(No Model.)

J. CARROLL.

VEHICLE SPRING.

No. 289,067. Patented Nov. 27, 1883.

Fig. 1.

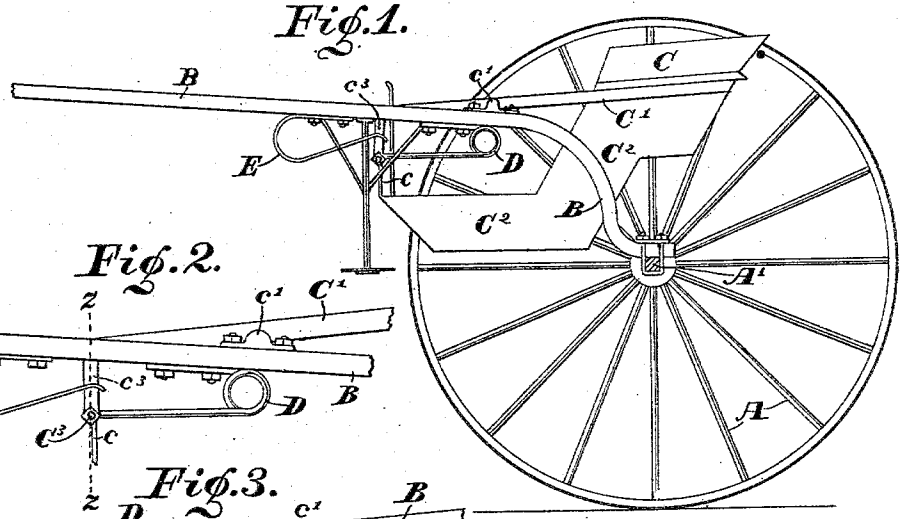


Fig. 2.

Fig. 3.

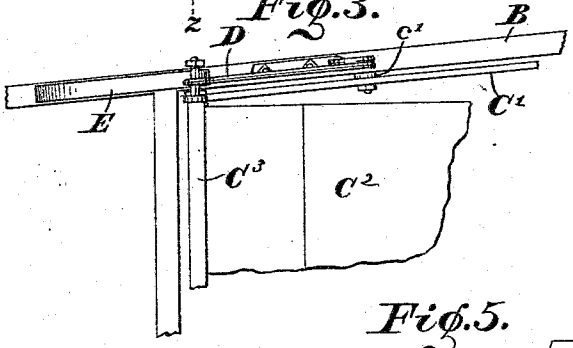


Fig. 4.

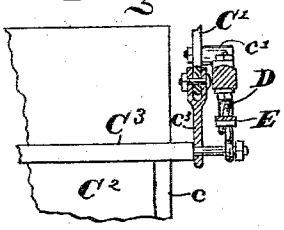
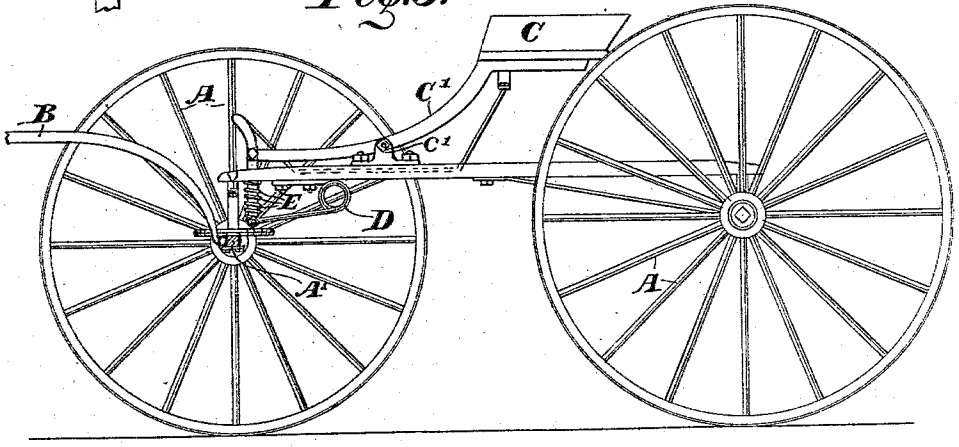


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN CARROLL, OF RUSHVILLE, INDIANA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 289,067, dated November 27, 1883.

Application filed October 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN CARROLL, of the town of Rushville, county of Rush, and State of Indiana, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is a specification.

My said invention consists in providing an equalizing or supplemental spring for the seats of road-carts and buck-boards or buggies, whereby when more than a certain weight is placed upon the seat the main spring is relieved of part of the strain, as will be hereinafter more particularly set forth.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a road-cart embodying my invention, one wheel being removed; Fig. 2, a detail view of my invention and the parts to which it is attached; Fig. 3, an under side plan of the same; Fig. 4, a detail sectional view looking to the right from the dotted line *z z* in Fig. 2; and Fig. 5, a side elevation of a buck-board, one forward wheel being removed, showing an alternate construction which is used in such cases.

In said drawings, the portions marked A represent the wheels; A′, the axles; B, the thills; C, the seat; C′ C′, the inside pieces between which the seat is mounted; D, the spring usually used in this class of road-carts to relieve the seat of sudden jolts, and E the equalizing or supplemental spring, which constitutes the main feature of my invention.

The wheels A, axles A′, and thills B are of an old and well-known construction, and therefore need no special description.

The seat C is mounted on the rear ends of the two side pieces, C′. It is also provided with the usual body or basket, which is secured to the rear end of the side pieces at its rear end, and at the front end is supported by means of the links *c* to the front end of said side bars, as will be presently described.

The side bars, C′, are of suitable strength to support the seat and its loads, and are mounted on the thills by means of the pivots *c′*, and pivot-bearings c^2. From the forward ends of these bars links c^3 extend down through apertures in the thills, and are connected at their lower ends by a cross-bar, C^3, from which the links *c* extend downward to the front end of the body C^2 and connect therewith.

The spring D is secured to the under side of the thill at one end behind the link c^3. The other end extends forward and is attached to the end of the cross-bar C^3, as shown.

The spring E is a common C-spring secured at one end to the under side of the thill in front of the link c^3, and the other end extending back over the cross-bar at about half-way between said cross-bar and the thill. (See especially Fig. 2.)

The foregoing description applies to road-carts. In the case of buck-boards or side-spring vehicles the plates to which the side pieces are pivoted are secured to the top of the side bars of the bottom, and the links extend down through said side bars instead of through the thills, as has been described; and the equalizing-springs are coiled springs instead of C-springs. They are located on the link c^3, between the cross-bar C^3 and the side bar of the bottom of the buck-board, as shown in Fig. 5.

The operation of this equalizing spring is as follows: The spring D is intended to be of sufficient stiffness to support the weight of an ordinary-sized man on the seat without subjecting the spring E to any strain; but when two men are on the seat both springs will be subject to the strain or weight.

By the employment of this spring, as will be readily understood, I avoid the necessity of making the main spring to the seat of any more than sufficient stiffness to support the weight of one person, and yet have a means of supporting the weight of two. This makes the vehicle much more easy to ride in, as the seat gives as readily under the weight of one person as of two when the spring employed is of the common heavy construction.

It will be readily seen that springs of various other constructions may be used to accomplish the same purpose, and I do not therefore desire to be understood as limiting myself to the construction shown and described, but regard as my invention the employment of an equalizing or supplemental spring of any construction for the purposes hereinbefore described.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a road-cart or other vehicle, the seat of which is supported on the rear end of pivoted bars, the front ends of which are connected to springs which tend to draw down said ends and thus equalize the weight of the person on the seat, a second equalizing or supplemental spring adapted to aid the first after it has been subjected to a certain amount of strain, substantially as described, and for the purposes specified.

2. In a road-cart or similar vehicle, the combination of the seat C, supported on the rear ends of the side pieces, C′, said side pieces pivoted in suitable bearings on the frame-work of said vehicle, the spring D, secured to the under side of said frame-work and connected to the front end of said side pieces, and the second or supplemental spring E, adapted to aid the first in supporting the seat after the first has been subjected to a certain amount of strain, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 26th day of September, A. D. 1883.

JOHN CARROLL. [L. S.]

In presence of—
C. BRADFORD,
CHAS. L. THURBER.