H. A. SCHMIDT.

ELECTRIC BELL.

APPLICATION FILED JAN. 31, 1910.

1,037,059.

Patented Aug. 27, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

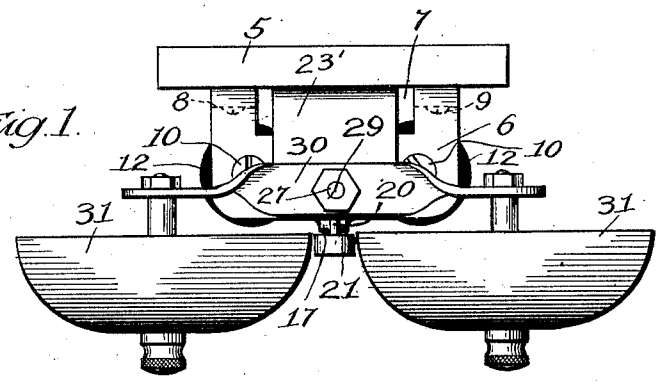


Fig. 2.

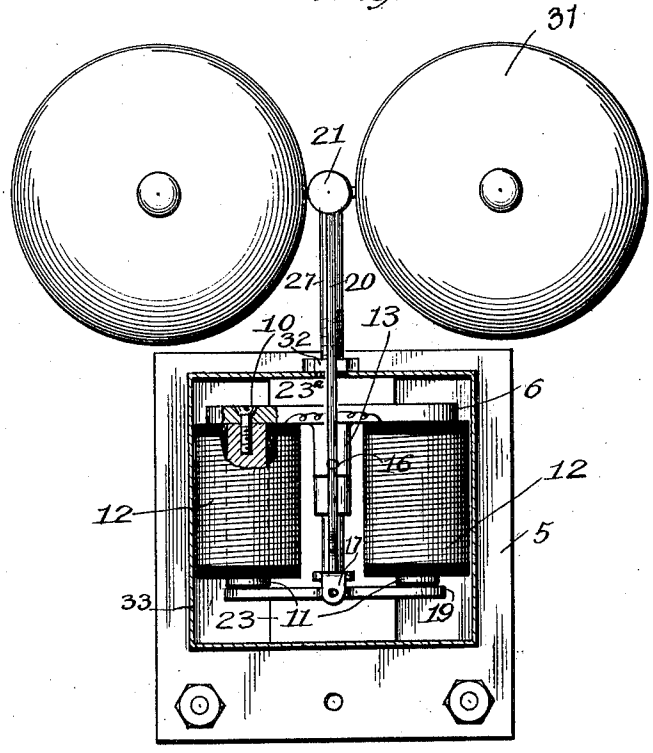
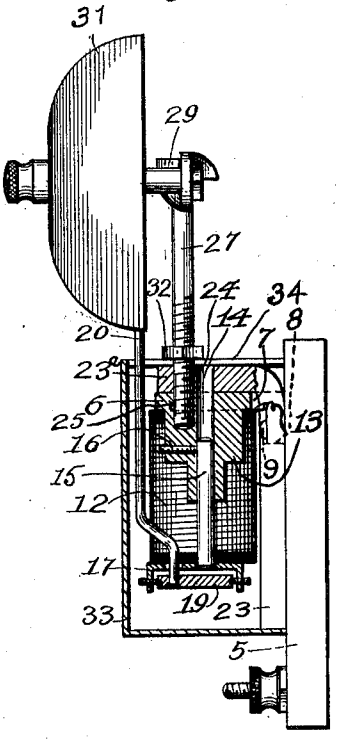


Fig. 3.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 4

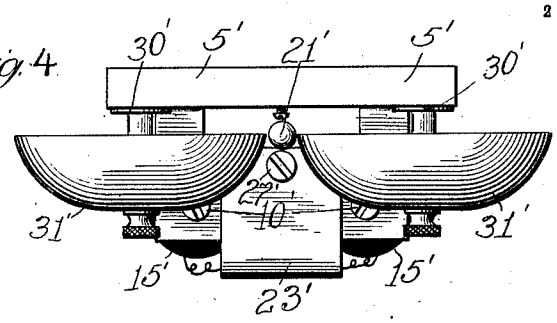


Fig. 5

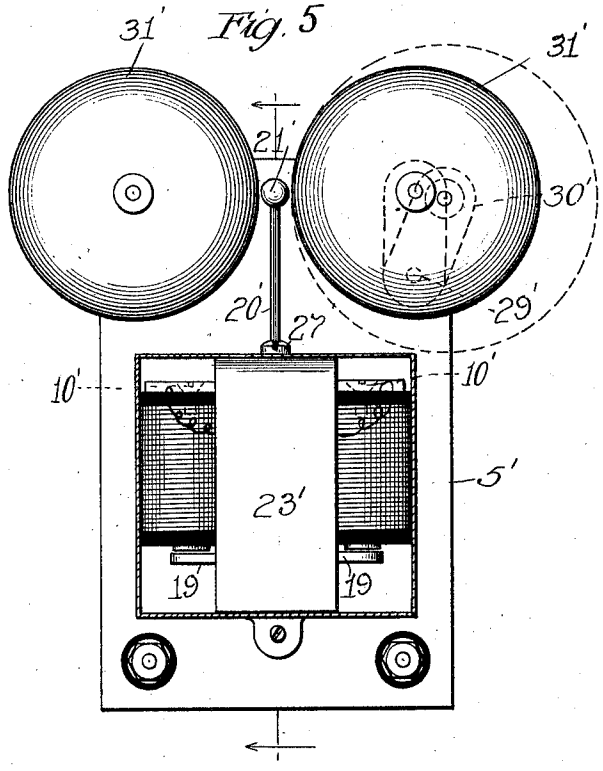
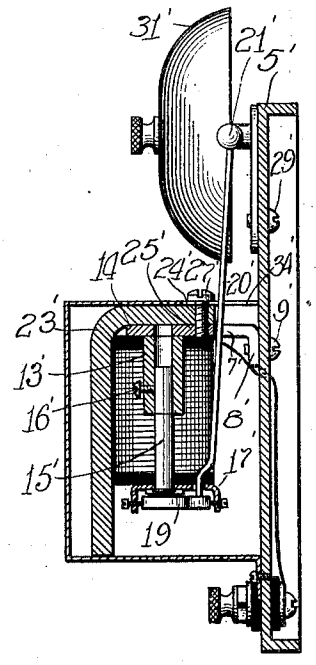


Fig. 6



Witnesses
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UNITED STATES PATENT OFFICE.

HERMAN A. SCHMIDT, OF CHICAGO, ILLINOIS.

ELECTRIC BELL.

1,037,059. Specification of Letters Patent. **Patented Aug. 27, 1912.**

Application filed January 31, 1910. Serial No. 541,098.

To all whom it may concern:

Be it known that I, HERMAN A. SCHMIDT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Bells, of which the following is a specification.

My invention relates to improvements in electric bells and has for its general object to provide a simple and efficient bell construction, easily manufactured and assembled, and cheap in cost.

In the embodiment of my invention illustrated in the drawings, Figure 1 is a plan view of one embodiment of my invention; Fig. 2 is a front elevation with the casing partly cut away; Fig. 3 shows a central vertical section through the casing; and Figs. 4, 5, and 6 are like views of a modified embodiment of the invention.

In the construction shown in Figs. 1 to 3, 5 indicates a base plate upon which is mounted a horizontally projecting yoke, 6, of U-shape, having an opening, 7, toward the base 5 and provided with feet, 8, secured to the base, as by screws 9.

The yoke has secured thereto, as by screws, 10, the two cores, 11—11, of an electro-magnet, 12, bearing the customary winding and having the polar extremities depending. Upon the yoke 6, preferably as an integral part thereof, is provided a depending arm, 13, disposed centrally between the coils of the electro-magnet and having a central bore, 14, in which is mounted for vertical adjustment a brass stem, 15, arranged to be secured in adjusted position by a set-screw, 16, and carrying at its lower end a bearing head, 17, in which is horizontally pivoted for oscillation the armature, 19, of the electro-magnet, which carries the striker arm, 20, provided with the gong-clapper, 21.

23 indicates a permanent magnet, preferably of inverted-L-shape, having its vertical arm flat against the base 5 and extending up through the yoke opening 7 and its horizontal arm, 23′, forwardly projecting over and in contact with the yoke 6.

Registering screw-threaded apertures, 24 and 25, are provided in the magnet arm 23 and the yoke 6 to receive a screw-threaded post, 27, which has bolted to its top, as by a nut, 29, a transverse bar, 30, having its ends bent up into a vertical plane to receive the customary stems of the gongs, 31. A lock nut, 32, upon the post acts as a head to clamp down upon a suitable casing, 33, slotted as at 34 to receive the screw post 27, and held on the base to overlie the ringer movement by the clamping action of nut 32.

It will be observed that the stem 15 and the post 27 are not in vertically alining position, so that their receiving apertures do not interfere with each other, and that the screw post 27 projects into and secures together both the permanent magnet 23 and the yoke 6, so forming a positive means of connection between said parts, and with its nut 32 a clamping means for the casing.

The bell above described is made up of a very few parts, easily assembled, easily adjusted, and is therefore cheap in the cost of manufacture of its several parts and in their assemblage.

In the construction shown in Figs. 4 to 6, the base 5′ is of metal, hollow backed, and long enough to afford support to the gongs, 31′, which have their stems mounted on arms, 30′—30′, pivoted to the base by clamping screws, 29′, so that, as indicated in Fig. 5, different sized gongs may be accommodated. Further, the gongs being placed against the base, the clapper-arm 20′ is passed up through the opening 7′ in the yoke and slot 34′ in the casing, and the permanent magnet 23′ extends over the front of the magnet coils and is secured by a screw 27′, the head of which acts as a clamp for the casing.

It will be seen that these constructions, while superficially quite distinct, embody the same invention, and such different forms are illustrated to indicate that changes may be made in detail in the embodiment of my invention without departure from its spirit.

What I claim is:

1. In an electric bell, a base, a yoke, electro-magnets on said yoke, an L-shaped permanent magnet extending over the yoke and along the magnets, a gong and a screw member at one end uniting said permanent magnet and yoke and at the other end supporting said gong.

2. In an electric bell, a base, a yoke, electromagnets on said yoke, an L-shaped permanent magnet extending over the yoke and along the magnets, a casing overlying the magnets, a gong, a screw member at one end supporting said gong and at the other end screw-threaded for engagement of said yoke and permanent magnet, and a nut upon said

screw member clamping together said yoke, magnet, and casing.

3. In an electric bell, a base, a yoke mounted thereon, electromagnets on the yoke, and an L-shaped permanent magnet having its longer leg lying adjacent the base and its shorter leg overlying the yoke, a casing encompassing said parts having its upper and lower walls engaging respectively the upper surface of the shorter leg of the permanent magnet and the end of the longer leg thereof, and a screw member taking through the casing, shorter leg, and yoke, to hold the casing in place, said upper wall of the casing having a slit to permit emplacement of the casing in position over the permanent magnet, as described.

4. In an electric bell, a base, a yoke mounted thereon, electromagnets on the yoke, a gong, a hammer for the gong operable by the electromagnets, an L-shaped permanent magnet having its longer leg lying adjacent the base and its shorter leg overlying the yoke, a casing encompassing the permanent magnet, yoke, and electromagnets, having its upper and lower walls engaging respectively the upper surface of the shorter leg of the permanent magnet and the end of the longer leg thereof, a gong-supporting screw member, a nut thereon, said screw member taking through the casing, shorter leg, and yoke, and said nut adapted to be screwed down into engagement with the upper wall of the casing to hold it in place, the upper wall having a slit to permit emplacement of the casing in position over the permanent magnet as described, or to permit removal thereof without removal of said gong-supporting screw member.

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

HERMAN A. SCHMIDT.

In the presence of—
W. LINN ALLEN,
MARY F. ALLEN.