

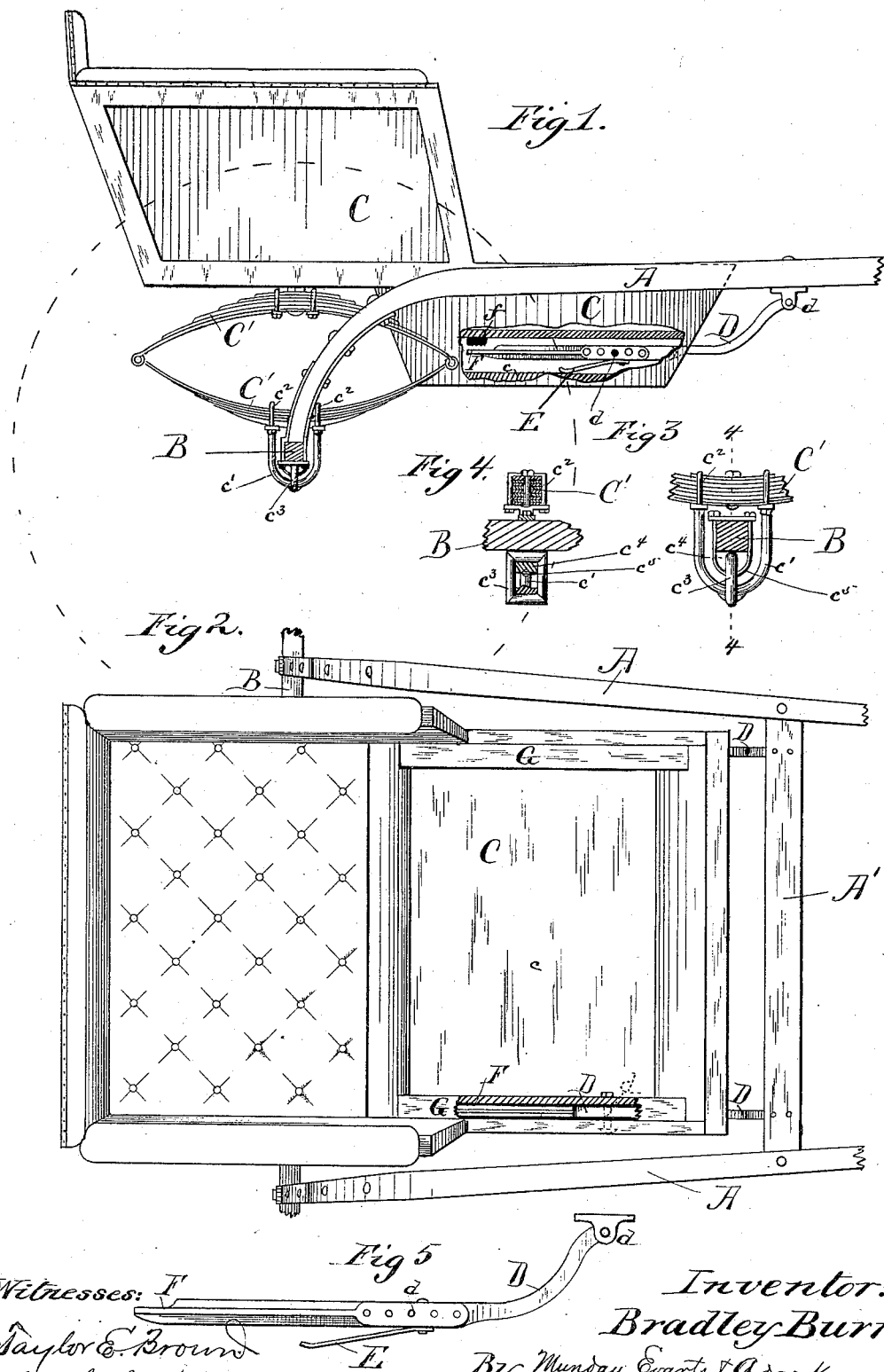
(No Model.)

B. BURR.

TWO WHEELED VEHICLE.

No. 307,432.

Patented Nov. 4, 1884.



Witnesses: Taylor E. Brown
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UNITED STATES PATENT OFFICE.

BRADLEY BURR, OF CHICAGO, ILLINOIS.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 307,432, dated November 4, 1884.

Application filed June 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, BRADLEY BURR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Road-Carts, of which the following is a specification.

My object in this invention is to render the body of the road-cart thoroughly independent of the horse motion; and to that end I have devised a new method of supporting the body in this class of vehicles.

The invention consists in the novel construction and combinations of parts hereinafter set forth.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a road-cart embodying my present invention, the wheel being omitted and some of the body being broken away to show the construction of some of the parts which are concealed. Fig. 2 is a plan of the same, the body being also broken away at one point. Fig. 3 is a front, and Fig. 4 a side, view of the device whereby the body-springs are supported above the axle, both enlarged. Fig. 5 is a detail enlarged of the connecting-link and spring.

In said drawings, A represents the shafts; A' the cross-bar connecting the shafts, B the axle, C the body, and C' the body-springs, of a road-cart, all these parts being of the usual construction, and the shafts being rigidly attached to the axle by an ordinary clip.

Extending from the cross-bar A' to the forward part of the body, and pivoted directly to each of those parts at *d*, is a rigid link, D. This link is preferably duplicated at the other side of the body from that shown in Fig. 1, and by means of it the body is securely held to the shafts, so that the occupant may stand in the front end of the body without depressing it unduly. At the same time this link-connection renders the body measurably independent of the shafts, so far as the motion of the latter is concerned, not being compelled to move with and receive the horse motion therefrom. Attached to this link, and extending rearward from the pivotal connection to the body and with its free end resting upon the floor thereof, is a flat spring, E, which tends

to counteract or take up the motion of the shafts without communicating the same to the body. Thus when the shafts are raised the spring is compressed and the equilibrium of the body is not disturbed until the compression has proceeded to nearly its full extent. When the shafts move downward, the spring opens and keeps the body stationary. Other forms of springs might be substituted; but I prefer the flat spring as the simplest and best for this purpose. Any other resisting surface supported in the body may also be used in place of the floor in this connection. The spring may be stiffened or limbered by moving the pivot connecting the body and link to one of the other holes in the link. (Shown in Figs. 1 and 5.) The link may be also provided with a rigid rear extension, F, which vibrates with the movements of the link upon its pivotal attachment to the body. This extension strikes a buffer, *f*, secured to the boxing G, or other appropriate part of the body, when the shafts are lowered beyond a certain point, thereby limiting the independence of the body. This buffer is so located that it will not be struck by the extension unless the dip of the shafts is considerable, it being expected that under ordinary circumstances with a smooth road and easy horse the spring E will take up all the motion produced. The floor *c* of the body may act as a stop to limit the freedom of the body in the other direction by acting as a lower stop to the vibration of the extension F and a like buffer to be placed there, or a buffer may be placed above the link in the opening in the front of the body for this purpose.

In practice I make the spring to be of such strength that the body will be thrown up by it when unoccupied; but when occupied it will be compressed to the position illustrated in Fig. 1. In this position the extension F should vibrate in space, touching the buffer only occasionally.

The boxing G is intended to cover the link and its attachments from sight, and to prevent interference therewith when located within the body. This, however, is not necessary, as those parts may be below the body or at the side of it.

The body-springs are supported above the

axle by the yoke c' , attached to the springs by clips c'' , and resting in the open link c'' , this link being suspended from the axle upon a block, c' , in the bottom of the clip c'' . It will
 5 be readily seen that this permits the axle to oscillate in obedience to the motion of the shafts without communicating such motion to the springs, the open link swinging in the clip c'' and taking up the axle oscillation, except
 10 when it is extended to unusual limits.

My invention also relieves the horse of a large part of the weight of the shafts. This is due to the spring E, which when the body is depressed under the rider's weight exerts a
 15 force in the contrary direction, and such force is transmitted to the shafts through the link D.

I claim—

1. In a road-cart, the combination of the shafts and axle rigidly secured together, the
 20 body supported from the axle by springs having a slight rocking motion thereon, a rigid link pivotally joined both to the shafts and forward part of the body, and a spring for taking up or counteracting the motion of the
 25 shafts, substantially as specified.

2 In a road-cart, the combination, with the spring-supported body and the shafts, of a rigid link pivoted directly to both of them and furnished with a counteracting-spring
 30 adapted to take up the horse motion, substantially as specified.

3. In a road-cart, a link pivotally joined both to the shafts and forward portion of the body, a rearward extension of said link vibrating
 35 with the motion of the shafts, and a stop

or stops upon the body for limiting the extent of such vibratory movement, in combination with the shafts and body, substantially as specified.

4. In a road-cart, the combination of the
 40 shafts and axle, the body and its springs supported from the axle by swinging links c'' , and a rigid connection, D, pivotally joined both to the shafts and forward part of the body, substantially as specified. 45

5. The combination of the body and its springs supported from the axle by swinging supports, the axle, the shafts, the pivoted link-connection having a counteracting-spring and an extension, F, and a stop or stops engaging
 50 the latter, substantially as specified.

6. The body mounted on side springs supported from the axle by supports permitting them to rock, the shafts attached directly to the axle, the axle, the rigid pivotally-joined
 55 link-connection between the body and shafts, and the flat spring E, attached to the link and resting upon the floor of the body, substantially as specified.

7. The combination, with the body and
 60 shafts, of the pivotally-joined link D, furnished with the counteracting-spring when the pivot joining the link to the body is adjustable, substantially as and for the purpose specified.

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Witnesses:

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