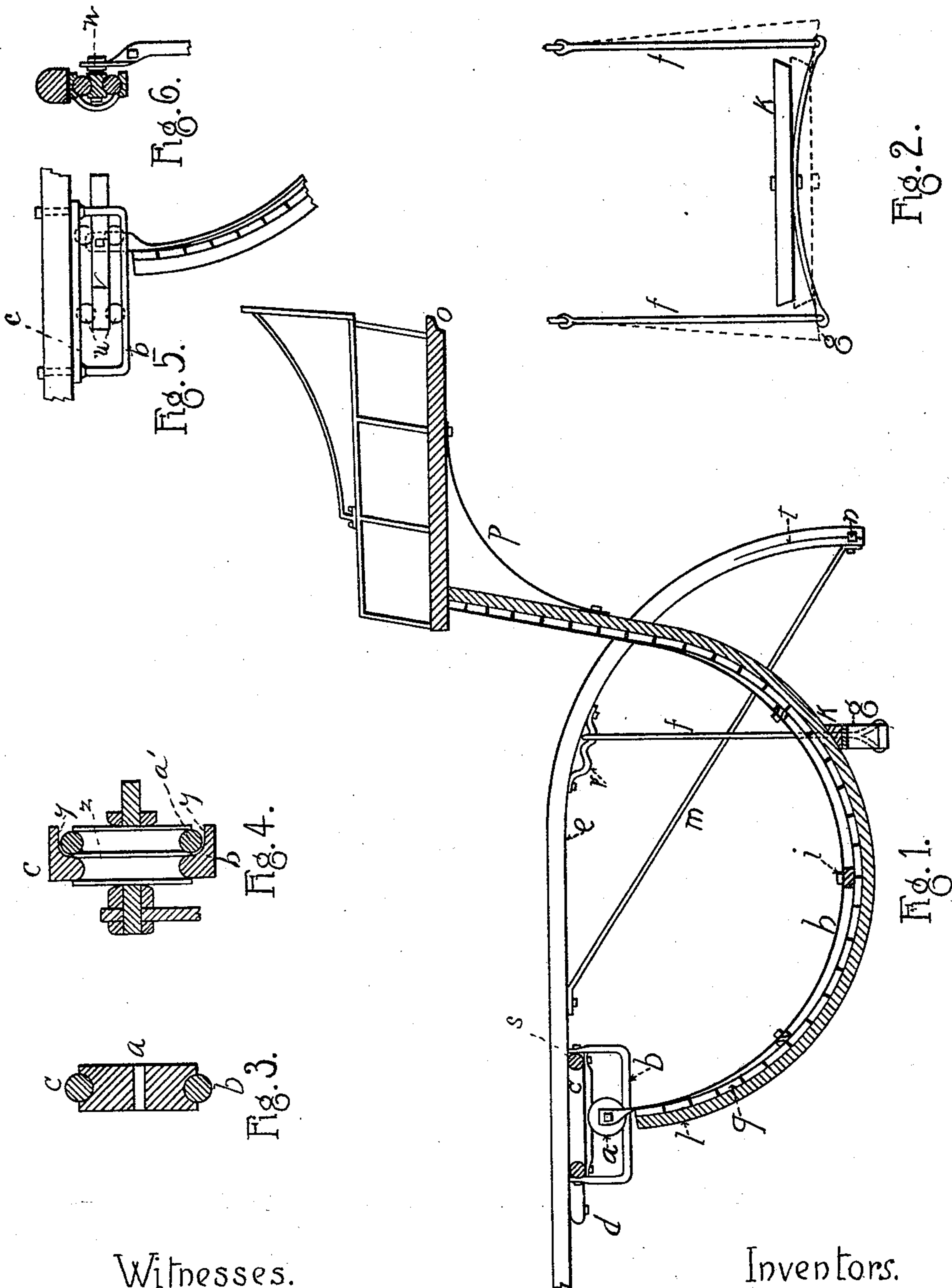


(No Model.)

H. & W. C. SMITH.
ROAD CART.

No. 461,395.

Patented Oct. 13, 1891.



Witnesses.
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Nathan Clifford.

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per
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UNITED STATES PATENT OFFICE.

HUGH SMITH AND WILLIAM C. SMITH, OF GRAY, MAINE, ASSIGNORS OF
ONE-HALF TO JAS. T. HANCOCK, OF SAME PLACE.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 461,395, dated October 13, 1891.

Application filed December 15, 1890. Serial No. 374,842. (No model.)

To all whom it may concern:

Be it known that we, HUGH SMITH and WILLIAM C. SMITH, both of Gray, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Road-Carts; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in road-carts and similar vehicles. It is designed to make the body more durable and to lessen as much as possible the disagreeable effects of the horse motion imparted to the body of the vehicle when in use.

It consists in a new and improved method of constructing and hanging the body, which is hereinafter more fully set forth.

In the drawings herewith accompanying and making a part of this specification, Figure 1 is a central longitudinal section of our improved cart. Fig. 2 is a detail showing hangers and spring by which the center of the body is supported. Fig. 3 is a detail showing truck and upper and lower tracks. Fig. 4 is a detail showing double truck and anti-rattler attachment. Fig. 5 is a detail showing a ball-bearing instead of the truck. Fig. 6 is a sectional view of the same, and same letters refer to like parts.

In said drawings, *e* represents the thills, *o* the seat, and *p* the body, considered as a whole. The body has two or more curved floor-timbers *l*, extending longitudinally, as shown in Fig. 1. Laid upon said timbers are the floor-boards *q*, and above said boards are cross-ties *i*, which serve for rests for the feet and also for the attachment of strengthening-trusses *h*, the middle ties being thicker than the others. The ends of the thills are split, as shown at *t*, and then separated to allow the axle *n* to be inserted between the two halves, which are then bolted together. The thills may also have cross-bars *d* and *s*. The body is suspended from the thills at its forward end and also at or near its center. At a point on the thills at a suitable distance from the axle are attached loops *r*, in which are placed

the hangers *f*. Supported in stirrups from the lower extremities of said hangers is a spring *g*, curving upwardly toward the center, as indicated in Fig. 2. Bolted to the top of said spring at the center is a bearing-block *k*, upon which the center of the body rests and to which it is attached in some convenient manner. At a suitable distance in front of the loops *r* are attached to the thills the tracks *b* and *c*, one above the other. Extending out beyond the forward end of said body are straps or supports, in the ends of which are journaled trucks *a*, having a central groove, whereby they are adapted to run on said tracks, as shown in Fig. 3. The straps or supports in which are journaled the said trucks may be formed by simply extending the strengthening-trusses *h* beyond the end of the body, as shown in Fig. 1, or journal-bearings for the trucks may be attached to the forward end of the body in any convenient manner. In order that the balance of the body may be adjusted to loads of different weights, the loops *r*, to which the hangers *f* are attached, may have two or more depressions and said hangers adapted to be changed from one to another as the weight changes. The spring *g* is attached to the under side of the block *k*, as shown in Fig. 2, the under side of said block being straight or nearly so. Consequently, as the weight increases the spring becomes stiffer, inasmuch as a greater part of its length rests on said block, as shown by dotted lines in said Fig. 2.

In order to prevent the rattle of the trucks on the tracks *b* and *c*, a double truck *z* may be used, the said tracks *b* and *c* having a flat projection *y* and one of the grooves in said double truck having a rubber tire *a'*, adapted to bear on said projection, as shown in Fig. 4.

Instead of the trucks shown in Fig. 1, a ball-bearing, illustrated in Figs. 5 and 6, in which *b* and *c* show grooved tracks, *u* the balls, and *v* a carrier having grooves in its top and bottom and attached to the straps or supports by a bolt *w*, said carrier being adapted to travel back and forth freely between said balls.

The center of the body being supported by a spring suspended from hangers loosely attached to the thills and the forward end being free to move back and forth in a horizontal

direction, reduces the horse motion to a minimum. Again, when the wheels strike an obstruction there is usually a disagreeable sidewise jerk. In the present invention, since
5 the center of the body rests upon a spring loosely supported in stirrups from the extremities of hangers which are free to move back and forth and sidewise, the jerk which is usually felt when one wheel strikes a rock
10 is neutralized, inasmuch as the body, instead of being thrown suddenly upward, is simply swung sidewise to the opposite side. Arranged in the above-described manner the body has always an easy swinging motion.

15 Having thus described our invention and its use, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a road-cart, the combination, with
20 of a body supported by hangers pivoted to the thills and a spring to which the body is attached and at its forward end by a truck attached thereto and adapted to run on said double track, substantially as and for the
25 purposes set forth.

2. In a road-cart, the combination, with thills having double tracks attached thereto, of a body supported at the center by hangers pivotally attached to said thills and to a leaf-spring upon which said body rests and at the
30 forward end by a truck journaled in the end of the brace-bar and adapted to travel in said double tracks, substantially as and for the purposes set forth.

3. In a road-cart having a body freely suspended at its center to thills, the combination, with tracks having a flat projection attached to the thills, of a double-grooved truck having a rubber tire firmly held in one of said
35 grooves, substantially as and for the purposes set forth. 40

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

HUGH SMITH.
WILLIAM C. SMITH.

Witnesses:

JAMES T. HANCOCK,
LUTHER W. HILL.