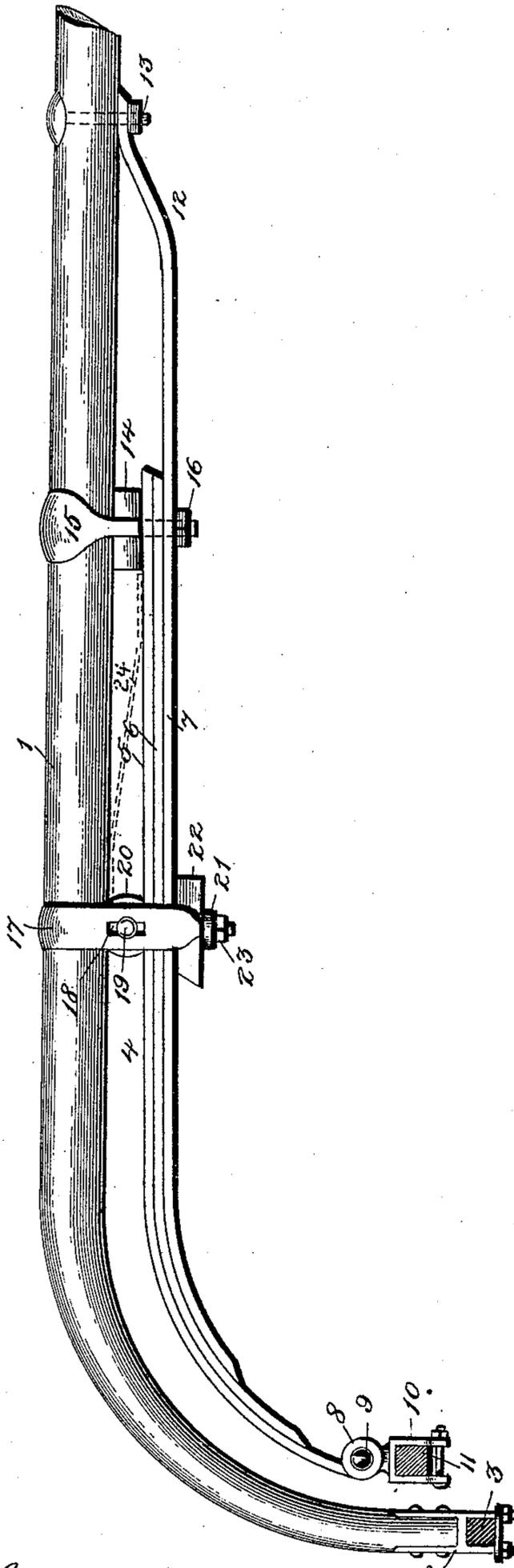


(No Model.)

R. E. JONES.  
ROAD CART SPRING.

No. 397,236.

Patented Feb. 5, 1889.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

RICHARD E. JONES, OF GOLDSBOROUGH, NORTH CAROLINA.

## ROAD-CART SPRING.

SPECIFICATION forming part of Letters Patent No. 397,236, dated February 5, 1889.

Application filed October 25, 1888. Serial No. 289,091. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD E. JONES, a citizen of the United States, residing at Goldsborough, in the county of Wayne, State of North Carolina, have invented certain new and useful Improvements in Road-Cart Springs, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention has relation to road-carts, and particularly to the springs thereof; and among the objects in view are to overcome the horse motion peculiar to two-wheeled vehicles; to so arrange the shafts and springs as to be out of the way, so that a person can mount and dismount with ease; to adapt the spring for the use in connection with light phaeton-bodies, if desired, and to employ the well-known flat spring, so arranged as not to be liable to break, and which, if broken, can be easily replaced by any ordinary mechanic.

Further objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawing, which is a side elevation of a road-cart thill and spring constructed in accordance with my invention, 1 represents the shaft or thill of the usual construction, which is provided at its rear end with the clip 2, arranged to embrace the shaft 3.

4 represents the spring, which is composed of a series of overlapping layers, 5, 6, and 7. The upper layer, 5, projects to the rear beyond the terminals of the remaining layers, 6 and 7, and is provided with an eye, 8, to which is connected, by means of a bolt, 9, a shackle, 10, designed to receive the cross-bar 11, for supporting the body of the vehicle. The second layer, 6, of the spring terminates at its forward end opposite the upper layer, 5, and its rear end short of that end of said layer. The third layer, 7, terminates at its rear end short of the layer 6, but is projected beyond the remaining two layers at its front end and bent upwardly, as at 12, and bolted to the thill, as at 13.

Near the point where the two layers of the springs 5 terminate there is interposed between the upper layer, 5, and the thill a block, 14, of hard wood, which is bound in position

by means of a clip, 15, which straddles the thill or shaft, and is formed with depending arms passing through the several layers of springs and provided with binding-nuts 16 at their ends. In rear of the clip 15, and about midway the rear end of the thill and said clip, there is mounted a second U-shaped clip, 17, which straddles the thill or shaft, and the arms of which depend below the surface of the spring. These arms are slotted vertically, as at 18, midway their length, and receive, for vertical movement, a transverse pin or shaft, 19, carrying a rubber roll, 20, which is interposed between the thill 1 and the upper surface of the spring 4. The terminals of the clip 17 embrace the opposite sides of the spring 4, and are connected by means of a tie-plate, 21, between which and the lower spring, 7, of the series is interposed a hard wooden block, 22, the parts being bound in position by means of bolts 23, mounted on the terminals of the clip.

By this construction it is apparent that the well-known and advantageous qualities of the flat spring are secured without danger of the same breaking, which danger is obviated by the peculiar manner herein described of connecting the same with the thills. Ordinarily the springs themselves will take up all horse motion so far as it is possible in vehicles of this class, and any sudden strain caused by the vehicle going over rough roads or striking obstructions will be compensated for by the elastic rubber roll 20. It is also apparent that should one or more of the springs break they could be easily replaced by any ordinary mechanic by the simple loosening of the nuts 16, 23, and 13.

If desired, I may omit the rubber roll 20 and its shaft or spindle 19 and substitute therefor a flat spring, 24, (see dotted lines,) which is formed with bent ends, one resting upon the upper surface of the spring 4 and the other against the under surface of the thill or shaft 1.

Having described my invention, what I claim is—

The thill 1, in combination with the spring 4, consisting of the overlapping layers 5, 6, and 7, the former provided with an eye, 8, and connected with the shackle 10 by the bolt 9, and the latter provided with the for-

ward-bent portion 12, and connected by the bolt 13 to the thill, the clip 15, having the nuts 16, for connecting the spring with the thill, and having the interposed block 14, and  
5 the clip 17, having the tie-plate 21, nuts 23, wood block 22, interposed between the plate and spring, and the rubber roll 20, having the spindle 19, passing through the slotted open-

ings formed in the clips, substantially as specified. 10

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

RICHARD E. JONES.

Witnesses:

T. W. DEWEY,  
W. K. STANLEY.