

No. 744,356.

PATENTED NOV. 17, 1903.

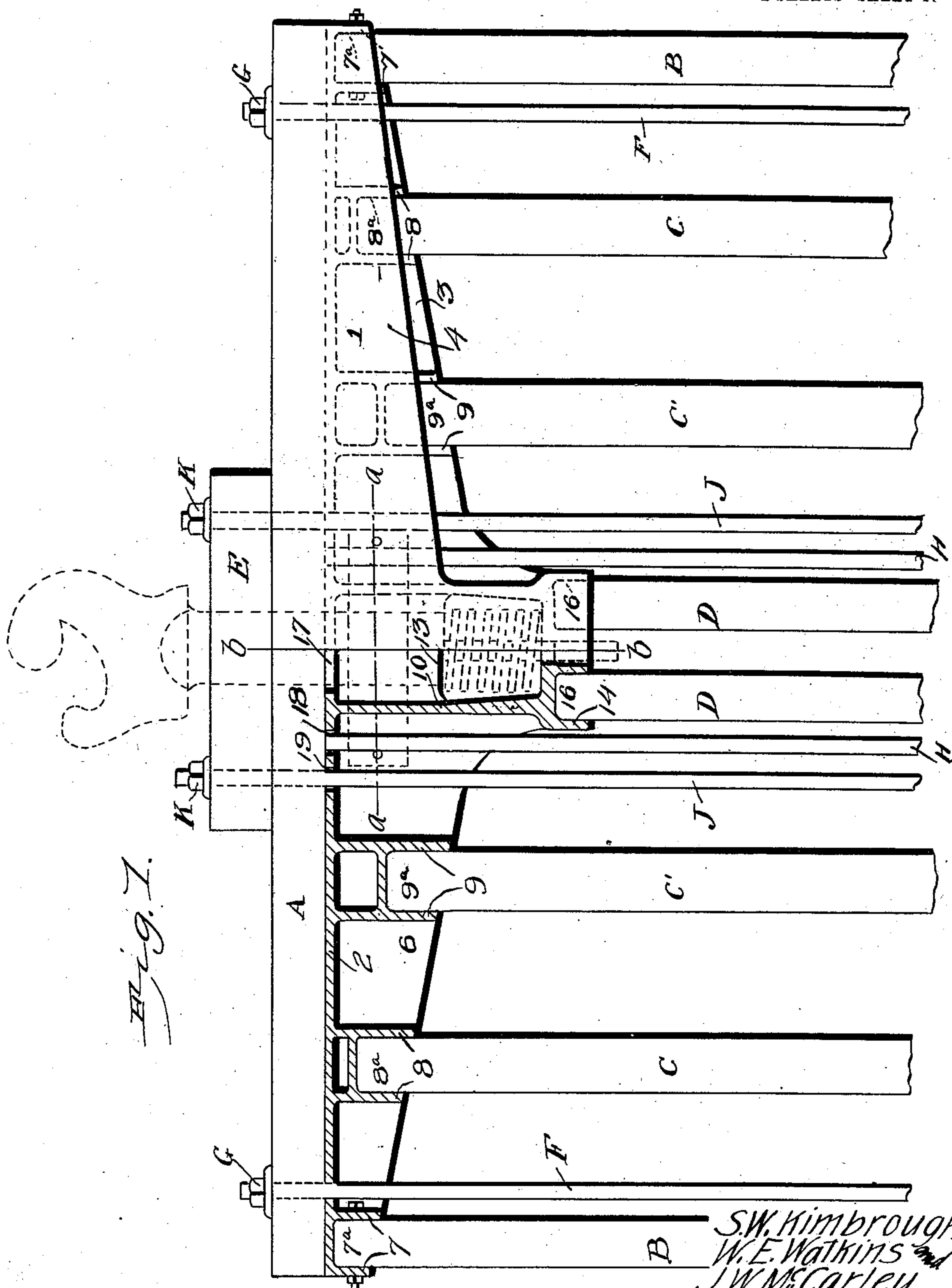
S. W. KIMBROUGH, W. E. WATKINS & J. W. McCARLEY.

METALLIC END YOKE FOR RAILWAY CARS.

APPLICATION FILED NOV. 1, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



1627

Witnesses

Witnesses  
E. J. Stewart  
J. W. Garner

by

*Chas. H. Snow & Co.*  
Attorneys

*S.W. Kimbrough,  
W.E. Watkins and  
J.W. McCarley,  
Inventors:*

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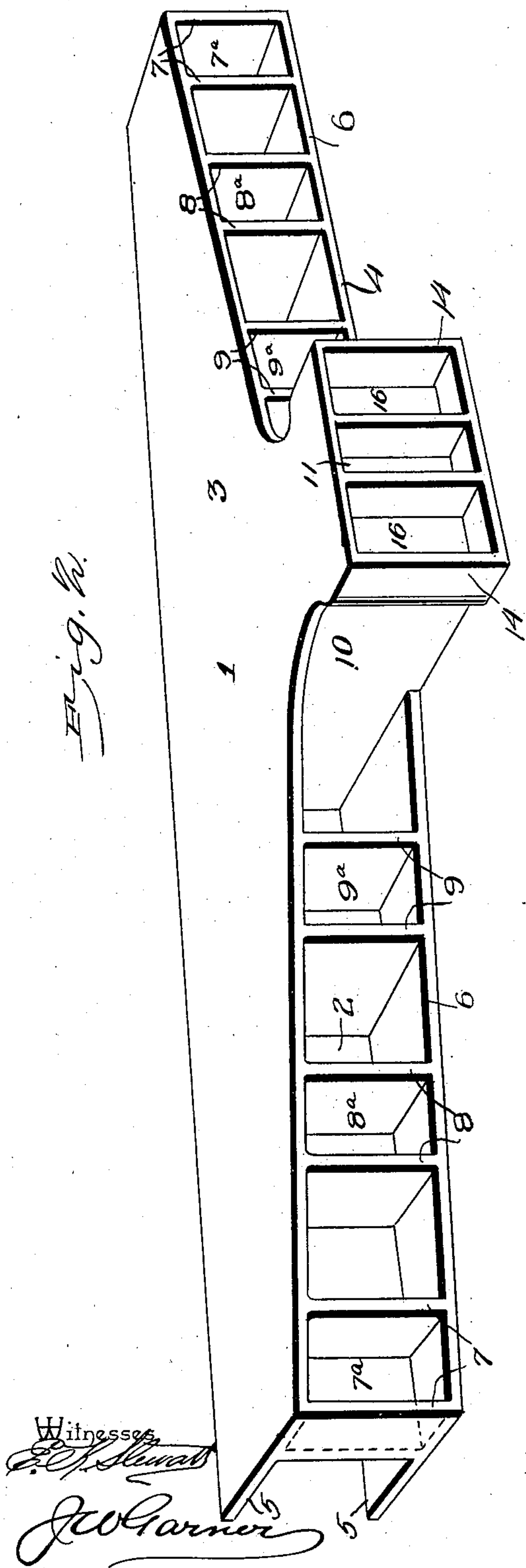
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# METALLIC END YOKE FOR RAILWAY CARS.

APPLICATION FILED NOV. 1, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses  
E. P. Stuart  
J. W. Gann

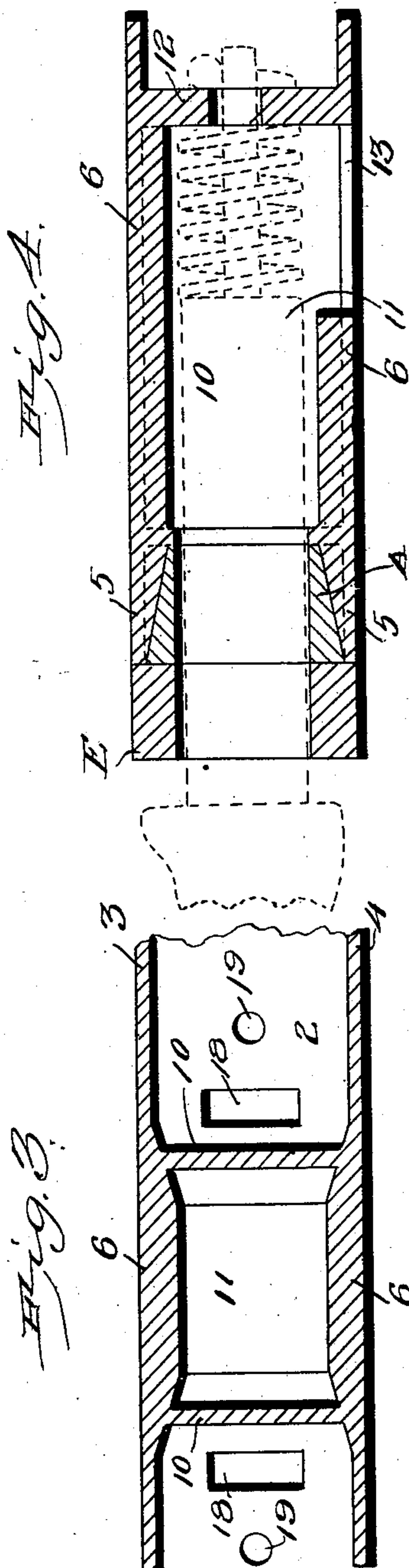


Fig. 3.

S. W. Kimbrough,  
W. E. Watkins and  
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by

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# UNITED STATES PATENT OFFICE.

SIDNEY W. KIMBROUGH, WILLIAM E. WATKINS, AND JAMES W. MCCARLEY,  
OF CLEBURNE, TEXAS.

## METALLIC END YOKE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 744,356, dated November 17, 1903.

Application filed November 1, 1902. Serial No. 129,719. (No model.)

*To all whom it may concern:*

Be it known that we, SIDNEY W. KIMBROUGH, WILLIAM E. WATKINS, and JAMES W. MCCARLEY, citizens of the United States, residing at Cleburne, in the county of Johnson and State of Texas, have invented a new and useful Metallic End Yoke for Railway-Cars, of which the following is a specification.

Our invention is an improved metallic end yoke for railway-cars, adapted to carry the end sill and for the attachment of the longitudinal sills and the draw-head, whereby the latter is disposed in the common plane of the end yoke and sills and the stress incident to draft and buffing is applied directly to the end yoke and transferred from the latter to the longitudinal sills endwise, thereby avoiding all lateral stress and the wear and breakage incident thereto; and it consists in the peculiar construction and combination of devices hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is partly a bottom plan view and partly a horizontal sectional view of one of our improved end yokes, showing the same in connection with the longitudinal sills, the truss-rods, draft-rods, and one of the end sills and draw-heads of a railway-car-platform frame. Fig. 2 is a detail perspective view from the inner side of our improved metallic end yoke. Fig. 3 is a vertical sectional view of the same, taken on a plane indicated by the line *a a* of Fig. 1. Fig. 4 is a vertical sectional view of the same, taken on a plane indicated by the line *b b* of Fig. 1.

Our improved metallic end frame 1 is a single casting in the form of our invention here shown; but the same may be made of wrought metal or wood and may within the scope of our invention be composed of a number of parts suitably secured together. We therefore do not desire to limit ourselves in this particular.

In the embodiment of our invention we provide a cross plate or web 2, which is vertical and on the upper and lower sides of which are top and bottom webs or plates 3 4, respectively, which project both outwardly and inwardly therefrom, the outer portions of said webs or plates 3 4 being, in effect, flanges 5 and the rear portions of said plates or webs

being, in effect, inwardly-extending flanges 6. The flanges 5 and the web 2 form a channel on the outer side of the end yoke, which channel is adapted to receive the end sill A. On the inner side of the web 2 and between the inner flanges 6 are vertical webs 7 8 9, which form, together with the said flanges 6, pockets 7<sup>a</sup>, 8<sup>a</sup>, and 9<sup>a</sup> to receive the ends of the side longitudinal sills B and the intermediate sills C C', as shown in Fig. 1.

The central portions of the flanges 6 are widened, as shown in Figs. 1, 2, and 4, and between the widened portions of said flanges are vertically-disposed webs 10, which form, together with said flanges 6, a chamber 11 for the inner portion of a draw-head of common form, such as is indicated in dotted lines in Figs. 1 and 4. At the inner end of the chamber 11 is a wall 12. The upper side of the said chamber is entirely closed by the top flange 6; but the lower side thereof has an opening 13 (shown in Fig. 4) to enable the usual buffer-spring to be placed on the draw-head. The buffer-spring also is indicated in dotted lines in Figs. 1 and 4. The central portions of the upper and lower flanges 6 extend somewhat beyond the wall 12, and the yoke is formed with vertical heads 14, which, in connection with the flanges 6 and the wall 12, form pockets or sockets 16 to receive the ends of the center sills D. The web 2 has an opening 17, through which the draw-head extends, and the same extends also through the end sill A and through the block of dead-wood E, which is placed on the outer side of the end sill at the center thereof. The outer truss-rods F have their ends extended through alined openings in the web 2 and in the end sill, and the nuts G on said outer truss-rods bear on the outer sides of the end sills near the ends of the latter. The draft-rods H, which are disposed near and on the outer sides of the center sills B, have their ends secured in openings 18, with which the web 2 is provided. The inner truss-rods J have their end portions extended through alined openings 19 in the web 2. End sill A and dead-wood block E and their nuts K bear against the outer side of the dead-wood block, as shown.

It will be understood from the foregoing



and by reference to the drawings that the longitudinal sills, end sill, end yoke, and draw-head are all disposed in a common plane, so that the stress of the draft and that incident to "buffing" is applied directly from the draw-head to the dead-wood block, end sill, and end yoke to the longitudinal sills endwise of the latter, so that the lines of force or stress are coincident with the axes of the sills and end yoke, and the same are entirely relieved of all lateral stress, such as is inevitable when the draw-head, as is usual in the cars heretofore constructed, is out of the common plane of the sills. Such lateral stress is exceedingly destructive and is the cause of a very large percentage of the injury and wear of railway-car-platform frames and of the expense incident to repairs. Furthermore, by our peculiar construction we are enabled to materially reduce the weight and the cost of the car draft-rigging.

We do not desire to limit ourselves to the precise construction and combination of devices herein shown and described, as it is evident that modifications may be made therein without departing from the spirit of our invention.

Having thus described our invention, we claim—

1. In a car draft-rigging, the combination of an end yoke, longitudinal sills having their ends secured thereto, a draw-head extending through an opening in the end yoke, and a spring applied to the draw-head, said yoke having an opening formed through its wall to permit the insertion or removal of the spring.

2. In a car draft-rigging, the combination of an end yoke, longitudinal sills having their ends secured thereto and a draw-head extending through an opening in the end yoke, the latter, the sills and the draw-head being disposed in a common plane, substantially as described.

3. An end yoke for cars, having a channel on its outer side to receive an end sill, laterally-extending flanges on its inner side to bear on the upper and lower sides of longitudinal sills and webs between said laterally-extending flanges, near the center of the yoke, said webs and flanges forming a chamber to receive a member of the draw-head, substantially as described.

4. An end yoke for cars having a channel on its outer side, laterally-extending flanges on its inner side, webs between said laterally-extending flanges, near the center of the yoke, said webs and flanges forming a chamber, and said yoke being further provided with pockets on its inner side between the laterally-extending flanges and at the inner end of said chamber, in combination with an end sill in the channel, longitudinal sills having their ends in said pockets, a draw-head having a member disposed in the chamber and connected to the yoke, draft-bars having their ends secured to yoke and truss-rods having their ends extending through the yoke and end sill and secured to the latter, said end yoke, the said sills and the said draw-head being all disposed in a common plane, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

SIDNEY W. KIMBROUGH.  
WILLIAM E. WATKINS.  
JAMES W. MCCARLEY.

Witnesses to the signature of S. W. Kimbrough:

W. C. ARNOLD,  
W. J. BOSBOROUGH, Sr.

Witnesses to the signatures of Watkins and McCarley:

W. A. RICHEY,  
JNO. R. JOHNSON.