

(No Model.)

J. KREHBIEL.
CAR PLATFORM.

No. 528,170.

Patented Oct. 30, 1894.

Fig. 1.

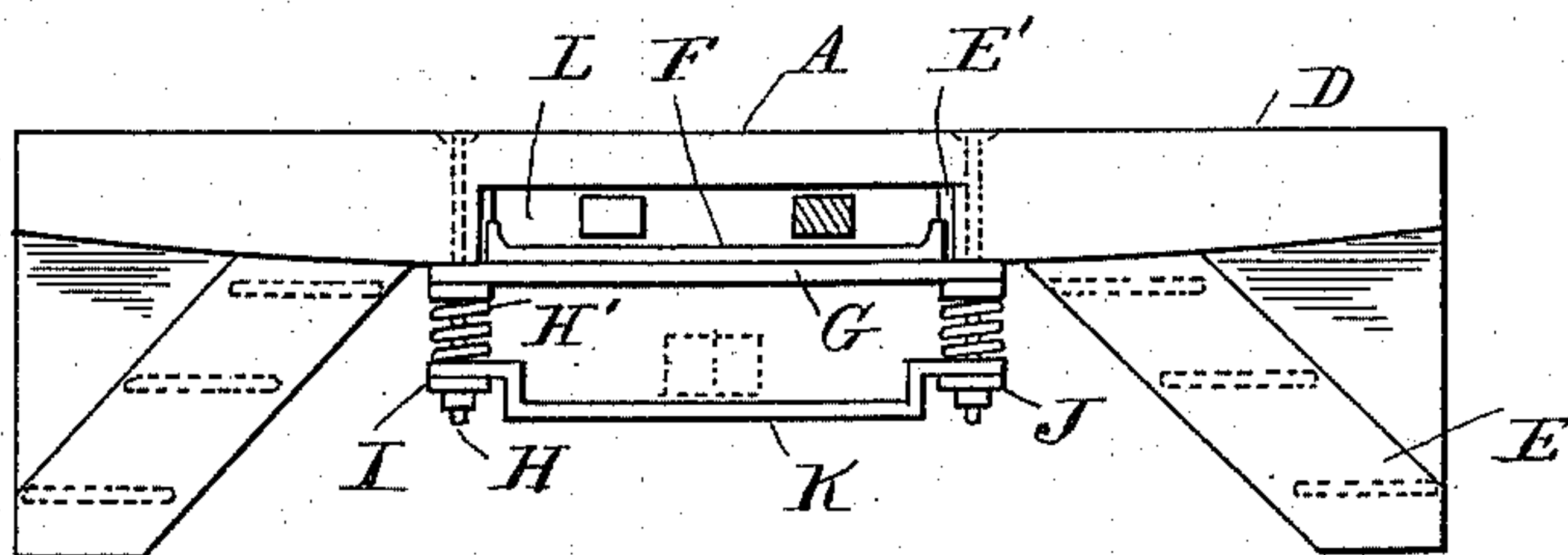


Fig. 2.

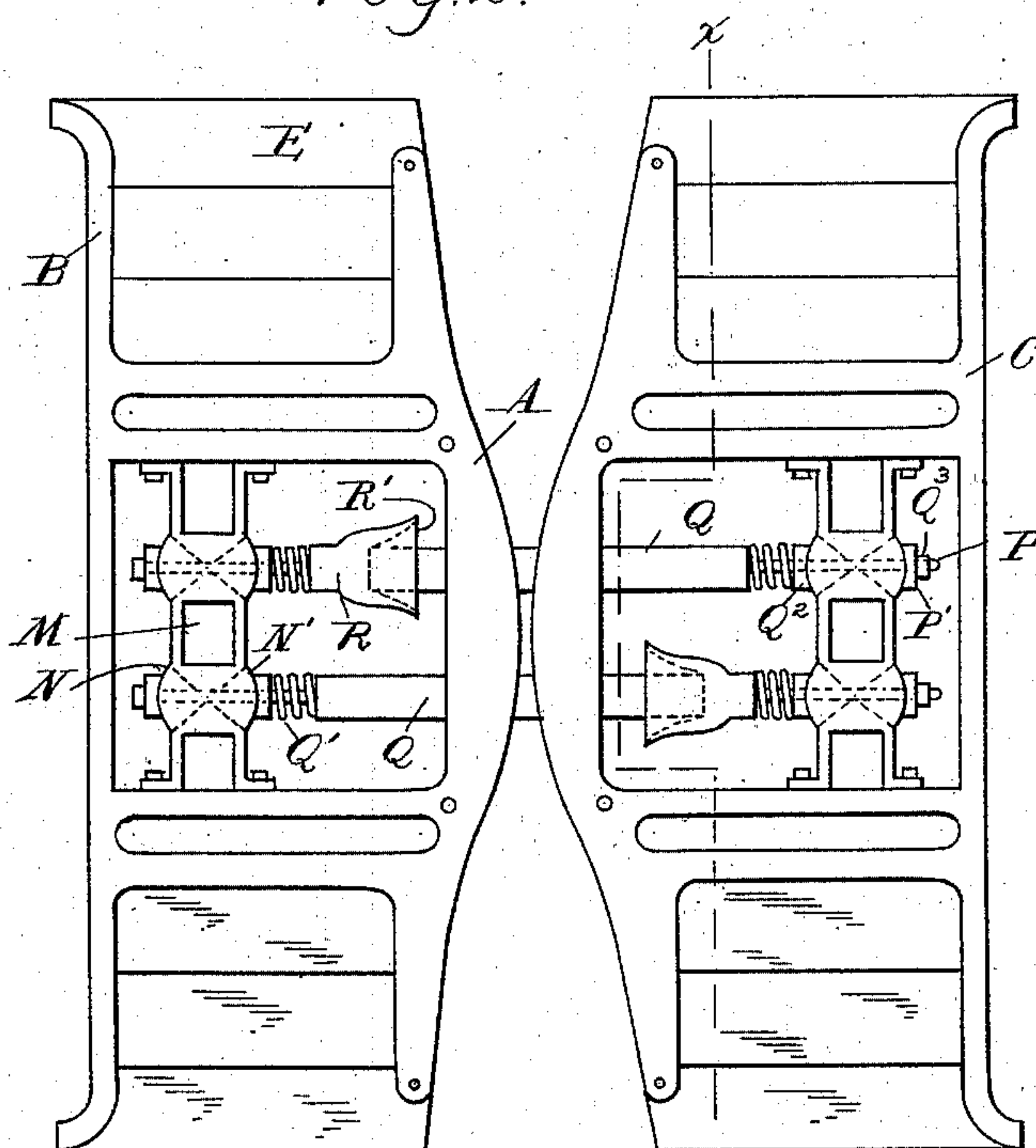


Fig. 3.

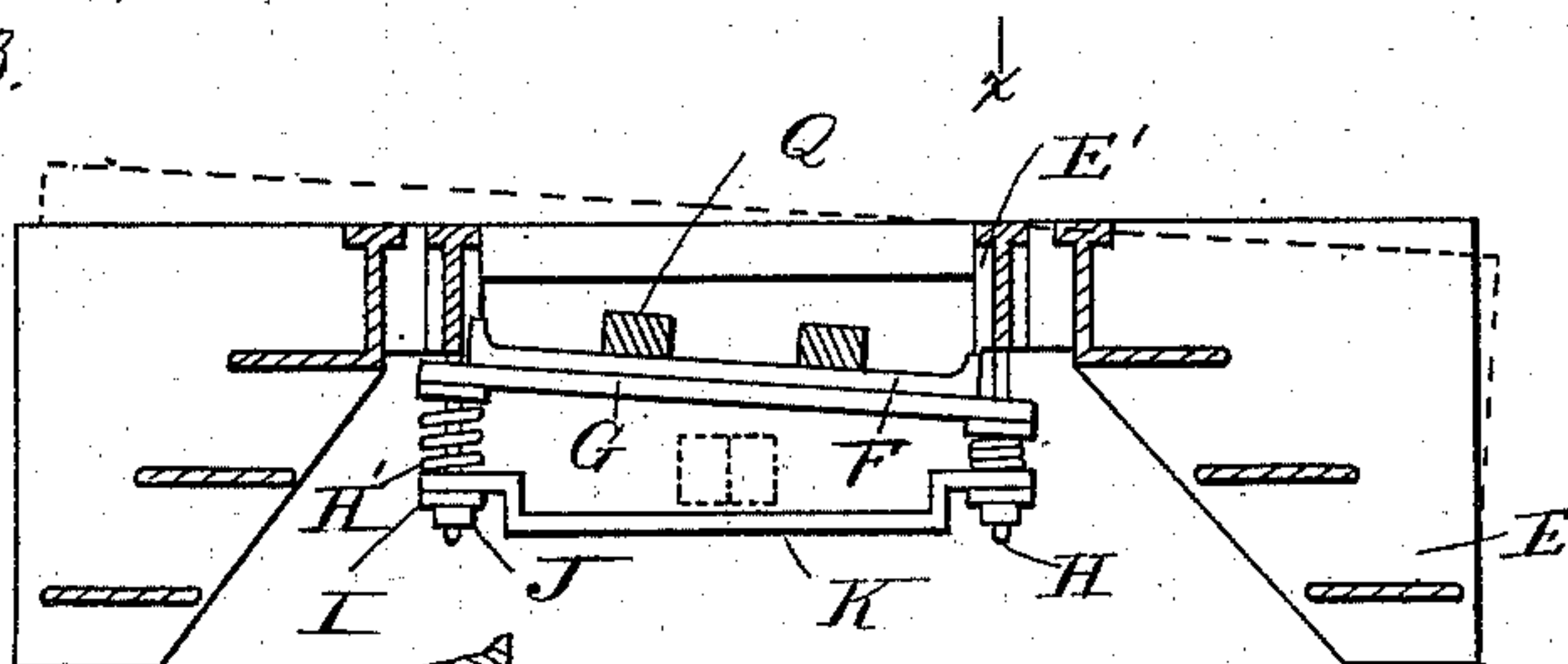
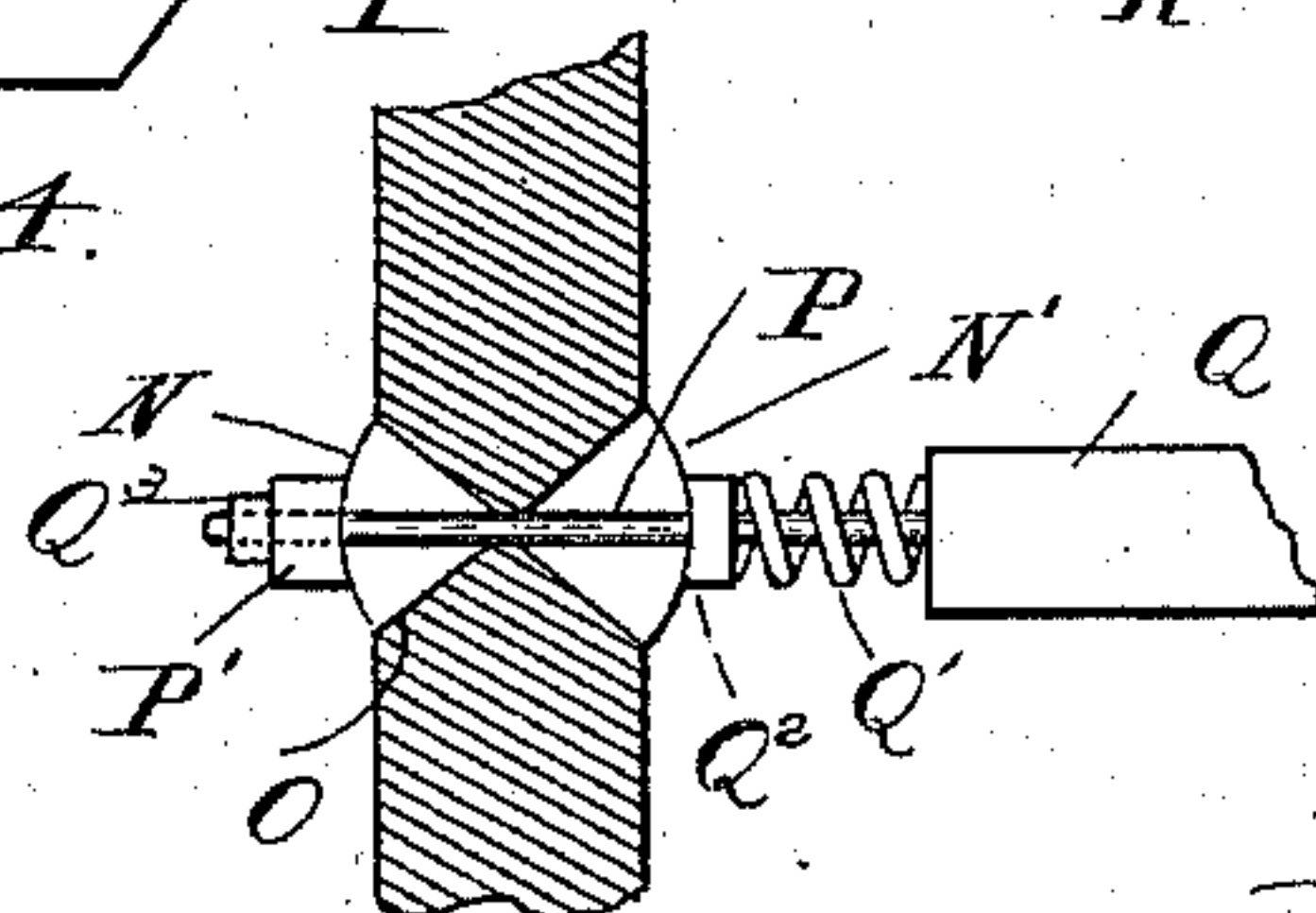


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN KREHBIEL, OF CLEVELAND, OHIO.

CAR-PLATFORM.

SPECIFICATION forming part of Letters Patent No. 528,170, dated October 30, 1894.

Application filed November 14, 1893. Serial No. 490,915. (No model.)

To all whom it may concern:

Be it known that I, JOHN KREHBIEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Platforms, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to the particular construction of a platform having portions adapted to interlock with the platform of any adjoining car, so constructed that the vertical movements of the adjoining cars are checked, and the jolting of the cars due to inequalities in the track is greatly lessened.

The invention further consists in the peculiar construction of the platform whereby it greatly lessens the liability of damage to the cars in cases of collision, by providing a metallic platform frame in one piece, and by so constructing the interlocking sections that they act as buffers.

The invention further consists in the peculiar construction, arrangement and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a front elevation of a car platform embodying my invention. Fig. 2 is a plan view of two of my improved platforms in the position of two coupled cars. Fig. 3 is a vertical cross section on line *xx* Fig. 2, showing the position of the parts on an even and an uneven track. Fig. 4 is a horizontal section.

My platform I preferably construct by casting it in one piece, embodying the end sill A, the car sill B to which the longitudinal timbers of the car body are secured and suitable longitudinal connecting bars C. The sill A is provided at each end with the extensions D, and between this extension and the car sill B I suspend the step E. Instead of casting this in one piece it is evident that it may be made up of a number of pieces bolted together if desired. The front edge of the sill A is provided centrally with a curved bearing to allow the platforms of adjoining cars to assume the necessary angular position to each other in going around curves.

The sill A is provided at each end with downward projections E, between which is slidably secured a horizontal bar F guided

upon the inner faces of the projections E and supported by means of a second horizontal bar G suspended beneath it and beneath the projections E. This bar G in turn is supported by means of the bolt H passing through the sill A, bar G, spring H', washers I and nuts J. I also preferably support by means of the bolt H the cross bar K carrying the draw-bar of the car coupler. I thus form in the end of the platform a socket or opening L, the lower side of which is formed by the spring supported bar F, which as will be more fully hereinafter described, acts as a buffer to check the vertical oscillation of the car.

M is a cross-bar secured between the inner connecting bar C and provided near each end with the curved bearing N N' upon the front and rear above and below a horizontal aperture through said bar. This aperture is provided with a central bearing O upon each side and enlarges to both sides the width of the curved bearings N N'. Through this aperture projects a bolt P secured to the rear end of the interlocking arm Q, which at its forward end projects through the opening L some distance.

Q' is a spring secured between the rear end of the arm Q and the collar Q², which is provided with suitable curved faces to engage with the curved bearing N'. This spring is put under tension by means of the nuts Q³ which bear upon the collar P' having corresponding curved bearings which rest against the curved face N on the rear side of the bar M. At the other end of the bar M, secured by corresponding bolts, washers, collars and spring is a socketed buffer R, having a bell shaped mouth R'.

It is evident that if two cars, each similarly equipped with the arms Q and socketed buffer R are coupled together the arm Q upon each car will engage in the socketed buffer upon the adjoining car, passing through the opening L, resting upon the spring supported bar F. Now it will be apparent that any downward movement of the platform of the forward car will necessarily carry with it the arms Q of both cars and in order to do this as both these arms rest upon the bar F of the rear car, it will necessarily carry down with it this bar which will necessarily compress

the springs H'. Thus the bar F and the springs H' act as a buffer to check the vertical oscillation of the cars. The upward movements of either car would be checked in the same manner.

It will be seen that the arms Q when coupled are supported at both ends and have two bearings above and below, one upon each car and one of these bearings is an elastic bearing. By arranging these arms Q upon opposite sides of the middle of the car I not only check the vertical oscillations of the cars but also the lateral oscillations, as it is evident that one car cannot change its angular position in relation to the other without causing one or both of the spring bearings on the arm Q to be depressed, which will act to restore the superstructure of the car to its normal position.

The parts are so arranged that the cars can readily assume any desired angle to each other without injury to the arms, or the bearings with which said arms engage, the aperture L being sufficiently wide to allow such angular movement without contact with the side.

The essence of my invention consists in connecting the adjoining ends of two coupled cars by interlocking bars or projections where- by such cars are maintained as nearly as possible in the same horizontal plane at all times, a depression of one car to any material extent being checked by its connection with the adjoining car.

What I claim as my invention is—

1. The combination in a railway car, of a platform having portions adapted to interlock with the platform of the adjoining car, and a spring applied to resist the vertical movement of said platform in relation to each other, substantially as described.

2. The combination in a railway car, of a platform provided with pivotal projections adapted to interlock with the platform of an adjoining car, and a buffer applied to said interlocking portions adapted to resist the vertical oscillation of said platforms in relation to each other, substantially as described.

3. The combination in a railway car, of the platform having projections adapted to interlock with the platform of an adjoining car, a buffer upon the adjoining car with which the ends of these projections engage, and a buffer applied to said interlocking portions adapted to resist the vertical oscillation of said platforms in relation to each other, substantially as described.

4. The combination in a railway car of the

platform, arms pivoted thereto within the platform and extending through the front thereof, of bearings upon the adjoining platform with which said arms engage, and springs applied beneath said arms to resist the vertical movement of said platforms in relation to each other, substantially as described.

5. The combination in a railway car, of a platform, an arm extending through a bearing in the front of said platform and swiveled to said platform at its rear end and an elastic cushion for said arm, substantially as described.

6. The combination in a railway car, of a platform apertured at its front edge, an arm projecting through said aperture and connected to said platform by a swiveled joint at its end, a spring backing for said arm, a socketed bearing in the platform of an adjoining car, a spring cushion for said socketed bearing and a swiveled joint connecting said socketed bearing to the platform, substantially as described.

7. The combination with two coupled railway cars, each provided with a forwardly extending spring back socketed bearing, of swiveled joints connecting said arm and bearing to the platform and spring supports upon both cars beneath said arms, substantially as described.

8. In a railway car, the combination with the platform having the depending portions E at the sides, the opening L, the cross bar F guided by said depending portions E, the bar G supporting the bar F, the springs H', the bolts H and nuts J, substantially as described.

9. In a railway car, the combination with the platform apertures at its front end, the arm Q, the bolt P at the rear end thereof, the cross bar M having curved faces N N', the spring Q', the collars Q² and P', and the nuts Q³, substantially as described.

10. In a railway car, the combination with the platform, the forward projecting arms Q, the socketed bearing R having the bell shaped mouth R', the bolt P passing through the bar M, the spring Q' in rear of said bearing R, and a swiveled connection between said cross bearing and the bar N, substantially as described.

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

JOHN KREHBIEL.

Witnesses:

M. B. O'DOHERTY,
O. F. BARTHEL.