

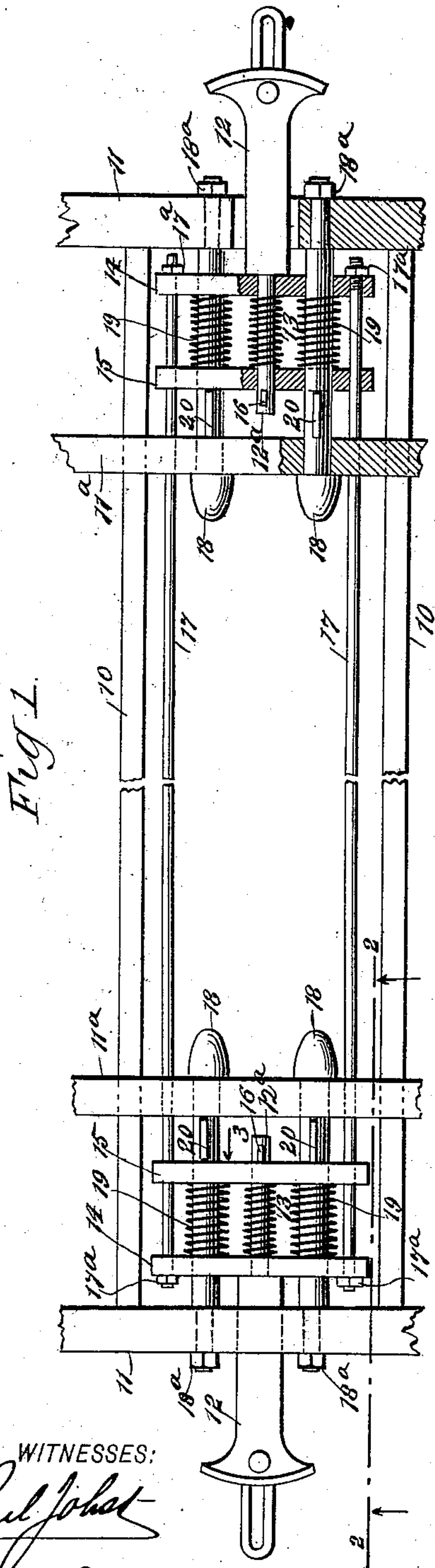
(No Model.)

G. E. SHUEY.

BUFFER AND CONTINUOUS DRAFT DEVICE FOR CARS.

No. 546,561.

Patented Sept. 17, 1895.



WITNESSES:
Paul J. J. J.
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Fig. 2.

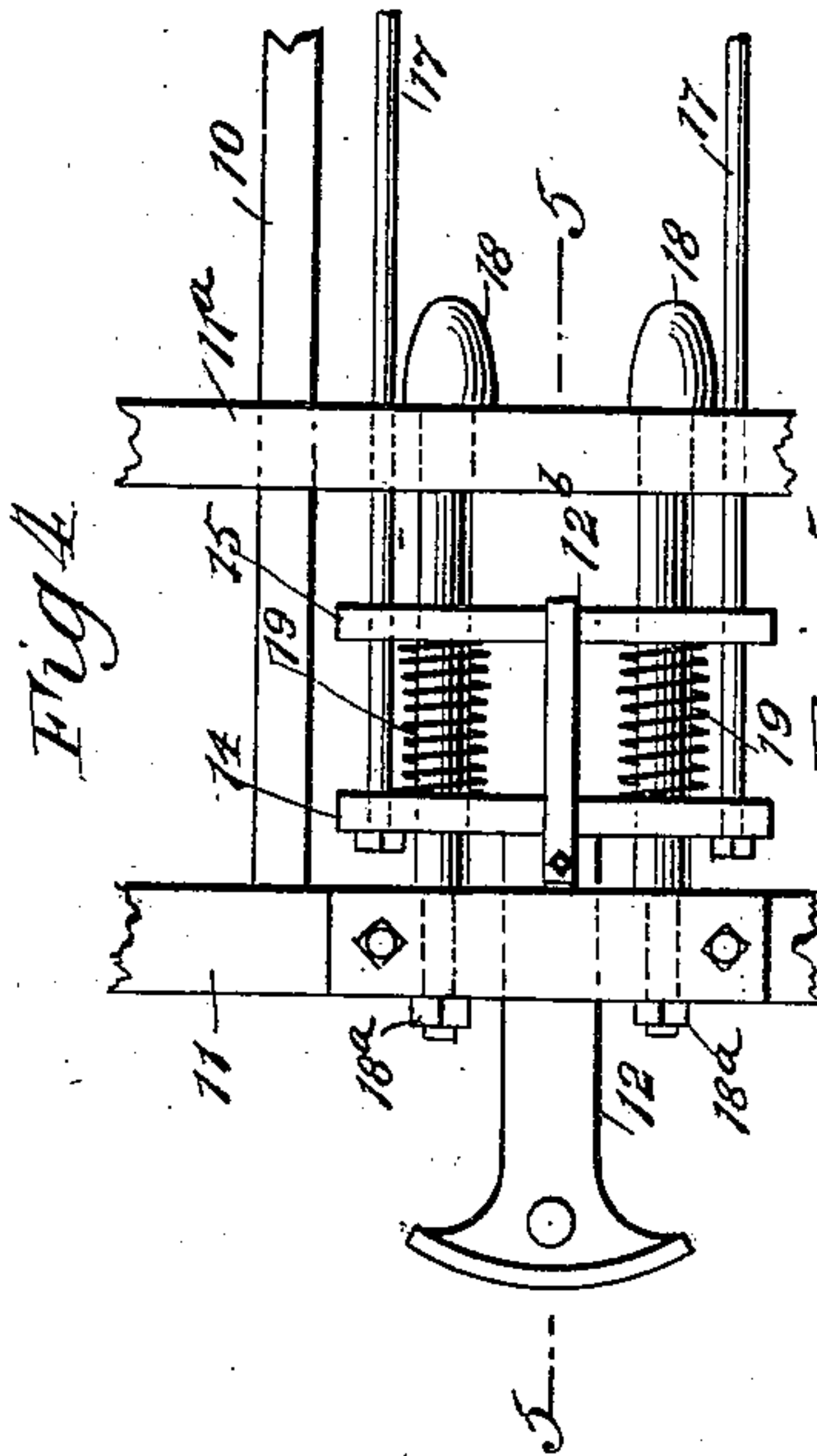
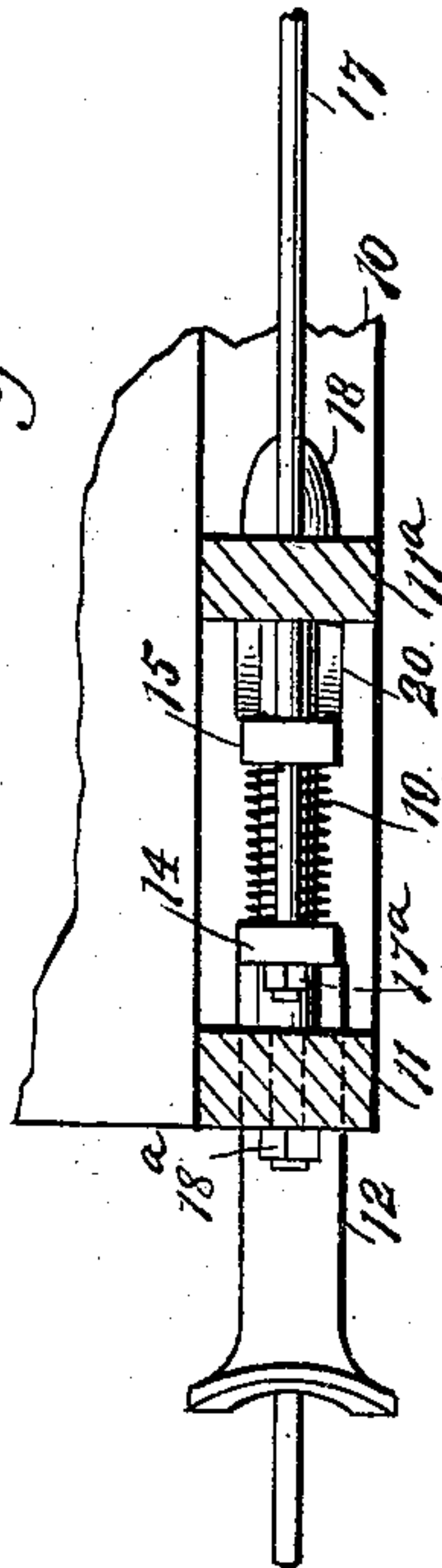


Fig. 3.



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GEORGE E. SHUEY, OF LAWTEY, FLORIDA.

BUFFER AND CONTINUOUS-DRAFT DEVICE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 546,561, dated September 17, 1895.

Application filed July 23, 1895. Serial No. 556,878. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SHUEY, of Lawtey, in the county of Bradford and State of Florida, have invented a new and Improved Buffer and Continuous-Draft Device for Cars, of which the following is a full, clear, and exact description.

This invention relates to an improved buffer and draft device for railroad-cars, and has for its object to provide novel features of construction in an apparatus of the indicated type which will adapt the same to relieve the frames of cars having the improvements from shocks or strains resulting from pulling cars in a train, or the sudden impinge of one coupling on another to which it is connected.

The invention consists in the peculiar construction and combination of parts, as hereinafter described, and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a broken plan view of a car-frame, portions being in section, and the improvement in position thereon. Fig. 2 is a sectional side view of the car-frame, essentially on the line 2 2 in Fig. 1, showing the improvement at one end of a car. Fig. 3 is a detached side view of a yoke-plate which is part of the draft apparatus, seen in direction of arrow 3 in Fig. 1. Fig. 4 is a plan view in part of the end of a car-frame and of the improvement at said end of the car-frame shown slightly changed in construction; and Fig. 5 is a partly-sectional side view of the modified construction of the improvement, substantially on the line 5 5 in Fig. 4.

In the drawings the portions of car-frame shown to indicate the relative position of the improvement as applied thereto comprise the pair of longitudinal beams or stringers 10, located one at each side of and near the transverse center of the car-frame, these being attached at their outer ends to the cross-beams 11, technically known as "bumper-timbers," of the frame.

The car-couplings of any approved style, those shown being of the ordinary link and pin type, are placed one at each end of the car-frame, as usual, the body of each coupling

draw-head 12 being preferably adapted to slide in the bumper-timbers 11.

Rear portions of the draw-heads 12 are reduced in diameter, giving them a cylindrical form, said reduced portions 12^a being of sufficient length to permit the spiral springs 13 to be mounted thereon. A transverse yoke 14 is secured on or formed integral with each draw-head 12 at the rear end of its portion having the greatest diameter, so that the spring 13 on each draw-head may impinge its forward end on the yoke. A loose follower-plate 15, similar to the yoke, is mounted on the cylindrical part of each draw-head behind the spring 13, and the follower-plate is held in contact with the rear end of the spring on each draw-head by a cross-key 16 or other suitable means.

The yokes and follower-plates are similarly perforated near their ends for the loose introduction of the long draft-rods 17, which are inserted through the aligned perforations of said parts on each draw-head, and are prevented from longitudinal displacement by nuts 17^a on projecting ends of the rods, as shown in Fig. 1.

Two cross-timbers 11^a, which are parts of the car-frame, are secured to other parts of the same at a suitable distance from the bumper-timbers 11, parallel thereto.

At each side of the draw-head 12 and each end of the car-frame between the draft-rods 17 and the draw-heads perforations are formed in the timbers 11^a, yokes 14, and follower-plates 15 for the loose introduction of the guide-rods 18, which have their headed ends preferably engaged with the timbers 11^a and their opposite ends passed through holes in the bumper-timbers 11, the projecting ends of the guide-rods having nuts 18^a provided, which hold the rods in position.

On the guide-rods 18, between the yokes 14 and follower-plates 15, strong spiral springs 19 are placed, and the follower-plates are each held in contact with the springs by the cross-keys 20 or equivalent means.

In operation it will be obvious that draft strain applied to the car-couplings of a car or train of connected cars will be transmitted from each coupling drawn upon to the one on the other end of the car through the rods 17 after the springs 13 and 19 have been partly

compressed, and there will be no injurious strains imposed on the car-frames.

It will also be seen that the end thrust of a car-coupling which rearwardly pushes the yokes 14, attached to the draw-head of said coupling, will be cushioned by the said springs 13 19, which are connected to the draw-head that has been pressed on at the front end, the bumper-beam to which the guide-rods 18 are secured in this case receiving the reduced shock of impact, which has been cushioned and nearly absorbed by the said springs.

In Figs. 4 and 5 the draw-head 12 is connected to yokes 14; but the reduced cylindrical extension 12^a is dispensed with and the spring 13 also, and a looped strap 12^b, taking the place of the extension 12^a, serves to connect the follower-plate 15 with the yokes 14, and is attached to the parts 14 15 at each end of a car-frame. When the looped strap 12^b is used, draft strain applied to a car-coupling 12 will be sustained by the springs 19, and the force of impact received at the outer end of the car-coupling will also be taken up by said springs as they are compressed.

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

1. The combination with a car frame, of car couplings, a yoke for each coupling and transversely secured thereto, guide rods on the car frame, held spaced from the car coupling one at each side thereof, springs on said guide

rods, a follower plate loosely mounted on the guide rods and pressing on the rear ends of said springs, and draft rods passing loosely at their ends through the follower plates and secured to the yokes, substantially as described.

2. The combination with a car frame, of car couplings, having the rear portions of their drawheads diametrically reduced and cylindrically formed, a yoke affixed on each drawhead intermediately of its ends, a spiral spring on the cylindrical portion of each drawhead, a follower plate loosely mounted on each cylindrical portion of the drawheads and prevented from displacement by cross keys, guide rods for each car coupling, spaced therefrom at each side thereof and passing through a transverse frame timber of the car, then loosely engaging the follower plate and yoke of each car coupling, and secured to the bumper timbers of the car frame, the follower plates being held in contact with the springs on the guide rods by cross keys, and draft rods extending loosely at their ends through the transverse car frame timbers, and also through the follower plate and yoke of each car coupling, and secured against end play in the yokes, as specified.

GEORGE E. SHUEY.

Witnesses:

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