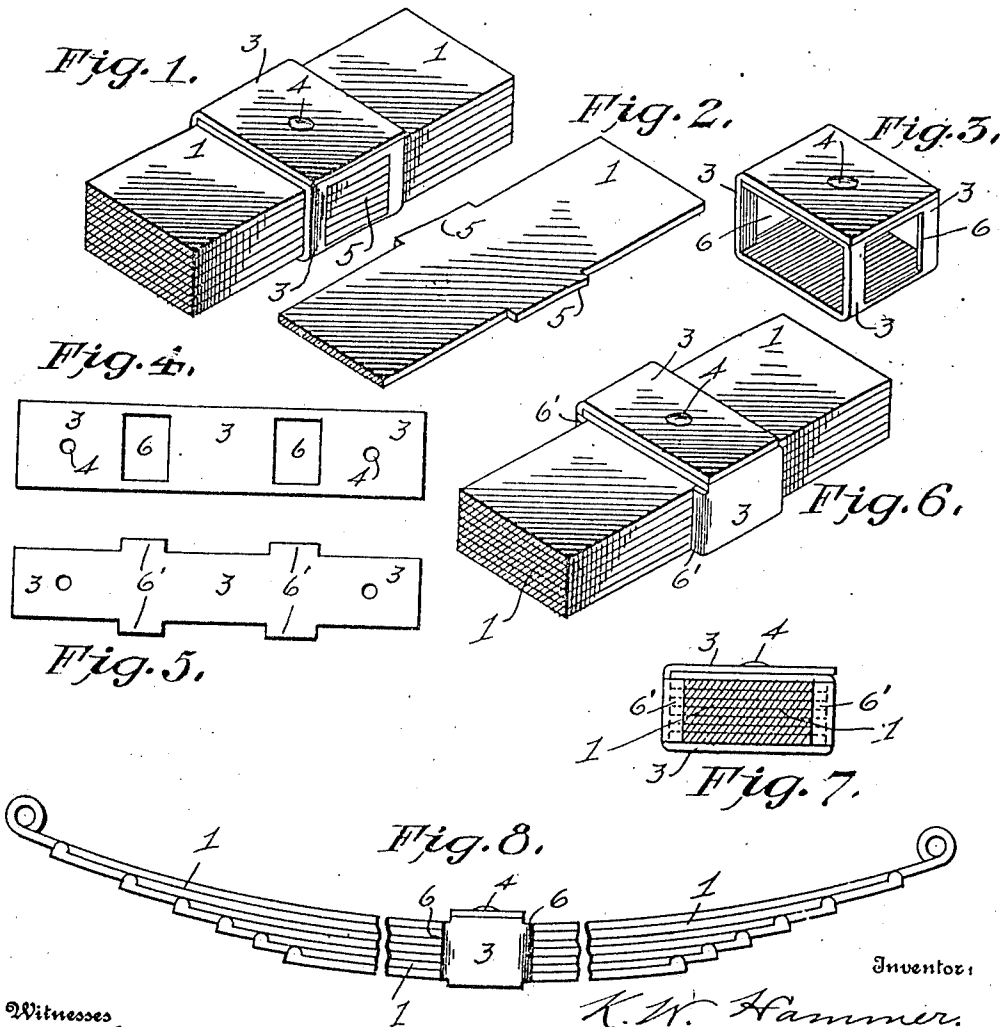


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VEHICLE SPRING.

APPLICATION FILED MAY 3, 1909.

965,579.

Patented July 26, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

KARL W. HAMMER AND CHARLES L. CRIST, OF DAYTON, OHIO.

VEHICLE-SPRING.

965,579.

Specification of Letters Patent.

Patented July 26, 1910.

Application filed May 3, 1909. Serial No. 493,553.

To all whom it may concern:

Be it known that we, KARL W. HAMMER and CHARLES L. CRIST, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Vehicle-Springs; 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 new and useful improvements in vehicle springs, and more specifically to means for uniting the assembled leaves of elliptical or semi-elliptical springs.

The improvements embodied in our invention are especially adapted for the running gear of automobiles, and the object of the invention is to provide for the attachment of the assembled leaves of such springs in a manner which will preserve the life of the spring and will not endanger the breaking of the same.

In the present improvements, the leaves of the spring are strengthened at the central point by increasing their width by providing extensions from the opposite edges of the leaves at a central point, so that when the leaves are assembled one on top of the other, there are a series of lugs centrally disposed on opposite sides of the springs as a whole. These lugs add to the strength of the spring at such point and cooperate with other means in the form of a band which encircles the central point of the assembled leaves, in preventing the individual leaves from having any independent lateral or longitudinal movement, all as will hereinafter more fully appear from the specification and the accompanying drawings forming a part thereof.

In the accompanying drawings, Figure 1, is a view of the spring showing one form of clamping band for uniting the individual spring leaves. Fig. 2, is a view of one of the leaves removed from the assembled leaves in Fig. 1. Fig. 3, is a view of the inclosing band or clamp removed from Fig. 1. Fig. 4, is a plan view of the band or clamp shown in Figs. 1 and 3, before the

same is united to the assemblage of leaves. Fig. 5, is a plan view of the band or clamp shown in Fig. 6. Fig. 6, is a view similar to Fig. 1 showing a modification in the use of the band or clamp in uniting the individual leaves to form the spring. Fig. 7, is a cross sectional view of Fig. 6 on one side of the surrounding band or clamp. Fig. 8, is a side view of a semi-elliptic or lower half of an elliptic spring, the leaves of which are united by the method or means shown in Figs. 6 and 7.

In the detailed description of the invention, similar reference characters indicate corresponding parts.

The individual leaves 1 which when assembled, constitute a semi-elliptic spring, are provided as shown in Figs. 1 and 2 of the drawings, with lateral extensions or lugs 5 centrally disposed on the opposite edges thereof, which when the leaves are assembled, are in alinement with each other and thus provide a series of lugs extending throughout the depth of the spring on each side thereof and at the central point of the assemblage. At the points where these lugs extend, the leaves are strengthened by making them wider at such points. The vertical shoulders thus formed at the ends of the extensions or lugs 5 are engaged by the inclosing band or clamp 3 which is provided with two openings 6, which receive the extensions or lugs 5 when the band or clamp is made to inclose the assembled leaves as in Fig. 1. The clamp 3 is extended around the assembled leaves and is overlapped at its ends and united by a rivet as at 4. There is thus formed between the vertical sides of the clamp and the lugs 5 on each side of the spring, a connection which prevents any independent longitudinal or lateral movement of the individual leaves constituting the spring as a whole, and said spring is securely held. A different connection may be made between the shoulders formed by the lugs 5 and the clamp, for example, in Fig. 5, the clamp is shown to have two lateral extensions 6' projecting from the opposite edges thereof, which, when the clamp incloses the assembled spring, are bent around the shoulders formed by the extensions or lugs 5. This idea of means is more clearly shown in Figs. 6 and 7, where it will be seen the lips or extensions 6' reach around the shoulders of the lugs 5 and thus lock the

individual leaves or spring members in the same manner as hereinbefore described.

We claim:

5 A semi-elliptical spring, comprising an assemblage of leaves of varying lengths, each of which is provided with a single extension on opposite edges of the central portion thereof, which increase the width of the spring at its center and thereby strengthen
10 the same, and provide two vertical shoulders on each side of the spring, and a clamping band surrounding the said spring and in-

terlocking with said shoulders to rigidly bind the leaves together and prevent any lateral or longitudinal movement of the individual members of the spring. 15

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

KARL W. HAMMER.
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