G. S. ROBERTS.

CAR-WINDOW.

No. 192,014. Patented June 12, 1877.

Fig. 1.

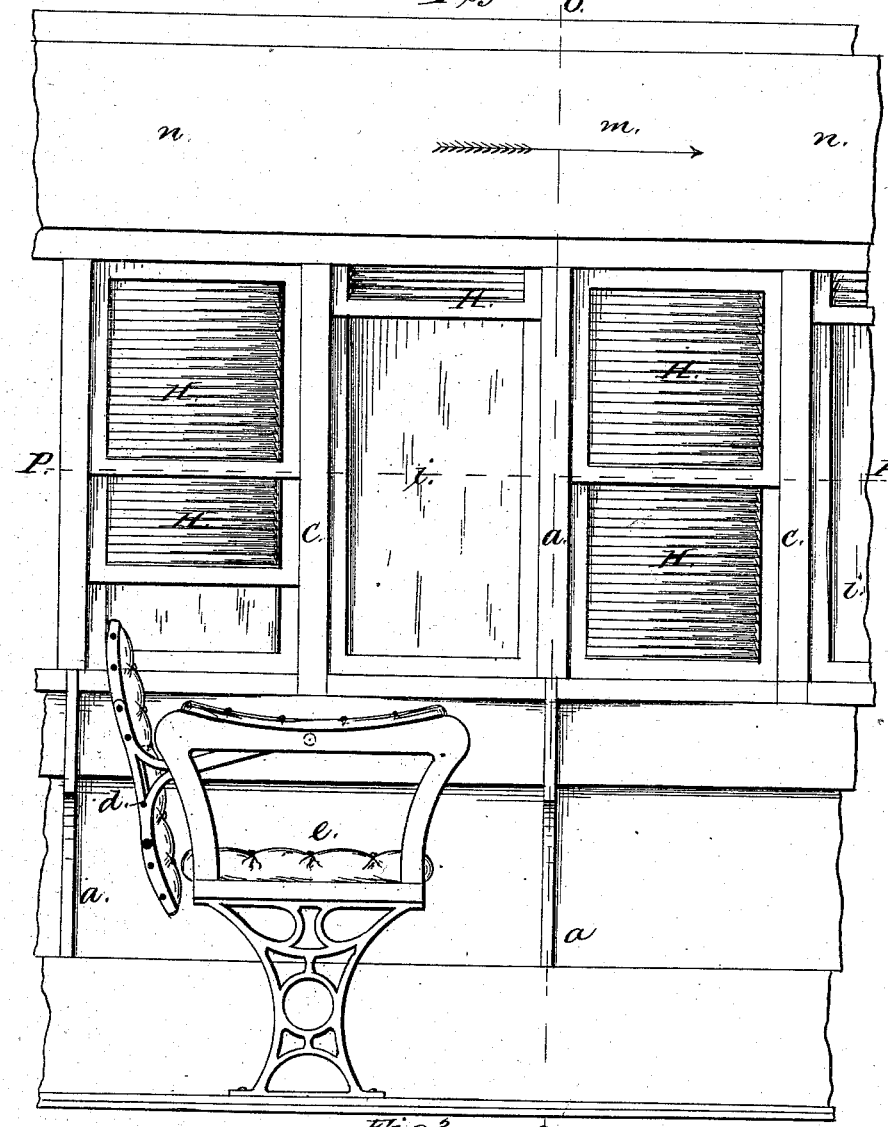


Fig. 2.

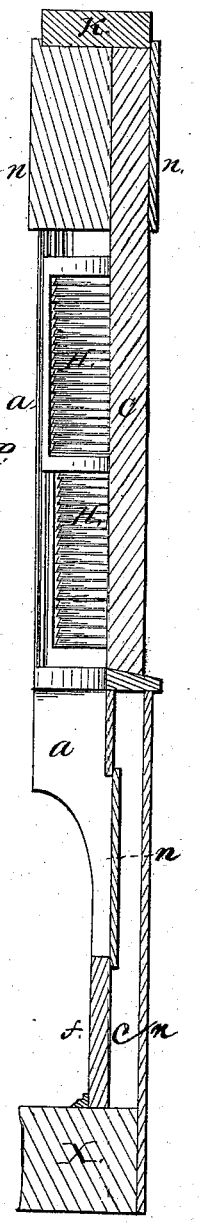
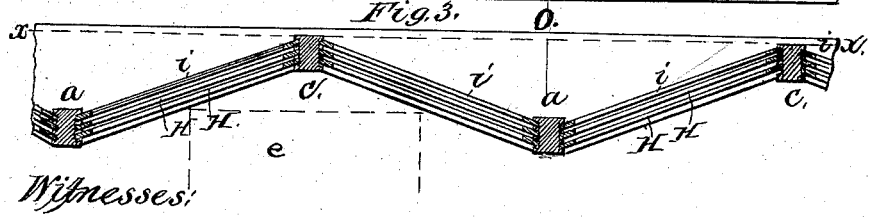


Fig. 3.



Witnesses:

Horatio N. Newell

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UNITED STATES PATENT OFFICE.

GEORGE S. ROBERTS, OF MEREDITH, NEW HAMPSHIRE.

IMPROVEMENT IN CAR-WINDOWS.

Specification forming part of Letters Patent No. **192,014**, dated June 12, 1877; application filed July 31, 1876.

To all whom it may concern:

Be it known that I, GEO. S. ROBERTS, of Meredith, county of Belknap, State of New Hampshire, have invented an Improvement in the Construction or Formation of the Side of a Railway-Car, of which the following is a specification:

The object of my invention is to secure better facilities for ventilation, protection from the sun and dust, a better view of objects outside, and a stronger and more elegant car.

In the accompanying drawing, forming part of this specification, Figure 1 represents a section of the inside of a car. Fig. 2 is a vertical section of Fig. 1, taken on the line O O; also, showing the position of post C.

Similar letters of reference indicate corresponding parts.

Fig. 3 shows two lines of posts, *a c*, standing on the car-sill X, as usual, the line *a* standing into the car a sufficient distance to give the line of windows *i* and blinds H a zigzag form, they running alternately from *a* to *c* and from *c* to *a*, &c. By this obtuse angle a "bay-window" is formed for each seat. The direction of the car is indicated by the arrow *m*.

In Fig. 1, *e* is the seat with the reversible back *d*, after the usual style. Here two distinct windows are given for each seat, the blinds over the front window being raised, while those over the back window are dropped.

This back window can be open, thereby giving a free circulation of air and protection from the sun and dust by the blind H.

By the rapid motion of the car a partial vacuum will be formed in the recess of the back window upon the outside, which will be filled by the air from the inside passing through the blind H, as indicated by the arrow, thus securing ample ventilation.

The front window being closed and the blind raised, abundant light is given, and by its angular position a better view of any object is afforded than can be obtained from any window now in use.

In Fig. 2, *c* is the outside line of posts running from the plate K to the sill X; *a*, the inside line running from plate K to truss-plank *f*.

The paneling *n n*, &c., above and below the windows, will run on a straight line—inside on the posts *a*, and outside on the posts *c*.

Posts *a* may pass the truss-plank and connect with the sill, or they may end at the bottom of the windows.

By standing the posts as above, the car side is made much stronger than by setting them all on one line.

The windows may be straight or arched at the top. The sash and window may be made on a curved line swelling outward, if desirable.

By the foregoing description it will be seen that two windows are given to each seat, to be operated at will by the passengers for light, ventilation, protection from the sun and dust; they, at the same time, enjoying a broad and extended view near the line of track.

I claim as my invention—

A railway-car constructed with two lines of alternating posts, *a a* and *c c*, for the insertion of windows in oblique or zigzag positions, and for forming bays or recesses in the sides of the car, opposite to the several seats thereof, substantially as and for the purpose herein specified.

GEORGE S. ROBERTS.

Witnesses:

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