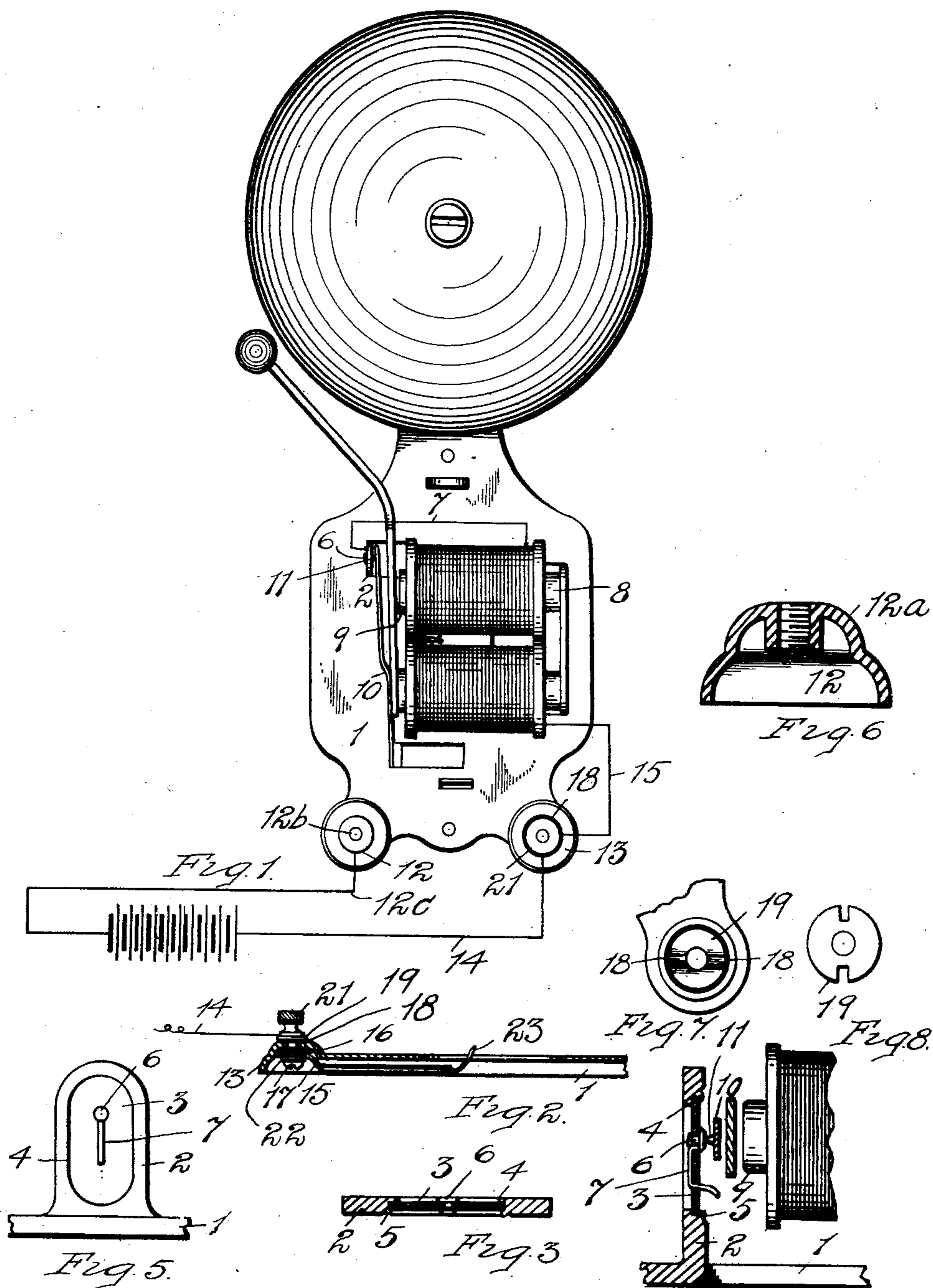


H. W. EDEN.
ELECTRIC SIGNAL BELL.
APPLICATION FILED JAN. 9, 1908.

916,284.

Patented Mar. 23, 1909.



WITNESSES
Clarence E. Day
Alicia Townsend.

INVENTOR
Harold W. Eden
By Parker & Burton
Attorneys.

UNITED STATES PATENT OFFICE.

HAROLD W. EDEN, OF DETROIT, MICHIGAN, ASSIGNOR TO P. R. MANUFACTURING COMPANY,
OF DETROIT, MICHIGAN.

ELECTRIC SIGNAL-BELL.

No. 916,284.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed January 9, 1908. Serial No. 409,913.

To all whom it may concern:

Be it known that I, HAROLD W. EDEN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Electric Signal-Bells, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to electric signal bells.

It has for its object improvements in the means of securing insulating parts necessary for the proper action of such bells.

In the drawings:—Figure 1, is a plan view, showing the bell and indicating the location of the insulating parts. Fig. 2, is a sectional elevation of an insulated binding screw. Fig. 3, is a cross section of an insulated interrupter contact. Fig. 4, is a vertical section of the interrupter contact point and its support. Fig. 5, is an elevation of the interrupter contact point and its support. Fig. 6, is the socket for a binding post. Fig. 7, is a plan view of the upper insulator and holding nut of the post shown in Fig. 2. Fig. 8, is a plan view of the securing nut.

The main base 1 of the bell is made from sheet metal, from which there is stamped out and bent up an interrupter point support 2 through which there is punched an opening, and the opening is filled with an insulating tablet 3. In order to hold the insulating tablet in place, the opening through the standard or support 2 is initially made with a rabbeted edge indicated in Fig. 4 at 4. The insulating tablet 3 made of a size to engage on the rabbet 4, is set in place on the rabbet, and the edge of the metal turned over the insulating tablet. A cut or kerf 5 is made entirely around the hole, and partially through the metal in order to enable the metal to be bent and turned over the plate 3. The contact point 6 of some metal not easily oxidized, such as silver, is inserted through the plate 3, and riveted in place. The conducting wire 7 from this point is secured to the point under the rivet head, and passed to the front of the plate 3, and through the plate below the rivet and thence to the coil. The wire thus threaded through the plate 3 twice, is very firmly held in position. The

bent condition of the wire caused by threading it twice through the plate serves to prevent direct strain on that part of the wire which lies directly in contact with the rivet, and which is the weakest part of the connection. The end of the core 8 is covered with a cap 9 of thin non-magnetic metal, which does not interrupt the magnetic flux, but does prevent a direct contact between the magnetic core and the armature. The armature is provided with the ordinary spring contact piece 10 in which is inserted a point 11 of metal that is not readily oxidizable.

One of the binding posts 12 needs no insulation because the body of the bell is used as a part of the magnetic circuit. The other binding post 13 is insulated from the body of the bell, and is adapted to receive on the upper side the end of the circuit wire 14, and on its under side the end of a short piece of wire 23, which connects the binding post with the coil. To produce the insulation of this binding post, the metal of the body is pressed upward to form a small boss 15 with the cavity on the under side, and with the upper surface of the boss in a plane surface parallel with the main body of the bell. Through this plane surface is a hole for the passage of a screw stem, so much larger than the screw stem intended to be used that the screw stem easily passes through without touching the walls of the opening. On the under side in the cavity of the boss is inserted an insulating washer 16, through which the stem of the screw 17 passes, and which serves to hold the screw centrally in the hole, the washer itself fitting so snugly within the cavity of the boss, as to hold the stem of the screw 17 from moving to either side of the center to a distance sufficient to touch the metal of the bell body. On the top surface of the boss are two radial projections 18, which rise above the surface of the face, and are adapted to engage the notches of a nut washer 19 with an interposed washer 20 of insulating material interposed between the face of the boss and the washer 19. The stem of the screw 17 projects through these washers, and is engaged by binding nut 21 run on the end of the screw from the upper side. The washer 19 is threaded and serves as the primary holding nut to secure the screw 17 and the two insulating washers, and bearing washer 22 in place, and hold the permanently fixed con-

ductor wire 23 in place while the binding nut 21 is released or loosened to admit the insertion in place of the end of the conductor wire 14.

- 5 In making the post which holds wire 12^c the metal of the body of the bell is forced up to form a boss 12^a; the crown of the boss is pierced with a pointed piercing tool, and the metal forced down into the hollow of the
10 boss. The inner face of the opening thus formed is then threaded, the binding screw 12^b makes good contact, and holds firmly the terminal of the circuit wire 12^c.

What I claim is:—

- 15 In an electric bell, in combination with a sheet metal frame having an apertured center portion, the inner edges of the same being

rabbeted, an insulating filler for said opening inserted within the apertured portion of said frame, being secured in place by a bent over 20 kerf composed of an integral portion of the adjacent peripheral edge of the frame portion, a contact point secured in said insulating filler, and a terminal wire secured to said contact point, extending along the surface 25 of said filler to a point thereon distant from said contact point and passing through the filler, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses. 30

HAROLD W. EDEN.

Witnesses:

CHARLES F. BURTON,
VIRGINIA C. SPRATT.