(No Model.)

A. H. PALMER.

ELECTRIC BELL.

No. 318,647. Patented May 26, 1885.

Fig. 1.

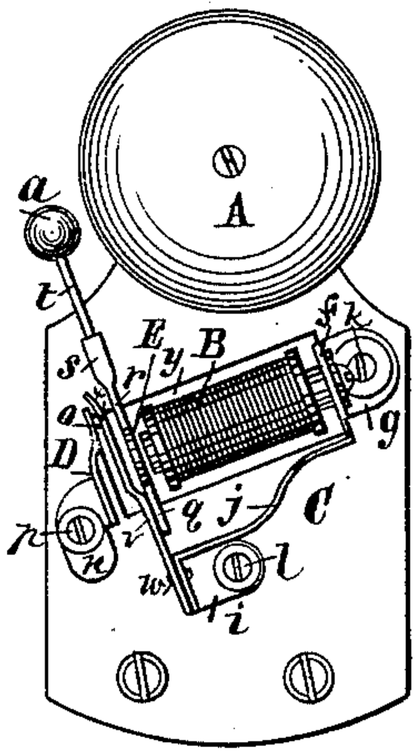


Fig. 8.

Fig. 9.

Fig. 2.

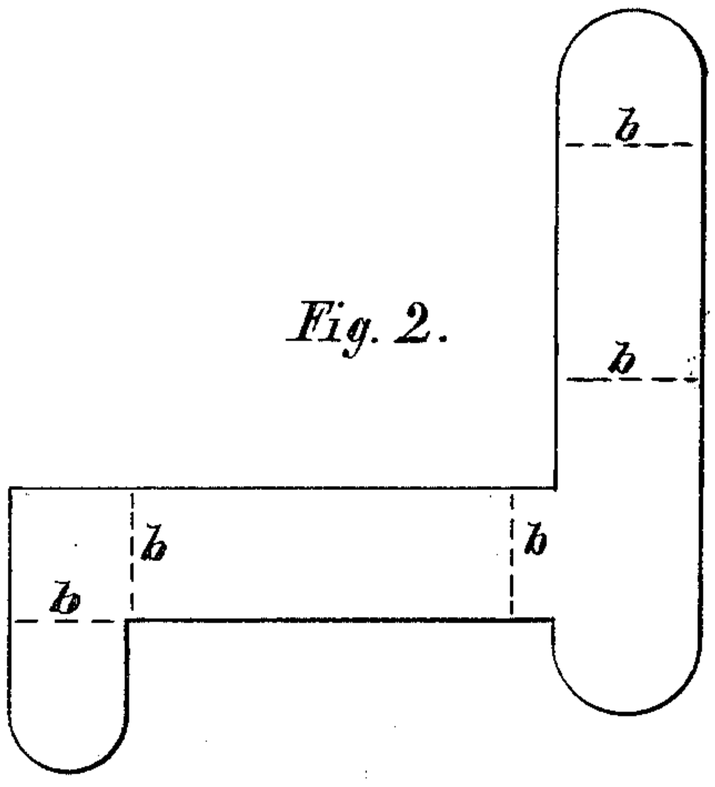


Fig. 3.

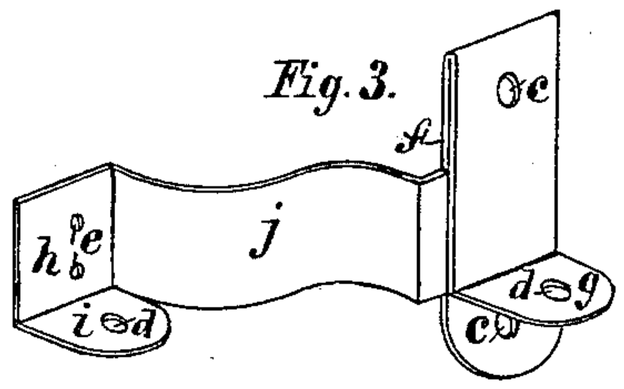


Fig. 4

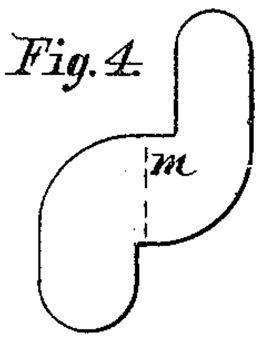


Fig. 5.

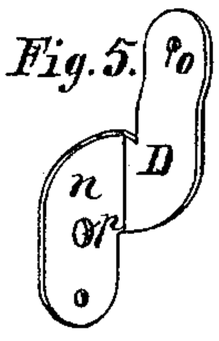


Fig. 6.

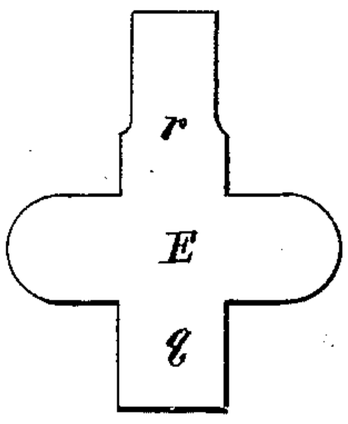
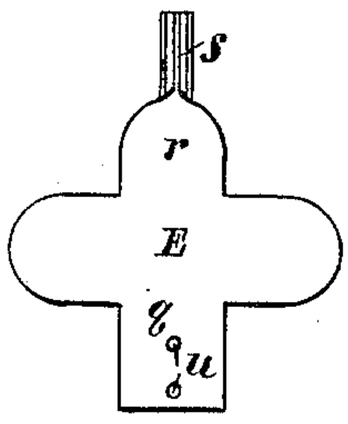


Fig. 7.



Attest;

Wm. H. Drury.
J. P. Duncan.

Inventor;

Augustus H. Palmer,
per Edw. Dunmer, atty.

UNITED STATES PATENT OFFICE.

AUGUSTUS H. PALMER, OF UTICA, NEW YORK.

ELECTRIC BELL.

SPECIFICATION forming part of Letters Patent No. 318,647, dated May 26, 1885.

Application filed April 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS H. PALMER, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Electric Bells, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists in the improved construction of certain parts of an electric-bell device, as hereinafter set forth, the primary object of the invention being economy in manufacture.

In the drawings, Figure 1 is a front view of an electric-bell device embodying my invention. The other eight figures of the drawings, to be explained hereinafter, illustrate details of the device and their construction, and are drawn on a larger scale than Fig. 1.

The gong A, hammer *a*, and electro-magnet B are located with reference to each other, as shown, there being the usual support or base-board, C.

I cut from sheet metal a piece of the shape shown in Fig. 2. This piece is then bent at the places of the dotted lines *b* and in such a manner as to form the piece as shown in Fig. 3, and punched to have the holes *c* for the screws which enter the cores of the magnet holes *d*, to receive screws for holding the piece on the base-board, and holes *e* for rivets. The piece thus constructed forms the back piece, *f*, of the magnet, a stand having a foot, *g*, to support the magnet, a stand, *h*, having a foot, *i*, to support the spring and armature, and also a connecting-bar, *j*, to hold said stands in fixed relation to each other. The feet *g* and *i* are fastened to the board C by means of screws *k* and *l*. Another piece of the form shown in Fig. 4 is cut from sheet metal, and, having been bent up at right angles along the the dotted line *m*, forms a stand, D, having foot *n*, as shown in Fig. 5. This stand bears a contact-point, *o*, and, a hole, *p*, having been punched in the foot, is fastened to the base-board by a screw at *p*. Another piece of the form shown in Fig. 6 is cut from sheet metal, to form an armature, E, and arms *q* and *r*. The arm *r* having been rolled up at its outer end forms a socket, *s*, to hold the rod *t* of the hammer, and holes *u* for rivets having been punched in the arm *q*, the piece is complete, as shown in Fig. 7. A piece (shown in Fig. 8) is cut from sheet spring metal and, having been suitably stamped up, rivet-holes V and W having been punched therein, forms the spring F, as shown in Fig. 9. A contact-point, *x*, is formed on this spring. This spring is fastened to the arm *q* of the armature at *v*, and fastened to the stand *h* by rivets at *w*. Thus the armature, spring, and hammer are supported in suitable relation to each other and other parts of the device, whereby the required movements of the armature, swing of the bell-hammer, and contact of the points *o* and *x* are obtained. The stand *h*, and hence the spring F and the stand D, being insulated from each other, as by means of the base-board C, which may be of insulating material, are suitably connected to opposite poles of the battery. The base-board C has a recess, *y*, cut therein, so that the electro-magnet may be sunk partially below the surface of the board.

The device, having the parts described formed as set forth, is simple and effective in operation, and is economical in construction.

I claim as my invention—

1. In an electric-bell device, a back piece, *f*, stand having foot *g*, stand *h*, having foot *i*, and connecting-bar *j*, formed of one piece of sheet metal, substantially as and for the purposes set forth.

2. In an electric-bell device, a stand, D, having foot *n*, the same being one piece of sheet metal bent at right angles to form both the foot and upright part, as shown and described, and bearing a contact-point, *o*, as set forth.

3 In an electric-bell device, an armature, E, having arms *q* and *r*, and socket *s*, formed of one piece of sheet metal, substantially as and for the purposes set forth.

4. The combination of the back piece, *f*, stand *h*, and connecting-bar *j*, formed of one piece of sheet metal, stand D, armature E, having arms *q* and *r*, and spring F, substantially as and for the purposes set forth.

AUGUSTUS H. PALMER.

Witnesses:
E. B. HASTINGS,
H. A. HASTINGS.