

I. A. SALMON.

Automatic Ventilators or Screens.

No. 152,517.

Patented June 30, 1874.

Fig. 1.

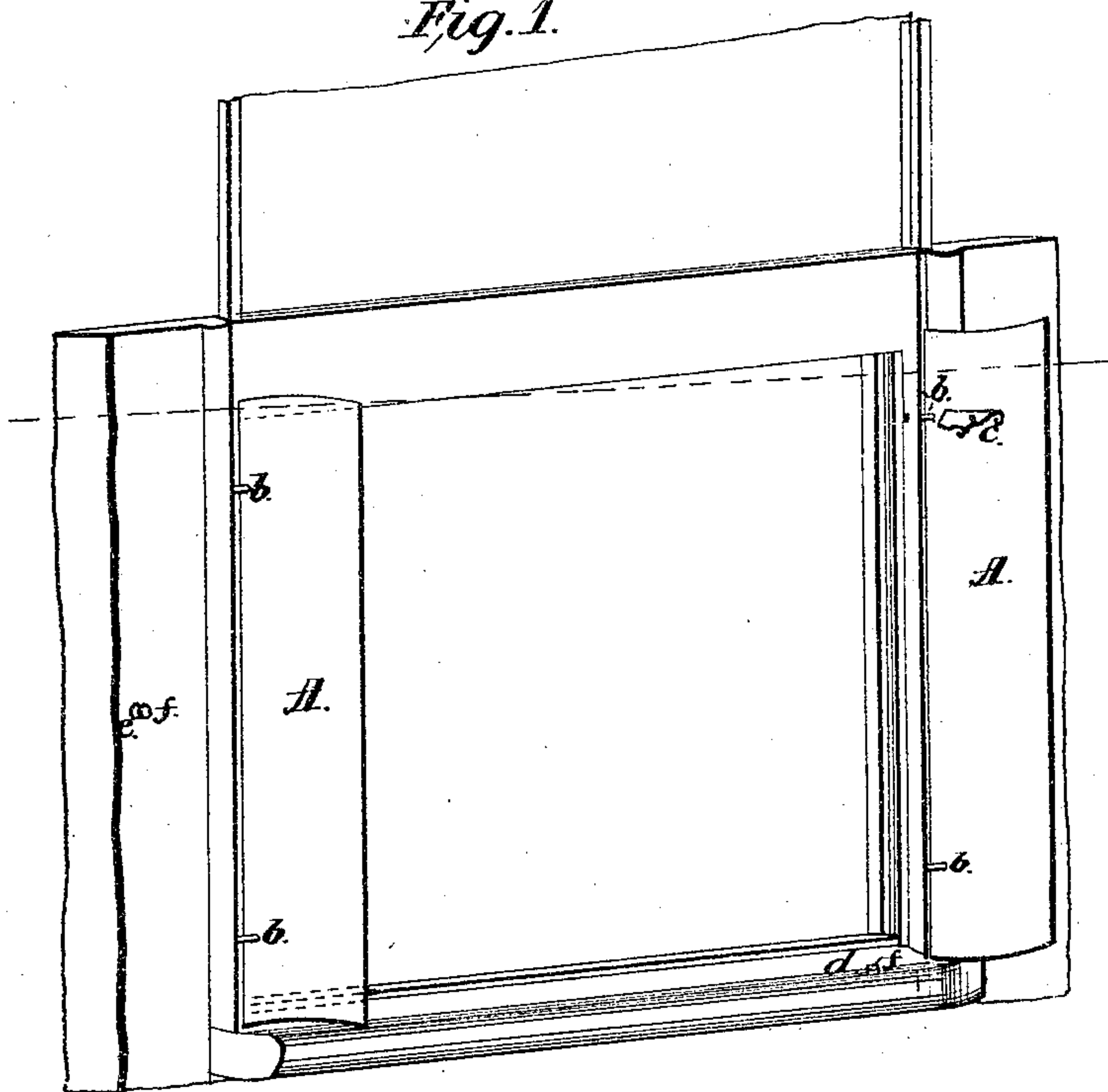


Fig. 2.

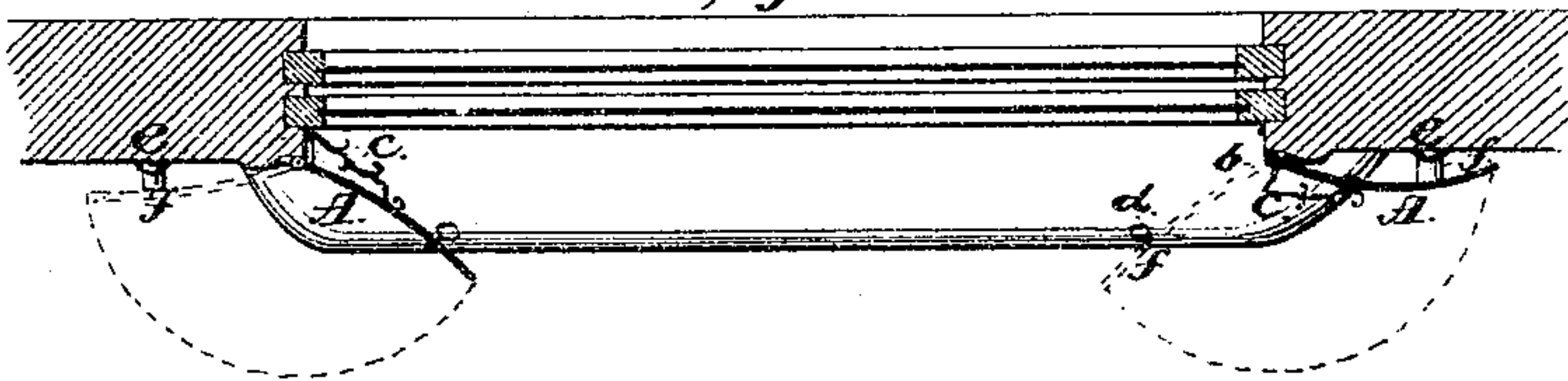


Fig. 4.

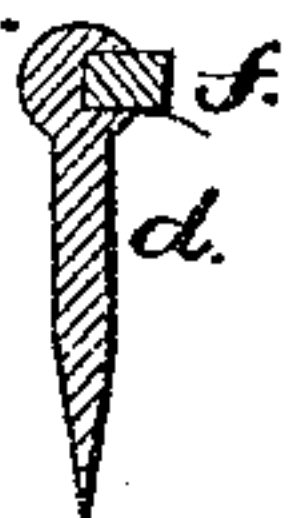


Fig. 3.



Witnesses;

H. H. Jones
Ira A. Salmon.

Inventor;

Ira A. Salmon

UNITED STATES PATENT OFFICE.

IRA A. SALMON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN AUTOMATIC VENTILATORS OR SCREENS.

Specification forming part of Letters Patent No. **152,517**, dated June 30, 1874; application filed May 21, 1874.

To all whom it may concern:

Be it known that I, IRA A. SALMON, of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful Improvement in Automatic Ventilators or Screens, for the purpose of ventilating railroad-cars, and preventing the ingress of cinders and dust, thereby protecting passengers against annoyance from the same; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to construct and apply the same, reference being had to the accompanying drawing, which is made a part of this specification, and in which—

Figure 1 is a side view, one window being shown with the screens in position. Fig. 2 is a transverse section at *x x*, showing all the parts in position. Fig. 3 represents a screw or nail, with a piece of rubber, *f*, inserted into or covering its head; Fig. 4, a screw or nail, with rubber, as in Fig. 3.

My invention relates to screens designed to prevent cinders and dust from entering the windows of railway-cars, and it is an improvement on my Patent of April 28, 1874, No. 150,192. The horizontal bars across the windows were found to be objectionable, as they were in the way of washing and cleaning the windows. The arrangement also required the exercise of some care in changing the curved plates from side to side of the window to suit the running direction of the car. Hence my present invention consists in rendering the adjustment of the curved plates automatic by the combination of devices hereinafter explained.

My ventilator or screen consists of a curved plate of metal or other suitable material, of sufficient height to cover the open space when the window is raised, attached to the front side of the windows of a railroad-car, in such a manner as to be easily reversed by the current of air caused by the motion of the car. The plate stands with its concave surface outward, and at the angle shown, so as to cause the current of air created by the velocity of

the car to shoot off or deflect from the car, thereby preventing the entrance of cinders and dust at the windows when open, and at the same time causing an outward current of air through the windows, thereby keeping the air pure within the car. One of these plates is attached to each side of the windows. The plates at the rear of the windows are held back against the side of the car by the current of air pressing upon their convex surface.

In the drawings, *A A* represent the plates; *b b*, the hinges; *c c*, the brackets, braces, or stops, which keep the top of the plates at the proper angle when in use by resting against the inside of the window-frame, while the bottom of the plates are held in position by a stop on the window-sill, as represented at *d d*. *e e* represent stops which keep the screens or plates out sufficiently from the side of the car when not in use, so that when the motion of the car is reversed the air will be forced under the screens and cause them to turn upon their hinges *b b*, as indicated by the dotted lines, until the stops *c c* at the top strike the window-frame, and the bottoms of the plates or screens strike the stops *d*, which stops will hold the plates in the desired position.

The stops *e e* and *d*, in Fig. 2, may be cushioned with rubber or some soft material, as shown in Figs. 3 and 4, and the brackets or window-frames, where the brackets strike, may be cushioned with rubber or other material, as shown at *f f f f*. The object of these cushions is to prevent the noise which might otherwise be caused by the changing of the screens by the current of air.

I am aware that screens hinged on each side of a car-window are old, and also that it is not new to provide stops to arrest the motion of the said screens; but the peculiar advantage of my invention consists in the curve given to the screens, and the relation of stops and hinges, whereby the deflectors or screens are not only rendered automatic in their operation, but are, by means of the hinges and stops, held at the angle shown, so as to most effectively deflect the cinders and air, and

cause an outward current from the car, and also present the least possible resistance when the car is in motion.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with the curved plates A,

hinged, as shown, at *b*, the stops *c*, *d*, and *e*, constructed so as to operate substantially as and for the purpose set forth.

I. A. SALMON.

Witnesses:

GEO. A. SALMON,

S. L. POTTER.