

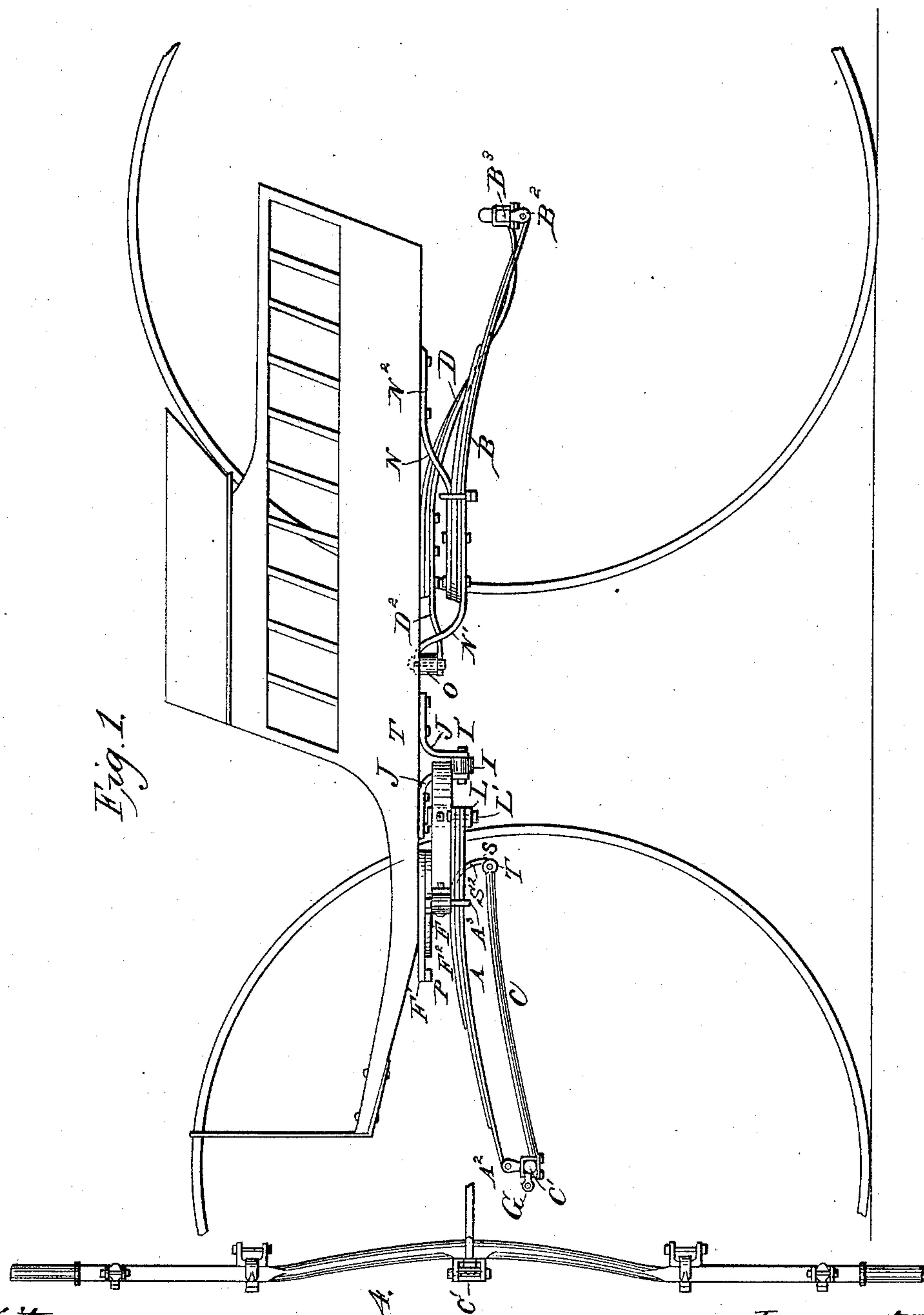
(No Model.)

2 Sheets—Sheet 1.

C. W. SALADEE.  
SPRING PLATFORM FOR ROAD WAGONS.

No. 441,901.

Patented Dec. 2, 1890.



Witnesses:

J. M. Hume  
O. P. W. Fisher

Fig. 4.

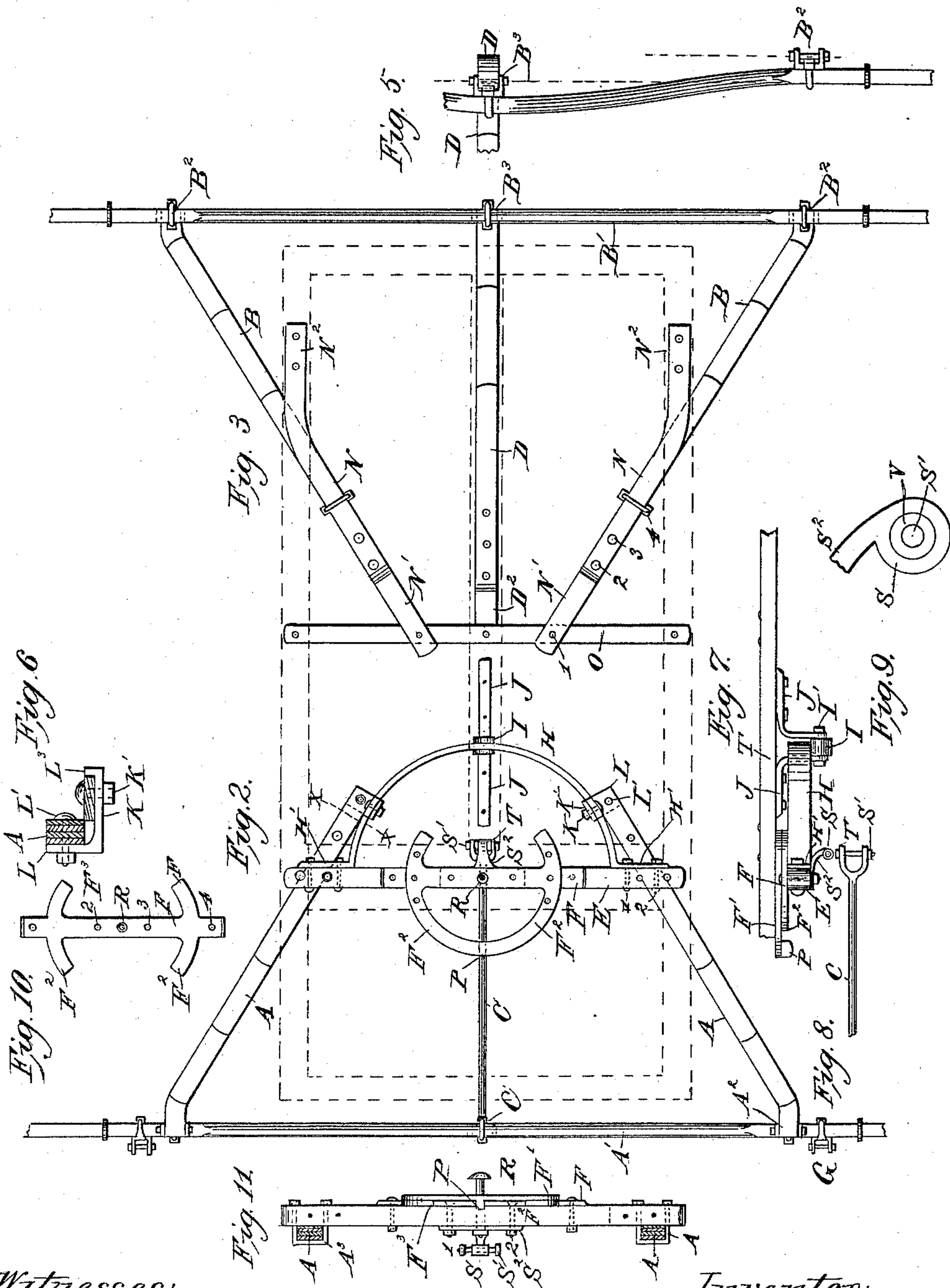
Inventor:

C. W. Saladee

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# UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF CLEVELAND, OHIO.

## SPRING-PLATFORM FOR ROAD-WAGONS.

SPECIFICATION forming part of Letters Patent No. 441,901, dated December 2, 1890.

Application filed July 22, 1890. Serial No. 359,714. (No model.)

*To all whom it may concern:*

Be it known that I, CYRUS W. SALADEE, of the city of Cleveland, State of Ohio, have invented certain new and useful Improvements in Spring-Platforms for Road-Wagons, whereof the following is a specification embodying my invention, and as more specifically pointed out in the following claims.

The object of the invention is, first, the suspension of the body at its opposite ends upon independent spring-platforms, each composed of side springs extended obliquely from the bottom of the body to the axle, and each in combination with a longitudinally-arranged central member suspended in a different plane than that assumed by the side springs, whereby to prevent the rotation of the axles by the vibration of the springs; second, to secure a short turning spring-platform, whereon to support the front end of the body, consisting of a novel fifth-wheel frame and king-bolt coupling device secured to the bottom of the body and operated upon a roller-bearing; third, to provide a stop whereby to regulate the action of the fifth-wheel when in the act of turning the vehicle in a circle to either hand, together with other features in the details of construction, all as hereinafter more fully set forth, reference being had to the accompanying drawings, whereof—

Figure 1 is a side elevation of the complete vehicle embodying my invention. Fig. 2 is a detached plan view of the front spring-platform. Fig. 3 is a detached plan view of the rear spring-platform. Fig. 4 is a detached front view of the front axle. Fig. 5 is a detached rear view of the hind axle. Fig. 6 is an enlarged view in section cut off at the dotted line  $x x$ , Fig. 2, showing the hanger securing the rear end of the side springs to the segment-plate H of the front spring-platform. Fig. 7 is a detached side elevation of the fifth-wheel, segment, and roller seen in Fig. 2. Fig. 8 is a detached plan view of the rear end of the axle-stay C, seen in Fig. 2. Fig. 9 is a detached and enlarged side view of the head S, carrying the rear end of the axle-stay C, seen in Fig. 2, and showing the end of the rubber tube V, surrounding the bolt S', seen in Fig. 8, whereby to maintain this connection close-fitting and prevent its rattling. Fig. 10

is a detached plan view of the lower plate F of the fifth-wheel seen in Fig. 2. Fig. 11 is a detached front view of the cross-bar E and its attachments seen in Fig. 2.

I proceed with the construction of the front spring-platform substantially in the manner following:

The side springs A A are made, preferably, to the form seen in Fig. 1, and are in this instance pivotally shackled to the axle A', as represented in Figs. 1 and 2. A cross-bar E is provided, preferably of wood. To the rear face of this bar, as seen in Fig. 2, is bolted the opposite ends of the segment-plate H, as at H' H'. Said plate is made, preferably, of steel, say, one and one-fourth inch deep by three-eighths of an inch thick, and is bent to the form seen in Fig. 2, so that the width of the plate is presented from a side view, as in Figs. 1 and 7, and its edge presented to a top view, as in Fig. 2, whereby to secure lightness and great strength against the vertical strain imposed thereon at L and I. To the sides of this segment-plate are secured hangers or other suitable bearings K, on which to support the rear terminal ends of the side springs A A, substantially as shown in Fig. 2. The opposite ends of the cross-bar E are in this instance preferably clipped to the top face of the side springs by a clip A'', enclosing the spring and passing up through the bar with nuts on top, as seen in Fig. 11. To the top face of this cross-bar is secured the lower plate F of the fifth-wheel, a detached plan view of which is seen in Fig. 10. Said plate is formed with laterally-projected segments F'' and F''.

The top plate F' of the fifth-wheel is clearly shown in Figs. 1, 2, and 7, and which is secured to the bottom frame of the body. On the under face of the forwardly-extended segment of said upper plate F', at its center, is formed the stop or stud P, and which is designed to engage the forwardly-extended segments F'' F'' of the lower plate F, thereby forming a "stop" to limit the action of the fifth-wheel when turning the vehicle in a circle right or left. A king-bolt R passes preferably through the cross-sill of the body, the fifth-wheel center, and the bar E, thereby connecting the latter to the bottom of the



body. The segment-plate H is rearwardly supported on a friction or preferably a roller bearing I, which is suspended from the bottom frame of the body by the brackets J J. (More clearly seen in Figs. 1 and 7.) In my patent, No. 411,732, dated September 24, 1889, is shown and claimed a central spring extending from the fifth-wheel to the axle in connection with obliquely-arranged side springs. For the purpose of imparting a lighter appearance to this member I substitute in this case a rigid axle-stay C of the form seen in Fig. 1, and having its opposite ends pivotally connected to the cross-bar E and to the axle A' in a lower plane than the opposite ends of the side springs, thereby providing a brace against the draft of the vehicle from said axle, and to prevent the rotation of the latter by the vibration of the springs. The front end of this axle-stay is shackled to the under side of the axle, as in Fig. 4, and its rear end to the head S of the dependent bracket S'', which latter has its upper end bolted to the under side of the cross-bar, as more clearly shown in Fig. 11. The eye in the head S (see Fig. 9) is made large enough to receive a hollow spool of rubber or other suitable material, and through which is passed the bolt S', connecting the stay C therewith, and thereby making this connection close-fitting and prevent its rattling on the bolt S'.

The rear platform, (seen in Figs. 1 and 3,) like the front one, is composed of obliquely-arranged side springs B B and a central member D. The rear ends of the side springs are in this instance pivotally shackled to the under side of the axle, as at B'', and they are suspended from the bottom of the body by loops N N'. The loop N (see Fig. 1) has its front end rigidly secured to the top face of the spring B and its rear end bent up and bolted to the side sill of the body, while the front loop N' is formed by extending the lower or main plate of the spring B, and which is bent up to connect with the cross-bar O and bolted thereto, as clearly seen in Fig. 1, or to a cross-sill framed into the bottom of the body. The side springs are thus suspended at a proper distance below the side frame of the body, whereby to admit of securing the opposite ends of the central member D in a higher plane than the opposite ends of the side springs, and thereby prevent the rotation of the axle by the vibration of the latter.

The axle-stay C, before described and as seen in Figs. 1 and 2, may be used in the rear platform, if preferred, by giving it the shape or form of the central spring D, (seen in Fig. 1;) but in either case, whether the central member D of the rear platform is a spring or an axle-stay, its opposite ends must both be secured to the bottom of the body and to the central portion of the axle in a higher plane than the opposite ends of the side springs for the purpose before stated; but in this instance I prefer the central member to take the form of a spring D, having its front end directly

and rigidly secured to the bottom frame of the body and its rear end pivotally shackled to the under side of the arch of the axle, as seen in Fig. 5, so that both ends of this central member D shall be secured to the body and to the axle in a higher plane than the opposite ends of the side springs. The cross-bar O has its opposite ends bolted to the side sills of the body and is designed to connect with the front ends of the side and center springs, as seen in Fig. 3. Therefore to remove the rear platform from the body this bar O remains connected to the ends of the springs, as shown and described.

It will be understood that these spring-platforms are independent of each other, and that either may be used to support one end of the body, while some other well-known means may be employed to support the other end.

If preferred, for the cheaper class of vehicles the axle-stay C may be omitted, in which case the front terminal ends of the springs A A are rigidly connected to the axle.

Without limiting my claims to the precise arrangement of the several parts shown and described, I claim—

1. The combination, with the cross-bar and the converging side springs secured thereto, extending both forwardly and rearwardly therefrom and having their front ends attached to the axle, of the independent segment-plate having its ends secured to the cross-bar at some distance within the side springs and its body detachably secured to the rear ends of said springs, and an axle-stay lying below the plane of the side springs and having its ends pivotally secured, respectively, to the axle and cross-bar midway between the side springs.

2. The combination, with the cross-bar adapted to support a fifth-wheel device and bearing a rigidly-attached rearwardly-extending segment-plate, of side springs converging from the attachment to the axle at their front ends and having their rear ends secured to the body of the segment-plate and their intermediate portions fixed, respectively, to the ends of the cross-bar at some distance without the circle of the segment-plate.

3. The combination, in a front spring-platform for road-wagons, of side springs obliquely extended from a cross-bar to and pivotally connected with the axle, said cross-bar being adapted to support thereon a fifth-wheel device consisting of two plates and a king-bolt, its opposite ends being carried by said springs and having the rear ends of the latter secured upon hangers suspended from a segment-plate forwardly connected to said cross-bar and rearwardly supported upon a friction or roller bearing attached to the bottom frame of the body, and a longitudinally-arranged axle-stay intermediate between said springs, having its opposite ends suspended from said cross-bar and the axle in a lower plane than the opposite ends of the side springs, whereby to brace the axle and prevent its rotation by



the vibration of the springs, substantially as set forth.

4. The combination, with the springs converging from their points of attachment of the axle, of the cross-bar secured across said springs, a rearwardly-extending segment-plate having its ends secured to said cross-bar and its body supported by brackets depending from the bottom of the vehicle, brackets securing said springs to said segment in the rear of the cross-bar, and a fifth-wheel device having its plates secured, respectively, to the cross-bar and vehicle-body and provided with stops limiting their relative rotary motion.

5. The combination, in a rear spring-platform for road-wagons, of side springs extended from the bottom of the body and pivotally connected to the axle, the front ends of said springs being supported by brackets or loops suspended from the bottom frame of said body, and a longitudinally-arranged central stay or spring having its opposite ends con-

nected to the bottom of said body and to the axle in a higher plane than the opposite ends of the side springs, whereby to prevent the rotation of the axle by the vibration of said springs, substantially as set forth.

6. In a rear spring-platform for road-wagons, the combination of side springs B, the loop N, having its front end clipped or bolted to the top face of the spring and its rear end N'' bent up and bolted to the body-sill, and the bottom or main plate of said spring extended beyond its front end and bent up to form the loop N', having its terminal end also bolted to the bottom frame of the body, substantially as and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CYRUS W. SALADEE.

Witnesses:

GEORGE L. MUNN,  
JUDSON C. CHAPIN.