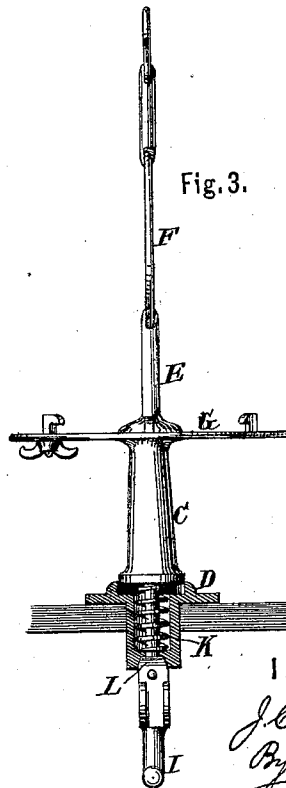
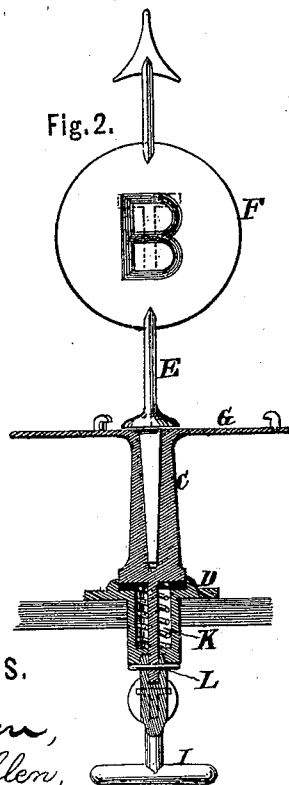
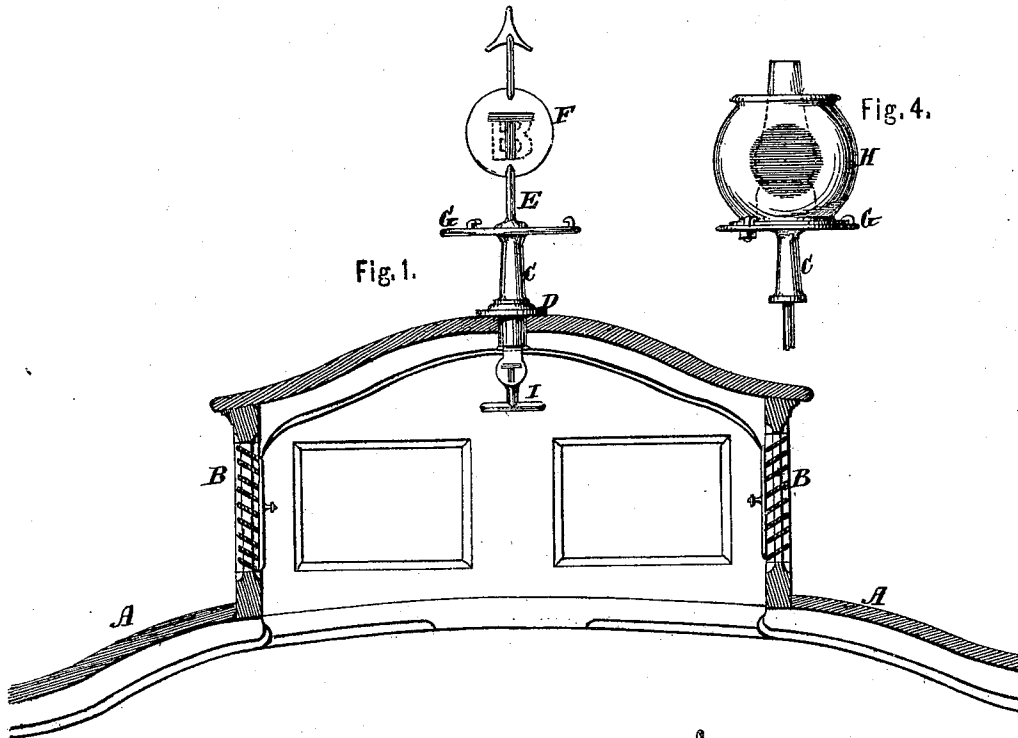


JOHN C. HARRIS.

Improvement in Street-Car Signals.

No. 127,877.

Patented June 11, 1872.



WITNESSES.

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UNITED STATES PATENT OFFICE

JOHN C. HARRIS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STREET-CAR SIGNALS.

Specification forming part of Letters Patent No. 127,877, dated June 11, 1872.

Specification describing certain Improvements in Street-Car Signals, invented by JOHN C. HARRIS, of Philadelphia, in the county of Philadelphia, State of Pennsylvania.

The invention consists of a signal to be exhibited above the roof of a street-car, in order to signal a connecting line or branch-car, for the convenience of a passenger in the former who may desire to make a close connection.

In the drawing, Figure 1 is a transverse section across the roof and dome of the car. Fig. 2 is a view of the apparatus, partly in section, the signal broadside on. Fig. 3, a view similar to Fig. 2, except the signal is edge on. Fig. 4 is an elevation of the lantern, which is a night substitute for the lettered disk.

A is a portion of the car-roof; B, the dome or central raised portion. On the roof of the dome the signal is erected; or a separate signal may be used at each end, over the platform. It consists of a standard, C, stepped into a socket-plate, D, and supporting the post E, to which the lettered disk F is attached. G is a circular plate, with catches to hold the colored or lettered lantern H, Fig. 4, for night signaling. Figs. 2 and 3 show two different positions of the signal, the former displaying it toward the front, the latter toward the side. The change is made by pulling downward the handle I, condensing the spring K in the barrel of the plate D, and drawing the square shoulder L out of its socket, so that the standard C and post E may be rotated to face the signal in the direction required; this having been done, the handle is released and the spring again elevates the post and standard, the square of the shoulder L again locking its socket, as before. To enable it to be more readily distinguished the signal letter is repeated on the handle, so that a glance at the handle will show the position of the signal above. After nightfall the post E, carrying the lettered disk, is removed from its socket in the standard C, and the signal-lantern is placed on the plate G, which has hooks to hold the foot-flange of the lantern. While the plate may have on its respective sides the letters **B** and **T**, for signaling a car on a **B**ranch or a **T**hrough connecting route, respectively, the lantern may have blue and red glasses on its respective sides to act as signals, the blue for the **B**ranch, and the red for the **T**hrough.

The turning by the handle is the same for the day or night signals. For example: If a car, say, is coming up Pennsylvania avenue, Washington, and is opposite the Metropolitan hotel, and contains a passenger who wishes to catch a car running southwardly, on Seventh street, he requests the conductor to signal it. This he does by pulling down the cross-handle, turning it as required, and letting it up again. The driver of the Seventh street car, on the alert at all crossings, sees the signal, stops his car till the passenger comes up, and thus time is greatly saved, and exposure to bad weather, if it then exist.

There are in some cities different lines of cars running limited distances over the same track; lest the wrong one should stop, the variable signal is introduced of **T** for through cars and **B** for branch lines on the signal above, to be read at a distance, as well as below on the handle, that the conductor, too, may see what signal he is making. When no signal is being made the edge of the signal is toward the front of the car. The conductor setting it again, if used, at each crossing; the spiral spring raising the signal, after the conductor pulls it down and turns it as desired. The square shoulder keeps it from jolting out of position.

When the colors of the lantern are to the side of the car no light shows to the front, and thus will serve the same as the edge of the disk. Inside of the globe a chimney-lamp can be placed, with projections underneath to fit in the square socket. If desired, a cord running beneath the car-roof from the axis of the signal—(on which, when either letter is front, it has a quarter turn,) first over a small wheel with axis running like the car-wheel axis, then over a wheel with a vertical axis, both on a frame screwed to the roof, then to the front platform, passing therethrough a pulley—could have its end near the driver, so that as he crossed each street he could reset it, edge to the front. The cord would operate, first, to lower the signal so that it could be turned; then, by the quarter-turn wrap, to turn the signal. Letting go, by means of the spiral spring, would send it up, edge to the front, as desired. This would relieve the conductor, who, at crossings, is generally busy otherwise.

Or screw a slightly-conical plate with vertical hole through its center upon the car-roof.

A signal shaft, No. 1, with inverted conical shoulder bearing the same signal, is inserted from above, and extends two inches below the roof, with slot cut in lower end of shaft, lying in same direction as the signal disk. A tongue of a shaft, No. 2, some ten inches long, fits in this slot, and is hinged thereto by a pin. This shaft terminates at its other end in a ring, through which the driver's cord is fastened. An iron rod, (an inverted horseshoe in shape,) running two hundred degrees of a circle, lying not over four inches below and parallel with the roof, is firmly screwed by the heel of the shoe to the roof, the toe of the shoe being forward. No. 2 shaft, resting on it above, can then describe an arc of one hundred and eighty degrees when it is lying to the extreme right, the **T** shows to the front, the **B** shows at the extreme left, and the edge when lying to the front. The horseshoe rod has three slots, ninety degrees apart, open from above, in either of which No. 2 shaft will lie, as placed, until the driver's cord pulls and resets the signal, edge to the front.

Or, by means of a cord passed through the vertical axis of the signal, knotted above, and coming out beneath the roof, running forward in the car, and under a wheel of sufficient diameter to carry the cord low enough to enable the signal to turn when the cord is pulled by the conductor or driver, on whose platform the

cord terminates. Then, the signal being edge to the front, a cord run underneath and lengthwise, knotted at one end, passing horizontally through the vertical axis of the signal, drawn tight, and attached at its other end to a spring fastened under the roof, will, on a signal being made, take a quarter-turn on the signal's vertical axis. On the drawing of the longer cord the spring and shorter cord will reset the signal, edge on.

Claims.

I claim as my invention—

1. The standard or holder **C**, journaled in the roof of the car, and adapted to support a signal-disk, **F**, or lantern **H**, above the roof, and furnished with the handle **I**, with indicator below the roof, constructed and arranged as described, by which to present different sides, or an edge, or blank of the disk or lantern, as required.

2. The combination of the standard **C** with socket and disk to support a signal disk or lantern, and with "square" **L** and handle **I**, the socket-plate **D** and the spring **K**, constructed and operating substantially as shown and described, for the purpose specified.

JOHN C. HARRIS.

Witnesses:

WM. B. RIDGELY,
L. B. ULMER.