

S. S. CLAAR.
Vehicle-Spring.

No. 213,172

Patented Mar. 11, 1879.

Fig. 1.

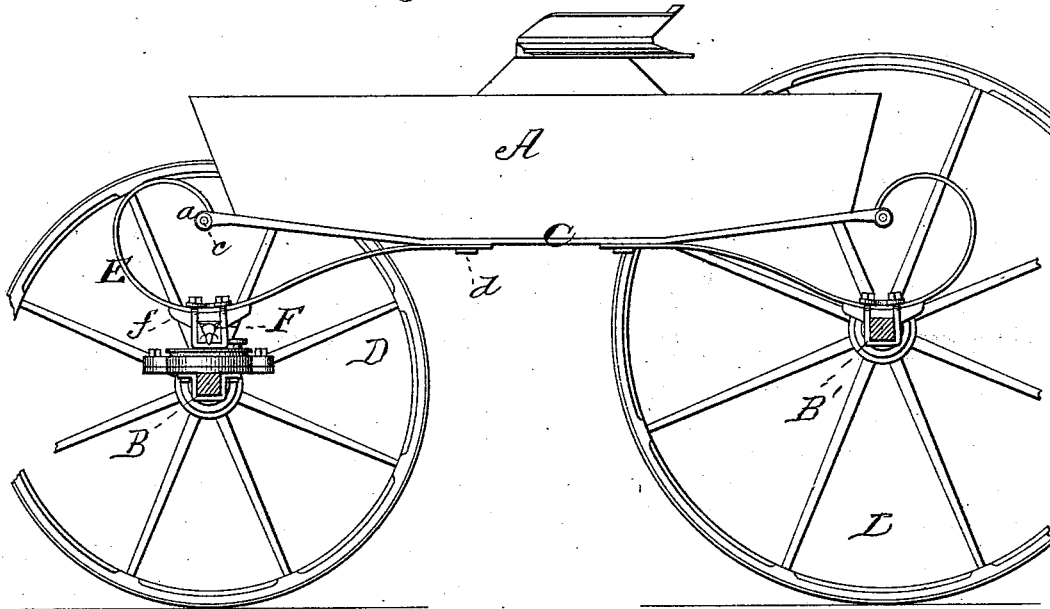
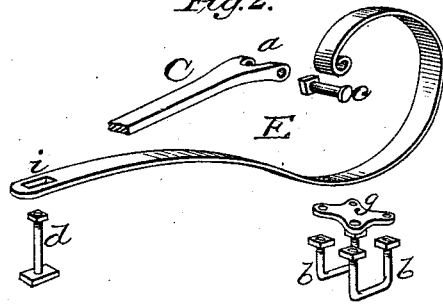


Fig. 2.



WITNESSES

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SAMUEL S. CLAAR, OF BEDFORD, PENNSYLVANIA.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **213,172**, dated March 11, 1879; application filed November 2, 1878.

To all whom it may concern:

Be it known that I, SAMUEL S. CLAAR, of Bedford, in the county of Bedford and State of Pennsylvania, have invented a new and valuable Improvement in Vehicle-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 annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of a vehicle with my improved spring applied. Fig. 2 is a representation of the parts of the spring in detail.

This invention has relation to improvements in vehicles.

The object of the invention is to provide an improved spring-support for the vehicle-body; and it consists in the construction and novel arrangement of the metallic edge-plates extending the entire length of the body on each side, the front and rear C-springs connected with the ends of said edge-plates, and slotted at their inner ends for connection with the middle portions of said edge-plates, on which they slide, and the concave shoes and clamps by which the springs are secured, all as hereinafter shown and described.

In the annexed drawings, the letter A designates the body of the vehicle; B B', the front and rear axles, and D the transporting-wheels. C indicates metallic strips, secured in any suitable manner to the bottom of the vehicle along each edge, and provided at each end with a bifurcation, *a*, the branches of which are connected together by a pin, *c*, that serves as a bearing or pivot to the springs E. These are made of steel, of proper length, breadth, and thickness, and may be composed of one or more layers, according to the load they are designed to bear. They are secured to the forks *a* in the usual manner, then bent in a regular C-shaped curve, and their free ends secured to the strips C, under which the springs extend toward the middle portions thereof, by means of a headed bolt, *d*, passing through an oblong slot, *i*, formed in the spring, as shown in Fig. 2.

The front springs, E, are secured to the head-block F by means of clips *b*, the said springs bearing on a concave shoe, *f*, arranged on the said block at right angles thereto.

The clamp-plate *g*, through which the ends of the V-bolts pass, is usually an X-shaped piece of metal, having in its arm ends an eye for the reception of the threaded ends of said bolts, and when the clip-nuts are applied effectually holds the said springs in place.

The rear springs do not differ from the front ones, and are secured to the rear axle by means above described.

The advantages of my improved springs are mainly these: When bearing a weight they have a slight endwise play that brings their bends closer to the ends of the vehicle-body, thus materially adding to their strength; the weight is evenly distributed at eight points; and, finally, when the wheels come in contact with an object or rut, the weight in the vehicle is thrown up instead of backward and forward, thus preventing the springs from being racked and their fastenings loosened. This is due to the fact that upon running over a rut or elevation the rear springs counteract the forward movement of the front springs, and the reverse.

These springs are side springs, and each set acts directly under its edge-plate C, and serves, in connection with said edge-strip, to sustain the body. The springs cannot slip in the concave bearings, and the necessary play of the springs on the edge-strips is given by the slots.

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

The edge-plates C, extending the entire length of the wagon-body to support the same, and having coupling ends *a*, the front and rear side C-springs E, pivoted to the coupling ends *a*, extending under the edge-plates, and having sliding ends provided with slots *i*, and bolts *d*, extending through the middle portions of the edge-plates upon which said ends have a bearing, and the concave shoe *f* and clamp *g* *b*, whereby the middle portion of the spring is securely held, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL SCOTT CLAAR.

Witnesses:

J. H. ALSIP,
W. F. MOORE.