W. BAMBRIDGE.
Vehicle-Spring.

No. 219,612. Patented Sept. 16, 1879.

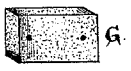


Fig. 4

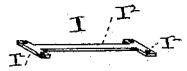


Fig. 5

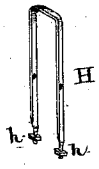


Fig. 3.

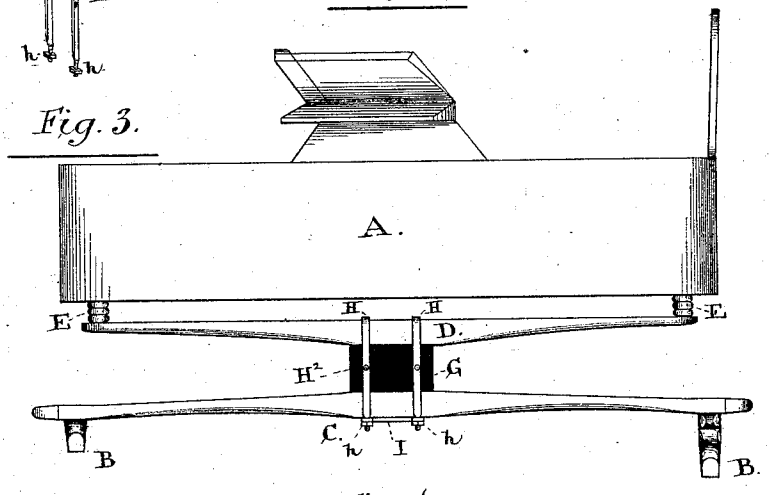


Fig. 1.

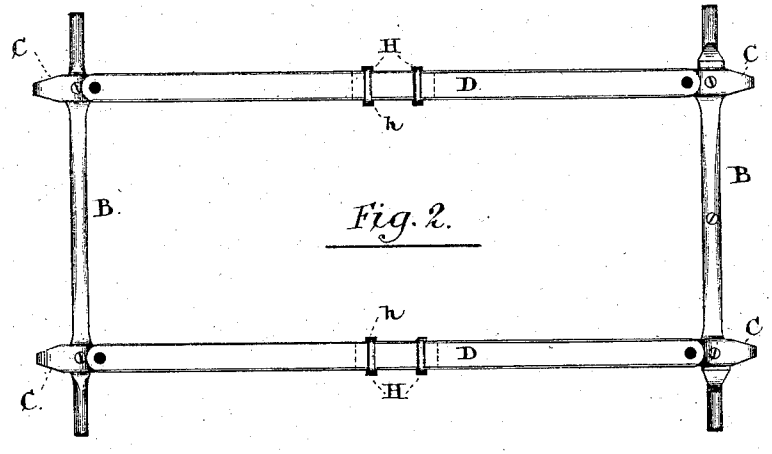


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM BAMBRIDGE, OF OSHAWA, ONTARIO, CANADA.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **219,612**, dated September 16, 1879; application filed October 7, 1878.

To all whom it may concern:

Be it known that I, WILLIAM BAMBRIDGE, of the village of Oshawa, in the county of Ontario, in the Province of Ontario, Canada, manufacturer, have invented certain new and useful Improvements in Carriages, of which the following is a specification.

My invention has relation more particularly to improvements in the spring-gear of carriages and buggies; and my improvements are designed to lighten the weight of the vehicle and cheapen its cost by the substitution for the expensive and heavy steel springs and metal connections usually employed of combined wood and rubber springs of a simple and strong construction, which are more particularly described hereinafter.

In the accompanying drawings, Figure 1 is a side view of the body of an ordinary four-wheel buggy to which my spring-gear, as shown, is applied. Fig. 2 is a plan of the spring-gear, and Figs. 3, 4, and 5 are details in perspective.

A is the body of the buggy, which may be of any design or construction desired. B B are the axles. C C are wooden bearers, which extend on each side from the front to the rear axle. One end of these bearers is fastened directly to the rear axle, and the front end is fastened to the bolster over the front axle, the bearers, rear axle, and bolster forming a rectangular frame, which strongly connects the running-gear together, thereby dispensing with the usual reach and its expensive and heavy connections.

At or about the center of the bearers C C, on the upper face thereof, a squared seat is formed for the rubber or other elastic cushion-blocks, and from or about the center to each end the bearers C C are tapered to a suitable degree consistent with strength.

D D are wooden body-bearers, connected at each end by the blocks E E to the body A. These bearers are provided with a squared face on the under side at the center and are tapered toward each end.

Between and connecting the upper and lower bearers, C and D, at their center on the prepared seats is placed a cushion-block, G. This cushion-block is made of rubber or any other elastic material of a suitable description.

The bearers and cushion are strongly connected together by the inverted-U-shaped clips H H, which are passed over the upper bearer and down each side of the bearers and cushion-blocks, the ends extending below the lower bearer, and being secured by the plate I and nuts *h*. The sides of each clip are also bolted together by bolts H^2, which pass through the elastic cushion-block.

The plate I is formed with end bars, I^1, through which the screwed ends of the clips pass, and these end bars are connected rigidly together by a center bar, I^2, so that when bolted together the position of the ends of the clips to each other cannot be changed.

The bolts H^1 secure the clips and cushion together, so that under action the parts cannot alter from their correct working position in relation to each other.

The wooden bearers C and D, while they support the weight of the body and load, act also as springs which relieve the load from the jolts and shocks of travel.

The elastic cushion-block G, connecting the two bearers, also serves as a spring, and permits of the necessary oscillating or rocking motion of the body and load.

The advantages of my improvements are that a strong, comfortable, light carriage or buggy can be constructed of a neat and good appearance at a much less cost than in the ordinary way, and which will weigh very much less than a vehicle of the same capacity, constructed in the ordinary manner.

I claim as my invention—

The combination, with the body A and axles B, of the bearers C and D, elastic cushions G, and blocks E, the said bearers and elastic cushions being suitably united or strapped together, substantially as specified.

W. BAMBRIDGE.

Witnesses:
N. MCGEE,
A. R. GARROW.