(No Model.)

C. W. SALADEE.

SPRING BRACE FOR VEHICLES.

No. 266,647. Patented Oct. 31, 1882.

Fig. 1.

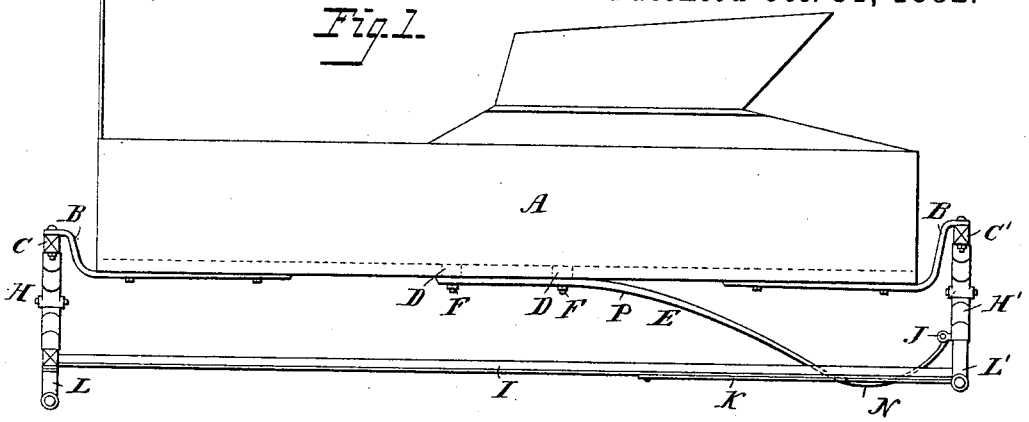
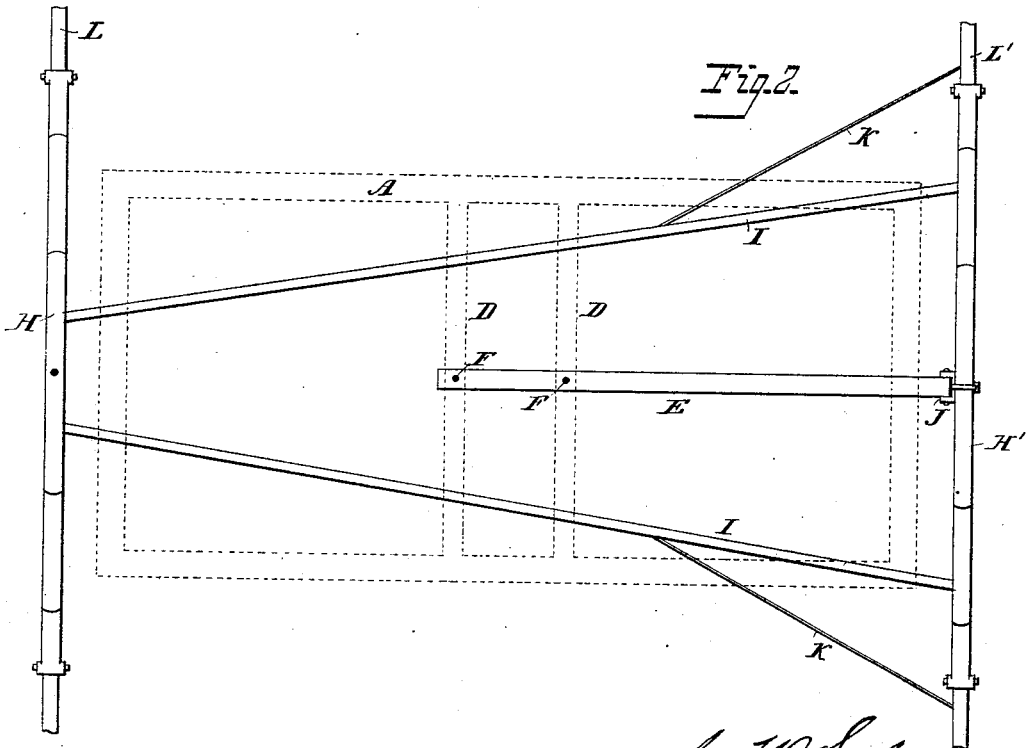


Fig. 2.



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UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF TORRINGTON, CONNECTICUT.

SPRING-BRACE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 266,647, dated October 31, 1882.

Application filed September 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, CYRUS W. SALADEE, a citizen of the United States, residing at Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Vehicles, of which the following is a specification.

My invention relates to road-wagons in which the body-supporting springs are arranged over front and rear axles connected by rigid perches; and it consists in the application of a central longitudinally-arranged supplemental spring, having its inner or heavier end rigidly secured to the bottom of the body and the other end secured to the frame, whereby to assist in carrying the rear half of the body, as well as to prevent its longitudinal movement, as hereinafter more fully set forth.

My invention is applicable to side-bar, end elliptic, or semi-elliptic end-spring vehicles. The rear end of the body in all two-passenger vehicles is required to carry a greater load than the front, as the seat is back of the center. Hence the rear spring is ordinarily made heavier and stiffer, so that at one end of the vehicle there is a spring more rigid in its action and motion than at the other. This prevents the ease of motion that would result if both springs were alike. To overcome this difficulty, I use front and back springs of like dimensions, or nearly so, and provide a supplemental spring at the rear.

The old elliptic-spring wagon, as now generally made, lacks a very important provision, whereby to prevent undue strain, which the longitudinal thrust of the body imposes upon the springs. My invention prevents this also, and is thus a valuable improvement upon the ordinary end elliptic-spring buggy, retaining all that is of value in the old structure and embodying a new feature.

In the drawings, Figure 1 is a side elevation of an end-elliptic spring-buggy, showing the supplemental spring E in position; and Fig. 2 is a top plan view of the same.

A represents the body; L L′, the axles; B, the body-loops; C, the spring-bars; D, the cross-bars framed into the sides of the body; E, the supplemental spring, attached to cross-bars D D by bolts F F at one end and at the other to a shackle, J. H H′ are the elliptic end springs, supporting the body. I I are the perches connecting the axles. J is the shackle, which may be attached either to the rear spring or to the axle, and receives the rear end of the supplemental spring E. K K are the axle-braces, extending to the perches I.

The supplemental spring E is of such form as to admit of a vertical movement of the body without a link motion at J—that is to say, when the spring begins to straighten under pressure the expansion or elongation is taken up at N, where the curve will become greater in proportion as the spring is straightened at P, so that the one curve accommodates itself to that of the other. As the one is straightened the other is increased.

It will be understood that the supplemental spring must be made with a carrying capacity equal to the additional weight which the rear half of the body is to carry, while the end springs, C C′, are substantially alike, and that the supplemental spring will prevent any forward or backward movement of the body when the vehicle is suddenly started or stopped, and thus relieve the end springs of all torsional strain.

In a side-bar wagon the supplemental spring is attached to the bottom of the body and rear axle or spring in substantially the same manner as here shown and described.

I am aware that a central longitudinally-arranged supplemental spring, in combination with a rigid frame-gear, is not new, as I invented and patented this feature by Letters Patent No. 148,504, March 10, 1874; but in such application of the spring it was limited to its combination with semi-elliptic side springs.

In my patent No. 197,669, November 27, 1877, I show a central longitudinal spring extending from axle to axle, combined with either side or end supporting-springs; but experience in the manufacture of these wagons has demonstrated the fact that the front half of the central spring, extending from axle to axle, imparts as much supplemental strength to the front as to the rear spring, or nearly so. My present invention overcomes this defect and gives the requisite carrying capacity and mo-

tion to the rear end of the vehicle without increasing the spring capacity of the front end.

I claim—

In a road-wagon having end supporting-springs over the front and rear axles, connected by rigid perches a central longitudinally-arranged supplemental body-supporting spring, having its inner end rigidly secured to the bottom of the body and the other end secured to the frame, substantially as set forth.

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

CYRUS W. SALADEE.

Witnesses:
CHARLES E. FOSTER,
A. E. T. HANSMANN.