(No Model.)

R. D. SCOTT.

ROAD CART.

No. 457,621. Patented Aug. 11, 1891.

Fig. 1.

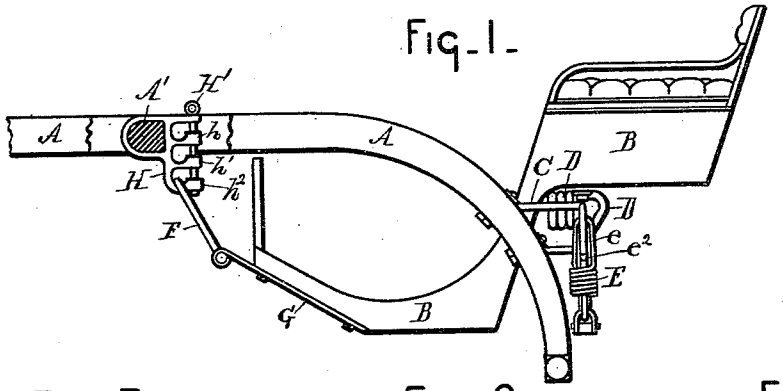


Fig. 3.

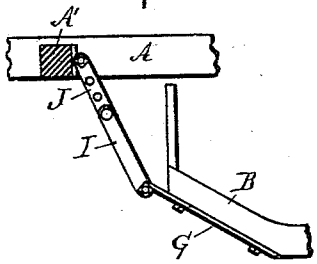


Fig. 2.

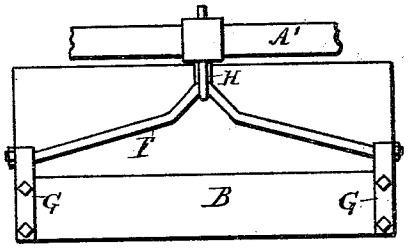


Fig. 4.

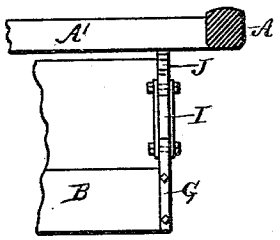


Fig. 6.

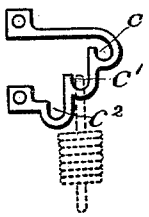
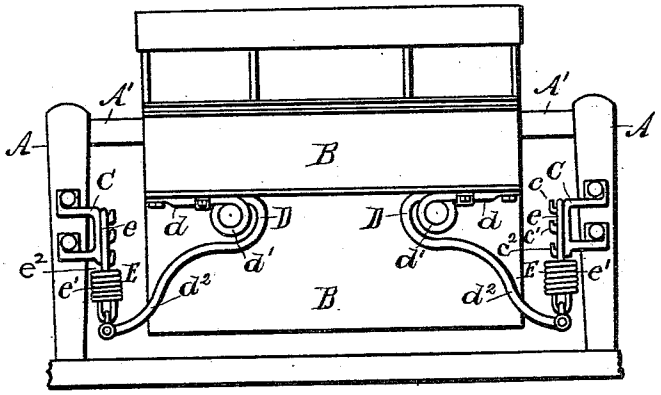


Fig. 5.



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ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 457,621, dated August 11, 1891.

Application filed December 12, 1890. Serial No. 374,460. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. SCOTT, a citizen of the United States, residing at Pontiac, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Road-Carts; and I do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a side elevation of a road-cart embodying my invention. Fig. 2 is a front view of the same, with the shafts removed, showing only the cross-bar of the shafts. Fig. 3 is a variation in the means for elevating and depressing the forward end of the body. Fig. 4 is a front view of the construction shown in Fig. 3. Fig. 5 is a rear view of the road-cart. Fig. 6 is a variation of the bracket.

My invention has for its object to improve the construction of a road-cart so as, first, to provide it with means for neutralizing the horse motion; second, to provide it with means for raising and depressing the seat so as to give it a higher or lower altitude with respect to the horse without affecting its spring action; third, to provide it with means whereby the rear end of the cart-body may be raised or lowered without altering the altitude of the forward end of the body, thereby throwing the center of gravity of the load toward the front or toward the rear, as the case may be, and so adapting the vehicle respectively for a heavier or a lighter load; also in the provision of means whereby the forward end of the body may be independently raised or lowered without disturbing the altitude of the seat, thereby enabling a rider to gain an easier or stiffer action of the springs, as the case may be, by throwing the center of gravity of the load farther to the rear or farther to the front, respectively.

In carrying out my invention, A represents the shafts, and B the body, of my improved road-cart.

A′ is the cross-piece of the shafts.

C represents hangers upon the shafts for sustaining the body therefrom. These hangers are provided with hooks at different altitudes and preferably overhanging each other—that is to say, the upper hook c is offset beyond the hook c', and this likewise is offset beyond the hook c^2, there being as many of these hooks as may be desirable.

D represents springs beneath the body of the vehicle and fastened thereto at one end d, thence coiled at d', and terminated in a free end d^2, which projects downward and outward, and at its extremity is clipped to a spiral spring-link E. This link has a loop e at its upper end, which engages with the hooks $c\,c'\,c^2$, &c. It will be observed that this loop e projects upwardly from the coiled portion e' of the link, so as to leave at e^2 a recess. This construction permits the loop to be hooked over any one of the hooks $c\,c'$, &c., and the shoulder beneath the said hook will set into the said recess e^2, permitting the coiled portion e' to swing laterally and longitudinally beneath the said hook. This enables me to bring the said spring-link well out, nearly parallel with the shaft, and yet allow it to have a free lateral and longitudinal movement without its coil portion e' striking or binding against the said bracket C. This also enables me to project the free end d^2 of the spring D well out outwardly toward the shaft, thereby adding to its elasticity an easy action.

F is a bail or stirrup at the front of the body, secured at its ends to suitable straps or body-irons G, and at its middle it is adapted for engagement with a bracket H at the middle of the cross-bar of the shafts. This bracket is provided with hooks $h\ h'\ h^2$ at different elevations for the reception of said bail or stirrup, and a locking-pin or equivalent H′ may be employed for closing said loops and preventing accidental disengagement of the bail or stirrup therefrom.

I would have it understood that instead of using the bail or stirrup I may employ independent links or suspenders I, one on each side of the front of the body, and connect the same with brackets H, correspondingly located adjacent to the shafts at both ends of the cross-bar. So, also, instead of using the

form of bracket H, (shown in Fig. 1,) I may employ simply a separate link J, provided with a series of holes whereby the links or suspenders I or the bail G may be engaged therewith at different altitudes.

I would also have it understood that I prefer the form of body-spring D illustrated in the drawings, because this form gives support to the body close to its edges and prevents the disagreeable sagging of that side of the vehicle which happens to be more heavily loaded than the other side, a condition frequently met with in vehicles of this class, and especially such as have their forward ends sustained from a single point midway of the shafts.

I am also enabled to get a much stronger form of spring at a lower cost, and with greater elasticity in proportion to its strength than where a straight spring or semi-elliptical or other similar form of spring is employed; but the feature of elevating and depressing the forward end of the body, and the peculiar construction of spring-link at the rear end of the body and its adjustability up and down, are equally applicable regardless of what form of body-spring is employed, and I would therefore not be limited in the employment of these features to any particular form of body-spring.

The operation of this device is as follows: In the first place, the horse motion is converted into a horizontal swinging motion of the body, this being due to the fact of its suspension from links both at the front and rear of the body. Secondly, should a person have a high horse, or should he for any reason desire that his cart-body be adjusted bodily to a higher or lower level without altering the spring action, this may be accomplished by raising the bail G or suspender I into higher or lower hooks h, h', or h^2, and the rear end of the body may be in like manner raised or lowered into the corresponding hooks c c' c^2, &c. Then, again, the rider may find that with his seat at the desired altitude the spring action is too stiff. He may correct this without altering the altitude of his seat by simply raising the bail G into a higher hook. This has the effect to shift the center of gravity of the load farther back, and so brings greater weight upon the springs and causes them to operate with a more easy action. Again, should he desire to carry another person with him, and for this reason wish to maintain his seat at practically the same altitude, he may raise the rear links E into higher hooks c c', &c., so that with the increased load the depression of the springs will bring the seat to the proper level. Again, a rider may increase the stiffness of his spring action by raising the rear of the body without altering the forward portion of the body, accomplishing the object by throwing the center of gravity of the load forward. It is thus observed that a rider may stiffen the action of his springs to a stronger degree by raising the rear body-supporting links into their highest positions, and then, if the spring action is not sufficiently stiff, he may drop the forward portion of his body by causing the bail G to rest in the lowest of the hooks h h', &c. He therefore is enabled to throw the center of gravity of the load very considerably forward and to accomplish as great a stiffening action as might be accomplished by a much greater elevation of the rear of his body.

What I claim is—

1. In a road-cart, the combination, with the body and shafts, of a pivoted bail or suspenders and a bracket with suspending-hooks at different elevations, one being attached to the body and the other attached to the shafts, whereby the forward end of the body is suspended and adapted to be adjusted to a higher or lower level, and in connection therewith suspending-links, and a bracket with supporting-hooks at different elevations, one being engaged with the body and the other with the shafts, whereby the rear of the body may be adjusted to a higher or a lower level, substantially as and for the purposes described.

2. In a road-cart, the combination, with the body and shafts, of a pivoted supporting bail or suspenders at its forward end and connected with said body and shafts, means for adjusting the forward end to a higher or lower level, and in connection therewith a body-spring engaged at its free end with a suspending-link, a bracket on the shaft, with which said link engages, and means for adjusting the end of the spring to a higher or lower altitude, substantially as and for the purposes described.

3. In a road-cart, the combination, with the body and shafts, of a pivoted bail or suspenders at the forward end of the body and connected with said body and shafts and means for adjusting the said forward end to a higher or lower level, and in connection therewith a body-spring connected with the body and with a spring-link pivoted to its free end, a bracket on the shaft adapted to engage said spring-link, and means for adjusting the end of said body-spring to a higher or lower level, substantially as and for the purposes described.

4. The combination, with the shafts and brackets C, with hooks at different altitudes, each one offset beyond the other, as described, of the spring-link E, having flat loop e, coiled portion e', and recess e^3, adapted to enter beneath the shoulder under the suspending-hook, said spring-link adapted at its lower end to be clipped to a body-spring, substantially as and for the purposes described.

5. The combination, with the shafts, of a bracket H, provided with hooks for adjusting the adjacent portion of the body to a higher or lower level, and a lock for temporarily clos-

ing said hooks against accidental disengagement of the engaging-link, substantially as and for the purposes described.

6. The combination, with the shafts, of a bracket H, provided with hooks at different altitudes for engagement of a body-supporting link, and a locking-pin for temporarily closing said hooks against accidental disengagement of the engaging-link, substantially as and for the purposes described.

In testimony whereof I sign this specification in the presence of two witnesses.

ROBERT D. SCOTT.

Witnesses:
MARION A. REEVE,
WELLS W. LEGGETT.