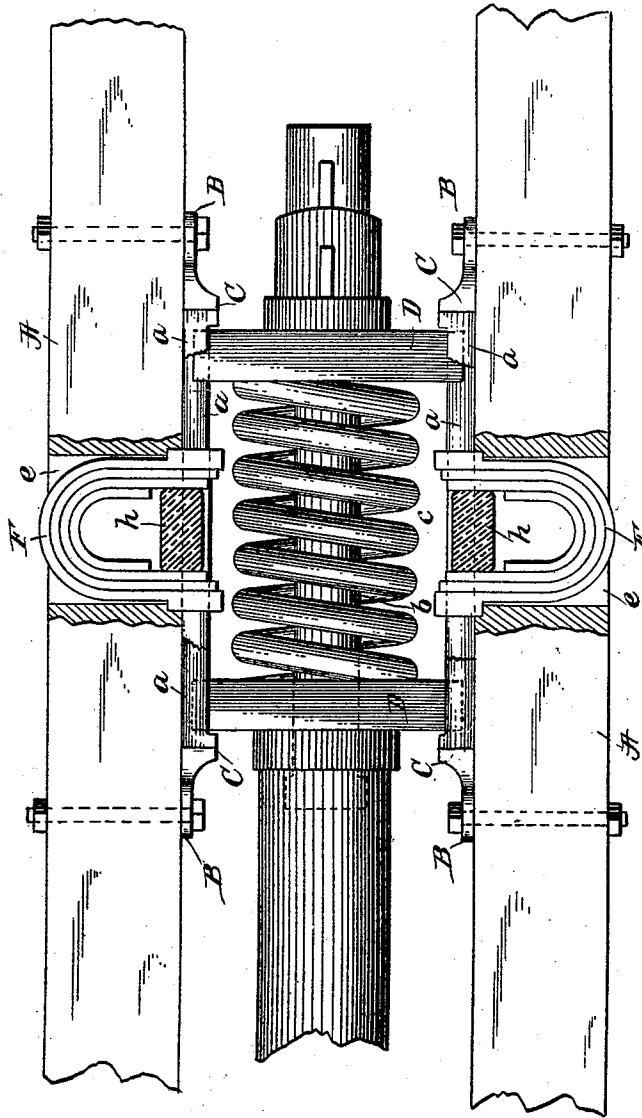


(No Model.)

J. A. HINSON.  
CUSHIONING DEVICE FOR DRAW BARS.

No. 461,339.

Patented Oct. 13, 1891.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA.

## CUSHIONING DEVICE FOR DRAW-BARS.

SPECIFICATION forming part of Letters Patent No. 461,339, dated October 13, 1891.

Application filed February 14, 1891. Serial No. 381,474. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. HINSON, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Cushioning Devices for Draw-Bars; 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.

This invention relates, generally, to draw-bar draft-rigging, and particularly to cushioning devices for taking up or absorbing the shocks or blows resulting from the impact between coupling-heads and from the jerking of the coupling devices in moving or pulling the train; and it has for its object to provide a simple yet effectual device for this purpose of few parts, comparatively inexpensive, and not liable to become damaged or get out of repair; and it consists in providing an auxiliary spring or springs arranged in the draft-timbers and having their free ends in the path of the follower-plates, so as to be struck by said plates under certain conditions, as will be clearly explained hereinafter, and pointed out in the claims.

In the accompanying drawing, forming a part of this specification, is shown a plan view of a draft-rigging with my improvement applied thereto, parts being broken away to show the arrangement of underlying parts.

A represents the draft-timbers of a railway-car, which are to be secured to the under side of a car in the usual or any desired manner, and B metal plates bolted to the sides of the timbers A and having cast at each end therewith draft-lugs C, said plates having longitudinal flanges *a* cast at their top and bottom edges, between the lugs C on the lower or bottom flanges of which the follower-plates D rest at each end and on which they slide when under strain—that is, during the movement of the train of cars.

The plates D are the ordinary follower-plates, each having a central opening therein through which the spindle *b* passes that supports the ordinary spiral spring *c*, said spindle having a thimble or other collar keyed thereto at its rear end in order to prevent it being drawn through the follower-plate and having

its forward end secured to the draw-bar, as is customary.

The plates B are formed with oblong or rectangular slots or openings at their center between the lugs C, which correspond with similar slots or openings *e* formed in the draft-timbers. In the openings *e* are arranged and secured in any desired manner the U-springs F, said springs being formed, preferably, of a series of leaves *f* of varying lengths, the shorter leaves being arranged within the longer leaves and the outermost leaf bearing against the sides of the opening *e* or against wear-plates secured thereto. The U-spring is arranged in the opening so that its ends project or extend past the inner side or surface of the timbers and lie within the path of the ends of the follower-plates D, said plates being of a greater length than the diameter of the spring *c*, so that when said spring *c* is compressed by the force or pressure exerted thereon by the follower-plates, owing to the surging of the cars or through buffing blows or otherwise to a certain degree within its known strength, the ends of the plates D strike against the ends of the springs F, lying within their paths, and thus transfer to said spring F a portion of the strain or shock and thus relieve the spring *c* from the labor or duty of sustaining alone the entire shock and bringing to its relief auxiliary springs capable themselves of bearing a very strong blow. In order, however, to relieve said auxiliary springs against sudden and violent blows I secure in any suitable manner between its ends and partly within the openings *e* an elastic filler *h*, which may be of rubber in the form of a block or may be of metal in the form of a spiral or other shaped spring, as desired, as is evident, and I do not therefore desire to be limited to any particular material of which the spring may be formed, nor to any particular shape thereof. It is also evident that the spring F may be of a somewhat different form—as, for instance, two C-springs might be employed or single flat plates of spring metal might be used at each side of the opening in lieu of said U-spring. Although I prefer the latter and believe it to be the best for the purpose, yet I do not desire to be restricted thereto.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the follower-plates of a draw-bar draft-rigging, of auxiliary springs secured to the draft-timbers and arranged with their pliable ends within the path of said follower-plates, substantially as described.
2. The combination, with the follower-plates of a draw-bar draft-rigging, of springs arranged within openings in the draft-timbers and having their pliable ends extended within the path of the ends of said follower-plates, substantially as described.
3. The combination, with the follower-plates of a draw-bar draft-rigging, of U-springs secured in openings in the draft-tim-

bers and arranged with their pliable ends extending across the path of the ends of said follower-plates, substantially as described.

4. The combination, with the follower-plates of a draw-bar draft-rigging, of U-springs arranged in openings in the timbers and having their ends extending beyond the sides of said timbers into the path of said plates, and an elastic filler arranged between the ends of said springs, substantially as described.

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

JAMES A. HINSON.

Witnesses:

W. A. REDMOND,  
G. M. COPENHAVER.