

(No Model.)

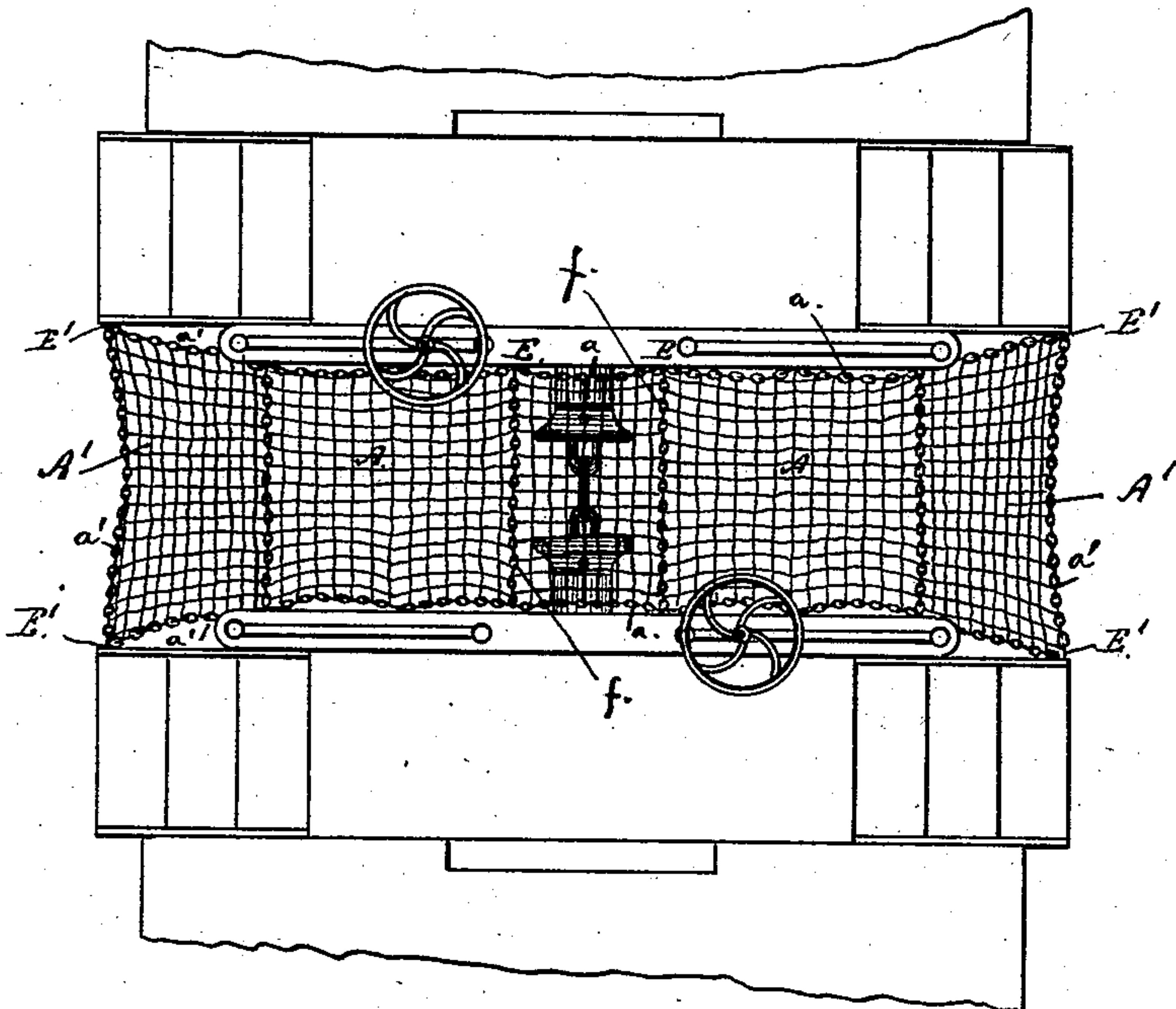
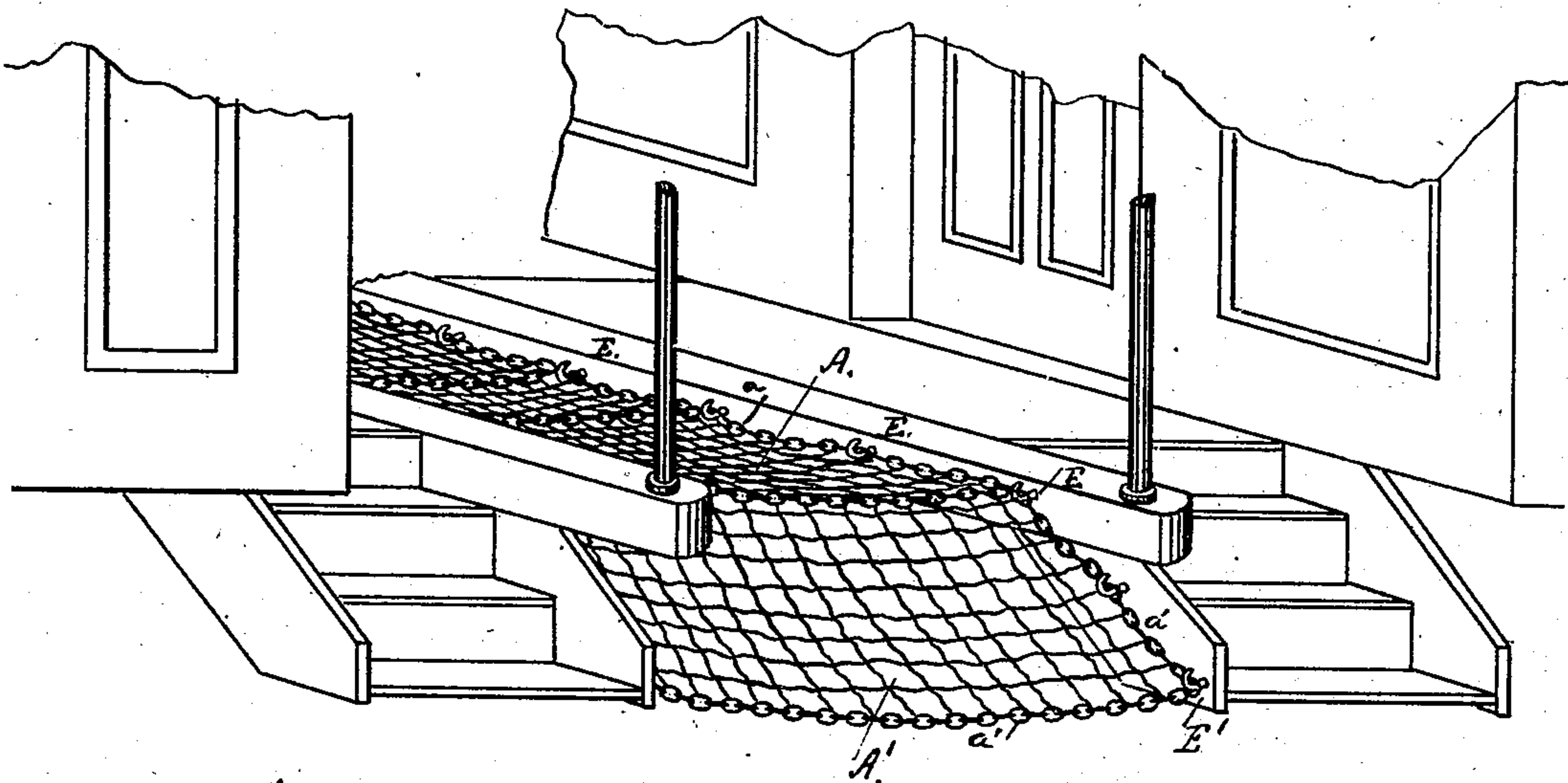
A. B. SMITH.

SAFETY BRIDGE FOR RAILWAY CARS.

No. 289,866.

Patented Dec. 11, 1883.

Fig. 1.



Witnesses:

George Davis Jr.
J. M. Downey

Fig. 2.

Inventor:

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Edw. C. Horn

UNITED STATES PATENT OFFICE.

ALPHONSO B. SMITH, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO
SOLON PATTEE, OF SAME PLACE.

SAFETY-BRIDGE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 289,866, dated December 11, 1883.

Application filed April 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO B. SMITH, a citizen of the United States, residing in the city and county of San Francisco, State of California, have made and invented a new and useful Improvement in Safety-Aprons for Openings between Railway-Cars in a Train; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the accompanying drawings.

My invention has reference to a device or an attachment for closing the gap or open space that exists between the adjacent ends or platforms of railway-cars in a train. It is designed and is adapted to cover over and close both the horizontal space and opening between the ends or platforms of two cars coupled together and the gaps or spaces at the sides between the steps. For such purpose and to such end it consists, essentially, of a light flexible apron with an open-work surface, such as is readily formed or produced by interlocking or interweaving a number of links, chains, or rings together, or by interweaving strands or lengths of wire together. This apron or surface is sufficiently strong to withstand the wear and tear and to support the weight of a heavy person, and it is galvanized or coated or covered by some weather-proof and rust-proof paint or substance; or it is made of metal that will not rust through exposure. It is attached at the corner and at intervals along its edges to the edge of the platforms or the cross-timbers at the end of the car, so that while it hangs loosely between these points of attachment it also completely covers over the space between the ends of the cars from outside to outside, not only between the cars, but also, in the cases where it is applied to platforms of passenger-cars, it protects the spaces or gaps at the sides between the step-boxing.

The following description fully explains the nature of my said invention and the manner in which I proceed to construct, apply, use, and operate it. The accompanying drawings herein referred to being—Figure 1, a perspective view of the adjacent ends of two passenger-cars with my improved safety device applied thereto. Fig. 2 is a plan or top view of Fig. 1.

I form a light open-work apron, A, by suitably interlocking or interweaving a number of links or ring, or lengths of chains, or by weaving or twisting and tying lengths or strands of wire together until I obtain a surface of required width and length. These measurements should be breadthwise somewhat greater than the greatest width that can exist between the two coupled platforms, and lengthwise about the same as the platform requires from outside to outside. This part of the space between the two platforms is then covered over by attaching the apron A by the outer corners and at intervals along both longer edges to the platforms by a strong fastening, such as a ring, link, or eye, and a hook, E E', fixed in the platform. For such purpose I fix along the sides of the apron a border or edge, a, of heavier links or strands, to give greater strength to the apron and afford support and attachment to the line of hooks E E'. Such an outer heavier chain, a', is also carried across the ends of the apron. At points in the middle portion of the apron, and on either side of the draw-head or coupling, I place heavier strands or chains f f, of same character as those around the margin. These are provided more especially for the protection of the apron in case the coupling breaks or the cars become separated after the apron is fixed in place, as they are strong enough to preserve connection between the cars independent of the coupling. These chains in the middle portion of the surface are not essential to the practical operation of my device, and they may be employed or not as the circumstances in any application may seem to require.

Now, while this apron is applicable to all descriptions of cars where a space is left between them when coupled to make up a train, it is desirable, and in fact necessary, to provide a means for closing the spaces between the sides of the steps on one platform and those of the adjacent platform, this gap between the boxing or casing of the steps on passenger-cars of the ordinary kind being the source of more injuries and accidents than the horizontal opening between the ends of the platforms. I therefore make and apply an addition or extension piece, A', of wedge shape, or gradually

widening from the edge that is attached to the top edge of the platform at the line of the apron A, and increasing to a width that is sufficient to extend from the inner side of the lowest step on one platform to the corresponding side of the other platform-step. This apron is of the same construction, and is attached to the platform and the step-boxing in the same manner as the apron A. One of these extension-aprons A' is applied to each side, and they may be formed integral with the apron A or fixed in place as separate devices. The application and position of these extension-aprons are clearly shown in Fig. 2 of the drawings.

As thus constructed and applied, my device covers and completely protects the dangerous gaps and openings that always exist between cars of the ordinary kind when made up into a train. The apron is strong, durable, and readily applied to all situations. When not in use, it is readily folded into small compass, and can be left attached to one platform by the hook-fastenings.

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

1. The herein-described safety apron or device for covering and protecting the gaps or spaces between the platforms of cars in a railway-train, consisting of the open-work flexible surface A, having strengthening and connecting chains $a a'$, that are adapted to engage with hooks or similar fastenings on the car-platforms, substantially as set forth.

2. In combination with the two adjacent sides of contiguous car-platforms in a train, the inclined or slanting apron A', having the marginal strengthening chains $a^2 a^2$, and hooks or equivalent fastening devices on the sides of the car-steps, as described, whereby the said apron is carried outward to the line of the steps, for the purpose set forth.

3. In combination with the opening between car-platforms in a train, the flexible open-work apron A, having the extensions A', and the fastening-hooks E E' on the edges of the platforms and the steps, applied to operate as and for the purpose set forth.

ALPHONSO B. SMITH. [L. S.]

Witnesses:

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