

C. CARR.
Car Signal.

No. 105,040.

Patented July 5, 1870.

Fig. 2.

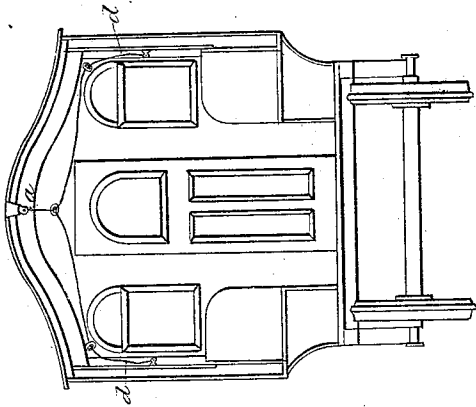


Fig. 1.

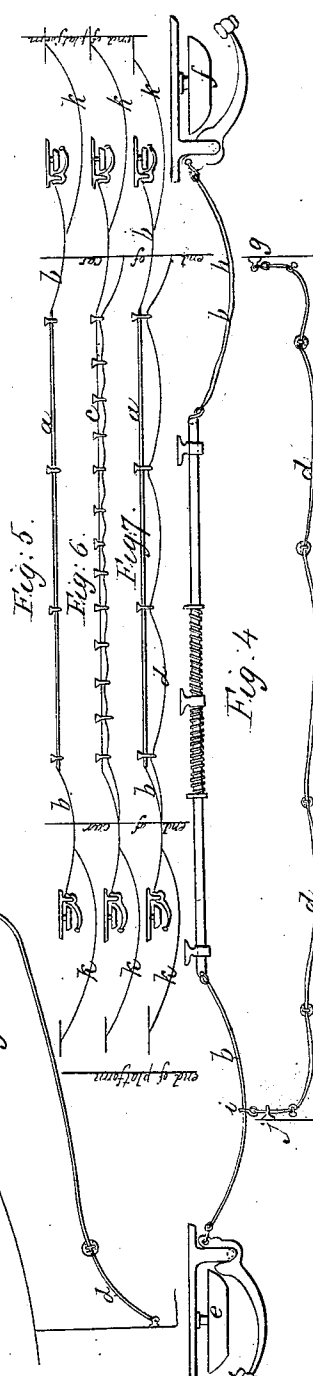
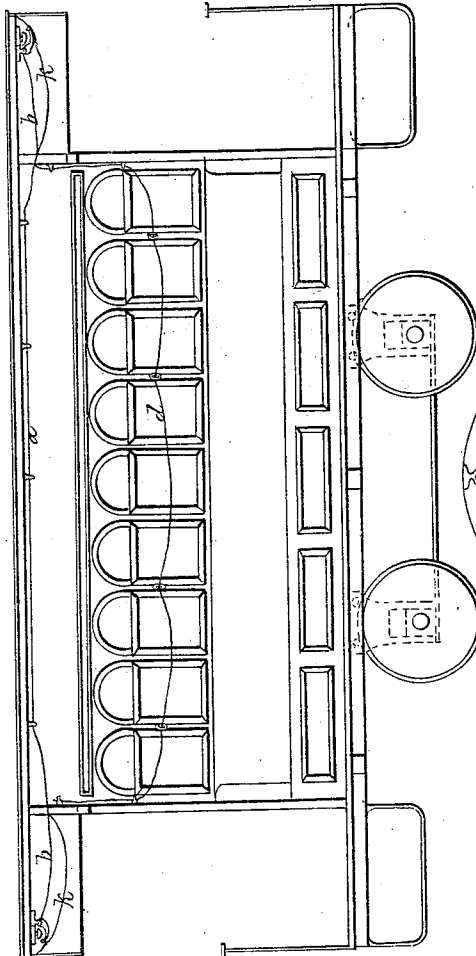


Fig. 5.

Fig. 6.

Fig. 7.

Fig. 4

Witnesses
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CHARLES CARR, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SIGNALING APPARATUS FOR CARS.

Specification forming part of Letters Patent No. 105,040, dated July 5, 1870.

To all whom it may concern:

Be it known that I, CHARLES CARR, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Signaling Apparatus for Cars, of which the following is a specification:

My present invention is in the nature of improvements upon or supplementary to my former invention, filed January 23, 1869, and for which my claims have been allowed by the Patent Office.

It relates, mainly, in its object, to that mode of signaling in street-cars which, while it affords to passengers facilities for signaling the conductor, does not afford like facilities for them to signalize the driver, but does afford the conductor and driver facilities to signalize each other, as more fully set forth below.

Referring to the accompanying drawings, Figure 1 is a side elevation, and Figs. 2 and 3 are end elevations, illustrating the signaling apparatus and its application to the car. Figs. 4, 5, 6, and 7 are side elevations of the signaling apparatus, and illustrating some of the useful modifications to which the invention is adapted.

In Figs. 1, 2, 5, and 7 may be seen a rod, *a*, suspended longitudinally to the car. It has the advantage over lines or straps of not sagging or drooping, while it operates to pull or push, when required, and with less slack.

In Fig. 4 may be seen a rod unlike this in being provided with springs, which tend to keep it in a central position longitudinally, while it is otherwise free to move longitudinally in either direction the required distance, returning, when released, by the action of the springs.

From this rod I conduct a line or strap, *b*, to the signals, which may be located at any convenient point where connection can be made to the rod. Thus the means is provided for the conductor and driver, located at opposite ends of the car, to signalize each other. So also with the ordinary line or straps *c*, but the strap requires to be supported all along its length, or inclosed, or carried outside, to keep it out of reach of the passengers, and prevent them from signaling both dri-

ver and conductor promiscuously. But, while the strap *c* will answer a very good purpose, suitably arranged and protected, it does not so simply and efficiently effect the purpose as the rod does, used either with the springs, as in Fig. 4, or without, as in Figs. 5 and 7.

When used without springs, the rod should be very light, or so suspended in flexible supports as to insure its being easily moved back and forth.

To the straps *b*, which form continuations of the rod *a*, or to the strap *c*, is connected the pull or strap *d*, near to the conductor's end of the car, or so that its being pulled will operate the conductor's signal only, (see Fig. 4,) where the conductor, for illustration, may be understood to be located at the left-hand end of the car, or apparatus under the bell or signal *e*.

The opposite end of the pull, it will be noticed, is connected to the car, or any fixture for the purpose, so that the pulling of the line *d* can only operate the signal at *e*.

When the car starts in the opposite direction, and the conductor and driver exchange positions on the car, the conductor being then under bell or signal *f*, then the pull *d* is to be detached at *g*, and hooked to strap *b* near *h*, while the opposite end is detached from strap *b* at *i*, and connected to a fixture, as at *j*.

The pulls *d* may be conducted along the side of the car, as indicated in Fig. 2, or along under the rod *a*, or direct strap *c*, as illustrated in Figs. 7 and 6, or in any intermediate position convenient for the passengers.

The straps *k* are supplementary pulls, for the convenience of the conductor and driver in signaling each other.

I claim—

The combination of the rod *a*, straps *b b*, or equivalent connections to the bells, and the strap *d*, constructed to be attached to and detached from the straps *b b*, or their equivalent connections, all arranged and operating as and for the purpose set forth.

CHARLES CARR.

Witnesses:

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