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No. 148,497.

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C. W. Saladee Jr.  
E. B. Saladee.

Yours. W. Salas

# UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN RUNNING-GEARS FOR VEHICLES.

Specification forming part of Letters Patent No. 148,497, dated March 10, 1874; application filed December 31, 1873.

### CASE C.

*To all whom it may concern:*

Be it known that I, CYRUS W. SALADEE, of Pittsburg, in the State of Pennsylvania, have invented certain new Improvements in Gearing for Vehicles, of which the following is a specification:

The first part of my invention consists in bending the front and rear bolsters and side perches in one piece, and splicing them together at or about the cross-center of the gearing, in such manner as to make, literally, an "endless perch" for carriage-gearing.

The second part of my invention consists in supporting and operating two half-elliptic side springs between the two outside perches and upon two separate connecting-rods, the bearings of which latter are also secured to the perches.

Carriage-gearing with two or more perches have a bolster resting upon both the front and rear axles, and in or upon which is secured the opposite ends of the two outside perches, each corner of the gearing presenting two ends, viz., the end of the perch and the end of the bolster, to be finished with a scroll, or otherwise, besides involving the cost of bolts and other necessary fastenings to make these connections secure. To obviate all this, I proceed to unite the bolsters and side perches as follows, viz: In the first place, I take two pieces of wood of the required thickness and depth for the bolsters at their heaviest point, and of a length equal to the length of one bolster and the half-length of each perch. These pieces are now bent into substantially the form shown from H to F of the drawing, and with the round corners S S S S. The opposite ends of these pieces A and A' are then finished up as required, and are spliced together at F and F, after which the side perches A and A' are plated with iron, in the usual way. It will now be seen that I have produced an endless perch by bending the bolsters A' with the side perches A, and splicing the latter at or about the cross-center of the gearing. By this means, I not only get rid of joining the perches A to the ends of the bolsters A' at S, and the work of finishing the ends of each, as

is required upon the old plan, but I produce a cleaner and smoother finish at these points, and save a great deal of work in the iron connections, otherwise necessary at these points. In all cases where elliptic springs are to be used over the front and rear axles, they are made to rest upon the ends of the perches or bolsters A', between the dotted lines E, but in this case the front bolster A' will be made considerably shorter than the hind one, so that the rear ends of the perches A will be farther apart than the front ends, and not parallel to each other, as seen in the drawing. If preferred to bend the perches in one piece, only one splice, F, will be necessary.

I am aware that two perches have been bent in one piece, as shown and described in the patent of John Curtice, of Cincinnati, Ohio, and in a former patent of my own. In the former case the perches are closed by the bend in front of the head-block over the front axle, with the rear ends of the perches left open and framed into the hind axle-bed or bolster, while in the latter case the perches are closed by the bend in the rear of the hind axle, and the front ends left open and framed into the head-block over the front axle. But my present invention, let it be well understood, differs materially from both of the forms above described, as well as from all other kinds of bent perches of which I have any knowledge, in this, that both ends of the perches are closed by the bend of the wood—making the bolsters and perches, when completed, in one continuous piece, or, in other terms, an endless perch.

The half-elliptic side springs B and B are linked to two separate connecting-rods, C and C, at D, between the two opposite perches A and A, and the body of the vehicle is then supported upon the center of the springs, in the usual way. The bearings in which the connecting-rods are hung and operate are also secured to the perches, and not to the bolsters, as is the general custom.

Two advantages are attained in this mode of suspending the springs upon and between the perches, viz., first, the springs being sus-

pended and operating between the perches, instead of on the one side of them, as is usual, the body can never strike the perches by the over-depression of the springs; and, second, the perches being on the outside of the springs, I can attach the steps directly to the perches, and not to the springs, as is usual, by which I gain the advantage of relieving the springs of the strain imposed upon them in all cases where the steps are secured to either the body or springs, as is now the almost universal custom.

I claim as my invention—

1. An endless perch, A and A', substantially as and for the purpose set forth.

2. Connecting-rods C and C, pivoted at or near the opposite ends of the perches A and A, and provided with links D and springs B and B, all combined to operate between the opposite perches A and A, substantially as and for the purpose set forth.

CYRUS W. SALADEE.

Witnesses:

C. W. SALADEE, Jr.,

G. B. SALADEE.