(No Model.) 2 Sheets—Sheet 1.

J. STEPHENSON.

CAR GONG BELL.

No. 339,342. Patented Apr. 6, 1886.

Fig 1.

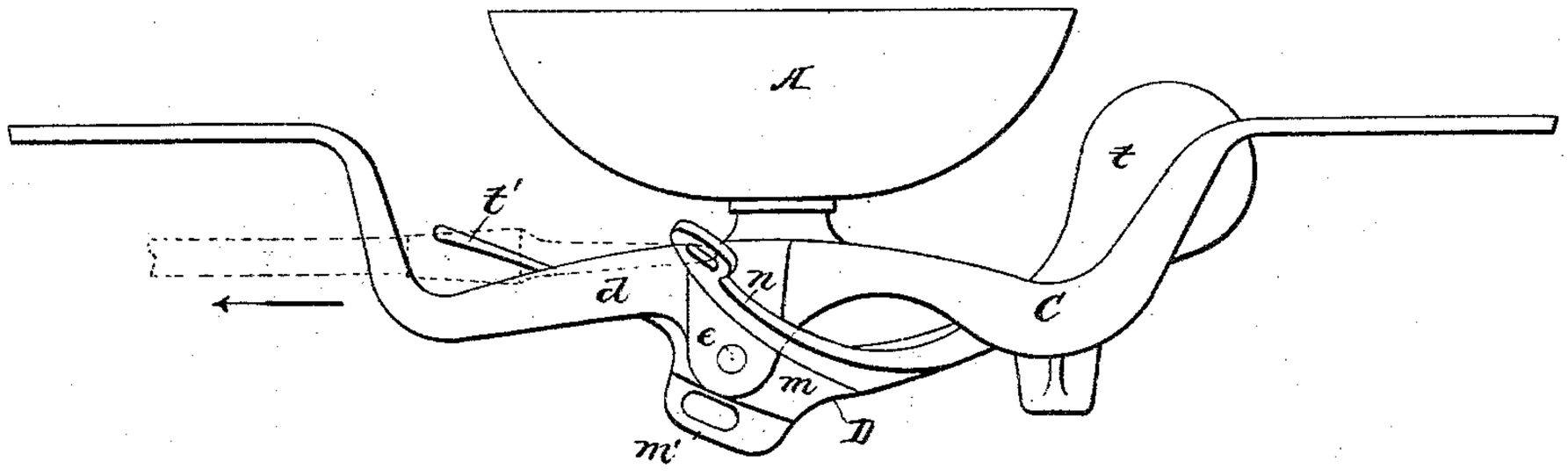
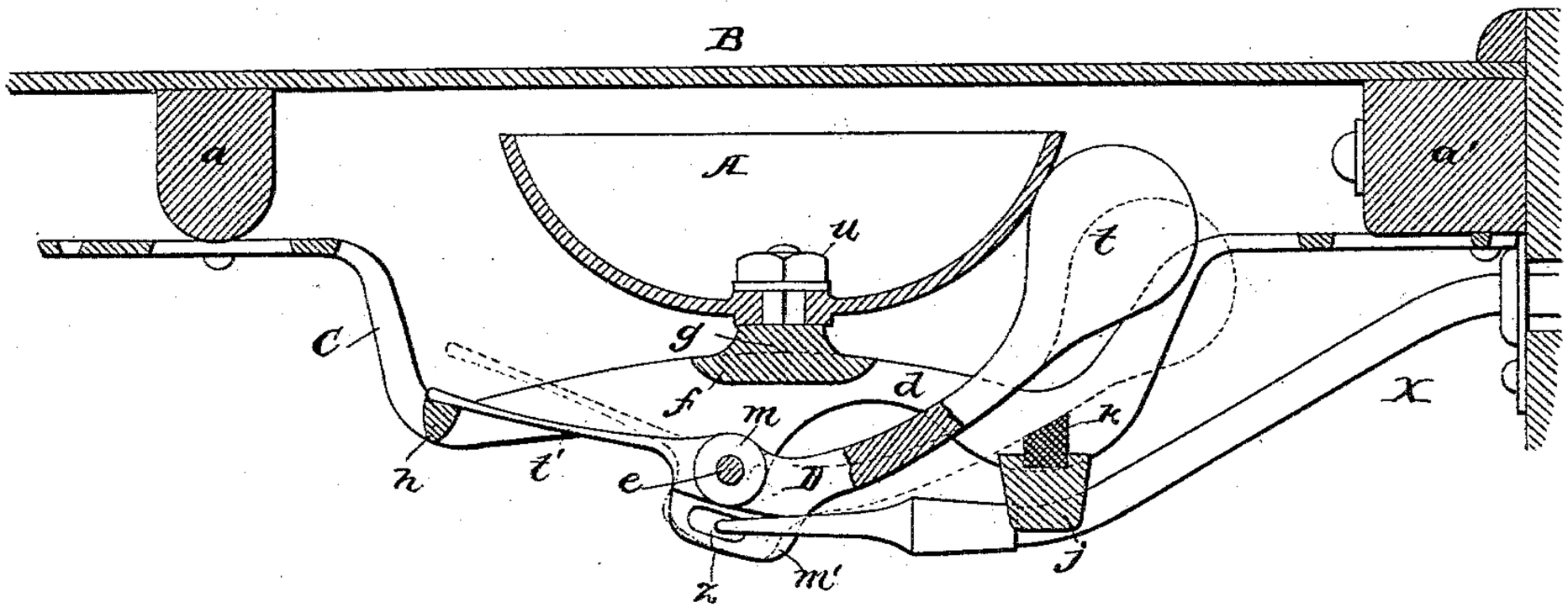


Fig 2.



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(No Model.) 2 Sheets—Sheet 2

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Fig. 3.

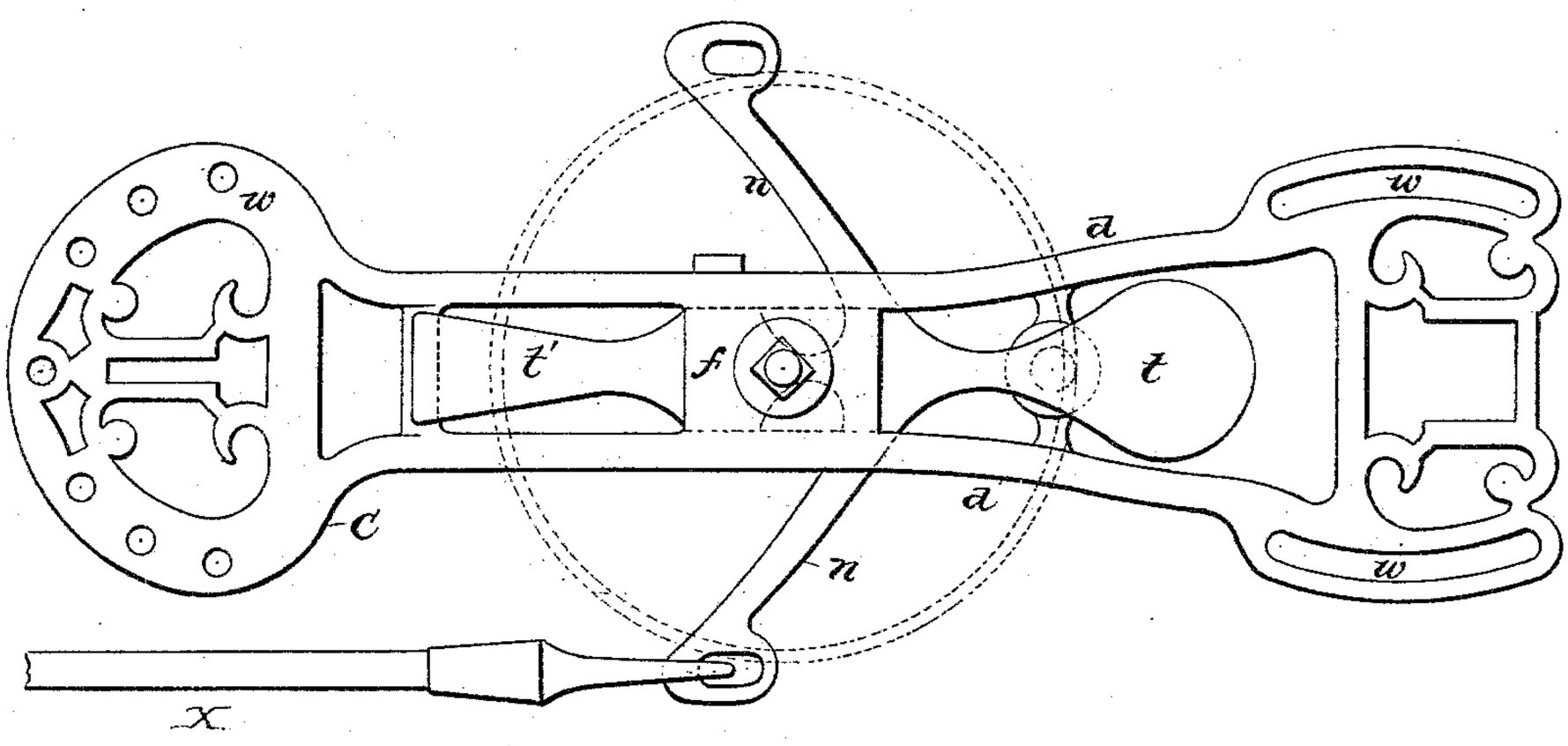
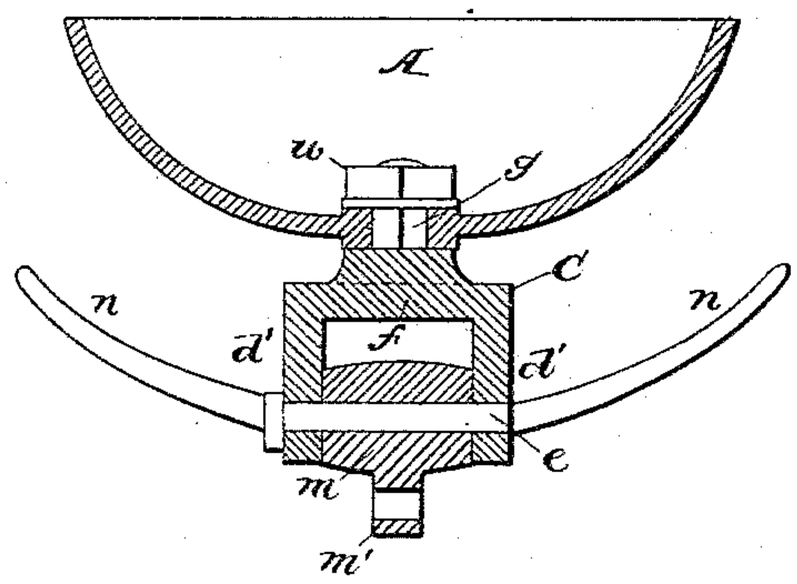


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

CAR GONG-BELL.

SPECIFICATION forming part of Letters Patent No. 339,342, dated April 6, 1886.

Application filed December 23, 1885. Serial No. 186,583. (No model.)

To all whom it may concern:

Be it known that I, JOHN STEPHENSON, a citizen of the United States, and residing in the city, county, and State of New York, have invented certain new and useful Improvements in Tram-Car Gong-Bells, of which the following is a specification.

The desirable qualities of the car-gong are, first, that it shall emit a clear, distinct, ringing sound, free from clatter or muffle; second, absence of the noise of operating mechanism, so that only the desired sound may be heard; third, a quick recoil of the hammer, so that it shall immediately leave the gong after a stroke; fourth, sufficient strength in the recoil apparatus to overcome the friction of the bell-cord and restore the cord to its normal position ready for action; fifth, simplicity and strength of parts, and that they shall be secure against derangement, that the signal may be always reliable; sixth, adaptation to the varied positions in which the gong may be placed, especially near the side verges of car-bonnets, with means of connecting the operating-cord, so that it may pass through the end wall of the car without any bend or assuming an angle, or nearly so, and also that the bell and housing may be clear of the heads of passengers.

My invention is a signal-gong for tram-cars and other uses possessing the qualities and capabilities desired.

I take a gong of ordinary shape and size to be suspended about midway between two rafters of the car-bonnet, the ends of the housing having series of perforations for the fastening-screws to accommodate various spreads of the rafters. The housing deflects between the supporting ends, thus making room for the bell without contact with the roof. The two side bars of the housings are spread at their central part to receive the lengthened axis of the helve, and the two sides of the housing above the axis are united by a bar with a standing post, the upper end of which carries the gong. Another bar, toward the back end of the housing, unites its two sides and forms a bumper for the tail end of the helve. The sharpness of the hammer-blow is promoted by reducing a section of the helve to the consistency of a spring, preferably between the axis and the tail end. This also causes a quick recoil of the hammer and pull-cord. The axis of the helve forms a casing for the true axis, and extends at each side of the helve to give steadiness to the hammer-head when in motion, and through the lengthened axis as a casing passes the real axis, with its ends secured in the sides of housing. Forward from the axis another cross-bar holds a cushion, on which the hammer normally rests, and which prevents noise when the hammer falls. A projection from the helve at or near the axis drops below the housing, and is provided with an eye or other convenient device for receiving or attaching the operating bell-cord. In some cases from either side of the helve, at or near the axis, projects a supplemental arm of form, length, and construction desirable to attach the cord eccentric to the axis of the helve, and also afford leverage for giving motion to the hammer.

My improved car-gong is illustrated in the accompanying drawings, in which Figure 1 is a side elevation. Fig. 2 is a longitudinal section showing the gong applied in position to the bonnet-rafters of a car. Fig. 3 is a plan of Fig. 1, the bell being removed and its position indicated by dotted lines. Fig. 4 is a transverse section.

C is the housing, which is a suitable metallic frame depressed or sunken at the center, and having side bars, *d d*, a central cross bar or plate, *f*, from which rises the post *g*, that supports the bell A, the latter being confined to the post by a nut, *u*, as best shown in Figs. 2 and 4. In the elevated ends of the housing are openings *w w* for the passage of screws, which secure the housing to the rafters *a a'* of the car-bonnet B, the said openings being so situated as to permit this attachment whatever may be the distance between the rafters.

d' d' are the widened portions of the side bars, *d d*, of the housing, through extends the true axis *e* of the helve D, the lengthened axis of which is formed by a hub, *m*, formed upon the central portion of the helve and fitting between the widened portions or ears of the side bars, and receiving the axis *e*, upon which the helve vibrates. The arm *t* of the helve is thickened to form the hammer, and the arm or tail *t'* is reduced in thickness to constitute a spring, and the cross-bar *h*, connecting the side bars, *d*, of the housing, is so arranged as

to be struck by the tail of the helve before the hammer strikes the bell, so as to cause a quick recoil of the hammer and a drawing outward of the pull-cord X. The forward cross-bar, *j*, connecting the side bars of the housing, supports the elastic cushion *k*, of any material which is a non-conductor of sound—as gum, wood, fabric, &c.—upon which the hammer falls at its recoil with the effect above described.

A projection, *m'*, from the hub *m* drops below the housing, and is provided with an eye, *z*, or is otherwise constructed for the attachment of the pull-cord X, and in some instances I project from either or from both sides of the helve lateral arms *n*, which extend beyond the axis *e*, and have eyes at the ends, or are otherwise constructed for the attachment of the bell-cord, the arrangement of which in such case is illustrated in Fig. 3, and in dotted lines, Fig. 1, the end of the supplemental arm being above the axis, so as to afford leverage for giving motion to the hammer when the cord is pulled in the direction of the arrow, Fig. 1.

It will be evident that the construction of the parts above described may be varied to a certain extent without departing from the main features of my invention.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A car-gong having a housing provided with a cross-bar, a hammer hung on an axis about midway of the length of its helve, the section of the helve remote from the hammer-head forming a spring, and the tail end of said spring being arranged to make contact with said cross-bar, as and for the purpose set forth.

2. A car-gong having at either side of its helve a wing or arm extending outward laterally, provided with an eye or other convenience at the end for attaching the pull-cord in a plane above or below the plane of the axis of the helve, substantially as and for the purpose described.

3. A car-gong provided with a housing having a cross-bar, a cushion of flexible material supported by the cross-bar, and a hammer the helve of which is pivotally connected to the housing and adapted to rest upon said cushion when the gong is not in operation, as and for the purpose set forth.

4. The combination, in a car-gong, of a housing provided with a cross-bar, a bell, and a helve pivoted in said housing and terminating at one end in a hammer-head and at the opposite end in a spring-tail, arranged to make contact with the cross-bar when the gong is operated, and an elastic cushion, *k*, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STEPHENSON.

Witnesses:
JOS. B. STEPHENSON,
STUART A. STEPHENSON.