

UNITED STATES PATENT OFFICE.

PETER LAMB, OF CINCINNATI, OHIO.

IMPROVEMENT IN CAR-TRUCKS.

Specification forming part of Letters Patent No. 36,657, dated October 14, 1862.

To all whom it may concern:

Be it known that I, PETER LAMB, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Car-Trucks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention. Fig. 2 is a front view of a portion of the same; Fig. 3, a detached longitudinal section of one of the bearings of an axle; Fig. 4, a transverse section of the same, taken in the line *x x*. Fig. 5 is a front or face view of the means employed for suspending the shoe-bar to the truck. Fig. 6 is a side view of the same; Fig. 7, a section of the same, taken in the line *x' x'*, Fig. 5.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in a novel construction of the car-truck, whereby two springs are made to answer for the truck instead of four hitherto used.

The invention also consists in a novel way of suspending the shoe-bars to the truck, whereby the former may be readily attached to and detached from the latter.

The object of the invention is to economize in the application of steel springs to car-trucks, and at the same time obtain a truck that will have greater elasticity than the ordinary ones and be capable of running easier or smoother over the track, and the shoe-bars at the same time be allowed to yield readily to the action of the brake mechanism.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents what may be termed the "upper part" of the truck-frame. This part A is of rectangular form, and to each of its side bars, *a a*, there are attached two pendants, *b b*, which are of metal, and have each an eye, *c*, at their lower ends, through which rods *d* pass horizontally, said rods having screws cut on them to receive nuts *e*.

To the inner end of each rod *d* there is connected a link, B, and the links at each side of the truck are connected to the ends of a metal bar, C, to which a spring, D, is secured. This spring D is composed of a series of steel plates or leaves, *f*, placed one underneath the other,

the plates or leaves gradually decreasing in length from the upper to the lower part of the spring, as shown clearly in Fig. 1. The ends of the upper and longer plate or leaf *f* are connected to the bar C by clips *g g*, and the spring D, and also the bar C, are firmly secured at their centers by a clamp, E, to a bar, F, the ends of which have the bearings *h h* of the axles G G attached to them. There is a spring D at each side of the truck, both being constructed and arranged precisely alike, and the two bars F F are connected by cross-bars G', any proper number of the latter being used and arranged in any proper way. The bars F F and cross-bars G' form what may be termed the "lower part" of the truck-frame, and the only connection between the upper and lower parts of the truck is that formed through the medium of the clamps E, by which the springs D are attached to the bars F. The springs D extend the whole length of the bars F F, and the tension of the former may be regulated by turning the nuts *e* of the bars C. Thus by this arrangement it will be seen that two springs are only required for each truck, and owing to the length of the latter and the manner in which they are applied between the two parts of the truck, a great degree of elasticity is obtained, and some parts hitherto used—such as the standards, for instance—dispensed with.

H represents the shoe-bars, which may be operated by the usual or any proper brake mechanism. These shoe-bars are connected to the cross-bars *i i* of the part A of the truck by means of links I, the ends of which are fitted in sockets J, attached to the shoe-bars H and cross-bars *i*. These sockets J are constructed of metal plates *j*, each having a recess, *k*, in it to receive the end of the link. In these recesses *k* slides *l* are fitted, one in each, the end of the slide which is in contact with the end of the link being of concave form or provided with a half-round groove, so as to fit snugly on the end of the link, and the bottom of the recess *k* of each socket is also of half-round form to receive the end of the link. (See Figs. 6 and 7.) The slides *l* are retained in the sockets J by nuts *m* on one of the bolts *n* of the sockets. By this arrangement it will be seen that all that is required in order to remove the links I is to loosen the nuts *m* and take out the slides *l*, and the links may be read-

ily secured in position in the sockets by replacing the slides and securing them in the sockets by screwing up the nuts *m*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Constructing the car-truck of two parts connected together by springs D D, arranged substantially as herein described.

2. Attaching the springs D D to bars C, which are connected at their ends by links B

to rods *d*, which pass through pendants *b* and have nuts *e* on them, for the purpose of regulating the tension of the springs, as set forth.

3. Securing the links I to the shoe-bars H and cross-bars *i* by means of the sockets J, provided with recesses *k* and slides *l*, arranged as herein described.

PETER LAMB.

Witnesses:

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