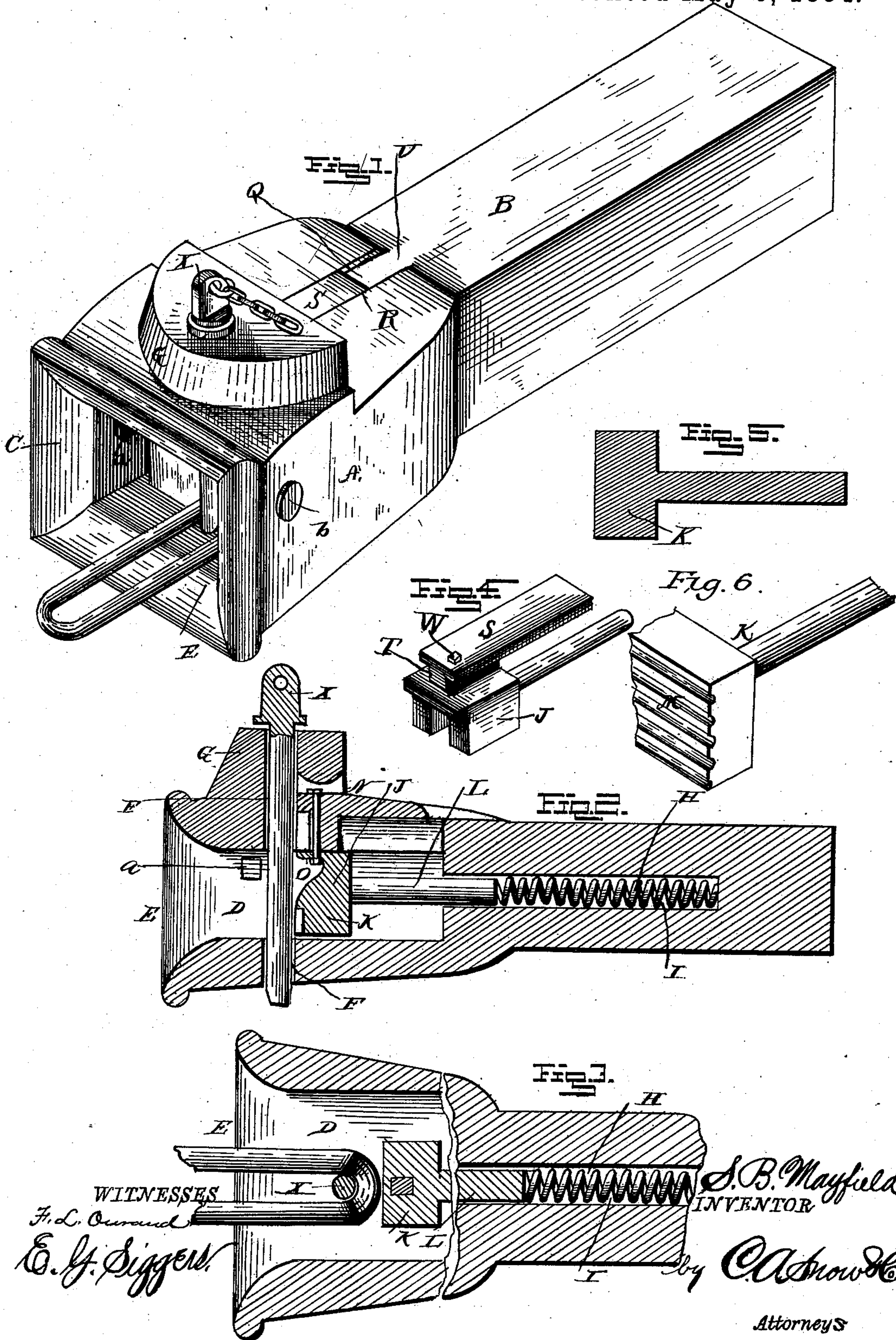


(No Model.)

S. B. MAYFIELD.  
CAR COUPLING.

No. 298,010.

Patented May 6, 1884.





# UNITED STATES PATENT OFFICE.

SAMUEL BROOKS MAYFIELD, OF PALESTINE, TEXAS, ASSIGNOR TO MARY L. MAYFIELD, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 298,010, dated May 6, 1884.

Application filed March 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL B. MAYFIELD, a citizen of the United States, residing at Palestine, in the county of Anderson and State of Texas, have invented a new and useful Car-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to car-couplings of that class which have a sliding spring-actuated pin-support, against which the link comes to drive the support back and permit the pin to fall and effect an automatic coupling.

The invention is designed to provide a car-coupling possessing superior advantages in point of simplicity, inexpensiveness, durability, and general efficiency; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims appended.

Figure 1 is a view in perspective of a car-coupling embodying the improvements of my invention. Fig. 2 is a vertical longitudinal sectional view of the same; Fig. 3 is a horizontal sectional view; Fig. 4 is a detail perspective view of the pin-supporting slide, and Fig. 5 is a vertical longitudinal sectional view of a modification of the pin-supporting slide in the draw-head. Fig. 6 is a further modification of same.

Referring by letter to the accompanying drawings, A designates the draw-head, which has the usual stem, B, and the head portion C in the latter being provided with the link-chamber or recess D, having the mouth E, and the usual vertical coupling-pin perforation, F, a semicircular guide and stop G being raised around the perforation on the top of the draw-head. The mouth E is rectangular in form, is five inches wide, and three inches in height. The front of the draw-head is rectangular in cross-section, and the walls flare outwardly two inches beyond their outer faces at the front, giving the same strength in these parts as at the neck. The semicircular guide and stop G not only guide the coupling-pin X, but its rear vertical face acts as a bumper and prevents the draw head from being driven under the cross-timbers of the car.

H is a cylindrical longitudinally-disposed bore or recess that is formed in the stem of the draw-head, and opens into the link-chamber. In this bore is arranged a neatly-fitting coiled spring, I, that is always entirely inclosed in said bore, whether compressed or extended, so that it is protected from damage or displacement and cannot become bent or jammed.

J is the supporting-slide, which comprises a head, K, that works in the link-chamber, and a rearwardly-extending cylindrical bar or stem, L, that enters the bore H and works against the spring therein, which latter normally retains the said slide forward against the stops *a a*, formed by the inwardly-projecting ends of the pins *b b*, passing through the side walls of the draw-head slightly in front of the pin-perforation F, so that the head of the supporting-slide will be under the pin-perforation. The head K is formed with a vertical transversely-corrugated front face, M, at the top of which is formed a projecting flange, N, extending across the said head, and in this face M is preferably provided a recess, O, from the top of which extends a perforation, P, up through the head K.

Q is a longitudinal groove or depression that is formed in the top surface, R, of the head C of the draw-head, and extends to the pin-perforation F, and under the semicircular guide and stop G. In this guide-groove slides a longitudinal plate, S, from the under side of which, at its front end, extends a downwardly-projecting tongue, T, that slides in a longitudinal slot, U, formed centrally in the bottom of the said groove and opening into the link-chamber, said slot being of a smaller width than the groove. A perforation, V, extends through the plate S and the tongue T at the front end of the same, and through this perforation and the perforation P is passed a pin or bolt, W; by which the guide-plate S is secured to the main slide J, to guide the same and preserve it from lateral displacement. The plate S normally projects under the pin-perforation F at the front part of its groove Q, the movement of said plate being effected by the spring I as the plate and main slide are connected together. Normally the plate



S is forward under the pin-perforation F, so that it will support the coupling-pin in the perforation in the semicircular guide and stop G; but as soon as the link of the approaching  
 5 draw-head enters the link-chamber it drives the slide J and the plate S back, and the coupling-pin X falls and effects the coupling. When coupled, the slide-head K forces the inner curved end of the link against the coupling-  
 10 pin, and the said curved end will enter the recess O and be retained in position.

In the modification I still further simplify the construction by dispensing with the groove Q, plate S, pin W, and flange N, leaving simply the slide J with its stem L, the spring I  
 15 in the bore H, and the stops *a a* in the draw-head.

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

1. In a car-coupling, the combination, with the draw-head having the guide and stop around the coupling-pin perforation on its top face, the stops on the inner faces of the vertical walls of the link-chamber in front of the  
 25 pin-perforation, and the bore in its stem communicating with the link-chamber, of the pin-supporting slide having its head working in the link-chamber beneath the upper portion of the pin-perforation, and its stem or bar working against the spring in the bore of the stem of the draw-head, substantially as specified.  
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2. As an improvement in car-couplings, the combination of the draw-head having the longitudinally-disposed bore or recess H in its  
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stem, the vertical coupling-pin perforation F, the longitudinal top groove, Q, extending to and opening into the pin-perforation F, and the longitudinal slot U, opening into the pin-perforation F at its front end, the spring I,  
 40 fitting neatly into the bore H, and working against the front end of the spring I, and the supporting-plate S, sliding in the groove and over the pin-perforation, and provided with the downwardly-extending tongue T at its front  
 45 end which works in the slot, and is secured to the top edge of the slide J at the front end of the latter, as set forth.

3. The combination, with the draw-head having the longitudinal groove in its top surface, and a longitudinal slot arranged centrally in the bottom of said groove, of a spring-actuated slide having its head provided with a straight front face, at the top of which is formed a projecting flange, and in the surface  
 50 of which is provided a recess, from which extends a perforation up through the head, a slide-plate working in the groove and having a downwardly-projecting tongue at its front end, through which a perforation is provided, and  
 55 a pin or bolt passing through the perforations to secure the slide and guide-plate together, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in  
 60 presence of two witnesses.

SAMUEL BROOKS MAYFIELD.

Witnesses:

C. M. QUOOLES,

SELDEN A. McMEANS.