

(No Model.)

W. E. WILLIAMS.
CAR COUPLING.

No. 494,663.

Patented Apr. 4, 1893.

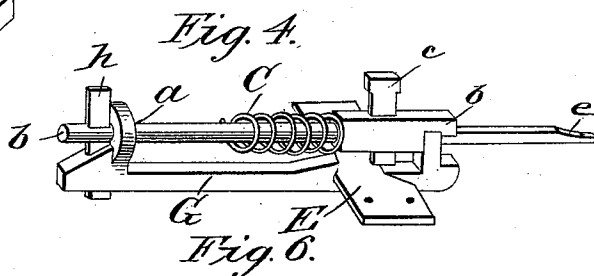
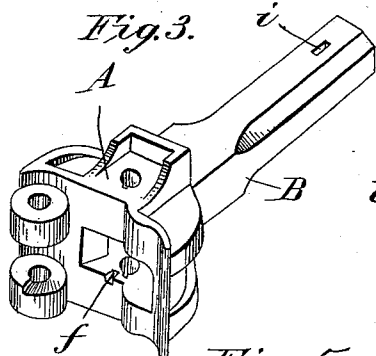
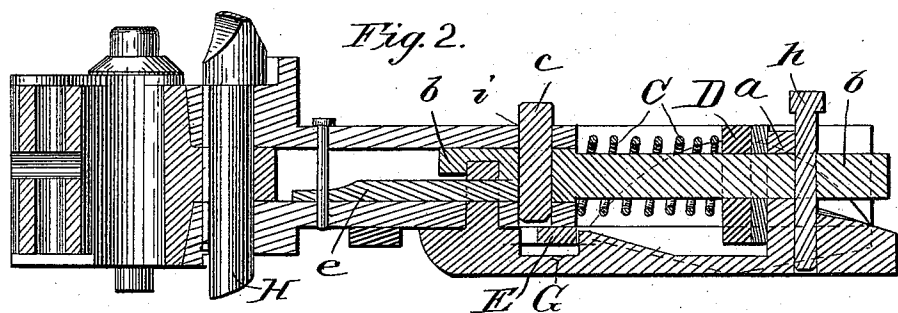
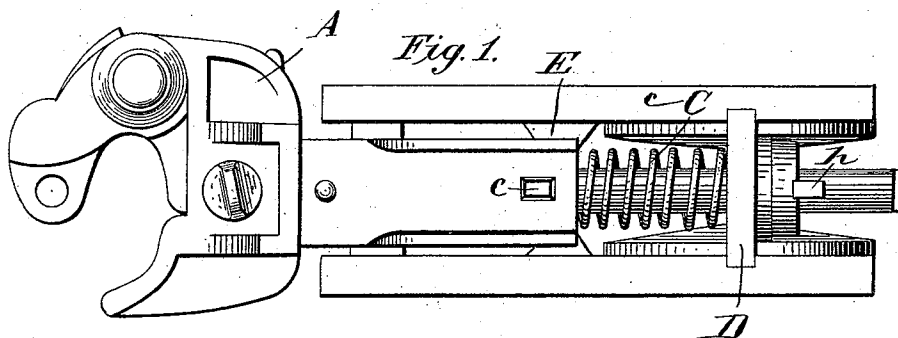
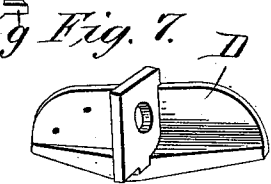
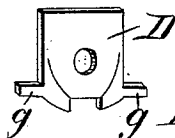
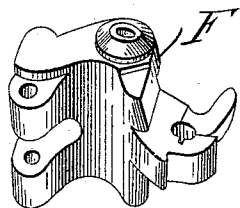


Fig. 5.



Witnesses:

Thos. B. Houghty
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM E. WILLIAMS, OF BOONVILLE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 494,663, dated April 4, 1893.

Application filed April 14, 1892. Serial No. 429,228. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. WILLIAMS, a citizen of the United States, residing at Boonville, in the county of Cooper and State of Missouri, have invented certain new and useful Improvements in Devices for Coupling 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 improvements in devices for coupling cars, and consists of a pull attachment in connection with the draw bar proper and the spiral spring bar, and an iron plate for the rearward end of the draw bar to slide upon and which is also a part of the pull, and a stop and pull plate of iron which is also a support for the rearward end of the spiral spring bar attachment, and of a simple device to prevent the coupling pin being removed from its place in the draw head, and of an incline projection cast integral with and on the under side of the rearwardly extending tongue on the movable jaw and a corresponding inclined depression cast integral with and near the center of the upper side of the lower section of the draw head to hold the movable jaw in its raised and horizontal position when the coupler is locked, all which are improvements on my invention covered by Letters Patent No. 467,126, dated January 12, 1892.

My improvement also consists in the peculiar arrangement construction and adjustment of the parts, hereinafter more specifically pointed out and claimed.

To enable others readily to understand my said invention I have made certain drawings which accompany this specification, in which—

Figure 1 represents a top view of the coupling attached to the draft timbers. Fig. 2 is a longitudinal section of Fig. 1. Fig. 3 is a perspective view of the draw head. Fig. 4 is a side view of the draft apparatus. Fig. 5 is a perspective view of the coupling hook. Figs. 6 and 7 are detail views of the pull and stop plate and its attachments.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the draw head cast integral with the hollow draw bar B in my improved coupler secured by the Letters Patent aforesaid. Near the rearward end of the draw bar at the point *i* a key *c* is passed through the upper and lower walls or sides of the draw bar B and through the enlarged forward end of the spiral spring bar *b*. On the under side of the draw bar B just forward of the key *c* is an aperture into the hollow in said draw bar, and into this aperture is inserted the hook or shoulder on the forward end of the casting G. The casting G, near the rearward end, in the hook or shoulder, has an opening through which and a corresponding opening in the spiral spring bar is inserted the key *h*. At the point *a* in said casting G is also an opening through which is passed the spiral spring bar *b*. The opening through the hook or shoulder on the rearward end of the casting G at the point *a* through which the spiral spring rod *b* passes, is beveled above on the forward side and below on the rearward side, so that when the spiral spring bar *b* is inserted therein the forward end of the casting G may drop down sufficiently to allow the shoulder or hook on the forward end of said casting to pass under the plate E. Around the rod *b* is fitted a heavy coiled or cushion spring C, one end of which bears against the shoulder on the bar *b* and the other end of said spring bears against the pull and stop plate D. The pull and stop plate D is attached firmly by bolts from underneath and from the sides at the rearward end to two timbers under and lengthwise of the car, and the plate E upon which the rear part of the draw bar B slides and which is also a part of the pull, is bolted firmly to the under side of said timbers. The pull and stop plate D is provided with an opening or aperture through which passes the spiral spring bar *b*. At the forward end of the casting G through the hook or shoulder is an opening or aperture, and on the under side of the end of the spiral spring bar *b* resting thereon is a journal or passage and a corresponding opening or aperture in the end of said spiral spring bar abutting against said shoulder or hook, and into these several openings and passage is inserted from the forward end inside the hollow draw bar B the key *e*.

Near the forward end of the key *e* is an opening into which a key is also inserted and down into an opening in said draw bar.

The construction of my invention may be briefly stated as follows:—The plate *E* is firmly bolted to the bottom of two timbers secured to the car underneath, and the plate *D* is firmly bolted to said timbers from the bottom through the flanges *g* and from the sides at the rearward end. The spiral spring bar *b* is inserted into the hollow draw bar *B* and the key *c* is inserted at the point *i* through said draw bar and spiral spring bar. The coiled spring *C* is fitted to the spiral spring bar *b* and the parts thus put together are pushed rearwardly, the spiral spring bar *b* passing through the opening in the pull and stop plate *D*. The casting *G* is then attached by passing the rearward end of the bar *b* through the opening in the shoulder or hook at the point *a*, and running said casting forward, the hook or shoulder on the forward end passing under the plate *E*, until said hook or shoulder may be inserted in the opening on the under side of the draw bar *B*, when it is elevated, inserted into said opening and locked by means of the key *c* inserted from the forward end of the draw bar *B*. The key *h* is then inserted in the rearward end of the spiral spring bar *b* and the casting *G*. A rub-

ber or paper washer may be used between the plate *D* and the shoulder on the rearward end of the casting *G* to reduce jarring and jolting.

I am aware that changes in the form and proportion of the parts and in the details of construction of the devices shown and described in this specification as embodying my invention can be made without departing from the spirit or sacrificing the advantages of my invention and improvements, and I therefore reserve the right to make such changes and alterations as fairly fall within the scope of my invention.

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

In a car coupler, a pull attachment in combination with the draw bar proper and the spiral spring bar, and a pull and stop plate to support the rearward end of the spiral spring bar and pull attachment, and a key passing through the rearward end of the spiral spring bar and the pull attachment locking the same securely.

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

WILLIAM E. WILLIAMS.

Witnesses:

THOMAS B. WRIGHT,
A. A. HOWARD.