

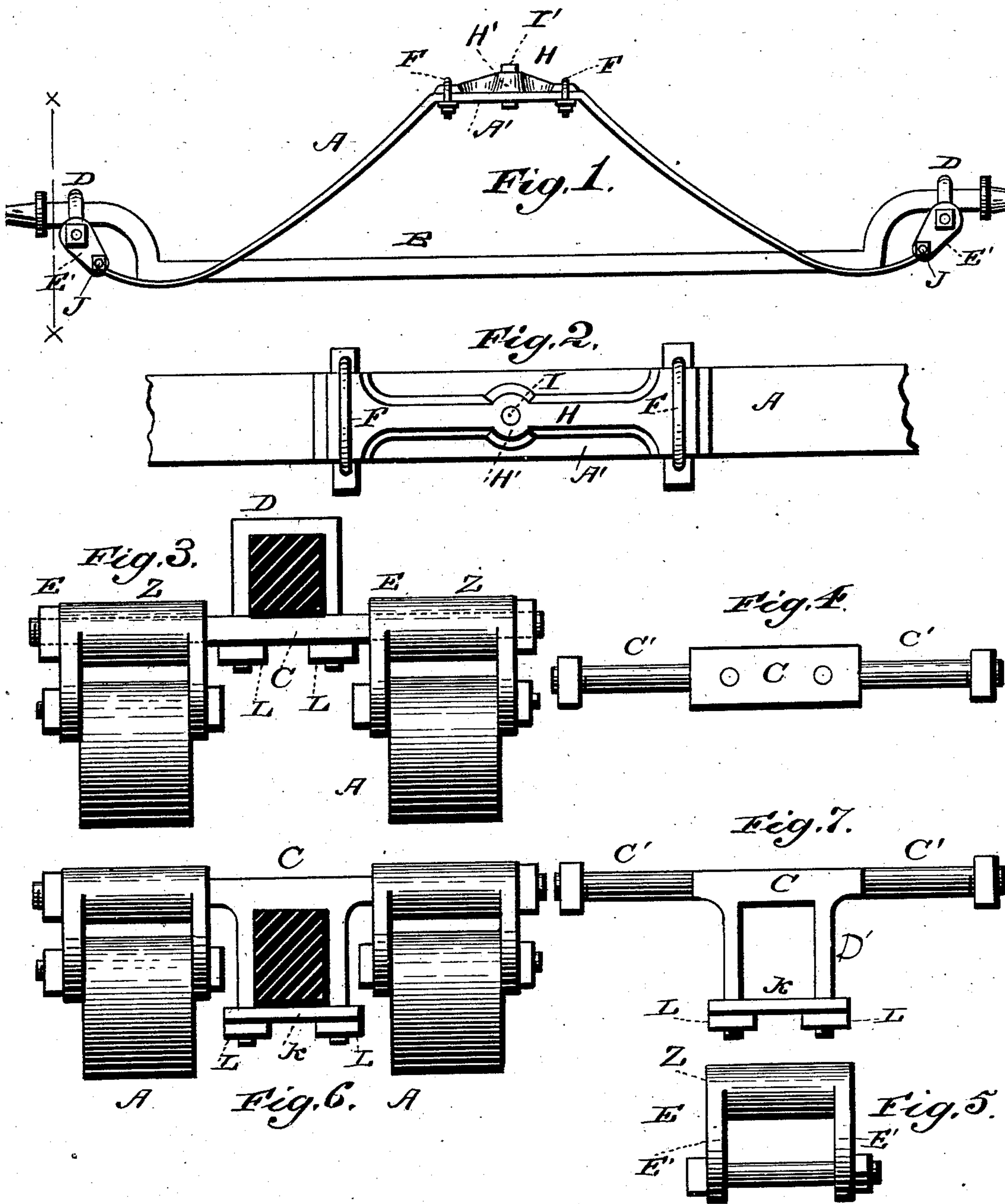
(No Model.)

C. W. SALADEE.

VEHICLE SPRING.

No. 305,241.

Patented Sept. 16, 1884.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

CYRUS WELLINGTON SALADEE, OF TORRINGTON, CONNECTICUT.

## VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 305,241, dated September 16, 1884.

Application filed April 28, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CYRUS W. SALADEE, a citizen of the United States, residing at Torrington, in the county of Litchfield and State of Connecticut, 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 a part of this specification.

This invention has relation to vehicle-springs; and it consists in the construction and novel arrangement of devices, as herein-after set forth, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a representation of an axle, a cross-spring suspended therefrom by links connected to a trunnion bearing on said axle. The figure also shows the truss-brace clipped to the top or central portion of the spring. Fig. 2 is a top view showing the truss-brace clipped to the central portion of the spring. Fig. 3 is an enlarged cross-section taken at the side of the spring-supports on line X X. Fig. 4 is a plan view of the trunnion-plate detached. Fig. 5 is a view of the link detached. Fig. 6 is a cross-section showing the trunnion-plate secured to the top of the axle and having the clip-prongs made integral with the plate. Fig. 7 is a view of the trunnion-plate made with integral clip-prongs, as shown in Fig. 6, detached.

A represents an arched transverse spring, which, in the form illustrated, is made with a straight central portion, A'.

B is the axle, which in this instance is made in the cranked form.

C indicates the trunnion-plate, which is extended at either or at each end to form a trunnion-bearing, C'.

D is the saddle-clip, which embraces the axle, its prong ends passing through the trunnion-plate and firmly holding the latter up against the under side of the axle by screw-nuts L L.

E represents the links, which are connected to the trunnion-bearings by pivot-barrels Z.

F indicates the saddle-clips, which secure

the opposite ends of the truss-brace H to the center portion of the spring A.

H' denotes the enlarged middle portion of the truss-brace, and I the central perforation therein, through which the center bolt, I', passes, to firmly hold the center of the truss-brace to the center of the spring.

J indicates the bolt which passes through the opposite ears, E', of the link E and through the spring-head V, and serves to connect these parts. A clip-bar, K, engages the ends of the clip-prongs of the trunnion-plate and aids in the fastening of said plate to the axle.

In most cases I prefer to carry the trunnion-plate C below the axle. When, however, it is desirable to carry the trunnion-plate on the top of the axle, the plate is made with its clip-prongs integral, as shown in Figs. 6 and 7, thereby avoiding the necessity of making perforations through the plate, and causing the plate to present a neat and finished appearance on the upper surface of the axle. Otherwise the screw-nuts would be exposed to view, as would be the case if the construction employed, as shown in Fig. 3, were reversed, to carry the trunnion-plate above the axle.

This invention is not confined to the employment of duplex springs—that is to say, two springs—one in front of the axle and the other in rear thereof. A single spring may be employed, the plates C each having a single trunnion-bearing for engagement therewith. In this manner it is designed to provide for the use of one or of two springs in connection with the axle, as the carrying capacity of the vehicle may require. The truss-bar H is made in elongated form, broader from its ends toward its center, to give it strength, substantially as shown in the drawings, and is secured to the top of the middle portion of the spring, as hereinbefore described. In all cases where the middle portion of the spring is not supported by having a spring-bar clipped or bolted thereto in the usual way, and the weight imposed acts upon the clips F F at the ends of this middle portion, there is a tendency, on account of the great leverage exerted by the branches of the spring, or from J to F, to cause said middle portion to be strained downwardly. To prevent this the truss-brace is applied.

In connecting the spring to the axle the



trunnion-plates may be used with or without links. In cases where a self-compensating spring is preferred the links may be omitted, and the heads of the spring connected directly to the trunnion-bearings, a neat, simple, and strong connection being in this manner secured.

I am well aware that it is not new to suspend cross-springs from bolsters and axles by links variously constructed, and I make no claim, broadly, to such devices.

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

1. The combination, with a transverse vehicle-spring rising at the center, of a truss-brace secured to the center portion of said spring, and adapted to support the spring against vertical strain, substantially as specified.

2. The combination, with a vehicle-spring having a flat central portion and ends inclining downward, of a brace secured to the flat central portion, substantially as described.

3. The trunnion-plate C, having one or more

laterally-projecting trunnions, and clip-prongs D' D', integral with said plate, substantially as specified.

4. The combination, with the axle, of the plates secured to the axle by clip-fastenings embracing the axle, and provided with trunnions and links E, hung to said trunnions, and supporting the ends of the spring upon bolts passing through the sides of the links, substantially as specified.

5. The combination, with the axle and transverse spring or springs, of a plate extended at the ends to form trunnions with which to connect the ends of the springs, and provided with downwardly-extending clip-prongs integral with the plate, substantially as described.

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

CYRUS WELLINGTON SALADEE.

Witnesses:

CHAS. L. MCNEIL,  
MICHAEL BATTERS.