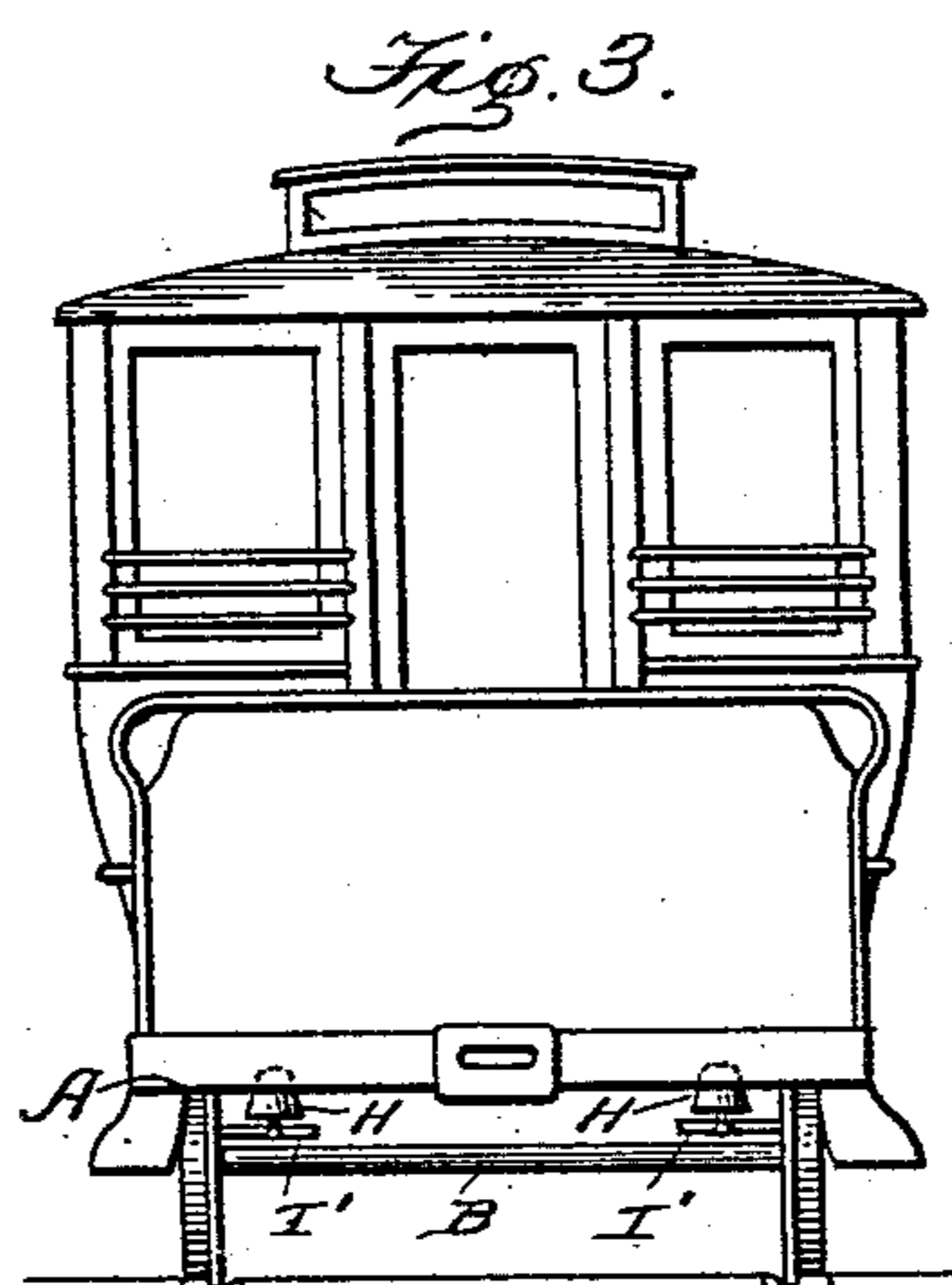
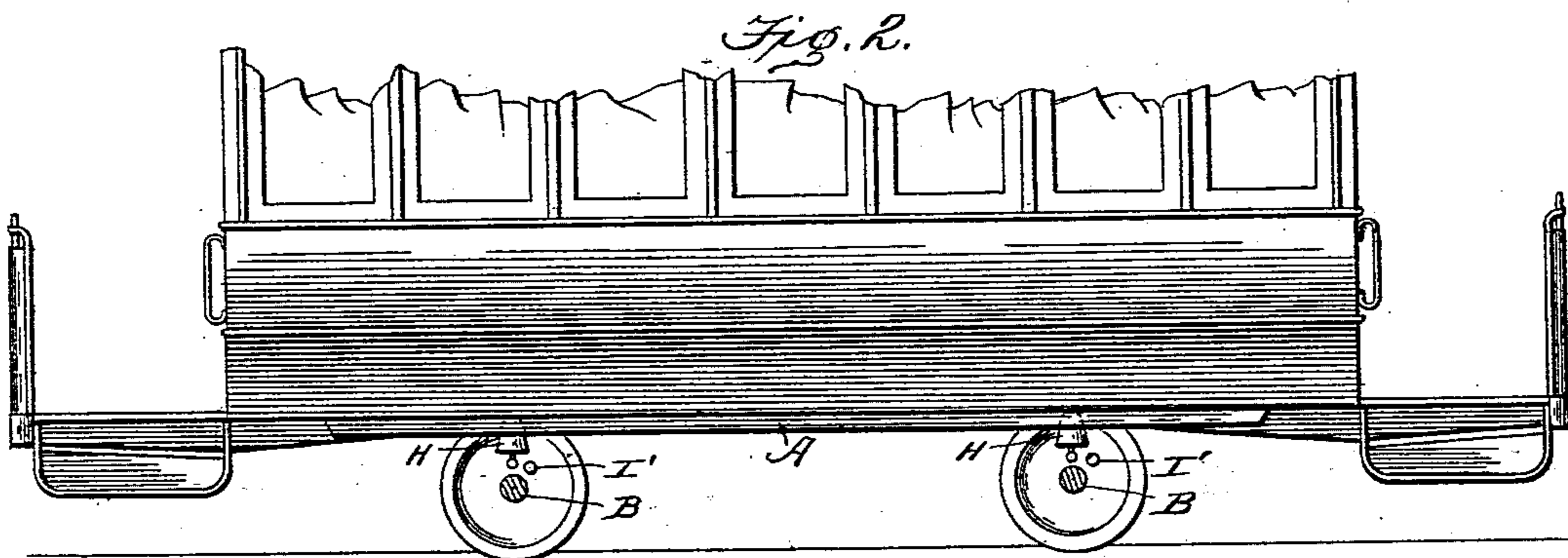
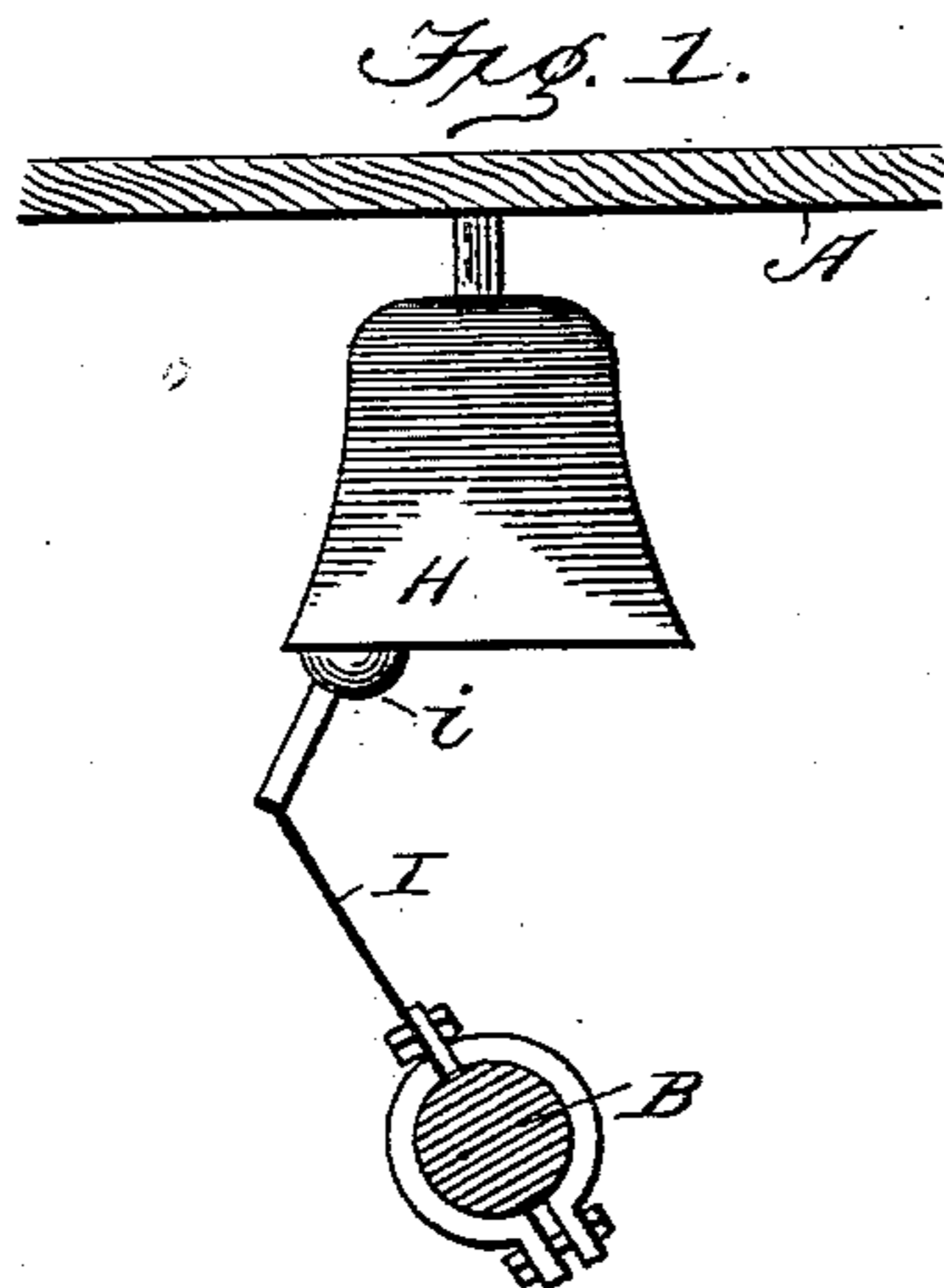


(No Model.)

E. NELSON.
CAR SIGNAL.

No. 555,391.

Patented Feb. 25, 1896.



Witnesses
C. L. Belcher
E. C. Dana

Inventor
Elihu Nelson,
by G. H. Stockbridge
his Attorney

UNITED STATES PATENT OFFICE.

ELIHU NELSON, OF NEW YORK, N. Y.

CAR-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 555,391, dated February 25, 1896.

Application filed November 27, 1893. Serial No. 492,052. (No model.)

To all whom it may concern:

Be it known that I, ELIHU NELSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Warning-Signals for Street-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in alarm devices for vehicles, and more particularly to the matter of furnishing alarms for street-cars operating under the cable or the trolley system.

It has been found that foot-passengers in the streets of our large cities are more liable to accident from cable and trolley cars than from cars drawn by horses. While this may be partly due at present to the novelty of street-car propulsion without the aid of horses, yet it is partly due to the fact that cable cars and trolley-cars approach more silently and comparatively without warning, thereby overtaking the traveler unawares, or else the alarms employed on such cars are of such a sudden and startling nature as to unnerve and temporarily paralyze the person who may be threatened with danger, whereby accidents are caused. This latter is especially the case with children.

It is the object of my invention to provide an alarm which shall be operated all the time the car is moving, the sound being of such a nature that it will not startle nor confuse, but will soon become recognized as belonging distinctively to a motor-car or cable car. After a little the avoiding of such a car will become an instinct, just as it was in the case of the old horse-car. I desire that the sound should not only be free from the liability to startle the people crossing the street, but also not unpleasant to those living or doing business in the buildings along the street. To

this end I employ small bells under the body of the car, and I connect with the wheels or axles of the car-truck devices for operating the said bells whenever the car moves.

My invention will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is a detail elevation of the essential features of my invention. Figs. 2 and 3 are respectively side and end views of a car-truck having my improvements attached thereto, the striking-arm being here shown as connected to the axle through the medium of the wheel.

The bottom of the car is indicated at A and the car-axle at B. An arm is rigidly secured to the axle either directly, as shown at I in Fig. 1, or indirectly through the medium of the car-wheel, as indicated at I' in Figs. 2 and 3. A bell H is suitably supported, as by the bottom of the car, over the axle, in such position that its clapper or an extension thereof will be in the path of movement of the arm rotating with the axle. This construction is simple and inexpensive and provides for a uniform alarm that is not so rapid as to be annoying to persons in the neighborhood, the clapper being operated but once during each rotation of the axle.

What I claim is—

A warning-signal for street-cars consisting of a bell supported under the car-bottom over the axle, and an arm secured so as to revolve with the axle and to pass between the axle and car-bottom and adapted to come in contact with the bell-clapper or an extension thereof once for each revolution of said axle, substantially as described.

In testimony whereof I have signed my name, in the presence of two witnesses, this 25th day of November, A. D. 1893.

ELIHU NELSON.

Witnesses:

G. H. STOCKBRIDGE,
C. L. BELCHER.