

No. 700,629.

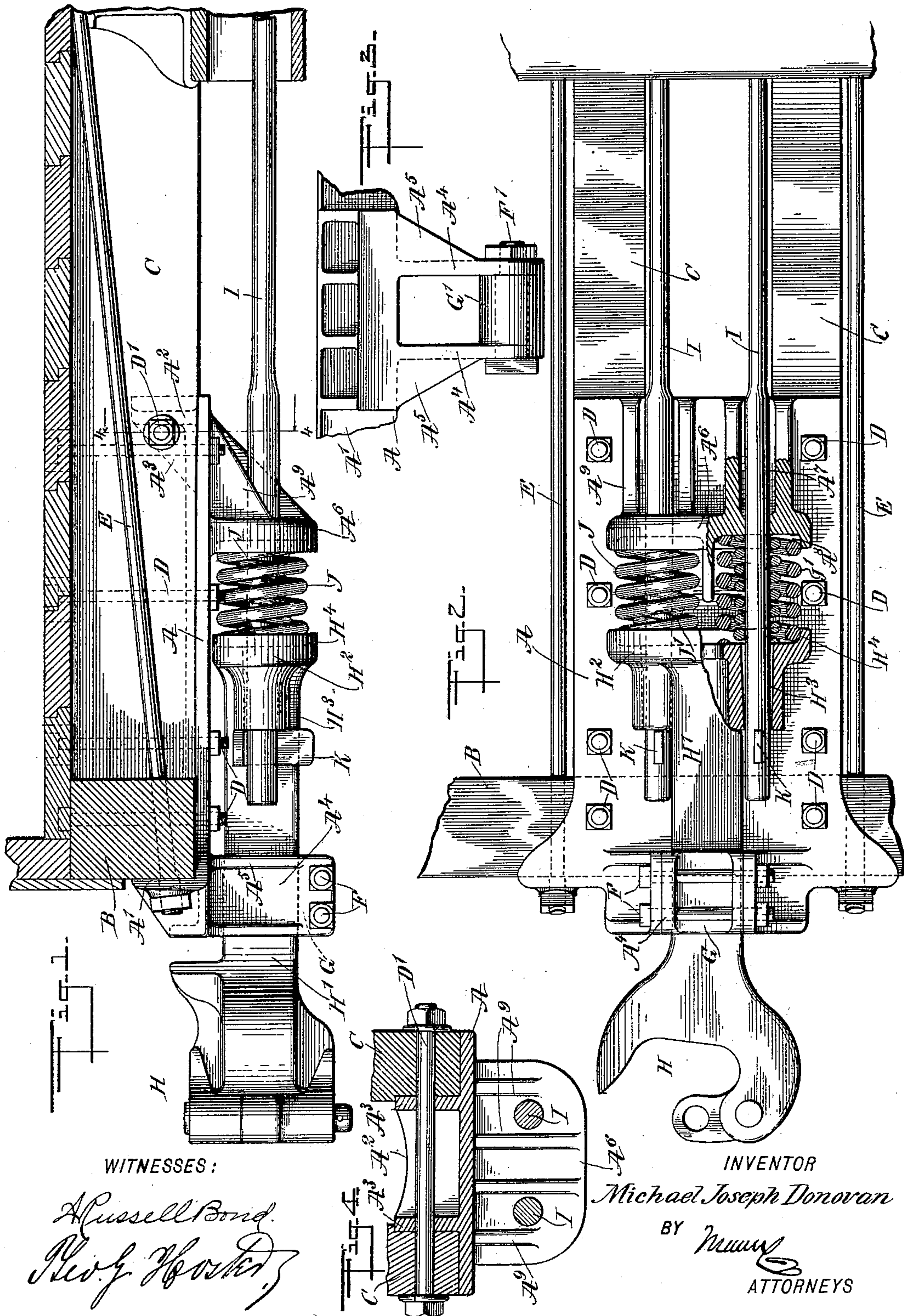
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M. J. DONOVAN.

DRAFT ATTACHMENT FOR RAILROAD CARS.

(Application filed Dec. 20, 1901.)

(No Model.)





# UNITED STATES PATENT OFFICE.

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## DRAFT ATTACHMENT FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 700,629, dated May 20, 1902.

Application filed December 20, 1901. Serial No. 86,690. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL JOSEPH DONOVAN, a citizen of the United States, and a resident of Vicksburg, in the county of Warren and State of Mississippi, have invented a new and Improved Draft Attachment for Railroad-Cars, of which the following is a full, clear, and exact description.

The invention relates to railroad-cars having draw-rods extending from one end of the car to the other to connect with the draw-bars; and the object of the invention is to provide a new and improved draft attachment for railroad-cars arranged to insure easy drawing of the cars and to resist buffeting shocks or jars, so as to relieve the car-body of undue strain, thereby insuring longer life of the car-body.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in 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 longitudinal sectional elevation of a car-body provided with the improvement. Fig. 2 is an inverted plan view of the same, parts of the improvement being shown in section. Fig. 3 is a front end elevation of the draft-casting and the car-iron of a modified form, and Fig. 4 is a transverse section of the improvement on the line 4 4 of Fig. 1.

The draft attachment for railroad-cars is mounted on a draft-casting having a base-plate A, which rests against the under side of an end sill B and side sills C of a car-body, and the said base-plate is fastened by bolts D to the said sills, as plainly indicated in the drawings. On the forward end of the base-plate A is formed an upwardly-extending integral flange A', engaging the front face of the end sill B and secured to the latter and to the car-body by truss-rods E, as plainly shown in Figs. 1 and 2. The rear end of the base-plate A is provided with an upwardly-extending integral cross-piece A<sup>2</sup>, having longitudinal flanges A<sup>3</sup>, likewise integral with

the base-plate and fitting into recesses or gains formed on the inner faces of the side sills C, as plainly shown in Fig. 4, a bolt D' extending transversely through the sills C and the said flanges A<sup>3</sup> to assist in securely fastening the base-plate in position on the sills of the car. From the front end of the base-plate A depend integral spaced arms A<sup>4</sup>, strengthened by ribs A<sup>5</sup>, and supporting at their lower ends bolts F for fastening a carry-iron G in place between the said arms A<sup>4</sup> for the shank H' of a draw-bar H to rest on, as will be readily understood by reference to the drawings. The carry-iron G may be in the shape of a cross-bar, as indicated in Figs. 1 and 2 or in the shape of a roller G', mounted to turn on a single bolt F', attached to the arms A<sup>4</sup>, as illustrated in Fig. 3. The rear end of the shank H' of the draw-bar H is formed with an integral lug H<sup>2</sup>, projecting beyond the sides of the shank and formed with longitudinally-extending apertures H<sup>3</sup> and concentric spring-seats H<sup>4</sup> at the rear face of the lug, (see Fig. 2,) and through the said apertures H<sup>3</sup> and seats H<sup>4</sup> extend draw-rods I, also passing through apertures A<sup>7</sup> and spring-seats A<sup>8</sup>, formed in a bracket A<sup>6</sup>, depending integrally from the base-plate A near the rear end thereof, the bracket being strengthened by ribs A<sup>9</sup>. The apertures A<sup>7</sup> and H<sup>3</sup> register with each other, and likewise the corresponding seats H<sup>4</sup> and A<sup>8</sup>, and the said seats are engaged by sets of springs J and J', coiled on the rods I, between the lug H<sup>2</sup> and the bracket A<sup>6</sup>. Keys K are inserted in the forward ends of the rods I to abut against the forward ends of the projecting sides of the lug H<sup>2</sup>, the arrangement being such that the springs J and J' are normally under a slight tension, it being understood that the draw-rods I extend from one end of the car-body to the other to connect in the same manner with the draw-bar, as above described, and shown in Fig. 1.

From the foregoing it will be seen that an outward pull exerted on the draw-bar H causes the draw-rods I to move along, so that the springs J and J' at the other end of the car are compressed while the draw-bar at this end is moved inward, and consequently the entire strain comes on the base-plate A and not on



the car-body, so that the latter is relieved of all undue strain. It is expressly understood that when the springs J and J' are compressed the pressure is exerted against the lug H<sup>2</sup> and bracket A<sup>6</sup>, and as the bracket is an integral part of the base-plate A it is evident that the car-timber is not subjected to the drawing strain.

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

1. A draft attachment for railroad-cars, comprising a draft-casting for attachment to the end and side sills of the car-body, a depending carry-iron on one end of the said draft-casting, a depending apertured bracket on the other end of the draft-casting, a draw-bar resting on the said carry-iron and having an apertured lug, draft-rods extending through the said bracket and lug, and springs held between the said bracket and lug, the draft-rods extending through the springs, and the latter being seated on seats formed on the opposing faces of the bracket and lug, as set forth.

2. A draft attachment for railroad-cars, comprising a draft-casting for attachment to the end and side sills of the car-body, a depending carry-iron on one end of the said draft-casting, a depending apertured bracket on the other end of the draft-casting, a draw-bar resting on the said carry-iron and having an apertured lug, draft-rods extending through the said bracket and lug, springs held between the said bracket and lug, the draft-rods extending through the springs, and the latter being seated on seats formed on the opposing faces of the bracket and lug, and keys held on the outer ends of the draft-rods to abut against the outer end of the lug on the draw-bar, as set forth.

3. A draft attachment for railroad-cars, comprising a draft-casting arranged for attachment to the car-sills, depending arms on the forward end of the draft-casting, a carry-iron supported between the arms, a depending bracket on the rear end of the draft-casting and formed with longitudinal apertures and spring-seats, a draw-bar supported on the carry-iron and having its shank provided with a lug having apertures and spring-seats in alinement with the apertures and spring-seats on the draft-casting bracket, springs extending between the said bracket and the said lug and seated on the seats thereon, draft-rods extending through the said registering apertures, spring-seats and springs, and keys held on the ends of the draft-rods and adapt-

ed to abut against the forward end of the lug, as set forth.

4. A draft attachment for railroad-cars provided with a draft-casting, comprising a base-plate fitting against the under side of the end sill and the side sills, a flange extending upward on the forward end of the base-plate for attachment to the front face of the end sill, depending arms on the front end of the base-plate for supporting a carry-iron, a bracket depending from the rear end of the base-plate and having longitudinal apertures and spring-seats, and a cross-piece having side flanges and rising integrally from the base-plate at the rear end thereof for attachment to the side sills of the car-body, as set forth.

5. A draft attachment for railroad-cars, comprising a base-plate fitting against the under side of the end sill and the side sills and provided at its forward end with an upwardly-projecting flange for attachment to the front face of the end sill and depending arms supporting a carry-iron, and at its rear end with a depending apertured bracket having slots in its front face, and with an upwardly-extending cross-piece connected with the base-plate by side flanges, a draw-bar working between the arms and resting on the carry-iron, the rear end of the draw-bar having an apertured lug having seats around the apertures, draft-rods extending through the apertures of the bracket and lug on the draw-bar and provided with securing means at their ends, and springs surrounding the rods with their ends in the seats of the said bracket and lug, as set forth.

6. In a draft attachment for railroad-cars, a draft-casting secured to the end and sills of a car and provided at its front end with an upwardly-projecting flange and depending arms having a roller mounted between them and at its rear end with a depending apertured bracket, a draw-bar having its shank working in the guideway and provided with an apertured lug at its rear end, draft-rods extending through the apertures of the bracket and lug and provided at their ends with stops for engaging said lug, and springs surrounding the rods between said lug and bracket, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MICHAEL JOSEPH DONOVAN.

Witnesses:

R. C. GRANT,  
FLORA LIEBY.