No. 818,963.

PATENTED APR. 24, 1906.

E. P. HOLLISTER.

ROAD CART.

APPLICATION FILED MAY 15, 1905.

Fig. 1.

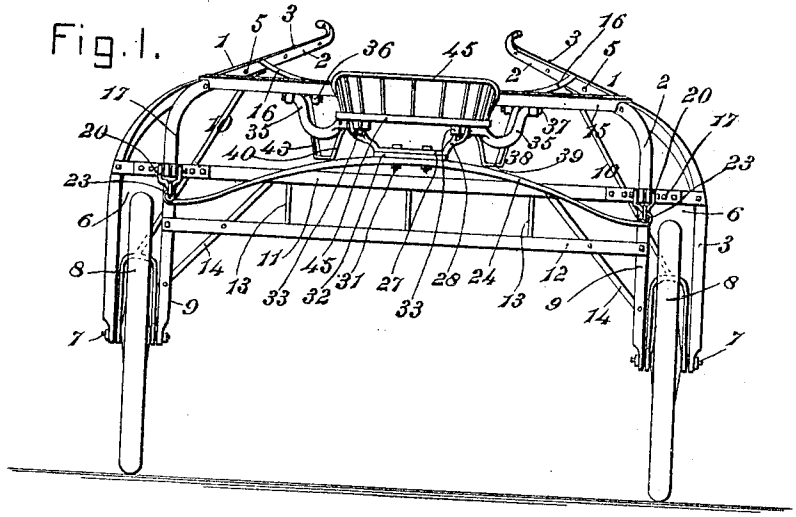

Fig. 2.

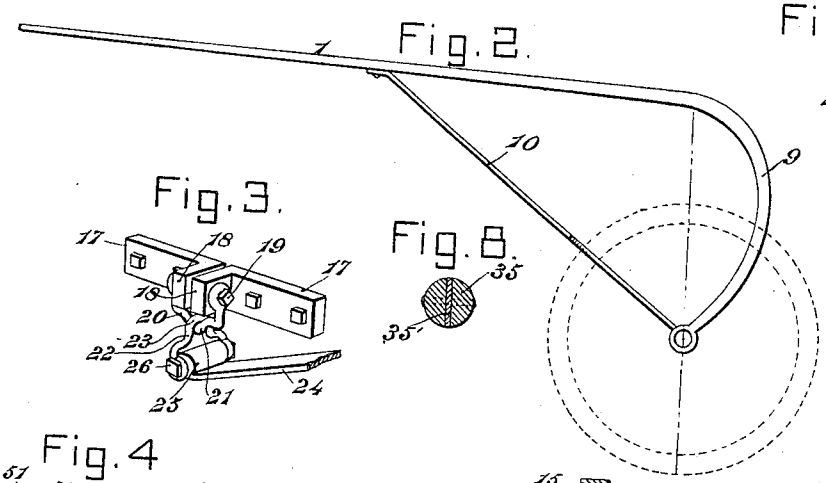

Fig. 3.

Fig. 4.

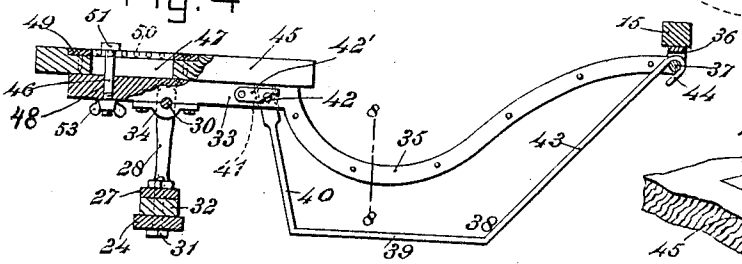

Fig. 5.

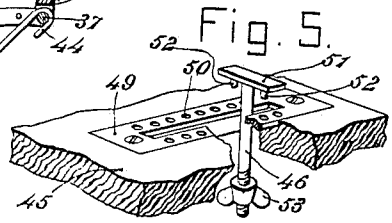

Fig. 6.

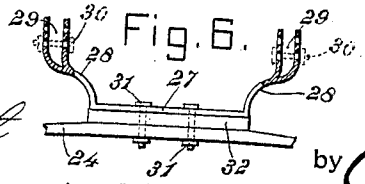

Fig. 7.

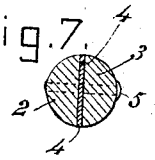

Fig. 8.

Witnesses

E. F. Attwood

Wm. Bagger

Elmer P. Hollister

Inventor

by Church & Co

Attorneys

UNITED STATES PATENT OFFICE.

ELMER P. HOLLISTER, OF JERSEY CITY, NEW JERSEY.

ROAD-CART.

No. 818,963. Specification of Letters Patent. Patented April 24, 1906.

Application filed May 15, 1905. Serial No. 260,528.

To all whom it may concern.

Be it known that I, ELMER P. HOLLISTER, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Road-Cart, of which the following is a specification.

This invention relates to road-carts or speeding-carts; and the objects of the invention are to simplify and improve the construction and operation of this class of vehicles, to reduce the weight of the same, to practically do away with the objectionable horse motion, and to present a vehicle of this class which shall possess superior advantages in point of easy-riding qualities, simplicity, durability, and general efficiency.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a rear elevation of a road-cart constructed in accordance with the principles of the invention. Fig. 2 is a side elevation of one of the thills, illustrating the relation of the same to the wheels and axle. Fig. 3 is a perspective detail view illustrating the means for connecting the spring and seat with the frame of the machine. Fig. 4 is a longitudinal vertical sectional view taken through a portion of the seat and illustrating the seat-support, a seat-bar, and a foot-rest. Fig. 5 is a perspective detail view, partly in section, illustrating the seat-adjusting means. Fig. 6 is a rear view of the seat-support. Fig. 7 is a transverse sectional view, enlarged, of one of the thills. Fig. 8 is a sectional detail view taken on the line 8 8 in Fig. 4.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The thills 1 1 of the improved vehicle are divided longitudinally and vertically nearly or quite throughout the lengths thereof to admit of the interposition between the inner and outer side members 2 3 of a vertically-disposed spacing-plate 4, of steel, the side members 2 3 being connected at their forward ends by means of transverse bolts or rivets 5, which extend through the intermediate plate 4. The rear ends of the side members 2 3 are spaced apart to form forks 6, affording bearings for the spindles 7, carrying the wheels 8. The rear ends of the thills or of the side members 2 3, constituting the thills, are bent downward in the usual manner; but the downward curves of said thills, as clearly seen at 9 in Fig. 2 of the drawings, are extended rearwardly a considerable distance in rear of the vertical plane of the spindles, which latter are connected by forked braces 10 with the forward portions of said thills—that is to say, with portions of said thills which are located in front of the downwardly and rearwardly curved portions. By this construction the curved rear portions of the thills will exert a pushing action and the braces 10 an upwardly and forwardly lifting action upon the spindles, which is extremely conducive to lightness of draft. The thills are connected by the upper and lower frame-bars 11 12, the former of which extends across the forks 6 above the wheels and is suitably connected with both side members 2 3 of the thills, while the latter frame member 12 extends to and is connected with the inner thill members 2 only. The frame members 11 12 are connected and spaced by vertical struts 13, and braces 14 connect said frame members with the members 2, said frame members being suitably bent to afford a strong and rigid construction. The thills are connected with each other in the usual manner by a cross-bar 15, which serves, primarily, for the attachment of the draft, said cross-bar being shown as reinforced by braces 16.

Upon the rear side of the frame-bar 11 are bolted or otherwise suitably secured two pairs of L-shaped brackets 17, the rearward extending arms or bracket members 18 of which are disposed in registry with the inner side members 2 of the thills. Said bracket members 18 are perforated for the passage of bolts 19, carrying clevises 20, having offsets 21, which support similar clevises 22, having offsets 23. The seat-spring 24, which is of the

ordinary bowed or arched form, is provided at each end thereof with an eye 25 for the clevis-bolt 26, whereby it is connected with the clevis 22. It will be seen that by this construction the spring 24 is supported from the frame by universal joints admitting of a freedom and flexibility of movement which largely eliminates the horse motion, since the seat-spring and related parts may remain relatively stationary while the vehicle-frame is in motion.

The seat-support consists of a bar or plate 27, terminating at the ends thereof in upwardly and outwardly extending arms 28, the extremities of which are bifurcated, as shown at 29, and provided with transverse bolts 30. Said seat-support is mounted centrally upon the spring 24, with which it is connected, as by means of bolts 31, although clips may be used and are preferred to avoid weakening the parts by perforating the same. A cushion-bar 32 is also preferably interposed between the spring 24 and the seat-support 27.

The seat-bars 33, two of which are employed, are provided with boxes 34 or other bearings, such as transverse perforations, for the bolts 30 at the bifurcated ends of the seat-supporting arms 28, with which the seat-bars are thus loosely connected, additional bolts being used, when desired, to make a rigid connection. Curved extensions 35 of the seat-arms 33 extend forwardly and are connected at their front ends with the cross-bar 15, as by means of clips 36 and bolts 37.

In manufacturing the device the seat-bars 33, with their extensions 35, may be divided vertically and longitudinally in the same manner as the thills and provided with reinforcing-plates 35′, as shown in Fig. 8, whereby great strength and ability to resist vertical strain is obtained. Foot-rests 38 are provided, each of which is composed of a flat central member 39, having at one end an arm 40, extending into a mortise 41, formed in the seat-bar, where it is secured by means of a pin 42, and a flat spring 42′, pressing against the head of said pin, to enable the foot-rest to be readily attached and removed. The forward end of each foot-rest member 39 has a flat, straight, upward, and forward projecting foot-piece 43, terminating in a hook 44, engaging the bolt 37, whereby the adjacent brace member of the seat-arm is connected with the clip depending from the cross-bar 15. It is to be understood that any other suitable means than those herein described may be employed for connecting the brace members 35 and the foot-rest members 43 with the cross-bar 15, and also that the foot-rest members may be connected with the seat-bars by means other than those herein described. The seat-bars, with their forwardly-extending braces, and the foot-rests of the construction herein described are considered important features of the present invention. Not only do these members serve to afford proper connection between the seat and the thills, but the foot-rests are of a shape which will enable the driver to place his foot flatly against the supporting members 43 without any possibility of cramping or hurting the foot, as with the curved or loop-shaped supports usually provided for the feet, and also enabling the horse to be hitched much closer than is usually the case.

The seat 45 is adjustably connected with the seat-bars by means of bolts 46, extending through longitudinal slots 47 in the seat, and through vertical apertures 48 in the seat-bars 33. The upper side of the seat is provided adjacent to the slots 47 with longitudinally-slotted plates 49, the latter being countersunk in the seat and provided with series of apertures 50. The bolts 46 are provided with T-heads 51, having depending lugs 52, adapted to engage the recesses 50. It will be readily seen that by loosening the thumb-nuts 53 upon the bolts 46 the lugs 52 of the latter may be disengaged from the recesses or perforations 50, thus enabling the seat to be moved longitudinally and to be firmly secured at various adjustments by retightening the nuts 53.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. The general construction is simple and inexpensive and the device is thoroughly practical and efficient for the purposes for which it is intended

Having thus described the invention, what is claimed is—

1. A longitudinally and vertically divided thill having side members spaced apart at their rear ends, and a reinforcing-plate inserted between the side members in front of their rear ends.

2. A longitudinally and vertically divided thill having side members spaced apart at their rear ends, and a resilient reinforcing-plate inserted between the side members in front of their rear ends.

3. In a road-cart, longitudinally and vertically divided thills, reinforcing-plates inserted between the side members of said thills, means for connecting said side members throughout a portion of their lengths, means for spacing apart the rear ends of said side members, and wheels journaled in the forks thus formed.

4. In a road-cart, longitudinally and vertically divided thills, reinforcing members interposed between the front ends of the side members of said thills, means for connecting said side members and reinforcing members, means for spacing apart the rear ends of the side members of the thills said side members

being downturned in rear of the reinforcing members, and wheels supported for rotation in the forks thus formed.

5. In a road-cart, thills having rearwardly and downwardly curved bifurcated rear ends, and wheels supported for rotation near the extremities of the forks thus formed at points which are in advance of the rear extremities of the arcs presented by the downward curves of the thills.

6. In a road-cart, thills having rearwardly and downwardly curved bifurcated rear ends, and wheels supported for rotation near the extremities of the forks thus formed at points which are in advance of the rear extremities of the arcs presented by the downward curves of the thills; in combination with bifurcated braces connecting the wheel-supports with the thills in front of the downward curves of the latter.

7. In a road-cart, longitudinally and vertically divided thills, reinforcing-plates between the thill members, connecting means for the latter, a cross-bar connecting the thills, a frame-bar extended between the thills and spacing the side members of the latter in rear of the cross-bar, an auxiliary frame-bar connecting the inner side members of the thills, struts connecting the frame-bars, and wheels supported for rotation in the forks formed by the spaced side members of the thills.

8. In a road-cart, a pair of thills having downturned bifurcated rear ends, frame members connecting the thills, wheels supported for rotation in the forks of the thills, L-shaped bracket members supported upon one of the frame members, clevises supported by said bracket members, a seat-spring having terminal eyes, and clevises connected with said eyes and engaging the clevises supported by the bracket members; said interengaging clevises having offset engaging portions.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELMER P. HOLLISTER.

Witnesses:
M. A. ROBINSON,
E. H. HOLLISTER.