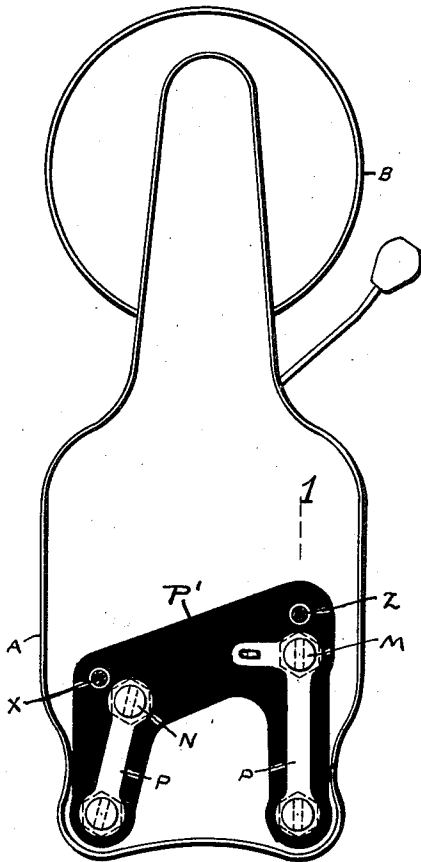


Fig. 2

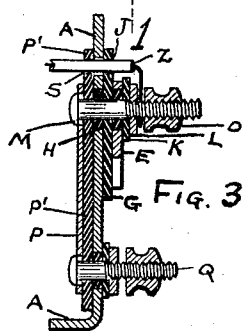


Fig. 3

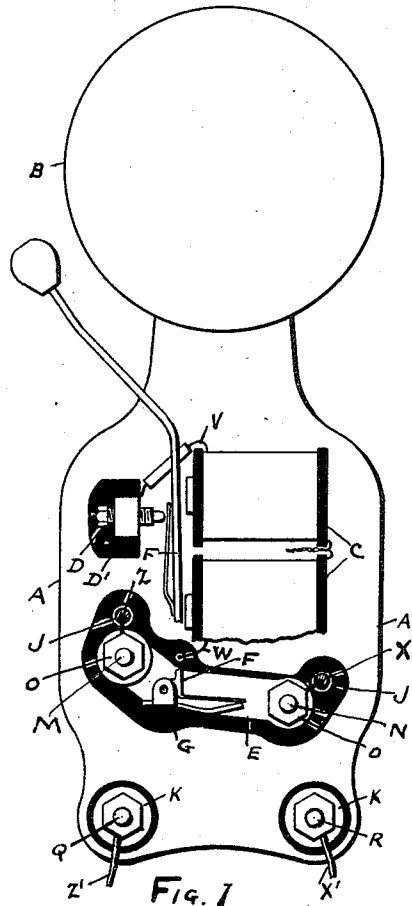


Fig. 1

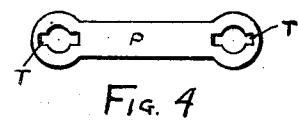


Fig. 4

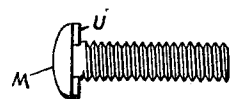


Fig. 5

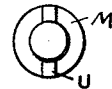


Fig. 6

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ELECTRIC BELL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES M. PROCTOR, who am a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Electric Bells, of which the following is a specification.

This invention relates to electric bells, and has for its object an improved device of this type adapted for use either where the circuit wires approach the base plate of the bell from without or the base plate is designed to cover a hole in the supporting wall through which the wires emerge.

In the drawings:—Figure 1 is a front elevation of the bell as a whole. Fig. 2 is an elevation of the reverse face of the same. Fig. 3 is a sectional elevation, in somewhat exaggerated proportions as to thickness of the parts, along the line 1—1 of Fig. 2. Fig. 4 is a plan view of the connecting strap of sheet metal between binding posts of different pairs. Figs. 5 and 6 are side and end elevations respectively of the holding screw constituting a part of each binding post.

A represents the base plate, on which are mounted the gong B, the magnet coils C, and the regulating contact screw D, in the usual manner. Interposed between the metal foot or base E, which supports the pivoted armature F, and the base plate A is an insulating mat G, which is not only provided with holes H for engagement of the binding post screws M and N there-through, but is also provided with holes J, which register with similarly located holes S in the plate A. Above the armature support E and about the screw M engages a washer K, above which is located a guard nut L and a top nut O; one of these nuts may, if desired, be omitted. The screw N has on it the nuts L and O, but omits the insulating washer K, thus being in direct electrical contact with the base E of the armature, which, in turn is as a whole connected with the coils by way of the contact screw D and wire V: the wire end W leads from the coils to the apertured end of that one of the straps P through which the binding post screw M engages, to make possible the completion of a circuit.

Connected with each of the screws M and N, and extending along the under side of the base plate A, are straps P of flat con-

ducting metal, or of wire if desired, which extend to engagement about the screws Q and R of another set of binding posts which are similarly insulated from the base plate A, but are not located adjacent such holes S in the base plate A as are the binding post screws M and N. As herein illustrated, the binding post screws have the under side of their heads formed with lugs U which engage in correspondingly cut away portions of the straps P, so as to prevent their rotation when the nuts are being screwed on the top end of the several screws. Ordinary screws could, however, be used, and thus not require the cutting away of the strap P at the points T, though obviously not quite as convenient from the standpoint of quick and easy assemblage of the parts.

The regulating contact screw D, which is insulated by the mat D' from the base plate A, is connected by means of the wire end V with the magnet coils C, while the insulated binding post M is similarly connected with the other end W of the wire as it emerges from engagement about the coil. In case the circuit wire ends X and Z emerge from the wall immediately behind the plate A, they pass through the holes J and S in the plate A and the insulating mat G to engagement with the binding posts M and N. If, however, the wires approach the base plate from without as at X' and Z', they are attached directly to the binding posts Q and R. These latter being in direct and constant electrical contact with the binding posts M and N, through the medium of the straps P on the under face of the base plate A, the same result is secured when the circuit is completed and the bell is consequently rung as when the circuit wire ends are connected with the binding posts M and N, and a bell thus constructed is interchangeably available for either method of arrangement as to the ends of the circuit wires.

What I claim is:—

1. In an electric bell, in combination with a plurally perforated base plate, a pair of magnet coils, and an armature member, supported by said base plate, a pair of binding post members insulated from said base plate and adapted to receive the ends of circuit wires approaching said plate from the same side as that on which said posts are located, a second pair of binding post members also insulated from said base plate and located

adjacent certain of the perforations therein, adapted to receive the ends of wires approaching the reverse face of the plate and passing through said perforations, and
5 means connecting one of each pair of posts with the corresponding member of the other pair, whereby either pair is rendered immediately available for completion of the energizing circuit for the bell upon connection of
10 the wires thereto, substantially as described.

2. In an electric bell, in combination with a base plate provided with a plurality of perforations, a pair of magnet coils mounted thereon an armature member pivotally
15 supported thereon though insulated therefrom, a pair of binding post members one of which is insulated from direct connection with said armature though adapted to be placed in circuit therewith, said posts being
20 adapted to receive the ends of circuit wires passing through adjacent perforations in the base plate from the under side thereof, and a second pair of binding posts also insulated from the base plate, and connected
25 with said first named pair of binding posts, adapted to receive the ends of circuit wires

directly approaching that face of the base plate on which the operative parts of the bell are located, substantially as described.

3. In an electric bell, the combination with 30 a perforated base plate, a pair of magnet coils and an armature and hammer member mounted thereon, and a plurality of pairs of binding post members, the corresponding members of each of which are permanently 35 connected the one with the other, and one of each pair being insulated from direct connection with the armature, one of said pairs of circuit wires approaching the plate on the same side as that whereon the posts are 40 mounted, and the other of said pairs being located adjacent the perforations in said plate to receive the ends of circuit wires approaching the plate from beneath and passing therethrough, substantially as de- 45 scribed.

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

CHARLES M. PROCTOR.

Witnesses:

WILLIAM M. SWAN,
JEFFERSON G. THURBER.

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