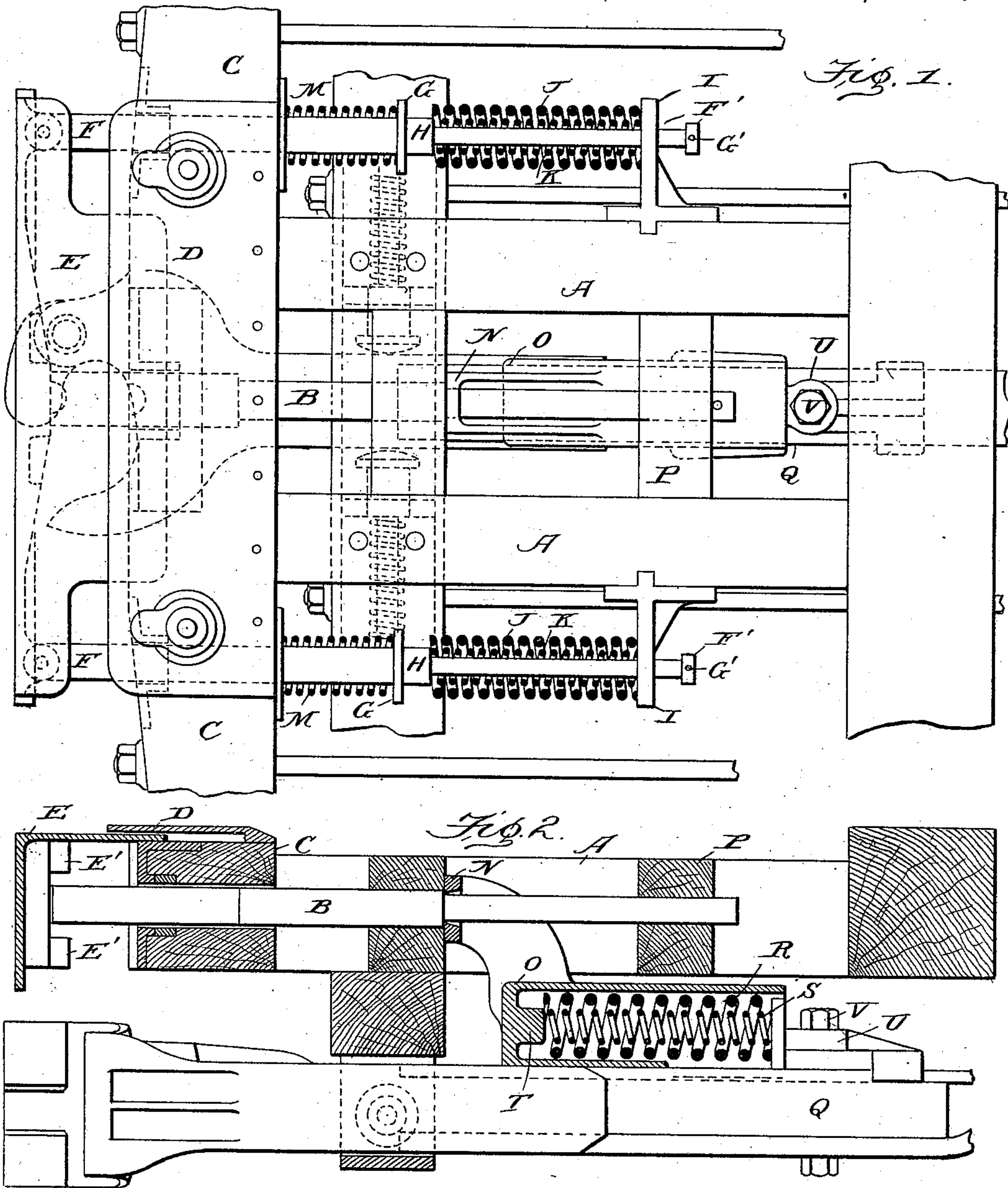


(No Model.)

T. L. McKEEN & A. H. RENSHAW.
BUFFER PLATFORM FOR RAILROAD CARS.

No. 574,257.

Patented Dec. 29, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS L. McKEEN AND ALFRED H. RENSHAW, OF NEW YORK, N. Y.,
ASSIGNORS TO THE TROJAN CAR COUPLER COMPANY, OF TROY,
NEW YORK.

BUFFER-PLATFORM FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 574,257, dated December 29, 1896.

Application filed September 10, 1896. Serial No. 605,403. (No model.)

To all whom it may concern:

Be it known that we, THOMAS L. McKEEN and ALFRED H. RENSHAW, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Buffer-Platforms for Railroad-Cars; and we do hereby 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.

Our invention relates to certain new and useful improvements in buffer-platforms for railroad-cars, and particularly to that class shown and described in Letters Patent No. 554,496, granted to Isaac G. Johnson & Co., as the assignees of T. L. McKeen, and dated February 11, 1896.

Our invention has substantially the same general object in view as that described in the patent above referred to, but by different features of construction, which we will now proceed to describe, referring by letters to the accompanying drawings, in which—

Figure 1 represents a plan view, partially in section, of our improved buffer-platform and platform proper. Fig. 2 is a central longitudinal section.

Similar letters of reference denote like parts in both views.

A represents the ordinary central longitudinal sills of the body or frame of a railroad-car as usually constructed, between which is located the central buffer-stem B.

C is the head or transverse beam, which constitutes the support of the ordinary platform D, and E is the auxiliary or buffer platform.

F F are side buffer-stems pivotally connected at their forward ends to the buffer-platform E, as clearly shown at Fig. 1.

The side or auxiliary buffer-stems are formed or provided with a circular collar G and a shoulder H, and the rearwardly-projecting reduced portion of the stems pass through a bracket I, secured in any suitable manner to the car-frame, and are held in place by a washer F' and pin G', as clearly shown. The front ends of these stems pass

through suitable guide-channels in the cross-beam C. Surrounding the stems F and located between the brackets I and shoulder H and collar G are arranged a heavy coil-spring J and a smaller interior and lighter coil-spring K, and between the front face of the collar G and the rear face of the beam C is arranged a light coil-spring M.

The central buffer-stem B is guided at its forward end through the main platform and frame, as shown, or in any other suitable manner, and at about the center of its length it is reduced to form a shoulder to bear against the end of a duplex arm N, extending upwardly from a shoe O, as most clearly shown at Fig. 2, the rear reduced end of the stem being guided by a cross-beam P. The shoe O is adapted to slide on the shank of the coupler Q. It is made cylindrical and hollow to receive a heavy coil-spring R and an interior and lighter coil-spring S. The interior front end of the shoe O is cast with a short projection T, (see Fig. 2,) adapted to enter the large spring R and to bear against the forward end of the interior spring S, and the rear ends of both of these springs bear against the face of a stop U, which is secured by a bolt V to the coupler Q.

The front face of the auxiliary or buffer platform E is composed of steel, malleable or wrought, as may be most desirable, and its inner surface is made plain and adapted to contact with the straight face or end of the central stem B, so that the former can freely move across the end of the said stem. The end of the stem, if thought desirable, may be provided with an antifriction-roller.

Above and below the point of contact between the end of the stem B and the interior face of the buffer-platform E the latter may be formed or provided with buffer projections or blocks E' to contact with the forward edge of the main platform D when the buffer-platform for any reason is unduly forced backward.

As the coupler Q forms no part of our invention, it is only necessary to say that it is made of the usual form and secured in position in the ordinary manner.

The buffer-platform slides under the floor

of the main platform, as clearly shown at Fig. 2.

Having described the construction and arrangement of the several parts, we will now describe the action.

When cars approach each other to be coupled, the main jar against the buffer-platforms is taken up by the central buffer-stem B, the shoulder at the central portion of which bears against the arm N of the shoe O, forcing the latter rearward against the contained springs R and S and against the stop U, the first effect being the compression of the lighter spring S by the action of the projection T of the shoe and the second and subsequent effect being the compression of the heavier spring R. The reaction of the springs causes the buffer-platforms to be forced outward and into proper contact with each other, and by reason of the fact that the shoe is adapted to slide on the coupler Q and that the springs R and S bear at their rear ends against the stop U, secured to said coupler, it is obvious that in heavy trains or where sudden jerks occur the forward movement of the coupler Q will necessarily force the shoe O and in turn the central stem B and buffer-platform forward also, and thus maintain the proper contact of such platforms. The side buffer-stems F F, by reason of their pivotal connection with the buffer-platform E, prevent the latter from going too far forward and also enable either end to be forced inwardly, as may become necessary in rounding curves.

From the construction and arrangement of the stems and springs previously described it will be readily understood that when one end of the buffer-platform E has been forced inwardly the first effect is to compress the light spring K and then the heavier one J, the reaction of which springs tends to restore the platform to its normal plane, and when they have ceased to act in this direction then the springs M, confined between the collars G on the stems and the rear face of the beam C, accordingly as one or the other of said springs is compressed by the outward movement of the opposite end of the buffer-platform, will exert its force against the collar G and restore the platform to its proper position.

It will be seen that the central buffer-stem B is in no wise connected with nor does it in any manner support the buffer-platform, but serves the purpose only of taking up the excessive shock of meeting platforms when coupling, and through the medium of the spring-shoe O and its connections forces the buffer-platform outward when the coupler Q is subjected to excessive pull or sudden jerks.

What we claim as new, and desire to secure by Letters Patent, is—

1. In combination with the main platform D and coupler Q, the buffer-platform E pivoted at each end to side buffer-stems F, constructed as described, the springs J, K, brackets I, and springs M interposed between the collars G and beam C, substantially as and for the purposes set forth.

2. In combination with the main platform, auxiliary or buffer platform, side buffer-stems, pivoted to the buffer-platform, and the coupler Q, a center buffer-stem free from the buffer-platform and having its rear end passing through an arm on the shoe O, and having a shoulder bearing against the said arm, the hollow shoe O formed with the arm N and projection T, the springs R, S, and stop U on the coupler Q, substantially as and for the purpose set forth.

3. The buffer-stems F formed with a fixed collar G and shoulder H, in combination with the brackets I, exterior spring J and interior spring K, substantially as and for the purpose set forth.

4. In combination with the buffer-platform E and side stems F provided with fixed collars G, and transverse beam C, the righting-springs M interposed between and bearing against the collars G and the rear face of the beam C, whereby the stems F are restored to normal position, substantially as and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS L. McKEEN.
ALFRED H. RENSHAW.

Witnesses:

FRANK E. NORTON,
EUGENE SEETZ.