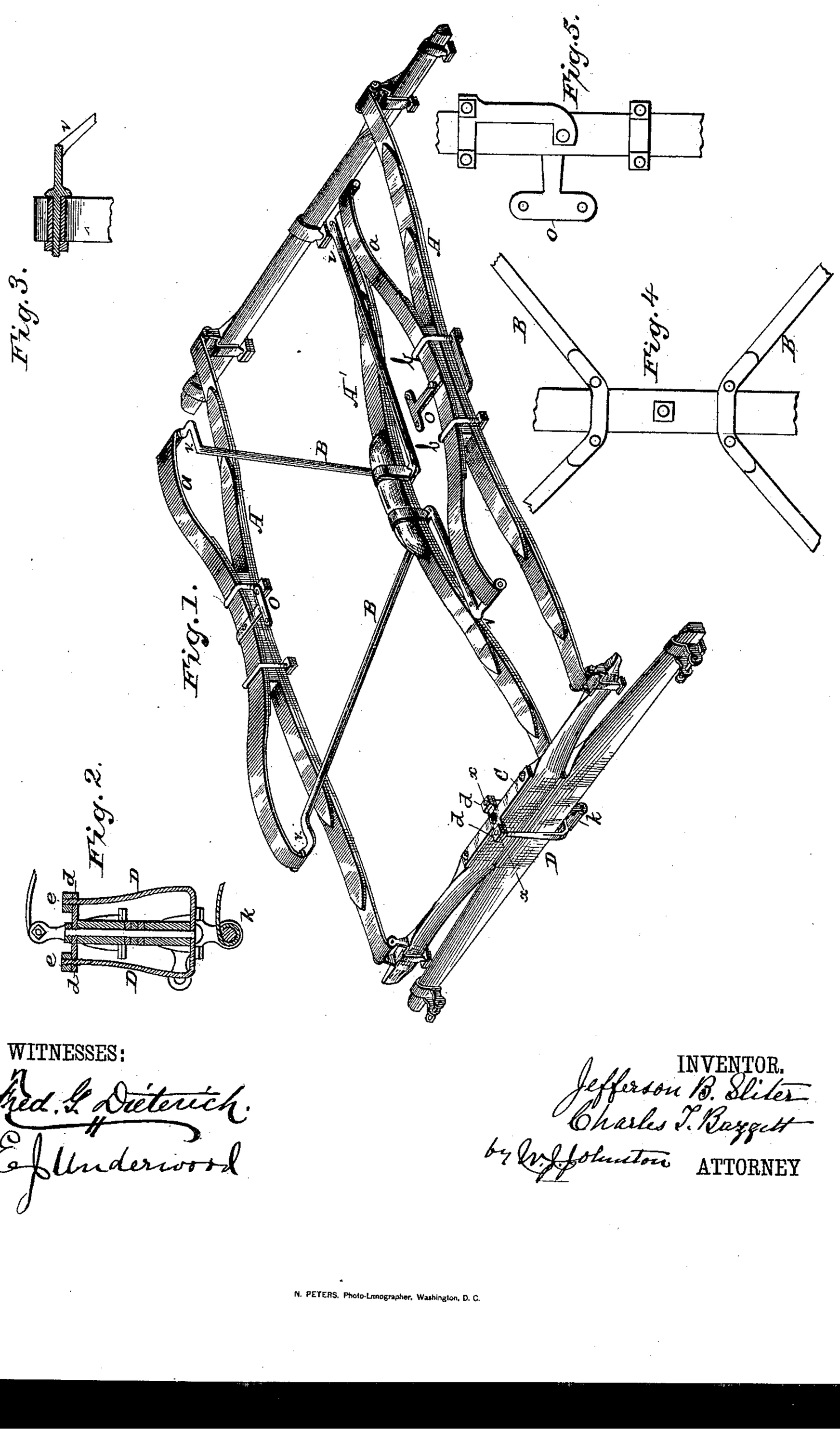
(Model.)

J. B. SLITER & C. T. BAZZETT.

CARRIAGE SPRING.

No. 353,980. Patented Dec. 7, 1886.



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UNITED STATES PATENT OFFICE.

JEFFERSON B. SLITER AND CHARLES T. BAZZETT, OF WAVERLY, N. Y.

CARRIAGE-SPRING.

SPECIFICATION forming part of Letters Patent No. 353,980, dated December 7, 1886.

Application filed June 1, 1885. Serial No. 167,216. (Model.)

To all whom it may concern:

Be it known that we, JEFFERSON B. SLITER and CHARLES T. BAZZETT, citizens of the United States, residing at Waverly, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Carriage Springs and Gear; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to vehicles, and is designed as an improvement on a device for which Letters Patent No. 291,934 were granted to us July 24, 1883; and it consists in the addition of auxiliary springs, arrangement of braces, and certain other details of construction, hereinafter shown and described.

In the drawings, Figure 1 is a perspective view of our invention. Fig. 2 is a transverse vertical section through the line *x x* of the front axle, spring-bar, and clevis surrounding same. Fig. 3 is a detail, partly in section, of the end of one of the auxiliary springs to which the diagonal braces are secured. Fig. 4 is a bottom plan view of the middle portion of the central spring, showing the manner of securing the diagonal braces thereto. Fig. 5 is a bottom plan view of the middle portion of one of the exterior or side springs.

The springs are three in number, arranged longitudinally with the running-gear, and consist of two exterior springs, A A, and a central spring, A′, each composed of two or more leaves and curved upwardly in the center.

The exterior springs are secured at their rear ends by clips upon the upper side of the rear axle, and at their front ends by similar clips upon the upper side of the spring-bar, and thus both occupy a position upon the same plane above the running-gear.

The central spring, A′, is suspended by clips beneath the center of the front and rear axles, and consequently its position is on a plane below that of the exterior springs.

Upon each of the exterior springs is mounted a shorter auxiliary spring, *a*, similar in form to the other, but reversed in position and secured at the center by clamps *b b*, a bolster of wood or other suitable material being interposed between them at their point of junction.

The central and side springs are united by double diagonal or V shaped braces B, having their point or apex secured beneath the central spring near its middle, as shown in Fig. 4, and their arms extending upwardly and outwardly to the ends of the short auxiliary springs, to which they are united, as shown in Figs. 1 and 3. By means of these diagonal braces, secured in the manner shown, the springs are all connected, so that they operate unitedly as one and form a single spring-platform, any strain or tension upon any part being distributed equally throughout over the whole.

In order to provide a seat or support for the body of the vehicle, a flat horizontal surface, *v*, of sufficient length, is formed near the end of each arm of the braces B at or near their point of junction with the ends of the auxiliary springs, and holes provided for suitable bolts for securing the body in place.

The spring-bar is pivoted to the front axle in the usual manner by a king-bolt, which passes through a plate, C, upon the upper side of the spring-bar. This plate is provided at its center with horizontal arms *d d*, projecting at right angles to the front and rear, and having perforations to receive the ends of the arms of a wide clevis, D, which extends around and beneath the front axle. On the bottom of this clevis is formed a clip for the front end of the central spring, composed of two downwardly-projecting lugs, *k*, perforated to receive the bolt which passes through the loop at the end of the spring, as shown in Fig. 2. This clevis, being firmly secured to the plate of the spring-bar by the nuts *e e*, and to the central spring, permits the front axle to be independently pivoted within it to the spring-frame, and the clevis being of sufficient width, permits the axle to turn freely to the right or left.

We do not, however, limit our invention to the location of the auxiliary springs above the exterior springs; but in case it is desired to lower the body of the vehicle, then these auxiliary springs may be secured beneath or on the under side of the exterior springs. We

may also, instead of connecting the ends of the braces B directly with the ends of the auxiliary springs, simply bolt them to the body of the vehicle, and provide independent connections from the ends of the auxiliary springs to the body, as it is obvious that the same result will be accomplished by either construction; but we prefer the construction here shown as more durable and less likely to get out of order.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A vehicle having two exterior longitudinal springs provided with shorter auxiliary springs centrally secured thereto, and a central longitudinal spring united by means of diagonal braces with the exterior springs, so that all operate unitedly as one, substantially as and for the purpose specified.

2. A vehicle provided with two exterior springs having auxiliary springs centrally secured thereto, and an interior or central spring connected with the exterior springs by two diagonal V-shaped braces connected with the central spring near its center and extending outwardly to unite with the ends of the exterior auxiliary springs, substantially as and for the purpose specified.

3. The combination, in a vehicle, of the exterior springs provided with centrally secured auxiliary springs connected with the body, and a central spring provided with V-shaped diagonal braces extending outwardly from its center, and also connected to the body of the vehicle, substantially as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JEFFERSON B. SLITER.
CHARLES T. BAZZETT.

Witnesses:
H. WILLISTON,
L. D. ATWATER.