A. GUMMER.
Vehicle-Spring.

No. 217,457. Patented July 15, 1879.

Fig. 1.

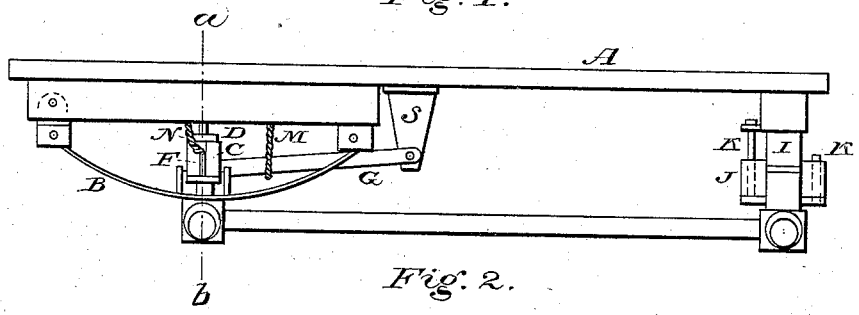


Fig. 2.

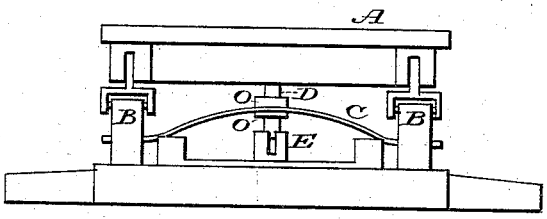


Fig. 3.

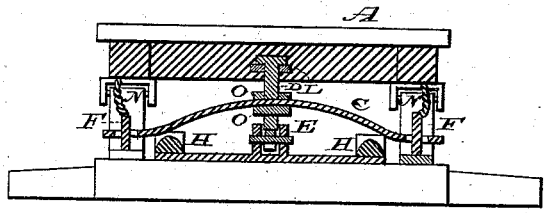
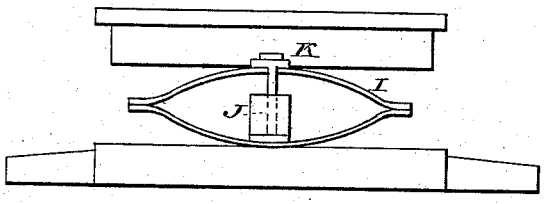


Fig. 4.



Witnesses:

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ALBERT GUMMER, OF OMRO, WISCONSIN.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **217,457**, dated July 15, 1879; application filed August 10, 1878.

To all whom it may concern:

Be it known that I, ALBERT GUMMER, of Omro, Winnebago county, Wisconsin, have invented certain Improvements in Vehicle-Springs, of which the following is a specification.

The nature of my invention relates to the use and peculiar construction of a supplementary spring to receive the burden of a load too great to be borne by the primary springs. Of course the springs herein called "supplementary springs" may be used alone, or in pairs, on vehicles; but their use in combination with primary springs is, as above stated, to enable a spring-wagon to sustain a greater load than the primary springs alone are capable of sustaining, so that, for ordinary use, while the primary springs may be light and elastic under a load that will not touch the supplementary spring, a considerable load may be added by the use of the supplementary spring. I also attach a cord or its equivalent from the jointed stay-bar to the vehicle-body to prevent the rebound. I may also attach similar cords from the bolster-pins of the supplementary spring to the vehicle-body for the same purpose.

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig 3 is a section on line *a b*. Fig. 4 is an elevation of the spring for the opposite axle.

A is the vehicle-body. B B are the side springs under the rear end of the same. C is the supplementary spring, transverse in the drawings, though it may be used in pairs on vehicles without any other springs, and be placed either transversely or longitudinally. It is provided with a central pin, D, which enters loosely in a hollow post, E, the top of which limits the descent of the spring. The pin has elastic washers O O on both sides of the spring, and has a head in the cross-bar to stay the rebound of the vehicle-body. Under this head there is also an elastic washer, L. The ends of the spring are slipped over shouldered bolster-pins F and are slotted to allow lateral play. To the bolster-pins I attach cords N, or their equivalent, fastened to the vehicle-body to stop the rebound.

On the axle, under and near the outer ends of the spring, I place elastic saddles H H inside of the bolster-pins F, so that the spring does not touch them until it is somewhat loaded, and then their elasticity eases the shock on the spring, while they shorten its bearing and stiffen it. It is understood that when this spring is used in combination with primary springs B B it is so constructed as not to come into use until a considerable load is added to the vehicle, so that the vehicle has the double advantage of pliability under ordinary light use and strength, as well as pliability under a load, by the use of the supplementary spring.

G is the jointed stay-bar, pivoted to the hollow post E on the axle, and also to the vehicle-body, through the medium of the bracket S. I also fasten a cord, M, from this stay-bar to the vehicle-body.

I is the forward spring, having an elastic stop, J, set transversely to the spring, and attached by pins K K, one of which is shouldered in a stop attached to the cross-bar to stay the rebound.

I claim—

1. A vehicle-spring, C, having slotted ends and shouldered bolster-pins F, with stay-cords N, center pin D, with head and elastic washers O O and L, in combination with elastic saddles H H and stop E, substantially as shown and described.

2. A transverse vehicle-spring, C, having slotted ends and shouldered bolster-pins F, center pin D, with head and elastic washers, elastic saddles H H, and stop E, in combination with side springs, B B, substantially as shown and described, for the purpose specified.

3. The jointed stay-bar G and stay-cord M, substantially as shown and described, for the purpose specified.

ALBERT GUMMER.

Witnesses:
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