

(No Model.)

W. B. DODGE.
ROAD CART.

No. 439,056.

Patented Oct. 21, 1890.

Fig I.

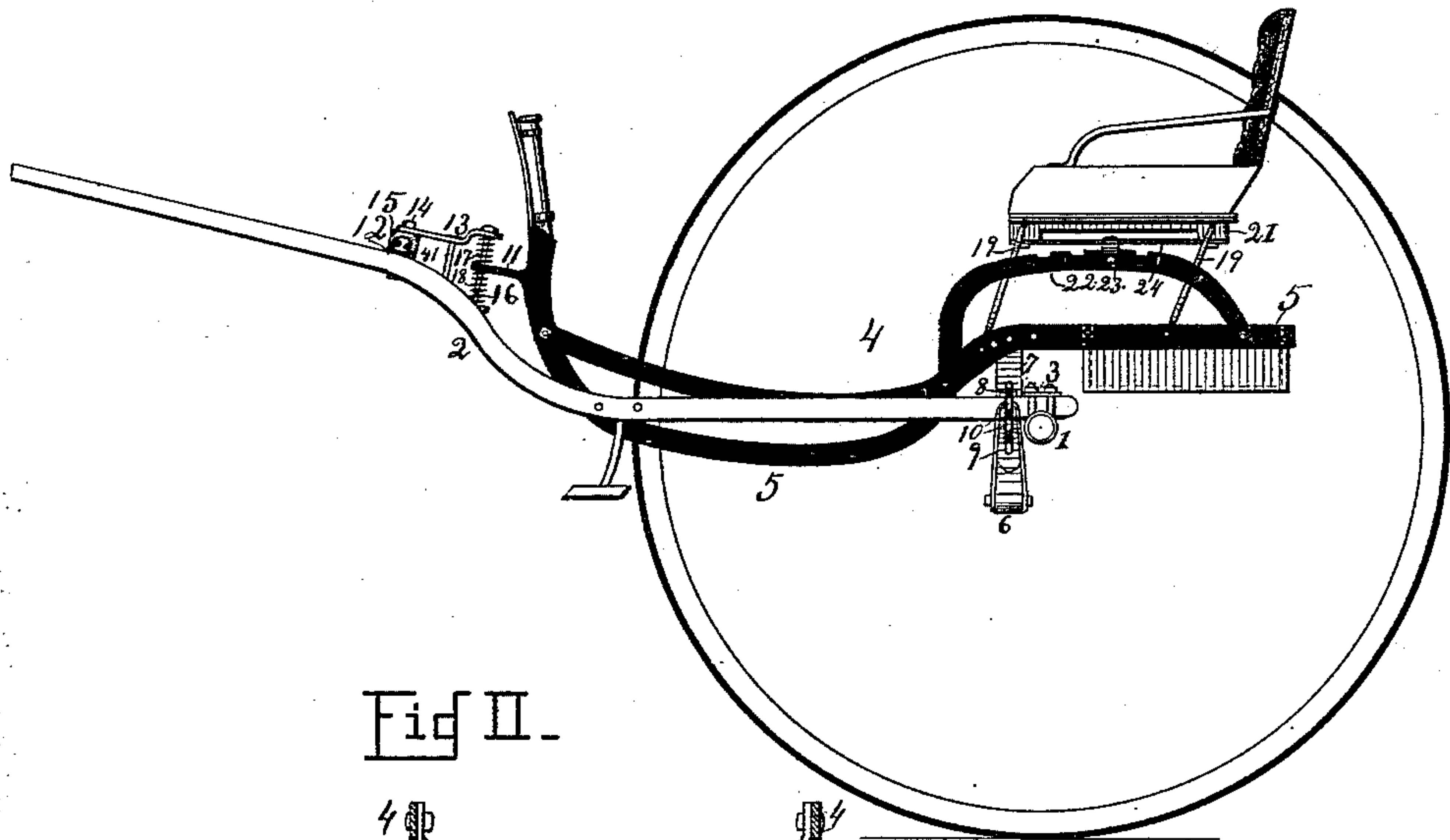


Fig II.

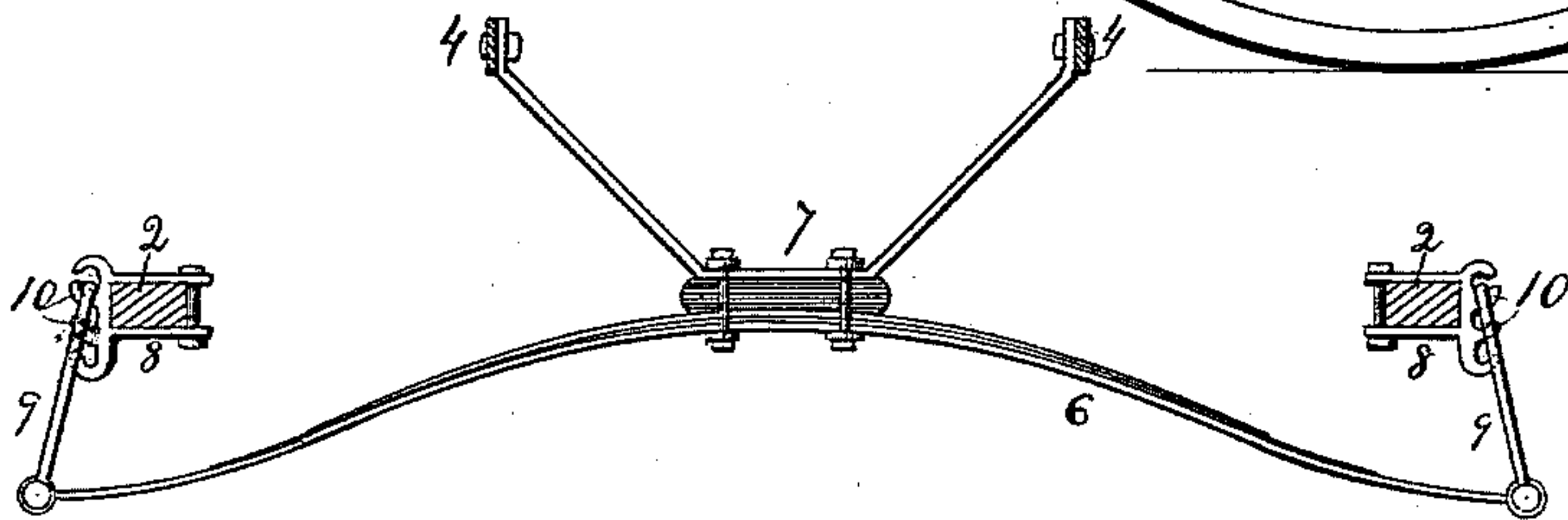


Fig III.

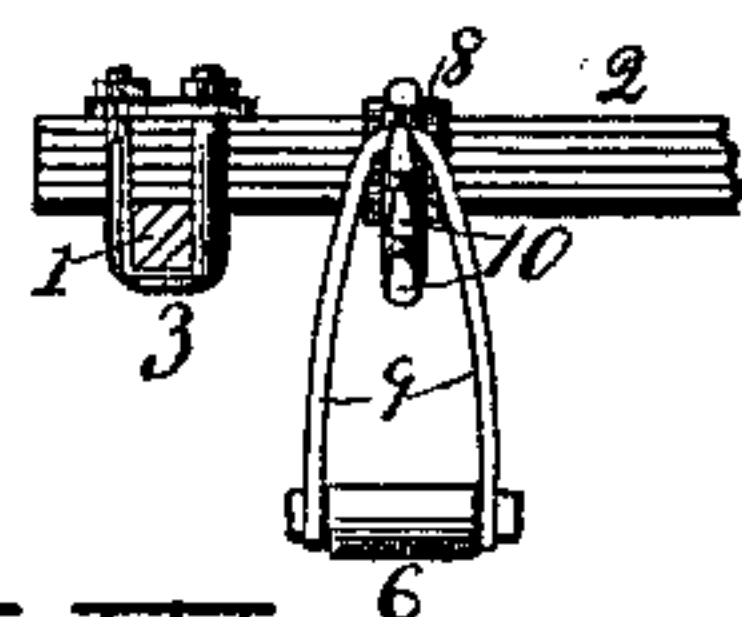


Fig IV.

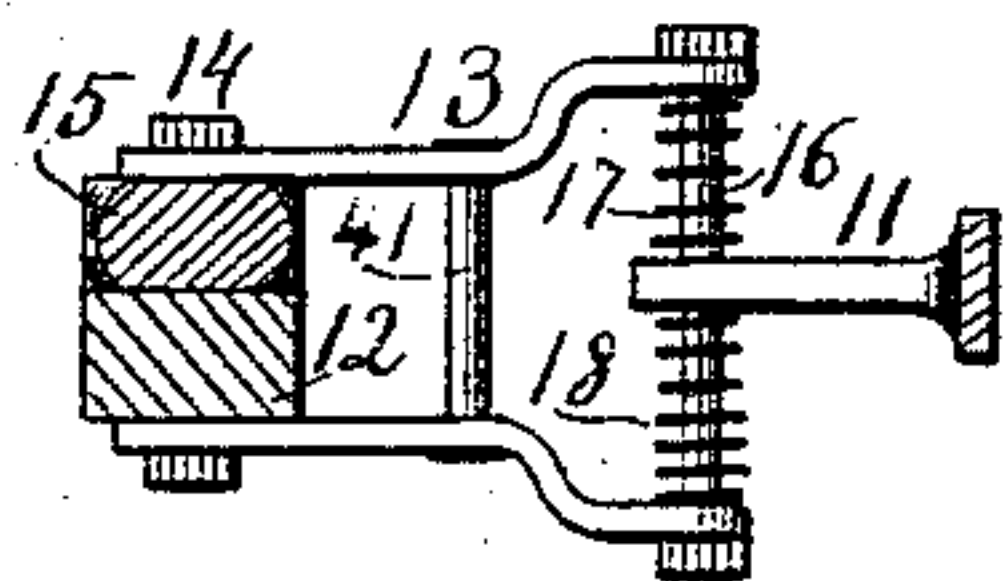


Fig VI.

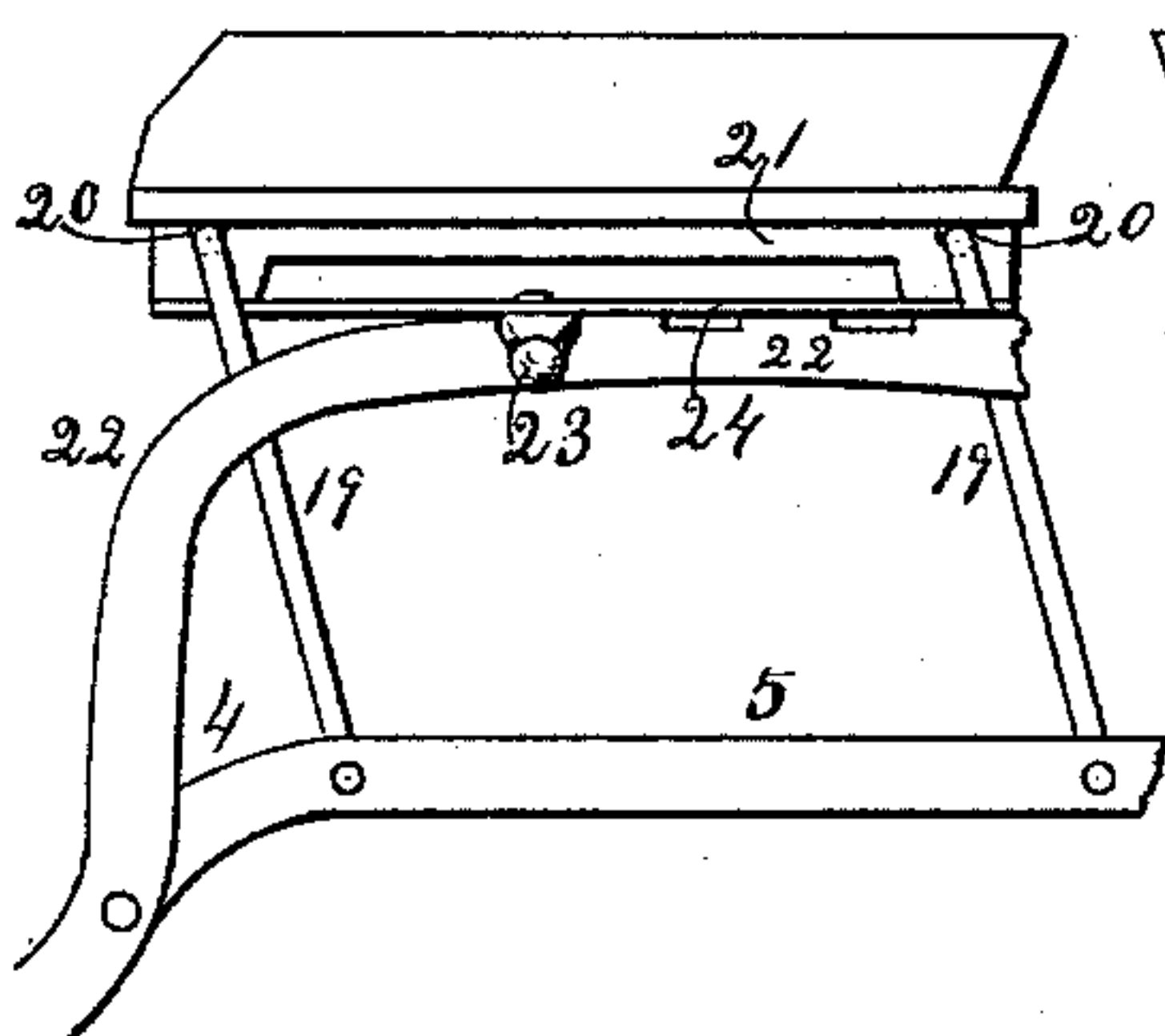


Fig VII.

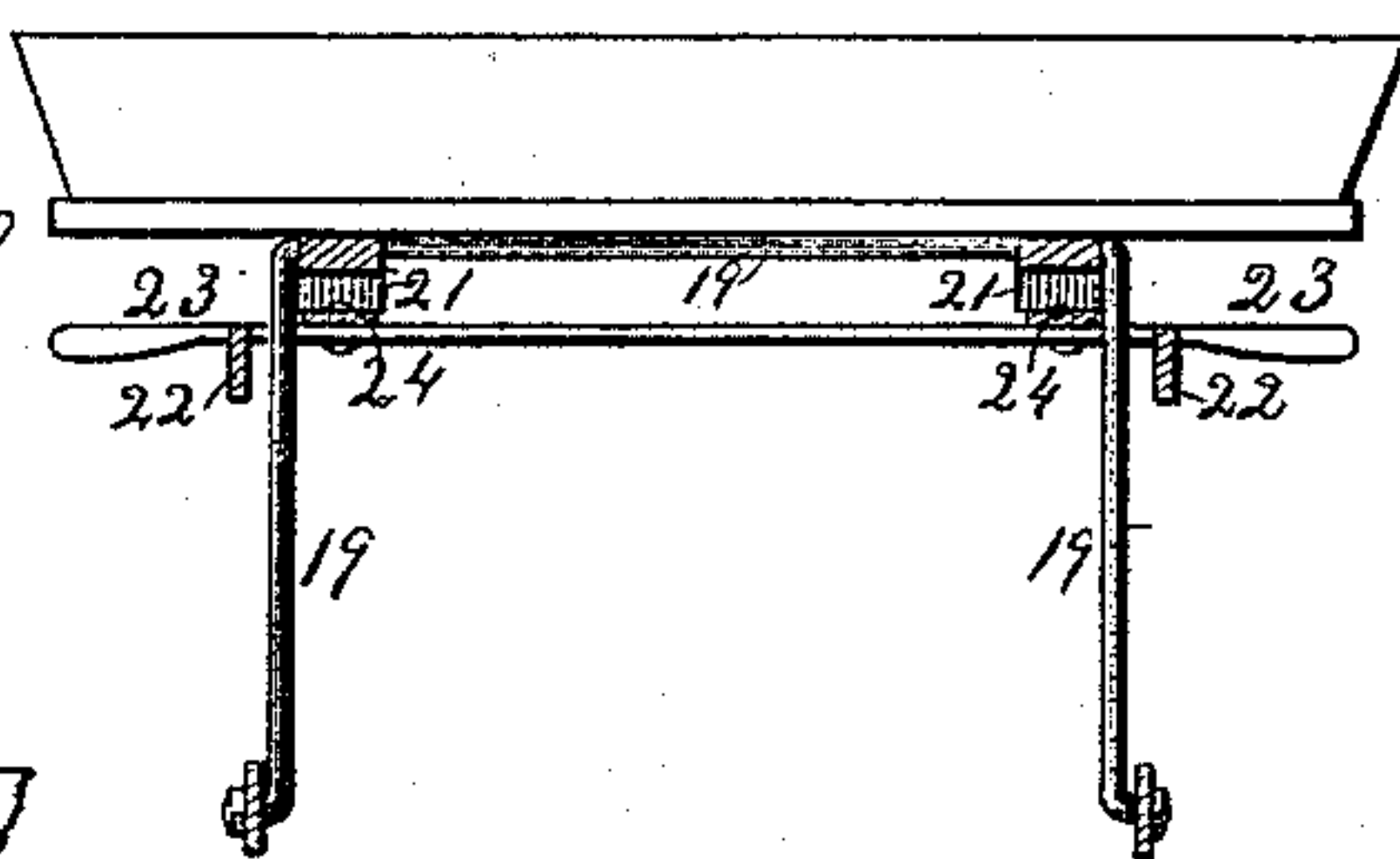
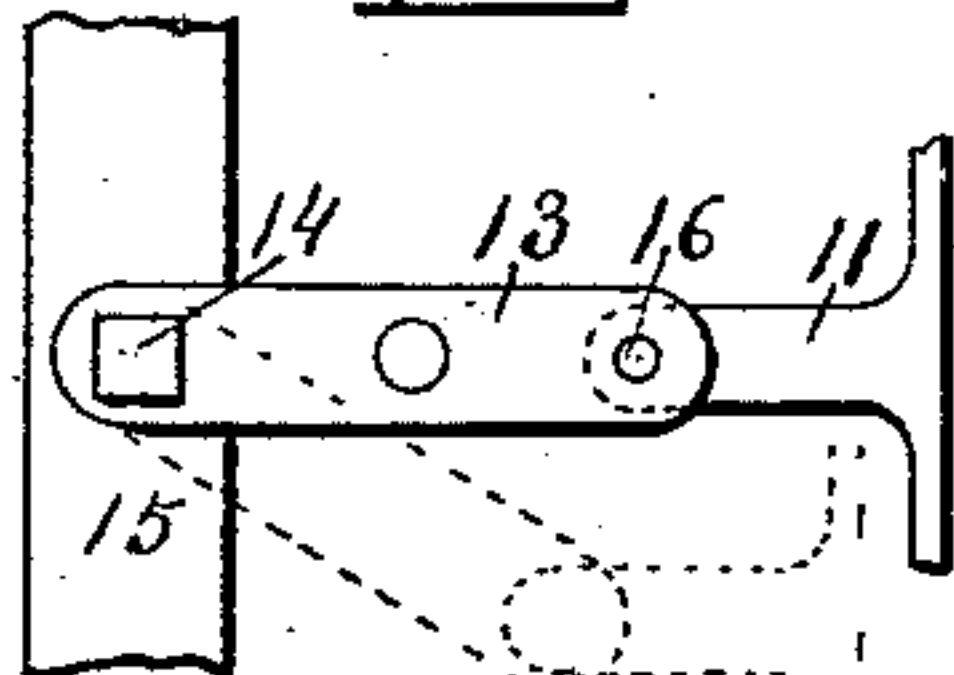


Fig V.



Witnesses

O. E. Stevens.
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Inventor

William B. Dodge

By his Attorney W. E. Stevens.

UNITED STATES PATENT OFFICE.

WILLIAM B. DODGE, OF STUART'S DRAFT, VIRGINIA, ASSIGNOR OF ONE-HALF
TO J. H. RANKIN, OF SAME PLACE.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 439,056, dated October 21, 1890.

Application filed May 3, 1890. Serial No. 350,486. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. DODGE, a citizen of the United States, residing at Stuart's Draft, in the county of Augusta and State of Virginia, 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.

This invention relates to that class of light vehicles which are mounted on two wheels by means of spring-connections and usually called "road-carts," and its object is to overcome the horse-motion; to soften as much as possible the jolting effect of travel on rough roads, whether the said jolts are directly forward or to one side; to provide means for properly balancing the weight of the load over the axle, whether there be one or more riders and whether the vehicle be traveling upon level ground or upon ascending or descending grades, in order that the cart may not tip backward in going uphill nor bear too heavily upon the horse in going down; means whereby the body and seat will automatically accommodate themselves to sidewise tipping of the axle, so as to remain in nearly a level position while traveling upon a sidling road, and some minor objects, as will hereinafter appear.

To this end my invention consists in the construction and combination of parts forming portions of a road-cart, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I is a side view of a road-cart, showing my invention without the road-wheel. Fig. II is a rear view of the main spring and its hangings, and Fig. III is a side view of the same. Fig. IV is a side view, and Fig. V is a top view, of the forward hangings for the body. Fig. VI is a side view, and Fig. VII is a rear view, partly in transverse vertical section, showing the seat-hangings.

1 represents the axle, which may be straight or of any other form preferred.

2 represents the thills, rigidly secured at their rear ends to the axle.

4 represents the body, preferably made

with curved iron sides 5, supporting any suitable flooring and dash-board.

6 represents the main spring, upon the middle of which the body is secured by means of a bolster 7. The spring is bow-shaped and hung at its ends upon the thills by means of clips 8 and stirrups 9. These clips are rigidly bolted to the thills and provided each with two or more hooks 10, upon which the stirrups 9 may be hung to raise or lower the body. The stirrups hang loosely both to the said hooks 10 and to the spring 6, so that the spring and the body supported thereon may swing freely sidewise, and each stirrup straddles its supporting-hooks 10 with its legs so far apart as to permit the spring and body to swing freely forward and backward.

The spring 6 is longer than the transverse distance between the hooks 10, in order that both stirrups 9 may slant outward at their lower ends, so that when the body swings sidewise one end of the spring will be raised as much as the other is lowered. Now if one wheel is on higher ground than the other, the body and spring will gravitate toward the lower side, the stirrup at the upper side will swing downward, and the other stirrup will swing upward to the same amount, thus keeping the body and seat level. Furthermore, if the cause of one wheel's rising be a stone or other obstruction suddenly run over there is very little jolt, because the sudden rise of the spring at one end is compensated for by its fall at the other end, so that the body supported midway thereon is not materially raised, and the spring readily deadens the little jolt that there is, so that it cannot be felt by the rider. If the two stirrups were hung vertically or parallel to each other, the body would always remain parallel with the axle and be equally tipped and jolted, and if they hung inward with their lower ends nearest together the opposite effect to that described as my invention would be produced, and the body would be caused to tip more than the axle.

From the frame of the body an arm 11 projects forward on the plane of the cross-bar 12, which connects the thills, and is connected with the said cross-bar by means of a clevis

13. This clevis is hinged at its forward end upon a vertical bolt 14, which passes through the cross-bar 12, which vertical bolt may also be the attaching-pin for the whiffletree 15.

5 16 is a vertical bolt in the rear end of the clevis 13, upon which the arm 11 is fitted to rise and fall freely.

41 is a rod rigidly connecting the upper and lower arms of the clevis 13.

10 17 is a spiral spring around the bolt 16 above the arm 11 to elastically resist upward motion thereof, and 18 is a similar spring below the arm to elastically resist downward motion.

15 The seat is located relative to the hangings 6 9 10, so that the weight of the rider tips it backward a little and presses upward on the spring 17; but these hangings are a little forward of the axle, so that the weight of the 20 body, seat, and rider may be balanced as nearly as possible over the axle. To maintain this same balance while ascending and descending steep hills, the seat is mounted upon two bails 19, each extending across un- 25 der the seat through hinge-bearings 20, notched into longitudinal bolsters 21, secured to the seat, and each bail is pivoted at its ends to the side bars 5 of the body. A seat thus hung may move forward and back, and 30 yet be held in a horizontal position by the two bails.

22 represents notched segments rigidly secured to the side irons 5, and 23 is a spring-bolt hung to the bolsters 21 by means of springs 35 24 and adapted to engage the notches in segments 22 to hold the seat fixed over the axle. The ends of the bolt 23 project beyond the segments far enough to serve as handles, which the rider may raise to disengage the 40 bolt from the segments and permit the seat to be swung forward or back to keep the weight centrally over the axle in going uphill and down and to adjust it for the weight of one or two riders to make it easier for both horse 45 and rider. A horse rises from the ground by a steady motion, but he comes down with a jolt, and for this reason I balance my cart-body so as to bear upward normally upon the thills so far as the body and load are con- 50 cerned, while the load is brought centrally over the axle by the hangings of the body being a little forward thereof. I hinge the clevis 13 to the cross-bar 12, in order that it may coact with the side hangings in permitting 55 the body to swing sidewise and forward and back.

25 represents a receptacle or box, which in itself is no unusual thing in carriages; but in order that it may not interfere either with the 60 independent movement of the seat on its bails nor with the axle when the body swings about I hang it between and below the side irons 5 and to the rear of the axle. The thills extend horizontally forward to the front of the body 65 on a level with its side rails 26 to be out of the way in getting into and out of the cart,

and they are bent upward at the front of the body to bring the cross-bar 12 onto the proper level at which to attach the whiffletree and the forward arm 11. 70

Having thus fully described my invention, what I believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination, in road-carts, of an axle, a pair of thills secured rigidly thereto and ex- 75 tending horizontally forward therefrom, clips having two or more hooks, each secured to the outer sides of the thills forward of the axle, a bow-shaped spring extending cross-wise beneath and beyond the thills, links piv- 80 oted to the ends of the spring and freely hung upon the said hooks in a position slanting materially outward from the hooks to the spring, and a cart-body attached midway upon said spring, substantially as shown and de- 85 scribed, whereby the body is free to swing both longitudinally and laterally, at the same time tending to maintain the seat nearer level than the axle.

2. The combination of a cart-body hung at 90 its forward end to the running-gear by a central hanging having both lengthwise and side-wise free motion, a bow-shaped spring supporting the body midway and extending across beneath its points of support, and 95 links pivoted to the outer ends of the spring and hung upon the running-gear, each in an outwardly-slanting position, substantially as shown and described, whereby both the seat 100 portion and the forward end of the body are at liberty to swing in any required direction to maintain the seat in a nearly level position, both on steep hills and sidling roads.

3. The combination of a vehicle-body hav- 105 ing retaining notches at its sides, a seat having forward and backward movement upon the body, and a spring-bolt rigidly secured midway under the seat and adapted to en- 110 gage the said notches, the ends of the said bolt projecting horizontally as handles be- yond the notches, substantially as shown and described.

4. The combination of a cart-body pro- 115 vided with the perforated forwardly-extending arm 11, thills fixed to an axle and having a cross-bar joining them in front of the body, a stirrup hinged at its forward end to a vertical pin in the said cross-bar and hav- 120 ing a vertical bolt at its rear end, and two springs upon the said rear bolt, the aforesaid arm being freely fitted upon the said bolt between the springs, substantially as shown and described.

5. The combination of a cart-body provided with a forwardly-extending arm, a spring 125 supporting the same midway and hung upon the running-gear, with laterally and longitudinally swinging hangings and a stirrup vertically pivoted to a cross-bar of said running-gear forward of the body, springs upon a bolt 130 in the free end of the said stirrup, and the said forwardly-extending arm of the body

freely fitted upon the said bolt between the springs, substantially as shown and described.

6. The combination of a cart-body having two notched segments fixed to its sides, a seat,
5 two bails extending across beneath and journaled thereto and pivoted at their ends to the sides of the body, and a spring-bolt attached to the seat and adapted to engage the notches

of the said segments, substantially as shown and described.

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

WILLIAM B. DODGE.

Witnesses:

E. M. CUSHING,
R. B. HUNDLEY.