

No. 711,265.

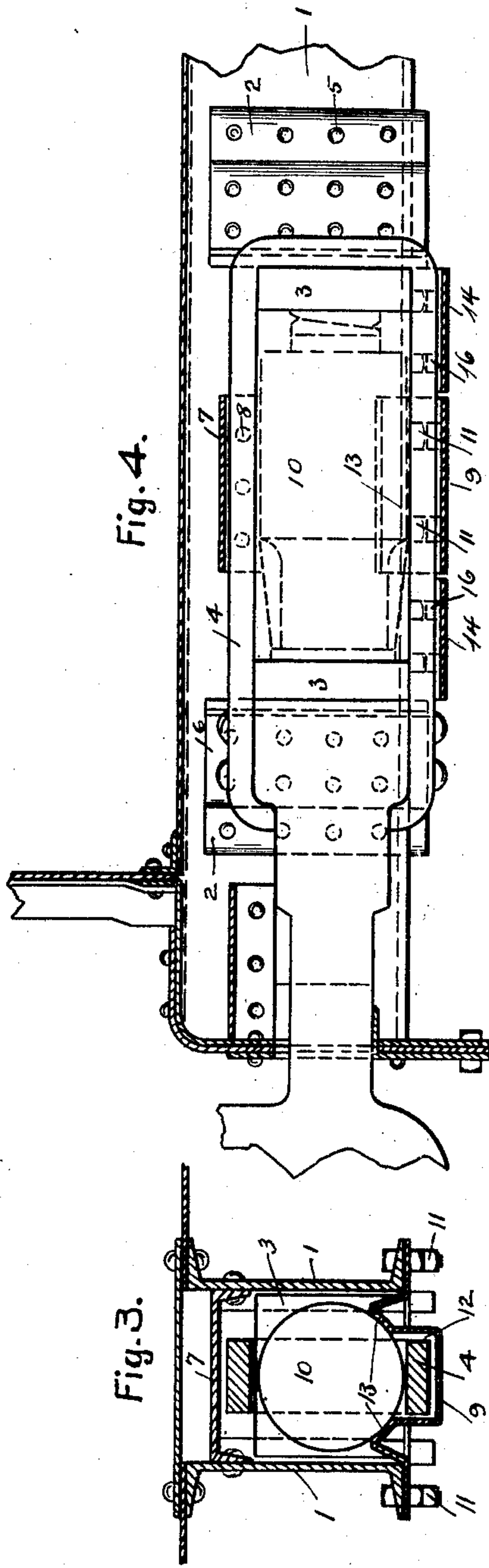
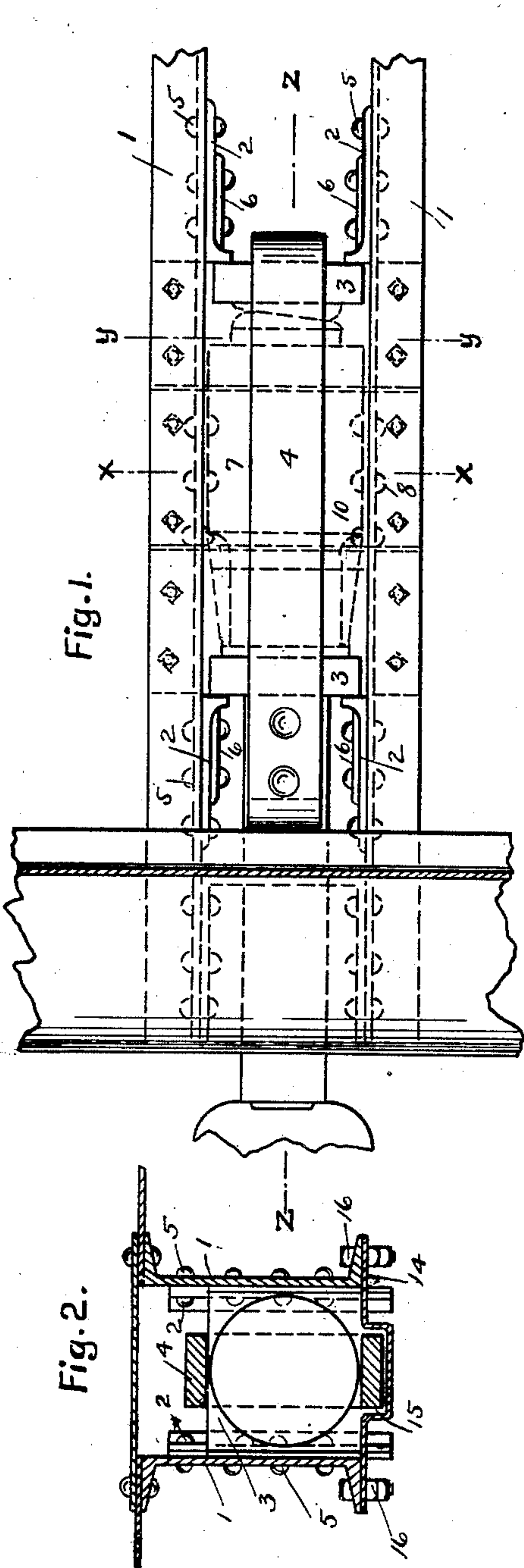
Patented Oct. 14, 1902.

R. V. SAGE.
DRAFT RIGGING FOR CARS.

(Application filed Nov. 9, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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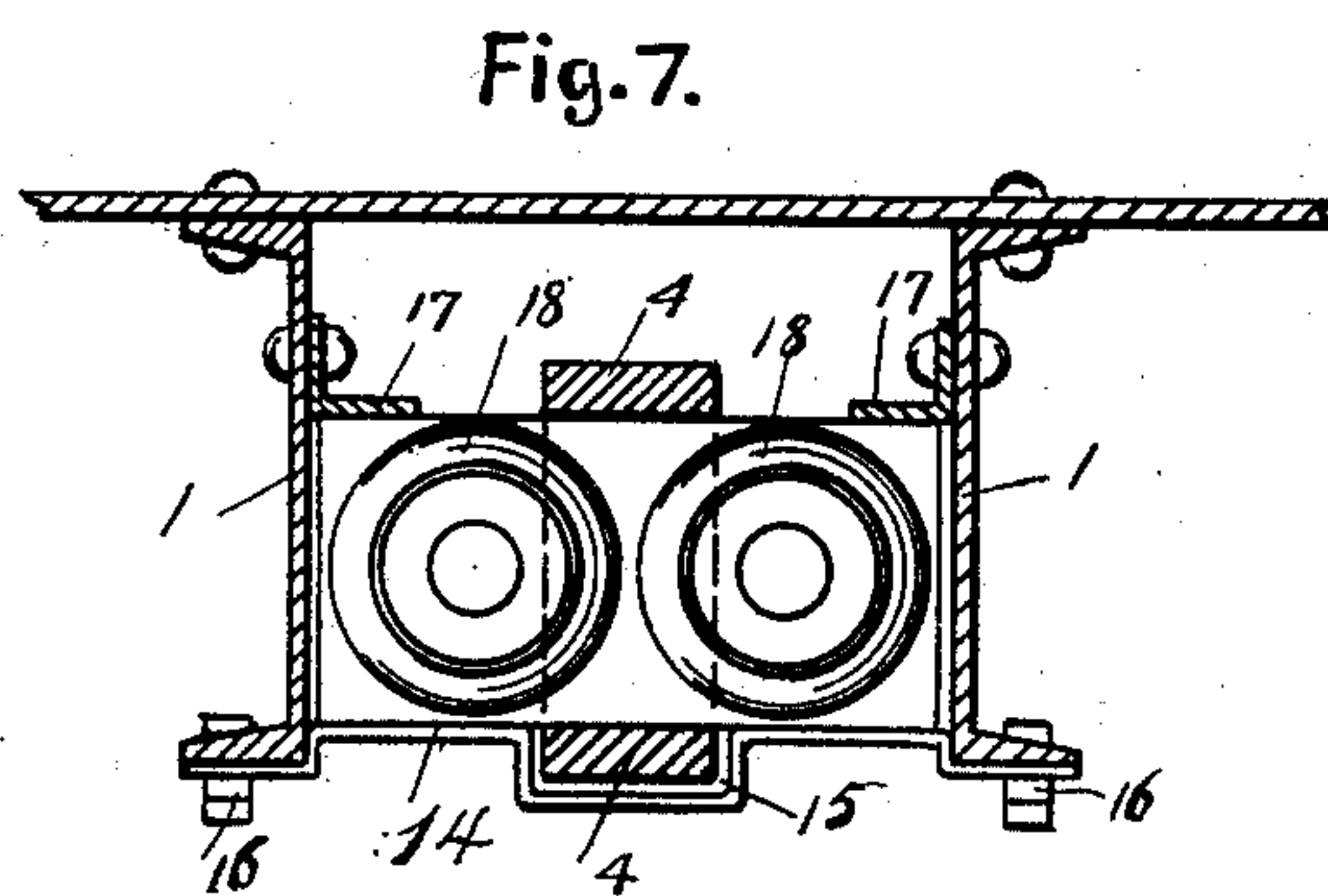
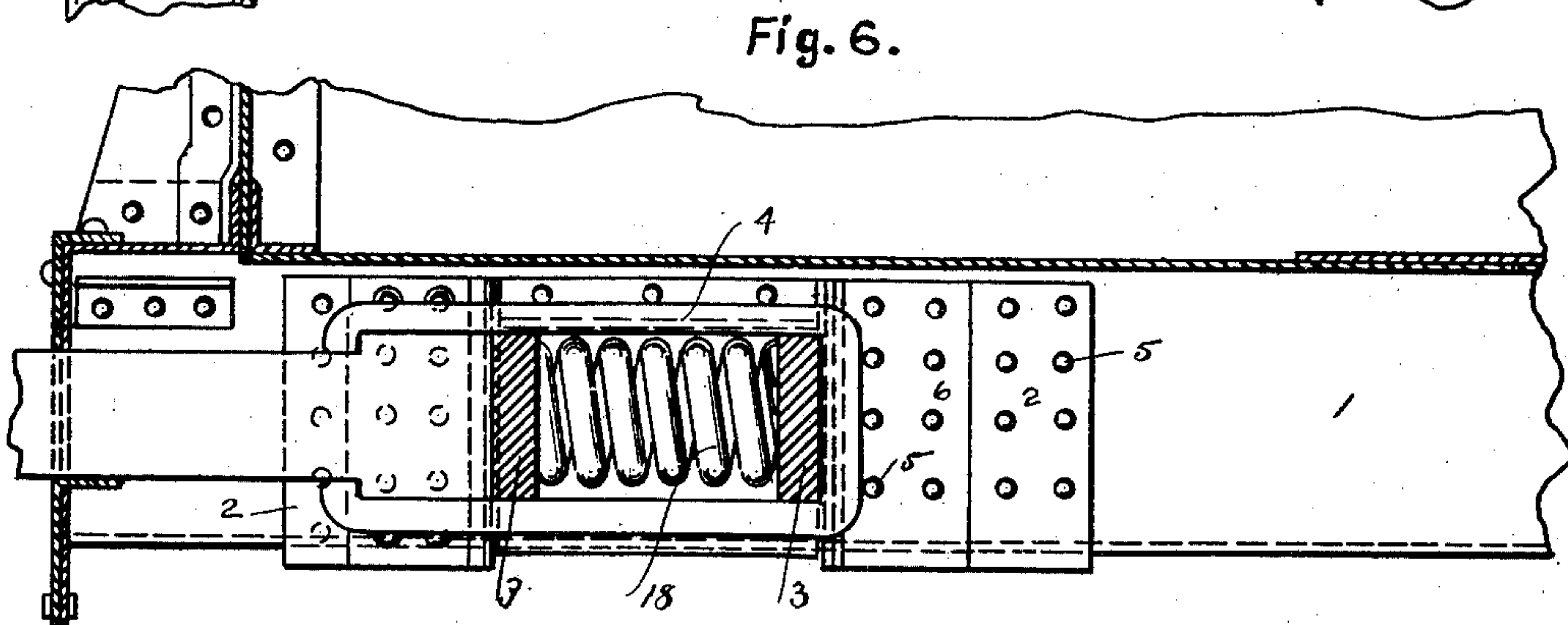
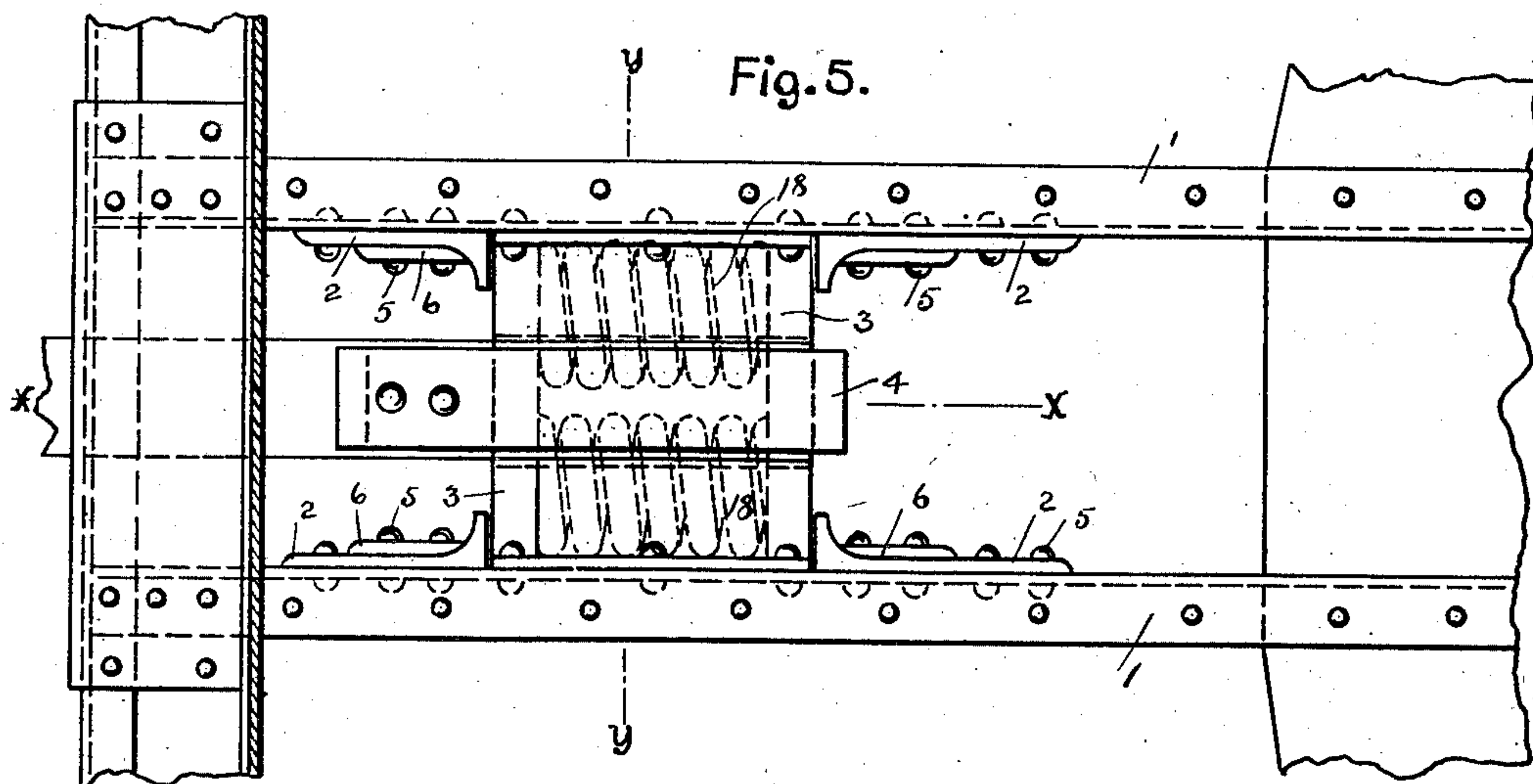
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UNITED STATES PATENT OFFICE.

RALPH V. SAGE, OF JOHNSTOWN, PENNSYLVANIA.

DRAFT-RIGGING FOR CARS.

SPECIFICATION forming part of Letters Patent No. 711,265, dated October 14, 1902.

Application filed November 9, 1901. Serial No. 81,678. (No model.)

To all whom it may concern:

Be it known that I, RALPH V. SAGE, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Draft-Rigging for Cars, of which the following is a specification.

This invention relates to draft-rigging for cars, and particularly for steel cars, and has for its object to provide an improved device of the class described which will possess advantages in point of convenience, simplicity, inexpensiveness, effectiveness, and general efficiency.

Another object of my invention is to provide an improved device of the class described which will be composed of few, simple, and strong parts readily assembled or disassembled.

Another object of my invention is to provide an improved device of the class described which can be easily manufactured and repaired and is accessible for inspection.

Another object of my invention is to provide an improved device of the class described in which the buffing and drawing strains are transferred to the draft-sills and by them to the center sill of the car.

Another object of my invention is to provide an improved device of the class described which can be used with any car and with various forms of draft-gear.

In the drawings, Figure 1 is a plan view of a draft-rigging embodying my improvements in operative connection with the Westinghouse friction draft-gear. Fig. 2 is a sectional view on the line *yy*, Fig. 1. Fig. 3 is a sectional view on the line *xx*, Fig. 1. Fig. 4 is a sectional view on the line *zz*, Fig. 1. Fig. 5 is a plan view of a draft-rigging embodying a modified form of my improvements in operative connection with an ordinary double-spring draft-gear. Fig. 6 is a sectional view on the line *xx*, Fig. 5. Fig. 7 is a sectional view on the line *yy*, Fig. 5.

Corresponding parts in all the figures are denoted by the same reference characters.

My invention comprises in general a draft-sill composed of two spaced channels, lugs secured to said channels to take the follower-plates and composed of channels with one flange cut off, and means for guiding and

supporting the draft-gear cylinder and the follower-plates.

In the form shown in the drawings and which, if desired, may be the preferred form, my invention comprises a draft-sill composed of two channels 1, which are spaced a suitable distance apart and placed back to back. On the inside of each of the said channels 1 and a suitable distance apart two lugs 2 are secured facing each other to take the follower-plates 3. I have formed a convenient form of such lugs 2 to consist of channels having one flange cut off and the other flange cut back, if necessary, to clear the coupler-yoke 4. Such lugs 2 may, if desired, be reinforced by a reinforcing-plate 6, placed upon the legs of the lugs 2. Such lugs 2 may be secured to the channels 1 in any suitable manner, herein shown as rivets 5, passing through the webs of the channels 1 and the legs of the lugs 2 and the reinforcing-plates 6.

Intermediate the lugs 2 and at a suitable distance below the top of the channels 1 a bent plate 7, preferably in the form of a channel with the flanges turned down, is secured between the channels 1 in any suitable manner, herein shown as rivets 8. Such plate 7 serves as a guide for the coupler-yoke 4. With the Westinghouse friction draft-gear a bent plate 9 may be used to support the draft-gear cylinder 10. Such plate 9 may conveniently be located intermediate the lugs 2 beneath the plate 7, so as not to interfere with the free movement of the follower-plates 3. A convenient form of the plate 9 is here shown and embodies side flanges adapted to be secured to the bottom flanges of the channels 1 in any suitable manner, herein shown as bolts 11, a longitudinal recess 12 through its center rectangular in cross-section and adapted to receive the lower part of the coupler-yoke 4, and longitudinal curved portions 13 intermediate the recess 12 and the side flanges, such curved portions 13 adapted to bear against the lower portion of the draft-gear cylinder 10 on opposite sides.

Bent plates 14, provided with longitudinal recesses 15 in their centers to receive the lower portion of the coupler-yoke 4, are secured to the bottom flanges of the channels 1 in any suitable manner, herein shown as bolts 16, on each side of the plate 9 and be-

tween the lugs 2 and the plate 9. Such plates 14 form a support and guide for the coupler-yoke 4 and the follower-plates 3.

The Westinghouse friction draft-gear is so well known that it is not necessary to describe it here further than to point out that the draft-gear cylinder 10 of such draft-gear is cradled in the curved portions 13 of the plate 9.

The draft-sill channels 1 are herein shown with the flanges turned out. Under some circumstances and conditions this construction may not be the most convenient, and I may prefer to reverse the position of the channels 1, in this respect turning their flanges in toward each other. The draft-sill in such case would be somewhat more compact and occupy less space laterally; but it is evident that such reversal of these parts would not affect my invention nor even materially alter the construction. Such changes as it required could be made by any ordinary mechanic.

The form of lugs 2 herein shown is one easily and economically made; but I may prefer under some circumstances and conditions and for special reasons to make such lugs 2 of a special rolled section of similar shape to that shown instead of making them of channels having one flange cut off and provided with a reinforcing-plate, as herein shown.

It will be understood that my improved draft-rigging can be used with the ordinary double-spring draft-gear as well as with the Westinghouse friction draft-gear. When used with the ordinary double-spring draft-gear, the construction will be that shown in Figs. 5, 6, and 7. The plate 9 will be dispensed with and the plate 14 extended continuously between the lugs 2, and two angles 17, one on each side, may be substituted for the plate 7, such angles 17 serving as guide-plates for the springs 18 at the top.

It is evident that my improved draft-rigging can be applied to any car, since the only modifications that would be necessary would be the widening or narrowing the distance between the draft-sill channels.

The operation and advantages of my invention will be readily understood and appreciated. The lugs 2 take the follower-plates 3, and the buffing and drawing strains both are transferred to the draft-sill channels 1 and by them to the center sill, (not shown,) with which such draft-sill channels 1 are suitably connected. The parts of the draft-rigging are few and simple and their organization such that all parts are easily and quickly accessible for inspection, and any part can be readily repaired or replaced without removing the whole of the rigging from the car. With the exception of the bent plates, which are easily formed, the parts are all of merchantable shapes, so that the rigging can be easily and economically manufactured.

I do not desire to be understood as limiting

myself to the details of construction and arrangement as herein described and illustrated, as it is manifest that variations and modifications may be made in the features of construction and arrangement and in the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variation and modification as properly falls within the scope of my invention and the terms of the following claims.

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

1. In a device of the class described, stops for the follower-plates constructed of rolled-steel channels from which one flange has been removed and reinforced by a plate secured on the web of such channel and fitting in the fillet formed by the web and the remaining flange.

2. A device of the class described, comprising two spaced parallel channels, stops for the follower-plates secured on the opposing faces of said channels and formed of channels from which one flange has been removed, follower-plates adapted to abut against said stops, a draw-bar provided with a yoke embracing said follower-plates, tensional means normally holding said follower-plates apart, a bent plate secured between said channels as a top guide for said yoke, and supporting-guides for said follower-plates secured below said channels between said stops.

3. A device of the class described, comprising two spaced parallel channels, stops to take the follower-plates and composed of channels from which one flange has been removed, follower-plates adapted to abut against said stops, springs interposed between said follower-plates, a coupler provided with a yoke embracing said follower-plates, guide-plates secured to the webs of the channels above said springs, and a plate secured to the bottom of said channels and provided with a central longitudinal recess to receive the lower part of said yoke and with curved portions adjacent to said recess to receive the cylinder of the Westinghouse friction draft-gear.

4. In a device of the class described, stops for the follower-plates formed of rolled-steel channels from which one flange has been removed, and reinforced by plates secured to said channels and in contact with the webs and remaining flanges thereof throughout the surfaces of the bottoms and one end of said plates.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

RALPH V. SAGE.

Witnesses:

WILLIAM MCKEE,
FRED E. MCQUEEN.