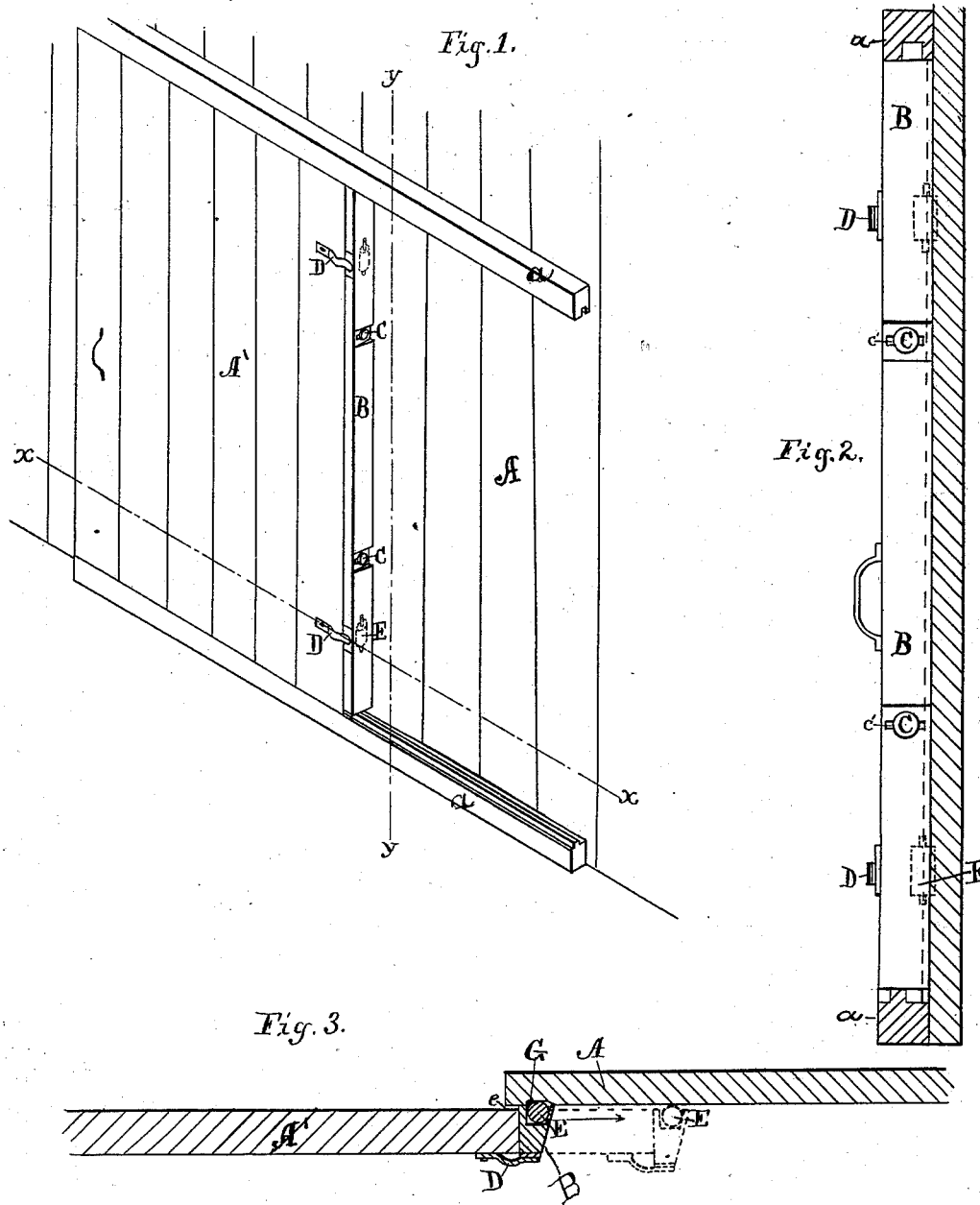


J. L. TOWNE.
Weather-Strip for Car-Doors.

No. 216,473.

Patented June 10, 1879.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH L. TOWNE, OF WATERVILLE, MAINE.

IMPROVEMENT IN WEATHER-STRIPS FOR CAR-DOORS.

Specification forming part of Letters Patent No. **216,473**, dated June 10, 1879; application filed April 28, 1879.

To all whom it may concern:

Be it known that I, JOSEPH L. TOWNE, of Waterville, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Weather-Strips for Freight-Car Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective, showing in detail the invention as applied in use. Fig. 2 is a section on line *y y*, Fig. 1. Fig. 3 is a section on line *x x*, Fig. 1.

The purpose of my invention is to provide a weather-strip for the rear or back edge of freight-car doors, to prevent the entrance of rain, snow, sparks, and the like through the crack or opening which almost invariably exists between the back edge of the door and the side of the car. When cars are run forward the presence of this opening is of no particular disadvantage; but when running backward rain and snow are often driven directly into the car to the great damage of the goods contained therein, and sparks from the locomotive not infrequently enter and set fire to the car.

The presence of the open space or crack above referred to is due, in old cars, to the shrinkage and working of the door, and in new ones to the fact that the doors are not always made perfectly tight, on account of their scratching the side of the car when opened and shut.

My invention consists of a weather-strip, which is attached to the rear edge of the car-door in such a manner that it closes up the open space entirely when the car is shut, and allows the door to be freely opened and closed without scraping the paint from the sides of the car. Moreover, it makes no difference how wide the crack is, or how much motion laterally the car-door has, the weather-strip is always pressed into place against the sides of the car by the constant pressure of springs attached to the door and bearing on the strip.

In the accompanying drawings, A repre-

sents the car-body, and A' the side door, sliding in ways *a*, or in any usual manner, and *e* the small crack between the door and the side of the car A.

B is a vertical weather-strip, somewhat wider than the thickness of the door A. This strip B may be fastened to the door A by means of the bolts C C, passing through slots *c'* in the strip B, or in some other suitable manner, so as to allow a small motion of the strip B to and from the sides of the car.

D D are springs secured to the door A, and pressing the strip always toward the body of the car.

On the side of the strip B which is against the car are rollers E E, secured to the strip B in such a position that they prevent it from coming against the side of the car except when the door A is shut, when the rollers E E sink into depressions or seats G, made for them in the side of the car, and allow the strip to come against the car, thus effectually closing the opening *e*.

It is evident that if the door A is loose and has some lateral motion, the action of the springs D D always keeps the strip pressed in against the car.

When the door A' is pushed back to be opened, as indicated by the arrow and dotted lines in Fig. 3, the rollers E E coming out of the apertures G raise the strip B away from the side of the car and allow it to roll smoothly along as the door A' is moved back or forth to open or shut it, the springs D D all the while adjusting it to any inequalities in the surface of the car. The surface of the car may be further protected from scratching by securing to it strips of wood or metal for the rollers E E to run on. A tighter joint may be made by facing the strip B with rubber where it bears against the car.

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

1. The weather-strip B for freight-car doors, with its fastening C, springs D D, and rollers E E, substantially as and for the purposes set forth.

2. The combination of sliding door A', having a weather-strip, B, attached to its rear edge, and held in place by suitable springs D

D, with the car A, substantially as and for the purposes set forth.

3. The weather-strip B for sliding doors, with its fastening C C, springs D D, and rollers E E, substantially as and for the purposes set forth.

4. In combination with car A, having depression G in its surface or body, the sliding door A', to the edge of which is attached strip

B, with roller E and springs D, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOSEPH L. TOWNE.

Witnesses:

HORATIO D. BATES,
S. W. BATES.