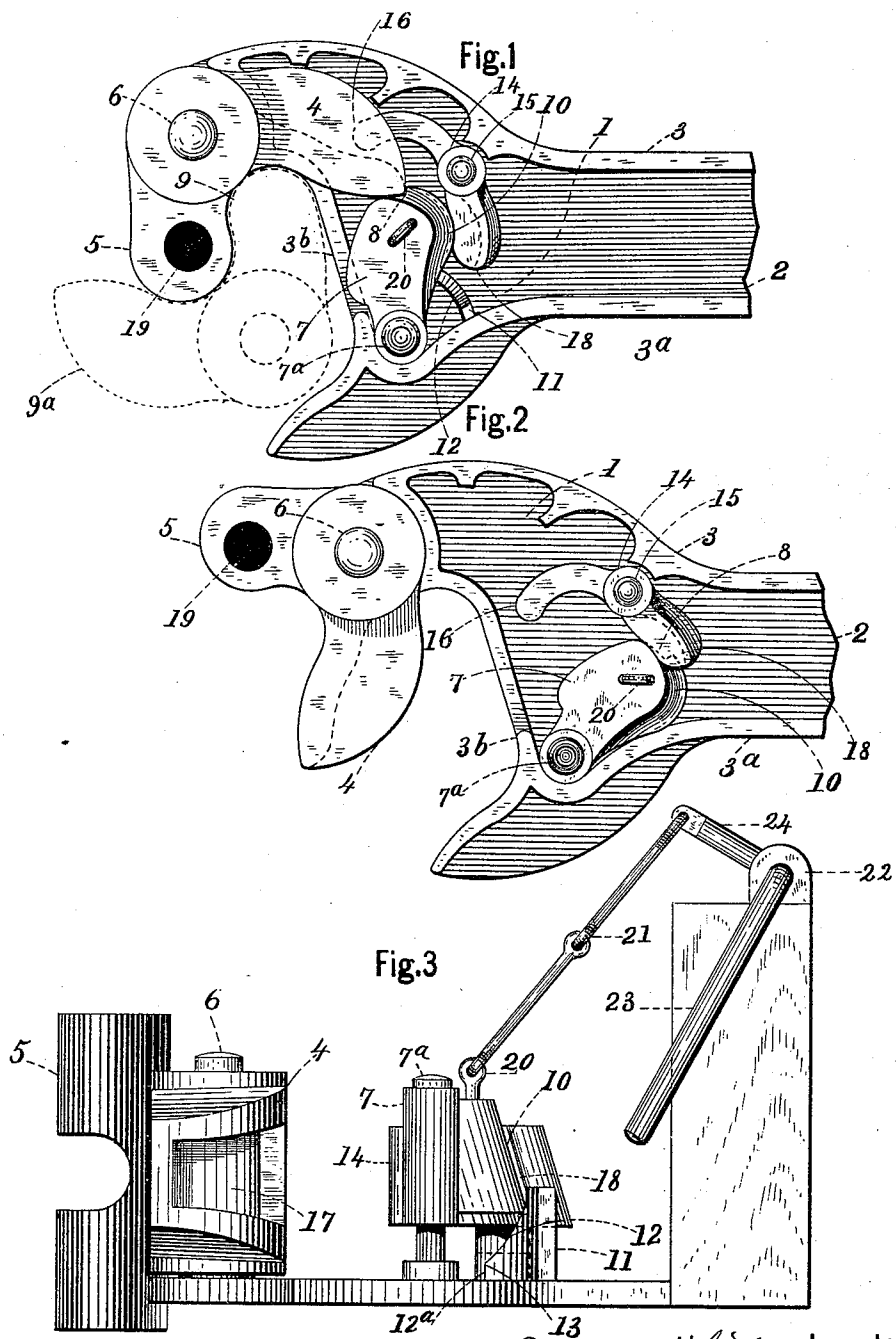


(No Model.)

T. H. GILBERT.
CAR COUPLING.

No. 467,249.

Patented Jan. 19, 1892.



Witnesses.

J.M. Caldwell.

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13
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UNITED STATES PATENT OFFICE.

TRUMAN H. GILBERT, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 467,249, dated January 19, 1892.

Application filed September 24, 1891. Serial No. 406,693. (No model.)

To all whom it may concern:

Be it known that I, TRUMAN H. GILBERT, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to that class of car-couplings in which a pivoted arm or dog is used to assist in opening the coupling, and it will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view showing the coupling. Fig. 2 is a similar view representing the position of the parts when the coupling is open. Fig. 3 is a side elevation, also showing the coupling open, the walls 3 and 3^a being omitted.

It is well known that in car-couplings of this construction (where a substantially centrally-pivoted bar or arm is used to assist in opening the coupling) when the pawl by which the coupling is operated is moved to open the coupling the coupling parts very often move only part way open, so that when two cars under these conditions come together to be coupled the result is one or both of the couplings are broken instead of locking together as they should, under which condition both cars are rendered useless for the time. The object of my invention is to avoid this objection.

Referring to the drawings, 1 represents the ordinary draw-head of a self-connecting coupling, and 2 is the draw-head shank. This draw-head is also provided with the usual vertical protecting and strengthening walls 3, 3^a, and 3^b, preferably all formed and cast in one piece with it.

The coupling-jaw 4 and locking-arm 5 are formed in one piece, as usual, and pivoted by a bolt 6 to the draw-head 2, so as to turn into its locking position, as shown in Fig. 1, and its unlocking position, as shown in Fig. 2.

The locking-pawl 7 is pivoted by a pin 7^a to the draw-head and is provided with a notch 8 in the end, in which the end of the coupling-jaw 4 rests when the coupling is locked or in engagement with another coupling and locked, substantially as shown in Fig. 1, the

connecting locking-jaw and locking-arm being represented by the dotted lines 9 and 9^a in said Fig. 1.

The back of the locking-pawl 7 is made to incline outward from the top down, as shown at 10, the object of which is important and will appear farther on. At the back of the locking-pawl 7 is a curved upwardly-projecting piece 11, having one side inclining outwardly from the top down, substantially as shown at 12 in Figs. 1 and 3. This incline extends down to the point 13 and then straight downward, thereby leaving a vertical portion 12^a, against which the back side of the locking-pawl 7 rests when down in the position shown in Fig. 1. From this construction it will be seen that the locking-pawl 7 will rise up on the incline 12 when lifted up past the vertical portion 12^a and then turn backward on its pin 7^a.

Back of the locking-pawl 7 is an opening-arm 14, pivoted nearly in the center of the arm by a pin 15. One end 16 of the arm 14 rests against the back of the coupling-jaw 4 in the recess 17 in the back of said jaw. (See Figs. 1 and 3, the depression 17 being shown more clearly in Fig. 3.) The opposite end 18 of the pivoted arm 14 is made to incline to one side to correspond with the incline on the locking-pawl 7. The object of this construction will appear when describing the operation of the invention.

19 represents the holes in which the ordinary link-pin is used when required.

At the top of the locking-pawl 7 is an eye-bolt 20, to which is secured the chain-links 21, (shown in Fig. 3,) and pivoted to the top of a beam adapted to be attached to the end of a car in boxes 22 is an arm 23, having a shorter arm 24 arranged at right angles to the arm 23 and rigidly connected to it, so as to turn with it. The opposite end of the chain-links 21 is pivoted to the outer end of the short arm 24.

As heretofore constructed the sides 10 of the locking-pawl 7 are made vertical without any inclination either way, while the inner side 18 of the pivoted arm 14 is also made vertical without any inclination either way. By such a construction the pawl 7 does not exert any influence in moving the opening-

arm 14, except its turning movement on its pivot 7^a. This in practice has not been found sufficient to throw the coupling entirely open at all times. Consequently the object of my invention is to avoid this trouble.

To uncouple the device, all that is necessary is to turn the arm 23 into the position shown in Fig. 3. This operation first lifts the pawl 7 up past the vertical portion 12^a, then causes it to turn around and pass up the incline 12, and both of the inclined sides being in contact there are two movements which tend to turn the arm 14. One is the turning movement of the pawl 7, the other the vertical movement of the pawl 7, which, by reason of the inclined sides 10 of the pawl 7 and 18 of the opening-arm 14 gives the end 16 of the arm 14 a greater movement against the un-

locking-jaw 4, thereby insuring its being thrown wide open at all times. Of course it will be noticed that as the pawl 7 is turned back it moves away from the end of the unlocking-jaw and thereby releases it, so that it can be thrown open by the end 16 of the arm 14.

I claim as my invention—

In a car-coupling, the combination, with the pawl 7 and its operating mechanism, substantially as above specified, of an unlocking-arm 14, having the inclined side 18, and the locking-pawl 7, provided with an inclined side 10, for the purposes described.

TRUMAN H. GILBERT.

Witnesses:

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