(No Model.)

G. K. HAMFELDT.

CAR COUPLING.

No. 599,899. Patented Mar. 1, 1898.

Fig. 1.

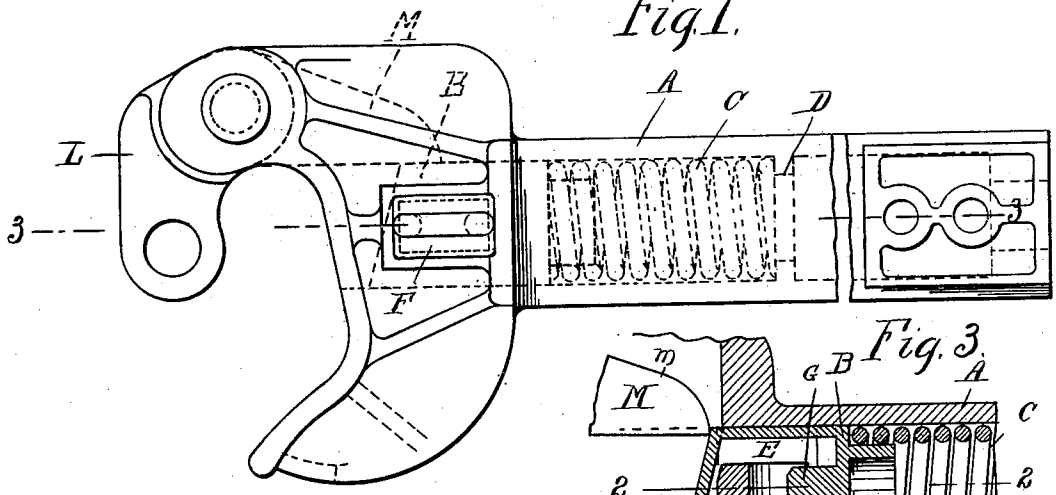


Fig. 3.

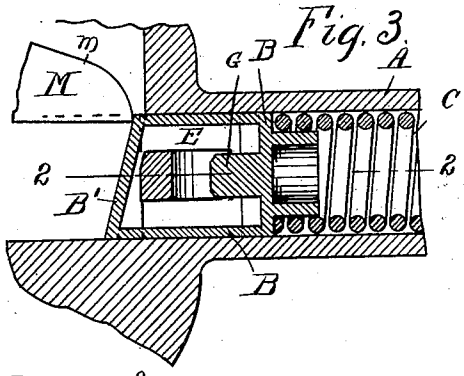


Fig. 2.

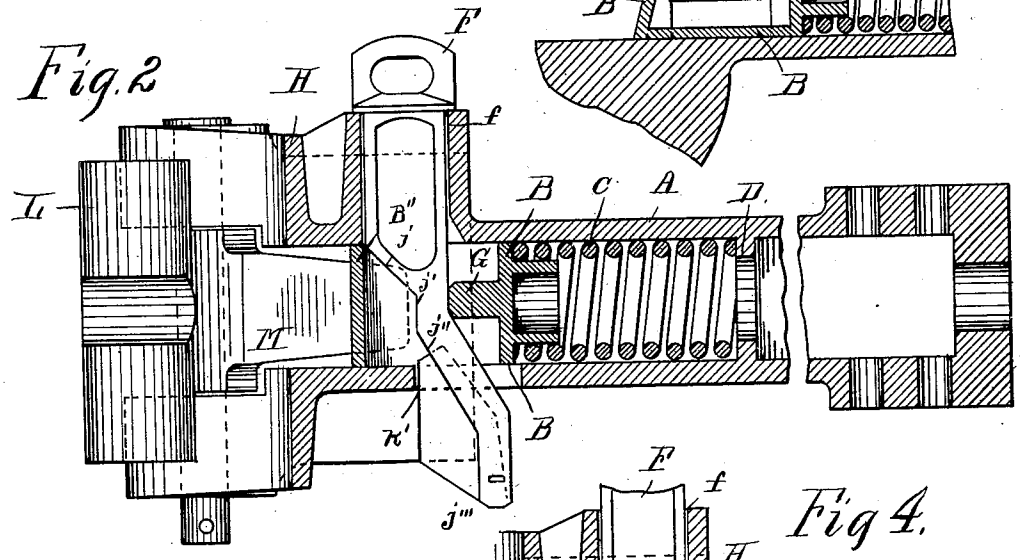


Fig. 4.

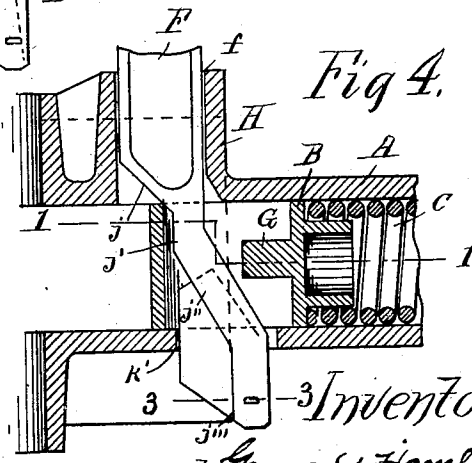
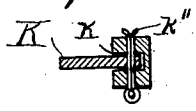


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE K. HAMFELDT, OF MENAND'S, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 599,899, dated March 1, 1898.

Application filed June 19, 1897. Serial No. 641,447. (No model.)

To all whom it may concern:

Be it known that I, GEORGE K. HAMFELDT, a citizen of the United States, residing at Menand's, county of Albany, State of New York, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to devices for coupling railway-cars; and the object of my invention is to provide an automatic device for locking the knuckle in a car-coupler in such a manner that the coupling-pin shall be positively prevented from being forced out by the vibration of the coupler and which will hold the knuckle rigidly in position until the pin is withdrawn by the operator. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan of one member of the coupler. Fig. 2 is a section along the line 3 3 on Fig. 1. Fig. 3 is a section along the line 1 1 on Fig. 4. Fig. 4 is a detailed sectional view along the line 2 2 on Fig. 3, and Fig. 5 is a section along the line 3 3 on Fig. 4.

Similar letters refer to similar parts throughout the several views.

Within the shank A of a coupler—that of the Master Car-Builders' style preferred—I place a spring C, having a seat upon the annular projection D in said shank at one end of the spring, the opposite engaging with a block B, adapted to reciprocate within said block. In said block I arrange an opening E, through which the coupling-pin F passes. On the block B, projecting into the opening E, is a rib G. The pin F passes through an opening f in the coupler-head H. Said pin is of irregular shape, as shown in Figs. 2 and 4, there being along one side of said pin—that toward the knuckle—an inclined portion j, said inclined portion extending toward the spring C, said pin on the side toward the knuckle then extending a short distance in substantially the same direction as the opening through the coupler-head H, as at j', and then at an angle to the portion j', as at j^2, and then extending substantially parallel to j', as at j^3. The side of the pin toward the spring C extends substantially parallel to the opening through the coupler-head down to the portion j', and then continuing parallel to the side j^2, and then parallel to the side j^3. As thus arranged when the pin F is in the position shown in Fig. 2, the coupler being closed, the portion thereof toward the spring is in contact with the rib G on the block B and the lower portion of the pin extends through the coupler-head. As thus arranged the pin is prevented from rising by the vibration of the coupler, because of the inclined portion j^2 being beneath the rib G. In the portions j^2 and j^3 of the pin F, I cut a groove k, within which I insert a locking-strip K and hold it in position by the split pin k^2, which is adapted to engage with the side of the opening k' in the coupler-head through which the pin F passes, preventing the pin F from disengaging with the rib G. Secured to the knuckle L is the knuckle-lip M, which when the coupling is closed rests against the side of the block B, as shown by dotted lines in Fig. 1, the block B having its portion toward the knuckle slanting toward the side of the coupler-head to which the lip M is attached, as shown in Fig. 3, the upper portion of the block when the coupling is made extending forward of the end of the lip M, which rests against the side of the block B.

The operation of my locking device is as follows: When making the coupling, the rounded portion m of the lip M comes in contact with the slanting portion B' of the block B and forces the block B into the shank A against the tension of the spring C. At the same time the portion B^2 of the block B, adjacent to the inclined portion j of the pin F, raises the pin, and when the end of the lip M passes the upper surface of the block B, adjacent to the slanting portion B', the spring C acts, forcing the block B forward, allowing the pin to drop and holds the knuckle locked.

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

1. In a device for locking the knuckle of a car-coupler, the combination of a block adapted to reciprocate within the shank of the coupler, a spring, or its equivalent, adapted to operate said block, a coupling-pin arranged to pass through the coupling-head and said block, said coupling-pin provided on the side toward the said spring with a portion flaring outward toward the block, a projection on the block resting against said coupling-pin adjacent to said outwardly-flaring portion when

the pin is inserted within the block, said coupling-pin provided on the side opposite the spring with an upwardly outwardly flaring portion, a knuckle-lip adapted to rest against the side of said block when the coupling is made, substantially as described and for the purpose set forth.

2. In a device for locking the knuckle of a car-coupler, a spring-actuated block adapted to reciprocate within the shank of the coupler, one end of said block provided with an inclined portion, a knuckle-lip adapted to rest against the side of said block near the end provided with said inclined portion, a pin adapted to pass through the coupler-head and through the block, said pin having a downwardly outwardly flaring portion on one side and an upwardly outwardly flaring portion on the opposite side thereof, so arranged that when the lip comes in contact with said inclined portion of said block, the block will be moved into the shank against the tension of said spring, at the same time the portion of the block adjacent to the pin raises the pin, and when the lip passes said block, the spring forces the block forward allowing the pin to drop and holds the knuckle locked, substantially as described and for the purpose set forth.

3. In a device for locking the knuckle of a car-coupler, a spring-actuated reciprocating block within the shank of the coupler, a coupling-pin arranged to pass through the coupler-head and through said block, said pin having a downwardly outwardly flaring portion on one side, and an upwardly outwardly flaring portion on the opposite side thereof, said coupling-pin prevented from creeping by means of a projecting rib on said block resting against an inclined portion of said pin and held against said pin by the action of a spring, substantially as described and for the purpose set forth.

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