

(No Model.)

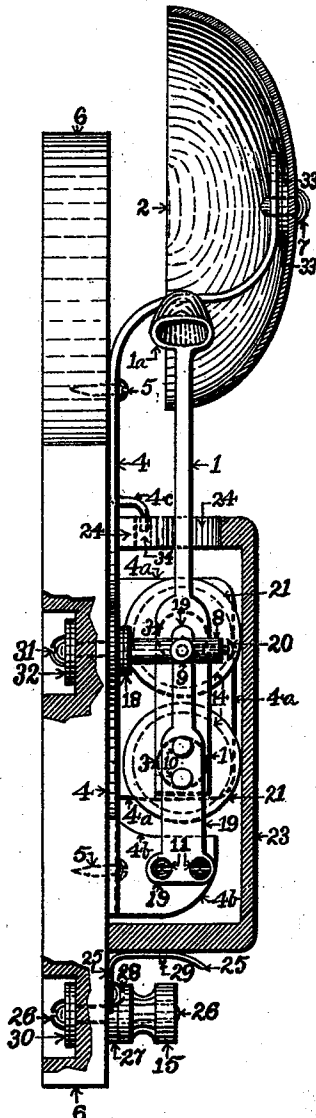
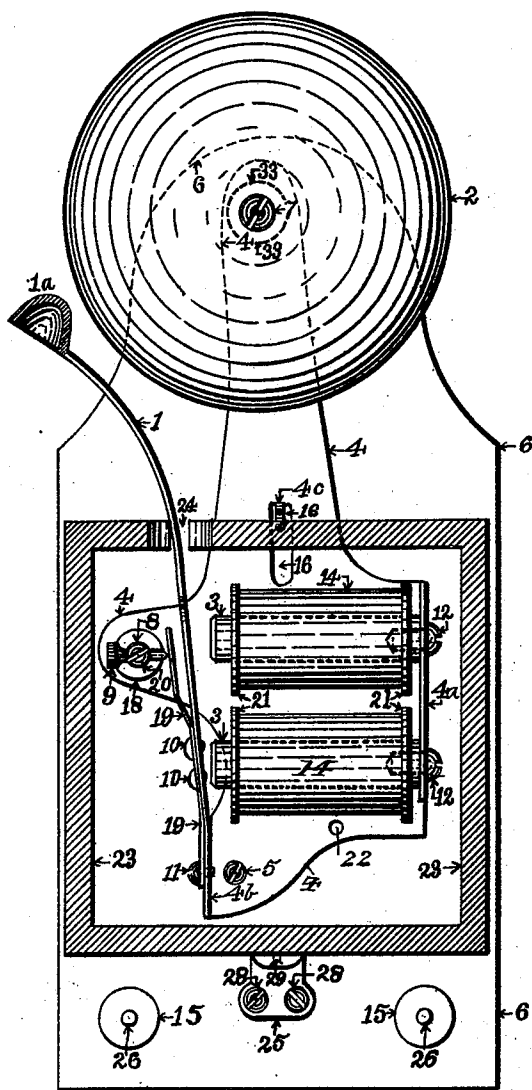
J. L. MOORE.
ELECTRIC BELL.

No. 499,305.

Patented June 13, 1893.

Fig. 1.

Fig. 2.



WITNESSES:
James E. Bates.
Erastus D Moore

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INVENTOR

UNITED STATES PATENT OFFICE.

JOHN LEA MOORE, OF NEW YORK, N. Y.

ELECTRIC BELL.

SPECIFICATION forming part of Letters Patent No. 499,305, dated June 13, 1893.

Application filed June 6, 1892. Serial No. 435,592. (No model.)

To all whom it may concern:

Be it known that I, JOHN LEA MOORE, a citizen of the United States, residing at No. 77 Jane street, New York, in the county and State of New York, have invented some new and useful Improvements in Electric Bells, of which the following is a specification.

This invention has for its object to improve and simplify the construction of electric bells, whereby the same may be cheaply manufactured, yet maintaining a high standard of efficiency.

In accordance with this invention the supporting frame for the bell mechanism is made in a single piece, being struck up from sheet metal, and comprises a base bent outward at its upper end to support the gong, and having two outwardly extended projections, to one of which the electro-magnet is attached, and to the other of which the supporting spring for the armature of said electro-magnet is attached, said frame having holes to receive the screws by which the frame may be attached to a back board, and also having a hole for the post which supports the contact screw, and also a hole for the circuit wire. The bell hammer, its supporting arm, and the armature of the electro-magnet are all formed in a single piece, being struck up or stamped from a piece of iron, the bell hammer being made cup shaped to better adapt it for the purposes designed, while that portion of the piece which constitutes the armature is made quite broad. Suitable means are also provided for holding the cover which incloses the bell mechanism.

Figure 1, is a front elevation of my improved electric bell, the box or cover being taken in section to disclose the operating parts, and Fig. 2, a side elevation of the electric bell shown in Fig. 1, the box or cover and bell being shown in section.

The bell hammer or knocker 1^a, is made cup-shaped, and formed integral with the arm 1, which is made quite long and slender, and attached at its lower end to a suitable projection on the supporting frame. The supporting frame, which is made in one piece, of sheet metal, comprises the base 4, having an outwardly extended arm at its upper end to which the gong 2, is attached by screw 7 or otherwise; the outwardly bent portion or projection 4^a, to which the magnet cores 3, 3, are

attached by screws 12, or otherwise; the outwardly bent portion or projection 4^b, to which the lower end of the supporting spring which forms an extension of the hammer carrying arm 1 is attached by screws 11, or otherwise, and the outwardly and downwardly turned projection 4^c, at a point just above the central part of the base 4, which is adapted to hold the cover 23 of the bell mechanism. This supporting frame has several holes formed in it preferably at the same time that it is stamped out, two of which receive the screws 5, 5, by means of which said frame is secured to the back board 6, and another of which receives the post 8, while the hole 22 is provided for the purpose of permitting the passage of the circuit wire, not shown, which is connected with the coils 14, wound on the cores 3, and held in place by the end disks 21, 21.

The bell hammer carrying arm or lever extends down by the poles of the magnet, and at such point is made quite broad to serve as the armature of said magnet. This one-piece armature and bell hammer carrying arm is secured to the upper end of its supporting spring by rivets 10, 10.

An adjustable contact screw 9, passes through the post 8, and is adapted to bear against or co-operate with the contact carrying arm 19, attached to the armature, or to its supporting spring, said contact screw 9, being secured in whatever position it may be placed by the set screw 20.

The post 8 is insulated from the base by the washer 18, and said post is held in position by a screw 31, a suitable washer 32, being placed next the head of said screw.

Two binding posts 15 are secured to the back board by screws 26 or otherwise, suitable washers as 30 being placed next the heads of said screws.

The cover 23 for the bell mechanism has a hole or slot at its upper side through which the arm 1 passes, and in which it is free to work, and said cover in addition to being held in position by the downwardly turned projection 4^c, is also engaged and held by the spring acting catch 25, which is secured to the backboard by the screws 28 or otherwise. In this instance I have also interposed a washer as 33, between the gong and its support.

If the cover 23 is omitted as is frequently the case, the supporting frame may be made without provision for supporting said cover.

It will be seen that by making the supporting frame for the parts all in one piece, and by making the bell hammer or knocker, its supporting arm and the armature all in one piece, and by constructing and arranging the other parts of the bell in the manner described, it may be very cheaply made.

I claim—

1. In an electric bell, the stamped up cup-shaped bell hammer, its supporting arm and the armature of the electro-magnet, all made in a single piece, substantially as set forth.

2. In an electric bell, the stamped up cup-shaped bell hammer, and its supporting arm made in a single piece, substantially as set forth.

3. In an electric bell, the supporting frame made of a single piece of sheet metal, comprising the base 4, having the outwardly bent portion to which the gong is attached, the pro-

jection 4^a, to which the magnet is attached, the projection 4^b, to which the supporting spring of the armature and bell hammer-carrying arm is attached, and having holes to receive screws 5, 5, and the post 8, and also having the hole 22, for the circuit wire, substantially as set forth.

4. In an electric bell, the supporting frame for the bell mechanism having the outwardly and downwardly extended projection 4^c, formed integral with it, and the spring catch 25, attached to it, combined with the cover for the bell mechanism adapted to be held in position by said projection 4^c, and catch 25, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 31st day of May, 1892.

JOHN LEA MOORE.

Witnesses:

JAMES H. BATES,
ERASTUS D. MOORE.