

(No Model.)

W. C. WATSON.
CAR COUPLING.

No. 507,296.

Patented Oct. 24, 1893.

Fig. 1.

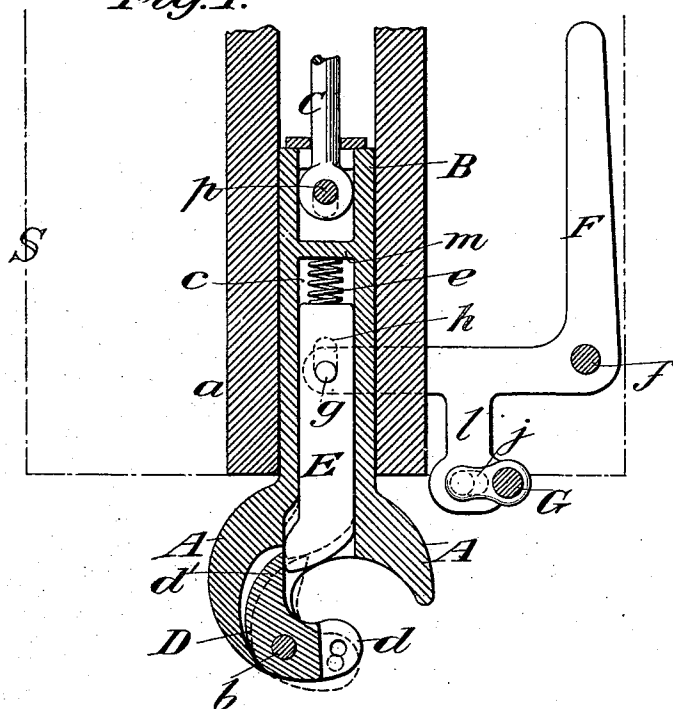
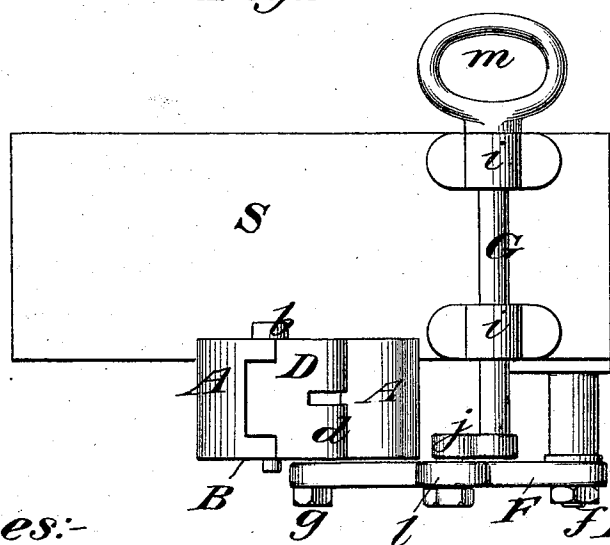


Fig. 2.



Witnesses:-

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UNITED STATES PATENT OFFICE.

WILLIAM C. WATSON, OF PATERSON, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 507,296, dated October 24, 1893.

Application filed August 8, 1891. Serial No. 402,078. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WATSON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

This invention relates to what are known as rotary or knuckle couplings. Its object is to provide for the more secure locking of such a coupling and also to afford facility for locking and unlocking from the side, roof or platform of the car.

Figure 1 represents a horizontal section of one member of a coupling embodying my invention. Fig. 2 represents a front view of a portion of a car body having said coupling member applied.

Similar letters of reference designate corresponding parts in all the figures.

B designates a draw-bar arranged under the car-body S and adapted to be moved lengthwise, but held against lateral displacement and guided in its longitudinal movement by guides *a* secured to the car-body. This draw-bar is hollow and has at its front end the buffer-head A, and has the draw-rod *c* attached to its rear end by a pin *p*. I have not thought it necessary to show either the buffer spring or the draw spring as they may be applied in any well known manner.

D designates a coupling-piece or knuckle of elbow-form substantially like what is commonly used in what are known as "knuckle" or "rotary" couplings consisting of a hooked portion *d* for engaging with the corresponding portion of the coupling member of another car and an angularly-extending arm *d'* which is acted upon to throw the coupling into engagement and to lock it when engaged. The hollow draw-bar B has within its rear part a transverse abutment *m*, and in front of this abutment *m* there is fitted to the interior of said draw-bar a sliding latch bolt E having a beveled end and between the said bolt and the said abutment a spring *e* is placed in the cavity *c* of the draw-bar which tends to push the said bolt outward from the draw-bar. The front end of this bolt E is so beveled laterally as shown in Fig. 1, that it may by the action against it of the beveled or rounded exterior of the arm *d'* of the knuckle D, be pressed back by the said arm as illustrated by dotted outline in Fig. 1, in the act of coupling, by which act the point of the said arm is carried past the beveled

end of the latch-bolt E, leaving the latter free to be pressed outward by the spring *e* against the inner face of the said arm, as shown in bold outline in Fig. 1, thereby locking the knuckle in the coupling position. This locking is such as to give the most positive security, the bolt having such substantial support within the draw-bar in the direction in which the strain of the draft comes upon the arm *d'* of the knuckle.

To provide for uncoupling from the sides of the car, a horizontal elbow lever F is arranged under the car on a fulcrum *f*, one arm of which is connected by a pin *g* with the bolt E, and the other arm is arranged lengthwise of the car within easy reach from the side thereof, and out of the way of everything passing by the side of the car, the last mentioned arm serving as a handle for operating the bolt from the side of the car. A slot *h* shown in dotted outline in Fig. 1, is provided in the bar B for the pin *g* to work through.

To provide for uncoupling from the platform or roof of the car, a vertical shaft G is fitted to bearings *i* provided on the end of the car body. At the lower end of this shaft G is secured a crank arm *j*, the wrist of which engages with the slot on the projection *l* provided on the lever F. This shaft G, in the case of a passenger car, may terminate above the railing of the platform, or in the case of a freight car may be continued up above the roof thereof, and is furnished at the upper end with a handle *m* of any suitable kind for the purpose of turning it.

The spring *e* arranged as shown and described is no part of the present invention but is part of the subject-matter of my application for patent, Serial No. 482,423, filed August 5, 1893.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination with a car body, a draw-bar attached thereto, a coupling piece of elbow form pivoted to said bar, a locking bolt fitted to slide lengthwise within said bar to engage with said coupling piece, and a horizontal elbow lever arranged under the car body for moving said locking bolt, substantially as herein set forth.

WILLIAM C. WATSON.

Witnesses:

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