

J. J. GUTIERREZ.
STREET RAILWAY CAR.

No. 103,874.

Patented June 7, 1870.

Fig. 1.

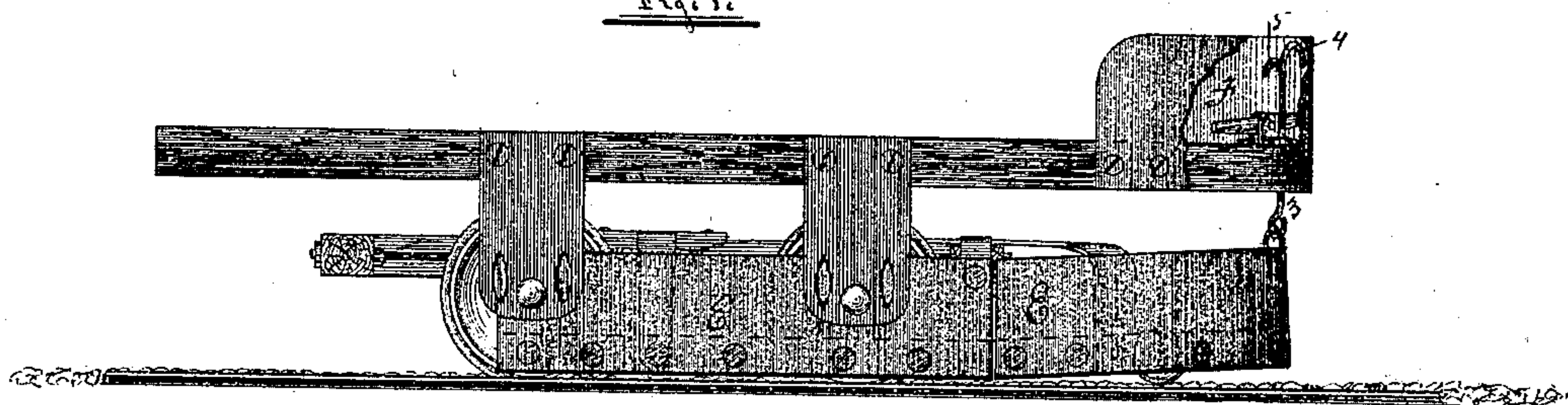
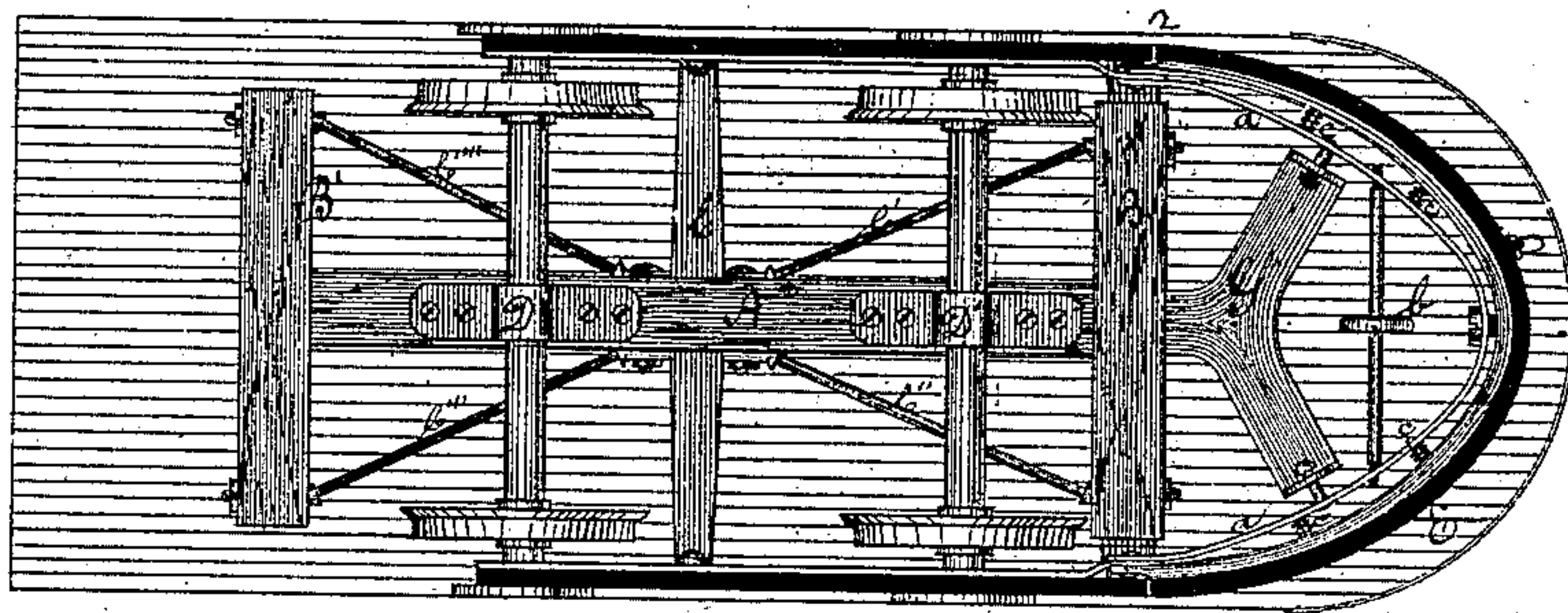


Fig. 2.



Witnesses.

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Letters Patent No. 103,874, dated June 7, 1870.

IMPROVEMENT IN STREET-RAILWAY CARS.

The Schedule required to in these Letters Patent and making part of the same

I, JOSEPH JUSTINIUS GUTIERREZ, of the parish of Jefferson, and State of Louisiana, have invented certain new and useful Improvements in Life-saving Apparatus or Attachments for Street-railroad Cars, of which the following is a specification.

Nature and Object of the Invention.

My invention relates to a means of preventing city railroad-cars from running over persons and killing or maiming them; and

It consists of a peculiarly-constructed and elastic shield or apron, which, extending in front of the fore wheels of the car, almost as far as the platform on which the driver stands, where it presents a curved termination, is carried back on each side of the car outside the wheels to a point a little behind the axle of the hind-wheels, the object being not only to interpose the shield in front of the wheels, but also at their sides, and between them, and in this way prevent the car from running over people and people from falling under the car at its sides.

The very great value of my invention will be at once demonstrated by a reference to city-railroad statistics on the subject of accidents resulting from the absence of any certain means of keeping pedestrians out of the way, or of protecting them, especially in crowded streets, and in the case of young children and of aged and infirm persons.

But my invention will be better understood by reference to the drawing, on which—

Figure 1 is a side view of it in connection with those parts of a car which need to be shown in order to illustrate the manner in which it is applied and operates, and

Figure 2, a bottom view of a car with my invention attached thereto.

On a light but strong frame, consisting of the parts A B B' C C' C'' C''' C''', which I mount on the axles of the car by a loose journal-connection at D D', I secure my shield or protective apron E, by means of angle brackets at the ends of the cross-pieces B and C, and a metallic strip, which is firmly riveted on the inside of the apron, near its lower edge.

The apron proper is constructed of India rubber, or some equivalent substance of a yielding nature, and the reinforcing strip of metal should also possess some degree of elasticity.

The continuity of both the apron proper and the metallic strip is broken at the points 1 and 2, in order to provide a joint at each of said points which will allow the front curved sections under the driver's platform to have a limited measure of vibration, with the view to the elevation of it, whenever necessary to pass over accidental obstructions that may get on the road or track between the rails.

In order to effect such elevation, and then to depress the apron again, I secure to it a rod, 3, as shown in fig. 1, which, passing up through the platform of the car within easy reach of the driver, enables him to control this matter at his pleasure, either by hand or through the agency of a proper foot-lever, to be connected to the rod.

Hooks 4 5 present a very simple means for holding the apron up, whether elevated or depressed, it being only necessary so to adjust their distance apart that one hook will suit one condition, and the other the other condition, when hung over the upper edge of the platform-guard F.

Inside the metal strip, an inch or two from it, I provide another strip, *a*, from the joints 1 2, around the curved portion of the apron, as shown at fig. 2, with the view still further to strengthen that portion, and to afford bearings for the axle of a small wheel, *b*, that is placed as shown, and designed to support the front end of the apron on the track itself without permitting it to come into contact with the ground.

I sustain the strip *a*, and in doing so the other metallic strip and the apron proper by means of a bifurcated projecting arm, G, which is secured to the frames A B, and to the said strip, in the latter case, by means of projecting pins and slots, through the strip, in order to permit the apron to be lifted up, as occasion may require, some inches above its normal position, as before mentioned, for the purpose of passing over obstructions on the track.

I may sometimes, instead of using a single longitudinal beam, A, in the construction of the frame, to support the apron and its adjuncts, employ two. In that case, I should employ two projecting arms in lieu of the bifurcated arm G, one secured to each of the said beams, as presenting a more convenient mode of securing my object, to wit, to support the vibrating front section of the shield or apron E. To relieve the strip *a* from the effect of any sudden jar or concussion to which it may be subjected by coming in contact, when the car is in motion, against any heavy body, I place springs between it and the strip that is riveted to the apron E, as shown at *c*.

Behind the joints, at 1 2, the apron is sustained, not only by the cross-bar C, but also by the axles of the car which pass through it, as shown at fig. 2, and hence hold it immovably in position.

It will be seen from an inspection of the drawing at fig. 1, and from a consideration of the mode in which my invention is constructed and arranged, that it is simply impossible for a car to which it is attached to run over a person or thing, and that moreover it is of such an elastic or yielding nature, that no very severe shock will be sustained by those who unfortunately get in the way of a moving car, and hence come in

contact with it, and in most cases, probably, are struck down by the concussion.

It is obvious that, in the case of railroads on which there is no turn-table, and the cars consequently run first with one and then with the other end foremost, it will be necessary to put the apron on both ends of the cars. It is also clear that, in consequence of the apron being sustained on the axles of the cars, and not on the bodies of the same, it, the apron, will always occupy precisely the same relation to the ground, or, in other words, be wholly unaffected by any elevation or depression of the car bodies.

What I claim as my invention is—

1. The shield or apron E, with its reinforcing metallic strip riveted thereto, in combination with a supporting frame A B B' and C C' C'' C''' C'', when these several parts are constructed, arranged, attached to a city railroad-car, and operate substantially as herein described, for the purpose set forth.

2. The supplemental metallic strip *a*, in connection with a supporting arm or arms, G, and a wheel, *b*, and springs *c*, when these parts are constructed, arranged, and operate as described, for the purpose set forth.

3. The combination of the metallic strip *a*, the supporting arm or arms G, the wheel *b*, and springs *c*, with a supporting frame, A B B' and C C' C'' C''' C'', and the shield or apron E, when the parts are constructed and arranged and attached to a city railroad-car, as herein described, for the purpose set forth.

4. The above-named parts, when constructed, arranged, and attached to a city railroad-car, as herein described, in combination with a rod, 3, for the purpose specified.

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Witnesses:

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