

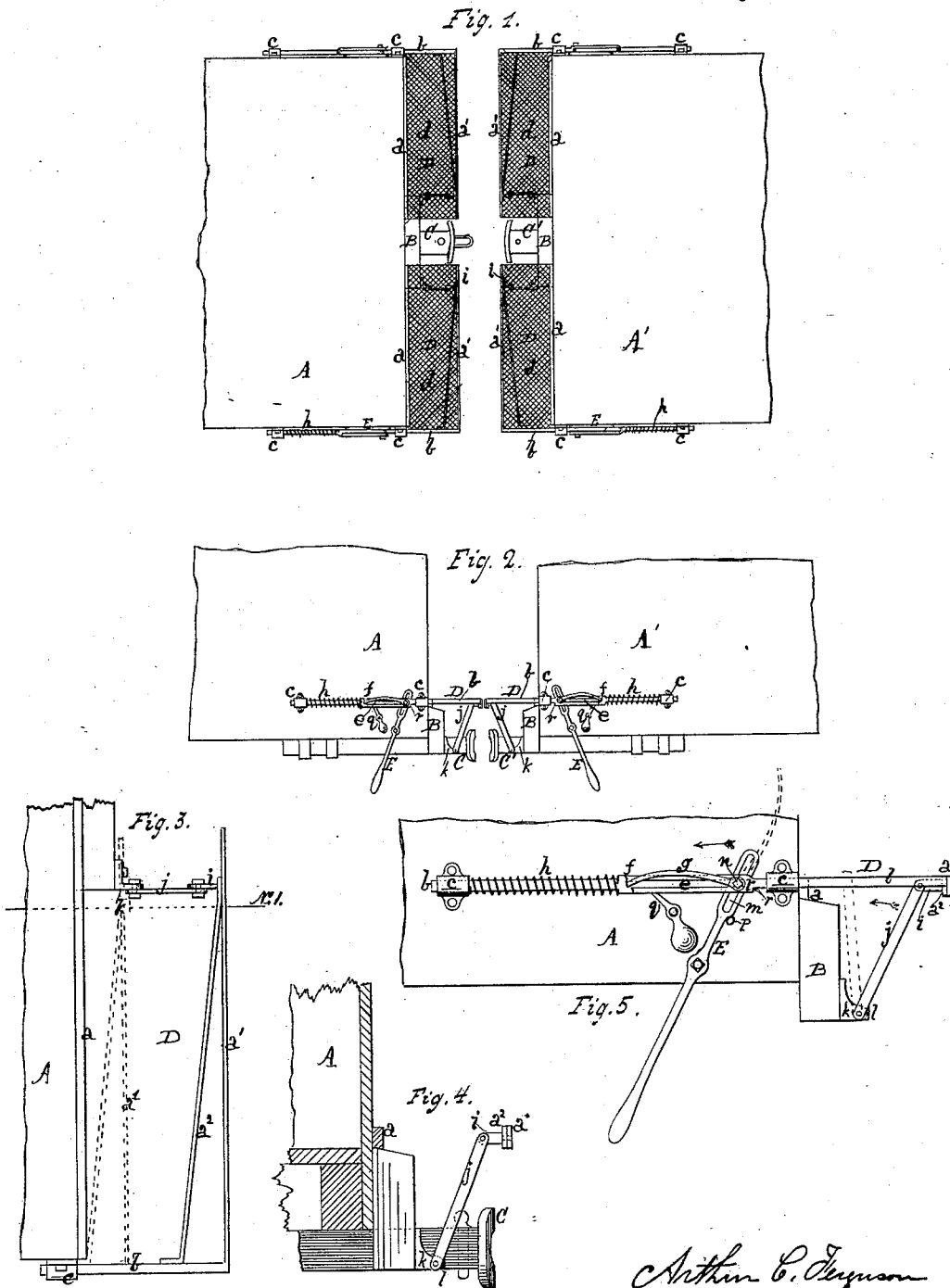
(No Model.)

A. C. FERGUSON.

CAR PLATFORM.

No. 302,551.

Patented July 29, 1884.



Witnesses
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CAR-PLATFORM.

SPECIFICATION forming part of Letters Patent No. 302,551, dated July 29, 1884.

Application filed November 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. FERGUSON, a citizen of the United States, and a resident of Fair Haven, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in Flexible Protective Platforms for Freight-Cars, of which the following is a specification.

My invention relates to a flexible protective platform for freight-cars, in which is provided a flexible web held by a frame which has its front portion yielding and rendered elastic by means of mechanism adapted to be operated by a lever, and crowded forward by a spring in such a manner that two such platforms—one on each car—will operate to bridge over the space between the cars, and be adapted to serve as a means for preventing an employé from falling on the track, and give him a standing-floor from which he may couple or uncouple the cars with safety, and may at any time pass from one car to the other.

The objects of my invention are to provide between freight-cars elastic flexible platforms which will be under the control of an operator, and be adapted to save employés from accident when passing from one car to another, or when coupling or uncoupling the cars. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which there are six figures illustrating my invention, in all of which the same designation of parts, by letter-reference, are used.

Referring to the drawings, Figure 1 is a plan view of two cars (part sections thereof) with my invention applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view (on an enlarged scale) of the flexible platform-frame with the flexible web removed. Fig. 4 is a sectional view taken at line No. 1 in Fig. 3. Fig. 5 is a side elevation of the mechanism I prefer to employ for operating the platform.

In the drawings, A and A' represent each a freight-car (or box or platform car) to which my invention is applied. B B are the bumper-timbers which receive the bumpers. C and C' are the bumpers or draw-bars, all of which are old,

Arranged at each end of the cars, and front of the ends thereof, are flexible platforms D D, consisting each of a flexible web, *d*, Fig. 1, secured at each of its marginal edges to stiff bars *a a'*. The bar *a* is firmly secured to the front of the car, and bar *a'* is secured at its outer end to the horizontally-moving bar *b*. This bar *b* is preferably made of square iron, (of, say, about one inch thick,) or of rectangular iron, (one and a quarter inch by seven-eighths in thickness, more or less,) and is supported in guiding-sleeves *c c*, securely attached to the sides of the car. Made in this bar, between sleeves *c c*, is an oblong slot, *e*, and made at the rear end of this slot is a projecting catch-seat, *f*, with which dog *g* is to engage, as shown in Figs. 3 and 5. This bar is made elastic by means of spring *h*, between sleeve *c* and the rear end of the slotted portion of said bar. Front side-bar, *a'*, of platform D is stiffened in its connection with elastic moving bar *b* by a horizontal bracing-bar, *a''*, which is secured at one end to bar *b* and at its other end to bar *a'*, as shown in Fig. 3.

Secured to the inner end of bar *a'* is a perforated ear, *i*. Pivoted to said ear is brace *j*, having its lower end pivoted to an ear, *k*, secured to the outer end of bumper-timber B, as shown in Figs. 3 and 4. This pivoted brace operates to support the inner end of bar *a'* of platform D from sagging down. With ear *k* is made stop *l*, which limits the outward movement of brace *j*.

Pivoted to the side of the car for operation of bar *b*, controlling flexible platform D, is lever E, provided with a handle for convenience of operating said lever. Made in this lever is slot *m*. This lever and bar *b* are connected together by a sliding pivot, *n*, which will move in slot *e* of said bar, and also in slot *m* of said lever when the lever is moved in either direction. Pivoted to this sliding pivot *n* is dog *g*, which engages catch-seat *f*, made on bar *b*, when the lever is moved in direction of arrow in Fig. 5. A stop, *p*, limits the forward movement of said lever, and a dog, *q*, pivoted to the side of the car and adapted to engage with shoulder *r* at the forward end of the slotted portion of bar *b*, operates to hold

said bar locked back when bar *b* is moved to its full distance rearward. Flexible web *d* may be made of small rope or large cord netting, or of metal chain-links, or of canvas, or of any other suitable material which will be so flexible and yielding as to admit the platform to be readily forced back toward the front of the car or moved forward by the elastic force of spring *h*. It is intended to provide each end of the car with two of these platforms and mechanism for operating the same.

When an employé desires to mount to the top of the car, he will throw dog *g* of each lever *E* from dotted lines to full lines in Fig. 5, when it will engage with catch *f*, and by moving lever *E* in direction of arrow in Fig. 3 the operator will force bar *b* rearward, when dog *g* will engage with shoulder *r* and hold said bar back. When bar *b* is thrown rearward the front bar, *a'*, of the flexible platform will also be moved back, as indicated by dotted lines in Fig. 3, when the flexible web will yield and fold or sag in its slack. With each platform thrown back toward the car, as above described, simple passage-way will be provided, by which the coupling of the cars may be reached, and access to the usual ladder (made with the front of the cars) may be readily had for mounting to the top of the car. When dog *g* is thrown out from engagement with shoulder *r*, spring *h* will force bar *b* forward and carry bar *a'* outward from the end of the car, when flexible web *d* will be extended and made to serve as a firm flooring, on which the employé may stand with safety. When dog *g* is turned to dotted lines shown in Fig. 5, platform *D* will be adapted to yield in an elastic manner when its front is pressed against by a similar coacting platform, as shown in Fig. 2.

When two coupled cars, *A* and *A'*, are each provided with these flexible protective platforms, the employé may at any time descend from the top of one car and pass from the same to the other, and mount to the top of the same without least liability to accident; and he may at any time (consistent with his duties) stand on these platforms between the cars for protection from wind and storm. The employé will also be able from these platforms to reach down to couple or uncouple the cars without getting down on the ground. It will be observed that when these platforms of two cars are together they form, in fact, a single platform extending from the front of one car to that of the other, with but a small opening only over the coupling-bars existing between the cars. In case an employé falls from the top of the car these platforms will operate to catch him, so that he will be prevented from falling on the track.

I do not confine myself to the use of the exact mechanism shown and described for operating the platforms, as they may be varied to effect the operations above described, the essential features to be had in such mechanism

being those which will make the platform elastic and flexible and to be under the control of the operator at will.

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

1. The flexible platform *D*, formed by the combination, with bar *a*, adapted to be attached to the front of a freight-car, and bar *a'*, attached to a movable horizontal bar adapted to work in a sleeve secured to the side of a car, of a flexible web, *d*, having one of its margin edges secured to bar *a* and the other to bar *a'*, the said platform being adapted to extend from a side of the car to near a vertical line drawn at a side of the coupling device of the car, whereby when applied to the car at about on a plane with the upper side of the bumper-timbers the said flexible platform will be adapted to operate with a similar platform of a connected car, and permit an operator to have access to the coupling device while standing on said platform, substantially as set forth.

2. The combination, with a freight-car, of flexible platform *D*, constructed and arranged in relation to the front of the car, substantially as above described, and with its rear edge portion securely fixed to said car-front, with its forward edge portion supported and guided in its horizontal movement by a horizontal bar and a sleeve secured to the car, and a lever mechanism by which the said front edge portion of the platform will be moved at the will of an operator in either direction, substantially in the manner and for the purposes set forth.

3. The combination, with two freight-cars adapted to be coupled together, of flexible platforms *D D*, each constructed and attached to the ends of the said cars in situation on planes about on a horizontal line with the upper sides of their respective timbers, and each provided with mechanism operated independent of the other for moving each platform outward from or rearward toward the front of the respective attached cars, whereby when said cars are coupled together an operator may at will operate either platform and have access to the floor of the other preparatory for access to the coupling devices of the cars, and to the roofs of the same, substantially as set forth.

4. The combination, with flexible platform *D*, of elastically-supported bar *b*, pivoted brace *j*, and lever *E*, for the purpose set forth.

5. The combination, with flexible platform *D*, of elastically-supported bar *b*, provided with slot *c*, lever *E*, provided with slot *m*, and connected by a dual sliding pivot, and dog *g*, adapted to engage with catch *f*, substantially as set forth.

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