C. HEISLER.

Electric Alarm-Bell.

No. 227,433. Patented May 11, 1880.

FIG. 1.

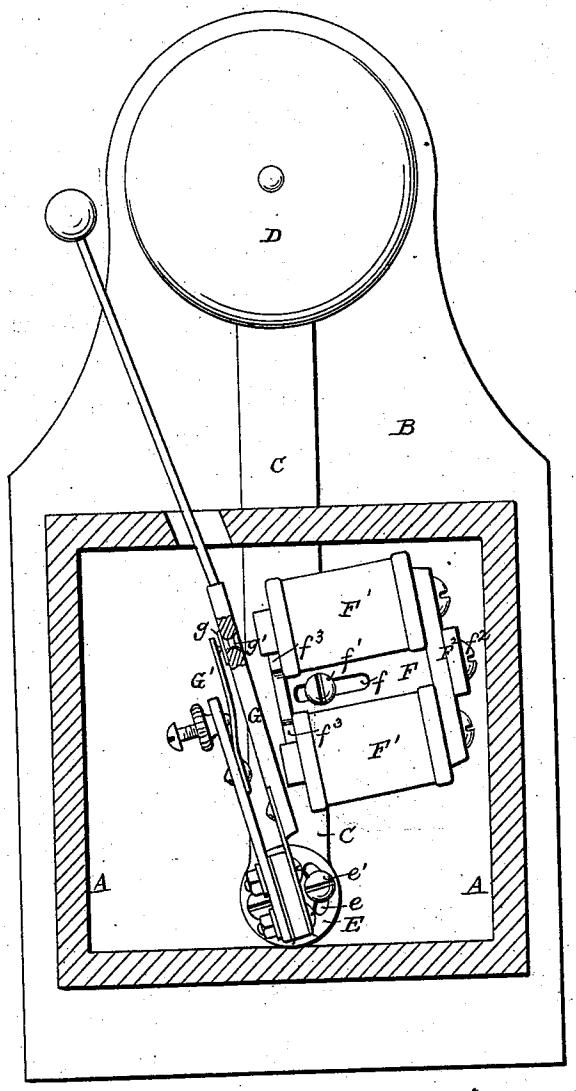


FIG. 2.

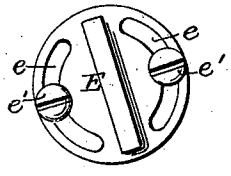


FIG. 3.

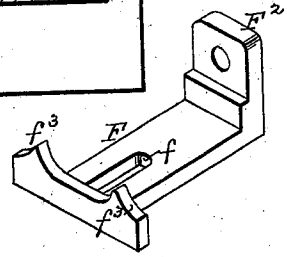
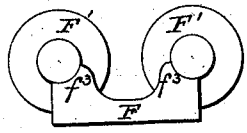


FIG. 4.



ATTEST:

Robert Burns

R. Wohlfarth

INVENTOR:

Charles Heisler

M. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES HEISLER, OF ST. LOUIS, MISSOURI.

ELECTRIC ALARM-BELL.

SPECIFICATION forming part of Letters Patent No. 227,433, dated May 11, 1880.

Application filed February 10, 1880.

To all whom it may concern:

Be it known that I, CHARLES HEISLER, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Electric-Alarm Bells; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention consists—

First, in the provision on the magnet-holding plate or frame of projecting wings for holding the electro-magnets in their proper position, as will hereinafter more fully appear.

Secondly, in the provision, in an alarm-bell, of an adjustable turning-plate, to which the armature and circuit-breaking device are attached, the purpose being to enable the bell-hammer (which is carried by the armature-bar) to be adjusted in relation to the bell without bending the bell-hammer stem, which is the usual mode of accomplishing this adjustment.

Thirdly, in an improved mode of attaching the platina contact plate to the armature. In this the platina plate is soldered onto a copper stem or rivet, which is afterward riveted in a hole in the armature, the purpose being to form a ready mode of attachment and detachment, and to obviate the objectionable features of corrosion met with when the platina plate is soldered onto the iron of the armature, and in case the platina is burned through by an induced current the copper rivet will answer as a good conductor.

In the drawings, Figure 1 is a front view with parts in section. Fig. 2 is a detail view of armature adjustment. Fig. 3 is a perspective view of the electro-magnet holding-frame. Fig. 4 is an end view of the electro-magnet holding-frame.

A is the housing, and B the base, of the alarm-bell. C is a metal plate or frame secured to the base B, and carrying at one end the bell D and the other the turning frame E and the magnet-holding plate or frame F.

The armature G, that carries the bell-hammer, is made adjustable with relation to the bell by being secured to the turning frame E, which can be adjusted by slot or slots *e* and binding screw or screws *e'* in a circular direction on the plate C, as clearly indicated in Fig. 2, and thus obviate the necessity of bending the bell-hammer stem, which is the usual mode of accomplishing this adjustment. The circuit-breaking device G' is also secured to this turning plate or frame E, so as to be adjusted at the same time with the armature.

The platina contact-plate *g* of the circuit-breaking device is soldered onto a copper rivet or stem, *g'*, which is riveted in place in a hole in the armature, as clearly shown in Fig. 1.

The plate or frame F, that carries the electro-magnets F', is provided with an elongated slot, *f*, for the holding-screw *f'*, the purpose being to allow of the adjustment of the magnet with relation to its armature, so as to suit the strength of the electric current used without the necessity of bending the springs by which the armature is pivoted.

F^2 is a projecting lug on the frame F, to which the rear end of the electro-magnet is secured by screw f^2.

At front the electro-magnet is supported and held in proper position by means of projecting wings f^3 of the frame F.

I am aware that electro-magnets have been arranged so as to be adjustable to and from their armatures by means of a micrometer-screw; and this I do not desire to claim.

I claim—

1. The plate F, formed with holding-wings f^3, in combination with an electro-magnet, substantially as and for the purpose set forth.

2. The combination of the turning plate or frame E, slots *e*, and clamping-screw *e'* with the armature of an electro-magnet, substantially as and for the purpose set forth.

3. The combination of the turning plate or frame E, slots *e*, and clamping-screw *e'* with the armature of an electric alarm-bell, as and for the purpose set forth.

4. The combination of the turning plate or frame E, slots *e*, and clamping-screw *e'* with

the armature and circuit-breaking device of an electric alarm-bell, as and for the purpose set forth.

5. The platina contact-plate *g*, secured to the armature by means of a copper rivet, *g'*, in the manner and for the purpose set forth.

6. The electro-magnet F', adjustable by means of slot *f* and screw *f'*, and armature and circuit-breaking device, adjustable by means of slots *e* and screws *e'*, arranged on the same base or frame C, in combination with a signal-bell, D, as and for the purpose set forth.

CHARLES HEISLER.

Witnesses:
ROBERT BURNS,
E. L. MORSE.