

C. V. N. SUYDAM.
Spring-Braces for Vehicles.

No. 145,916.

Patented Dec. 23, 1873.

Fig. 1.

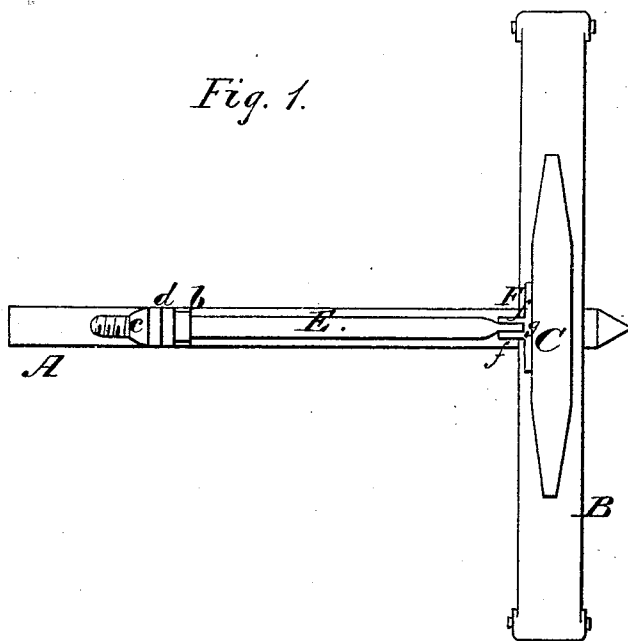
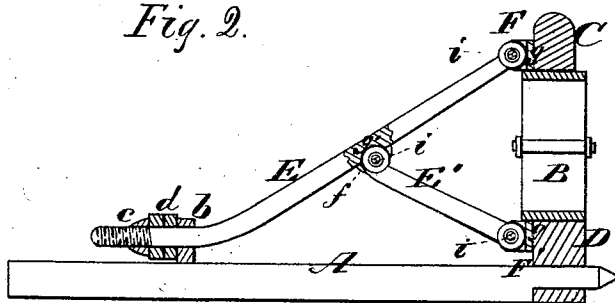


Fig. 2.



WITNESSES

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IMPROVEMENT IN SPRING-BRACES FOR VEHICLES.

Specification forming part of Letters Patent No. **145,916**, dated December 23, 1873; application filed November 22, 1873.

To all whom it may concern:

Be it known that I, CORNELIUS V. N. SUYDAM, of Millstone, in the county of Somerset and State of New Jersey, have invented a new and valuable Improvement in Carriage-Braces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my carriage-brace. Fig. 2 is a sectional view of the same.

This invention has relation to compensating braces or stays for the springs of vehicles. It consists in a novel construction of a compensating-brace of the bifurcated kind, whereby the front end of the main stay-rod is cushioned against the guide on the perch, to prevent sudden shock when the spring rises quickly, and whereby the pivotal connections are prevented from undue strain, as will be hereinafter explained.

The following is a description of my improved brace:

In the annexed drawings, A represents the perch or coupling-pole, and B an elliptic spring, which is secured to the bars C D in the usual well-known manner. E E' are the two rods constituting the compensating-brace. The longest rod E is jointed to a metal bearing, F, at its rear upper end, and its front curved end passes freely through a guide-eye, b, secured fast on top of the perch A, and receives on it an adjusting-nut, c, and a cushion, d, which latter is made of leather, india-rubber, or other equivalent material. The front end of the rod E is curved, so that it will play freely through the eye b as the spring B plays up and down. The cushion d is applied on the rod E between the nut c and the eye b, for the purpose of preventing the nut striking the eye and producing injurious and unpleasant concussion. The nut c is adjustable on its rod, for the purpose

of limiting the upward play of the spring B, and it is also removable for the purpose of renewing the cushion when it wears out or loses its elasticity. The rod E' is jointed at its rear end to a metal bearing, F', which is secured by bolts to the bar D, and at its front end it is jointed to the main rod E, between the eyes b and bearing F. This rod, with the rod E, braces the spring B, and prevents it from strain by a forward or backward lurch of the vehicle. At the same time the spring is allowed to receive free vertical play. The two bearings F F' are secured in their respective positions by means of bolts, and they are constructed with ears f f, between which the rounded rear ends of the rods E E' are received and held by pivots i i. The front end of the rod E' is received between two ears, f f, formed on the rod E, and held by means of a pivot, i. To prevent undue strain on the three pivots i, the rounded rear ends of the rods are allowed to bear against the connecting portions g g, between the ears f f, and the front rounded end of the tie-rod E is allowed to bear against a concave surface, g', in the rod E'.

This mode of jointing the rods not only relieves the pivots i from strain, but it also prevents lateral play and torsion of the joints.

I am aware that a compensating-brace composed of two rods jointed together and combined with a spring and perch is not new, and therefore I do not broadly claim such a contrivance.

What I claim as new, and desire to secure by Letters Patent, is—

In a spring-brace, the combination of the bent rod E, fixed eye b on reach A, cushion d, and adjusting-nut c, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

C. V. N. SUYDAM.

Witnesses:

PHIL. C. MASI,

GEORGE E. UPHAM.