

C. H. KELLOGG.
CAR VENTILATOR.

No. 176,139.

Patented April 18, 1876.

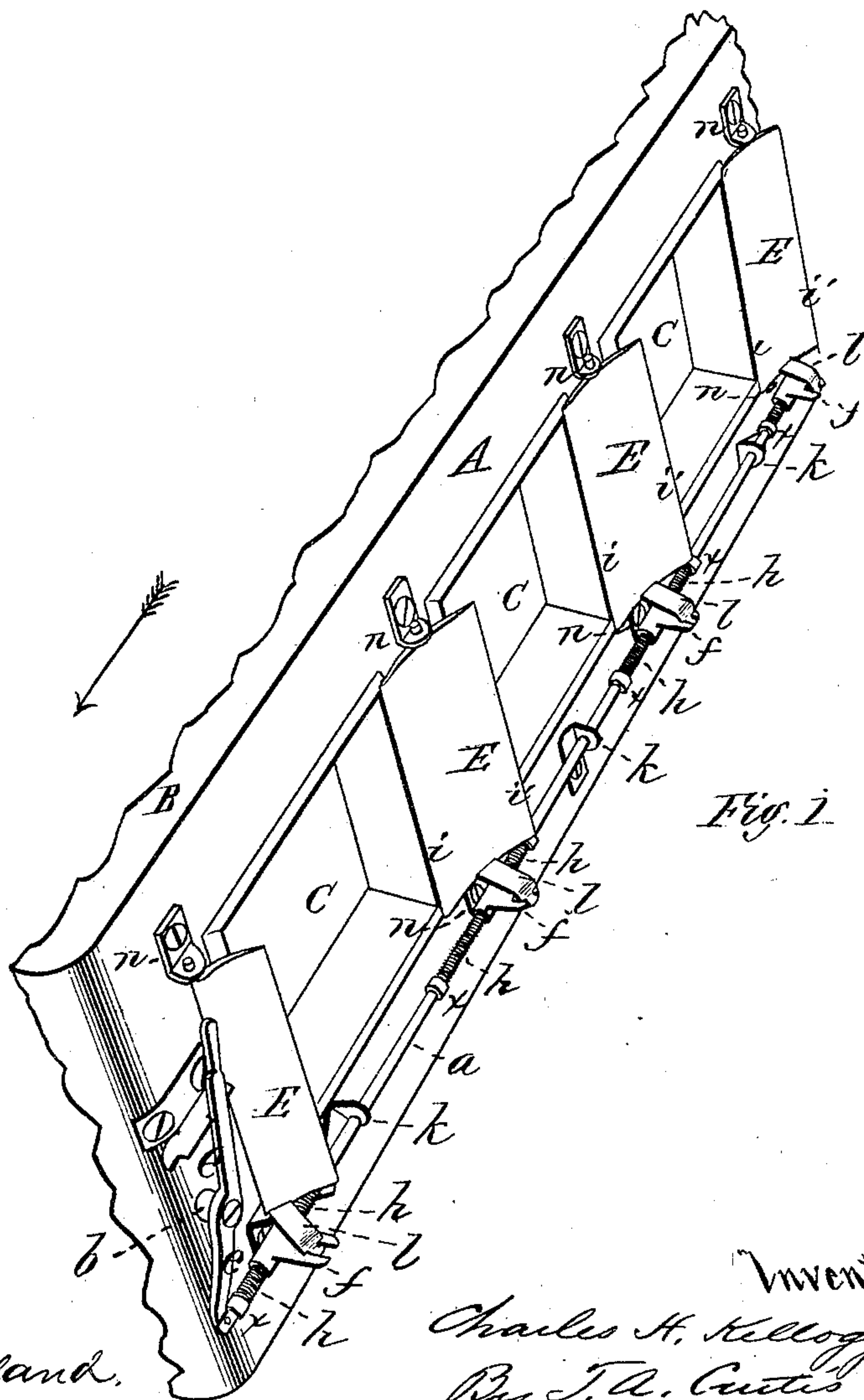


Fig. 1

Witnesses.

C. E. Buckland.
D. E. Fisk

Inventor.

Charles H. Kellogg.
By J. A. Curtis
his atty.

UNITED STATES PATENT OFFICE.

CHARLES H. KELLOGG, OF EAST LEVERETT, MASSACHUSETTS, ASSIGNOR
TO HIMSELF AND GEORGE S. LEWIS.

IMPROVEMENT IN CAR-VENTILATORS.

Specification forming part of Letters Patent No. **176,139**, dated April 18, 1876; application filed
September 25, 1875.

To all whom it may concern:

Be it known that I, CHARLES H. KELLOGG, of East Leverett, in the State of Massachusetts, have invented a new and useful Improved Railway-Car Ventilator; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

The object of my invention is to prevent the dust and cinders from entering a railway-car through the windows, and to remove, as far as possible, that which does find entrance through other channels, by creating a strong outward current of air through the ordinary car-windows; and to this end my invention consists of a series of deflectors, each pivoted midway its width to the outside of a railway-car, one between every two windows, and connected with a rod sliding in bearings lengthwise the car, said rod being also provided with springs, secured thereto, and bearing against an arm arranged loosely upon the rod, which arm is jointed or pivoted to a projection upon each deflector, so that, as the rod is moved longitudinally in its bearings, the deflectors are all set simultaneously, each with one vertical edge against one side of a window, and its opposite edge standing a little distance out from the adjacent side of the next window, each deflector being the whole width of the space between the windows, and pivoted midway thereof, so that the air, as the car moves forward, strikes against each deflector, and is turned outward, or away from the car, and this outward deflection of the air creates a current out of the car-window if open.

Figure 1 is a perspective view, representing a portion of the side of a railway-car with its windows and the deflectors pivoted between them, and showing the arrangement of the rod and the connections by which the deflectors are set and held firmly in place.

In the drawings, A represents the side of a railway-car, in which are the ordinary windows C, between each two of which is a deflector, E, pivoted in bearings *n n* midway its width, one above and the other below, and each deflector is of such width that one of its vertical edges will be against, or quite near to,

the side of one window, and its opposite vertical edge quite near to the side of the next window, as shown clearly in the drawing. At the lower end of each deflector is a projection, *l*, which is jointed or pivoted to a projecting arm, *f*, upon the rod *a*. This rod *a* is secured to the side of the car in bearings *k*, so as to slide to and fro freely therein, and also passes through a hole in each arm *f*, so that the arm is loose upon the rod, and a spring, *h*, is secured to the rod each side of each arm *f*, the spring bearing against a collar, *x*, at one end, or secured in any other convenient manner, and at the other end bearing against the arm *f*, to hold the arm steady and firm in the position into which it is moved. A lever, *e*, is pivoted at *b*, one end of which is pivoted to the rod *a*, while the upper end or handle is held in the position into which it is placed by a rack, *c*, or the rod *a* may be moved and held in its position by any other convenient means.

The operation of my invention is as follows: If the handle *e* is moved into the position shown in the drawing, and the car moves in the direction indicated by the arrow, the edge *i* of every deflector will be moved in next the rear side of the windows, while its opposite edge, *i'*, will be thrown out a little distance from the front side of the next window in the rear, as shown clearly in the drawing. The air, as the car moves forward, as indicated by the arrow, strikes the inclined face of each deflector, and is thereby turned or deflected outward or away from the car, and this outward deflection of the air, against which the car is moving, creates a draft out of the car-window next behind the deflector, if that window be open, and the cinders and dust are thereby prevented from entering the car-window, and, if the window be open, the dust and impure air are also carried out, in a great measure, from the car, and ventilation of the car is thus constantly carried on. If the car be moving in the opposite direction from that indicated by the arrow, the lever *e* is reversed, and the edge *i'* of each deflector is moved in next the window, and the edge *i* moved out. In moving the rod *a* to and fro, either edge of the deflector strikes against the side of the car, or completes its movement a little before the rod *a* completes

its longitudinal movement, and, as the rod continues to be forced along to complete its movement, the spring *h* is compressed against the side of the projecting arm *f*, and each deflector is thereby held firmly in its bearings, as is also the rod *a*, and all tendency of shaking and rattling of the parts in their bearings, which would otherwise be occasioned by the rapid movement of the car, is entirely prevented.

I am aware that a series of deflectors arranged between the windows on the outside of a railway-car, and operated by rods, has heretofore been made and shown, as in patent to E. Hamilton, reissued February 15, 1853, No. 230, and I do not claim the same, nor any part thereof, irrespective of my construction and arrangement thereof.

Having thus described my invention, what I claim as new is—

1. A series of deflectors, *E*, each provided with a projection, *l*, and pivoted at a point

midway its width to the outside of a railway-car between the windows, and of a width to occupy the whole space between two adjacent windows, in combination with the longitudinally-operating rod *a* and the projecting arms *f*, jointed or pivoted to the projections *l*, by which rod and arms all the deflectors on one side of the car are operated, substantially as described.

2. In combination with the series of deflectors *E*, pivoted midway their width, and provided with projections *l* and sliding rod *a*, the springs *h*, secured to said rod, and the projecting arms *f*, arranged loosely upon said rod, whereby a constant pressure is exerted against said deflectors, substantially as and for the purpose set forth.

CHARLES H. KELLOGG.

Witnesses:

A. C. FIELD,

RALPH A. FIELD.