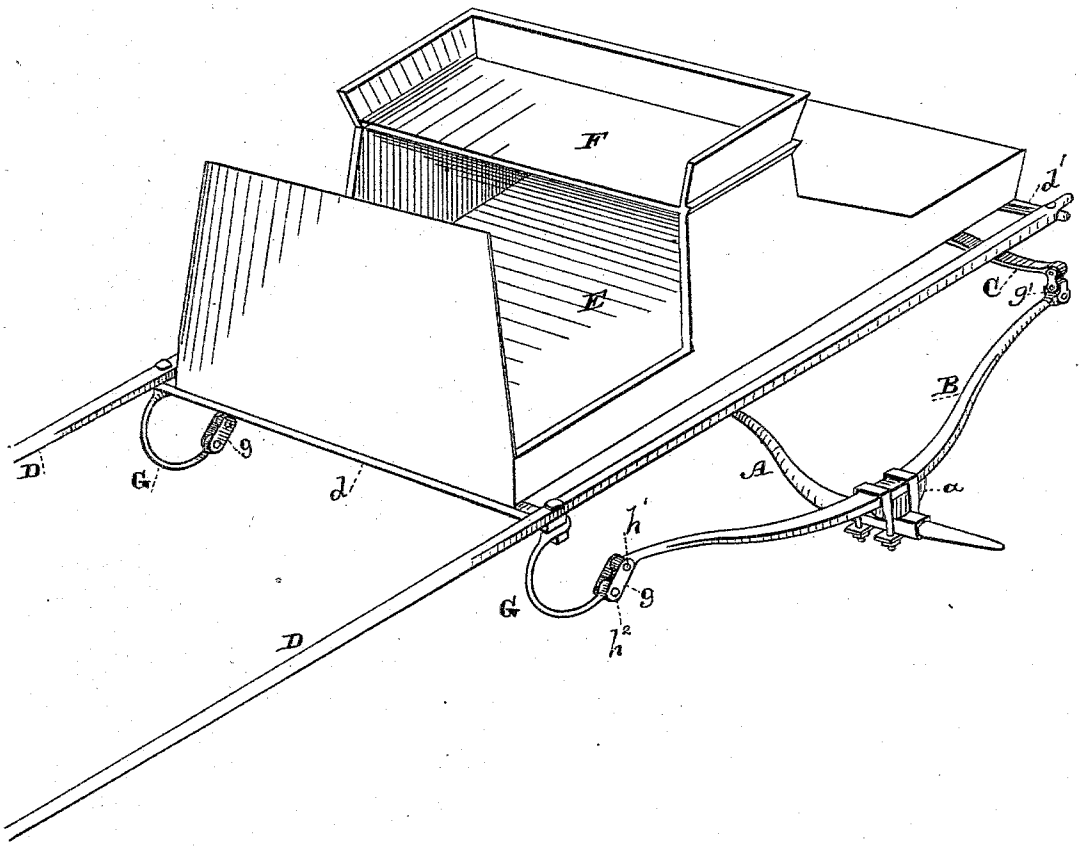
(No Model.)

J. S. CREIGHTON & J. TAYLOR.

TWO WHEELED VEHICLE.

No. 295,361. Patented Mar. 18, 1884.



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UNITED STATES PATENT OFFICE.

JAMES S. CREIGHTON AND JOSEPH TAYLOR, OF SMITH'S FLAT, CALIFORNIA.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 295,361, dated March 18, 1884.

Application filed April 30, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES S. CREIGHTON and JOSEPH TAYLOR, of Smith's Flat, county of El Dorado, State of California, have invented an Improved Two-Wheeled Vehicle; and we hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to the class of two-wheeled vehicles and to certain improvements therein, the object of which is to take away the unpleasant motion experienced by the rider, and derived from the jogging motion of the horse, transmitted through the shafts to the seat.

Our invention consists in the combination and arrangement of the several parts, as we shall hereinafter fully explain.

The figure is a perspective view of our invention.

A is the axle, upon which are clipped, through the intervention of suitable blocks, *a*, the side springs, B. These are of the usual pattern or form of what is known as the "platform-springs."

C is the rear cross-spring, connected with the rear ends of the side springs by the ordinary shackle or link joint. The side springs are curved downwardly, while the rear spring is curved upwardly.

D D are the shafts, having the usual front cross-bar, *d*, and a cross-bar, *d'*, mortised between their rear ends. To the under center of this rear cross-bar the center of the rear cross-spring, C, is clipped.

E is the body, bolted down at its corners to the front and rear cross-bars.

F is the seat.

G G are curved strips, the tops of which are bolted solidly underneath the front cross-bar. Their lower ends are connected with the forward ends of the side springs, B, by means of a shackle-joint, *g*. This is constructed of two separated plates, forming a link, pivoted by a bolt, *h'*, passing through it and an eye in the springs, and by another bolt, h^2, passing through its forward end and through the lower ends of the curved connecting-strips G G. These latter are not intended to spring, but are rigid strips.

We have discovered that the best spring for any two-wheeled vehicle is that known as the "platform-spring." As its name implies, its construction affords a better foundation than the ordinary elliptical springs. The up-and-down motion of the shafts is transmitted more perceptibly through the elliptic spring than through any other, and this difficulty it is almost impossible to overcome, no matter what may be the general construction of the vehicle and the various connections between the parts. The reason for this is obvious. Their shape makes them in reality long levers, and their slight central connection with the axle, with no cross-springs to hold them, renders them peculiarly sensitive to every motion of the shafts, and they transmit this motion to the body and seat to an unpleasant degree. But the platform-spring has more body to it and presents a broad support for the frame and seat, which will not transmit motion as readily. Now, we find that if we adopted the usual connection of platform-springs with the shafts or body the unpleasant motion would not be entirely avoided; but to accomplish this result we dispense with the usual cross-spring in front, and connect the side springs with the cross-bar of the shafts (or, if we desired, we could connect directly with the shafts) by means of the connecting-strips G. These furnish support, and at the same time, by having a shackle-connection, *g*, are enabled to move with the shafts without affecting the springs. In carts the axle is the fulcrum, and by means of this loose connection the rocking or oscillating motion is not imparted to it. In this vehicle we thus enjoy the advantages of the platform-spring and avoid its difficulty by a new and useful connection, which furnishes an easy-riding and pleasant conveyance.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a two-wheeled vehicle, the platform-springs B B, in combination with the shafts D D, having cross-bar *d*, and the means for connecting the springs with the cross-bar, consisting of the curved strips G G, bolted to the cross-bar, and the shackle *g*, formed of separated plates, making a link, *h*, pivoted by bolts at each end to the springs and to the curved strips, substantially as herein described.

2. In a two-wheeled vehicle, the axle, side

springs, and rear cross-spring, in combination with the shafts having front and rear cross-bars, the latter of which is clipped to the rear cross-spring, body E, bolted at its corners to said cross-bars, and the means for connecting the shafts with the forward ends of the side springs, consisting of curved strips G G, bolted to the front cross-bar, and shackle *g*, pivoted to the springs and curved strips G G, substantially as herein described.

In witness whereof we hereunto set our hands.

JAMES S. CREIGHTON.
JOSEPH TAYLOR.

Witnesses:
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