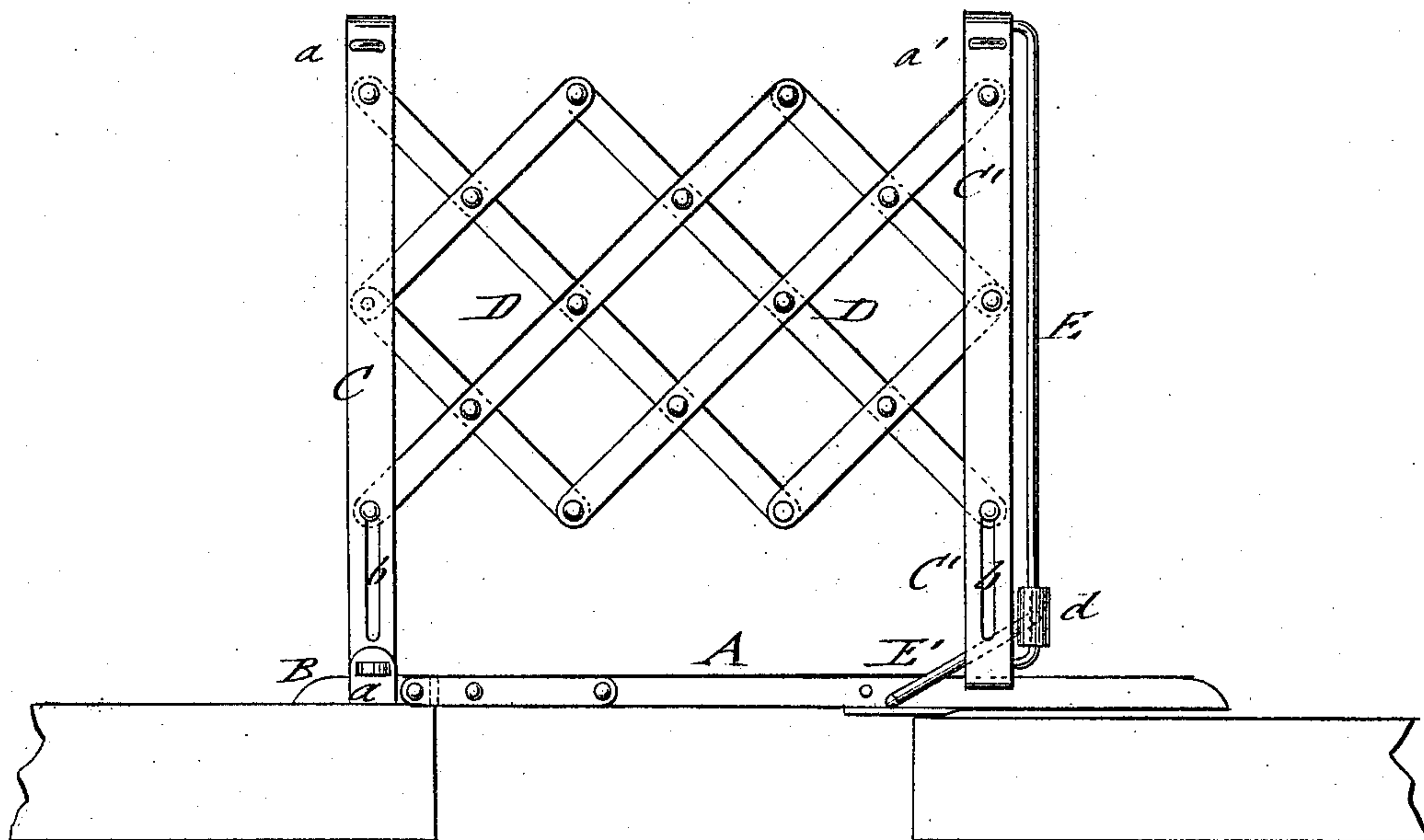


L. F. FRAZEE.  
SAFETY-BRIDGES.

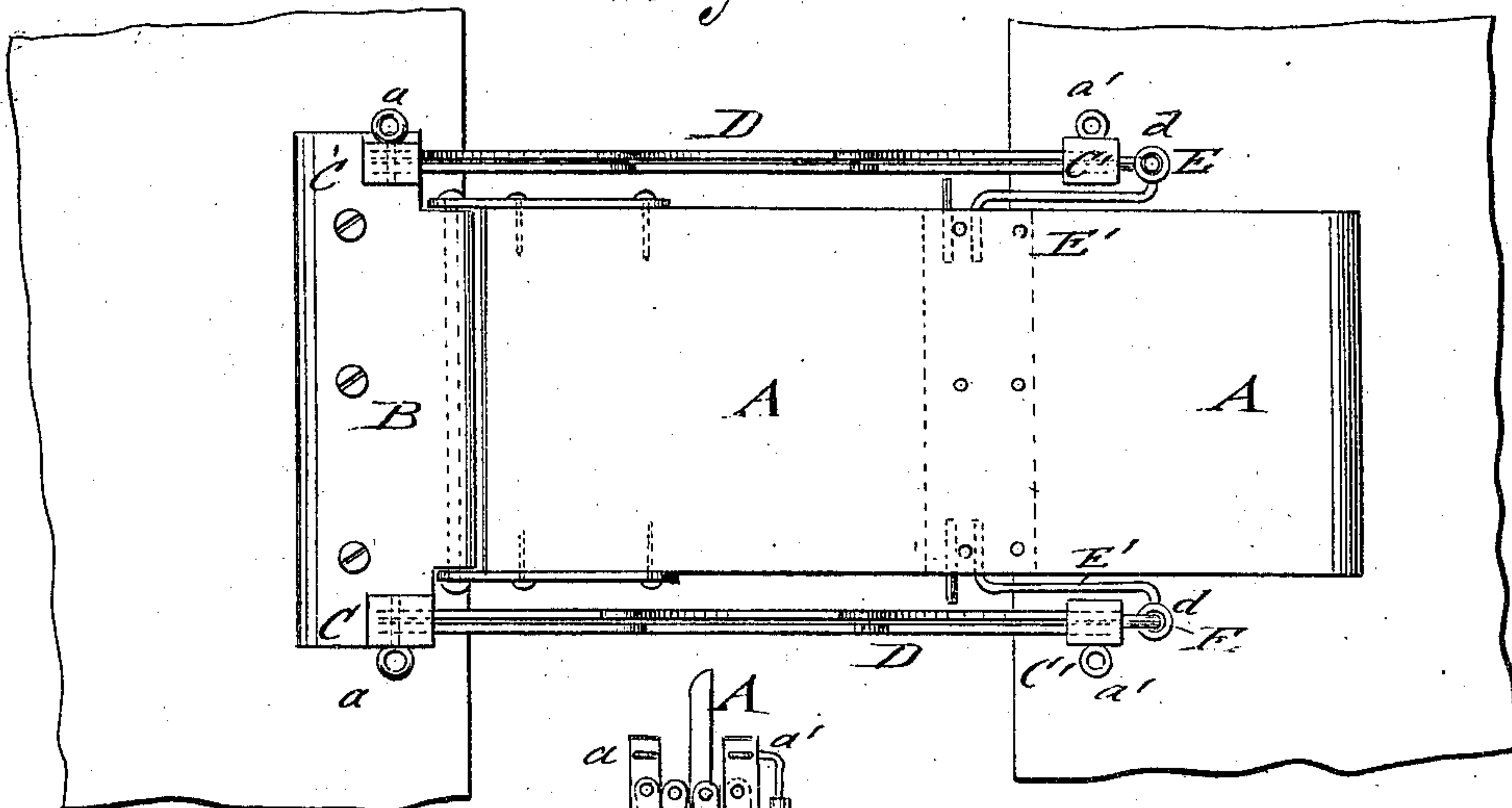
No. 177,493.

Patented May 16, 1876.

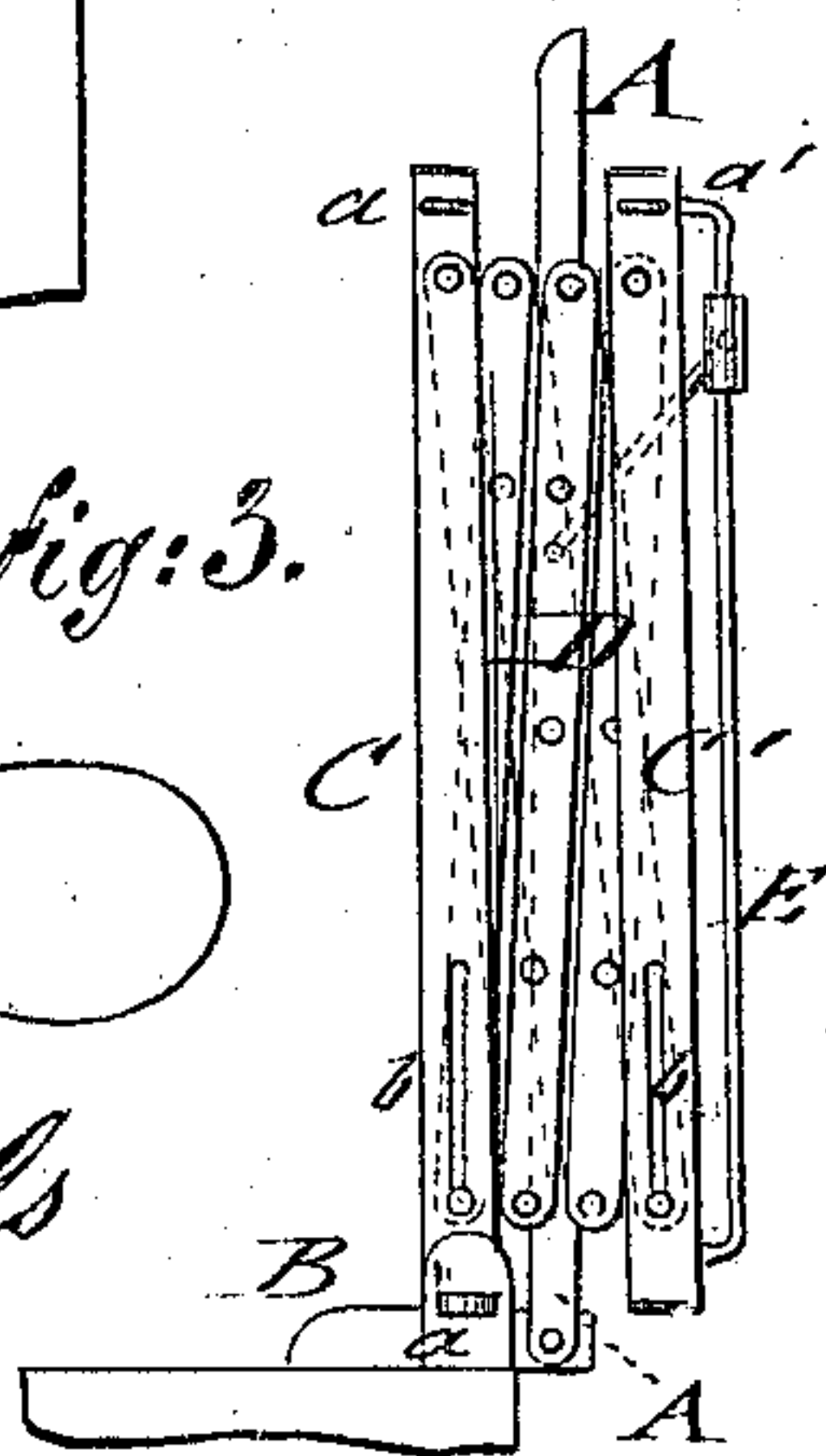
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*Chas. Nida*  
*John Goethals*

INVENTOR:

*L. F. Frazee*

BY

*Wm. H. ...*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

LAWRENCE F. FRAZEE, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN SAFETY-BRIDGES.

Specification forming part of Letters Patent No. **177,493**, dated May 16, 1876; application filed April 18, 1876.

*To all whom it may concern:*

Be it known that I, LAWRENCE F. FRAZEE, of Jersey City, Hudson county, State of New Jersey, have invented a new and Improved Platform-Guard for Railroad Passenger Cars, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved platform-guard for passenger-cars, being shown in position to connect two platforms. Fig. 2 is a top view of the same; and Fig. 3 a side elevation, showing the guard thrown up and folded up after use.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide for railroad passenger-cars, steamboats, &c., a gang-plank and guard-railing, by which the passengers are allowed to pass, with facility and without the least danger, from one platform to another, the platform-connecting guards being capable of folding up into narrow compass, to be out of the way when the cars are uncoupled.

The invention will first be described in connection with drawing, and then pointed out in the claim.

In the drawing, A represents a gang-plank of suitable width and length, as required to connect the platforms of two adjoining passenger-cars. The gang-plank A is hinged to an end piece, B, that is attached, by screw-bolts or otherwise, to the platform of a passenger-car, and provided with fixed upright side posts C, which are connected by top and bottom eyes or staples *a*, and pins, straps, chains, or otherwise, with the railing of the platform. A pivoted guard-railing, D, extends along each side of the gang-plank to movable upright posts C', and is made of intersecting pivot-rods, in the nature of lazy-

tongs, and admits, by slots *b* of the fixed and movable posts C C', the folding up of the guards after use. The movable posts may be strapped or otherwise attached, by eyes *a'*, to the stationary posts of the railing of the adjoining platform, the movable posts being provided with guide-rods E, to which the gang-plank is connected by lower swinging crank-arms E', with sliding-sleeve ends *d*, so that the guards follow the varying distance of the platforms during the motion of the train, and produce, when swinging up the gang-plank for the coupling or uncoupling of the cars, the simultaneous folding up of the guard-railing, and when lowering the plank, the opening of the guards, so that a perfectly safe communication from car to car, in the nature of a neat and convenient gangway, is furnished.

The connecting guard-railing may, if desired, be applied loosely to the platform or hinged to the posts of the platform-railing, to be swung sidewise or into any other suitable position, to be out of the way when not required for use, the gang-plank and guards forming, when connecting the platforms, a convenient bridge or gangway for the passengers and conductor, by which accidents are prevented and the access from one car to the other facilitated.

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

The pivoted guard-railing D of intersecting pivot-rods, in combination with fixed posts C, movable posts C', guide-rods E, cranks E', and gang-plank A hinged to end piece B, as and for the purpose specified.

LAWRENCE F. FRAZEE.

Witnesses:

PAUL GOEPEL,  
T. B. MOSHER.