J. R. FISH.

Draw-Bar for Railway-Car.

No. 207,727. Patented Sept. 3, 1878.

Fig. 1.

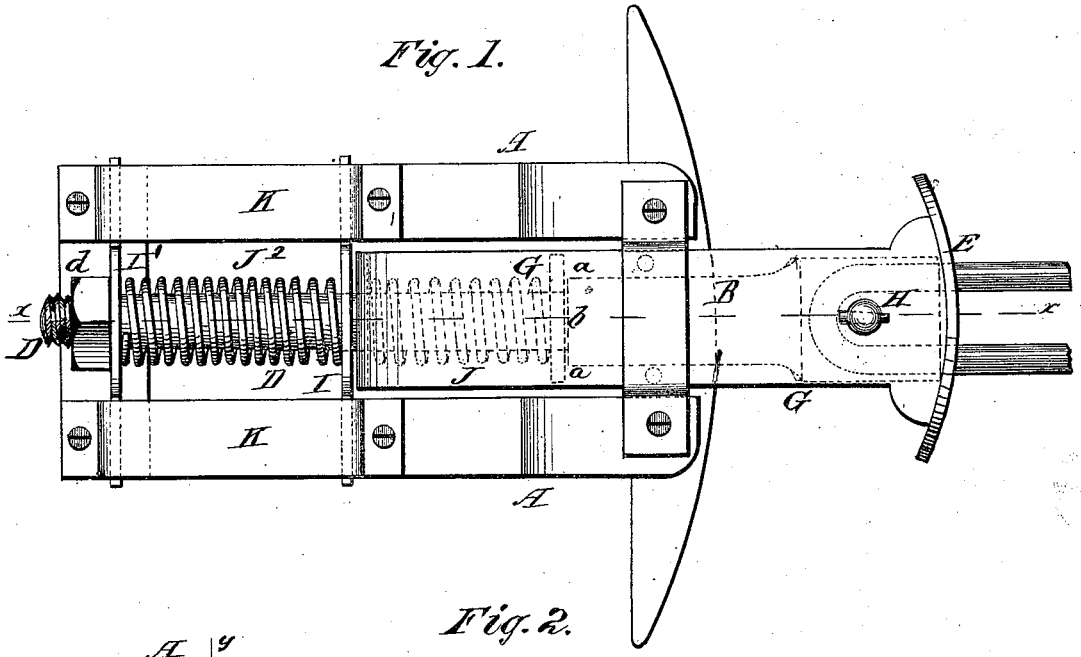


Fig. 2.

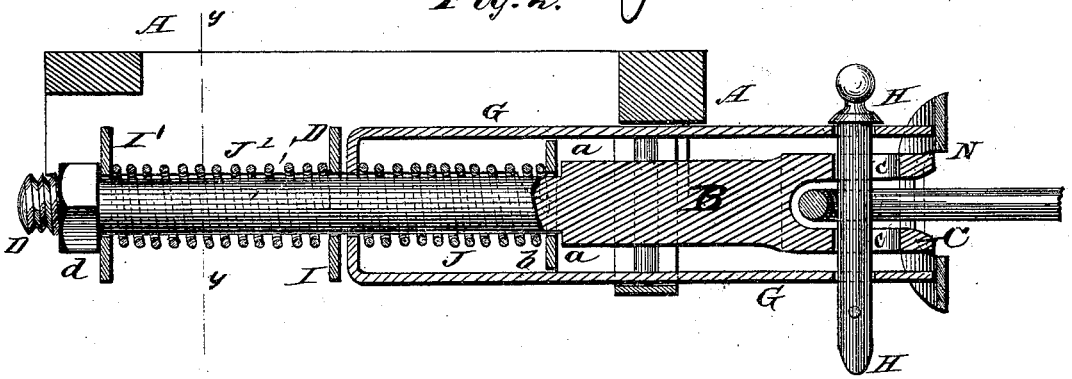
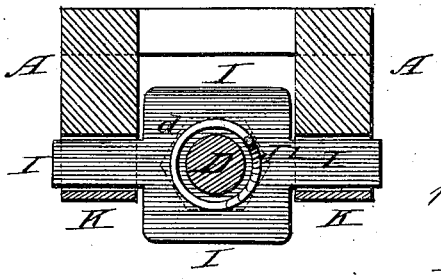


Fig. 3.



WITNESSES:

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JOHN R. FISH, OF GRAND RAPIDS, MICHIGAN.

IMPROVEMENT IN DRAW-BARS FOR RAILWAY-CARS.

Specification forming part of Letters Patent No. **207,727**, dated September 3, 1878; application filed December 13, 1875.

To all whom it may concern:

Be it known that I, JOHN R. FISH, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Draw-Bars for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention relates to draw-bars for railroad-cars; and it consists in the construction and combination of devices, as will be hereinafter more fully set forth, and pointed out in the claim.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a bottom view of my invention. Fig. 2 is a longitudinal vertical section of the same; and Fig. 3 is a transverse vertical section on the line *y y*, Fig. 2.

A represents part of the frame-work of a railroad-car to which the draw-bar is connected. B is a solid draw-bar, formed with a head, C, at its front end, said head being constructed with a flaring mouth to receive the coupling-link. From the rear end of the draw-bar B projects a rod, D; or the rear portion of the draw-bar may simply be turned down, so as to form a shoulder at *a*. The draw-bar B is placed within a metallic frame, G, having a head or bumper, E, at its front end, and the part D of the draw-bar extends through a hole in the rear end of the frame. In the frame G are suitable holes for the passage of the coupling-pin H, and the head C of the draw-bar is slotted longitudinally, as shown at *c c* in Fig. 2, for the passage of said pin H, allowing the surrounding frame to move a certain distance independent of the bar itself. Against the shoulder *a* on the draw-bar is placed a washer, *b*, and between this washer and the rear end of the frame, on the inner side, is placed a spring, J, surrounding a portion of the part D of the draw-bar. On the rear portion of said part D is another spring, J′, between two slides, I I′, which are held by and move in guides K K on the frame A. A nut, *d*, is screwed on the end of the part D, as shown.

The operation is substantially as follows: In pulling, the pin H draws the frame G forward the length of the slot *c* in the draw-head, compressing thereby the spring J. As soon as the pin H gets to the front end of the slot *c*, both the draw-bar B and frame G are pulled forward, and the spring J′ is then compressed, the slide I then remaining stationary, while the slide I′ is drawn forward to compress the spring J′. In like manner, in backing, the bar B is pushed back, compressing the spring J′ until the front part of the draw-head at the end of the slot *c* strikes the pin H, when both the draw-bar and the frame are moved back, compressing the spring J.

It will thus be seen that while I have two springs, they are not both compressed at the same time; but in either case, whether pulling or backing, one spring is brought into action—that is, compressed—first, and when this has been compressed as far as it will be, then the second spring is compressed, the extent of compression of the first spring depending upon the length of the slot *c* in the draw-head.

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

The combination of the draw-bar B D, provided with head C, having longitudinal slots *c c*, the surrounding longitudinally-movable frame G, provided with bumper E, the two springs J J′, loose slides I I′, and guides or ways K K, all constructed and arranged to operate substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN RANDOLPH FISH.

Witnesses:

JAMES R. BISHOP,

CYRUS E. PERKINS.