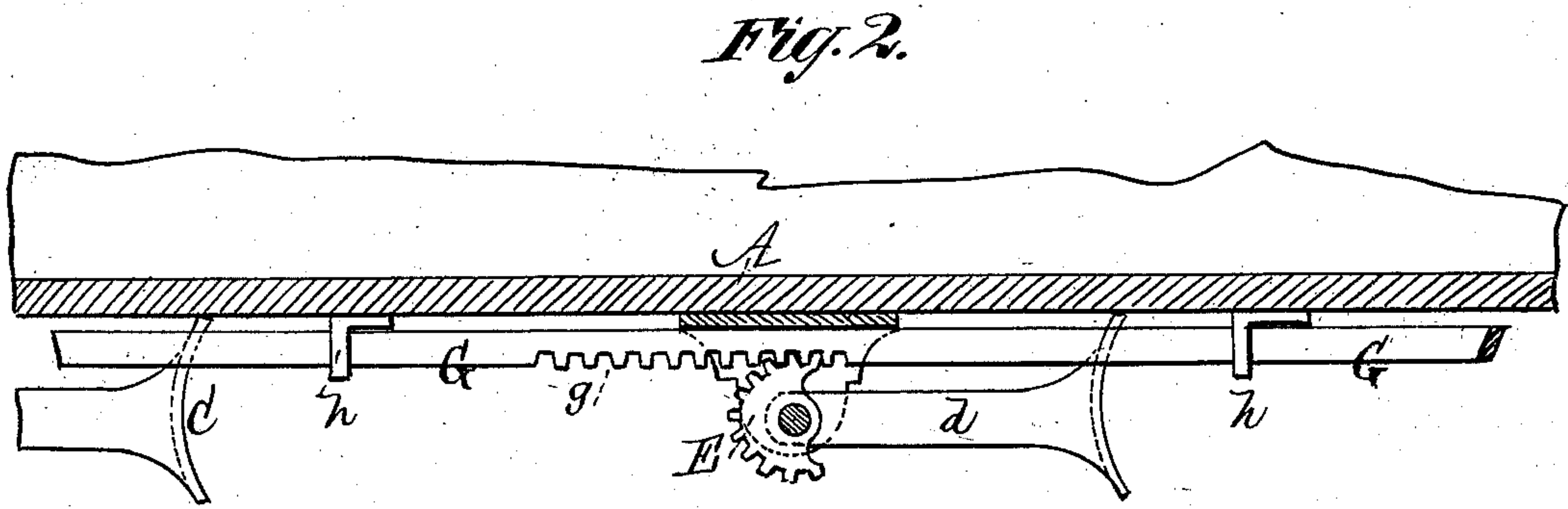
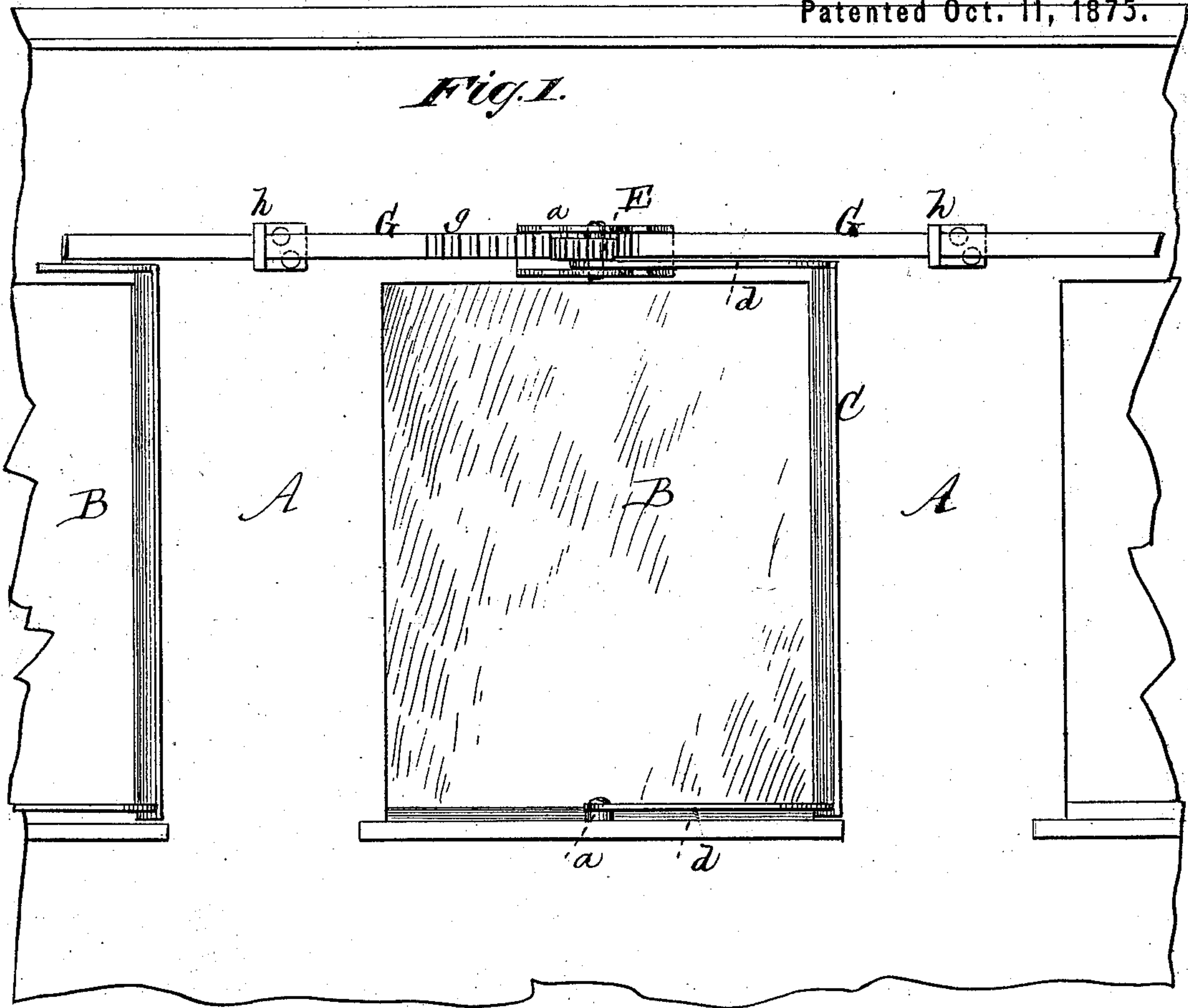


C. F. BRIDGMAN.

Ventilating Screens for Car Windows.

No. 168,712.

Patented Oct. 11, 1875.



Witnesses  
John Becker.  
Fred. Haynes

C. F. Bridgman  
by his Attorney  
Brown & Allen

# UNITED STATES PATENT OFFICE.

CHARLES F. BRIDGMAN, OF BROOKLYN, NEW YORK, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO JOHN H. HAULENBECK, OF NORWALK, AND FRANK P. RICE, OF DANBURY, CONNECTICUT.

## IMPROVEMENT IN VENTILATING-SCREENS FOR CAR-WINDOWS.

Specification forming part of Letters Patent No. **168,712**, dated October 11, 1875; application filed August 30, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES F. BRIDGMAN, of Brooklyn, in the county of Kings and State of New York, have invented an Improved Ventilating-Screen for Car-Windows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making part of this specification.

My invention relates to a means for excluding dust from railway-car windows; and it consists in a novel construction, arrangement, and combination of a pivoted deflecting device, and a sliding rack-bar for swinging the same, whereby the deflector may readily be reversed so as to occupy a position at either edge of the car-window, according to the direction in which the car is traveling.

In the accompanying drawing, Figure 1 is a side view of a portion of a car with this invention applied to the window. Fig. 2 is a horizontal sectional view of the same.

The deflector consists of a concave plate, C, of a length about equal to the height of the window B of the car A, and of a width sufficient to allow it to project a few inches beyond the surface of the side of the car. The ends of the plate C are attached to the outer ends of two arms, *d d*, the inner ends of which are pivoted to the window-frame midway of its width, by means of lugs *a a*, or in any other suitable manner. To one of the arms *d*, at the inner end, is attached a pinion or toothed sector, E, the center of which corresponds with the pivot on which the arm works. This pinion or toothed sector gears with a rack, *g*, formed on a bar, G, which is arranged to slide in lugs or keepers *h* attached to the body of

the car. By sliding the rack-bar G longitudinally of the car, the rack *g* engages with the pinion or toothed sector E, and oscillates the arm *d*, causing the deflector to swing in one direction or the other, according to the direction in which the rack-bar is moved. By this means the deflector may be placed at either edge of the window, according to the direction in which the car is traveling, so as to deflect the dust, and prevent it from entering the window. The rack-bar may be of such length as to require but one for each window, or it may be of a length corresponding with that of the car. In the former case the rack-bar may be placed within easy reach of the passenger seated near the window, and in the latter case it may be provided with a series of racks for engagement with the various pinions or toothed sectors, and be arranged to be operated by an attaché of the car or train so as to move all the deflectors simultaneously. In either case the rack-bar is provided with a notch for engagement with the keepers, or with any other suitable means for holding it in position at either edge of the window at which it may be placed.

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

The combination of the swinging deflector C, having its arms *d* pivoted midway of the window-frame, the pinion or toothed sector E, and the sliding rack-bar G, substantially as herein described.

CHARLES F. BRIDGMAN.

Witnesses:

BENJ. W. HOFFMAN,  
FRED. HAYNES.