

G. S. SHEFFIELD.  
Railway Hand-Car.

No. 213,254

Patented Mar. 11, 1879.

Fig. 1.

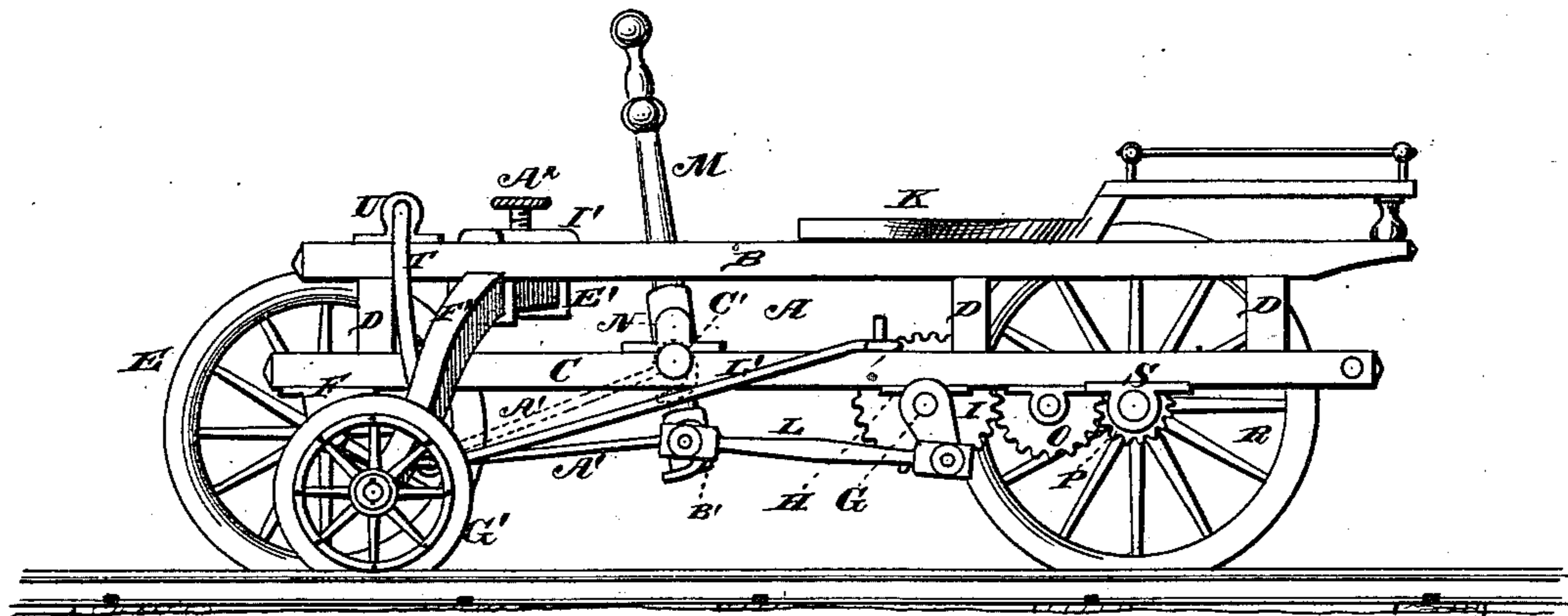
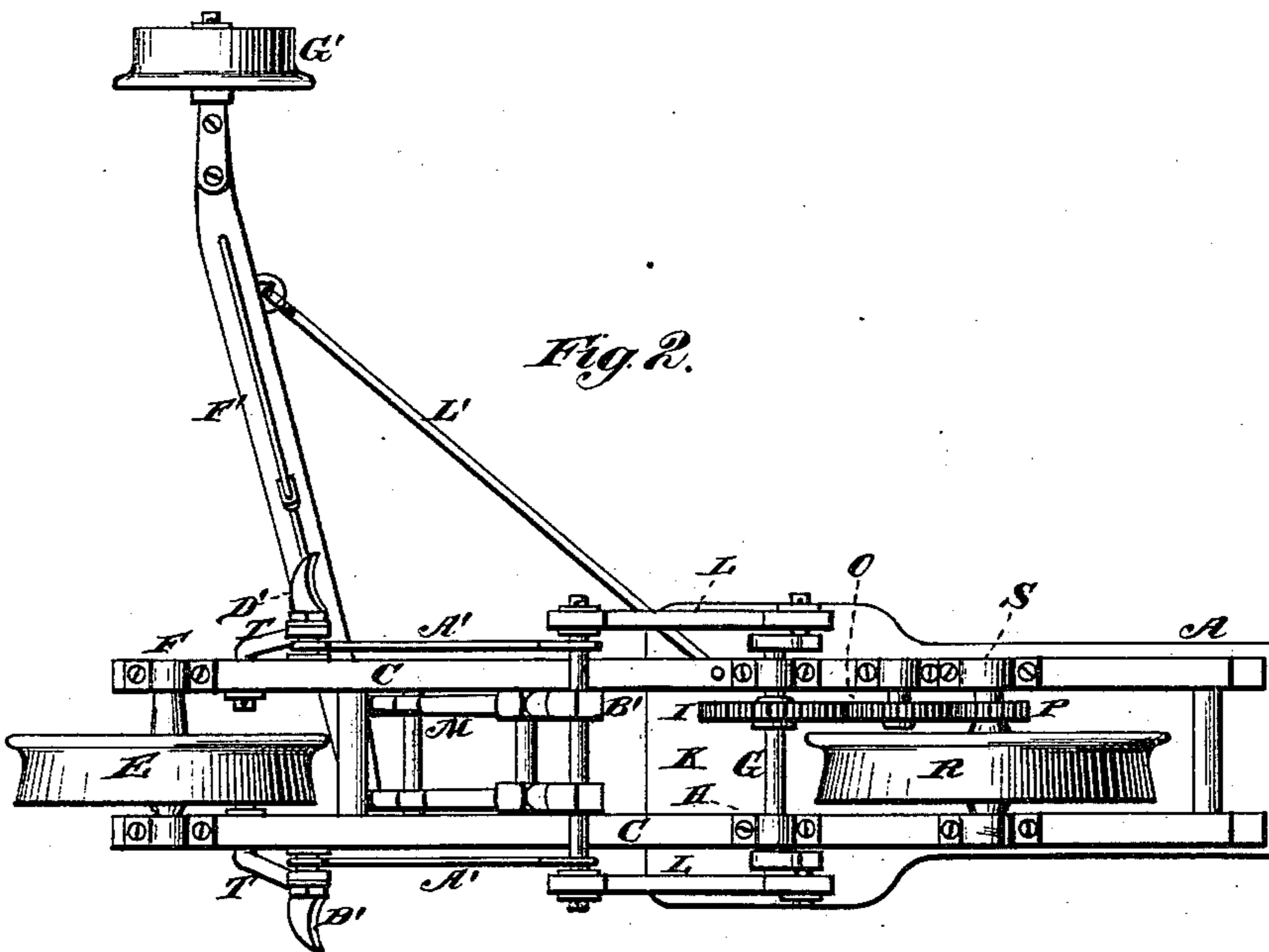


Fig. 2.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

GEORGE S. SHEFFIELD, OF THREE RIVERS, MICHIGAN.

## IMPROVEMENT IN RAILWAY HAND-CARS.

Specification forming part of Letters Patent No. **213,254**, dated March 11, 1879; application filed January 25, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE S. SHEFFIELD, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and valuable Improvement in Railway Hand-Trucks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my railroad hand-truck, and Fig. 2 is a bottom-plan view of the same.

My invention relates to a railway-velocipede, a portable hand-truck adapted to operate upon a track of broad or narrow gage; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth.

In carrying out my invention I employ two longitudinal bars below, connected together and to two similar bars above. In the lower bars I journal a forward riding-wheel and a rear driving-wheel. A crank-shaft, carrying a cog-wheel, is suitably journaled in the lower bars. A pitman from the crank connects with the arms of a pivoted hand-lever, and the cog-wheel, by a train of multiplying-gear, connects with a pinion rigid upon the shaft of the drive-wheel.

Pivoted upon the forward end of the upper bars are pendent arms carrying hooked links, which are removably engaged with the arms upon the pivoted hand-lever, and a stud above holds the same firmly up when not in use. A stirrup or foot-rest is secured to the junction of each link and pendant, and may be used in connection with the hand-lever to multiply power, or simply as a foot-brace, as desired.

The wheels are slightly beveled from the outer edges of their peripheries toward the flange, which serves to keep them on the rail.

Sockets in the frame afford bearings for a lateral arm or axle, which carries a smaller flanged wheel, which traverses the opposite rail, in order to confine the truck to the track. The lateral arm is adjustably secured in the sockets, so that it can be shifted to adapt the car to a broad or narrow gage road, the said

bar being held in the desired position by means of a set-screw extending through a cross-beam secured to the upper longitudinal bars.

The letter A represents the truck of my improved railway-velocipede, consisting of two upper longitudinal parallel bars, B B, and two lower longitudinal parallel bars, C C, the upper and lower bars being connected together by means of a series of vertical standards, D D D. The letter E represents a forward riding-wheel, journaled in bearings F F at the forward ends of the lower longitudinal bars, C C. The letter G represents a crank-shaft, journaled in bearings H H on the lower bars, C C, and carrying a cog-wheel, I, journaled in bearings H H on said lower bars. The letters L L represent pitmen connected to the crank-pins of the crank-shaft G, and with a hand-lever, M, pivoted in bearings N on the lower bars, C C. The cog-wheel I intermeshes with a smaller cog-wheel, O, which intermeshes in turn with a pinion, P, rigidly mounted on the shaft of the driving-wheel R, which is journaled in bearings S on the lower longitudinal bars, C C. The tread of both the riding-wheel and the driving-wheel is made slightly concave in cross-section, in order to "hug" the rail and better confine the truck to the track.

The letters T T represent two pendent arms, pivoted in bearings U U on the upper bars, and carrying at their lower ends hooked links A<sup>1</sup> A<sup>1</sup>, which are adapted to be detachably secured to the arm B' of the hand-lever M. The letters C' C' represent studs attached to the bars C C, to which the hooked links may be attached when not in use. D' represents a stirrup or foot-rest, secured to the junction of each link and pendant, which may be used, in connection with the hand-lever, to multiply power, or as a foot brace or rest, as may be desired.

The letter E' represents two sockets, secured to the lower sides of the upper bars, B B, in which is adjustably mounted a lateral arm, F', carrying at its outer extremity a flanged wheel, G', which is adapted to traverse the opposite rail to that upon which the riding and driving wheels travel. The letter A<sup>2</sup> represents a set-screw, mounted in a cross-beam, I', secured to the upper bars, B B, the lower end of said set-screw being adapted to be brought to bear

against the lateral arm, so as to confine it in place when shifted in or out to adapt the car to broad or narrow gage roads.

To the upper longitudinal bars is secured a seat, K', for the operator, in such position that he may conveniently grasp and operate the hand-lever with his hands, his feet resting upon the stirrups secured to the pendants, which serve, as before mentioned, as foot-braces simply, or to multiply the power when the links are secured to the hand-lever.

The letter L' represents a brace-rod secured to the lateral arm of the car, and adapted to be detachably secured to a pin, M', on one of the lower bars, C C, for the purpose of steadying said lateral arm.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of the hand-lever, the dependent arms T, adapted to be connected therewith by means of detachable links, and the stirrups secured to said dependent arms,

whereby the foot-power may be applied to the car, substantially as specified.

2. The combination, with the dependent arms T and their links, of the studs secured to the truck for supporting said links when detached from the hand-lever, substantially as specified.

3. In combination with the truck, a lateral arm carrying a flanged wheel, adapted to traverse the opposite rail to that upon which the riding and driving wheels travel, said arm being adjustably secured to the truck, in order to adapt the apparatus to broad or narrow gage roads, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE S. SHEFFIELD.

Witnesses:

W. J. WILLITS,  
A. C. TITUS.