

H. M. CURTIS.
Carriage-Spring.

No. 167,992.

Patented Sept. 21, 1875.

Fig. 1.

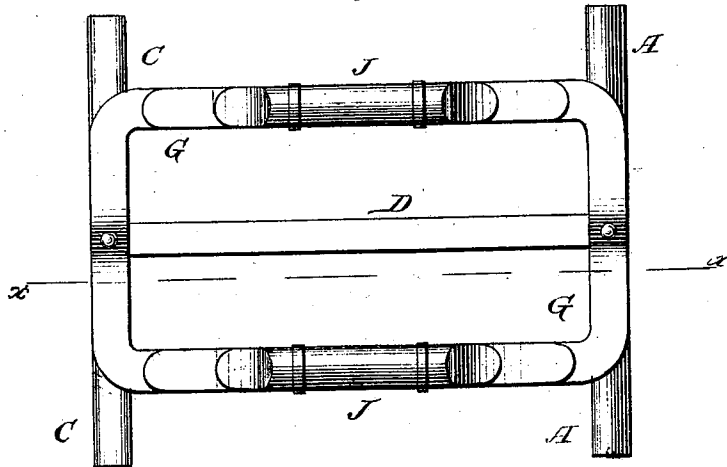
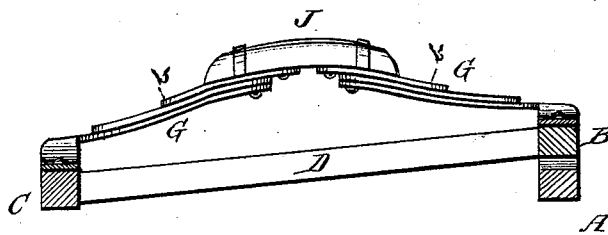


Fig. 2.



WITNESSES:

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HENRY M. CURTIS, OF YPSILANTI, MICHIGAN.

IMPROVEMENT IN CARRIAGE-SPRINGS.

Specification forming part of Letters Patent No. **167,992**, dated September 21, 1875; application filed August 28, 1875.

To all whom it may concern:

Be it known that I, H. M. CURTIS, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Carriage-Springs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to that class of vehicles known as "side-spar vehicles;" and it consists in the construction and arrangement of the springs, forming combined end and side bar springs, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view, and Fig. 2 is a section, of my invention.

A represents the front axle, with head-block B. C is the rear axle, and D is the reach connecting the rear axle with the head-block. To

the top of the head-block B is secured the center of a U-shaped spring, G, which is bent downward at this point, and provided on its under side with one or more leaves, as shown. On the top of the rear axle C is secured a similar spring, the ends of the two springs pointing toward each other, and provided with overlapping leaves *b b*, secured, with the ends of the springs G G, to the side bars J J by clips or other suitable means, thus uniting them together.

These springs, therefore, form both end springs and side-bar springs.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The U-shaped springs G G, constructed as described, in combination with the head-block B, axle C, and side bars J J, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HENRY M. CURTIS.

Witnesses:

FRANK JOSLIN,
A. E. SUCKING.