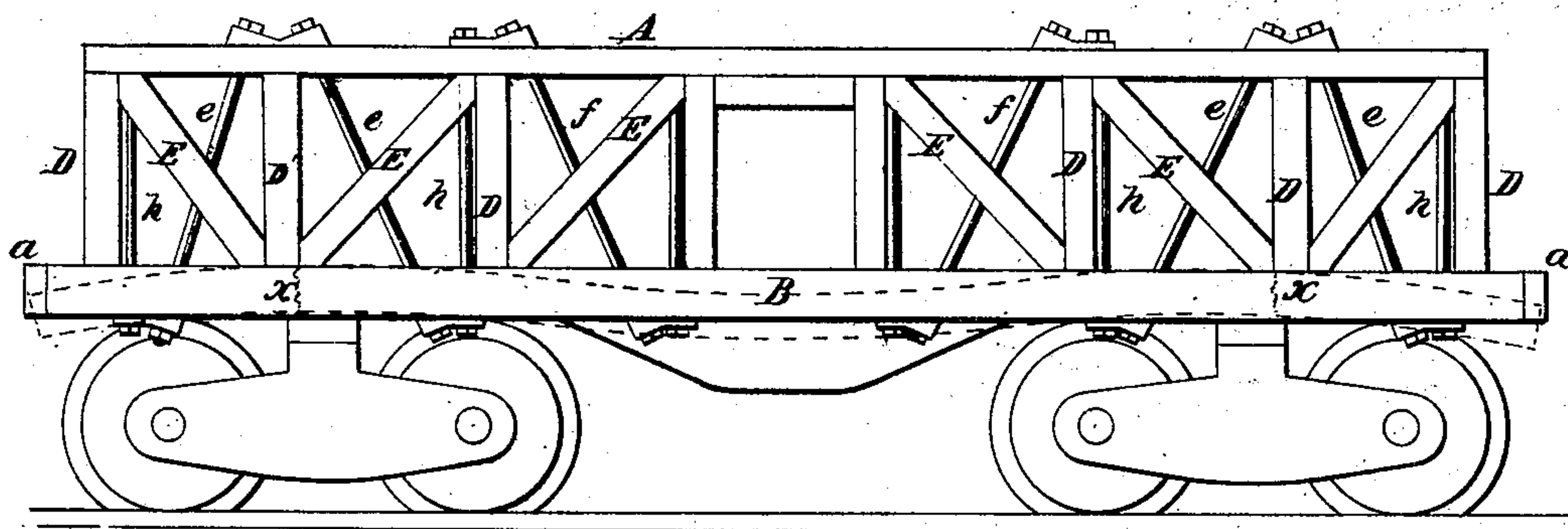


J. FOREMAN.  
RAILWAY CAR.

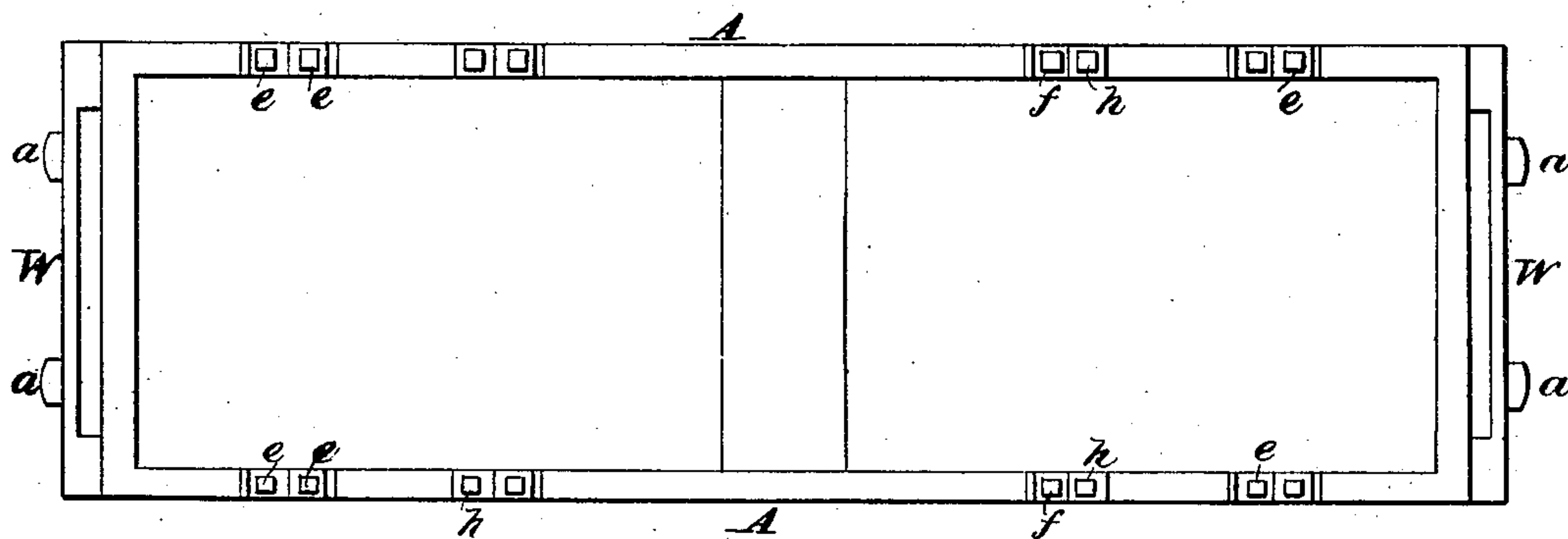
No. 68,619.

Patented Sept. 10, 1867.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*Wm Albat Stut*  
*John Parker*

Inventor:

*J. Foreman*  
*By his atty*  
*H. Howson*

# United States Patent Office.

JOHN FOREMAN, OF POTTSTOWN, PENNSYLVANIA.

*Letters Patent No. 68,619, dated September 10, 1867.*

## IMPROVED RAILWAY CAR.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN FOREMAN, of Pottstown, county of Montgomery, State of Pennsylvania, have invented an improvement in Railway Cars; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in the coal-cars commonly used on railways, and my improvement consists in combining with the bodies of such cars certain diagonal tie-rods by which the yielding and fracture of the lower longitudinal beams of the body of the car and distortion and injury to the latter are prevented, as fully described hereafter.

In order to enable others skilled in the art to make and apply my invention, I will now proceed to describe the mode of carrying the same into effect, reference being had to the accompanying drawing, which forms a part of this specification and in which—

Figure 1 represents a coal-car, with my improvement; and

Figure 2 a plan view.

Each side of the body of the car consists, as usual, of the upper and lower longitudinal beams, A and B, connected together by uprights D and bolts *h*, and strengthened by braces E, the opposite ends of the body being similarly constructed, and the whole being lined inside with boards. The bottom of the car is inclined downwards from each end, so that the body is deepest in the middle. The body rests on suitable trucks, and each end of the body is furnished with bumpers *a a*, secured to an elastic bar, W. In coal-cars, thus constructed in the ordinary manner, the longitudinal beams B have a tendency to assume the form represented in red lines, owing to the repeated bumping of one car against the other, and to the fact that the greatest weight is at a point midway between the opposite ends of the body, hence fractures of the beams B B are apt to take place at the points *x x*, or if the beams are not broken the entire body of the car is apt to become so distorted as to be unfit for use. In order to obviate this evil I brace the side of the body near each end by diagonal tie-bolts *e e*, one on each side of each of the posts D', the bolts passing through the upper and lower longitudinal beams A and B, as shown in the drawing, at a point where there is the greatest tendency of the beam B to rise. I also apply to each side of the car additional inclined tie-rods *f f*, which serve to resist the tendency of the beams B B to sink at a point midway between their opposite ends. By means of this simple application of diagonal tie-bolts the above-mentioned evil is obviated and the body of the car prevented from becoming distorted.

I claim as my invention, and desire to secure by Letters Patent—

The combination, described, of the diagonal tie-bolts *e e* and *f*, with the longitudinal beams, posts, and diagonal braces of the body of a car, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing-witnesses.

JOHN FOREMAN.

Witnesses:

JOHN WHITE,

W. J. R. DELANY.