(No Model.)

D. ALTMAN.

CAR COUPLING.

No. 594,367. Patented Nov. 30, 1897.

Fig. 1.

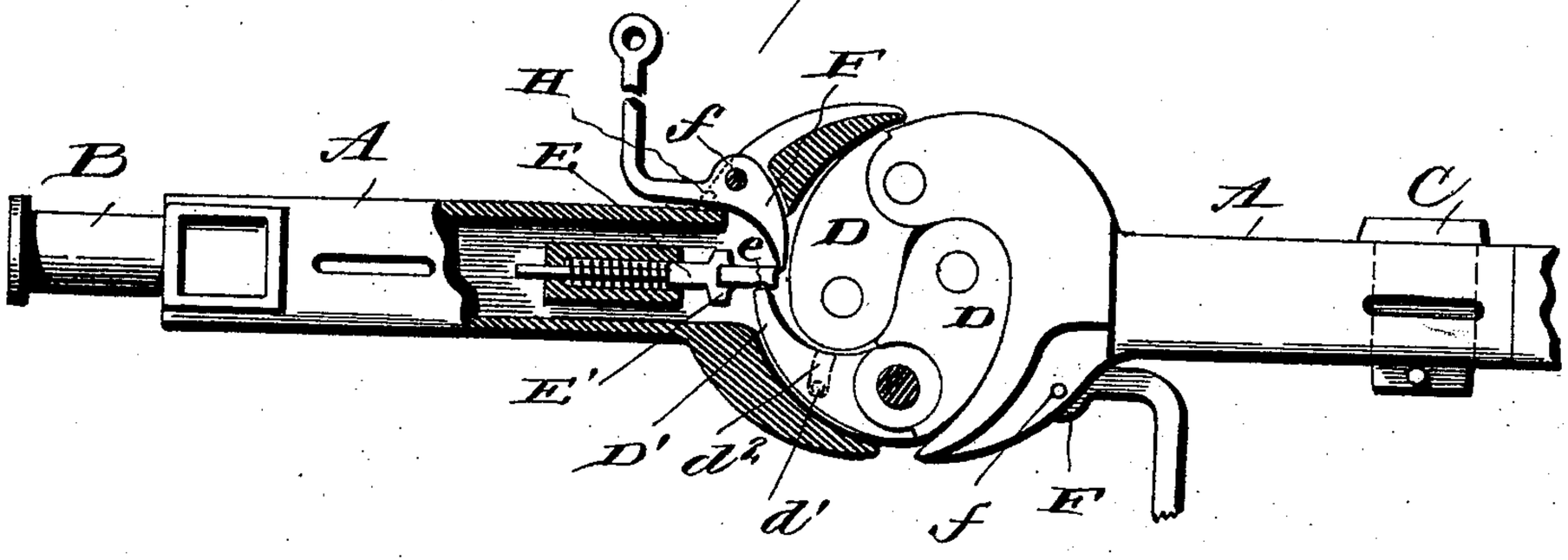


Fig. 2.

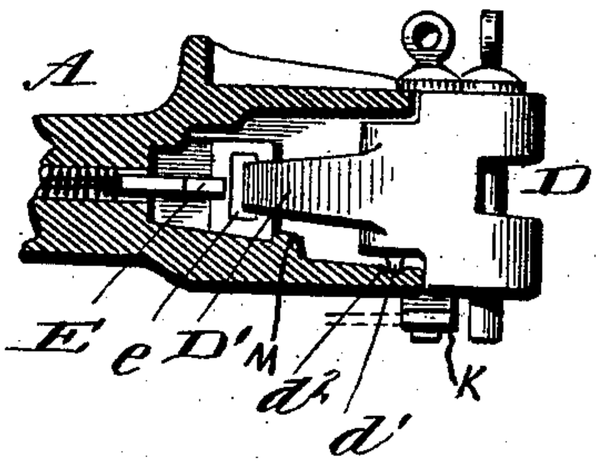


Fig. 3.

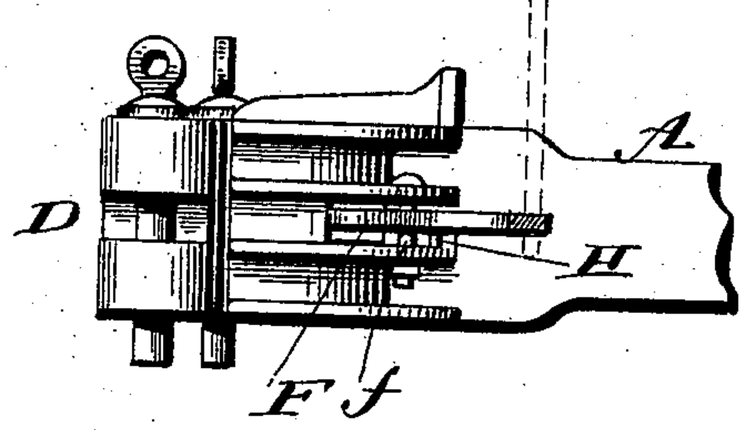


Fig. 5.

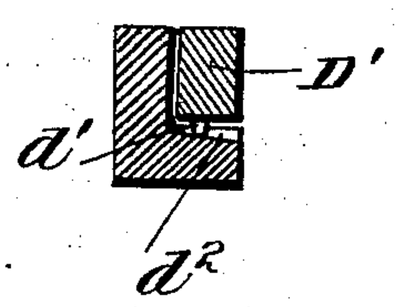


Fig. 4.

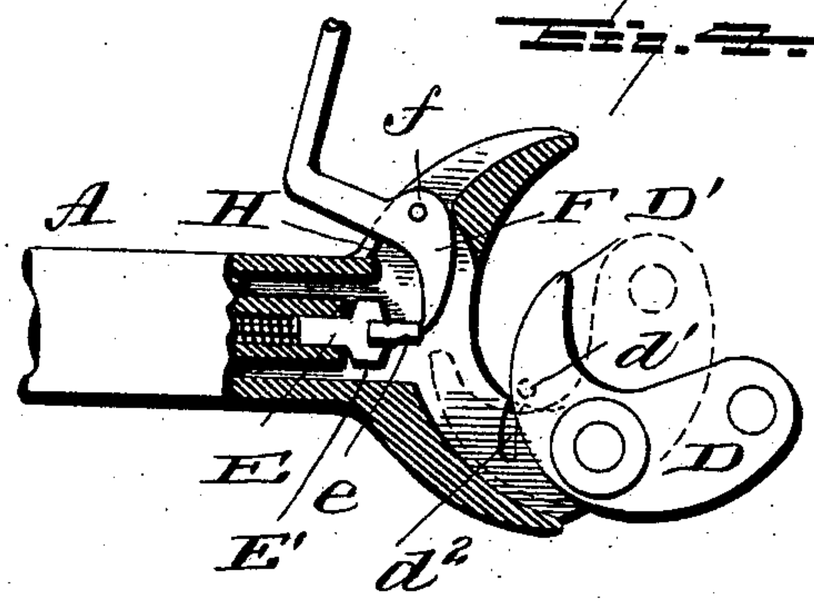
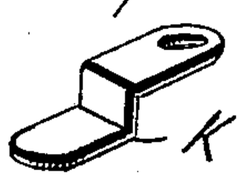


Fig. 6.



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Atty.

UNITED STATES PATENT OFFICE.

DAVID ALTMAN, OF CHATTANOOGA, TENNESSEE, ASSIGNOR OF ONE-HALF TO IKE POSS AND ROBERT SCHWARTZ, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 594,367, dated November 30, 1897.

Application filed January 30, 1896. Serial No. 577,486. (No model.)

To all whom it may concern:

Be it known that I, DAVID ALTMAN, a citizen of the United States, residing at Chattanooga, in the county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to certain new and useful improvements in car-couplers, and especially to the Janney type, in which the knuckles are held in a locked relation by means of a spring-actuated bolt operated by a suitable lever from the side or top of the car and guided in grooves in the draw-head, thereby steadying the knuckles, which have a slight vertical play as they are caused to swing, as will be hereinafter more fully described.

A further part of the invention resides in the provision of a coupler having knuckles pivoted to the draw-heads, each knuckle having on its lower face an integral lug which is designed to travel in an inclined groove in the jaw of the coupler, whereby as the knuckle is swung into a locking position the lug traveling up the incline of the groove will cause the knuckle to rise slightly, as when the knuckle is turned into a locking relation, and as the knuckle is swung out the lug will slide down the incline and the knuckle will lower until the bottom of the incline is reached.

A further part of the invention consists in the provision of means for holding the spring-actuated bolt so that the knuckle will be prevented from locking in case the couplers come together; and a further part consists in the provision of safety-brackets consisting of L-shaped members which are held on the under surface of the jaws and designed to receive the knuckle in case of an accident.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a top plan view of my improved coupler locked, part being shown in section. Fig. 2 is a side elevation of one of the couplers, a portion being cut away or in section to better illustrate the invention. Fig. 3 is a side elevation of the reverse side of the coupler. Fig. 4 is a top plan view of one of the couplers, a portion being shown in section with the knuckle thrown out, the sliding bolt being shown as locked back to prevent its engagement with the pivoted knuckle. Fig. 5 is a sectional view on line 5 5 of Fig. 1, and Fig. 6 is an enlarged detail view of the safety-brackets secured to the under side of the jaw of the coupler.

Reference now being had to the details of the drawings by letter, A designates the draw-heads, which have the reverse tail-pins B secured to their ends by means of suitable locking-keys C, and to each jaw of the coupler is pivoted a knuckle D, each knuckle having its bolt-engaging end brought to an edge, as shown at D′. Mounted within each draw-head is a spring-actuated bolt E, having a head E′, which is recessed out on its side, as at *e*, and has shoulders E″ on opposite sides which limit the rearward movement of the said bolt as they strike against the end of the casing through which the spring-bolt is guided. Pivoted in a recessed portion of each jaw is a lever F, the hooked end of which is adapted to rest immediately in front of the outer end of the said spring-actuated bolt, and as the said lever is turned on its pivot the spring-actuated bolt may be thrown back into its casing and free the end of the knuckle D, allowing the latter to turn on its pivot and become uncoupled. On the under face of each knuckle is an integral lug *d*′, which is adapted to be guided in an inclined recess D^2 in the lower portion of the jaw of the coupler, as clearly shown in Fig. 5 of the drawings. These inclines (one in each jaw) are slightly curved and rise toward the inner face of the jaw and cause the knuckles to rise slightly as they are swung back into a locking position. In order to facilitate the uncoupling of the knuckles, the spring-actuated bolt E is

slightly inclined downward, and as the said bolt is thrown back the knuckle will swing on its pivot and partially by gravity will open of itself, as the lug will slide down the inclined groove, and in the locking of the knuckles it will take slightly more pressure on the knuckles to swing them into a locked elevation by means of lugs on the knuckles turning back and upward in the inclined grooves. It is my purpose to have a slight vertical play to the knuckles, so as to adapt them for use in connection with different-sized couplers.

In order to hold the operating-lever F in the position shown in Fig. 4 of the drawings, in which position it holds the sliding bolt back out of engagement with the end of the knuckle D′, an offset H is provided against which the lever bears, and when it is desired to release the lever from engagement with the end of the bolt the lever has a slight vertical play on its pivot *f*, allowing the same to be raised so that it will clear the shoulder H, as shown clearly in Figs. 1 and 3 of the drawings.

Secured to the under side of each jaw of the couplers is an L-shaped guard member K, which may be held to the jaw by means of the pivotal bolt or pin which holds the knuckle to the jaw. These members K are provided to catch the knuckles in case there should be any tendency for them to drop down and out of engagement with each other.

In order to prevent the spring-actuated bolt from jumping out of the recess containing the same, one side of the recessed portion is provided with a shoulder or stop M, against which the outer end of the bolt will contact to prevent its further passage.

I am aware that it is old, as shown by the state of the art, to construct Janney type of couplers, in which a spring-actuated bolt is employed to retain the end of a locking-knuckle, the said bolt being moved longitudinally by means of a lever, and hence I do not claim any such construction.

What I do claim to be new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination with the draw-head, jaws and knuckles pivoted therein, of a spring-actuated locking-bolt, designed to normally engage with the end of a knuckle when closed, and a lever and notch engaging therewith designed to hold the said bolt out of the path of the pivoted knuckle, substantially as shown and described.

2. In a car-coupler the combination with the draw-head, jaw and knuckle, of the spring-actuated locking-bolt, a casing inside of the draw-head in which the said bolt is guided, shoulders on opposite sides of the bolt designed to abut against the end of said casing to limit its rearward throw, and a stop to limit its forward throw, formed by the end wall of a recessed portion, of the jaw, in which the head of the bolt slides, substantially as shown and described.

3. In combination with the draw-head, jaw, and knuckle pivoted thereto, the spring-actuated bolt and lever for actuating the same, the stop M to limit the forward throw of said bolt, the offset H over which the said lever may be made to engage, after the bolt is forced back in the draw-head, to hold the bolt from engaging with the end of the knuckle, substantially as shown and described.

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

DAVID ALTMAN.

Witnesses:

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