(No Model.)

E. H. BOOTH.

VEHICLE SPRING.

No. 346,711. Patented Aug. 3, 1886.

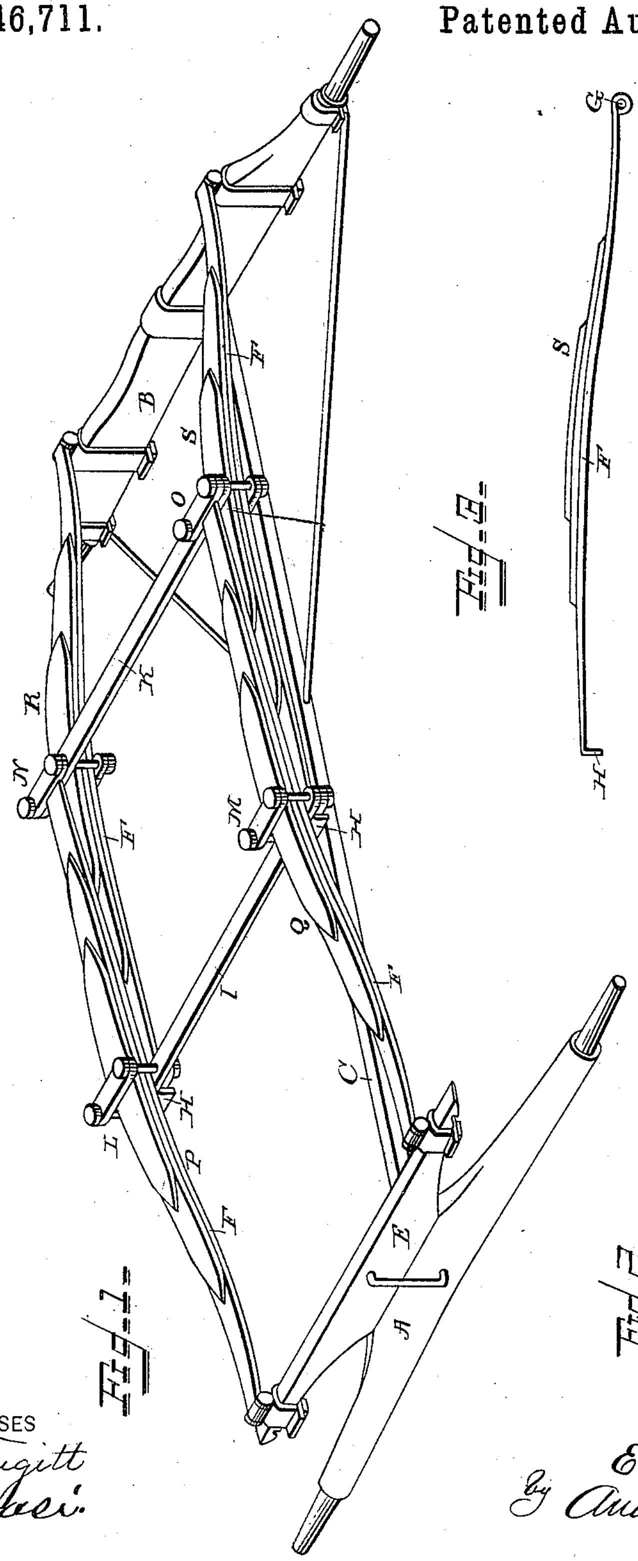

Fig. 1.

Fig. 2.

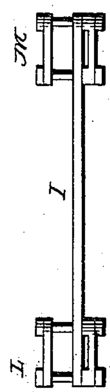

Fig. 3.

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UNITED STATES PATENT OFFICE.

EBENEZER H. BOOTH, OF KIRKWOOD, NEW YORK.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 346,711, dated August 3, 1886.

Application filed March 5, 1886. Serial No. 194,139. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER H. BOOTH, a citizen of the United States, residing at Kirkwood, in the county of Broome and State of New York, have invented certain new and useful Improvements in Vehicle-Springs; and I 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 letters or figures of reference marked thereon, which form part of this specification.

Figure 1 of the drawings is a perspective view of my improved vehicle springs. Fig. 2 is an edge view of one of the tie-bars, and Fig. 3 is an edge view of one of the sections of springs.

This invention relates to vehicle-springs; and it consists in the construction and novel combination of parts, as hereinafter set forth, and pointed out in the claim.

The object of this invention is to produce a spring that will have two natural bearings on each spring, so that the wagon body may be the more securely fastened and the load carried steadier; also to produce a spring that will load down level, as will hereinafter more fully appear.

Referring by letter to the accompanying drawings, A designates the front axle, B the rear axle, C the reach, and E the head-block, of the running-gear of a vehicle to which my improved springs are shown applied. The springs in this construction are sectional springs, and each section of said springs is composed preferably of three leaves. The number, however, is regulated by the strength desired. The lower leaf, F, of each section is provided at that end of said leaf which is to be connected to the running-gear of the vehicle with an eye, G, through which its attachment to the running-gear is effected by bolts or the like. The opposite or inner end of said lower leaf, F, is provided with a downwardly-projecting rectangular bend, H, which serves as a stop when the springs are connected, and prevents the springs from being lengthened beyond the desired ascertained points.

I and K are tie-bars, which are parallel with each other, and L M N O are clips, (four in number,) by which the spring-sections P Q and R S are connected in pairs to the tie-bars, near the ends of the latter. The clips aforesaid hold the spring-sections together, but embrace them so loosely as to permit the inner ends of the lower leaves, F F, to have sliding motion longitudinally between the cross-bars of the clips and the tie bars I and K. The vehicle-body is secured upon the tie-bars I and K in any suitable manner, as by bolts. These springs, when used as side springs, are attached either to the bolster in front and the rear axle behind, or they are attached to half or semi-elliptic springs at each end of the vehicle, and when used as side-bar springs their outer ends are secured to the side bars in the usual way.

By the construction above described, each complete spring is formed of two independent springs, (until brought together,) each section extending to and bearing on the center of the other, thereby conveying the weight from the middle of one spring-section to the middle of the other spring-section, so that if the wagon should be loaded heavier at one end than at the other the weight will be distributed or conveyed to the other spring-section, thereby causing the wagon to carry level. Another advantage is that a spring of this construction is self-adjusting, by reason of the fact that it is flexible between its attachment-bearings; and, further, this spring is fully one-third longer than any other spring when attached to the same length of running-gear. The yokes or cross bars of the clips that connect the spring-sections are shouldered to form lugs, which bear against the tie-bars, so that when the securing-nuts are turned up tightly the ends of the springs are free to play through the yoke or loop thus formed.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the spring-sections having eyes and angular bends at opposite ends of the sections, of the tie-bars and the connecting clips or yokes having the shouldered cross-bars and securing-nuts, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EBENEZER H. BOOTH.

Witnesses:

O. L. KEELER,

S. B. BALL.