

(No Model.)

2 Sheets—Sheet 1.

J. A. TRIMBLE.
SIGNAL LIGHT FOR STREET CARS.

No. 512,921.

Patented Jan. 16, 1894.

Fig. 1.

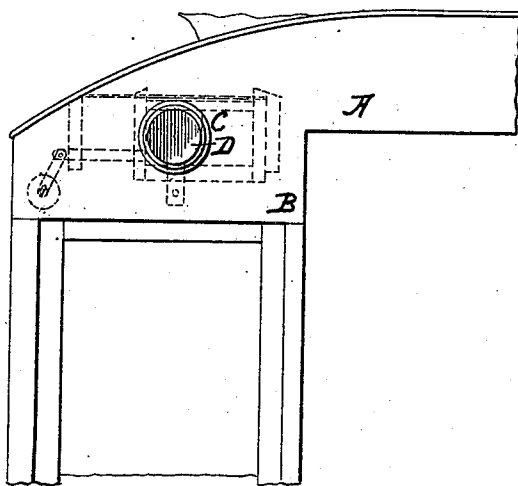


Fig. 2.

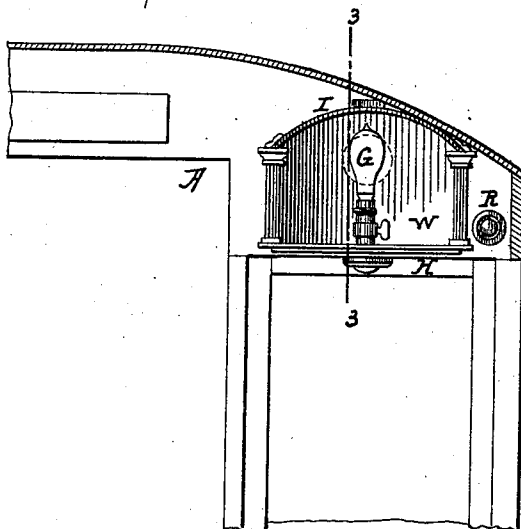
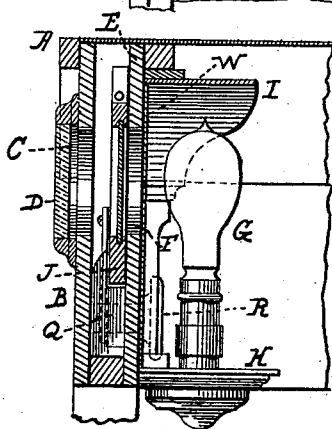


Fig. 3.



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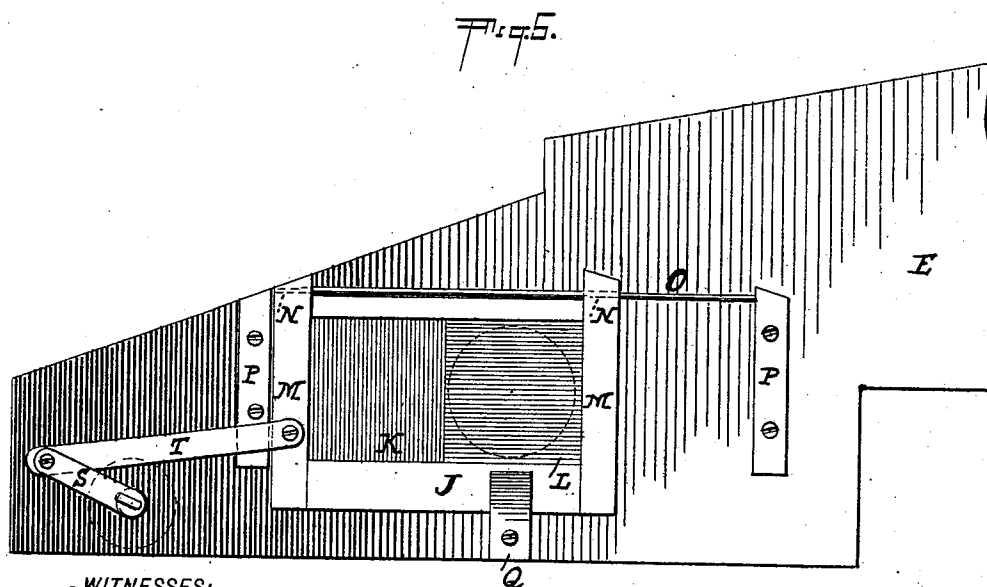
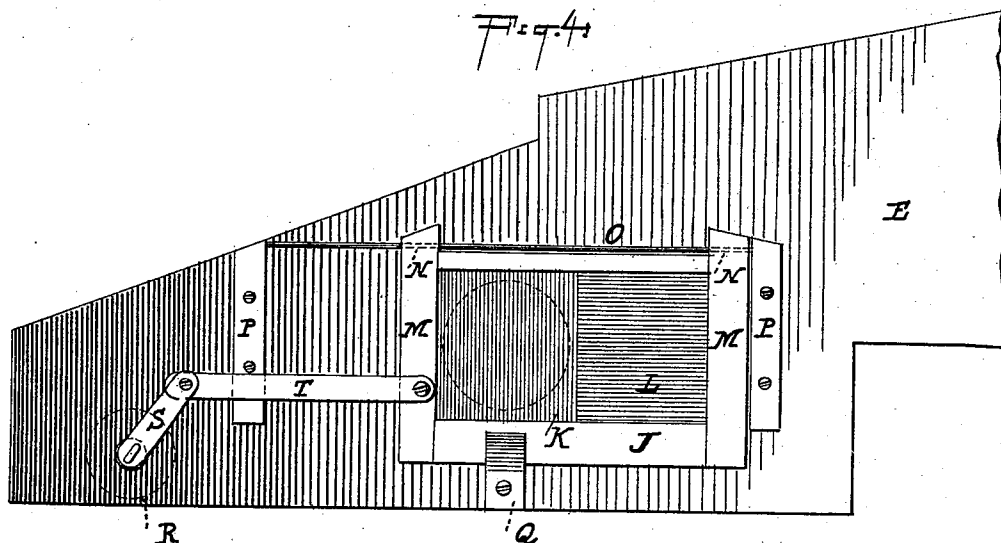
(No Model.)

2 Sheets—Sheet 2.

J. A. TRIMBLE.
SIGNAL LIGHT FOR STREET CARS.

No. 512,921.

Patented Jan. 16, 1894.



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UNITED STATES PATENT OFFICE.

JAMES A. TRIMBLE, OF NEW YORK, N. Y.

SIGNAL-LIGHT FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 512,921, dated January 16, 1894.

Application filed December 7, 1892. Serial No. 454,341. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. TRIMBLE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Signal-Lights for Street-Cars, of which the following is a specification.

The invention relates to improvements in signal lights for street cars and particularly to the means for changing the signal lights therefor.

It is well known that street cars carry at their ends a colored signal light by which the different lines of cars are designated and that whenever it is desired to shift a car from one line to another it is necessary to change the light in order to avoid confusion. Much difficulty has heretofore been experienced in providing suitable means for quickly changing the signal light of street cars, and various attempts have been made to facilitate this operation. In accordance with the present invention I dispense entirely with the necessity for the conductor to carry extra colored bulbs' eyes with him in order to change the signal, and provide means always present in the car by which the signal light may be instantly changed without inconvenience.

My invention involves the construction and use of a sliding frame arranged in line with the usual signal aperture in a car and carrying a series of two or more panes of differently colored glass, adapted, upon the sliding of said frame, to be successively brought into line with said aperture, and thus change the signal.

My invention also involves devices for operating said sliding frame, and maintaining the same in its various positions, as herein-after more fully described.

Referring to the accompanying drawings, Figure 1 is an exterior end view looking at one corner of a street car provided with the features constituting the invention sought to be protected hereby. Fig. 2 is a like view of same looking at the end of the car from the interior thereof, a portion of the car being shown in section. Fig. 3 is a vertical section of same on the dotted line 3—3 of Fig. 2. Fig. 4 is an enlarged detached plan view of the features constituting the present invention,

the outer facing of the car being removed to fully disclose the interior mechanism, and Fig. 5 is a like view of same, the mechanism being illustrated in an opposite position to that shown in Fig. 4.

In the drawings A designates the end of the car having the outer facing B, in which is formed at a suitable point the aperture C covered by a piece of transparent glass D. Adjacent to the facing B is provided the partition E, shown more clearly in Figs. 3 to 5 inclusive, in which partition is provided the aperture F, the latter being in line with the aperture C provided in the outer facing B, and adjacent to the partition E is suitably supported a lamp G, which will be within the car and have its flame or light in line with the apertures C, F. The lamp G will preferably be supported upon a bracket H and inclosed beneath the hood or covering I.

Between the outer facing B and the partition E are contained the devices which constitute the present invention, and these are more clearly illustrated in Figs. 4 and 5, in which J designates a rectangular frame having inclosed within its four sides the series of two or more panes of glass K, L, differently colored, one being, as a matter of illustration, green and the other red. The vertical sides M of the frame J extend upward and contain the apertures N through which is placed the rod O whose ends are secured in the cleats P. The cleats P are firmly secured to the partition E and they serve not only to support the rod O but to afford stops for the frame J when the latter is moved on the said rod. Beneath the frame J is secured to the partition E the cleat Q, which as shown in Figs. 3 and 4, overlaps the lower edge of the frame J and serves as a support for the same, and as a means for preserving said frame in proper relation to the vertical face of the partition E. The frame J is adapted to have a sliding or reciprocating movement on the rod O and cleat Q, thereby to bring either the red or the green light in line with the openings C, F, as may be desired, and for the purpose of effecting the proper reciprocation of the frame J, I provide within the car the rosette or knob R having a spindle extending through the partition E and carrying upon its end the crank arm S which is connected with the frame J by means

of the connecting rod T, the latter being pivotally secured at each end. The complete operation of the frame J knob R, crank S and connecting rod T may be understood by a reference to Figs. 4 and 5 in which the frame J is shown in its two positions.

In Fig. 4 the arrangement of the parts may be considered, for illustration, as bringing the green pane of glass K in line with the lamp G and openings C, F, and in Fig. 5 the parts may be likewise considered as having been changed in position for the purpose of shielding the green pane of glass K and bringing the red pane of glass L in line with the lamp G and openings C, F. In order to shift the frame J and thus change the signal it is simply necessary to turn the knob R, when the arm S and rod T will either draw the green glass K from the apertures C, F, and bring the red glass L in line therewith, as shown in Fig. 5, or move the red glass L from the apertures C, F, and push the green glass in line therewith as illustrated in Fig. 4. When the frame J is at one end of its line of travel it will meet one of the stops P and be supported by the rod O and cleat Q as illustrated in Fig. 4, and when moved to the other end of its line of travel it will meet the other stop P and likewise be supported by the rod O and cleat Q. It will thus be observed that the frame J is firmly supported at all times so as to prevent any rattling or undue looseness of the parts, and that the stops will prevent the same from being moved too far in either direction.

The knob or rosette R is the only feature of the construction which is disclosed at the inner side of the car, and this may be ornamental in configuration, so as not to detract from the appearance of the car or form an objection. By thus having the sliding frame carrying the different colored glasses between the outer facing B and the inner partition E there will be no necessity for the conductor or driver carrying different colored bull's eyes to apply to the aperture C and no inconvenience will be experienced in quickly

changing the signals. The aperture C will be covered by the clear glass D and will require no attention whatever, in so far as the changing of the signal is concerned, and on the vertical face of the partition E within the car will be arranged a mirror W which will extend from the bracket H to the hood I, as illustrated in Fig. 3, while that portion of the mirror covering the aperture F will be left transparent. Thus the mirror will serve as a reflector and the light from the lamp G will be enabled to pass through the aperture F, the colored glass in the frame J and clear glass in the aperture C.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The car having in its ends the facing B and partition E provided respectively with the apertures C, F, in line with the flame of the lamp, in combination with the reciprocating frame J between the partition and facing and having a series of differently colored panes of glass, the horizontal rotatable spindle having the knob connected thereto and arranged adjacent to the wall of the car, the oscillatory arm connected to said rotatable spindle, and the rod connecting said arm to the reciprocating frame, whereby the frame is reciprocated by rotating said spindle, substantially as and for the purposes described.

2. The car having in its end the signal aperture C, combined with the reciprocating frame J containing the series of differently colored panes of glass, the rod O supporting said frame, the stops P, P, at each end of the line of travel of said frame, the cleat Q at the lower edge of said frame, and mechanism for sliding said frame to change the signal; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 3d day of December, A. D. 1892.

JAMES A. TRIMBLE.

Witnesses:

CHAS. C. GILL,
ED. D. MILLER.