

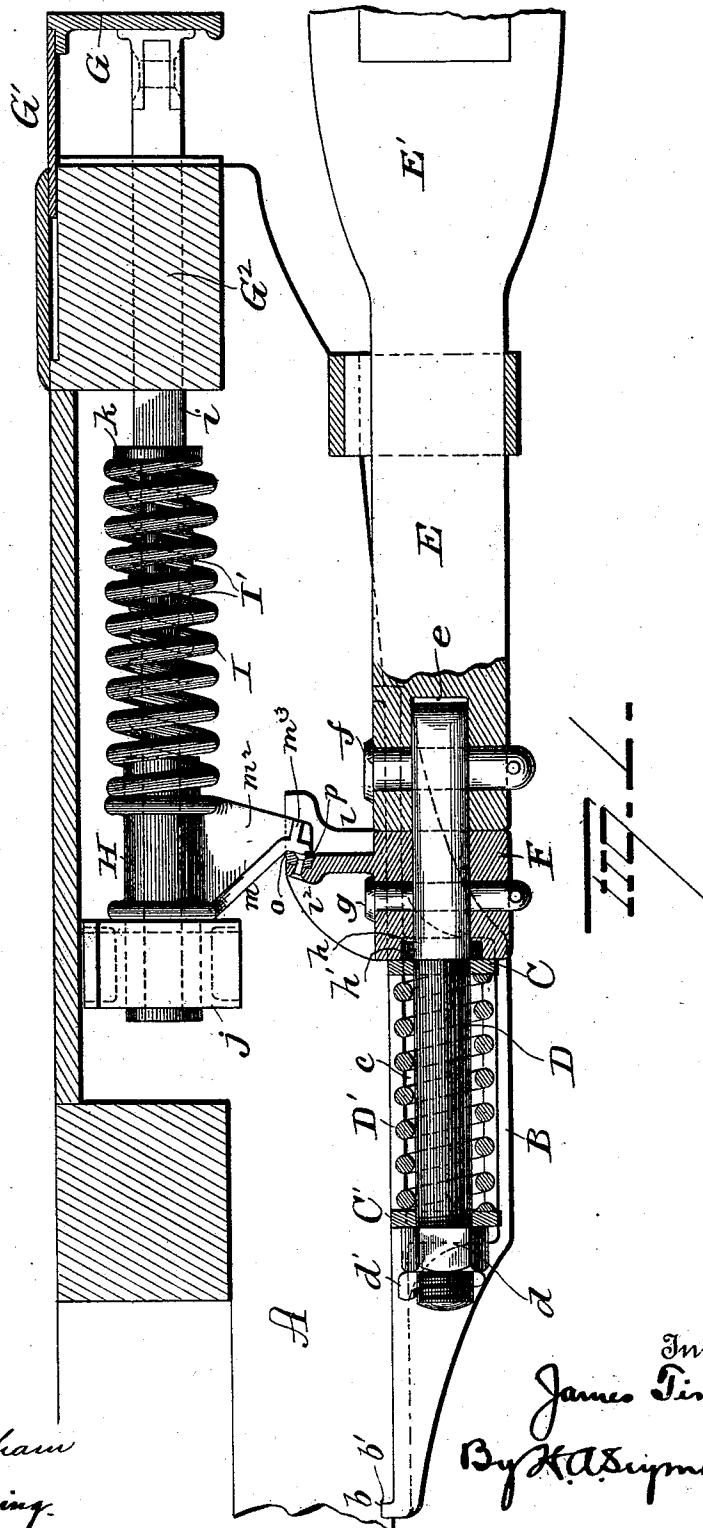
(No Model.)

2 Sheets—Sheet 1.

J. TIMMS.
DRAW BAR FOR CARS.

No. 537,084.

Patented Apr. 9, 1895.



Witnesses
E. Nottingham
G. F. Downing

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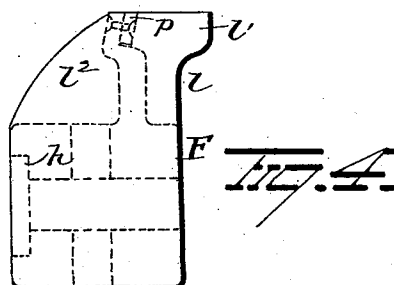
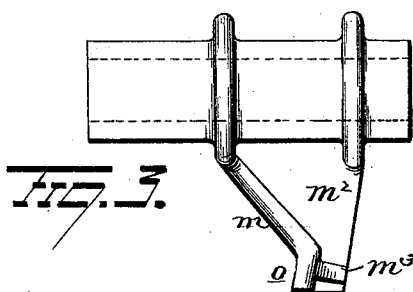
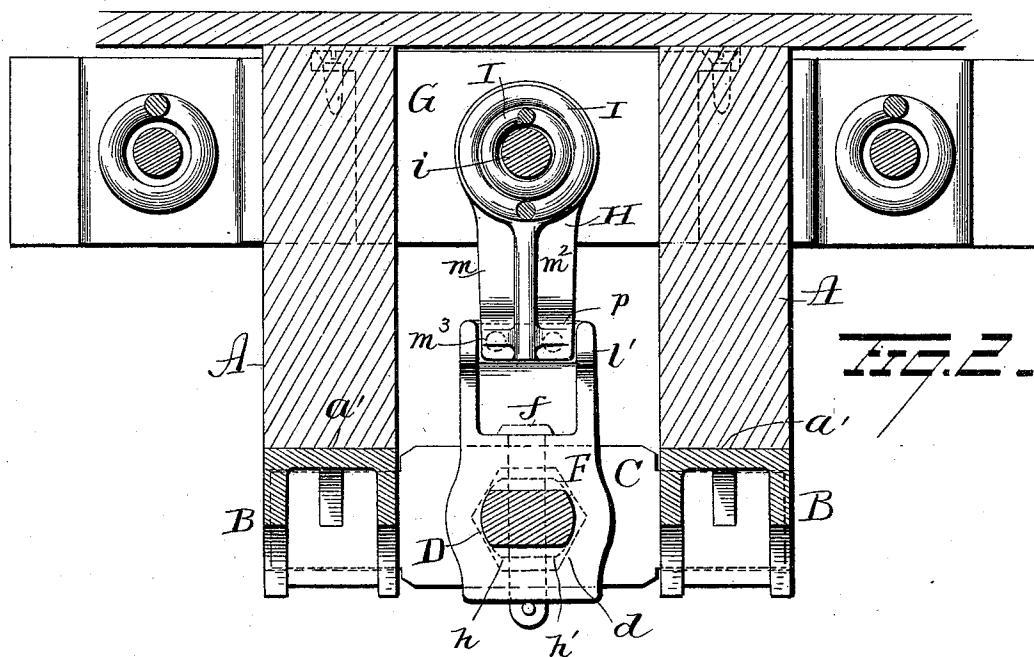
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UNITED STATES PATENT OFFICE.

JAMES TIMMS, OF COLUMBUS, OHIO, ASSIGNOR TO THE BUCKEYE MALLEABLE IRON AND COUPLER COMPANY, OF SAME PLACE.

DRAW-BAR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 537,084, dated April 9, 1895.

Application filed October 1, 1894. Serial No. 524,646. (No model.)

To all whom it may concern:

Be it known that I, JAMES TIMMS, a resident of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Cars; 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.

My invention relates to an improvement in cars and more particularly to the coupling and buffing devices,—the present invention being designed more particularly as an improvement upon that for which Letters Patent were granted to me on the 14th day of March, 1893, and numbered 493,371. In said prior construction the buffers of the abutting cars are maintained normally in contact with each other by means of a block or arm secured to the draw bar engaging a collar or arm on one of the buffer rods. When the block or arm is thus secured to the draw bar, it is necessary to remove it and to disassemble other parts of the device when it is desired to remove the draw-bar.

It is one object of this invention to so mount the block or arm which maintains the buffer in its forward position and to so connect the draw bar with the draft devices, that said draw bar can be readily removed by the withdrawal of a single bolt and without disturbing said block or arm or any other part of the device.

A further object is to improve various details of construction of the device illustrated by my said patent and to render the device very simple and effectual.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation showing the application of my improvements. Fig. 2 is a cross section. Figs. 3 and 4 are detail views.

A, A, represent the longitudinal draft timbers of the car, to the under side of which, draft irons B, B, are secured by means of suitable bolts, and between these draft irons the draft devices for the coupling are located, the

draw bar of which extends between the draft irons and terminates at a point in proximity to the forward ends thereof.

Each iron B is made of malleable cast iron, its upper face *a'* being flat so as to rest solidly against the under side of the draft timber, the extreme ends of the irons being upturned to produce lugs *b* which enter grooves or recesses *b'* made in the under side of the draft timber and materially assist the bolts *a* in resisting end strain.

Each iron B is enlarged centrally and made with a horizontal elongated slot *c* for the reception of the ends of follower plates C, C' which are normally disposed in the respective ends of said slots. Each follower plate is perforated centrally for the passage of a tail bolt D, the rear end of which is screw threaded for the reception of a nut *d* and perforated for the reception of a pin *d'* to prevent the escape of said nut.

A stout spring D' encircles the tail bolt D and bears at its respective ends against the respective follower plate C, C'. The forward end of the tail pin enters a socket or recess *e* in the rear end of the draw bar E, in which it is held by means of a pin *f*.

On the tail pin or bolt D, between the rear end of the draw-bar E and the forward follower plate C, a block or collar F is located and retained in place by a pin *g* passing through it and the tail pin. The block or collar F is recessed to produce a shoulder *h*, against which a flange or enlargement *h'* on the tail pin bears. From this construction and arrangement of parts it will be seen that there will be no strain upon the pin *g* but that the draft will come upon the pin *f*, shoulder *h*, and then, through the follower plates and spring, to the draft irons.

Above the draw-head E' the buffer plate G is located and provided with a plate or apron G' adapted to project over the sill G² of the car. To the buffer plate G, a buffer rod or shank *i* is pivotally connected and extends rearwardly under the car to a point rearward of the block or collar F on the tail pin and at its rear end is supported loosely by a bracket *j* secured to the timber of the car. A collar H is loosely mounted on the buffer rod *i* and to said buffer rod, in rear of the sill G², a col-

lar *k* is secured. Between the collars *H* and *k* the buffer springs *I*, *I'* are located.

The block or collar *F* is made with an upwardly projecting arm *l* having strengthening ribs *U*, *P*, and the collar *H* is provided with a depending arm *m* to be engaged by the arm *l* to cause the buffer rod and attached buffer plate to be projected when the car is in motion and thereby maintain the buffer plates of abutting cars always in contact. When the arms *l*, *m* are so made that their abutting faces are in a vertical plane, said faces are liable to become beveled by wear and the efficiency of the device seriously affected. To avoid this defect, the lower end of the arm *m* is made to project somewhat rearwardly so as to produce a rearwardly inclined abutting face *o* and the upper end of the arm *l* is made so as to present an inclined abutting face lying parallel with the abutting face *o* of the arm *m*. The arm *m* is strengthened by a vertical rib *m*² and the lower, abutting end of said arm is provided with transverse ribs *m*³. To the upper, inclined face of the arm *l* a steel abutting or wearing plate *p* is securely riveted, said plate being adapted to engage the inclined abutting face *o* of the arm *m*. By this construction, the wearing of the abutting ends of the arms *l*, *m*, is reduced to a minimum.

It will be seen that by mounting the abutment block or collar *F* on the tail pin instead of the draw bar, and connecting the tail pin with the draw bar in the manner above explained, the latter can be readily removed without disturbing other parts of the device.

My improvements are simple in construction and effectual, in all respects, in the performance of their functions.

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

1. The combination with a draw bar, and a buffer rod, of a tail pin independent of the draw bar but attached thereto, an abutment device removably secured to the tail pin, the securing device independent of the means by

which the tail pin is secured to the draw-bar, and an abutment device connected with the buffer rod and adapted to be engaged by the abutment device on the tail pin, substantially as set forth.

2. The combination with a draw-bar and a tail pin secured thereto, of an abutment block or collar on the tail pin and having a shoulder at its rear end, a collar or flange on said tail pin bearing against said shoulder on the abutment block or collar, draft irons, and connections between the tail pin and draft irons, substantially as set forth.

3. The combination with draft devices and a buffer rod, of rigid and unyielding abutment devices connected respectively with said draft devices and buffer rod, the abutting faces of said abutment devices being beveled or inclined, substantially as set forth.

4. The combination with draft devices and a buffer rod, of a block or collar connected with the draft devices and provided with an arm having an inclined face at its upper end, a collar connected with the buffer rod and provided with a depending arm having an inclined abutting face at its lower end to be engaged by the arm on the block or collar connected with the draft devices, and a steel wearing plate secured to one of said abutting faces, substantially as set forth.

5. The combination with draft devices and an abutment device connected therewith, of a buffer rod, a collar connected with said rod, an arm depending from said collar and having an inclined abutting face to be engaged by the abutment device connected with the draft devices, said arm having a vertical strengthening rib and transverse strengthening rings at its lower end, substantially as set forth.

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

JAMES TIMMS.

Witnesses:

R. S. FERGUSON,
VERNON E. HODGES.