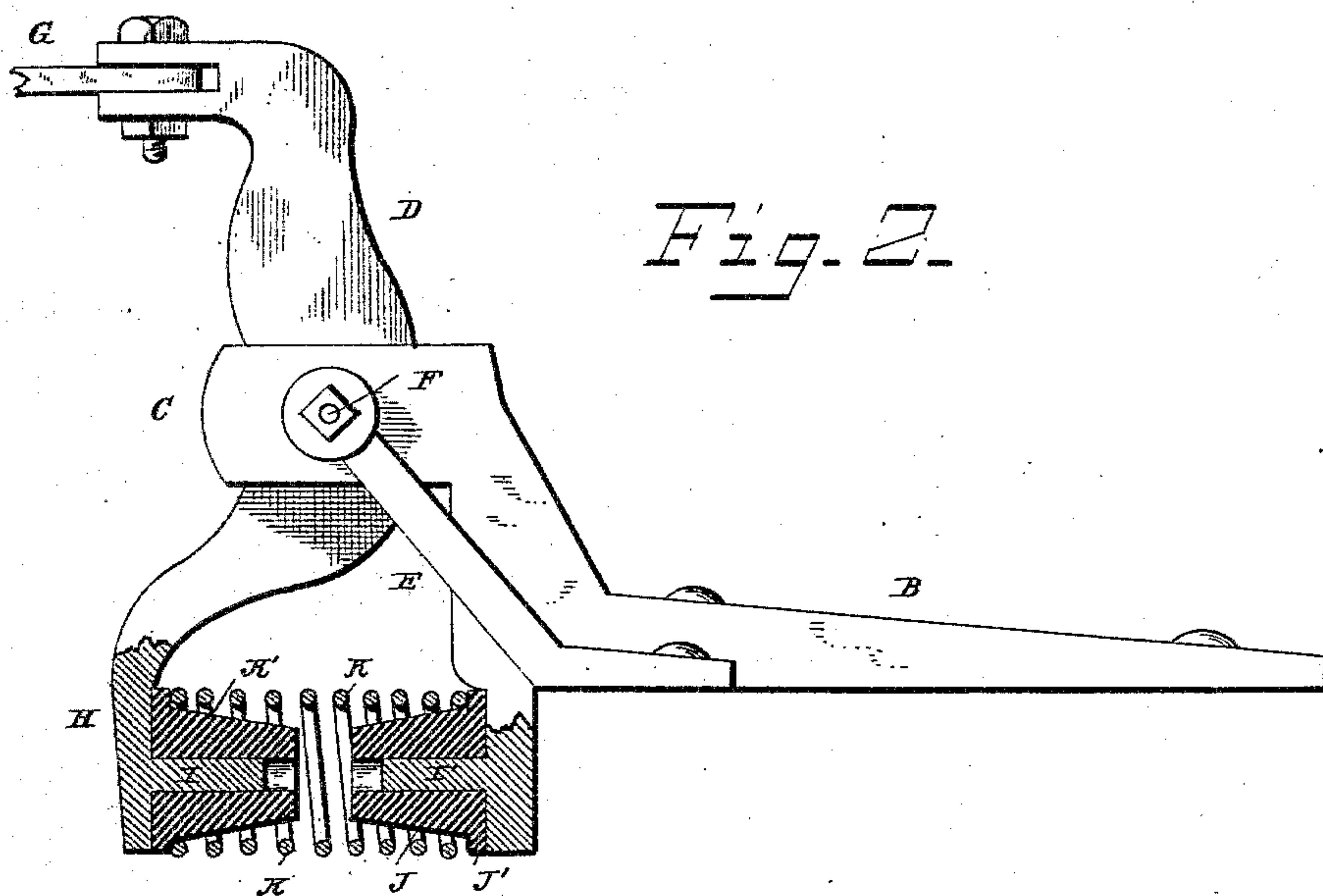
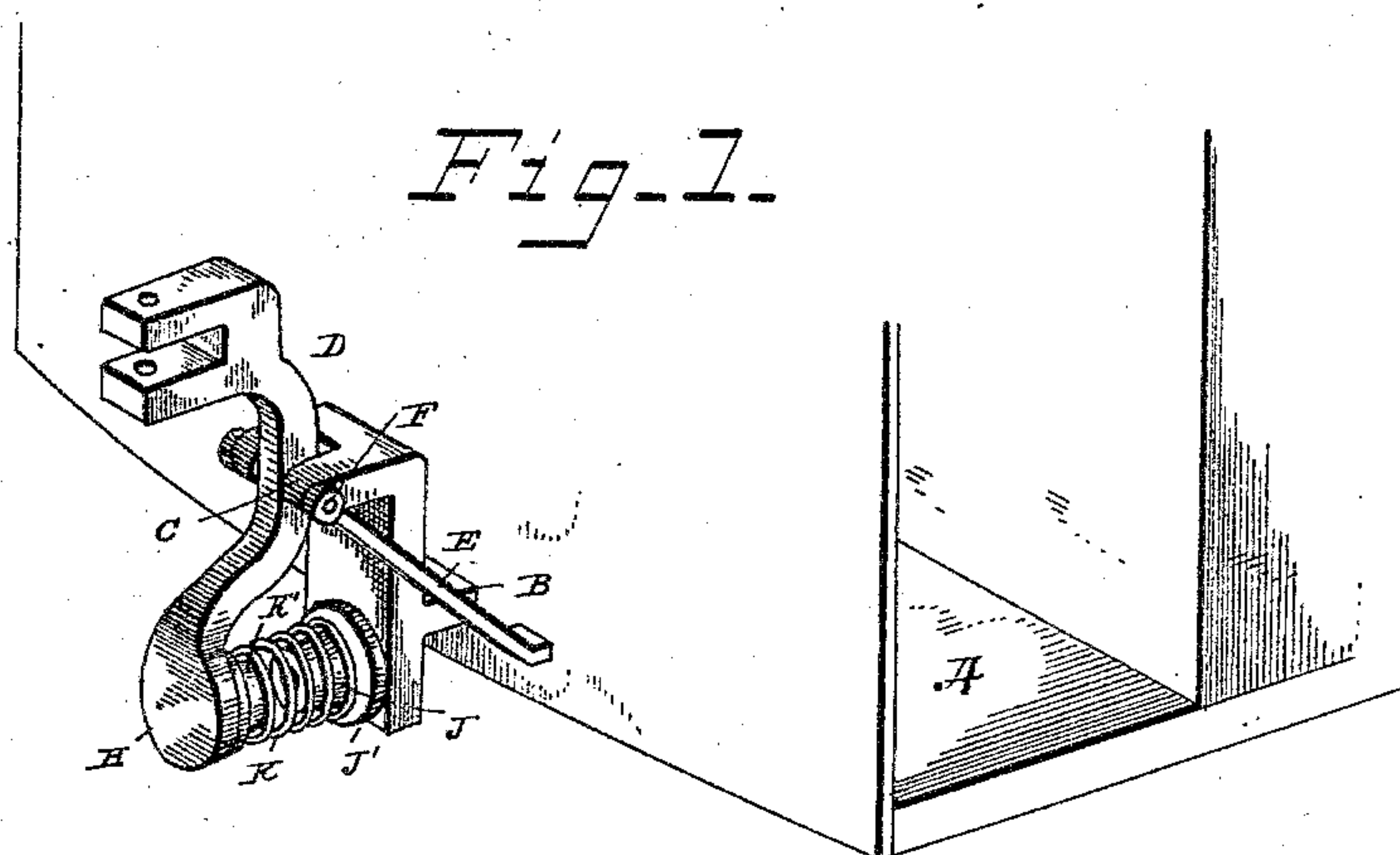


(No Model.)

J. D. MILLER.
DRAFT ATTACHMENT FOR CARS.

No. 303,033.

Patented Aug. 5, 1884.



WITNESSES

Edwin L. Jewell.
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UNITED STATES PATENT OFFICE.

JOHN D. MILLER, OF ANACOSTIA, ASSIGNOR OF ONE-HALF TO CHARLES WHITE, OF WASHINGTON, DISTRICT OF COLUMBIA.

DRAFT ATTACHMENT FOR CARS.

SPECIFICATION forming part of Letters Patent No. 303,033, dated August 5, 1884.

Application filed June 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. MILLER, a citizen of the United States, residing at Anacostia, in the District of Columbia, have invented certain new and useful Improvements in Draft Attachments for Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in draft attachments for vehicles; and it has special reference to those used on railway-cars. It has for its objects, first, to provide a yielding connection between the single-tree or other appliance to which the traces of the harness are hitched and the car or other vehicle, whereby the jerk and jar on the draft-animal's shoulders, incident to starting, is effectually overcome or avoided; and, second, to provide such an attachment with a spring or yielding device which will stand the strain incident to drawing the car continuously along after once started, and another for withstanding the severe strain incident to starting or overcoming the inertia of the car. With these ends in view the invention is essentially in a draft-iron adapted to be firmly attached to the car, and a lever pivotally connected thereto, to the longer arm of which the single-tree is connected, while from the shorter arm a pin projects rearwardly, and carries a rubber or other yielding sleeve, over which is fitted one end of a spiral spring, the opposite portion of the draft-iron being also provided with a like pin and sleeve, over the latter of which the other end of the spiral spring is fitted.

In the accompanying drawings, forming a part of this specification, and on which like reference-letters indicate corresponding features, Figure 1 represents a perspective view of my improved draft attachment as applied to a street-car, the forward part of the latter being also shown; and Fig. 2, a side elevation of the attachment detached from the car.

The letter A designates the platform or forward part of a street-car of the ordinary or any approved form, and the letter B the draft iron or bar, the same being preferably constructed of wrought-iron, and bolted or otherwise strongly secured to the car structure. This bar projects upwardly at its forward end

a sufficient distance to give the proper line to the draft, and then extends directly forward and terminates in a bifurcated portion, C, to which the draft-lever D is pivotally connected by means of a bolt or other suitable device.

In order to maintain the portion C of the draft-bar against lateral displacement, incident to the animal's pulling out of a direct line, I provide the diverging braces E, the same being connected to said portion at one end by the bolt F, and to the platform or car structure at the other. The upper end or longer arm of the draft-lever D is bifurcated horizontally, so as to receive the single-tree G, a pivotal connection being provided between the two. The lower end or shorter arm of the said lever is terminated in a flaring head or disk, H, from which rearwardly projects a pin, I, over which is fitted an india-rubber sleeve, J, the sleeve being slightly longer than the pin, for a purpose which shall presently appear. This sleeve is provided with a circumferential flange or bead, J', against which abuts one end of the spiral spring K, the same being snugly fitted over the sleeve. The opposite or lower portion of the draft-iron B is also of disk form, and is provided with a forwardly-projecting pin, I', over which is also fitted a sleeve, K', corresponding to that above described. The rear end of the spring K fits over this sleeve and its end abuts against the circumferential flange or bead formed thereon. The normal position of the draft-lever is such that the spirals of the spring stand apart, and the ends of the sleeves remain separated; but when the animal starts forward and the traces become tightened the strain through the single-tree is transmitted to the draft-lever, and its lower end thrown against the spiral spring, which is thereby compressed until the opposite ends of the india-rubber sleeves meet and receive a degree of compression commensurate with the strain produced in overcoming the inertia of the car. The protruding ends of the sleeves, beyond the pins, allow of their compression without bringing the pins themselves in contact, and the flanges on the sleeves afford a yielding seat or shoulder for the ends of the spring, and at the same time prevent wear and rattling of the parts.

It is obvious that by a slight modification in

the arrangement of the several features of my invention it may be adapted to two-horse draft appliances.

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

1. In a draft attachment, the combination, with the lever or bar adapted to be connected at or near one end with a single or other tree, of the draft-bar pivotally connected thereto, and the springs interposed between the said lever and draft-bar, one of which is adapted to resist the draft-strain incident to drawing the car continuously, and both of which are adapted to resist the strain incident to overcoming the inertia in starting the car.

2. In a draft attachment, the combination, with the lever or bar adapted to be connected to the single or other tree, and provided at one end with a yielding sleeve, of the draft-bar pivotally connected to said lever, and provided with a distinct yielding sleeve, and the spring fitted over said sleeves and interposed between the lever and draft-bar, whereby the strain exerted by the draft-animal is yieldingly resisted.

3. In a draft attachment, the combination, with the lever or bar adapted to be connected

at one end with a single or other tree, and having at the other a projecting pin and a yielding sleeve mounted thereon, of the draft-bar pivotally connected to said lever, and provided with a distinct pin and sleeve, the said sleeves having flanges and extending beyond the pins, and the spiral spring interposed between the lever and draft-bar and mounted upon said sleeves, and adapted to bear against the flanges thereof.

4. In a draft attachment, the combination, with the draft-bar terminating at one end in a bifurcation, and having a projecting pin and a longer yielding flanged sleeve mounted thereon, of the lever or bar pivotally connected thereto, and having a projecting pin and a longer flanged yielding sleeve mounted thereon, the spiral spring fitted over said sleeves and adapted to bear against the flanges, and the braces connected to the draft-bar, and adapted to be bolted or secured to the car structure.

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

JOHN D. MILLER.

Witnesses:

ROBINSON WHITE,

EDWIN L. BRADFORD.