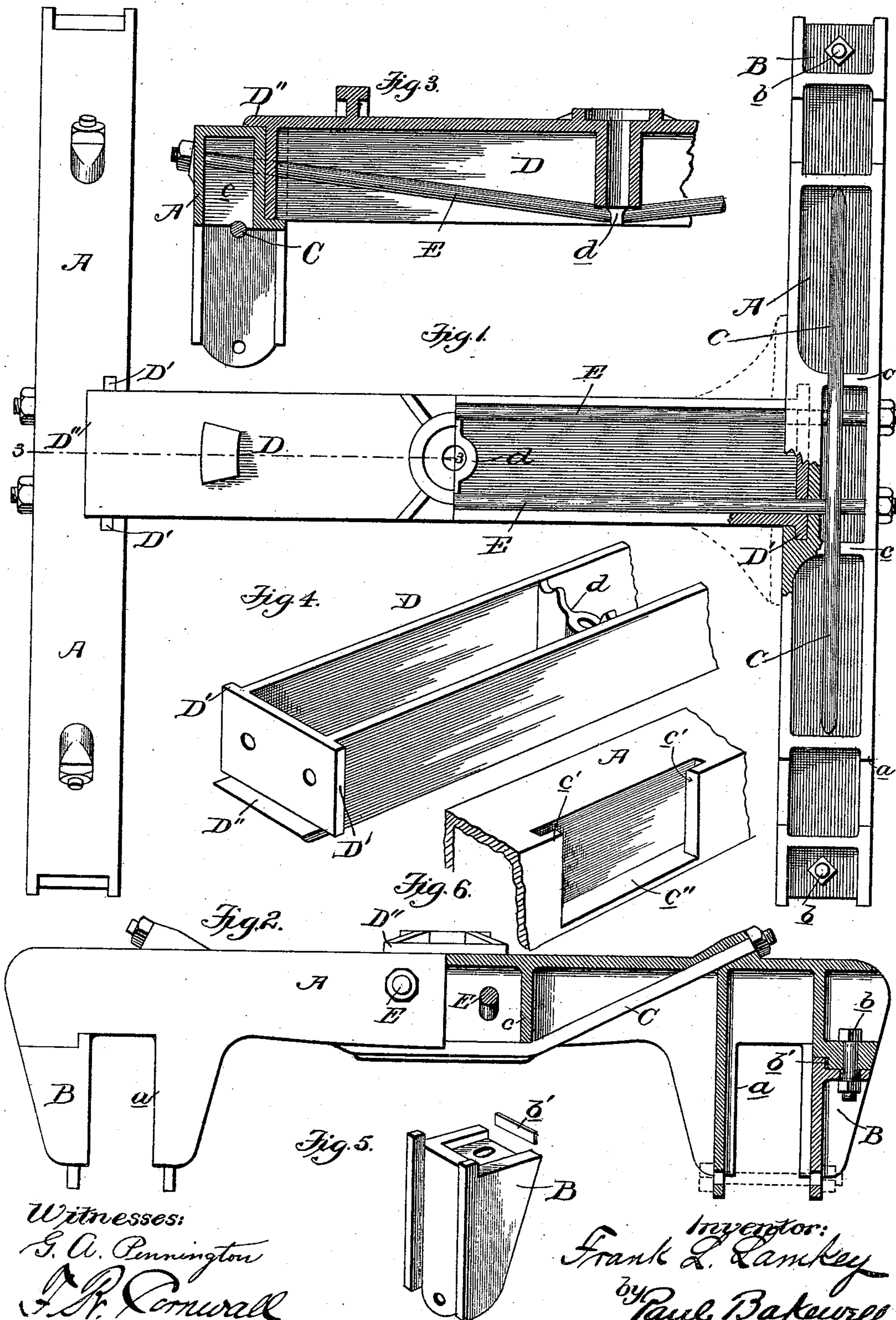


(No Model.)

F. L. LAMKEY.  
CAR TRUCK.

No. 563,285.

Patented July 7, 1896.



Witnesses:  
G. A. Pennington  
J. R. Cornwall

Inventor:  
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Atty.



# UNITED STATES PATENT OFFICE.

FRANK L. LAMKEY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO  
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## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 563,285, dated July 7, 1896.

Application filed April 23, 1896. Serial No. 588,693. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK L. LAMKEY, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a plan view of my improved car-truck, the left half of the same being a top plan view and the right half a bottom plan view, a part of which latter is in section. Fig. 2 is a side view of my improved truck, the left half of the same being in side elevation and the right half a longitudinal sectional view of the side bar. Fig. 3 is a fragmentary sectional view of the center bar, taken on the line 3 3, Fig. 1. Fig. 4 is a detail perspective view of a fragmentary part of the center bar. Fig. 5 is a detail view of a removable outer pedestal. Fig. 6 is a fragmentary view of a side bar, showing the recess or seat for the center bar.

This invention relates to a new and useful improvement in car-trucks; and it consists, generally stated, in key-seating the center bar in the side bars, and providing truss-rods to support the center bar, said truss-rods extending through the side bars and locking the parts together. Other features of the invention reside in the construction, arrangement, and combination of the several parts, all as will hereinafter be described, and afterward pointed out in the claims.

In the drawings, A indicates the side bars, which are substantially of inverted-U shape throughout their length. These side bars are provided with pedestal-jaws at their ends, one of which, the outer, is preferably removable to enable the car wheels and axle to be taken out without jacking up the truck to a great height, which would be necessary if both jaws of the pedestal were rigid. This outer removable jaw, which I will refer to by the letter B, is preferably recessed at its top to cooperate with a converse projection on the side bar, said removable jaw being held in position by a bolt *b*. The inner jaw of the pedestal

is preferably provided with lips *a* at its sides, which lips cooperate with the pedestal-lining or axle-box. The outer removable jaw is also provided with guiding-lips, which, as shown in Figs. 2 and 5, project above the jaw proper into a suitable recess in the side bar. By means of this upward projection of the lips and the non-circularity of the recess in the upper face of the removable jaw and its converse projection, said jaw is prevented from turning or being displaced in use. The lower ends of these pedestal-jaws are formed with openings to receive a through-bolt, as shown in dotted lines in Fig. 2, which bolt also adds rigidity to the removable jaw. This through-bolt may, in the event of the use of a pedestal-lining, sustain said lining, as is obvious. The opening in the removable pedestal-jaw, which receives the bolt *b*, is preferably elongated, so that should there be wear in the pedestal-jaw the same can be taken up by a liner *b'*, arranged as shown.

The side bar A, in addition to being braced by the web forming the inner pedestal-lining and the web which supports the outer removable pedestal-lining, is braced at its middle portion by webs *c*.

C indicates a tension or truss rod, which passes under the webs *c* and braces the middle portion of the side bar, said rod passing through noses on top of said side bar, beyond which it receives nuts by which the tension of said rod may be regulated. The inner face of this side bar is formed with a seat for receiving the end of the center bar. This seat is preferably made by recessing the side bar about its middle, said recessed portion having retaining-lips *c'* at its side edges, while the bottom of said recess is formed by a lip *c''* for supporting the ends of the center bar.

D indicates the center bar, which is substantially of inverted-U form throughout its length, which center bar is provided with the usual center bearing and central web or brace *d* and the side bearings *d'*. The ends of this center bar are provided with flanges *D'*, which are adapted to fit behind the lips *c'* on the side bars, while the top of the center bar is preferably extended, as at *D''*, to



rest upon the side bars to help support the ends of the center bar.

E indicates tension-rods which extend through openings in the side bars, the ends of the center bar, and under the central web of the center bar, the tension of said rods being regulated by nuts on their ends which impinge against the outer faces of the side bars. If desired, the center bar may also be provided with laterally-extending wings at its ends, as shown in dotted lines to the right of Fig. 1, which wings give a more extended bearing of the ends of the center bar against the side bars, thereby making a more rigid truck.

From the above it will be seen that the truck consists, essentially, of three pieces, the center bar and the two side bars. These pieces can readily be made of cast-steel at comparatively small cost, as the construction is such that the patterns can be easily drawn from the molds and little coring is necessary. In assembling the trucks the side bars can be trussed before the center bar is placed in position. In placing the center bar in position the flanges D' are slipped behind the flanges c' from above and the center bar forced into its seats in the side bar until it is seated home. The truss-rods E are now inserted, which truss-rods lock the center bar in position and prevent its removal.

When a truck, such as above described, is in position beneath the car, the weight carried by the center bearing is taken up by the truss-rods E and distributed over the entire truck, the tensional strain on said truss-rods tending to draw the side bars close together, which makes a very rigid truck. The weight carried by the middle of the side bars is taken up by the truss-rods C and distributed, as is well understood.

I am aware that many minor changes in the construction, combination, and arrangement of the several parts of my device can be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a car-truck, the combination with the side bars which are recessed to form seats, and a center bar of inverted-U form whose ends are adapted to be received by the recesses in the side bars; substantially as described.

2. In a car-truck, the combination with cast side bars of substantially inverted-U form which are provided with pedestal-jaws at their ends, and formed with seats in their inner faces, and a cast center bar of inverted-U form whose ends are closed and formed with converse portions to engage the seats in the side bars; substantially as described.

3. In a car-truck, the combination with the side bars, provided with recesses and lips c',

of a center bar having flanges D' to cooperate with said lip, and a lip D'' on said center bar, which projects over the side bar; substantially as described.

4. In a car-truck, the combination of the side bars formed with recesses and provided with lips c' and c'', and a center bar provided with flanges D' and D'' for cooperating with the lips of the side bars; substantially as described.

5. In a car-truck, the combination with the side bars of inverted-U form having seats formed therein, of a center bar provided with means to engage the seats of the side bars, said center bar being inserted into its seats only from above, and rods which act as bolts by passing through the ends of the center bar and through the side bars to hold said parts together; substantially as described.

6. In a car-truck, the combination with the side bars formed with seats to receive the ends of the center bar, and a center bar, the ends of said center bar and the walls of the side bars being formed with openings which align when the parts are assembled to receive rods which act as bolts to hold the parts against displacement; substantially as described.

7. In a car-truck, the combination with the side bars, of a center bar, and a truss rod or rods for the center bar which extend through the side bars; substantially as described.

8. In a car-truck, the combination with the side bars, of a center bar, and a truss rod or rods for the center bar which extend out beyond the side bars, against the outer face of which side bars, said truss-rods having a bearing; substantially as described.

9. In a car-truck, the combination with the side bars, of a center bar, and a truss rod or rods for said center bar which extend beyond the side bars and lock the center bar in position; substantially as described.

10. In a car-truck, the combination with the side bars having recesses formed therein, of a center bar seated in said recesses, and a truss rod or rods which pass through openings in the ends of the center bar and through the side bars; substantially as described.

11. In a car-truck, the combination with the trussed side bars, of a trussed center bar, the truss-rods of said center bar extending through the side bars; substantially as described.

12. In a car-truck, the combination with the side bars, of inverted-U form, having the webs c, and truss-rods which pass under said webs and through noses formed on top of said side bars; substantially as described.

13. In a car-truck, the combination with the side bars having recesses formed therein, of lips c' and c'' formed on said side bar, a center bar, flanges D' on the ends of said center bar which cooperate with the lips c' of the side bars, truss-rods E which truss the center bar and extend through the side bars and truss-



rods C for the side bars; substantially as described.

14. In a car-truck, the combination with the side bars having one pedestal-jaw formed thereon, a removable pedestal-jaw having a non-circular seat in which a projection on the side bar fits, said removable pedestal-jaw also having an elongated opening for the passage of a retaining-bolt, and a liner adapted to fit

in the seat of said jaw for the purpose of taking up wear; substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 11th day of April, 1896.

FRANK L. LAMKEY.

Witnesses:

F. R. CORNWALL,  
HUGH K. WAGNER.