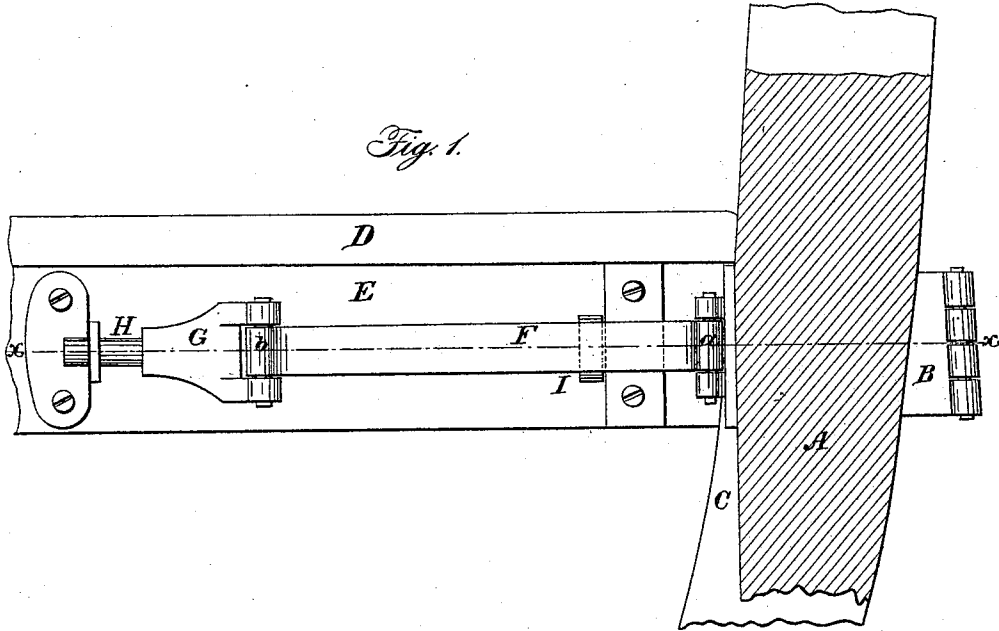


H. KILLAM.  
Carriage-Step.

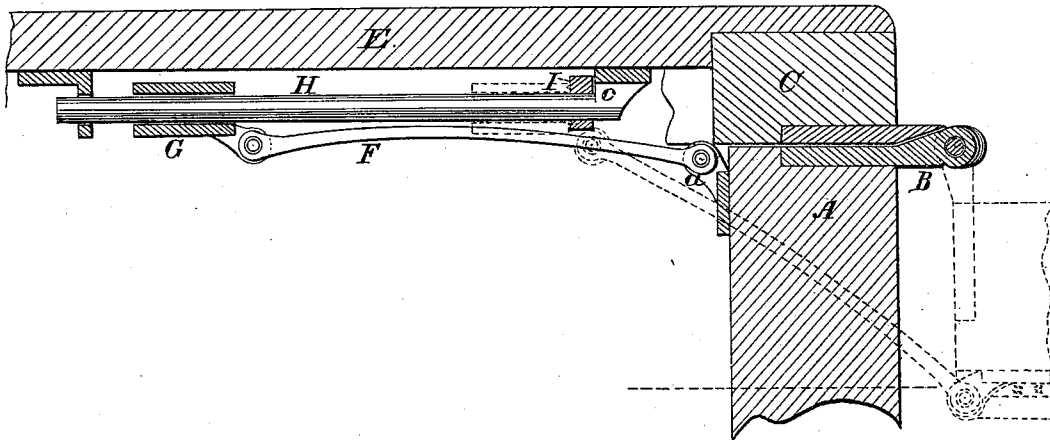
No. { 2,888, }  
      { 33,892. }

Patented Dec. 10, 1861.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*W. Coombs*  
*Wm. Simpson*

Inventor:

*Henry Killam*  
*by Messrs C*  
*attys*

# UNITED STATES PATENT OFFICE.

HENRY KILLAM, OF NEW HAVEN, CONNECTICUT.

## IMPROVED STOP FOR COACH-DOORS.

Specification forming part of Letters Patent No. 33,892, dated December 10, 1861.

### *To all whom it may concern:*

Be it known that I, HENRY KILLAM, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Stop for Coach-Doors; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention applied to a coach-door; Fig. 2, a horizontal section of the same, taken in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention is designed to prevent coach-doors opening beyond a certain limit, the same being a plane at right angles with the side of the body, whereby the door is prevented from coming in contact with the back wheel of the vehicle, and the stop so arranged as not to interfere with glass windows when the same are made to extend quite low in the sides of the body of the vehicle, as is frequently the case.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a coach-door, or rather a section of one, and B the lower hinge of the two, which secure it to the body C.

D represents a portion of the back seat of the coach, and E is the front rail, to which the front part of the seat D is secured.

F is a curved metal bar, one end of which is attached by a hinge or joint *a* to the door A near its hinged edge and in line with the rail E of the seat D. The opposite end of the bar F is attached by a hinge or joint *b* to a slide G, which is fitted and allowed to slide

freely on a horizontal rod H, secured to the rail E at its front side and in such a way as to project out sufficiently from the rail to allow the slide G to work on it. (See Fig. 2.) The rod H is of such a length and placed in such a position on the rail E as to admit of the door A opening to a position at right angles with the side of the body C. The contact of the slide F with the outer bracket *c* of the rod H prevents the door opening beyond the point specified. A spring I, which may be of india-rubber or a spiral wire, is placed on the rod H adjoining the bracket *c*. This spring breaks all concussions, which would otherwise be caused by a rapid opening of the door. This attaching of the rod H to the rail E of the back seat D and the slide G of the bar F being placed thereon places the whole device out of the way and entirely free from the body C, and low glass windows may be used in the body without being broken or at all endangered by the use of the stop.

I do not claim, broadly, a stop-bar F applied to a coach-door irrespective of the manner of application and arrangement of the same; but,

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

The curved bar F, slide G, and guide-rod H, arranged as shown, and applied, respectively, to the door A and seat-rail E, as and for the purpose set forth.

HENRY KILLAM. [L. s.]

Witnesses:

LYMAN E. MUNSON,  
HOMER B. SPRAGUE.