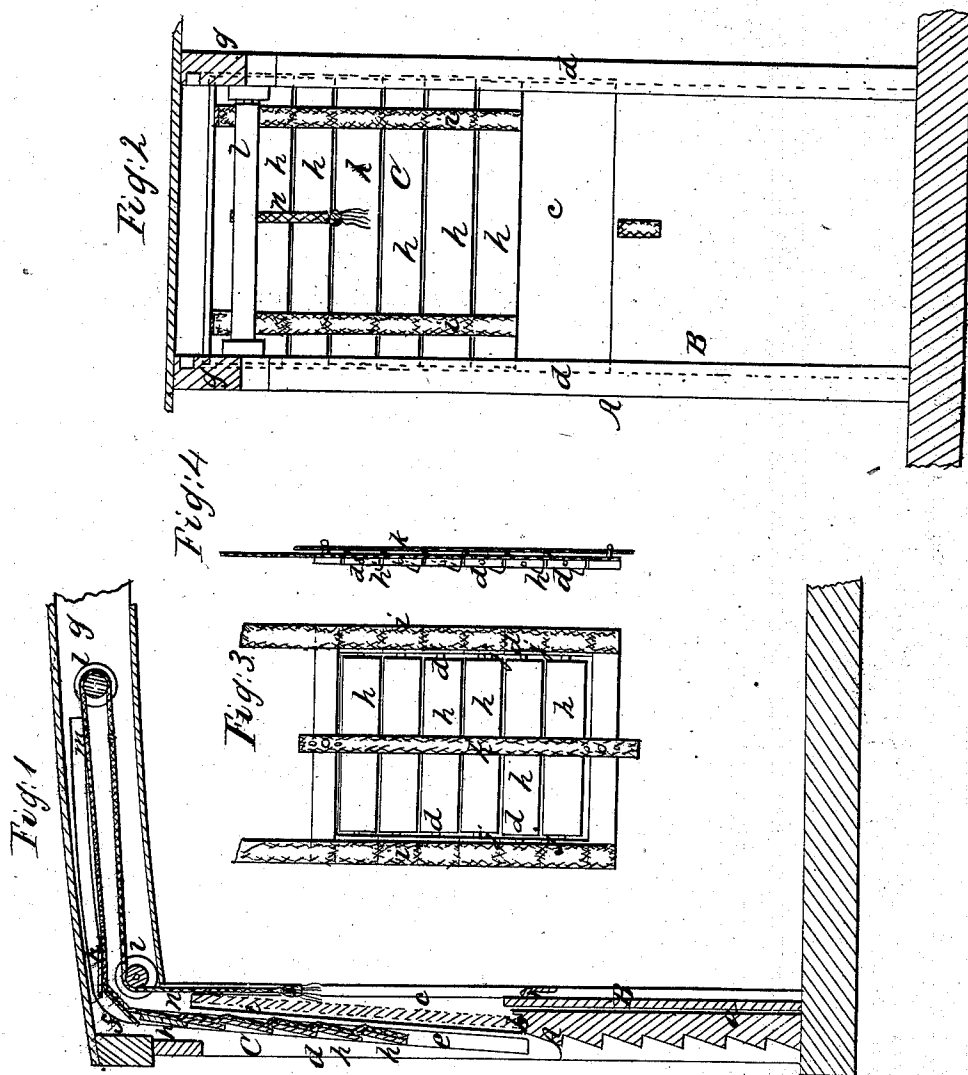


*D. M. Hall,*  
*Car Ventilator,*  
*N<sup>o</sup> 26,351.      Patented Dec. 6, 1859.*



*Witnesses*  
*Norden Nichols*  
*J. B. Herwin*

*Inventor*  
*Daniel M. Hall*

# UNITED STATES PATENT OFFICE.

DANIEL M. HALL, OF BRIDGEPORT, CONNECTICUT.

## RAILROAD-CAR BLIND.

Specification of Letters Patent No. 26,351, dated December 6, 1859.

*To all whom it may concern:*

Be it known that I, DANIEL M. HALL, of Nichols Farms, Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Arrangement of Blinds for Railroad-Cars and other Wheel-Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a transverse vertical section of my invention, applied to a rail-road car. Fig. 2, an inner face view of the same. Fig. 3, is a detached face view of the blind. Fig. 4 is a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in having the blind so constructed that it will be flexible and be permitted to work or rise and fall in a curved groove substantially as herein-after fully described, whereby the blind may be drawn into the roof of the car or other vehicle for the purpose of raising it within a comparatively limited space and the blind applied to the window without at all interfering with the operation of the sash.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents one side of a rail-road car, the plane of section passing through a window of the car. The sash B, is arranged to slide up and down in the side of the car in suitable grooves *a*, as shown clearly in Fig. 1. This arrangement of the sash B, is quite common, well known to car and carriage builders and therefore does not require a more minute description. The sash, when raised and the window closed, is in an inclined position as shown in red in Fig. 1, the lower edge of the sash resting in a groove *b*, at the lower edge of the opening *c*, covered by the sash. At the sides of the opening *c*, in the sides of stiles or uprights *d*, *d*, grooves or gains *e*, *e*, are made, one in each upright, these grooves extend upward to the top of the side of the car and are covered as shown at *f*, and extend along the sides of the beams *g*, which are connected with the upper ends of the uprights *d*, *d*,

and in the same planes with them. The curves *f*, of the grooves or gains *e*, *e*, are sections of as large circles as the space will permit so as to obtain as easy and gradual a curve as possible.

C, represents the blind which is formed of slats *h*, the slats being connected near their ends to tapes *i*, *i*. The slats *h*, may be connected directly to the tapes, and the ends of the slats fitted in the grooves *e*, as in Figs. 1, and 2, or the slats may be provided with a tenon at either end, the tenons fitted in strips *j*, which are attached to the tapes; the slats having a tape *k*, connected to them at their inner edges as shown in Figs. 3, and 4. This latter arrangement admits of the slats being turned from an open to a closed state as those of an ordinary window blind. The former arrangement in which the slats are attached directly to the tapes will not admit of the slats turning, they are therefore arranged in nearly a permanently closed state.

In the top or roof of the car or vehicle rollers *l*, *l*, are fitted or placed over and around which bands or straps *m*, pass. These bands or straps at one end are attached to the upper end of the blind and at the opposite end they are attached to a single strap or band *n*, which passes down in front of the opening *c*. The portion of the rollers *l*, *l*, are shown clearly in Fig. 1, and it will be seen by referring to the above figure that by drawing down the strap *n*, the blind C, will be raised and drawn upward within the top or roof of the car or vehicle and by pulling the lower end of the blind downward it will close over the opening *c*. By the above arrangement the blind may be formed of a single part and made to work or rise and fall, above the sash B, instead of by the side of it. The operation or adjustment of the sash is not at all interfered with by the blind and as the latter is drawn upward within the roof of the vehicle the window may extend to the top or roof of the car or vehicle and the blind drawn entirely free from it.

I do not claim broadly the employment or use of flexible blinds for such have been used and arranged so as to fold and may be seen in store fronts applied both to doors and windows; but

I do claim as new and desire to secure by Letters Patent—

The employment or use of the flexible blind C, arranged with the rollers *l*, *l*, fitted  
5 within the curved grooves *e*, *e*, and applied to the window of a car or other wheel vehicle so that it may be raised above the sash B,

and drawn within the roof of the vehicle substantially as described.

DANIEL M. HALL.

Witnesses:

NORTON NICHOLS,  
J. B. MERWIN.