

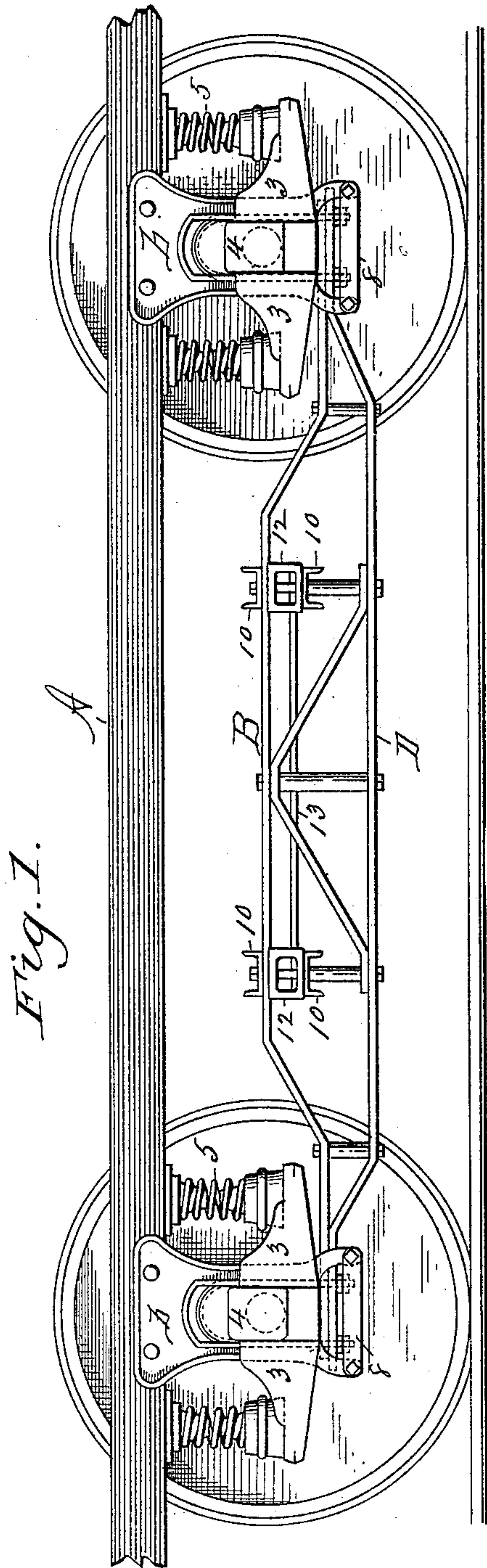
(No Model.)

3 Sheets—Sheet 1.

S. A. BEMIS.
CAR TRUCK.

No. 373,635.

Patented Nov. 22, 1887.



Witnesses
W. H. Chapin
G. M. Chamberlain

Inventor
Sumner A. Bemis
By his Attorneys *Chapin & Co.*

(No Model.)

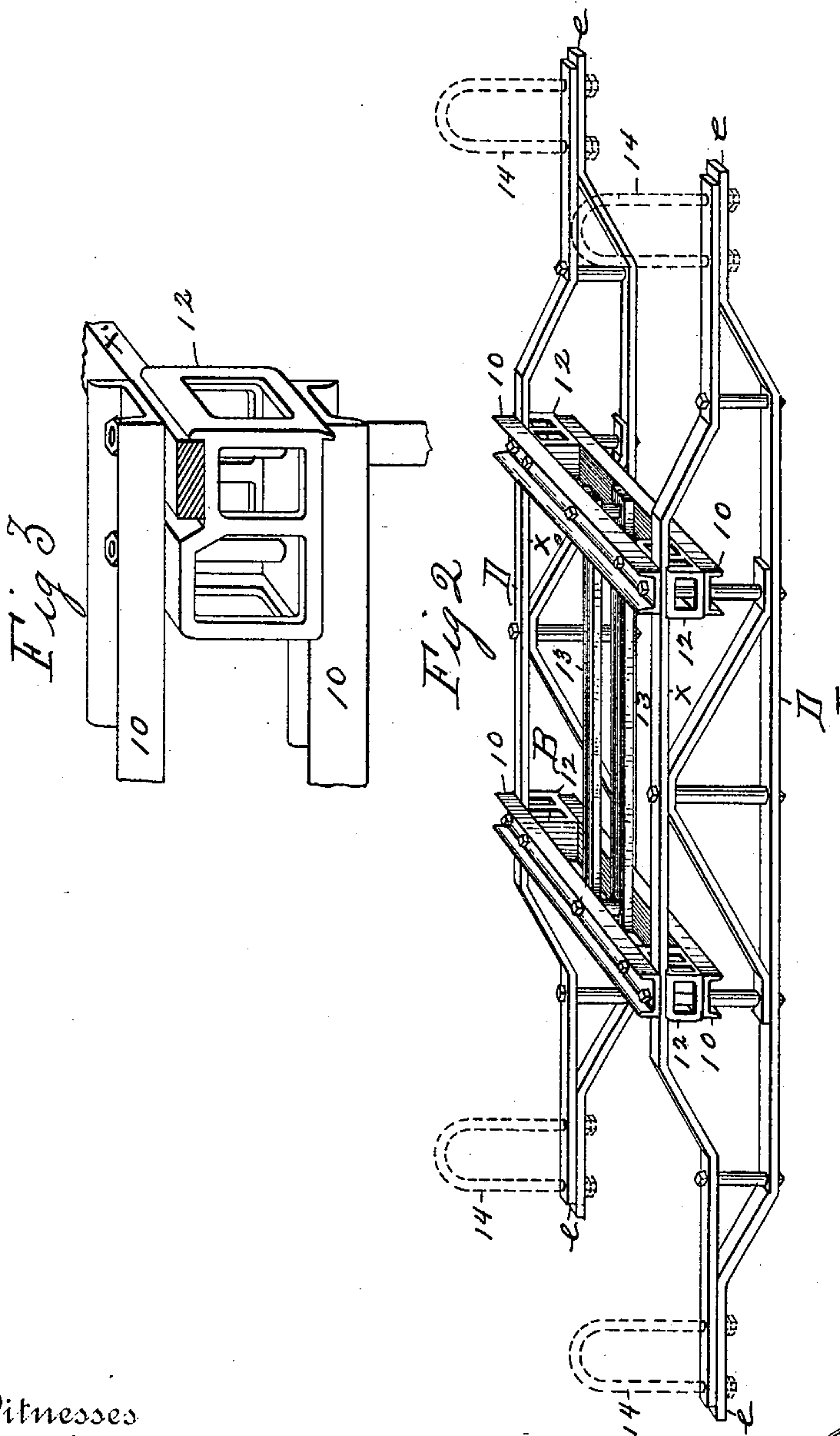
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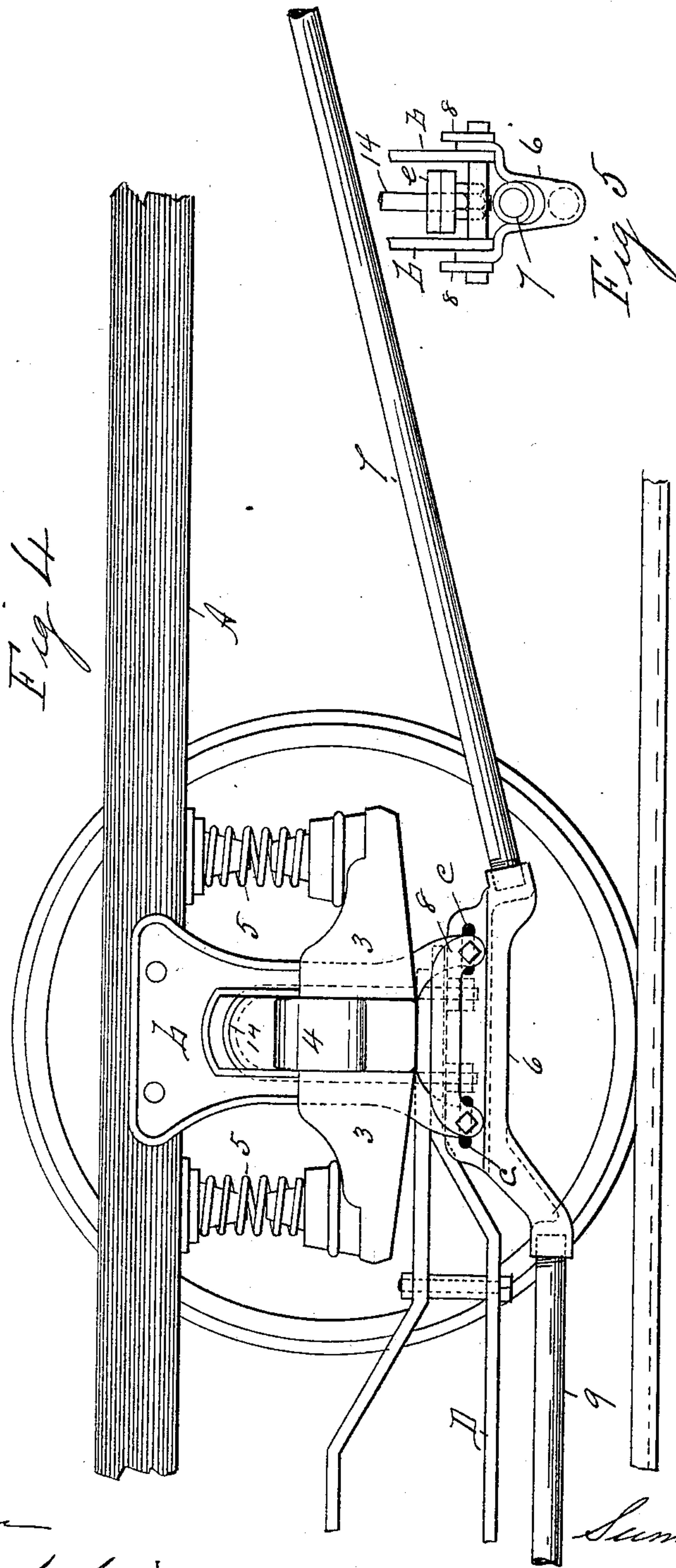
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UNITED STATES PATENT OFFICE.

SUMNER A. BEMIS, OF SPRINGFIELD, MASSACHUSETTS.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 373,635, dated November 22, 1887.

Application filed June 6, 1887. Serial No. 240,346. (No model.)

To all whom it may concern:

Be it known that I, SUMNER A. BEMIS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Means for Attaching Cable-Grip Frames to Cars, of which the following is a specification.

This invention relates to cable-grip frames for cars, and pertains to improvements in means for attaching said frames to the car and for bracing and supporting the axle-box pedestals thereof; and the invention consists in the peculiar construction and arrangement of the ends of said frame, combined with the parts of the car to which the frame is attached and means for effecting said attachment, all as hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation of a part of a car (the ends of the sill thereof being shown broken off) and a cable-grip frame embodying my improvements. Fig. 2 is a perspective view of said grip-frame, showing its attaching-yokes in dotted lines. Fig. 3 is a perspective view of a portion of the grip-frame, hereinafter fully described. Fig. 4 is a side elevation of that portion of a car to which the pedestal and axle-box are attached, showing a part of one end of the grip-frame and brace-rods and the manner of connecting the latter to the pedestal. Fig. 5 is an edge view of the lower end of one of the pedestals, showing the bifurcated end of the latter, the said brace-rod connection in end view, and the end of one side of the grip-frame in position between the two arms of the pedestal, and a portion of the grip-frame yoke.

In the drawings, A is the sill of the car, and b are the pedestals, which are bolted to the car-sill in the usual way, and 3 indicates the box-steps, which project laterally from the sides of the boxes 4, the usual springs, 5, being interposed between said steps and the car-sill, as shown. The said pedestals, boxes, and steps are arranged in the usual manner, whereby the pedestals have the required free vertical movement by the sides of the boxes and the latter are duly supported. The lower ends of the pedestals, which are bifurcated, as usual, (see Fig. 5,) extend below the box-steps, as

shown, and thereto is bolted an iron brace-rod shoe, 6, which receives the lower end of the pedestal between its sides, a strap, 8, being bolted against each side of said shoe to strengthen the pedestal and shoe connection. One end of a brace-rod, 7, is screwed to said shoe 6, and extends thence in an upwardly-inclined direction, and its opposite end is suitably secured to the sill A. A horizontal tie-rod, 9, having a connection, as shown, with the shoe of each pedestal, extends in practice between the two pedestals on one side of the car, and the brace 7 is applied, as described, to strengthen each of the two pedestals shown in Fig. 1, and thereby the said pedestals are held so rigidly that they are capable of resisting the strain to which they are subjected by reason of the connection of the axle-boxes and axles therewith and of resisting the strain of the grip-frame thereupon when the car is started and propelled, said frame being connected directly to the axle-boxes, as hereinafter described.

The above-described brace and tie-rods are omitted from Fig. 1; but Fig. 4, together with the above description of the construction there shown, makes the latter quite clear to any one familiar with car-building. The said cable-grip frame B is clearly illustrated in Fig. 2, and consists of two wrought-iron frames, DD, suitably braced and strengthened, connected to each other in parallel positions by the iron cross-ties 10, which are separated by the iron cage-blocks 12, each having a groove in the upper side thereof, in which the top straps, x, of said frames D lie. Said cross-ties and cage-blocks are firmly bolted together and to the frames D by suitable bolts, as shown. About midway between the side frames, D, of the grip-frame are secured in a separated position, as shown in Fig. 2, two longitudinal iron bars, to which the ordinary cable-grip devices are attached, said bars being indicated by 13.

The above-described grip-frame is made of such length that the ends e of the side frames, D, extend under the boxes 4 of each pair of wheels, as shown in Fig. 1, said ends e having a position in practice between the lower ends of the pedestals b, (see Fig. 5,) and said ends e of the grip-frame are secured under the boxes 4, or, in other words, are hung on said boxes by means of a U-shaped yoke, 14, (shown

in dotted lines in Fig. 2,) which hangs on said boxes 4, and whose ends extend below the latter and pass through the ends *e* of the grip-frame and are secured to the latter by nuts, as shown. A part of one of said yokes is shown in Fig. 5, where the end *e* of the frame referred to is also shown in position between the legs of the pedestal.

Heretofore grip-frames for cars have been hung on the axles thereof by means of suitable boxes attached to the ends of the grip-frame in which the axles run; but such construction and means of supporting the grip-frame is inconvenient for many reasons, among which are that the cost of making and attaching bearing-boxes to the frame is attended with a considerable expense, and, as said boxes are continually exposed to dust under the car, the said boxes soon become so much worn that they have to be frequently replaced, and the friction between said boxes and axle is quite considerable. Furthermore, the hanging of said frame on the axles of said car, as aforesaid, and its detachment from the axles involve considerable labor. By hanging said grip-frame on the boxes 4, as aforesaid, all of the friction which ensues when said frame is hung on the car-axles is avoided.

The within-described improved frame construction and means of hanging the same to the car avoid the above-mentioned inconveniences, for the reason that no preparation of the grip-frame for its attachment to the car is required beyond boring two holes in each of the ends of the frame to receive the ends of the yoke 14, by which the frame is hung to the boxes.

The hanging of the frame on a car consists simply in placing the frame in a convenient position under the car, then placing the yokes

14 over the boxes, and finally lifting the frame and passing the ends of the yokes through its ends and securing it there by the nuts on the yoke.

To get at the frame conveniently for any needed repairs of the grip device, the nuts are turned off from the yokes, thereby letting the frame drop beneath the car.

The brace-rod shoe 6 is provided with the longitudinal slots *c*, through which the bolts pass, whereby said shoe is secured between the lower ends of the pedestal in order to provide for adjusting said shoe to a proper position in the pedestal, so that the latter and the parts connected therewith may be adjusted to a proper position after the brace-rod 7 and tie-rod 9 have been properly secured and tightened.

What I claim as my invention is—

1. The herein - described improvement in cable-grip cars, consisting of the pedestals extending below the axle-boxes, and the grip-frame D, having its ends *e* extending under said boxes and between the ends of said pedestals, combined with a U-shaped yoke, 14, hanging on the axle-boxes and having said ends *e* of the grip-frame secured to their pending ends, substantially as set forth.

2. In combination, the pedestal *b*, extending below the box-steps, the brace-rod shoe 6, having the oblong slots *c* therein and receiving the ends of the pedestal between its sides, suitable bolts passing transversely through said oblong slots and pedestal, and the brace and tie rods 7 and 9, respectively connected with said shoe.

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