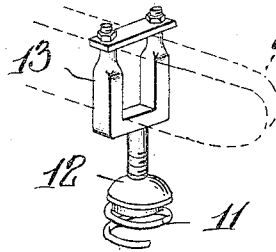
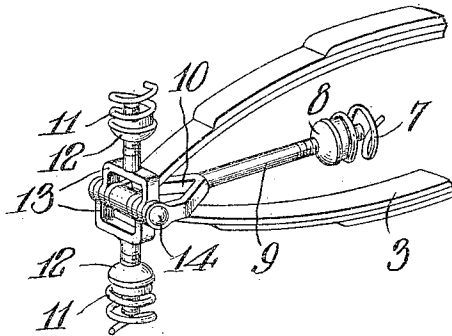
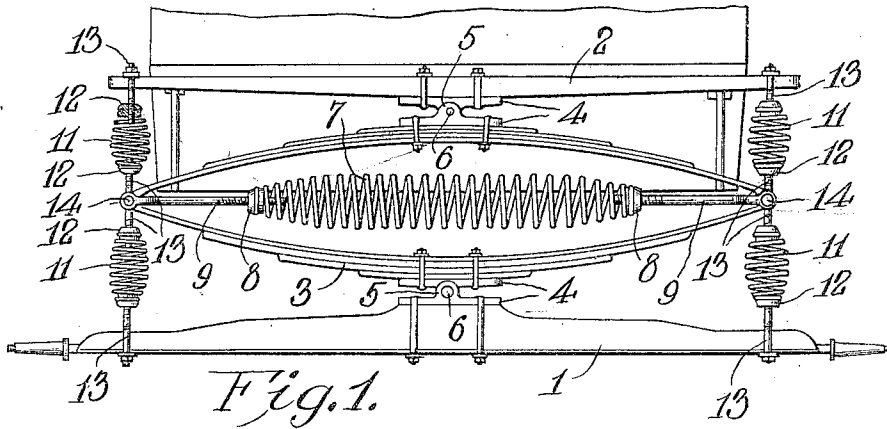


921,862.

Patented May 18, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

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VEHICLE-SPRING.

No. 921,862.

Specification of Letters Patent.

Patented May 18, 1909.

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To all whom it may concern:

Be it known that I, EDMON M. MAYHEW, a citizen of the United States of America, residing at Mooresville, in the county of Iredelle and State of North Carolina, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its object the provision of means whereby the vibration of a vehicle due to its passage over a rough road will be effectually overcome and a structure produced which will possess great strength and durability.

The invention consists in certain novel features of the device illustrated in the accompanying drawings as will be hereinafter first fully described and then particularly pointed out in the appended claims.

In the drawings annexed hereto showing the preferred embodiment of the invention, Figure 1 is an elevation of the complete structure. Fig. 2 is a detail perspective view of the connection between the vertically disposed spiral springs and the central spring, and Fig. 3 is a detail perspective view of the hanger for connecting the spiral spring to the axle or the top bar of the gear.

The axle, 1, and the top bar or bolster, 2, to which the body of the vehicle is secured, are of the usual or any preferred form and an ordinary elliptic spring, 3, is disposed between and secured to the said axle and top bar. In order to permit some oscillation of the spring relative to the axle or the top bar I employ a coupling consisting of two members each composed of a base plate, 4, having lugs or ears, 5, formed with central perforations. The ears or lugs of the two plates are arranged in different vertical planes so that the ears on one plate may fit between the ears on the other plate with the perforations of all the ears or lugs in alignment, a pivot pin, 6, being inserted laterally through the aligned perforations to fasten the members together, one member being secured by suitable bolts or clips to the top of the axle and the other member being likewise secured to the under side of the elliptic spring. A duplicate coupling is utilized to connect the top of the elliptic spring to the center of the top bar. Approximately at

the center of the space defined by the elliptic spring I arrange a horizontal coiled or spiral spring, 7, provided with collars or nuts, 8, at its ends in which are fitted the ends of links, 9, extending out to the ends of the elliptic spring and having their outer ends forked, as shown at 10. Above and below the ends of the elliptic spring are similar spiral springs, 11, which are provided with nuts or collars, 12, at their ends in which are fitted the threaded ends of yokes or hangers, 13. The topmost of these yokes or hangers pass up alongside the top bar 2 and are bolted or otherwise secured thereto while the lowermost yokes are similarly attached to the axle. The central or intermediate yokes, 13, are carried over the ends of the elliptic spring and arranged within the fork 10 of the link 9, the said central yokes and the link being held together by a single pivot pin, 14, inserted through their ends.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I have provided a very simple and compact arrangement of elliptic and coiled springs by which all vibration of the body of the vehicle will be overcome inasmuch as a spring is provided at each side as well as at the center of the connection between the axle and the bolster, the result being that the body is supported on a strong and quickly acting cushion. By rotating the collars or nuts at the ends of the coiled springs, they will be caused to move along the threaded rods and the tension of the said springs can thus be increased or diminished to the desired degree. The central spring having a pivotal connection with each pair of end springs will serve to transmit the movement of either pair to the other pair so that should one side of the running gear strike a rut and thereby tend to drop a pull will be transmitted to the pair of springs on the opposite side which will tend to place the said springs under an increased tensile strain so that they will draw upon the vehicle body and, consequently, serve to maintain the horizontal position of the same.

Having thus described my invention, what I claim and desire to secure by Letters-Patent is:—

1. The combination with an axle and a bolster, of coiled springs provided with collars at their ends, yokes having threaded en-

gagement with the said collars, a pivotal connection between adjacent yokes, and rigid connections between the end yokes and the bolster and the axle respectively.

- 5 2. The combination with an axle and a bolster, of end coiled springs arranged in pairs between the axle and the bolster and having a pivotal connection, and a coiled
10 spring disposed horizontally between the pairs of springs and having a pivotal con-

nection therewith common to the pivotal connection between the springs of the pair.

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

EDMON M. MAYHEW.

Witnesses:

M. L. BAKER,
W. S. PHILLIPS.