

No. 647,398.

Patented Apr. 10, 1900.

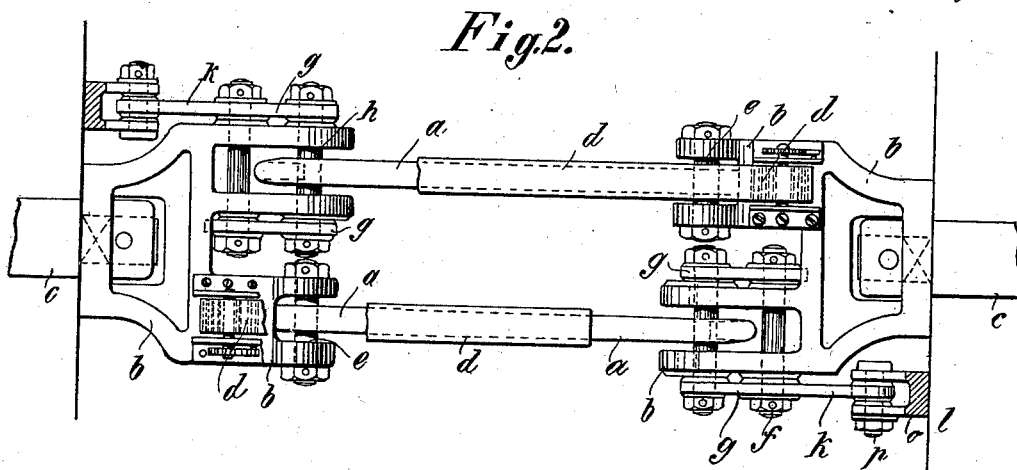
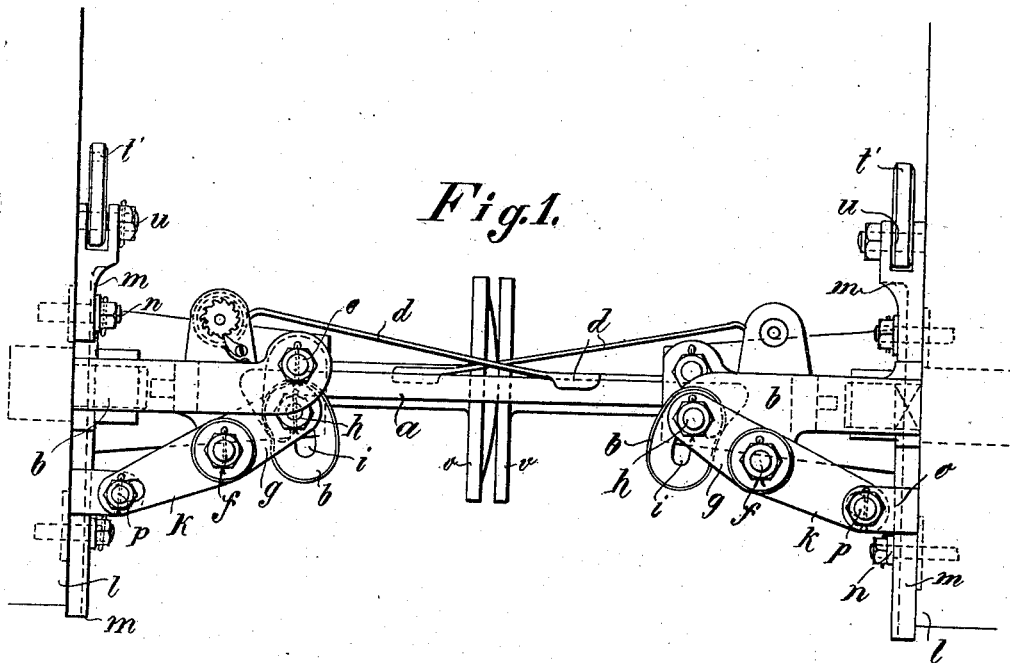
R. C. J. GAUCK.

COUPLING FOR RAILWAY CARRIAGES OR WAGONS.

(Application filed July 10, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

Geo. W. Rea.

*[Signature]*

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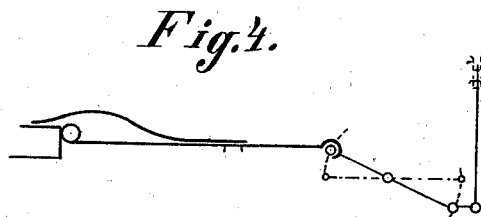
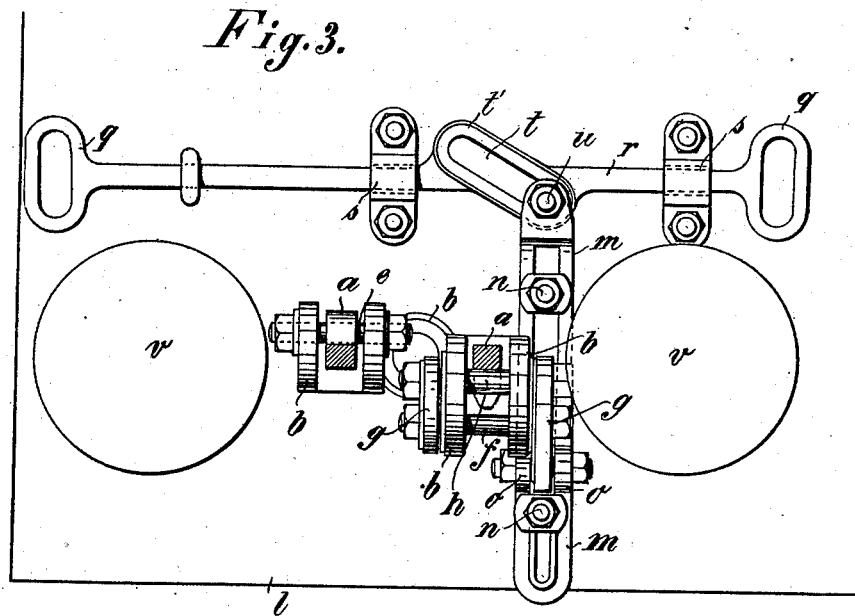
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(No Model.)

2 Sheets—Sheet 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

ROBERT CARL JOHANN GAUCK, OF WILHELMSHAVEN, GERMANY.

## COUPLING FOR RAILWAY CARRIAGES OR WAGONS.

SPECIFICATION forming part of Letters Patent No. 647,398, dated April 10, 1900.

Application filed July 10, 1899. Serial No. 723,403. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT CARL JOHANN GAUCK, a subject of the King of Prussia, German Emperor, residing at Wilhelmshaven, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Couplings for Railway Carriages or Wagons, (for which I have applied for a patent in Germany, dated December 10, 1898,) of which the following is a specification.

This invention has for its object to provide a new and improved coupling which is simple, efficient, and easily operated and is automatic in its coupling action, while it can be conveniently uncoupled without entering between the car-platforms. This object is accomplished in the manner and by the means hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved car-coupling. Fig. 2 is a plan view of the same. Fig. 3 is a sectional front elevation thereof, and Fig. 4 a diagram of the coupling. The coupling is effected by the coupling-rods *a*, Fig. 2, which are each pivoted in a bracket *b*, arranged on each carriage or wagon, by a bolt *e*.

The parts of the coupling are movably mounted. Each of the coupling-rods *a* is pressed downward by a separate spring *d*, whereas the end connected to a bracket *b* is provided with a projection that bears against the bracket and limits the downward-swinging movement of the rod, so that the spring *d* always remains under tension and the rod *a* cannot sink below its horizontal position. A pair of levers *g* is secured on a bolt *f* to each of the brackets *b*, which carry the coupling-rod *a*, by means of the bolts *e*. The outer ends of the levers *g* are connected by a bolt *h*, Fig. 1, whereas the end *k* is secured to the flat rail *m* on the frame or end beam of the carriage *l* by means of the lugs *o*. Each bolt *h* is guided in a slot *i* of the bracket *b*. Each rail *m* is secured to the end beam of the carriage or wagon *l* by bolts *n* in such a manner that it can slide vertically in the direction of its length. At the end of each carriage or wagon a draw-rod *r*, with handle or handles *q*, is arranged in guides *s*. These draw-rods are each provided centrally be-

tween its ends with an enlargement *t'*, having an inclined slot *t*. Through this slot *t*, the direction of which is inclined to the direction of length of the draw-rod *r*, a bolt *u* passes, which bolt is secured to the top of the rail *m*, Fig. 1.

As will be seen from Fig. 2, the hooked part of each of the rods *a* passes over a bolt *h* when the coupling is closed and is held in position by the spring *d*.

The operation of the mechanism is as follows: In order to close the coupling, the carriages or wagons to be coupled are allowed to collide against each other. By this means the inclined faces of the rods *a* strike against the bolts *h*, the springs *d* give somewhat, and the hooks spring over the bolts. The buffers *v* prevent the carriages or wagons from approaching each other too closely, and the coupling is accordingly closed. To uncouple the carriages or wagons, it is sufficient to pull the handle *q* of the rod *r*, by which means the rail *m* is raised by the inclined slot *f*, and the end *k* of lever *g*, being likewise raised, causes the levers *g* and bolt *h* to descend, in which position the rods are released.

To enable the end *k* of the lever *g* to rise with the vertical rail *m*, and thus lower the coupling-bolt out of engagement with the hooked head of a coupling-rod *a*, the said end of the lever is provided with a longitudinal slot *o'*, Fig. 1, through which passes a bolt or pin *p*, carried by lugs *o* on the rail.

In order to avoid complication, no means of securing the rod *r* in position has been shown. It can, however, be easily effected by means of a bolt of any kind. The springs *d* can, if desired, be adjustably arranged to balance changes of temperature. The slot *i* in the bracket *b* should be so formed that the bolt *h* and lever *g* are relieved from tensional stress.

Instead of rigidly connecting the end cross-beam of the carriage or wagon and bracket *b* an elastic connection may be made.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of a bracket having a vertically-movable horizontal coupling-bolt, a pivoted coupling-rod provided with a hooked head, a rocking lever pivoted between its ends and engaged at one end with the coupling-

bolt, a vertically-movable rail engaged with the other end of said lever, and means for moving said rail vertically, substantially as described.

5 2. The combination of a bracket having a curved slot, a horizontal coupling-bolt movable vertically in said slot, a pivoted coupling-rod having a hooked head, a vertically-rocking lever pivoted between its ends and  
10 engaged at one end with said coupling-bolt, a vertically-movable rail pivotally connected with the other end of the rocking lever, and a draw-rod connected with said rail to move it vertically, substantially as described.

15 3. The combination with a bracket having a vertically-arranged slot, a horizontal coupling-bolt movable vertically in said slot, a

pivoted coupling-rod having a hooked head, a spring acting on the coupling-rod to press it downward, a vertically-rocking lever pivoted 20 intermediate its ends and engaged at one end with said coupling-bolt, a vertically-movable rail loosely engaged with the other end of said rocking lever, and a horizontal draw-rod having an inclined slot engaged with said rail to 25 raise and lower the same, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ROBERT CARL JOHANN GAUCK.

Witnesses:

EUGEN EICHEL,  
E. H. L. MUMMENHOFF.