C. W. SALADEE.

Road-Wagon.

No. 218,690. Patented Aug. 19, 1879.

Fig. 1.

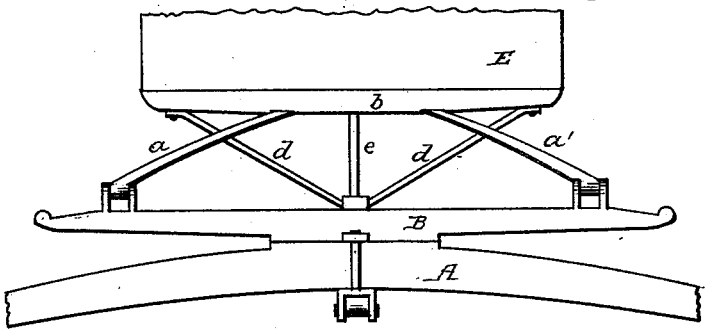


Fig. 2.

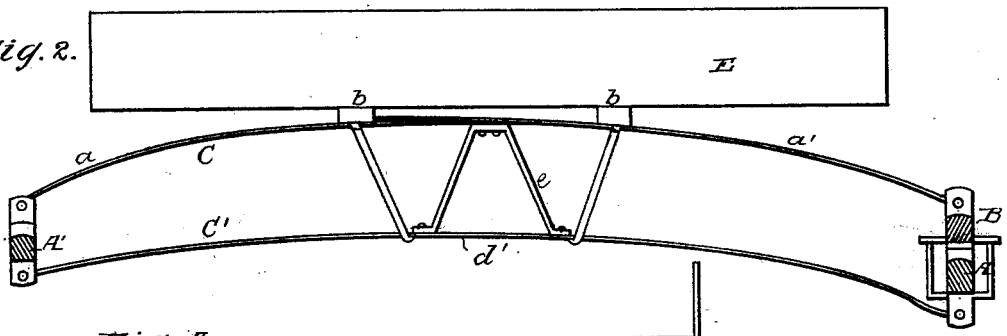


Fig. 3.

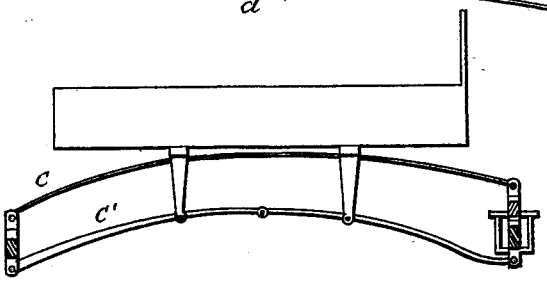
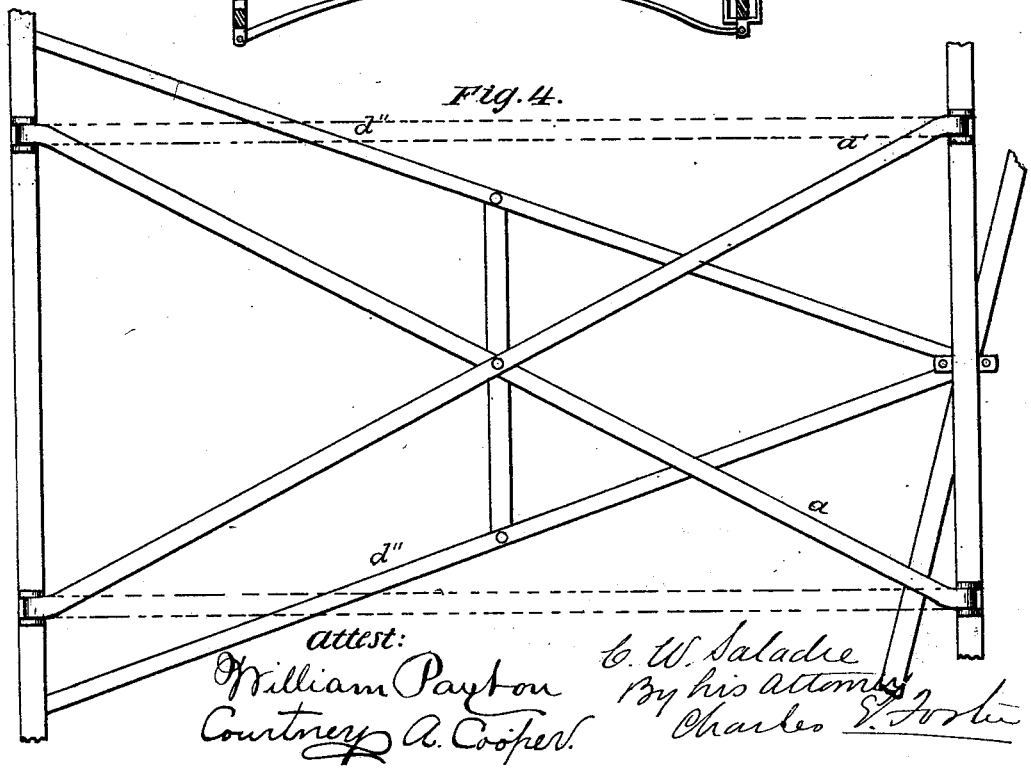


Fig. 4.



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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. **218,690**, dated August 19, 1879; application filed December 23, 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 road-wagons in which crossed semi-elliptic springs are used, and has for its object to afford a wide steady bearing for the body without interfering with the cramping or short turning of the wagon.

In the drawings forming part of this specification, Figure 1 is a front elevation of sufficient of a vehicle to show my invention. Fig. 2 is a side elevation; Fig. 3, a side view of a modification, and Fig. 4 a plan showing another modification.

The front and rear axles, A A′, bolster B, and body E are constructed and arranged in any suitable manner.

To the bolster and rear axle are hung two semi-elliptic springs, *a a′*, which are arranged to cross, substantially as shown, at or near the center, where they are rigidly connected together, and the body secured upon the cross-bars *b b*, or otherwise carried upon the crossed springs. These springs constitute the upper platform, C, of a duplex-spring platform, the lower platform, C′, on a parallel plane to the upper, consisting of a single central semi-elliptic spring, *d′*, connected to the rear axle and below the front axle, as shown in Figs. 1 and 2, or of two converging semi-elliptic springs, *d″ d″*, as in Fig. 4, or of equalizing-bars, as in Fig. 3.

In each case the lower platform is parallel to the upper platform, the lower springs extend to about the center of the front axle, and the two platforms are connected at or near the center by any suitable braces or brackets *e e*, so that they must move vertically together as one platform. This arrangement of upper crossed springs affords a wide bearing for the body, while the combination of the upper crossed springs and lower springs or equalizers, extending to near the center of the front axle, facilitates the turning of the vehicle in a much smaller space or curve than would be possible if side springs were secured to the bolster and rear axle parallel to each other, and the body hung between them in the usual way, as in the latter case the front wheel in cramping would come in contact with the central portion of the side spring, (shown in dotted lines, Fig. 4,) and prevent the further cramping of the wheel toward or under the side of the body; but when the upper springs are crossed and the lower spring or springs extend to the center of the front axle, all parts of the platform are so far out of the way that the wheel can pass under the body without striking the springs to a greater extent than would otherwise be possible.

I claim—

The combination of the upper crossed springs, directly supporting the body, and lower springs or equalizers, connecting the axles and extending to near the center of the front axle, substantially as set forth.

In testimony that I claim the above as my invention I hereunto subscribe my name this 23d day of November, 1878.

CYRUS W. SALADEE.

Witnesses:

JOHN W. BROOKS,

C. L. MCNEIL.