(No Model.)

D. BUDD.

TORSION SPRING FOR VEHICLES.

No. 269,633. Patented Dec. 26, 1882.

Fig. 2.

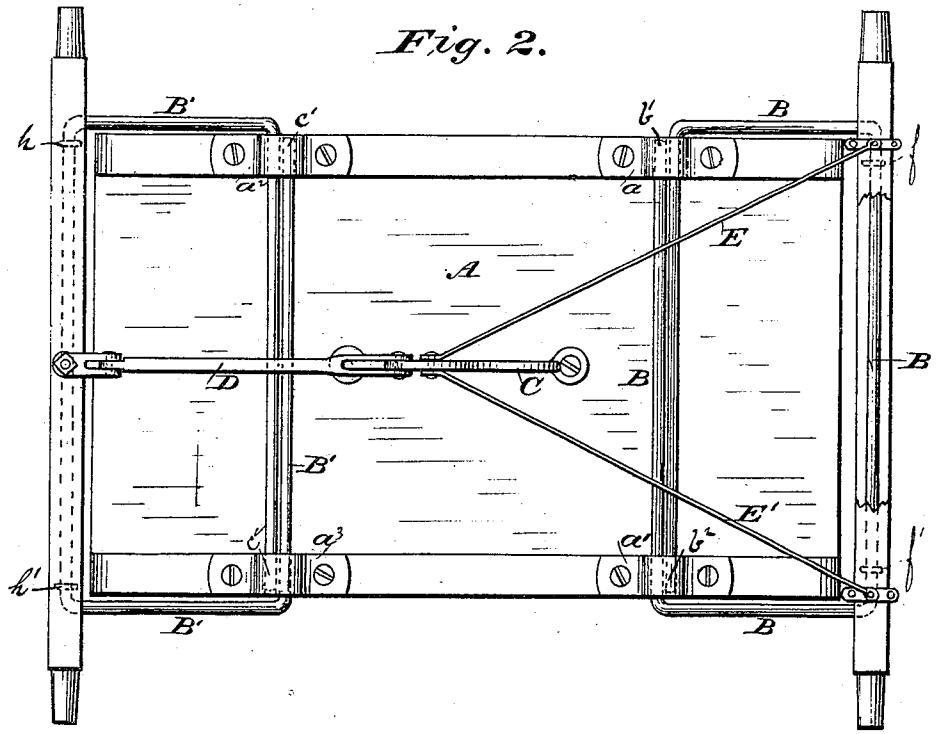
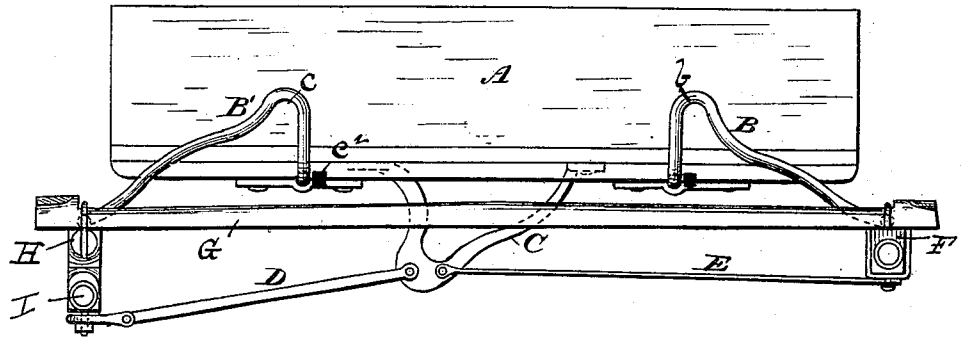


Fig. 1.



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TORSION-SPRING FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 269,633, dated December 26, 1882.

Application filed April 5, 1882. (No model.)

To all whom it may concern.

Be it known that I, DANIEL BUDD, a citizen of the United States, residing at Penn Yan, Yates county, New York, have invented certain new and useful Improvements in Torsion-Springs for Vehicles, of which the following is a specification, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has relation to torsion-springs for vehicles; and its object is to so construct the spring that it will be cheap and durable, as well as simple and effective in operation, combined with strength and elasticity.

To that end the novelty consists in the construction of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings similar letters of reference indicate like parts of the invention.

Figure 1 is a bottom plan view of the body of a wagon with its running-gear or frame, to which is applied my improved torsion-spring; and Fig. 2 is a side elevation of the same.

A is the body of the wagon, and F the rear axle, rigid with the frame G H.

To the cross-bar H is pivoted the front or swivel axle, I.

Secured to the rear axle, F, by fastenings f' f' is a spring, B, the sides b of which are bent up parallel with the sides of the body A and extend under the body to the opposite sides, so that one square end, b', is secured in the bracket a, while the other square end, b^2, is fastened in the bracket a'. It will thus be seen that the opposite ends of the spring pass freely through the brackets in the first place, but are confined by their ends at opposite sides, as shown in Fig. 1.

The construction of the front spring, B,' is identical with that just described—that is, the spring is secured to the cross-bar H by fastenings h h', thence bent up each side of the body A, so as to form a spring, c, thence passing freely through the brackets a^2 a^3 in opposite directions, and finally the square ends c' c^2 are secured on opposite sides of the body A in the brackets a^2 a^3.

It will thus be seen that as the body is loaded and consequently depressed the side bends, b and c, allow the body to adapt itself to the rigid frame F G H, and by means of the brace C, secured underneath the bottom A, and connected by the rods E E' to the rear axle, F, and by rod D to the king-pin of the front axle, I, the body as it descends is kept parallel with the frame, for the rear rods, E E', prevent the front end of the body from tipping up, and the rod D performs a similar office for the rear end of the body.

Having thus fully described my invention, what I claim is—

1. The torsion-spring B, bent so as to form auxiliary side springs, b, and having its ends lapping and confined in the brackets a a' at opposite sides of the bottom of the body, as set forth.

2. The spring B, bent so as to form auxiliary side springs, b, and having its ends secured in the brackets a a', in combination with the bracket C, rods E, E', and D, and the rigid frame F G H, substantially as described.

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