

(No Model.)

2 Sheets—Sheet 1.

J. H. WHITAKER.
ROAD CART.

No. 444,033.

Patented Jan. 6, 1891.

Fig. 1.

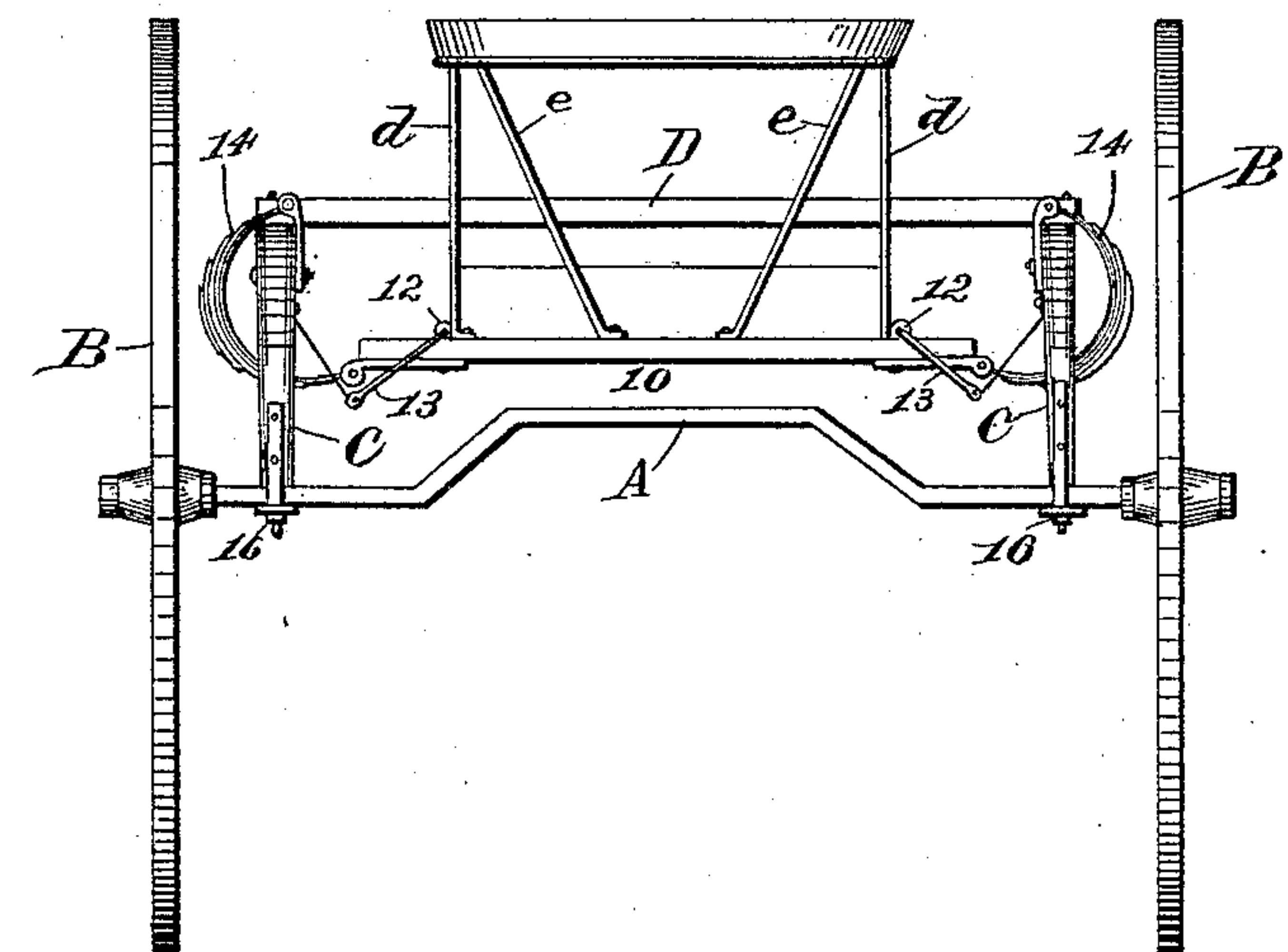
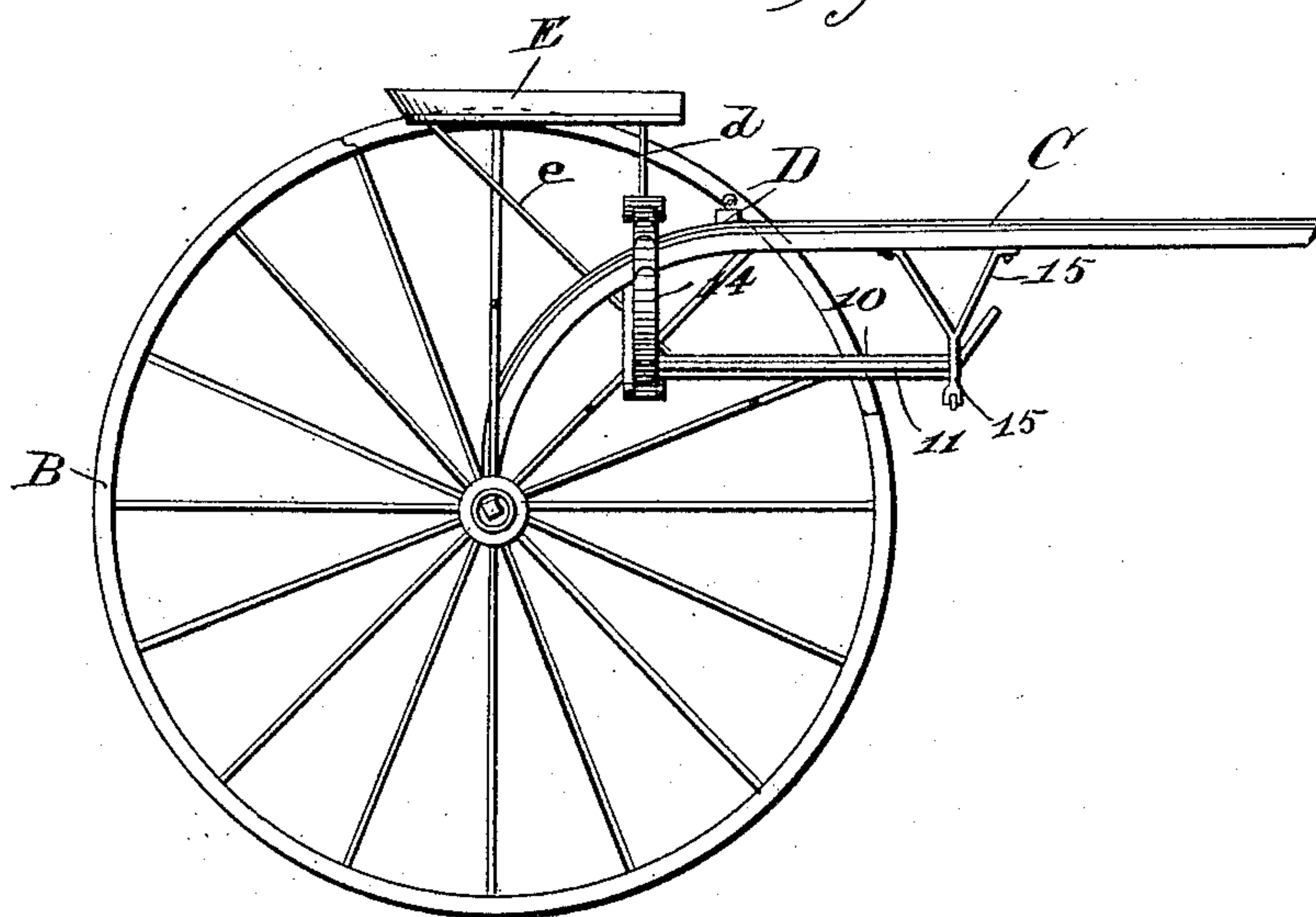


Fig. 2.



Witnesses:

Mary L Parker
H. H. Humphrey.

Inventor.

John H Whitaker
per Wm K White
Attorney

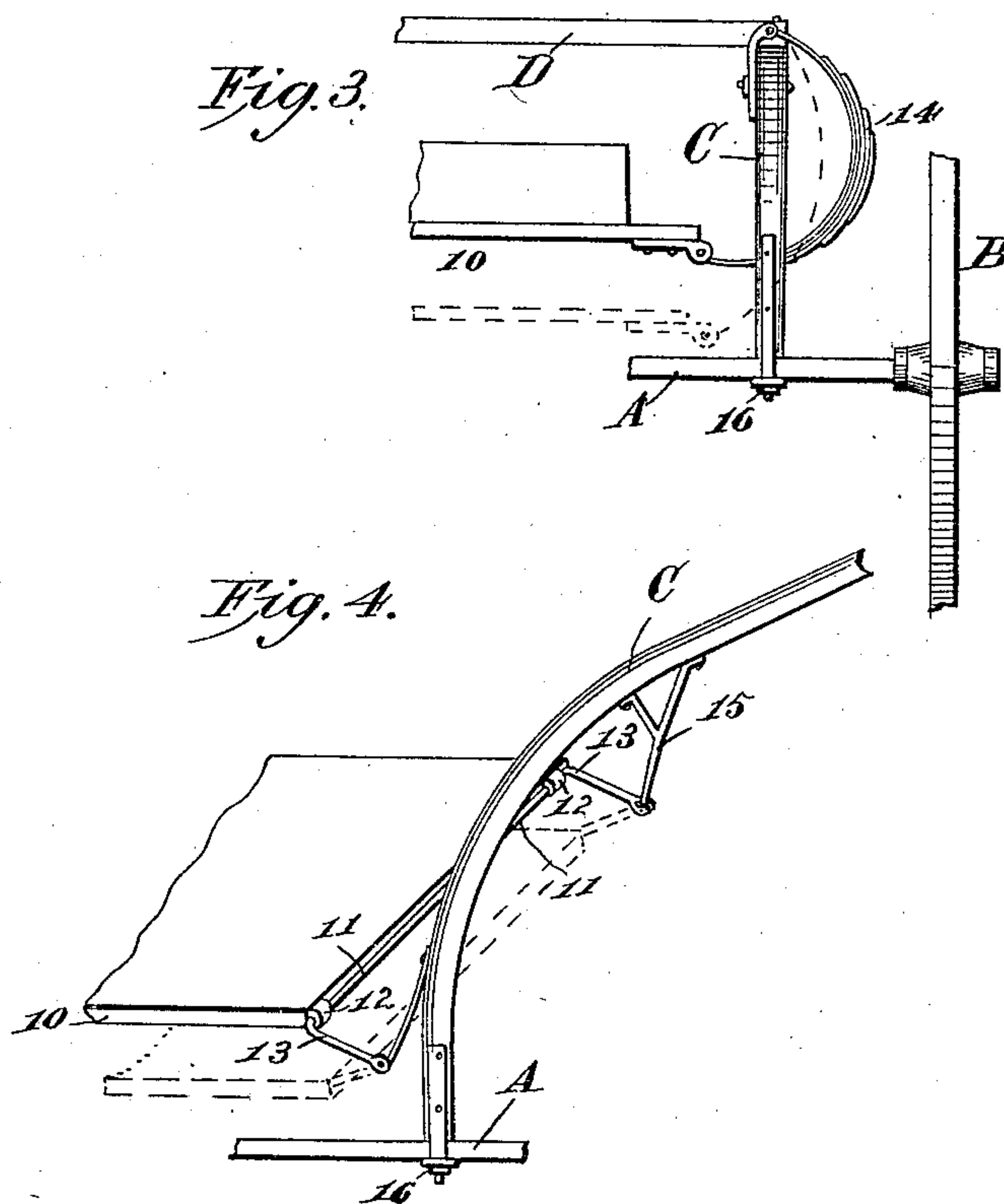
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UNITED STATES PATENT OFFICE.

JOHN H. WHITAKER, OF DAVENPORT, IOWA.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 444,033, dated January 6, 1891.

Application filed March 28, 1890. Serial No. 345,791. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WHITAKER, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Road-Carts, of which the following is a specification.

My improvements in road-carts relates to the means of hanging the cart-body between and to the cart-shafts at or near their rear ends, and to the means of attaching such body to springs; and the objects of my improvements are, first, to suspend such body between and to the shafts so that its ends will move up or down in unison, or, in other words, one end will not tilt up when the weight is placed upon the opposite end, as is the case when the seat is located at the end of the body and the driver seated thereon, and, third, to arrange so that the body may bear upon springs, permitting independent tension, but moving in unison laterally. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a rear view of the road-cart, showing my invention. Fig. 2 is a side view of the same, the felly and spokes of the right-hand wheel being removed and several spokes of the opposite wheel also broken away to afford a better view of my invention. Fig. 3 is a sectional rear view showing one of the semi-elliptical springs hinged at one end to the shaft, the other end hinged to a side of the body, the horizontal rod, arms, and shaft-hangers being removed; and Fig. 4 is a rear sectional view in perspective showing one of the horizontal rods, its arms, and shaft-hangers, the spring being removed.

Similar letters and figures refer to similar parts throughout the several views.

Briefly stated, my invention consists, first, in interposing between the shafts of the cart, near their rear ends, the cart-body and interposing between each side of such body and the respective shaft a bar in a corresponding parallel plane with the cart-body and shaft, hinged to the cart-body at one side and on the opposite side to the shaft, and providing such shaft at the point of hinging with the required amount of flexibility. As a means of providing such flexibility, the shafts are

provided with hangers having slight flexibility or yielding power, and to the lower ends of which such bar may be hinged. For cheapness and symmetrical appearance I prefer a rod terminating in right-angled elbows, the rod being hinged to the side of the cart-body and each end of the elbow hinged to a registering hanger from the shaft.

My invention consists, secondly, in suspending or supporting the cart-body at or near its rear end or at opposite sides on a spring, each of such springs arranged to permit vertical movement to the cart-body at the point of such connection, as also to permit lateral movement to such cart-body at such point.

These two features of my invention may be used in combination or be used separately in a road-cart.

A is the axle of a road-cart; B B, the wheels; C C, its shafts; D, the cross-bar of the shafts; E, the seat supported upon the standards *d d* and braces *e e* from the floor or bottom of the cart-body.

10 is the floor or bottom of the cart-body.

11 are horizontal rods, one of which is hinged on the edge of each side of the floor or bottom of the cart-body, in the manner as shown by a view of one side in Figs. 2 and 4, or each may be hinged on the upper surface near each edge of such bottom or floor, as shown in Fig. 1. Such rods may be hinged by staples 12, or any other suitable form of hinging may be adopted. Each rod at its outer end is provided with a short arm or bent portion 13 at right angles to the horizontal part of the rod. Each shaft is provided with two hangers 15 and 15, the upper ends of each of which are attached to one of the shafts of the road-cart at such distances apart as will bring their lower ends at corresponding distances with the outer ends of the arms 13 of the horizontal rods 11. The lower end of each hanger of each shaft is hinged or coupled to the outer end of the registering arm of the horizontal rod 11 adjacent to the shaft to which such hangers are attached, as illustrated in Fig. 4. For the purpose of making such hinge or coupling, the outer ends of the arms may be slotted vertically, so that the ends of the hangers may enter into such slots, and such ends hori-

zontally perforated to accommodate a pin to secure them together; or any other method of hinging or coupling such ends together may be adopted.

5 14 14 are two semi-elliptical springs composed of one or more leaves, the lower ends of each of which are hinged, respectively, to opposite sides of the cart-body, and preferably near the rear end thereof, and the upper
10 end of each respective spring is hinged to a shaft at the side of its respective body. Any of the forms of hinging suitable and well known to persons skilled in the art may be used for hinging the respective ends of the
15 spring to the cart body and shaft. Hence I do not deem it necessary to particularly describe a form or construction of hinge for this purpose.

The rear ends of the shafts are secured to
20 the axles by couplings 16 of any desired form. It will be understood that the cart-body and its seat, as also the shafts, axle, and wheel, may be constructed in any desired form which will permit of applying my device, and the
25 form of my device may be varied and changed without departing from the scope of my invention.

From the description I have given the construction and mode of operation of my invention
30 will be readily understood by persons skilled in the art to which the invention appertains without further description.

I am aware that heretofore it has been proposed to use torsion-springs secured to the
35 vehicle-body having ends flattened out and shaped into cylindrical heads and attached to the lower ends of pendent hangers hinged at their upper ends to the thills, so such hangers could swing laterally inward against the
40 force exerted by springs upon the thills, and

also that it has been proposed to use double-armed crank-rods having their central longitudinal portions journaled in bearings attached to the vehicle-body, the ends of the front arms journaled in bearings secured to 45 the thills, and the rearwardly-bent projections of their rear arms journaled in bearings attached to the axle. I do not claim, broadly, these features, as in my invention the front and rear arms of each rod have their bearings 50 in pendent hangers from the thills, and such rods and arms are not torsional springs, nor are the hangers arranged to swing inwardly upon a pivot or hinge against the force exerted by springs attached to the thills. 55

What I claim as new, and desire to secure by Letters Patent, is—

1. In a road-cart, the combination, with its axle, wheels, shafts, and body, of the body between such shafts and at its front ends suspended to the shafts, the semi-elliptical 60 springs, the rear ends of such body hinged to a spring at opposite sides, and each spring hinged at its upper end to a shaft, substantially as described. 65

2. In a road-cart, the combination, with its axle, wheels, shaft, and body, of the two horizontal rods, the arms attached to each of said rods, each rod hinged to a side of the body, hangers attached to each shaft, each arm of 70 a rod hinged to a hanger, the semi-elliptical springs, the rear end of such body hinged to a spring at opposite sides, and each spring hinged at its upper end to a shaft, substantially as described.

JOHN H. WHITAKER.

Witnesses:

GEO. E. GOULD,
T. A. MURPHY.