2 Sheets—Sheet 1

C. W. SALADEE.

Road-Wagon.

No. 210,636. **Patented Dec. 10, 1878.**

Fig. 1.

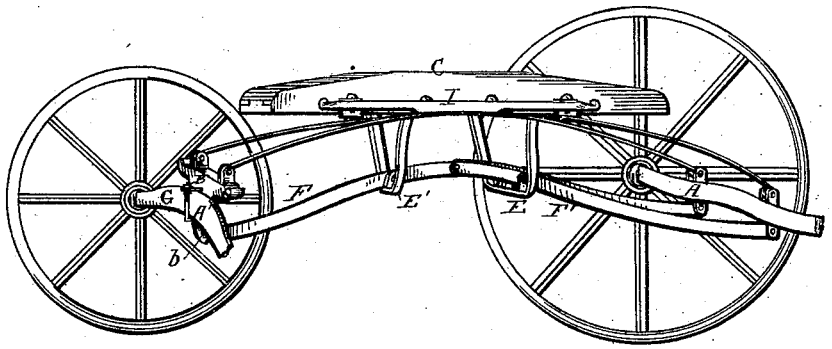
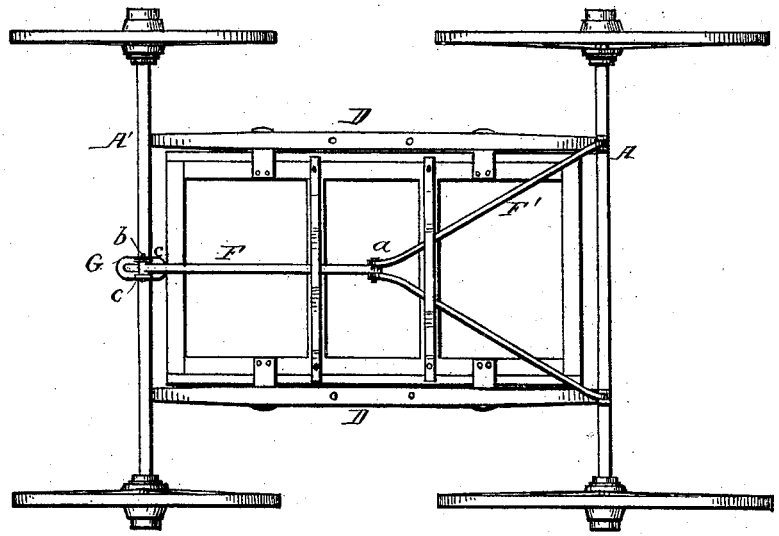


Fig. 2.



Attest:
Courtney A. Cooper
William Paxton

Inventor:
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By his attorney
Charles E. Foster

2 Sheets—Sheet 2.

C. W. SALADEE.

Road-Wagon.

No. 210,636. **Patented Dec. 10, 1878.**

Fig. 3.

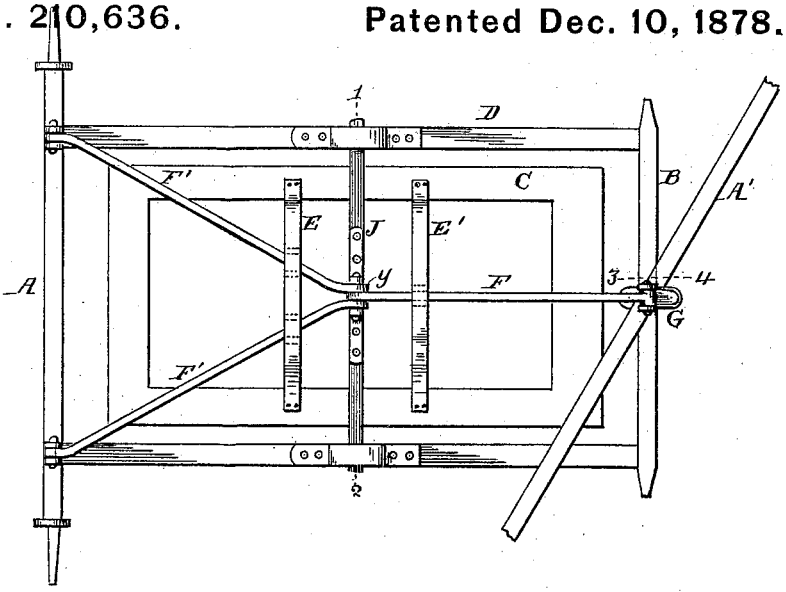


Fig. 4.

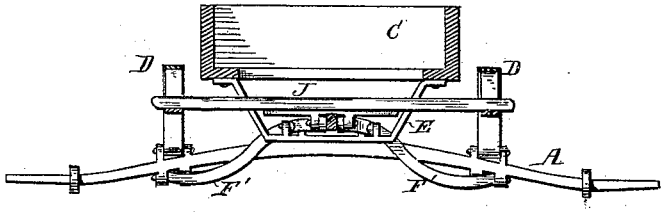
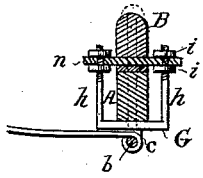


Fig. 5.



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UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN ROAD-WAGONS.

Specification forming part of Letters Patent No. **210,636**, dated December 10, 1878; application filed September 13, 1878.

To all whom it may concern:

Be it known that I, CYRUS W. SALADEE, of Washington city, in the District of Columbia, have invented certain Improvements in Road-Wagons, of which the following is a specification, embodying my said invention.

To enable others skilled in the art to make and use my invention, I herewith submit the following general description:

My invention relates to that class of vehicles in which the front and rear axles are connected to the body without the aid of the usual rigid perches, the object being to secure a proper spring-support for the body, to prevent it from yielding under the action of side loads, and to connect and preserve the position of the axles.

The invention further relates to a construction of the yoke, having for its object to preserve the contact of the friction-plates.

On reference to the accompanying drawings, which form part of this specification, Figure 1 is a perspective view of part of a road-wagon, showing my improvements. Fig. 2 is an inverted plan view; Fig. 3, an inverted plan view, showing a modification; Fig. 4, a section on the line 1 2, Fig. 3; and Fig. 5, a section on the line 3 4, Fig. 3.

A and A′ are the axles, B is the bolster, and C the body, of the vehicle, the latter being supported, as described hereinafter, by semi-elliptic side springs D D, connected above the bolster and rear axle. To the under side of the body are secured two parallel hangers, E E′, suitably constructed to support the pivots of a central front lever, F, and divergent rear levers F′ F′, the inner ends of the levers being connected by a bolt, *a*.

The rear ends of the levers F′ F′ are jointed below the rear axle, A, and the front end of the front lever is secured by a pin, *b*, passing through ears *c c* of the yoke G.

The body may have its bearing directly upon the springs D D, upon which, however, I prefer to secure the spars I I, resting the body upon the latter, as shown. In such case the weight of the body is sustained directly by the springs, while the levers F F′ F′ so equalize the action that a weight placed upon any portion of the body will be sustained by the whole spring-platform uniformly instead of affecting mainly a single portion, as usual.

Thus it will be seen that a weight placed upon the front body, Fig. 1, will depress the bracket E′ and inner end of the lever F, which of necessity conveys a like movement to the levers F′ F′, which are operated to precisely the same extent, so that the rear of the body is carried down in an equal degree. The springs being above and the levers below the axles, on different planes, and the body being connected to the levers by the brackets E E′, the body is so braced and supported that it cannot tilt under a side load. Thus the structure insures the horizontal position of the body, however unequally it may be loaded, and the uniform distribution of the load over the entire spring-platform. While the diverging levers F′ F′ impart increased stability, a good result may be obtained by the substitution of a single central lever, and in some instances I propose to change the spring-supports, using either a central semi-elliptic spring above the axles or the ordinary end springs. By connecting the springs above and the bars or levers below the axles, the latter are prevented from turning, while the body may be hung as low down as desired, and the strain upon the connections is much less than when the levers are above the axles. Instead of connecting the body directly to the side springs or spars, it may rest upon the brackets E E′, and the inner ends of the levers may be connected to the springs, which tend to elevate them and support the body. Any suitable connection may be used for this purpose, as a cross-bar, J, suspended from the springs, and connected at *y* to the inner ends of the levers. In this case, as in the first, the body is supported horizontally and has an elastic bearing upon the springs, but indirectly instead of directly, as in the first instance, the connections with the axles being the same in both.

In order to maintain the joint at the king-bolt tight, when the bearing-plates become worn, the arms *h* of the yoke G are threaded and extended upward through openings in the plate *n*, attached to the bolster, and are provided above and below said plate with set-nuts *i i′*, whereby the yoke can be adjusted and secured as may be desired.

I claim—

1. The combination, in a road-wagon, of the

body-supporting springs, connected and arranged above the axles, and the equalizing-levers, connected and arranged below the axles, and having their bearings between their ends in brackets supported by the body, substantially as set forth.

2. The combination of the body C, brackets E E′, equalizing-bars F F′, and side springs D D, supporting the body, substantially as specified.

In testimony that I claim the above as my invention I hereunto subscribe my name.

CYRUS W. SALADEE.

Witnesses:

CHARLES E. FOSTER,

WILLIAM PAXTON.