

R. A. HEFFLEY.
GONG ACTUATING MECHANISM FOR ELECTRIC CARS.
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1,065,804.

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Fig. 2.

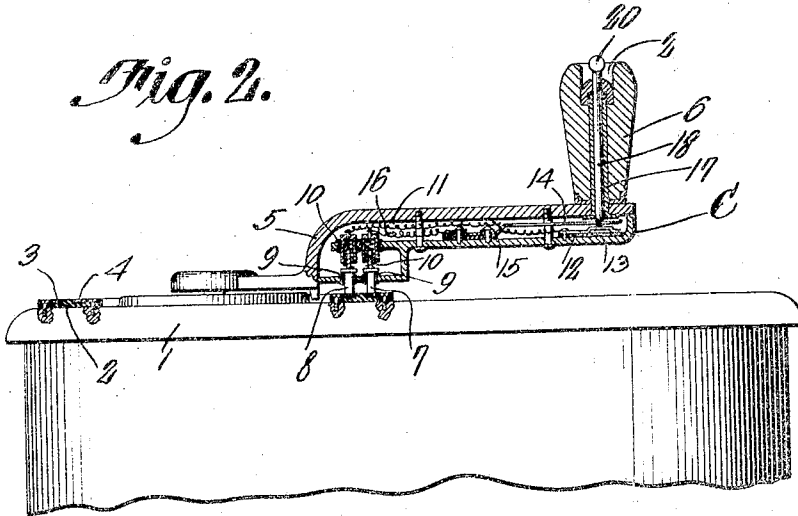
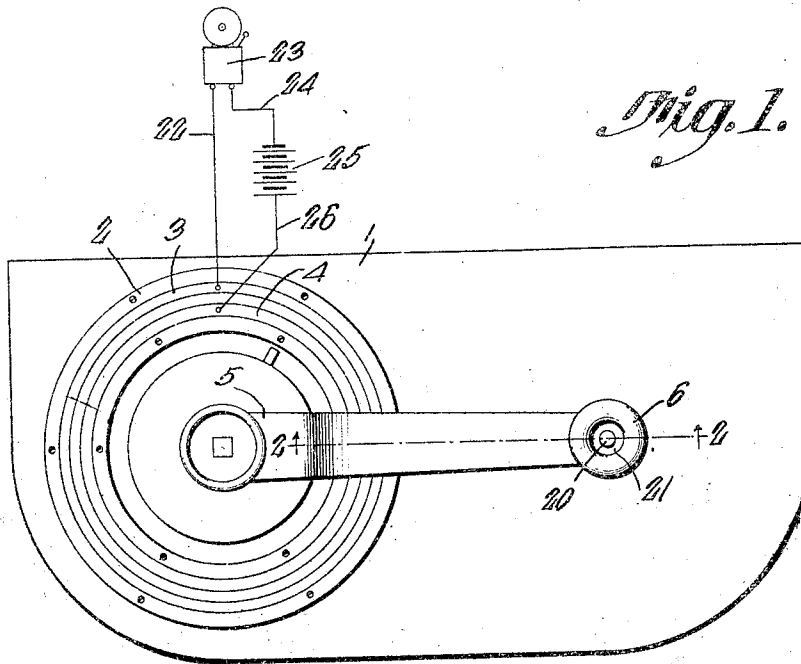


Fig. 1.



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UNITED STATES PATENT OFFICE.

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GONG-ACTUATING MECHANISM FOR ELECTRIC CARS.

1,065,804.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT ALLEN HEFFLEY, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Gong-Actuating Mechanism for Electric Cars, of which the following is a specification.

The present invention relates to improvements in gong actuating mechanism for electric cars, the primary object of the invention being the provision of a gong in which the electrical connections to actuate the same are disposed in operable relation to the controller box and controller handle of an electric car, the controller handle being provided with a novel form of normally open switch, whereby the motorman may at any desired time, regardless of the position of the controller and whether or not the car is in motion, actuate it to close the gong circuit to ring the gong.

A further object of the present invention is the provision of a novel form of switch mechanism disposed within the controller handle and bodily removable therewith, the same being provided with two contacts which normally ride upon two concentric metal rings carried by an insulation body upon the upper surface of the controller box, the controller handle being further provided with a novel form of switch actuating mechanism, so that the gong circuit may be energized at will.

A still further object of the present invention is the provision of a contact carrying mechanism detachably connected to the under side of a controller handle of an electric car, and bodily removable therewith, the same being readily attached without the necessity of altering the usual construction of the handle thus permitting the employment of the handles now in use and not necessitating the discarding of the same as is the usual practice in applying devices of this kind.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of

the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a top plan view of the complete apparatus with the gong and electrical circuit in diagram. Fig. 2 is a side elevation of the complete mechanism, with a section on line 2—2 taken through the controller.

Referring to the drawings, the numeral 1 designates the top of the controller box which has mounted thereon the insulation ring 2 which is disposed concentrically of the shaft of the controller arm, and has mounted therein so as to be insulated one from another, the two concentric metal rings 3 and 4, which constitute the two stationary contact plates of the gong circuit. The controller arm 5 is mounted as usual, the main portion of which is hollow and is actuated by the upstanding handle 6.

Disposed for slidable movement within the removable casing C attached to the underside of the controller arm 5 and normally held in contact with respect to the respective rings 3 and 4, are the metal contact pins 7 and 8 which are slidably mounted within the bushings 9 of insulation carried by the casing of the controller arm 5. The springs 10 are disposed within the casing of the controller arm 5 and are so mounted as to normally hold the said contact pins 7 and 8 downwardly, as clearly shown in Fig. 2. Led from the contact pin 8 is a conductor 11 which is also connected to the metal plate or spring contact 12 disposed upon the block 13 of insulation within the casing adjacent to the handle 6 of the controller. A movable spring contact plate 14, normally exerting a pressure out of contact with the metal contact plate 12, is mounted upon a block 15 of insulation within the controller casing and has led therefrom a conductor 16 which is connected to the contact pin 7.

In order to actuate the spring contact plate or switch 14 so as to cause the engagement thereof with the contact plate 12, a sleeve 17 is mounted concentrically of the handle 6 and has slidably mounted therein a pin 18, whose lower end 19 is disposed to be projected into contact with the spring contact plate or switch 14 to depress the same and close a circuit, the knob 20 of

the switch actuating pin 18 forming in reality a push button within the socket 21 formed in the upper end of the handle 6.

A conductor 22 is connected to and led 5 from the metal ring 3 and is connected to one of the terminals of the electric gong 23, while the conductor 24 is led away from the other terminal of the gong 23 and is connected to one side of the battery 25, or 10 other source of electrical energy, while led from the other side of the battery 25 is a conductor 26 which is led to the metal contact ring 14.

From the foregoing description, taken in 15 connection with the drawings it is evident that the spring contact pins 7 and 8 regardless of the position of the controller arm 5 are in contact at all times with the metal contact rings 3 and 4 and that as long 20 as the switch actuating pin 18 is in the position as shown in Fig. 2, the switches 12 and 14 are separated, but that at any point, the pin 18 may be depressed to close the switch points 14 and 12 and thereby close the circuit to the gong 23 so that the gong may 25 be energized with the controller arm 5 in any position, and consequently with the car moving or at a standstill. It will also be noted that the handle and casing C are 30 bodily removable, so that the usual change may be made in using the controller at either end of the car. Also it is evident that the present device may be readily attached to apparatus now in use.

35 What is claimed is:

In a gong actuator, the combination with a controlling box having a stem, an audible alarm, a source of electrical energy and

two insulated concentric rings disposed 40 upon the controller box and concentrically about the controller stem, of a circuit closing device including a controller handle 45 for detachably engaging the stem, a casing detachably connected to the under side of the controller handle and having a projecting portion above and parallel with the two 50 concentric rings, a projection carried by and within the casing above and in spaced relation with the projecting portion, the projecting portion and the incased projection 55 being provided with two vertically parallel apertures, two metal contacts mounted in the apertures of the parallel portions and disposed to ride upon the concentric rings, sleeves normally mounted in the apertures of 60 the projections within the casing and insulated therefrom, a spring mounted in each sleeve for holding the contacts resiliently in ring engaging position, a conductor led from each of the sleeves throughout the length of 65 the handle, a stationary contact plate connected to one of the conductors, a spring contact plate connected to the other conductor and normally held out of engagement with the stationary contact, and a push pin slid- 70 ably mounted in the gripping handle of the controller and for causing the closure of the contacts at will.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ROBERT A. HEFFLEY.

Witnesses:

OTTO H. HENCMANN,
H. S. MATTHEWS.