

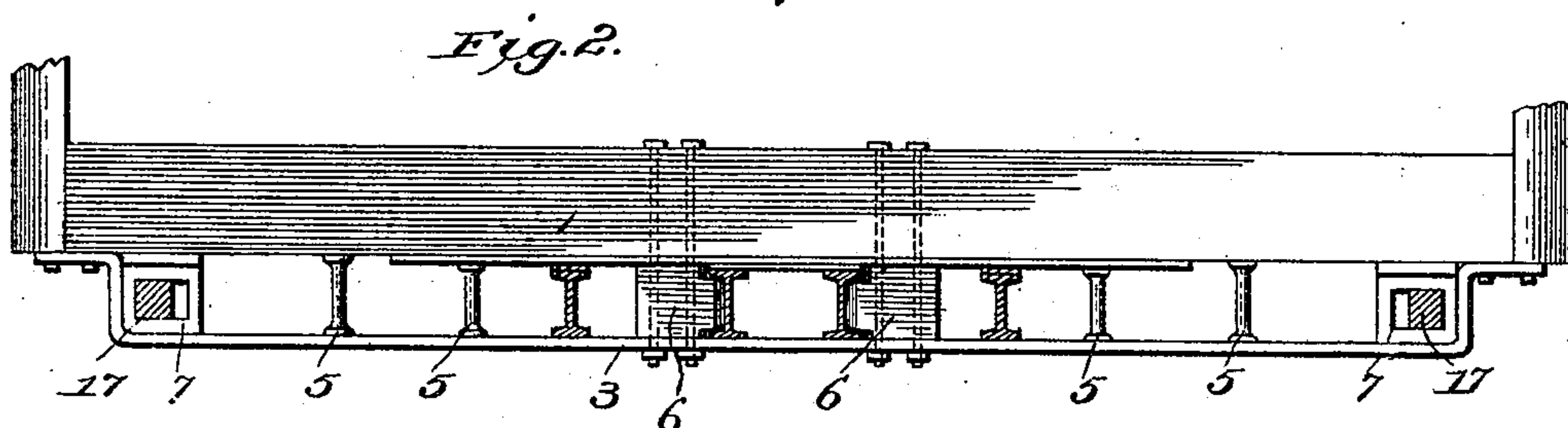
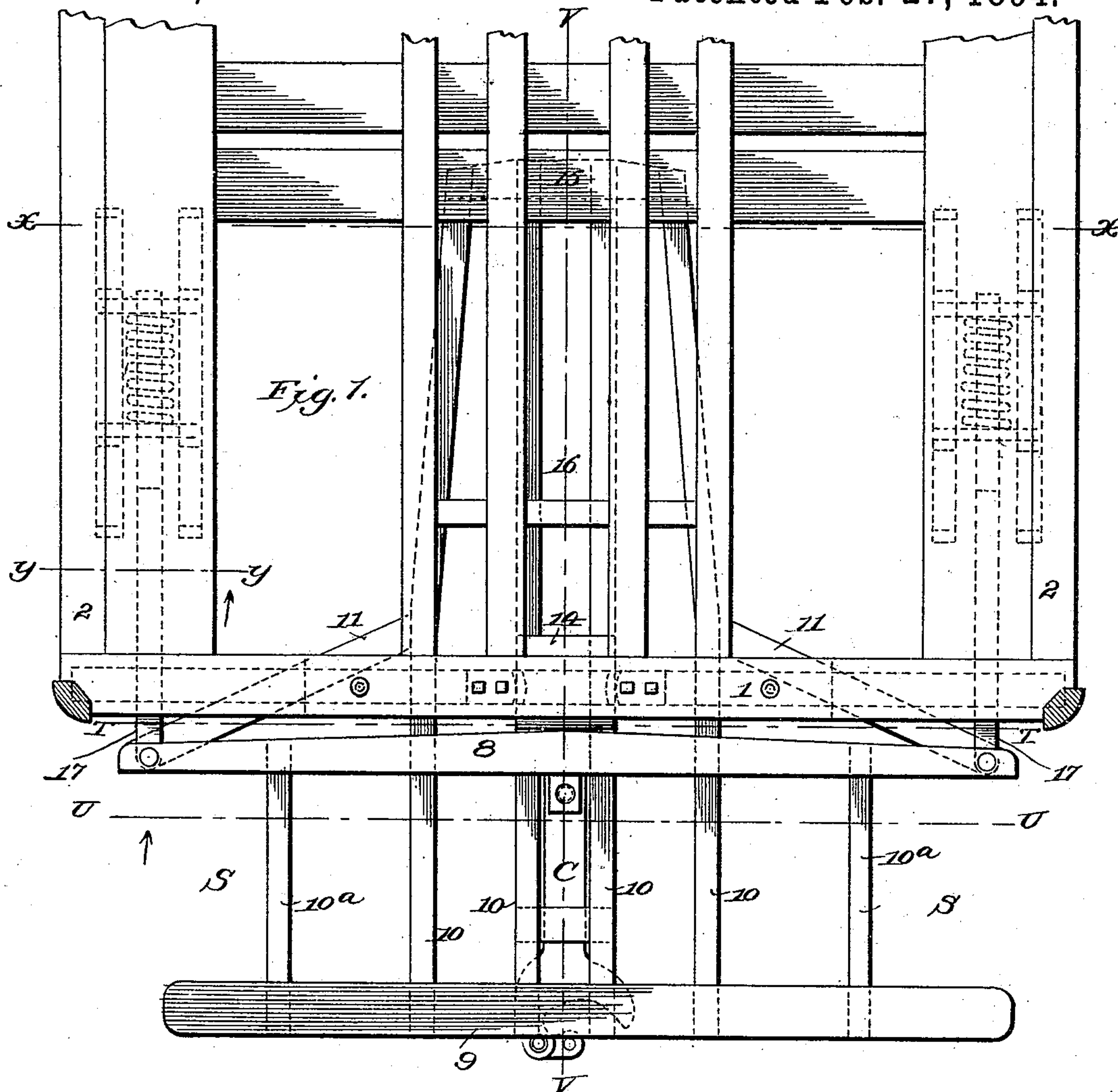
(No Model.)

2 Sheets—Sheet 1.

H. C. BUHOUP.  
RAILROAD CAR.

No. 515,322.

Patented Feb. 27, 1894.



Witnesses  
Harry E. Rohrer.  
Herbert Bradley

Inventor  
Harry C. Kuhouk  
by F.W. Pitter Jr  
Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

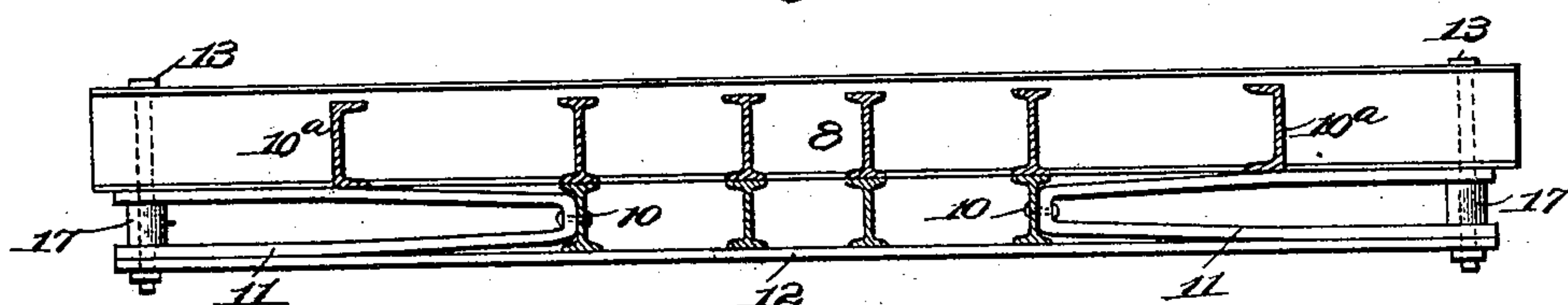


Fig. 4.

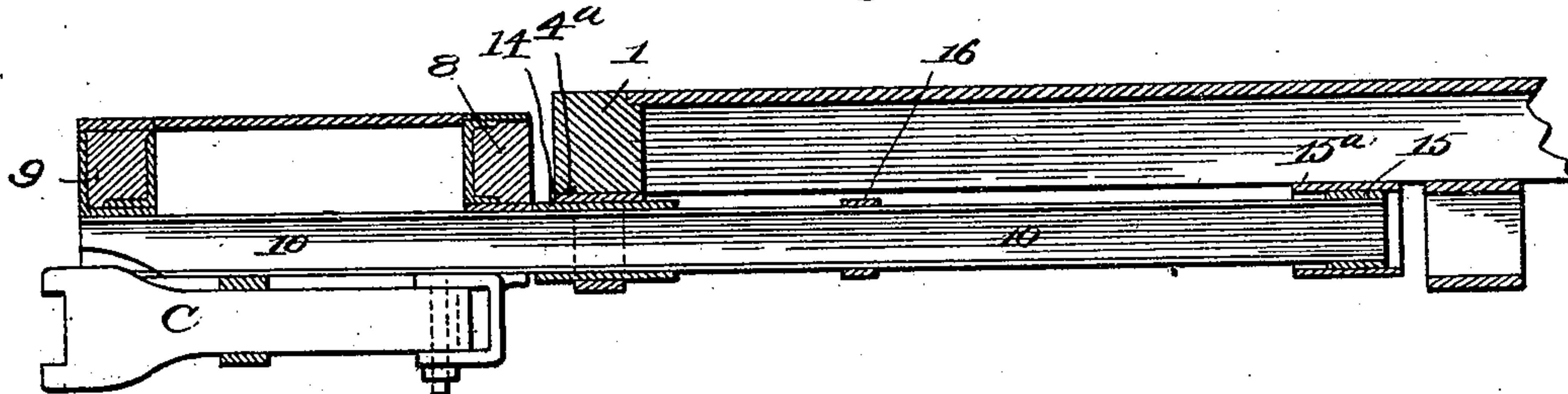


Fig. 5.

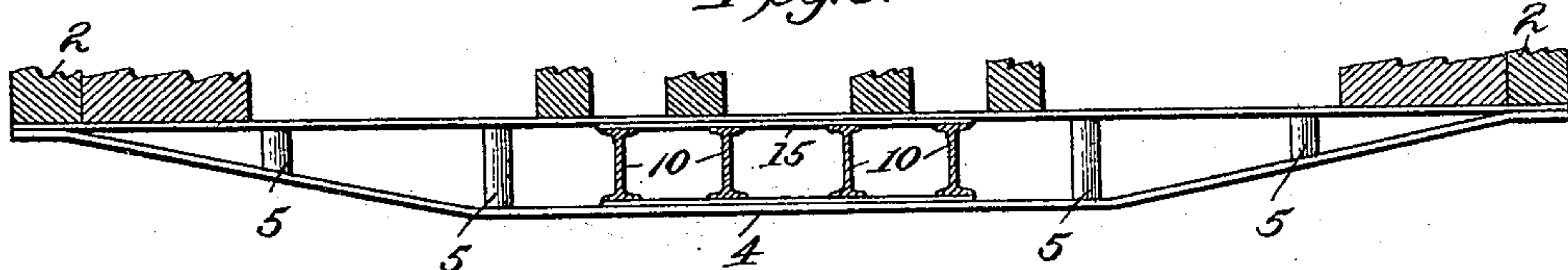


Fig. 6.

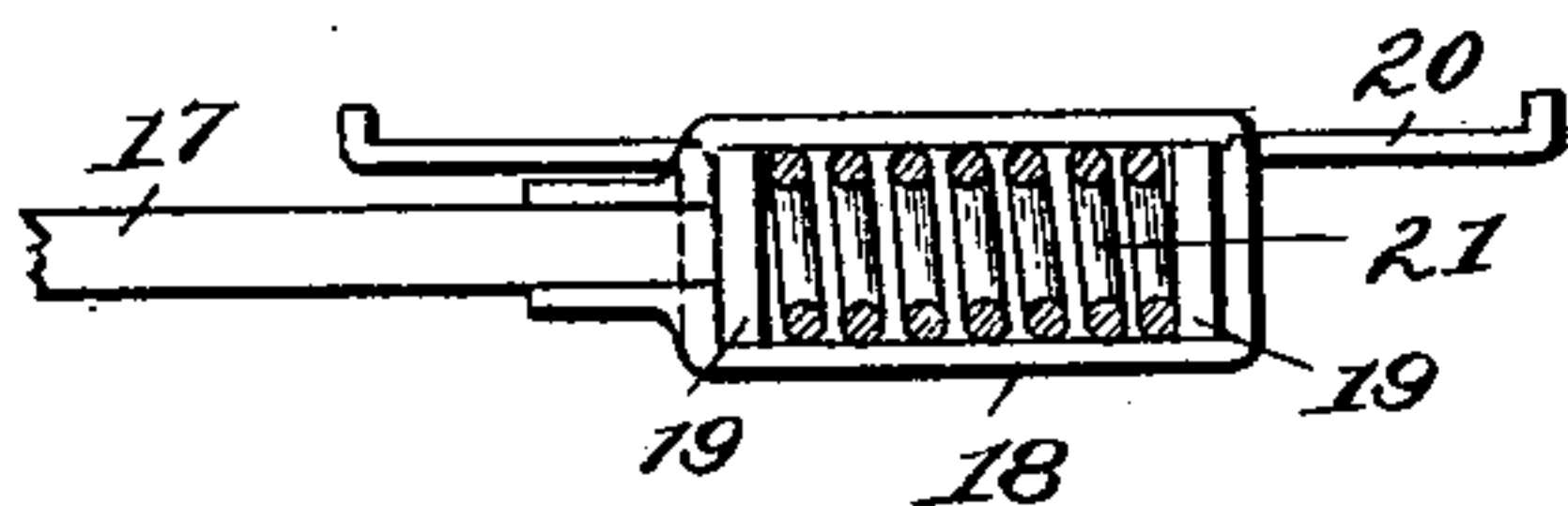
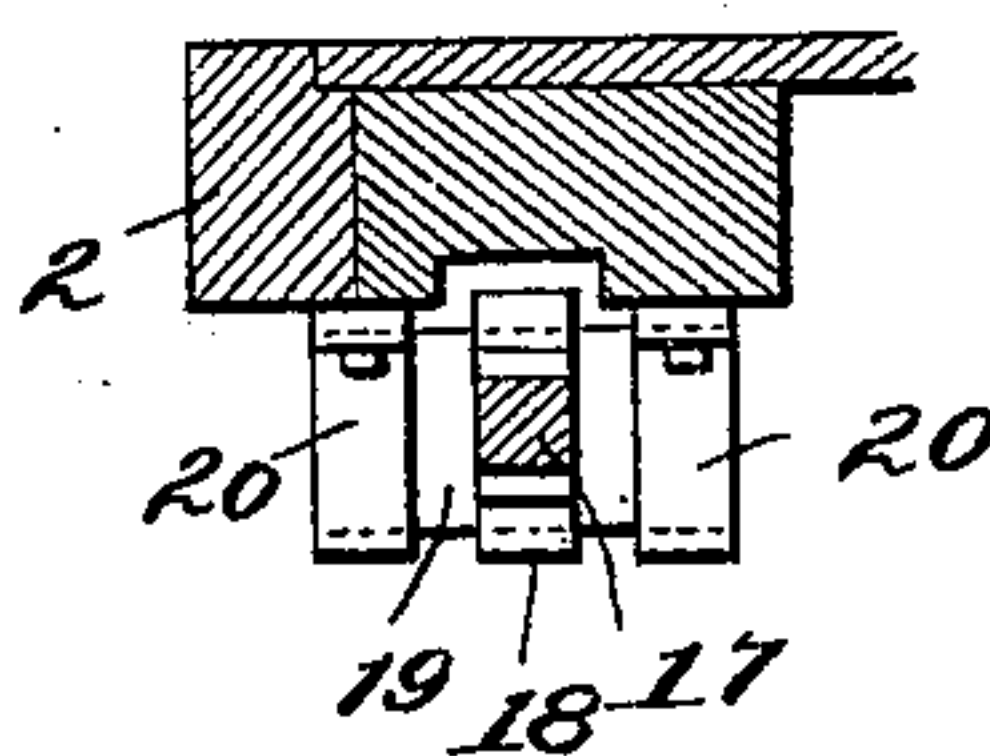


Fig. 7.



Witnesses  
Harry S. Rohrer  
Herbert Bradley

Inventor  
Harry C. Buhoup  
by F. H. Ritter Jr  
Attorney



# UNITED STATES PATENT OFFICE.

HARRY C. BUHOUP, OF CHICAGO, ILLINOIS.

## RAILROAD-CAR.

SPECIFICATION forming part of Letters Patent No. 515,322, dated February 27, 1894.

Application filed December 9, 1893. Serial No. 493,245. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Railroad-Cars; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a plan view of the end of a car and a platform, the flooring removed to show the construction of the platform and the manner of its combination with the car. Fig. 2 is a vertical transverse section on the line T—T, looking in the direction of the arrow, showing the end sill of the car and the front bracket support of the platform in elevation, and the buffer stems and longitudinal beams of the platform in section. Fig. 3 is a vertical transverse section of the platform on the line U—U, Fig. 1, looking in the direction of the arrow, the longitudinal platform beams being in cross section and the lateral forked braces in elevation. Fig. 4 is a longitudinal vertical section of the platform and end of the car on the line V—V, Fig. 1, a car coupling being shown below the platform in elevation and attached to the platform. Fig. 5 is a vertical transverse section on the line X—X, Fig. 1, showing the rear bracket support for the platform in elevation and the longitudinal beams of the platform in section. Fig. 6 is an elevation in detail, and partial section, of the draft and buffer stem, spring pocket, followers, and spring; and Fig. 7 is an end view of the same as shown by a vertical transverse section on the line Y—Y, Fig. 1, looking in the direction of the arrow.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of railway cars, provided with movable platforms, and has for its main objects the relief of the body of the car from torsional strain, and the wheel flanges from increased frictional contact with the rails and the augmented weight due to the lateral movement of car or platform in rounding curves. Heretofore, so far as I am aware, whether the platform has

been rigidly attached to the car, or whether it has been movable, it has been found necessary in constructing and connecting the parts to allow for a lateral movement either between the couplers of the cars, or between the platform and body of the car. Any construction which will permit such lateral movement is not only objectionable but dangerous for the reason that in curving the flanges of the wheels of the trucks always tend to bear against the outside rail and the tendency of the body of the car is naturally in the same direction, which being augmented by any lateral movement of the platform increases the weight on the wheels, the consequent friction between the wheel flanges and outer rails, and the liability of the wheels to climb the rails and derail the trucks.

In carrying out my invention, I construct a movable platform and combine it with the car body so that it may have a longitudinal—and a rotary—but no lateral movement—and any rotary movement of the front end of the platform will cause a corresponding rotary movement of the rear end thereof—whereby torsional strain on the body of the car is obviated, and in the absence of lateral movement, the weight projected against the wheel flanges and consequent friction is greatly reduced with lessened liability of the truck becoming derailed; and such a construction embodies the main feature of my invention. To obtain the best results I prefer to combine the longitudinally and rotary-moving platform with the car by means of pivoted stems, and to utilize said stems as draft and buffer stems by combining therewith the usual springs employed for such purposes; all of which, and other particular combinations and details of construction, are however but adjuncts of the main feature, and will be hereinafter more fully pointed out.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings 1 indicates the end sill, and 2—2 the side sills of the car body. Below the same and securely attached thereto are a suitable front bracket 3, (Fig. 2) and rear bracket 4 (Fig. 5) for the support of the lon-



gitudinally movable platform, and both brackets are strengthened and stayed by suitable bolts or posts 5, while the front bracket (see Fig. 2) is supplied with blocks or side stops 6—6 to prevent the lateral—and permit the rotary—movement of the platform, and with guides 7 for the draft and buffer stems which are movably (pivotally or otherwise) connected to the platform.

8 and 9 indicate the end beams or sills, and 10 and 10<sup>a</sup> the longitudinal beams of the platform—spaces being left as at S for the steps. The end beam 8, next to the car body, if desired, may have its face or side, which is adjacent to the end sill 1, inclined back from the center so as to facilitate the rocking or rotary motion of the platform, and the longitudinal center beams 10—10—are passed between the side stops or blocks 6, 6, which prevent any lateral movement of the platform.

11—11, (see Figs. 1 and 3) indicate forked braces which connect the outer longitudinal platform beams 10—10, with the beam or sill 8, and with a transverse plate 12, and for convenience in construction I prefer to use the bolts 13 which pass through the sill 8, forked braces 11, and transverse plate 12, as the pivots of the draft and buffer stems. The longitudinal platform beams 10—10 are further strengthened and connected by transverse friction plates 14 and 15, attached to the upper side of the platform and bear against corresponding plates 14<sup>a</sup> and 15<sup>a</sup> secured to the under side of sill 1, and the car body—and if desired further or intermediate transverse plates—as indicated at 16—(Figs. 1 and 4) may be employed.

17—17 indicate stems secured to the platform by pivots (13) or in other suitable manner, so as to permit of the rocking or rotary movement of the platform, and said stems pass back through the guides 7 (see Fig. 2) and are provided with straps 18 to engage the follower plates 19—19 of the spring pockets 20, secured to the under side of the car body and thus operate the springs 21 in the usual manner of draft and buffer stems.

To the longitudinally and rotary movable platform constructed substantially as hereinbefore specified, any approved form of coupler C, may be attached.

The construction and combination of the parts being of the general character set forth herein, it will be evident without further description, that the platform will have both longitudinal movement for draft and buffing purposes, and a rotary movement for curving—and its ends being free will move in arcs of circles, but the platform being confined at the points 6—6 will have no lateral movement whatever relative to its connection with the end sill of the car.

Among the advantages arising from my invention, are not only the relief from torsional strains given to the car body, and the

reduction of the weight and flange friction in curving, but the facility for coupling cars on curves, and the freedom of the platform in curving to move on easy lines as the impulse of motion is received through the wheel trucks.

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

1. The combination with a railway car, of a longitudinally movable platform having its ends free, and means for preventing the lateral movement of said platform at its center of vibration; substantially as and for the purposes specified.

2. The combination with a railway car, of a longitudinally movable platform arranged to rotate with corresponding movement of its front and rear ends; substantially as and for the purposes specified.

3. The combination with a railway car, of a longitudinally movable and rotary platform located at or beneath the floor of the car, and draft stems pivotally connected with said platform; substantially as and for the purposes specified.

4. The combination with a railway car, of a longitudinally movable and rotary platform, located at or beneath the car, and laterally placed draft stems pivotally connected with said platform; substantially as and for the purposes specified.

5. The combination with a railway car, of a longitudinally movable platform having its ends free to move in arcs of circles, means for preventing lateral movement of said platform at its center, and pivoted draft stems which connect the platform to the car; substantially as and for the purposes specified.

6. The combination with a railway car, of a separate platform, and combined draft and buffer stems which connect the platform with the car body; said platform and stems having pivotal connections forward of the car body and to one side of the longitudinal central line or line of draft substantially as and for the purposes specified.

7. The combination with a railway car, of a longitudinally movable platform having longitudinal frame beams, and side stops which permit the rotary and prevent the lateral movement of the platform relative to the car body; substantially as and for the purposes specified.

8. The combination with a railway car, of a movable platform having end sills and longitudinal frame beams, side stops which permit the rotary and prevent the lateral movement of the platform relative to the car body, and pivotally attached stems which connect the platform to the car body; substantially as and for the purposes specified.

9. The combination with a railway car, of a longitudinally movable platform having end sills, longitudinal frame beams, braces which extend from the longitudinal frame beams to

the end sill, pivotally attached draft and  
buffer stems which connect the platform with  
the car body, and side stops which prevent  
the lateral movement of the platform rela-  
5 tively to the car body but permit its rotary  
movement; substantially as and for the pur-  
poses specified.

In testimony whereof I affix my signature,  
in presence of two witnesses, this 2d day of  
December, 1893.

HARRY C. BUHOUP.

Witnesses:

GEO. ABEL,  
I. N. HYDEN.