No. 665,964. Patented Jan. 15, 1901.

J. HAHN.

CAR COUPLING.

(Application filed June 27, 1900.)

(No Model.)

Fig. 1.

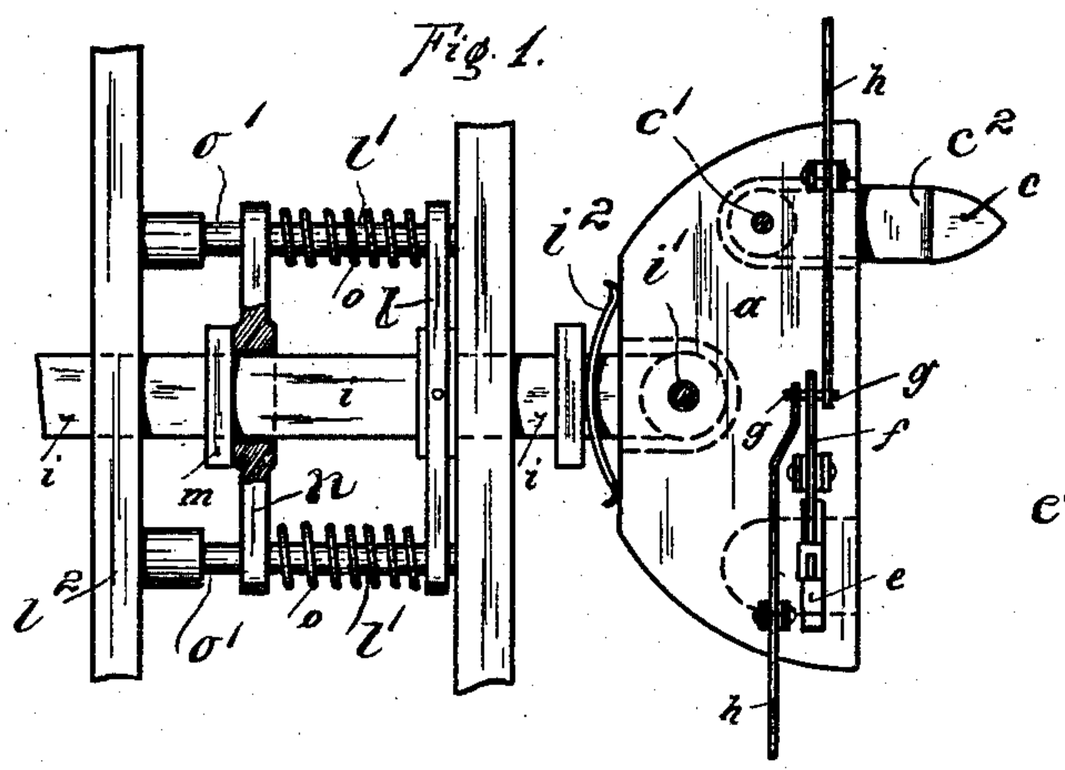


Fig. 2.

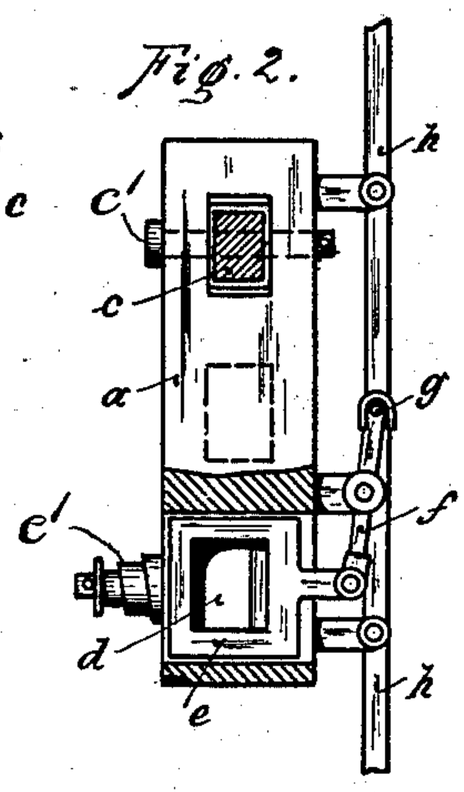


Fig. 3.

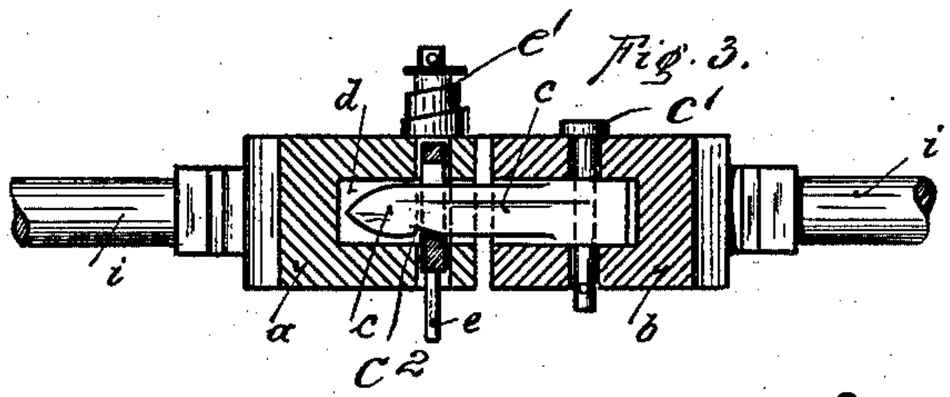


Fig. 4.

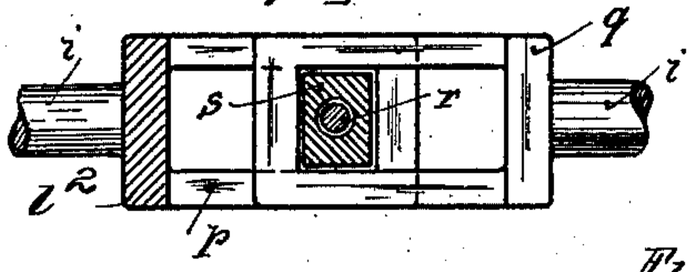


Fig. 5.

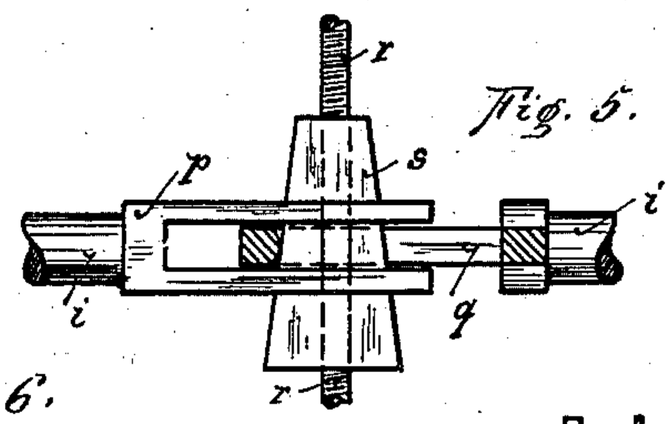
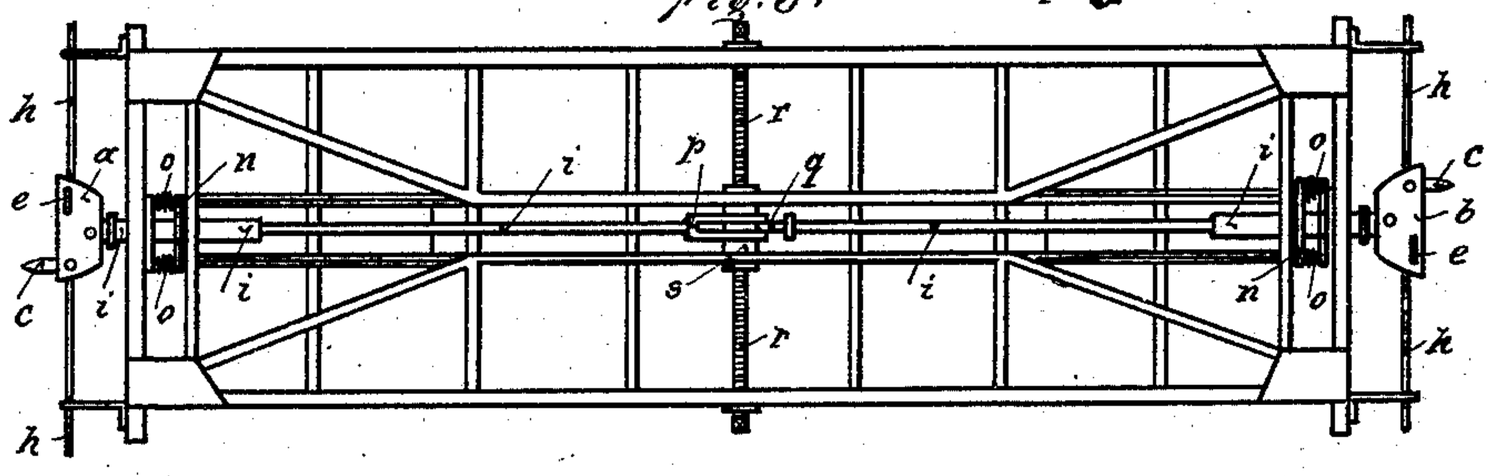


Fig. 6.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

JAKOB HAHN, OF INGOLSTADT, GERMANY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 665,964, dated January 15, 1901.

Application filed June 27, 1900. Serial No. 21,751. (No model.)

To all whom it may concern:

Be it known that I, JAKOB HAHN, railway guard, a subject of the King of Bavaria, residing at 5½ Ringsee, Ingolstadt, Bavaria, Germany, have invented certain new and useful Improvements in Railway-Car Couplers, of which the following is a specification.

My invention relates to automatic couplers for railway-cars; and its object is to improve the construction of such couplers and to adapt them to serve as buffers; and to this end it consists in certain features and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of one section of a complete coupler embodying my invention, the other section, it will be understood, being a duplicate or counterpart thereof. Fig. 2 is a front view of said coupler with the coupling-tongue in section. Fig. 3 is a vertical longitudinal section through two sections engaged, taken alongside the coupling-tongue of one section and through the socket of the other section. Figs. 4 and 5 are details of devices for tightening up or releasing the draw-bars of the couplers of a car for a purpose hereinafter explained, and Fig. 6 is a bottom plan view of a car with my improvements applied thereto.

Referring now to said drawings, *a* and *b* represent, respectively, two coupler-heads constructed according to my invention, each of which is identical with the other and either of which will hereinafter be referred to as a "coupler." Each coupler has a tongue *c* secured in a suitable socket in the head-block to one side of the center by bolt *c'*, so that it may have some pivotal play, and near its free end shouldered underneath or provided with a catch c^2 and conoidal at the extreme end to facilitate engagement. This tongue enters a chamber or socket *d* in the head-block of the opposite coupler, which is normally partly closed by a rectangular sliding catch-yoke *e*, held up by a spiral spring *e'*, so that when the tongue enters the socket its beveled or conoidal end first strikes the lower bar of said yoke and depresses it, and the yoke immediately thereafter snaps up behind the shoulder c^2 and locks the tongue in the socket. A similar coupling-tongue from the second coupler is received in a like socket in the head-block of the coupler first named, equidistant with the tongue of said latter coupler from the center thereof, but on the other side of said center, and is engaged by a similarly-controlled catch-yoke therein.

In order to release the catch-yokes in uncoupling cars, levers *h* extend laterally from the coupler to each side of the car and at their inner ends are connected to the power-arm of an auxiliary lever *f* by pivot-pin *g*, the opposite arm of this latter lever being jointed to a depending arm from the catch-yoke, so that by operating the levers *h* from either side of the train the couplers may be disengaged without entering between the bumpers.

The couplers are connected to their draw-bars *i* by pivots *i'*, and a spring i^2 is interposed between draw-bar and coupler adjacent to the pivot to hold the coupler normally in position for engagement with its counterpart. Fixed to the draw-bar behind the bumper-beam is a cross-bar *l*, sliding on guide-rods *l'*, which extend between the bumper and a parallel frame-beam l^2, through which the draw-bar plays. Another cross-bar *n*, playing loosely upon the draw-bar between said two beams, is normally forced away from cross-bar *l* and against flange or collar *m* on the draw-bar by springs *o*, coiled around the aforesaid guide-rods, so that as the draw-bar is drawn forward the springs will be compressed and resist it yieldingly; but when the draw-bar is forced back the ends of this latter cross-bar *m* are stopped against shoulders *o'* on the guide-rods, and the further retreat of the draw-bar will be against the cushioning action of the springs. By this arrangement, therefore, the ordinary buffers independent of the couplers are dispensed with.

In making up trains it is desirable that the connections shall be snug without unnecessary looseness. For this purpose I have provided apparatus for tightening up the draw-bars against their cushioning-springs after the train is made up. In the preferred form of this apparatus the draw-bars of each car are continued until they meet in the center and there terminate, the one in a single link-shaped extension *p* and the other in a double link-shaped socket *q* to receive the single link of the first. Through these links passes a screw-shaft *r*, reaching to and operable from either side of the machine, and upon this

shaft is mounted a traveling wedge *s*, rectangular in cross-section to fit the rectangular outline of the links and be prevented from turning thereby. Thus by turning the shaft *r* the wedge can be forced into the links and retract the draw-bars until their cushioning-springs are under sufficient tension, or it may be withdrawn therefrom to release said springs. The elongated shape of the links *p* and *q* will permit the draw-bars to yield even after the springs have been placed under high tension.

I claim—

1. The combination with the couplers of a car, of draw-bars extending to a meeting-point beneath the car, elongated links *p* and *q* on the meeting ends of said bars, one of which receives the other, a sliding wedge passing through said links, and means for operating said wedge.

2. The combination of the couplers *a* and *b*, the draw-bars *i*, fixed cross-bars *l*, flanges *m*, loose cross-bars *n*, springs *o* playing on shouldered guide-rods, links *p* and *q*, on the meeting ends of the draw-bars, transverse screw-shaft *r*, extending to either side of the car, and sliding wedge *s* mounted on said screw-shaft and playing through said links.

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

JAKOB HAHN.

Witnesses:

ALEX. WIELL,

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