S. N. BETTS.

VEHICLE-SPRING.

No. 182,267. Patented Sept. 19, 1876.

Fig. 1.

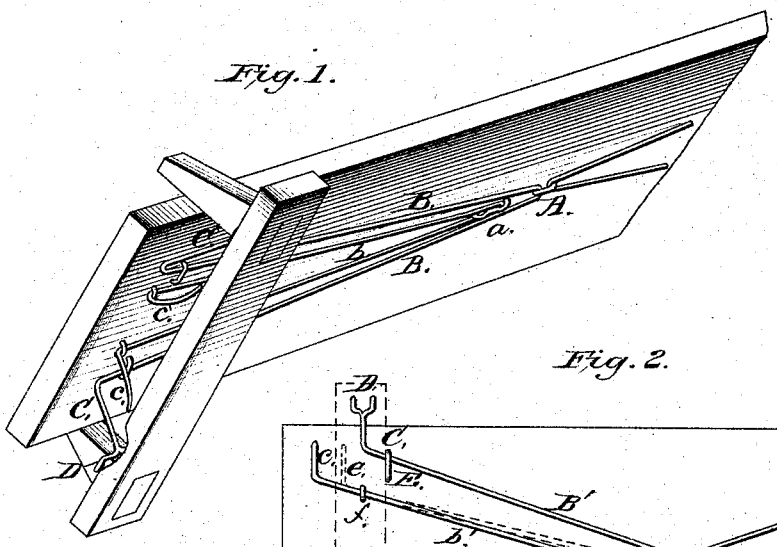


Fig. 2.

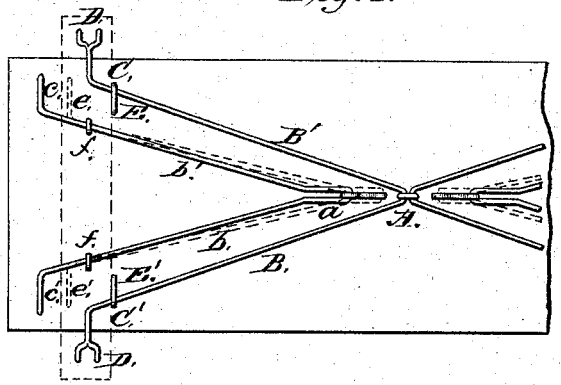
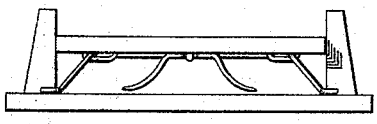


Fig. 3.



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UNITED STATES PATENT OFFICE.

STEPHEN N. BETTS, OF ADAMS, MICHIGAN.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **182,267**, dated September 19, 1876; application filed June 5, 1876.

To all whom it may concern:

Be it known that I, STEPHEN N. BETTS, of the town of Adams, county of Hillsdale and State of Michigan, have invented a new and useful Improvement in Torsion-Springs for Lumber Wagons and Carriages, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which like letters of reference indicate like parts in each of the figures.

My invention relates to a re-enforcing torsion-spring composed of two springs (one of which may or may not be used) at each end of the wagon or carriage, each constructed of a single steel rod or tube or other material possessing torsional elasticity, and fastened to the wagon-box on the under side.

In the accompanying drawing, Figure 1 is a view of the bottom of the wagon-box, with the spring attached, and resting on the wagon-bolster. The head of the spring, A, is fastened to the box by a staple. The arms of the spring, B B′, are about two feet long. C C are the points of the spring, and turn out nearly at right angles, and down at an angle of nearly forty-five degrees. The extreme points are made to rest on the bolster and to embrace the stake at its base, as shown at D. The wide staple E E′, Fig. 2, holds the spring in place, and also allows the necessary play. My re-enforcing spring, as shown at *a b c*, Fig. 2, is made with the arms running parallel a distance of about three inches, as seen at *a*, to prevent any side movement when the spring is shoved back and in use, as shown by the dotted lines. Then they diverge at an angle of about thirty degrees. The points *c c′* turn out at nearly a right angle, and down at an angle of about forty-five degrees, and are slightly curved, with the concave side up. It is fastened to the bottom of the wagon-box by a wide staple, as shown at *a*, (which admits of its being moved back and forth at pleasure,) and two small staples, as shown at *f f′*.

When not in use, the points *c c′* project beyond the bolster, and have no bearing, as seen in Fig. 2; but when in use the spring is shoved back, and the points *c c′* rest on the bolster, as represented by the dotted lines *e e′*. The spring is so constructed that I can re-enforce either end or both ends at pleasure.

My spring is cheaply made, very durable, and easily adjusted to the weight of the load it is required to carry.

I claim as my invention—

1. The main spring A B C D, with the arms B diverging, the points C turned outward and downward, and brackets D on the extreme points, to embrace the stake at its base, to hold the spring and also the wagon-box in place.

2. The re-enforcing spring *a b c*, with the arms *b* running parallel for a short distance, as seen at *a*, then diverging, with the points *c* turned outward and downward, and so fastened to the wagon-box by the wide staple at *a* that it can be thrown in and out of use, as the case may require, constructed to operate substantially as set forth.

STEPHEN N. BETTS.

Witnesses:

LEVI BACON,

D. P. COWL.