

(No Model.)

M. FITZSIMMONS.  
SAFETY GUARD FOR FREIGHT CARS.

No. 517,519.

Patented Apr. 3, 1894.

Fig. 1.

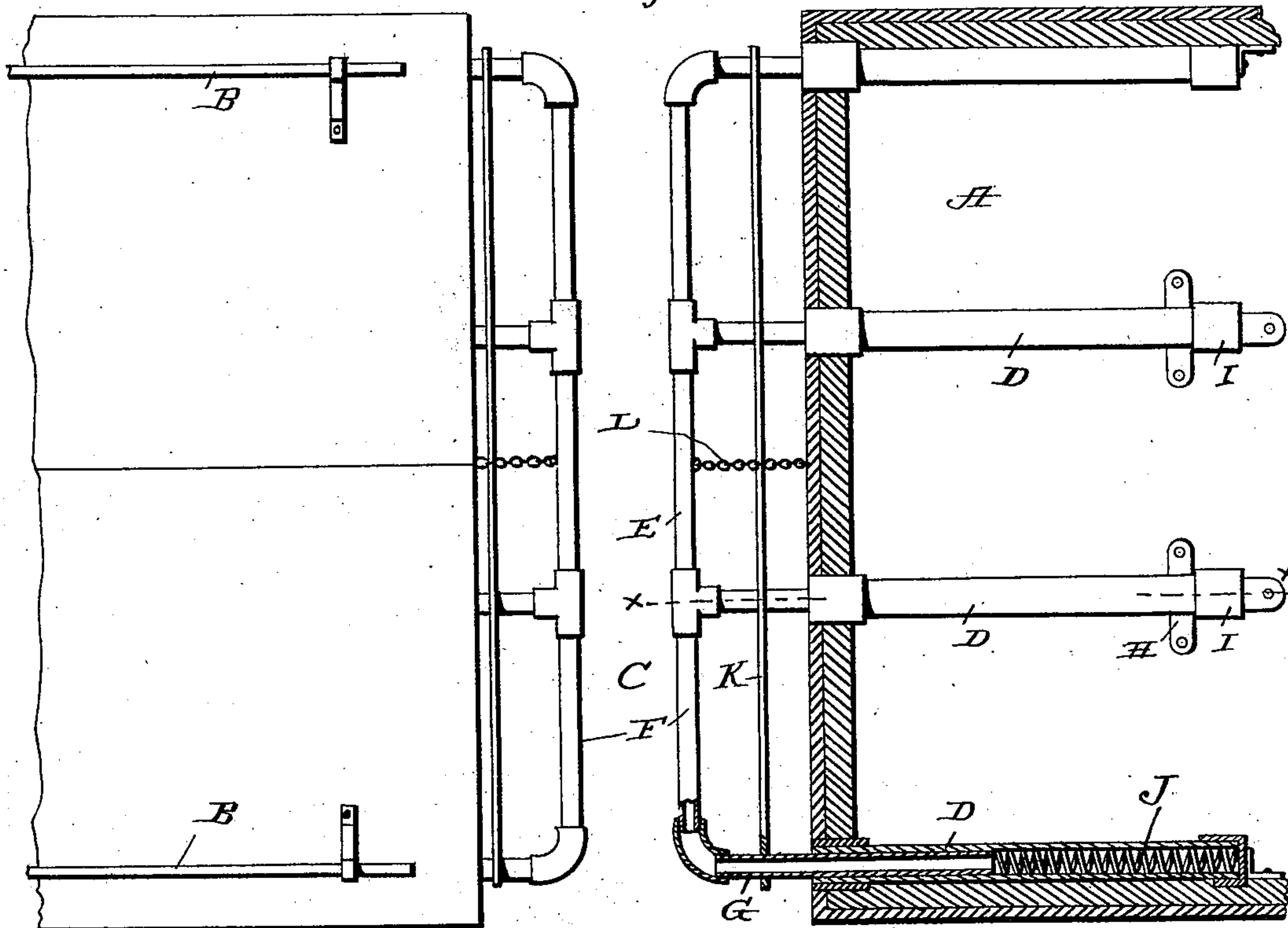


Fig. 2.

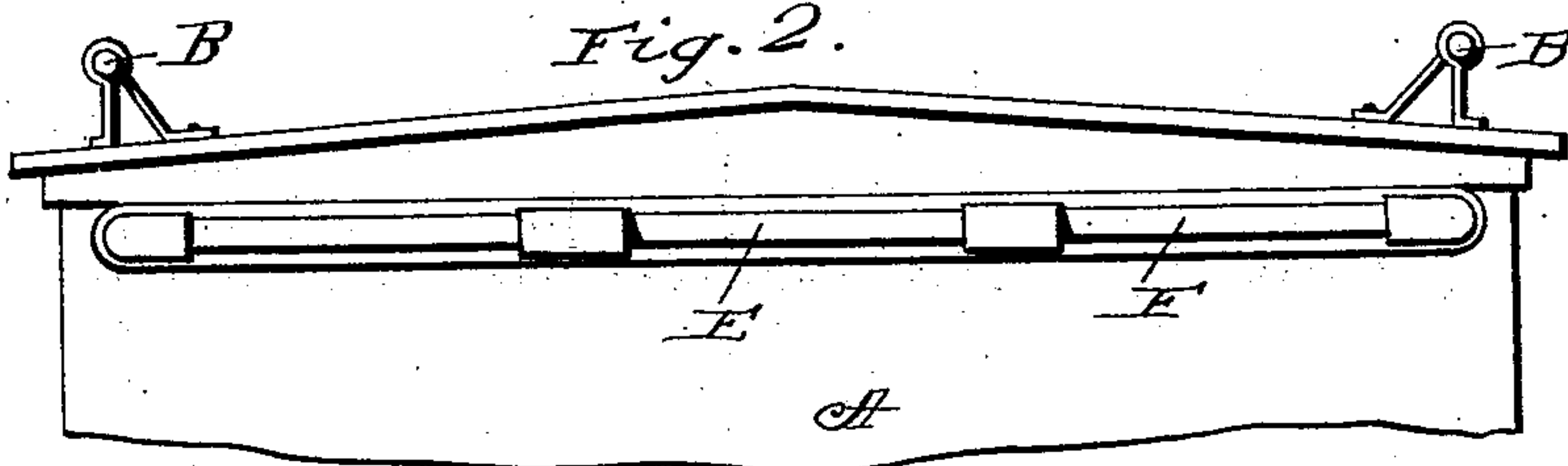
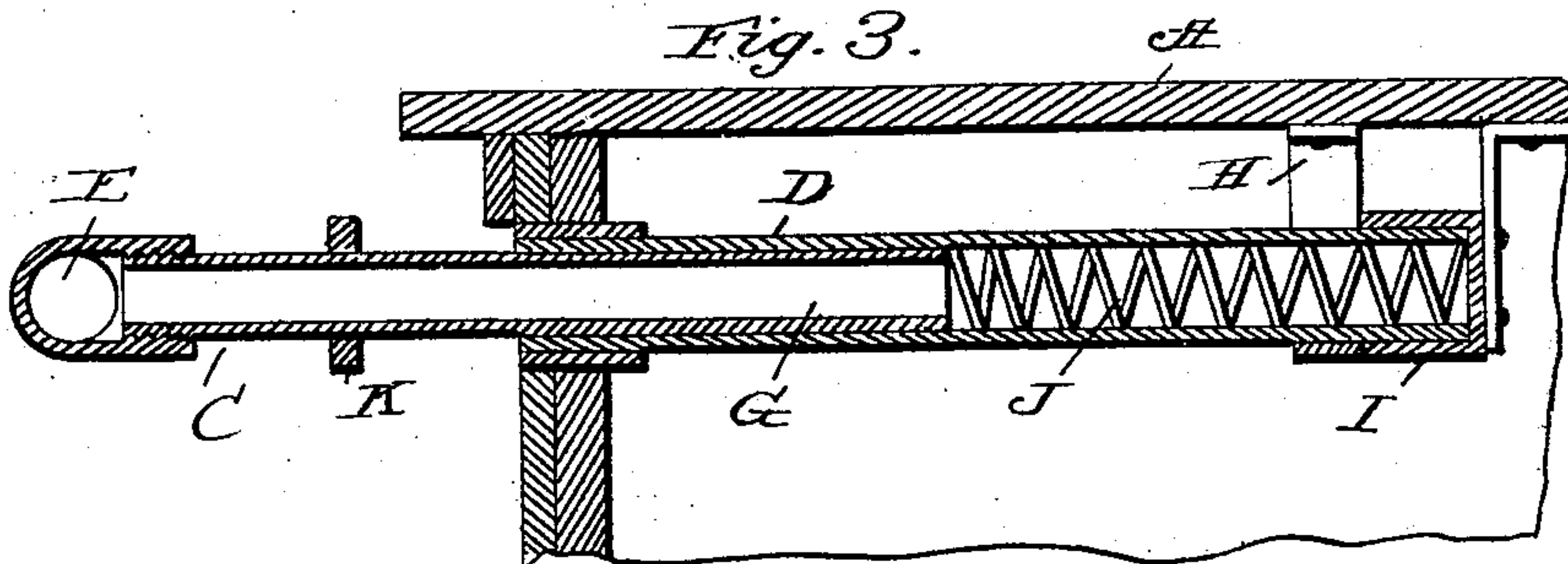


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

MATHEW FITZSIMMONS, OF IRONWOOD, MICHIGAN.

## SAFETY-GUARD FOR FREIGHT-CARS.

SPECIFICATION forming part of Letters Patent No. 517,519, dated April 3, 1894.

Application filed September 13, 1893. Serial No. 485,419. (No model.)

*To all whom it may concern:*

Be it known that I, MATHEW FITZSIMMONS, a citizen of the United States, residing at Ironwood, in the county of Gogebic and State of Michigan, have invented certain new and useful Improvements in Safety-Guards for Railway-Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway cars, and more particularly to freight or box cars, and it has for its general object to provide such cars with a safety attachment of a cheap, simple, and durable construction, adapted when two cars are coupled together, to form a frame or support between the same, so as to catch the trainmen should they lose their footing and fall while working the brakes or in passing from one car onto another; the said attachment being also adapted to serve as a buffer when the cars come together so as to lessen the shock and jar of the blow and thereby reduce the liability of a trainman being thrown off.

With the foregoing ends in view the invention will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1, illustrates the contiguous ends of two cars equipped with my safety attachment; one of said cars being illustrated in plan and the other in horizontal section. Fig. 2, is a detail end elevation of a car provided with my improved attachment, and Fig. 3, is an enlarged vertical section taken in the plane indicated by the line  $x, x$ , of Fig. 1.

Referring by letter to said drawings:—A, indicates freight or box cars which may be of the ordinary or any approved form and construction; and B, indicates longitudinal hand rails which are mounted upon the roof of the cars adjacent to the edges of the same, and are designed to enable a trainman to catch himself should he slip or fall laterally.

C, indicates my improved life saving attachments of which there is one employed at each end of the car. These attachments C, are preferably arranged in a plane slightly below that of the car roof as illustrated, and they respectively comprise a series of two

(more or less) fixed sleeves D, and a movable frame E, formed by the transverse bar F, and the longitudinally disposed plungers G, which latter are designed to take and play in the fixed sleeves D as will be presently described. The fixed sleeves D, and the movable frame E, are preferably formed from gas pipe; and the said sleeves are preferably arranged in the car as better shown in Fig. 3; their forward ends being supported in the end wall of the car while their rear ends are sustained by a bracket or brackets H, as illustrated. These brackets carry caps I, which receive and close the inner ends of the sleeves D, and also afford bearings for the inner ends of the coiled springs J. The said springs J, which are preferably formed from steel, bear at their opposite ends against the inner ends of the plungers G, and they serve to hold the movable frame E, in a normally extended position so that when two cars come together their contiguous attachments will engage each other and form a frame support for the purpose before described.

In order to strengthen the frame E, of my improved attachment and render the same capable of withstanding a great weight without bending or sagging, I provide the transverse brace K, and the chain L. The brace K, is connected to the several plungers of the frame E, and it serves to render the frame stiff and strong while the chain L, which is connected to the car and the bar F, serves to prevent the frame from sagging downwardly when it is fully extended.

From the foregoing description it will be seen that when two cars come together, the frames E, will engage each other and form a safety frame which is thoroughly capable of supporting the weight of a man. It will also be seen that the frames E, will take up a great deal of the shock and jar incidental to two cars coming together, and will adjust themselves to the varying space between the cars when the same are moving.

As before stated my improved attachment is designed more particularly for use upon box cars such as are now in use, but it may if desired, be applied to flat cars, coal cars, &c., without materially increasing the cost thereof.

Having described my invention, what I claim is—



1. In a safety attachment for railway cars, the combination with a car; of the outer and intermediate, longitudinally-disposed sleeves D, bearing at one end in the end wall of the car and fixed with respect thereto, brackets connected to the top of the car and having caps I, to support and close the inner ends of the sleeves D, the movable frame E, comprising the transverse bar F, the outer and intermediate longitudinally-disposed bars or plungers G, movable in the sleeves D, and the transverse bar K, connecting the bars or plungers G, coiled springs arranged in the sleeves D, and backing the bars or plungers G, and a chain connected to the bar F, of the frame E, and to the car above the said frame and adapted to prevent downward sagging of the frame E, and also adapted to retain the plungers G, in the sleeves D, all substantially as and for the purpose set forth.

2. In a safety attachment for railway cars, the combination with a car; of the outer and intermediate, longitudinally-disposed sleeves D, formed from gas pipe and bearing at one

end in the end wall of the car and fixed with respect thereto, brackets connected to the top of the car and having the caps I, to support and close the inner ends of the sleeves D, the movable frame E, formed of gas pipe and comprising the transverse bar F, the outer and intermediate, longitudinally-disposed bars or plungers G, movable in the sleeves D, and the transverse bar K, connecting the bars or plungers G, coiled springs arranged in the sleeves D, and backing the bars or plungers G, and a chain connected to the bar F, of the frame E, and to the car above the said frame and adapted to prevent downward sagging of the frame E, and also adapted to retain the plunger G, in the sleeves D, all substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MATHEW FITZSIMMONS.

Witnesses:

W. N. LUBY,

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