(No Model.)

J. ENDERS.

CARRIAGE SPRING.

No. 265,397. Patented Oct. 3, 1882.

Fig. 1.

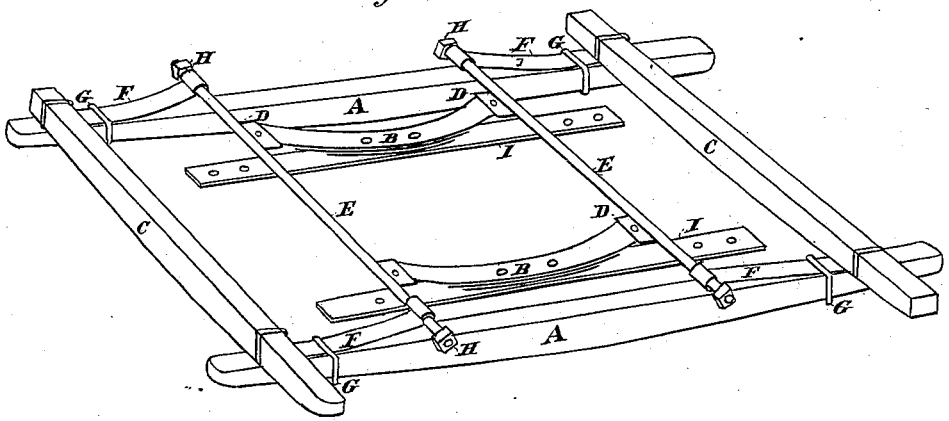
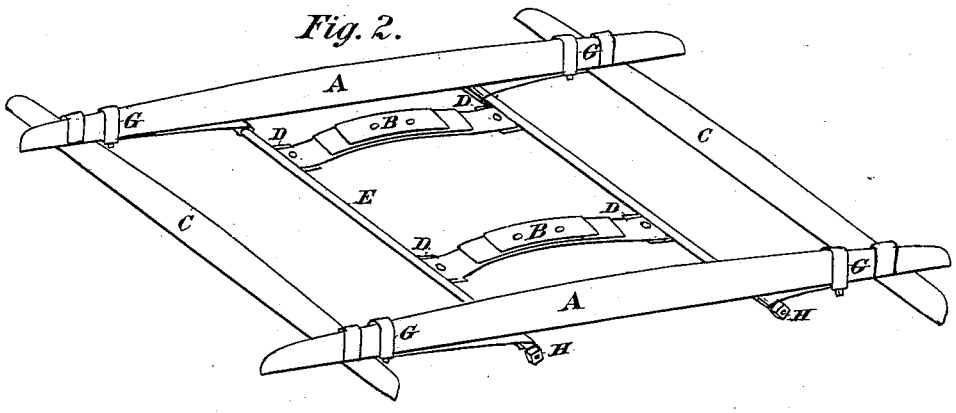


Fig. 2.



WITNESSES.

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JOSEPH ENDERS, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF TO STEPHEN SEVERSON, OF SAME PLACE.

CARRIAGE-SPRING.

SPECIFICATION forming part of Letters Patent No. 265,397, dated October 3, 1882.

Application filed July 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ENDERS, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Carriage or Buggy Springs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming part of this specification.

This my invention relates to a certain new and useful improvement in carriage or buggy springs, consisting, first, in a frame formed by the parallel side bars and head-blocks, clipped together at the corners, with flat springs clipped at one end to the under side of the side bars close up to the head-blocks, while the other ends are hinged to round bars of iron extending across the entire frame, with nuts on the ends to hold them in place. These bars have flanges or lugs formed on the side, upon which the central or half-elliptic springs rest, and to which they are secured firmly in such a position as to receive the bar or block upon which the body rests, and by which it is secured to the springs, and by means of the connection of the elliptic springs with the short springs below the whole is rendered more elastic, and as the upper spring becomes elongated or more expanded by the weight the short springs under the side bars become contracted or shortened at the same time, thereby making up the difference between the contraction of the one and the expansion of the other, and thereby relieving all the parts from unnecessary strain from expansion and contraction when in use.

The object of this my invention is to provide a series of springs especially adapted to carriages or buggies, so arranged as to be more convenient, durable, and more elastic and easy for the occupants, and not liable to wreck or break by the uneven or irregular expansion or contraction of the several springs. I attain the above object by the mechanism illustrated in the drawings, in which—

Figure 1 is a perspective view of the under side of the frame, showing the arrangement of the springs thereon. Fig. 2 is a perspective view of the top of the frame, showing the connection of the springs with the cross-bars.

Similar letters refer to corresponding parts of the drawings.

This my invention will be more fully illustrated in detail in the drawings, in which—

A represents the side bars of the frame, and C is the head-blocks or cross-bars, all of which are clipped together at the corners, and made in form as shown in the drawings.

F F are the short flat springs, one end of which is secured to the under side of the side bars by the clips G G, while the other is hinged to the cross-bars E, which are made of round iron, extending across the entire frame, with nuts on the ends to hold them in place. These last-named short springs, F, may be replaced by a clevis hinged to the under side of the side bars, instead of the springs, but connected in the same manner.

D D are lugs on the side of the bars E, on which the springs B B rest, and to which they are secured. These springs B are half-elliptic in form, and provided with bars H on the top for the body to rest upon, and to which it is secured, and as the weight expands the springs B the same weight curves and shortens the springs F F, thereby relieving all parts from unnecessary strain from expansion or contraction of the springs. Therefore

What I claim as new, and desire to secure by Letters Patent, in carriage or buggy springs, is—

The combination of the short springs F F and elliptic springs B B, connected by means of the cross-bars E E, to which the elliptic springs B B are rigidly secured by the lugs D D at the sides, thereby causing a regular elastic vertical motion to be given the body without straining the side bars, A, substantially as herein described, and for the purpose set forth.

JOSEPH ENDERS.

Witnesses:
C. HEWITT,
FRANK PARDON.