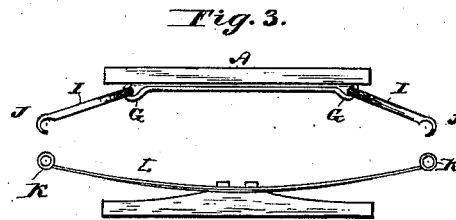
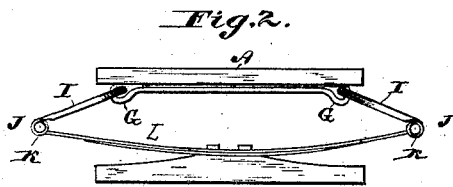
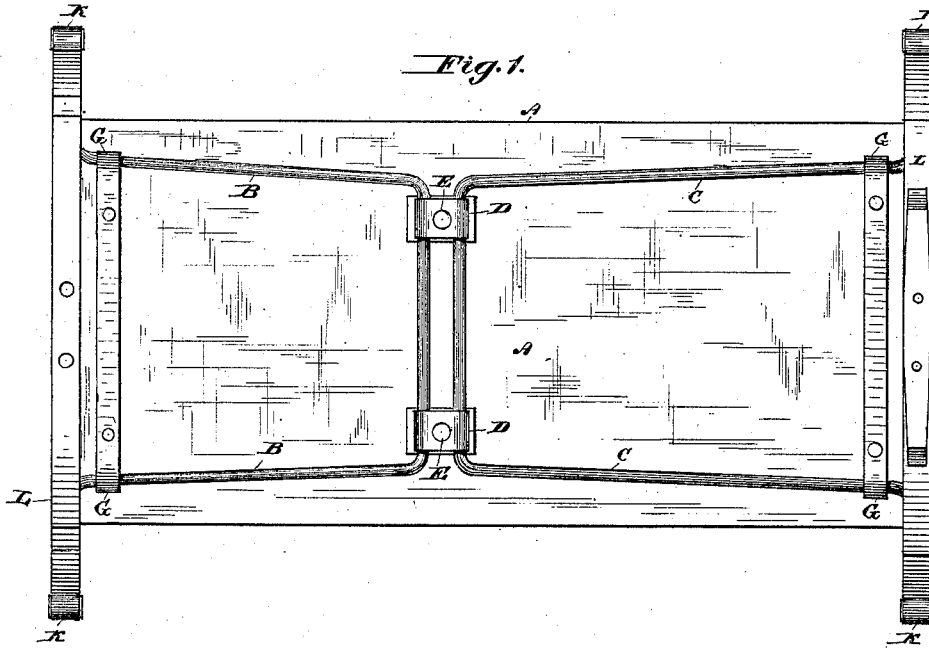


B. S. PORTER.
Vehicle-Spring.

No. 212,742.

Patented Feb. 25, 1879.



Witnesses.
Alvin M. Fug
H. S. Brown

Inventor
Benjamin S. Porter.

Per *H. A. Alford*
Atty.

UNITED STATES PATENT OFFICE.

BENJAMIN S. PORTER, OF OTTAWA, ILLINOIS, ASSIGNOR OF ONE-HALF HIS
RIGHT TO ALLEN JORDAN, JR., OF SAME PLACE.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **212,742**, dated February 25, 1879; application filed
July 31, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN S. PORTER, of Ottawa, in the county of La Salle and State of Illinois, 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.

This invention relates to certain improvements in vehicle-springs; and the invention consists in the special construction and arrangement of parts, which 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 arrangement, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a bottom view of a wagon-body, showing my spring secured thereto. Fig. 2 is an end view. Fig. 3 is a view showing the end spring detached.

In the drawings, A represents the bottom board of a wagon-body. The torsional springs B and C are preferably made in one piece, each spring being separate and distinct, as shown in Fig. 1 of drawings. These springs

B and C are secured to the bottom of the vehicle, and are held at or near the longitudinal center of the body by irons D, secured by bolts E or their equivalents.

The forward ends of the springs B and C are supported in sockets or bearings G, bolted to the bottom of the vehicle or secured to the sills of the body, as desired. Both ends of each spring B and C are bent laterally, forming arms I, the ends of which are curved under, forming sockets J, to receive the ends K of the bolster or end springs L.

Torsional springs of various constructions have heretofore been used with side-bar and other springs, and I do not therefore desire to broadly claim such as my invention; but

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

The combination of the springs B, C, and L with the irons D, bolts E, and bearings G, all constructed and arranged substantially as shown and described.

BENJAMIN S. PORTER.

Witnesses:

WILL. F. NEELY,
P. TALBOT.