

(No Model.)

B. F. MANIER, Jr.
CAR TRUCK.

No. 529,284.

Patented Nov. 13, 1894.

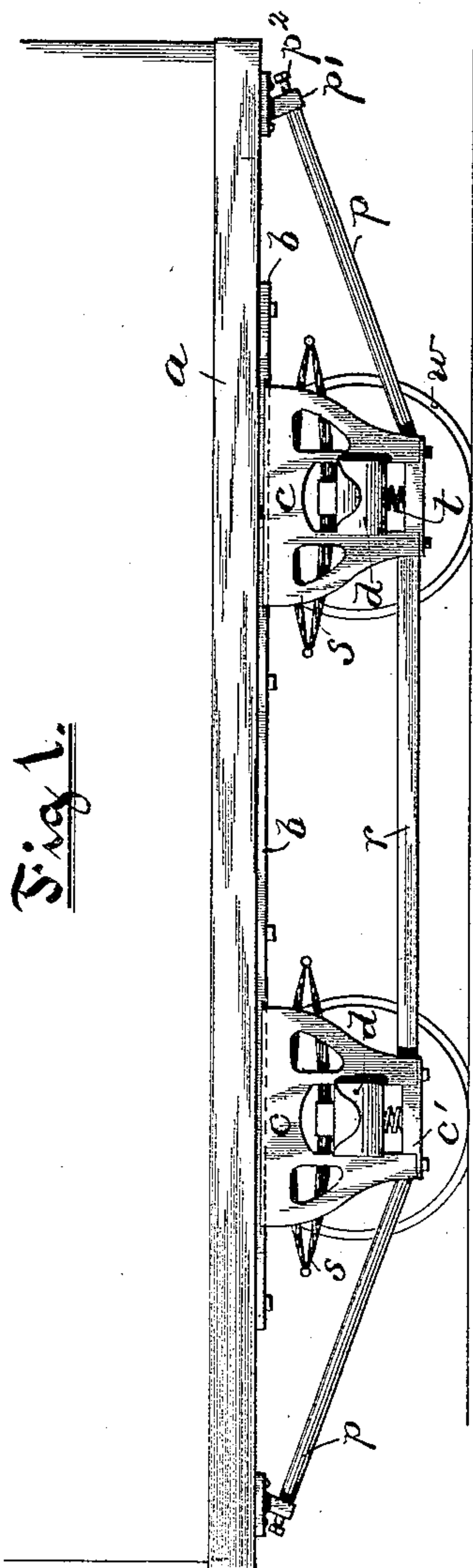


Fig. 1.

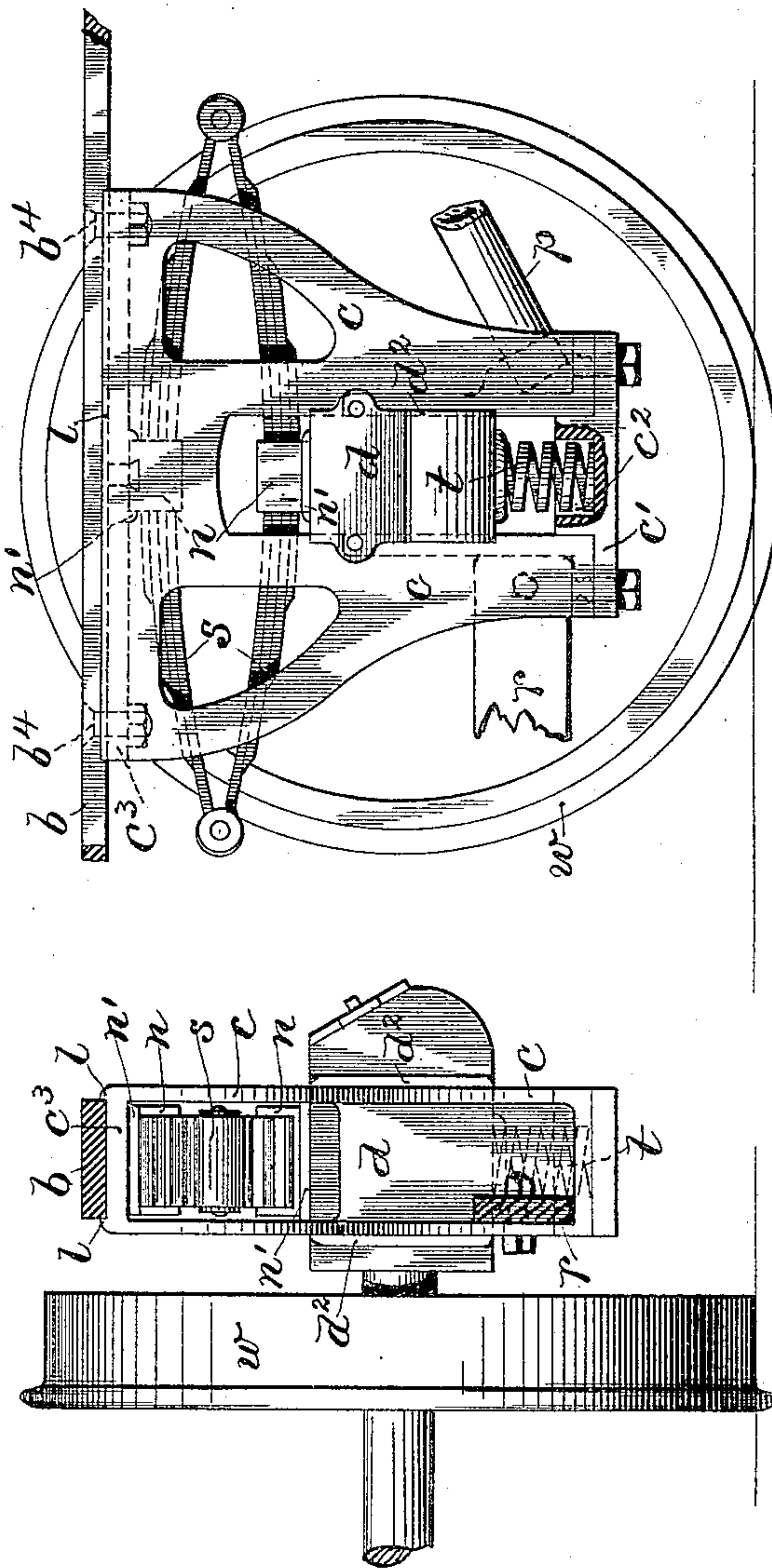


Fig. 2.

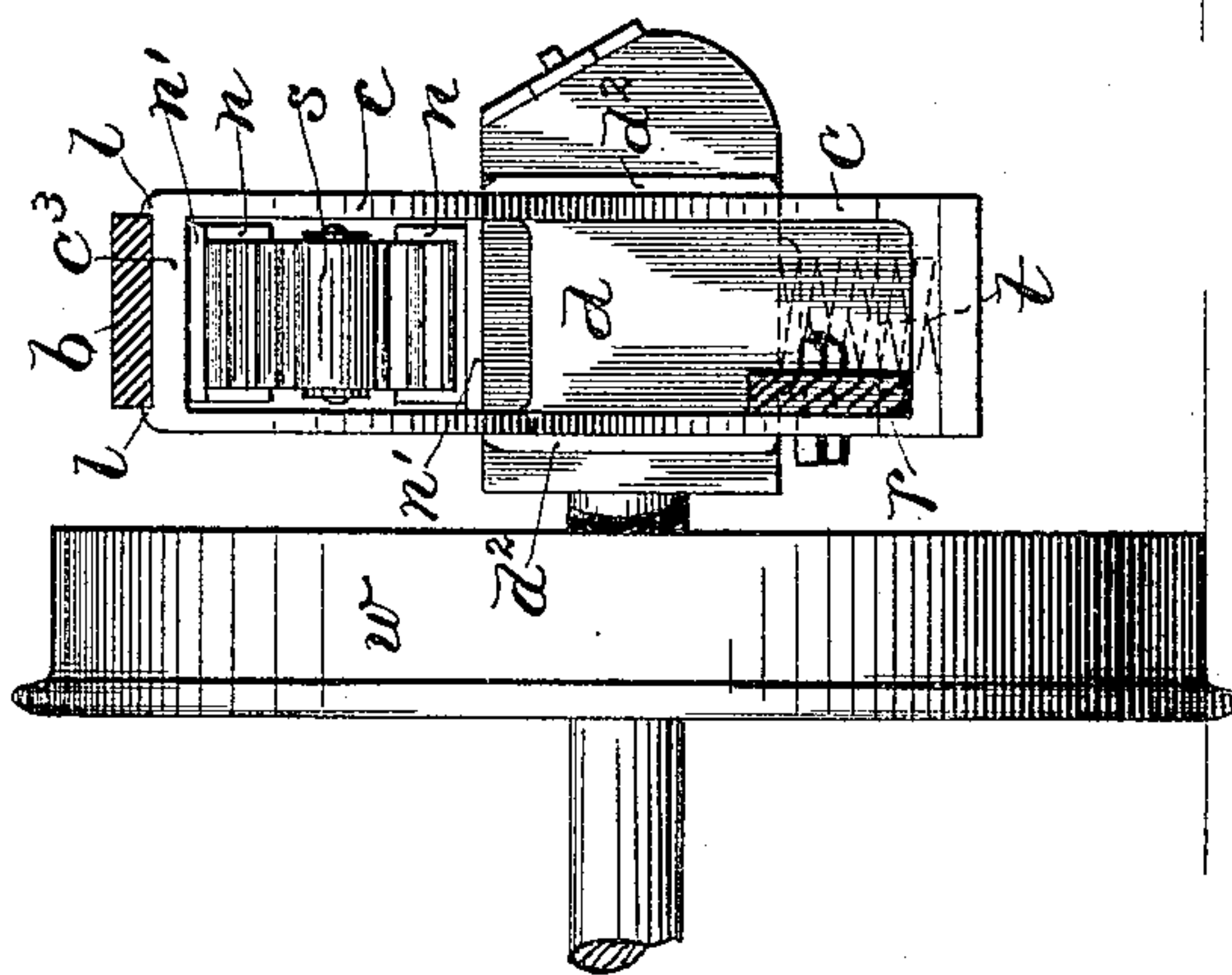


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN F. MANIER, JR., OF PROVIDENCE, RHODE ISLAND.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 529,284, dated November 13, 1894.

Application filed April 11, 1894. Serial No. 507,152. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. MANIER, Jr., a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Car-Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In United States Patent No. 510,277, granted to B. F. Manier December 5, 1893, is described and claimed a metal car-truck possessing certain novel features, that is a trussed continuous channel-bar having the axle-carrying pedestals rigidly secured to and located below said channel-bar, a plate secured to the car sill and a series of guided springs interposed between the plate and channel-bar, through which springs the weight of the car and its load is transmitted to the truck-frame.

My invention also relates to metal car-trucks adapted for street cars, and it consists essentially in the combination with a hollow pedestal, adapted to be secured to the car-base, and an axle-carrying box movably mounted therein, of an elliptic spring mounted between the walls of the pedestal and in engagement with the top of said box and braces or ties secured to the pedestal, as will be hereinafter described.

By means of this invention the weight of the truck is reduced. It is simpler and more accessible, and the vertical vibrations of the car are lessened.

A car provided with my improvement presents an attractive appearance, the arrangement of the parts at the same time being such that comparatively greater strength and stiffness is attained with less weight.

In the appended drawings, Figure 1 is a side elevation of the lower portion of a street-car provided with my improvement. Fig. 2 is a side elevation of the truck in enlarged scale, and Fig. 3 is an end view of the same.

Although my improved car-truck is more

particularly adapted for street-cars yet it can be employed in other types of cars or vehicles.

As drawn *a* indicates the base or sill portion of the car provided on its under side with a longitudinally extending strip *b* of metal rigidly secured thereto.

c indicates the pedestal, so-called, the same having a vertical opening extending upwardly from its lower end in which opening the axle-carrying box *d* is fitted to slide, substantially as common. The pedestal is hollow, its two sides being separated laterally and united at the top by a tie or plate *c*³ integral with the pedestal. The latter is secured to the sill-plate *b* by bolts *b*⁴, lips *l* further serving to hold it in place. To the bottom of the pedestal a space-tie or cap *c*¹ is removably secured. In the central part of this tie is formed a recess *c*² to receive a coiled spring *t*, the latter also bearing against the under side of the journal-box *d*, and forming a cushion or bumper. The said box *d*, as before stated, is fitted to move vertically in the pedestal, side flanges *d*² serving to hold it in position longitudinally of the axle. A slightly raised lip or rib *n*¹ is cast on the top side of the box to form a shallow socket, in which socket is located a bent strap *n*; a similar device being located on the under side of the pedestal plate *c*³. Within these straps *n* are mounted and secured the leaves or layers of a full elliptic spring *s*, all as clearly shown. These springs extend in a direction longitudinally of the car and are located between the front and rear sides of walls of the pedestals and are partially concealed thereby. The springs are fixed in position directly above the center of the axle-boxes, as clearly shown.

The two pedestals may be united at the bottom by a suitable tie, as *r*. The projecting or end portions of the car are stiffened and braced by means of diagonal compression members or trusses *p*. The said trusses may consist of a metallic tube, one end being inserted in an exterior socket (Fig. 2) formed in the forward side of the lower part of the pedestal, the other being mounted in a step or plate *p*¹ rigidly secured to the under side of the car-base; a screw *p*² mounted in the step being employed to regulate or control

the proper relation of the several parts. By means of this construction the truss member p may be readily and quickly removed upon unscrewing the thrust-screw p^2 .

- 5 I would add that while I have stated the box d is adapted to move vertically in the pedestal, such movement is only apparent, the fact being that in use the box is practically stationary or non-movable vertically
- 10 while the wheels w are in contact with the track-rails, while at the same time the pedestal itself is moving or vibrating up and down in unison with the car-body and sliding between the side flanges d^2 of the axle-box.
- 15 In the patent hereinbefore referred to, as well as in others of that class having the pedestals non-stationary with respect to the car-body, the end truss is secured to the pedestal and to the forward end of the longitudinal
- 20 frame or girder to which the pedestal is secured. Consequently the vertical movements or vibrations of the car are practically independent of such frame or girder, since the latter is yieldingly connected to the car-body.
- 25 Therefore such end trusses do not support or stiffen the corresponding portions of the car. In the present invention it will be seen that the end truss or brace p materially supports

the end portion of the car, from the fact that it is directly secured to the car and to the pedestal, the latter also being rigidly secured to the car.

I claim as my invention—

In a street car, a hollow pedestal c rigidly secured to the car-frame or base, oppositely arranged inclined braces p , fastened to the lower portion of the pedestal and to the car-frame, a tie brace r uniting the pedestals and a bottom tie or cap c' uniting the two sides of the pedestal, all adapted to move vertically in unison with the car, in combination with an axle-carrying box d loosely mounted in the pedestal, a light spring or cushion t interposed between and in contact with said box and tie c' and a full elliptic spring s , arranged longitudinally of the car, said spring s being interposed between and in contact with the upper side of the box and the under side of the pedestal base c^3 , substantially as described and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

BENJAMIN F. MANIER, JR.

Witnesses:

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