(No Model.)

L. BURG.

ROAD CART.

No. 391,836. Patented Oct. 30, 1888.

Fig. 1.

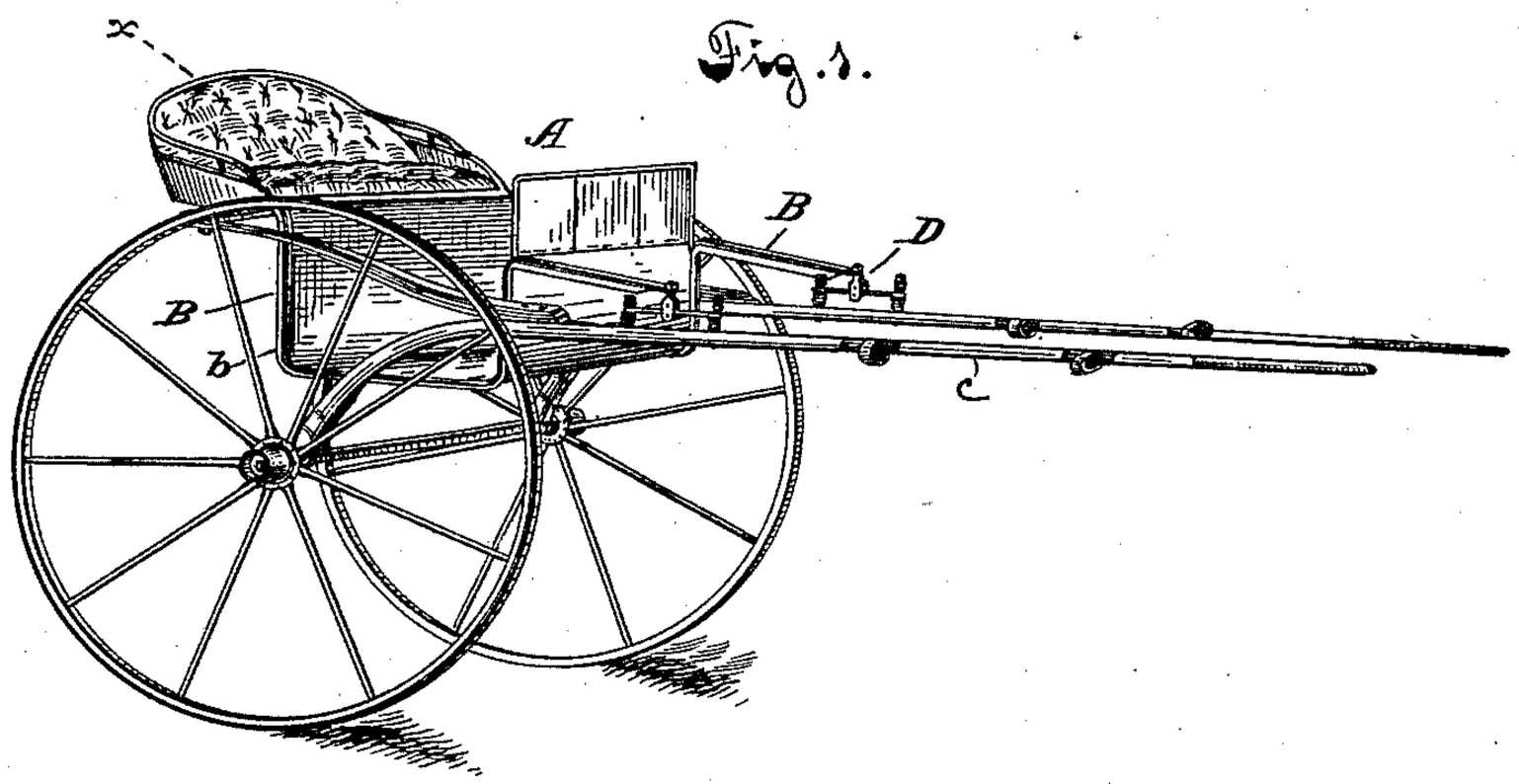

Fig. 2.

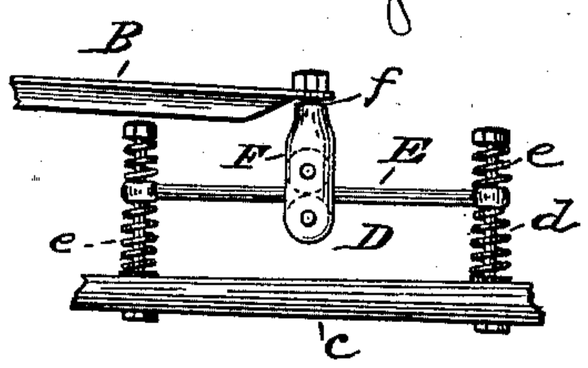

Fig. 3.

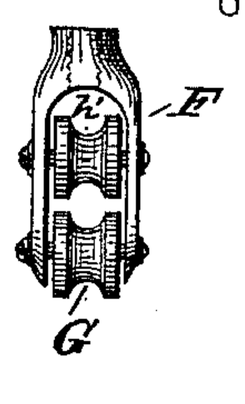

Fig. 4.

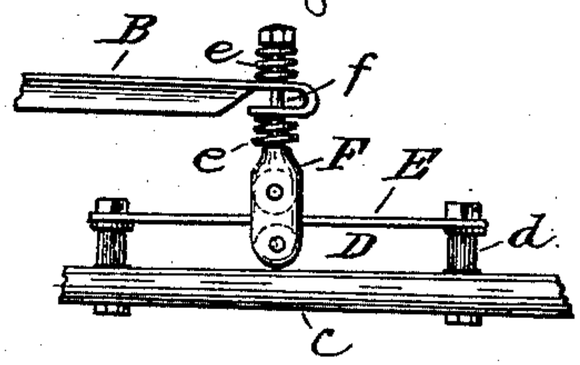

Fig. 6.

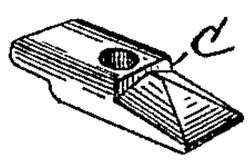

Fig. 5.

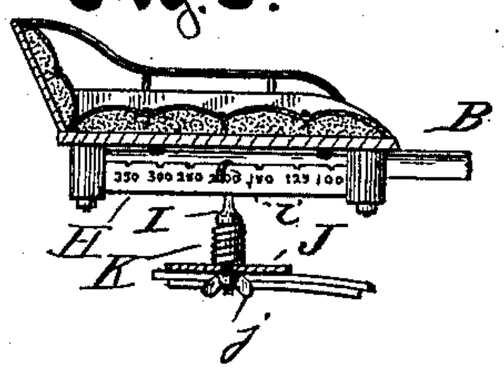

Fig. 7.

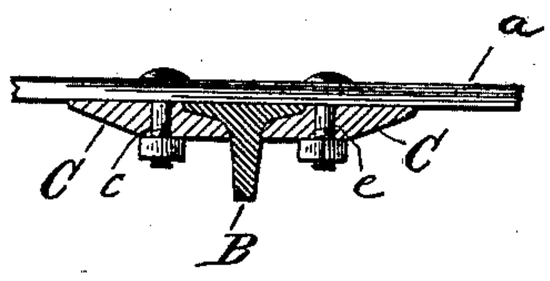

Fig. 8.

Fig. 9.

Fig. 10.

WITNESSES.

H. D. Healy.

E. F. Drew.

INVENTOR.

Lewis Burg.

By M. D. Peck.

Attorney.

UNITED STATES PATENT OFFICE.

LEWIS BURG, OF FARMINGTON, IOWA.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 391,836, dated October 30, 1888.

Application filed August 4, 1888. Serial No. 281,965. (No model.)

To all whom it may concern:

Be it known that I, LEWIS BURG, a citizen of the United States, residing at Farmington, in the county of Van Buren and State of Iowa, have invented certain new and useful Improvements in Road-Carts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in that class of devices known as "two-wheeled vehicles," and more commonly known as "road-carts" or "sulkies," and consists more especially in improvements on the style of cart shown and described in United States Letters Patent No. 376,470, granted to me January 17, 1888.

The object of my invention is to provide an easy and convenient adjustment of the seat proportionate to the weight of the person or persons to be carried or to the size of the draft-animal, and to effectively relieve the seat and its occupant from the horse motion, which is generally of great discomfort and inconvenience in road-carts heretofore constructed; and it consists in the construction and arrangement of parts hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of my improved cart. Fig. 2 is a detail view of an adjusting-frame and springs attached to the thills. Fig. 3 is a detail view of the pulley-block on the frame. Fig. 4 is a modification of the adjusting-frame and pulley-block. Fig. 5 is a sectional view of the seat on the line *x x*, Fig. 1, showing the adjustment underneath. Fig. 6 is a perspective view of a clip for holding the seat-bar. Fig. 7 is a cross-sectional view of the seat-bar and clip as in position on the bottom of the seat. Fig. 8 is a perspective view of the supporting-springs. Fig. 9 is a sectional view of the ends of the supporting-springs and the cross-bar on the line *y y* of Fig. 8, and Fig. 10 is a detail perspective view of the locking-bolt which unites the springs and cross-bar.

A represents my improved cart, having a running-gear and seat, all of which are of the usual form and construction.

B represents the seat-bars, which are formed of T-shaped bars of steel or other suitable metal, bent at their centers in a substantially U shape to form a bottom or foot-rest, *b*, and dash-support. The rear ends of these seat-bars B are extended backward horizontally, and are secured to the bottom *a* of the seat by clips C, located on either side thereof at different intervals, which are securely fastened to said seat by bolts extending through apertures formed therein and in the clips. The forward ends of the seat-bars B are extended to about midway the length of the shafts *c*, at which points they are secured to the shaft by an adjusting-frame, D, attached to the thills. This frame D consists of vertical posts *d*, which extend through the shafts, and are secured by nuts or other means underneath thereof, and are made to project a short distance above the same. These posts are preferably connected above the thill by a cylindrical rod or track, E, having loops on its ends, which loosely encircle the vertical posts *d*, and are provided with caps or nuts on their upper ends. Above and below the track E, on the posts *d* of the frame, are spiral springs *e*, the ends of which rest against the ends of said track and the caps above in the posts and the shafts below. The resiliency of these springs *e* admits of a vertical play of the track upon the posts, but normally holding it at about the center of the posts above the thill.

Pulley-blocks F are secured to the forward flattened ends of the seat-bars B by suitable screw-bolts, *f*, and nuts above the bar. Within the lower portion of the pulley-blocks there are grooved wheels G, mounted on journals, one above the other, at a short distance apart. These wheels G in the block are placed above and below the cylindrical track E, which passes between and is in contact with them. By this construction it will be seen that the seat-bars B are allowed an easy vertical and longitudinal movement as the grooved wheels move over the track E, preventing any side-play or lateral motion. I do not, however, confine my invention to this particular form of adjusting-frame, as it may be of a slightly-modified form, as shown in Fig. 4. In this form the springs *e* upon the posts *d* are dispensed with and the track E is made flat and is held rigidly on the posts. The ends of the

seat-bars in this form are bent downward and backward upon themselves to form hook-braces, which have vertical holes through both of their parallel branches for the insertion of the vertical bolt *d* of the pulley-block. The bolt *d* is made much longer in this construction, so as to admit of the springs *e* being placed on the bolt above and below the hooked or curved ends of the seat-bars. The wheels G in this case are preferably of rubber, and have flat or straight peripheries to conform to the track upon which they move.

In my aforesaid patent I have described means for adjusting the seat and retaining it in its adjusted position, and in my present invention I employ an adjusting-bar, H, which is notched, numbered, and connected in substantially the same way. The bar H is provided with a bolt, I, having a hook, *i*, on its upper end, which passes over the bar, and is adjusted and rests in the notches on its upper side. The shank of this bolt extends downward, having a collar slightly below the adjusting-bar, and passes through the cross-bar J, which unites the rear ends of the supporting leaf-springs under the seat, and is secured by a thumb-screw, *j*, under the cross-bar. Upon the shank of the bolt I, between its shoulder and the upper side of the cross-bar, there is preferably placed a coil-spring, K, though a rubber or other suitable spring may be used, which, when the thumb-screw is loosened, presses the bolt upward, releasing its hook from the notch in the adjusting-bar H, enabling the bar and seat to be adjusted back and forth to the desired point, when the hook is again secured in the notch underneath by tightening the thumb-screw, which holds it firmly in place. The coil-spring K also cooperates with the springs *e* on the thills, to relieve the seat of the horse motion imparted to the supporting-springs and seat-bars.

In uniting the ends of the supporting-springs L, which are preferably leaf-springs, with the ends of the cross-bar, so as to allow independent play of each leaf, I form a recess or elongated slot, *l*, in the lower leaf and an aperture in the upper leaf and cross-bar. Through said slot and apertures I pass a bolt, M, having a double head, and secure it in place by a key, *m*, in passing through cross-opening near its upper end.

The bolt M is constructed with a head, N, having flat upper surfaces, and a square projection or shoulder, *n*, of smaller width than the head N, so as to admit of its insertion in the slot *l* in the lower leaf of the spring. The sides of the shoulder *n* being straight and the width being nearly equal to the width of the slot *l*, the lower leaf will be allowed a longitudinal movement, while all lateral play will be prevented.

By using the T-rail for my seat-bars E and forming their central portion into a substantially U shape I am enabled to provide a much stronger rail of the size than that used heretofore, as well as forming an additional brace for the foot and dash boards.

My present arrangement of the thill-adjusting frames reduces the friction and forms a simple and durable method of obtaining the desired results.

In operation, as the thumb-nut *j* is loosened, the bolt I is thrown upward by the coil-spring K, releasing the hook from the notch in the bar H, enabling the seat to be adjusted backward or forward on the adjusting-frame D to the desired point, when the hook is again drawn down into the notch ont he bar and the nut tightened. As the upward and downward vibrations are imparted to the thills by the horse motion, the upward vibration is counteracted by the soft resiliency of the upper coil-spring, while the downward vibration is in like manner destroyed by the lower spring, and the vibration communicated to the seat-bar through the supporting-springs is counteracted by the coil-spring on the hook-bolt above.

I am aware that many minor changes in the construction and arrangement of the parts of my improvement can be made and substituted for those shown and described without departing from the nature and principle of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a two-wheel vehicle, having seat-bars and a spring cross-bar and seat-adjusting bar, of a bolt having its lower end passed through said cross-bar and its upper end over the adjusting-bar, and a spring interposed between said cross-bar and adjusting-bar, as set forth.

2. The combination, with the cross-bar and adjusting-bar, of a bolt having a hook on its upper end and a collar below the hook, the lower end of said bolt passed through said cross-bar, its upper end placed over said adjusting-bar, and a spring on said bolt between said cross-bar and collar, as set forth.

3. The combination, with the seat and shafts, of the T-shaped seat-bars, bent to form a U-shaped body, said bars being secured to the spring-bar by clips and to the thills in front of the body by posts having spring-connections with the ends of the seat-bars, as set forth.

4. The combination, with T-shaped seat-bars and shafts, of pulley-blocks on the front ends of the bars, wheels mounted in the blocks, vertical posts secured to the shafts, and a track on the posts between the wheels, as set forth.

5. The combination, with seat-bars and shafts, of pulley-blocks on the front end of the bars, wheels mounted in the blocks, a track loosely mounted on vertical posts secured to the shafts, and springs on said posts above and below said track, as set forth.

6. The combination, with seat-bars and

shafts, of grooved wheels mounted on the front ends of the bars, a cylindrical track loosely mounted on posts secured to the thills, and coiled springs on the posts above and below said track, as set forth.

7. The combination, with side leaf-springs and a cross-bar, the lower leaf having a slot therein and the upper leaf having an aperture of smaller diameter, of a bolt passing through the springs and cross-bar, and having a head wider than the slot and shoulders, and of a width substantially equal to the width of the slot and working in the same, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS BURG.

Witnesses:
JACOB W. MILLER,
LOUIS HASSLER.