(No Model.)

F. J. H. AXFORD.

ROAD VEHICLE.

No. 303,201. Patented Aug. 5, 1884.

Fig. 4.

Fig. 1.

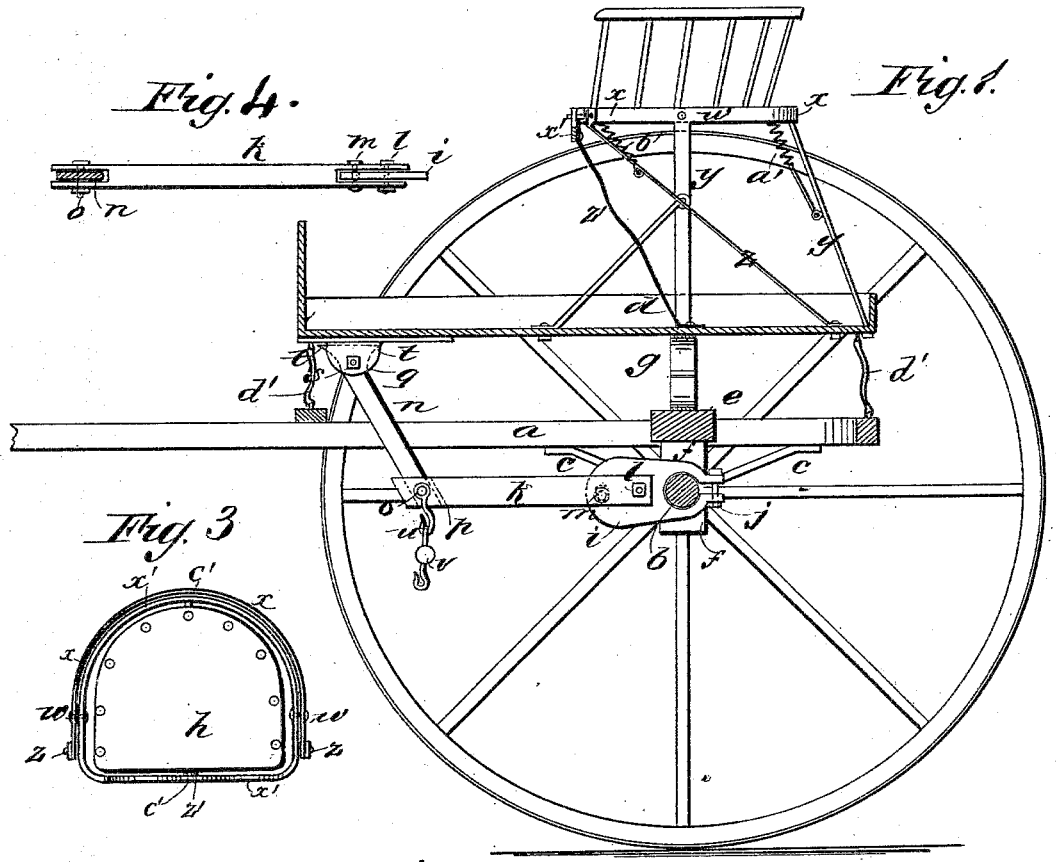
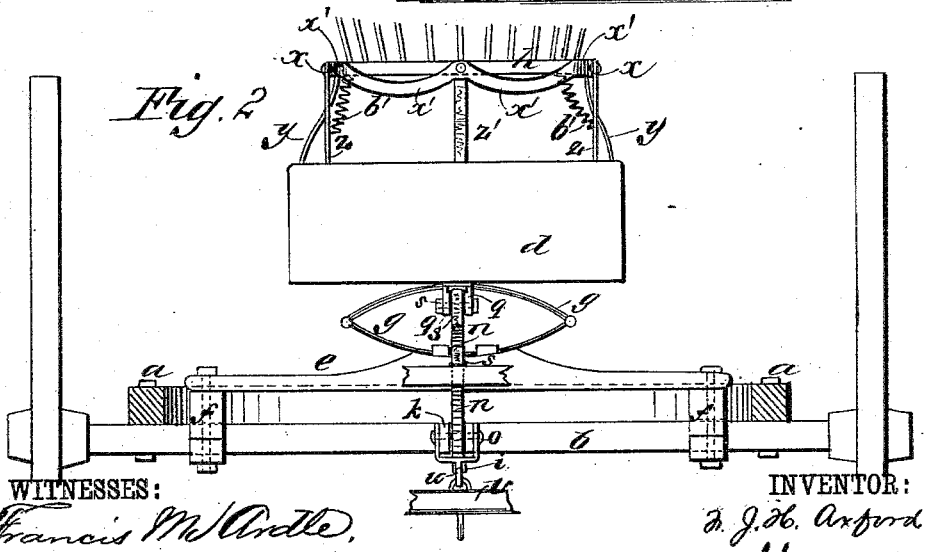


Fig. 3

Fig. 2



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FREDERICK J. H. AXFORD, OF CORNWALLIS, NOVA SCOTIA, CANADA.

ROAD-VEHICLE.

SPECIFICATION forming part of Letters Patent No. 303,201, dated August 5, 1884.

Application filed August 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. H. AXFORD, of Cornwallis, in the Province of Nova Scotia and Dominion of Canada, have invented certain new and useful Improvements in Road-Vehicles, of which the following is a full, clear, and exact description.

My invention consists of an improved arrangement for supporting the bodies of sulkies and other two-wheeled vehicles on the axle independently of the shafts, to relieve the bodies of the shake due to the vertical play of the shafts by the motions of the horse.

The invention also consists in a novel arrangement of the seat for increased comfort of its occupant, all as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of a sulky constructed according to my invention. Fig. 2 is a front elevation with the shafts cut off. Fig. 3 is a plan view of the seat; and Fig. 4 is a detail of the device for supporting the front part of the body, partly in plan view and partly in section.

The shafts *a* may be located directly on the axle *b*, as in Fig. 2, and attached firmly thereto in any approved way; or they may be located above the axle and connected to it firmly by bent bars *c*, as in Fig. 1.

For connecting the seat-body *d* to the axle *b*, independently of said shafts, I attach a bolster, *e*, to the axle by means of boxes *f*, on which to place the spring or springs *g*, for the main support of the body, directly under the seat *h*, which seat is balanced thereon, the spring or springs being parallel with the axle or with the wheels, as preferred.

For the support of the body at its front end I attach a clip, *i*, firmly to the middle of the axle by a clamp, *j*, or any other approved means; or, if two are used, near the boxes, which clip or clips extend forward of the axle a suitable distance to connect the rear slotted end of an arm, *k*, to it by a pivot-bolt, *l*, and by another bolt, *m*, which has a very little vertical play in the clip-plate, which has a slotted or elongated hole for said bolt *m*, which serves for a stop to the play of the arm *k* on the pivot-bolt *l*. The arm *k* extends forward along under body *d* not quite to the front end of said body, and carries a support, *n*, which is pivoted in a slot of the end of the arm *k*, by a bolt, *o*, on which said support has a little pivotal vibration allowed by the slack between said support and the shoulder *p* of the slot. This support *n* extends upward to the bottom of the body, and is pivoted between the ears of a socket, *q*, by a bolt, *s*, the socket being attached to the bottom of the body. The upper end of this support *n* is considerably widened, to make points *t* that will serve for stops to limit the vibration of the body on said support caused by the play of the arm *k*, and also by the otherwise forward or backward movement of the body on the axle *b*, by means of the loose boxes *f*. The pivot-bolt *o* supports the clevis or hook *u*, to which the whiffletree *v* is connected, for drawing the vehicle directly from the axle. It will be seen that by this simple arrangement the body will not be subject to any vibration by the shafts, and it will be greatly relieved of any vibrations by the axle in consequence of the play of the joints of the supporting-arm *k*.

In order that the seat may be still further relieved of any forward and backward play or side movements that the body may possibly have, I propose to pivot the frame *x'* of seat *h* at *w* to the outer frame, *x*, connecting with the supports *y* and *z*, leaving room for play, which frame *x'* has a spring, *a'*, at the back of it, which permits some vibration to counteract the effect of any vibration of the body, and a strap, *z'*, in front, to adjust the seat to the convenience of the user; and, further, in order to avoid any side motion and that the seat may be always horizontal, I propose to pivot it on its center at *c'*, before and behind inside of the frame *x'*, leaving room at each end for sufficient play as either wheel may rise or fall. For this purpose the frame *x'* is depressed in front for the thighs; and to secure a steady motion I attach a spiral spring, *b'*, on the under side of seat at each end and to the braces *z* or other suitable points. Stay-straps *d'* connect the body to cross-bars of the shafts *a* in any approved manner.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A two-wheeled vehicle having its body

supported independently of the shafts upon a spring or springs loosely connected to the axle and a support pivoted to the body and loosely connected to a clip projecting from the axle, substantially as herein shown and described.

2. In a two-wheeled vehicle, the combination, with the axle *b* and the shafts *a*, secured thereto, of the body *d*, the spring *g*, the bolster *e*, and the boxes *f*, substantially as herein shown and described.

3. The seat *h*, balanced on pivots, fore and aft, in a frame, *x'*, which frame is also balanced over the axle in an outer frame, *x*, on supporting-pivots *w*, and stayed at the front by a strap, *z'*, and at the back and sides by springs *a' b'*, substantially as described.

4. In a two-wheeled vehicle, the combination, with the axle *b* and the body *d*, supported upon the spring *g*, loosely connected to the axle, of the clip *i*, secured to the axle, the arm *k*, loosely connected to said clip, and the support *n*, pivoted to the body and loosely connected to the arm *k*, substantially as herein shown and described.

FREDERICK J. H. AXFORD.

Witnesses:

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