(No Model.) 2 Sheets—Sheet 1.

L. K. JEWETT.

CAR TRUCK.

No. 279,951. Patented June 26, 1883.

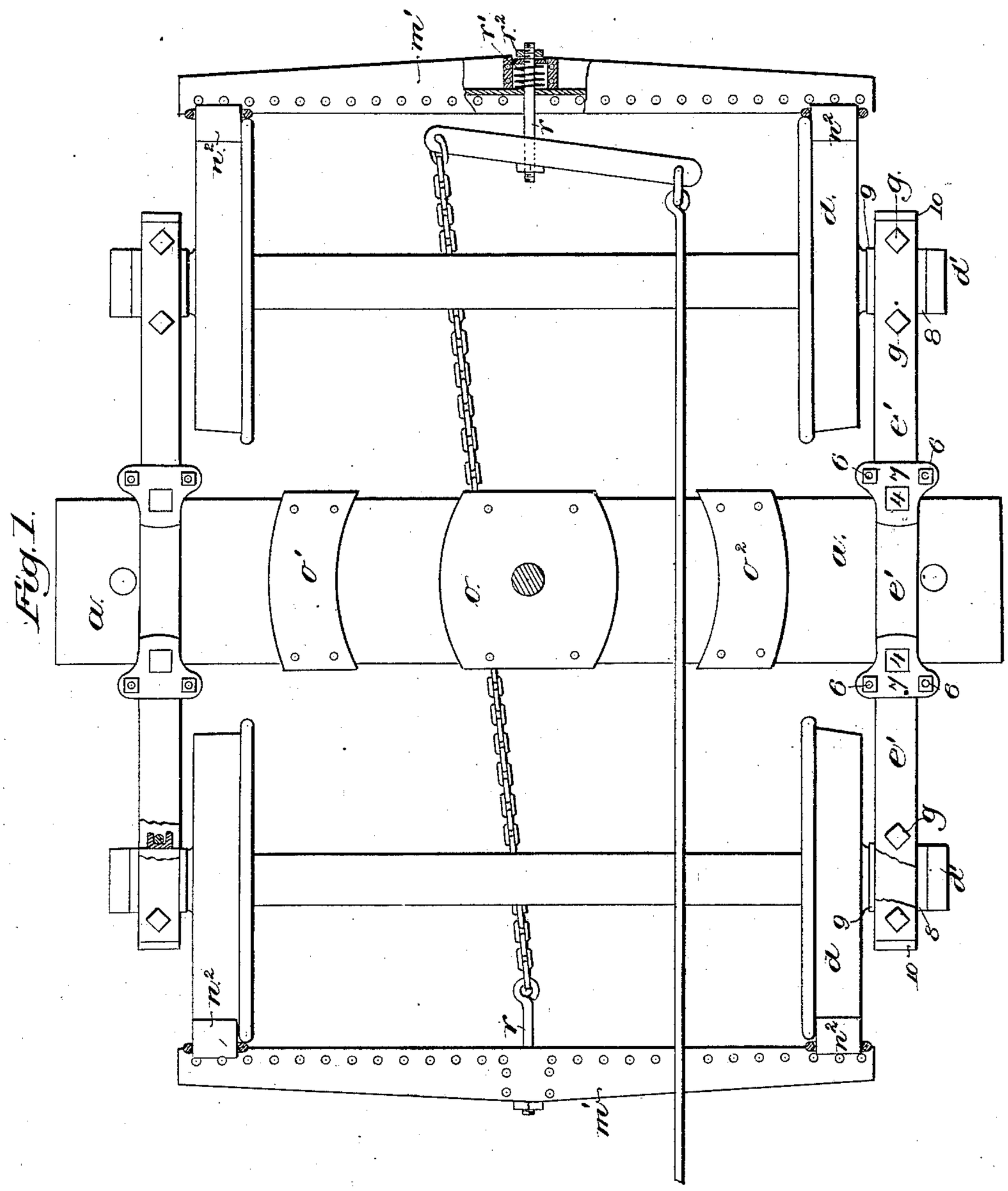

Fig. 1.

Witnesses.
John P. C. Reinkert
Fred A. Powell.

Inventor.
Luther K Jewett
by Crosby & Gregory Attys.

(No Model.)

2 Sheets—Sheet 2.

L. K. JEWETT.

CAR TRUCK.

No. 279,951.

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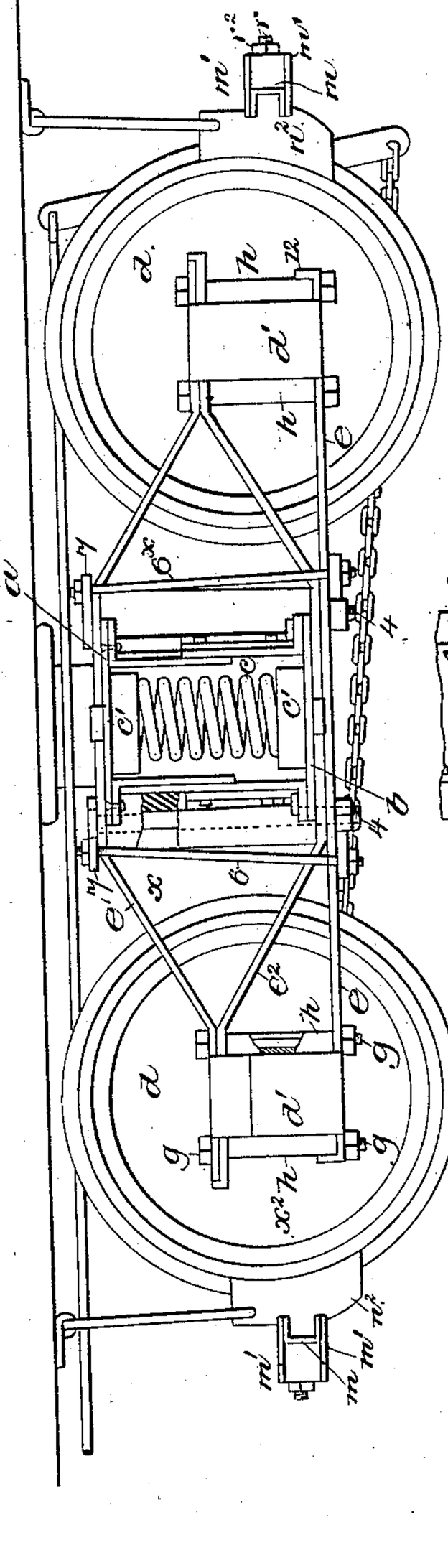

Fig. 2.

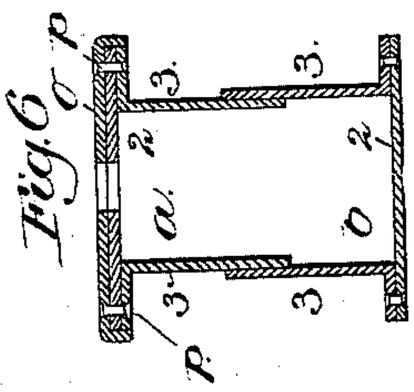

Fig. 6.

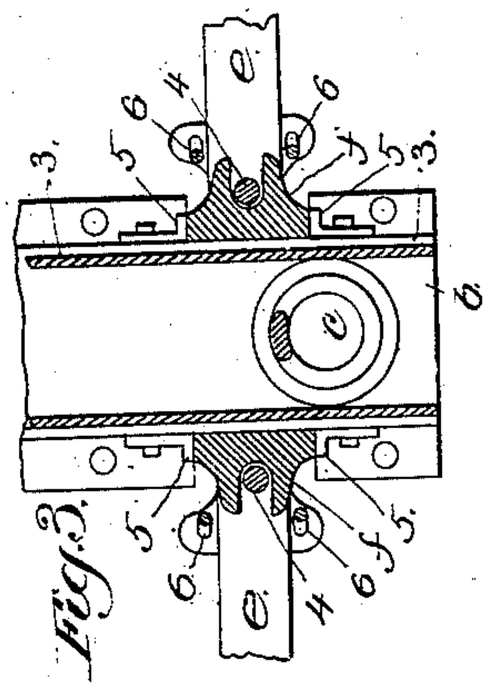

Fig. 3.

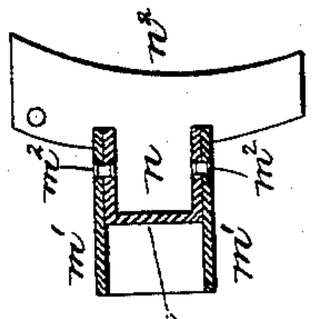

Fig. 4.

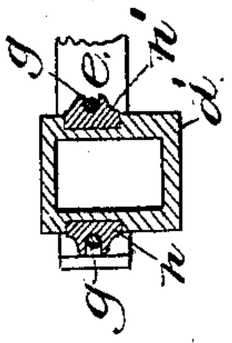

Fig. 5.

Witnesses.
John F. C. Pruinkert
Fred A. Powell.

Inventor.
Luther K. Jewett.
by Crosby Gregory Latty's.

UNITED STATES PATENT OFFICE.

LUTHER K. JEWETT, OF FITCHBURG, MASSACHUSETTS.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 279,951, dated June 26, 1883.

Application filed October 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, LUTHER K. JEWETT, of Fitchburg, county of Worcester, State of Massachusetts, have invented an Improvement in Car-Trucks, of which the following description, in connection with the accompanying drawings, is a specification.

This invention has for its object to simplify and strengthen the construction of the car-truck and its brake-beam; and my invention consists in features hereinafter set forth, and specified in the claims at the end of this specification.

Figure 1 represents in plan view a sufficient portion of a car-truck to illustrate my invention; Fig. 2, a side elevation thereof; Fig. 3, a horizontal section on the line *x x*, Fig. 2; Fig. 4, a sectional detail of the brake-beam with shoe attached; Fig. 5, a sectional detail on the line x^2, Fig. 2; and Fig. 6, a cross-section of the center beam or part of the truck to show its shape.

In this my invention the entire truck is made of metal, thus enabling me to gain great strength, and I have so made the different pieces of metal of angle-iron as to gain the greatest strength with the least weight of material. The center beam or center part of the truck, instead of being made from wooden beams from three to four inches thick, with springs between, is made from two sections, *a b*, of wrought-iron, preferably about three-eighths of an inch thick. Each of these sections is composed of a metal plate, 2, in practice about fifteen inches wide, having bolted to each edge of it flanged pieces of metal 3, forming, as it were, sides of a trough-like strip. These sides or pieces 3 of one section fit within the side pieces of the other section, as best shown in Figs. 2 and 6. Between the horizontal plates 2 of these sections are placed any desired number of strong spiral or other springs *c*, the upper ends of which are confined in suitable metal cups, *c'*, attached to the plates 2. The center beam being made of metal, as stated, and thin, enables me to use longer springs than heretofore, whereby I am enabled to support the car-body, which will be mounted on the truck, in a better and more satisfactory manner.

The axles of the car, on which are fixed the wheels *d*, have their end journals extended into boxes *d'*, mounted upon the metal beam *e*. This metal beam *e* is the lower beam of a series of three beams, the two other beams being marked $e' e^2$, all of which are connected together at each side of the truck and at each side of the center beam by means of bolts 4, extended through wrought-metal posts *f*, having at one face open grooves for the said bolts. The rear sides of these posts fit snugly against the side plates, 3, of the center beam, as in Fig. 3, the flanged edges thereof being notched to receive the said posts, and at the outer sides of the posts, on the plate *b*, I have attached guide-plates 5, to act against the sides of the said posts, and the latter thus act as guides, upon which the section *a* and its sides 3 may rise and fall under the action of the weight in the car-body sustained by the truck. The beams $e\ e'\ e^2$ are further bolted together by bolts 6, extended through plates 7, connected with the heads of the bolts 4. The beams $e'\ e^2$ are made to converge toward each other, between the center beam and the boxes for the axles, and are brought together or in contact above the said boxes, as shown in Fig. 2, and are secured to the under beam, *e*, by bolts *g*, extended through tubular posts *h*, of wrought-iron, fitted to grooves in the sides of the cast-metal boxes *d'*. These boxes *d'* have at their upper sides flanges 8 9, which embrace the opposite edges of the beams $e'\ e^2$, and similar flanges at the bottom of each box embrace the beam *e*. The outer ends of the lower beam, *e*, are turned upward, as at 12, to hold the post in place even should the bolt *g* break. The brake-beam is made from a U-shaped metal beam, *m*, having metal plates *m'* riveted to it at m^2, (see Fig. 4,) thus making a very stiff yet light brake-beam. The projection *n* of the metal shoe n^2 extends into the open side of the U-shaped metal beam, and is or may be bolted thereto in any usual way. This brake-beam and its shoe will be operated in usual manner to force the shoe against the wheels. The center wear-plate, *o*, and the wear-plates $o'\ o^2$, of metal, and on which corresponding plates attached to the under side of the car-body (not

shown) bear, are flanged each at each end, as shown in Fig. 6, which is a sectional detail taken through the upper part of the center beam and the plate *o*. These flanges prevent longitudinal movement as well as twisting movement of the plates *o o' o²*, and the said plates are riveted to the plates 2 by rivets *p*, the heads of which are properly countersunk into the said plates, so that the said plates cannot become accidentally detached or loosened.

In case the usual bolt, 4, becomes broken, the bolts 6 will afford sufficient strength to enable the car to be run to its destination.

The brake-beams are connected with the usual brake-moving mechanism by means of rods such as shown at *r*, Fig. 1. Each rod extended loosely through the brake-beam has applied to it a strong spring, *r'*, and a head or nut, *r²*. This spring and rod so arranged affords a yielding connection, and enables the shoes at each end of the brake-beam to adapt themselves independently to the shape of the wheels *d*.

I claim—

1. The all-metal center beam composed of the sections *a b*, each consisting of the plate 2 and flanged plates 3 3, riveted and fitted together, and intermediate inclosed springs, *c*, substantially as shown and described.

2. The all-metal center beam composed of the sections *a b*, each consisting of the plate 2 and flanged plates 3 3, riveted and fitted together, and intermediate inclosed springs, *c*, combined with beams *e e' e²*, boxes *d'*, posts and bolts for connecting them, and axles and wheels, substantially as shown and described.

3. The center beam composed of the metal plates 2 3, united together and fitted to slide vertically, and the intermediate springs, and beams *e e'*, combined with the independent metal posts and bolts 4 and 6, to operate substantially as described.

4. The box *d'*, grooved at its sides, and the beams *e'*, *e²*, and *e* above and below it, combined with the independent posts *h* and bolts *g*, extended through the said posts and beams, substantially as described.

5. The all-metal center beam having the sections *a b*, each consisting of plates 2 3 3, combined with the flanged wear-plates and rivets *p*, for uniting them and the parts 2 3 3 of the section *a*, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LUTHER K. JEWETT.

Witnesses:
G. W. GREGORY,
B. J. NOYES.