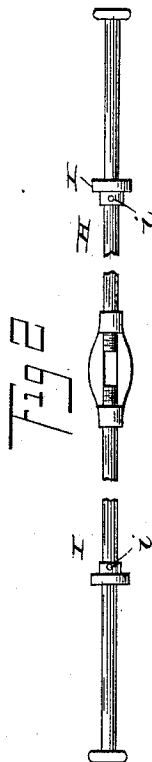
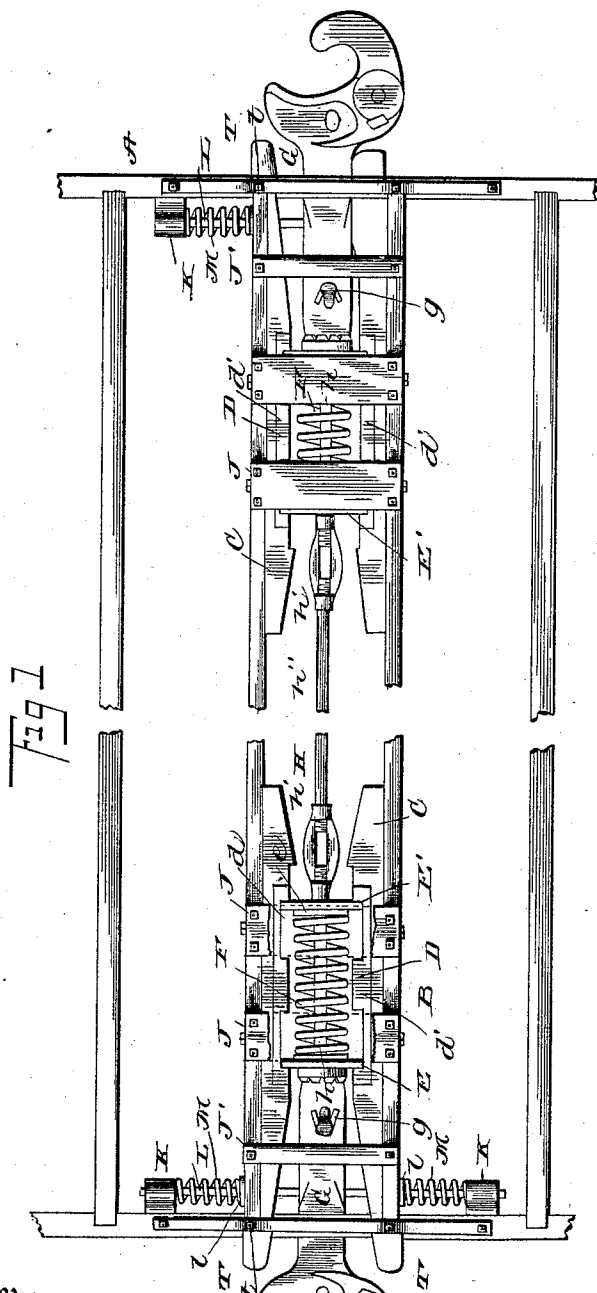


(No Model.)

P. BROWN.
DRAW BAR FOR CARS.

No. 465,015.

Patented Dec. 15, 1891.



Witnesses
John Imrie
J. E. Robertson

Inventor
Perry Brown
By his Attorney *J. W. Robertson*

UNITED STATES PATENT OFFICE.

PERRY BROWN, OF SHARONVILLE, OHIO.

DRAW-BAR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 465,015, dated December 15, 1891.

Application filed April 18, 1891. Serial No. 389,436. (No model.)

To all whom it may concern:

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Sharonville, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Continuous Draw-Bar Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

This improvement relates to that class of draw-bar attachments in which there is a continued connection from one draw-bar to the other; and the invention consists in the peculiar construction, arrangement, and combinations of parts hereinafter more particularly described, and then definitely claimed.

In the accompanying drawings, Figure 1 represents a reversed plan of the bottom of a car constructed according to my improvement, with parts removed at one end the better to show the construction. Fig. 2 shows a modification.

Referring now to the details of the drawings, A represents the front sills, and B the central sills, which latter I prefer to make sufficiently deep to form the draft-timbers also, as by this means the parts carrying the draw-bars, &c., run the whole length of the car, and thus add to its strength. At the inside of the sills B, I bolt blocks C, having recesses to receive the guides D, which guides may either be cast or formed in any convenient manner or of any suitable metal. The blocks C and sills B are preferably rounded at the ends and are covered by a thimble T, through which passes a bolt *t*, thus securely holding the whole together, and the thimble will prevent the splitting and splintering of the ends of the sills. The guides D have recesses *d*, which receive the ends of the follower-plates E E', each of which is perforated and provided with a flange or ring projection *e*, which forms a socket to receive the end of a spring F. At each end is a draw-bar G, of any approved form, which may be provided with a projection *g*, preferably in the form of a hook. Extending from draw-bar to draw-bar is a continuous draft-bar H, which I prefer to make in different parts, which may be connected in various ways. As shown in Fig. 1, there is a bolt *h* in the end of each draw-bar, passing through the follower-plates E E'

and spring F and connected to a turn-buckle *h'*, and a single rod *h''*, running from buckle to buckle; or I may use a long bolt in each draw-bar and connect them by a single turn-buckle in the center, as shown in Fig. 2, in which case I set on each bolt a collar I and hold it there by means of a key *i*, passing through a slot in the bolt, which collar acts against the inner follower-plate E'.

At different places under the central sills B, I bolt cross-bars J J J', which serve to prevent the sills from spreading, and the bar J' may serve an additional purpose, as in case of any breakage of the connection H between the draw-bars the projection *g* will come in contact with said bar J', and thus prevent the car breaking loose.

At K is shown a bracket which forms a guide for a plug L, one of whose ends passes through the sill and bears against the draw-bar. Around said plug is a spiral spring M, whose ends bear against the bracket K and a collar *l* around the plug L. This will allow of the draw-bar yielding, and thus prevent damage in turning very sharp curves, and yet the draw-bar will be always held by the spring in the proper position for coupling. I may use a single spring-plug to each draw-bar, as shown at the right-hand end of the drawings, or I may use two spring-plugs, one at each side of the draw-bar, as shown at the opposite end.

By the arrangement shown of the draw-bars, draft-bar, guides, and follower-plates I am enabled to provide a continuous connection from one end of the car to the other in a cheap, simple, and durable manner.

It will be obvious from an inspection of the drawings that, whether hauling or buffing, I have the use of both springs, for when hauling the turn-buckle at one end of the car is acting on its adjacent spring and the end of the draw-bar at the opposite end of the car is also acting on its spring. In like manner in buffing the draw-bar at one end and the turn-buckle at the other end are each acting on the spring nearest it. Moreover, it will be seen that there is no danger of overcrowding the springs, as the division *d'* between the recesses *d* prevents the plates E from being pressed beyond a certain point, and thus the wear of the springs from the overcrowding

the coils on each other is effectually prevented. It will be seen that the single spring-plug will act to keep the draw-bar in the coupling position, but will allow it to yield in one direction only. If, however, a similar spring is used on the draw-bar on the next car, said draw-bar will yield in the opposite direction, so that the coupling of the two cars will yield in either direction. If the draw-bar on the next car has no such spring attachment a spring-plug on each side of the car will be found very useful, as such a draw-bar will yield in either direction and yet always hold the draw-bar in the proper position for coupling.

What I claim as new is—

1. In a draw-bar attachment, the combination of two follower-plates, a spring between them, and guides for the follower-plates, set in recesses cut in the timbers beneath the floor of the car and provided with recesses to receive the ends of said follower-plates, and a division between them to prevent the overcrowding of the springs, substantially as described.

2. In a draw-bar attachment, the combination of two perforated follower-plates E E', a spring F set between them, a draw-bar on one end of a car, having a bolt in one end passing through said follower-plates and spring and connected to a draw-bar on the opposite end of the car, and a pair of guides to receive said plates, set in recesses in the

car-timbers, each guide having a division to prevent the overcrowding of the springs, substantially as described.

3. In a draw-bar attachment, the combination of central sills B, having blocks C fastened thereto, guides D set between the blocks and having recesses *d* and division *d'*, perforated follower-plates E E', a spring set in sockets formed in the follower-plates, draw-bars at the opposite ends of the car, and a connection between said draw-bars, substantially as described.

4. In a draw-bar attachment, the combination of two draw-bars provided with projections *g*, a draft-bar connecting them, and a cross-bar J', fast on the sills of the car, arranged to engage with projection *g* in case of breakage of the draft-bar, substantially as described.

5. In combination with a draw-bar having one end passing through the timbers of the car and a plug bearing against said draw-bar, a bracket to support the other end of the plug, and a spring surrounding the plug and acting against a collar on the same, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 17th day of April, 1891.

PERRY BROWN.

Witnesses:

T. J. W. ROBERTSON,
T. E. ROBERTSON.