

W. GUILFOYLE.
GONG FOR STREET-CARS.

No. 169,356.

Patented Nov. 2, 1875.

Fig 1.

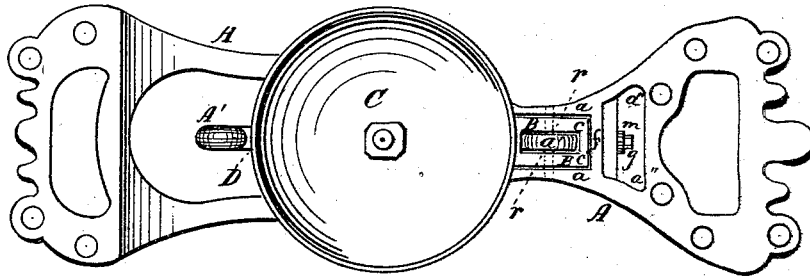


Fig 2.

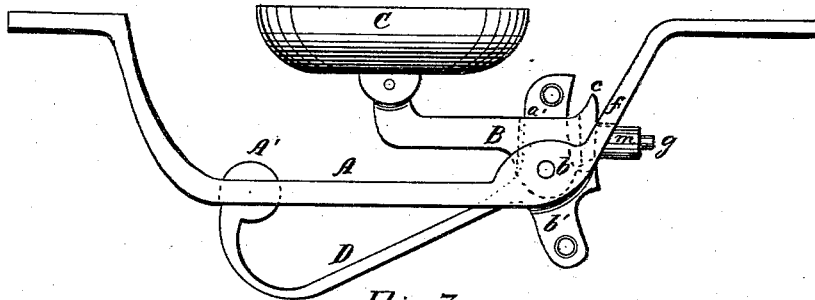


Fig 3.

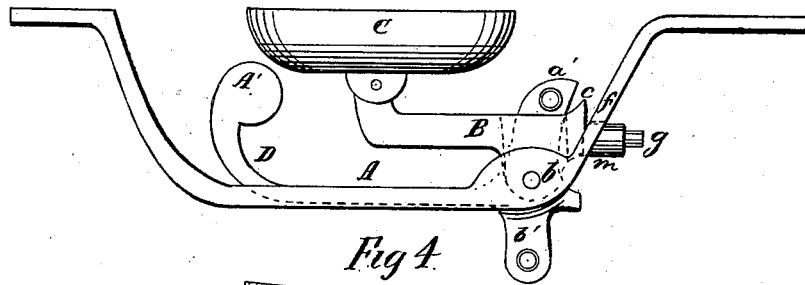
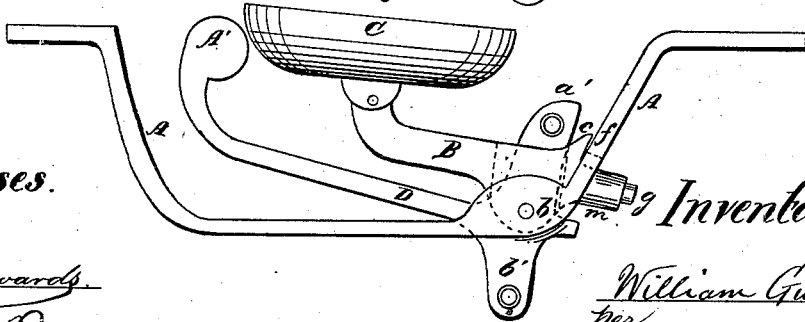


Fig 4.



Witnesses.

W. M. Edwards
R. J. MacFarland

Inventor.
William Guilfoyle
per
James A. Whitney
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM GUILFOYLE, OF NEW YORK, N. Y.

IMPROVEMENT IN GONGS FOR STREET-CARS.

Specification forming part of Letters Patent No. 169,356, dated November 2, 1875; application filed June 1, 1875.

To all whom it may concern:

Be it known that I, WILLIAM GUILFOYLE, of the city, county, and State of New York, have invented an Improvement in Gongs for Street-Cars, &c., of which the following is a specification:

This invention relates to that variety of gongs in which the bell and hammer, having a simultaneous movement, are brought sharply together to sound the bell by the sudden checking of the movement of the bell, which causes the momentum of the hammer to overcome the elasticity of its haft, and thereby be brought into sudden and forcible contact with the bell.

As hitherto made, however, all such gongs, owing to the slight space normally afforded between the hammer and the bell, have been liable to a second vibration of the hammer against the bell, which, by repeating the signal, nullifies the same, and renders the gong unreliable for the purposes for which it is used.

The object of my invention is to obviate this difficulty, and at the same time retain to the gong the sharp, clear, and quick tone and resonance peculiar to the contact of the hammer from the suddenly-checked movement of the bell, as hereinbefore indicated.

My invention consists in a novel combination of an independently-swinging hammer with a pivoted bell, whereby the hammer, after having been caused to strike the bell by the sudden checking of the movement of the latter, is enabled to retire to such distance therefrom that all liability of an accidental repetition of the stroke is avoided.

Figure 1 is a plan view of a gong made according to my invention. Fig. 2 is a side view of the same, showing the hammer in its normal position when at rest. Fig. 3 is a side view of the same, showing the hammer in position preparatory to the requisite movement of hammer and bell together; and Fig. 4 is a like view, showing the position of the parts at the time of the sounding or striking of the bell.

A is the usual bracket, by which the apparatus is attached to the roof of the car, over the platform thereof, in the ordinary or in any suitable manner. This bracket is slotted ver-

tically, as shown at *a*, in order to afford a bearing for the lever B, upon which, in a horizontal position, is arranged the bell C. The lever B is pivoted upon the transverse pin or bolt *b*, and its inner end or short arm *c* constitutes a shoulder, which, by striking the adjacent part *f* of the bracket, limits, by suddenly checking, the upward movement, hereinafter more fully explained, of the bell. When the lever, by its own weight and that of the attached bell, is permitted to descend, it is prevented from falling too far by the stud *g*, which strikes the upper or outer end of the slot *a* in the bracket. To prevent an objectionable jar to the bell in its descent to its normal position, the stud *g* should be covered with a sleeve or cushion, *m*, of india-rubber. In that portion of the lever B contiguous to its pivot *b* it is vertically slotted, as shown at *r*, and through this slot *r* is passed the upper short arm *a'* of the hammer-haft D, the hammer A' being formed upon the free extremity of the aforesaid haft, and the haft itself being pivoted upon the same pin *b* as the bell-carrying lever B. The short lower arm *b'* projects downward from the lever B at a point nearly or quite opposite the upper arm *a'*. An operating-strap, to be extended through the car in the usual way, is attached to one or the other of the arms *a'* *b'*.

If the strap is to be pulled in one direction to operate the gong, it is attached to the arm *a'*, and passes thence through an oblong slot, *a''*, in the adjacent part of the bracket A. If the strap is to be pulled in the opposite direction, it is attached to the arm *b'*, the pull upon the one or the other of the arms aforesaid being, of course, such as to lift or raise the hammer. When a pull is exerted upon one of the short arms of the hammer-haft, as just set forth, the hammer is first caused to swing upward, independent of the bell, until it is brought within a short distance—say one-eighth of an inch, more or less—of the same. This done, the upper arm *a'* strikes the rear surface of the slot *r*, so that the continued movement of the hammer-haft carries hammer and bell together, until the arm or shoulder *c* of the lever B strikes the bracket, and suddenly checks the movement of the bell. Instantaneously on this the momentum or acquired velocity of

the hammer causes the same to overcome the normal stiffness of the haft, and thereby be brought, with a peculiar sharp and sudden impact, against the bell to sound the same.

It is of course to be understood that the haft is to be made more or less elastic to permit this action of the hammer. The haft being released from the pull upon it, as soon as the stroke of the hammer has sounded the gong, both hammer and bell assume their previous or normal positions, the hammer falling to such distance from the bell that any acci-

dental repetition of the stroke by a second vibration of the haft is rendered impossible.

What I claim as my invention is—

The combination of the independently-moving hammer with the bell, capable of moving therewith during a portion of its movement, the whole being arranged for operation substantially as and for the purpose set forth.

WILLIAM GUILFOYLE.

Attest:

JAMES A. WHITNEY,
W. M. EDWARDS.