(No Model.)

G. E. BARTHOLOMEW.

TWO WHEELED VEHICLE.

No. 457,297. Patented Aug. 4, 1891.

FIG. 1.

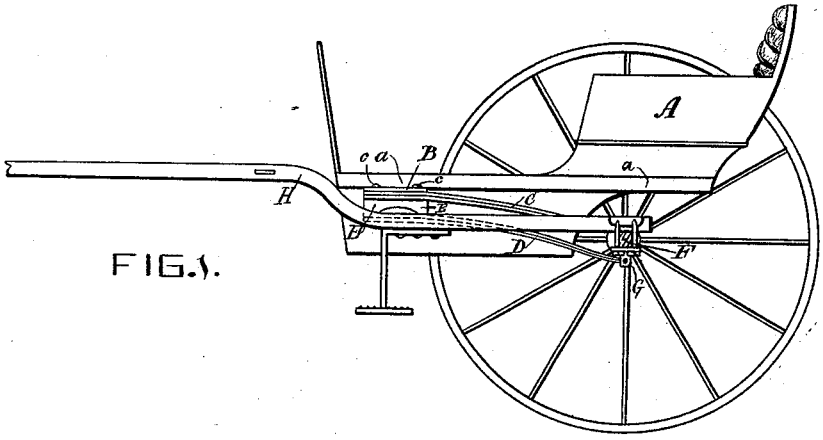


FIG. 2.

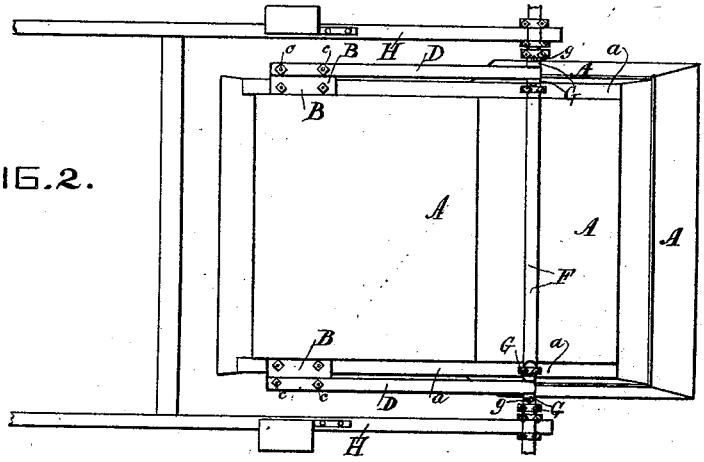
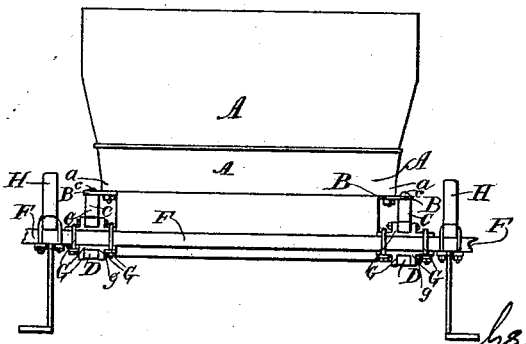


FIG. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE E. BARTHOLOMEW, OF CINCINNATI, OHIO, ASSIGNOR TO EDWARD WENNING, OF SAME PLACE.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 457,297, dated August 4, 1891.

Application filed November 17, 1890. Serial No. 371,663. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. BARTHOLOMEW, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Two-Wheeled Vehicles, of which the following is a specification.

My invention relates to two-wheeled vehicles, and particularly to the springs supporting the body, which are of the character shown in my Patent No. 427,033.

Its object is to provide a light, cheap, and easy-riding cart.

In the accompanying drawings, which illustrate my invention and in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a side elevation of a two-wheeled vehicle embodying my improvements, one wheel being removed. Fig. 2 is an inverted plan view. Fig. 3 is a rear elevation of the same.

The body A may be of any approved form; but for neatness of appearance I have selected what is known as the "phaeton-shaped" body to illustrate my invention, the frame-rails *a* of which extend out from each side of the body. Underneath these extended sides of the upper part of the body are secured the steel plates B, to which plates are secured the heavy or free ends of the coupling-springs C D, which are arranged in pairs one above the other upon each side of the body. The upper springs of each pair are represented by C and the lower ones of each pair by D. The springs are separated from each other at their forward ends by block E. The securing-bolts *c* pass through plates B, springs C D, and the separating-blocks E, and have tightening-nuts upon their under sides to secure the parts together. I prefer to employ the stay-blocks E to stay-bolts having collars to bear upon the inner faces of the springs. The heads of the bolts which secure the steel plates to the body are preferably countersunk into the top edge of the body-rail *a*. The metal clips shown in my said former patent may be used as the coupling devices instead of either the stay-bolts or stay-blocks E. The light or rear ends of the springs are turned to form eyes in the usual manner. These ends are coupled to the axle F by means of shackle-clips G, of which there are preferably four—two upon top and two underneath the axle—and the shackle-bolts *g*, which pass through the lugs of the shackles and the spring-eyes. The shackles are secured to the axle by clips *g'*, which pass upon each side of the axle and through perforations in the clip-bars. It is of course obvious that the shackles for the upper and under sides of the axle may be made in a single piece—that is, a single double shackle may be made to embrace the axle upon three sides and be secured in place by clips or bolts; but the form I have shown is believed to be the best and cheapest. The thills H, which are of ordinary construction, are extended over or underneath the axle, to which they are rigidly clipped. In the drawings I have shown the thills clipped upon the top of the axle.

I do not limit myself to the precise construction shown and described, as many mere mechanical changes in some of the features may be made without departing from the spirit or scope of my invention.

What I claim is—

1. In a two-wheeled vehicle, the combination of the axle, the thills rigidly secured thereto, the spring-coupling shackles rigidly secured to the upper and under side of said axle, the body, and the spring-couplings for connecting the body and shackles, said springs being separated and arranged in pairs one above the other, the heavy ends of said springs being secured to the body upon opposite sides and the light ends being pivoted in the shackles above and below the axle, substantially as shown and described.

2. The combination of the body and axle, the thills rigidly secured to the axle, the springs C and D, arranged in pairs one above the other, the block E, separating the forward end of each pair, the clips G, secured to the top and bottom of the axle, the shackle-bolts securing the springs in said clips, and the plates B for coupling the forward ends of the springs to the body, substantially as shown and described.

3. The combination, substantially as hereinbefore set forth, of the body A, having ex-

tended side *a*, the axle F, the thills rigidly secured to said axle, the springs C and D, arranged in pairs one above the other upon opposite sides of the body, the separating stay-blocks E, coupling-plates B, and bolts for coupling the springs to the plates and the plates to the body, and the angle-clips G, shackle-bolts *g*, and clip *g'* for coupling the light ends of the springs to the axle.

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