C. W. SALADEE.

Road-Wagon.

No. 210,635. Patented Dec. 10, 1878.

Fig. 1.

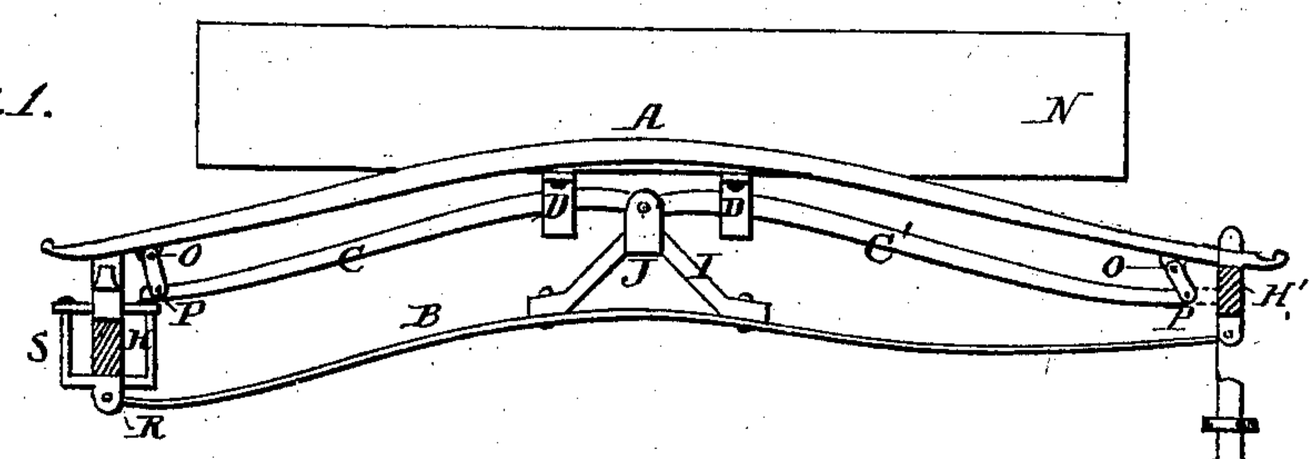


Fig. 2.

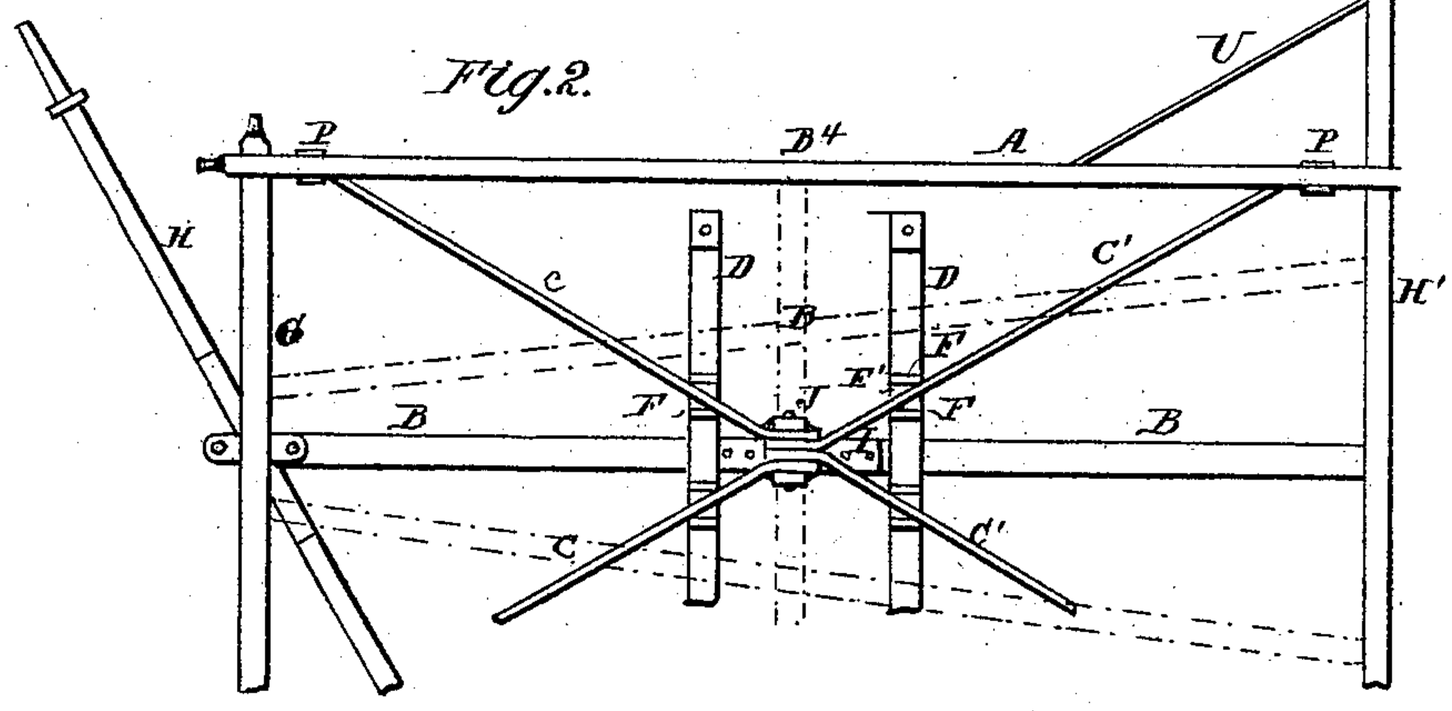


Fig. 3.

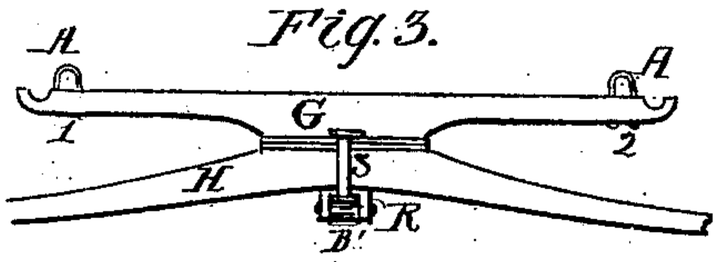


Fig. 4.

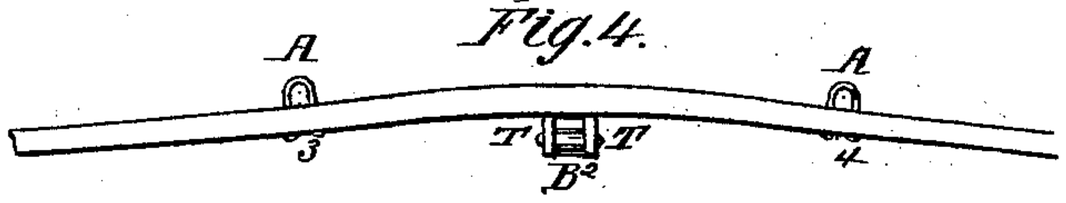


Fig. 7.

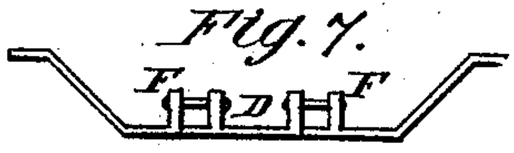


Fig. 5.

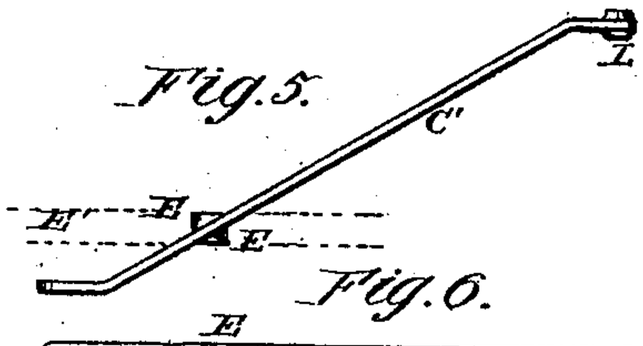
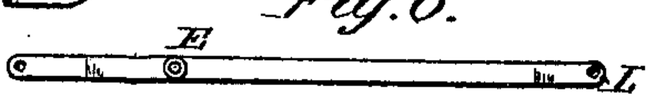


Fig. 6.



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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. **210,635,** dated December 10, 1878; application filed August 7, 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 consists in the construction of a new and improved road-wagon, as hereinafter fully described, the main object of which is the suspension of the body so that it is compelled in its vertical movement to maintain a perfectly parallel and horizontal position with the ground, no matter at which end or corner or on which side the greater part of the load is carried.

A further object is to provide a direct cross-brace from the opposite diagonal corners of the frame-work of the gearing, whereby to prevent the bolster and rear axle from being forced out of their parallel relation to each other, as well as to make them answer the purpose of diagonal perches between the front and rear axles.

In the drawings, Figure 1 is a side elevation of the wagon; Fig. 2, a part plan view of the gearing with wheels and body removed; Fig. 3, a front elevation of the front axle and bolster; Fig. 4, a rear view of the hind axle. Fig. 5 is a top, and Fig. 6 is a side, view of one of the equalizing-bars detached, and Fig. 7 a detached front or back view of the body-loops or supporting cross-braces D of the body.

The bolster, front and rear axles, and the side bars or perches A are of the usual construction and arrangement. A longitudinal central spring, B, or a central cross-spring, B, in dotted lines, Fig. 2, is employed. If the former, its opposite ends are pivoted below the axles in suitable bearings, as at B^1, Fig. 3, and B^2, Fig. 4; but if the latter, its opposite ends are hinged to the central portion of the side bars A, at or near B^4, Fig. 2, being below the body, and secured to the opposite bars of the frame in either case, so that the body may rest low within the frame. Four equalizing-bars, *c c c′ c′*, which are clearly shown in Figs. 5 and 6, have their inner ends hinged or pivoted at the bracket I, (seen in Figs. 1 and 2,) and their outer ends hinged to the opposite ends of the side bars A at P, or, if preferred, may as well be hinged directly to the ends of the bolster and rear axle.

The bracket I is secured to the central supporting longitudinal or cross spring B, as seen in Figs. 1 and 2. Bearings E (see Figs. 5 and 6) are formed on the opposite sides of the equalizing-bars, and are so formed that their faces shall be on parallel lines to each other. (See dotted lines, Fig. 5.) These bearings hinge into the shackles F of the body-loops D, Fig. 2, which latter are bent up at their ends, as in Fig. 7, and are bolted to the body, or they may be pivoted to ears at the bottom of the body.

The body, secured upon the loops or cross-braces D, as shown and described, and these being hinged to the equalizing-bars *c c′* at E, the inner ends of which are pivoted together, as at J, and their outer ends, as at P, it is evident that neither of the four bearings E, on which the body rests, can be elevated or depressed without communicating a like degree of action to the other three bearings, and hence the body cannot be any more elevated or depressed at either side, corner, or end than at the opposite side or end, no matter at which point the load is carried.

In place of the side bars A (shown in the drawings) a pair of half-elliptic side springs may be used, in combination with either a longitudinal or cross-spring, B.

In such arrangement of gearing the outer ends of the equalizing-bars are hinged directly to the ends of the bolster and to the rear axle, while the ends of the cross-braces D are extended and secured to the side springs.

Another modification is to omit the side bars or springs A, and by hinging the outer ends of the equalizing-bars direct to the bolster and axle, as last described, and by making the longitudinal supporting-spring sufficiently strong to carry the load, a wagon of marked simplicity and great strength is produced. In this case the rear ends of the equalizing-bars *c′* should be hinged nearer the shoulders of the rear axle than shown in Fig. 2, and thus be made to serve the additional purpose of the axle-stays U seen in this figure.

I will further state that when preferred the side bars or perches A, in place of being parallel to each other, may be framed into the bolster and rear axle, as indicated by the dotted lines A′, Fig. 2; and in all cases where it is not desirable to maintain the style and appearance of a side-bar wagon, the diagonal arrangement of the perches (shown by dotted lines A′) is preferable in this, that they are beneath the body and out of the way of contact with either of the front wheels when in the act of turning the vehicle, as would be the case were the side bars arranged parallel to each other and placed outside the sides of the body; but in this change of the position of the side bars A the outer ends of the equalizing-bars *c c′* would have to be hinged direct to the ends of the bolster and to the rear axle, as hereinbefore described in another modification of the same.

I claim—

1. The body of a road-wagon supported upon four equalizing-bars, the inner ends of which are pivoted to operate together at a point central between the axles, and their outer ends at or near the points of junction of the bolster and rear axle, with the side bars constructed and arranged to operate in combination with a supporting-spring suspended centrally below the body from opposite bars of the frame, as set forth.

2. In a road-wagon, the diagonally-arranged equalizing-bars *c c′*, having their inner ends pivoted to the bracket or connection of a cross or longitudinal central spring, B, and their outer ends pivoted to the side bars or to the bolster and rear axle, the whole constructed and arranged to operate substantially as and for the purpose set forth.

3. The combination of the equalizing-bars *c c′*, suspended in a plane below the side bars A, bolster G, and rear axle H, connected by said side bars, and central supporting spring or springs arranged below the body, substantially as set forth.

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