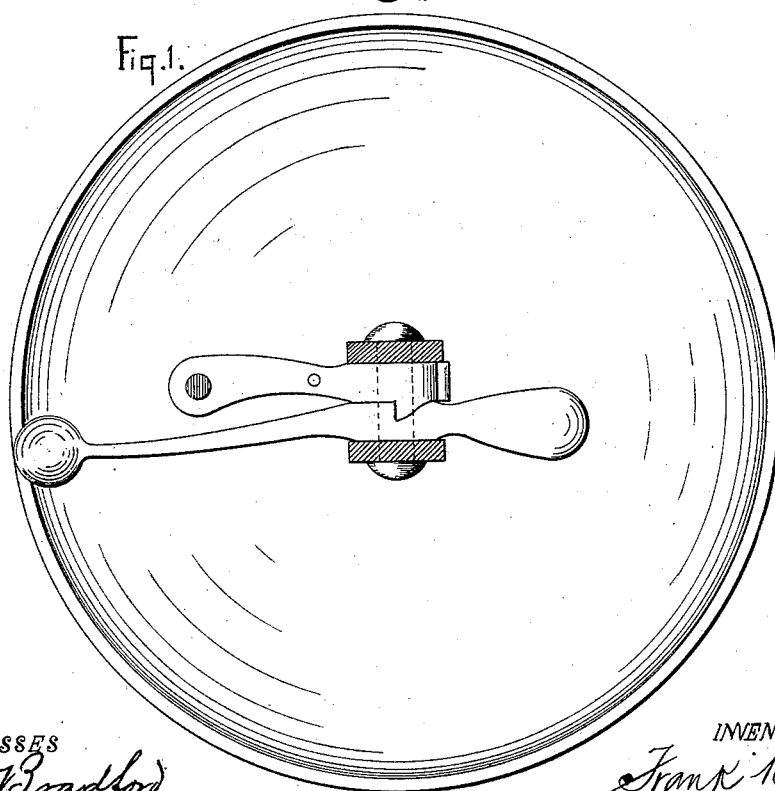
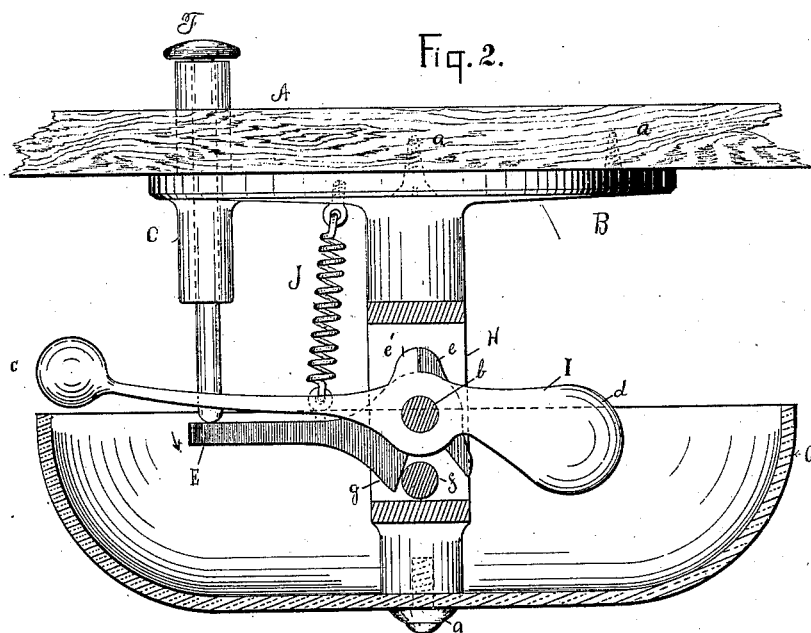


(No Model.)

F. B. RAE.
CAR GONG.

No. 423,392.

Patented Mar. 11, 1890.



WITNESSES
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CAR-GONG.

SPECIFICATION forming part of Letters Patent No. 423,392, dated March 11, 1890.

Application filed November 14, 1889. Serial No. 330,364. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. RAE, a citizen of the United States, and a resident of the city of Detroit, in the county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Car-Gongs; and I do hereby declare that the following specification is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a new and improved form of car-gong specially designed for use on electrically-propelled cars as an alarm-signal, and to meet this requirement the device is constructed so that it can be operated by the foot of the conductor or motor-man. The duties of the motor-man being of such nature as to constantly demand the attention of his eye and hands, it is necessary that the alarm-signal on the car for crossings and danger should be so placed and constructed that it can be operated at the same time the motor-man or conductor is handling the trolley-switch on the car. Accordingly my invention consists in certain details of construction, arrangement, and combination of parts so arranged and constructed that the gong can be operated and controlled by the foot.

All features and parts of the invention are fully and accurately described hereinafter, and the specific points of novelty in my improvement will be designated in the appended claims.

Referring to the accompanying drawings, Figure 1 is an inverted plan view of the car-gong and its annunciating-hammer and its operating parts. Fig. 2 is a central vertical section with parts broken away, showing my invention complete.

Like letters of reference mark like or corresponding parts in both views of the drawings.

Referring to Fig. 2, A represents a portion of the car-floor, having the plate B secured to the under side thereof by the screws *a*.

C indicates a tubular sleeve formed integral with the plate B and depending vertically therefrom in line with the detent-lever E. The sleeve C passes vertically through a perforation in the car-floor, as shown, and is

interiorly provided with a circular bore or orifice, through which the operating-detent F reciprocates.

G designates the gong, made of any suitable resonant metal, preferably brass, and held in its inverted horizontal position upon the end of the plate H by means of the screw *a*, which enters a screw-threaded orifice in the end of the plate H.

I designates an annunciating-hammer fulcrumed upon the short shaft or arbor *b*, and carrying at its forward extremity the impact-hammer *c*, while at its rear extremity *d* is weighted, as shown, in such manner that the normal position of the lever I would approximate the vertical if left free to assume its natural position under the influence of the weight. In other words, the rear extremity of the lever I is heavier than the forward extremity. The detent-lever E is loosely mounted on the same shaft or arbor *b*, and is provided with a laterally-projecting lug *e*, adapted to engage a similar lug *e'* on the lever I. Thus it will be understood that when the forward extremity of the detent-lever E is actuated in the direction of the arrow its consequent movement about the shaft *b* will cause the lug *e* to engage the lug *e'*, thus forcing the forward extremity of the lever I downwardly against the bell G.

J designates a spiral retracting-spring having its lower extremity secured to the detent-lever E, while its upper end is attached to the plate B, the object of this construction being to normally hold the detent-lever E in the horizontal position, and consequently the annunciating-hammer out of contact with the bell G. The weight of the detent F and the tension of the spring J are so balanced that the detent-lever E and its attached parts are normally in the proper position for operation.

f indicates a limiting stop or pin placed in the same vertical plane as the shaft *b*, and serving to arrest further motion of the lever E when the shoulder *g* thereof comes in contact with the stop *f*.

The operation of my invention may be briefly described as follows: The parts being in the position shown in Fig. 2—that is to say, the head of the detent F being the necessary

distance above the sleeve C—the operator will, by applying foot-pressure to the detent F, depress the detent-lever E in the direction of the arrow, consequently causing the engagement of the lug *e* with the lug *e'*, thereby forcing the impact-hammer *c* against the sounding-bell G, as before described. The force of the pressure applied carries the shoulder *g* of the lever E against the limiting-stop *f*, thus arresting further movement of the detent-lever E. But it will be understood that if the pressure of the foot were applied slowly to the detent F the lever E would reach its limiting-stop before the impact-hammer *c* struck the bell G; consequently it is clear that although the lug *e* on the detent-lever carries the lever I until the motion of the former is arrested by the stop *f*, it is on the other hand obvious that the inertia or impetus of the lever I suffices to bring it in contact with the sounding-bell G, and when this action takes place, it is moreover obvious that the stroke administered to the bell G is sharp, quick, and rebounding, and of short duration, since the weighted end *d* exerts its retracting effect as soon as the impetus or inertia of the lever I has been expended with its contact

with the bell G, thus bringing back the lug *e'* against the lug *e*.

Having thus fully described my invention, 30 what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the bell G, of an annunciator-lever carrying an impact-hammer at one extremity and weighted at the other, a detent-lever loosely mounted on the same shaft with the annunciator-lever, and a vertically-operating detent controlling the action of said detent-lever. 35

2. In combination with the bell G of the annunciator-lever I, carrying at one end the impact-hammer *c* and weighted at the other, the lug *e'*, formed on said annunciator-lever, the detent-lever E, loosely mounted on the same shaft with the annunciator-lever I, the lug *e* on the detent-lever, the retracting-spring J, and the detent F. 40 45

In testimony whereof I have hereunto set my hand this 10th day of October, 1889.

FRANK B. RAE.

Witnesses:

CHAS. BRUNDAGE,
F. R. HARDING.