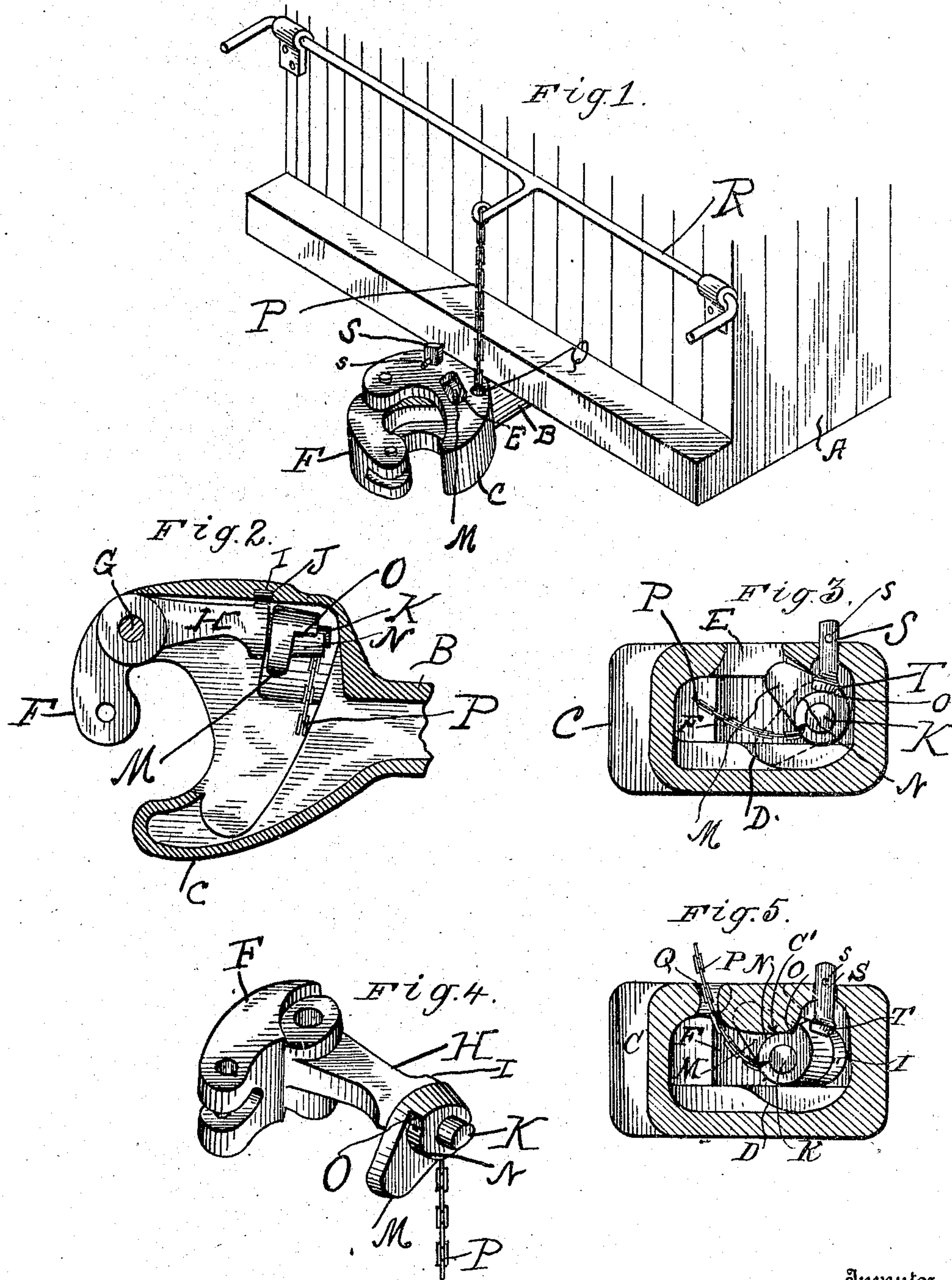


No. 894,496.

PATENTED JULY 28, 1908.

G. C. HARLIN.
CAR COUPLING.

APPLICATION FILED MAY 9, 1907.



Witnesses

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GEORGE C. HARLIN, OF OTTUMWA, IOWA.

CAR-COUPLING.

No. 894,496.

Specification of Letters Patent.

Patented July 28, 1908.

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To all whom it may concern:

Be it known that I, GEORGE C. HARLIN, citizen of the United States of America, and resident of Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to car couplers and particularly to an improvement in couplers of the Janney type, in which novel means are provided for retaining the knuckles of the couplers interlocked; novel means being also provided for permitting the release of the knuckle-retaining members, while the said knuckles are in interlocking engagement in order that as the cars move apart, the knuckles are permitted to swing out of engagement to uncouple.

An object of this invention is to provide novel means for retaining the latch or knuckle-retaining device in its disengaged position, that is, when the said latch is out of engagement with a shoulder in the draw-head. When cars are standing, and it is the purpose of the trainman to uncouple one or more cars, the latch may be set to permit the knuckles to swing and the trainman need not be in personal attendance at the time that one car is moved away from the other in order to permit this disengagement for the latch may be set in its elevated or disengaged position and held thereby until the cars move apart when, through the camming action of the latch retaining device, the said retaining device is elevated and thrown out of engagement with the said latch to permit swinging of the latch with the movement of the knuckle.

A still further object of this invention is to provide a novel form of latch retaining device to be hereinafter termed a detent, whereby the said detent through gravity interlocks with a shoulder of the latch when the said latch is rotated to throw its nose out of engagement with a shoulder in the draw-head.

Finally an object of this invention is to provide a car coupler which will prove comparatively inexpensive to manufacture as well as efficient and satisfactory in use.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a perspective view of the front end of a car with the coupler embodying the

invention applied thereto. Fig. 2, is a horizontal sectional view of the coupling head with a fragment of the draw-head. Fig. 3, is a transverse sectional view back of the detent. Fig. 4, is a perspective view of the knuckle, tail-piece and latch in assembled relation. Fig. 5, is a transverse sectional view illustrating, in detail, certain features of the invention.

In the drawings A, denotes a car which may be of any ordinary construction, B, the draw head and C, the coupler head which may be of any ordinary construction.

The interior of the draw-head is provided with a shoulder D, formed by recessing the bottom of the draw-head and the upper wall of said draw-head is provided with an opening E, the walls of which act as a guide for the nose of the latch as it is moved on the tail-piece of the knuckle.

The knuckle F, is pivoted in the draw-head by the pin G, and the tail-piece H, of said knuckle has a lug I, which lies in a recess J, in the wall of the draw-head. The engagement of the lug I, with the walls of the recess J, forms a bearing which, to a certain extent, relieves the strain on the pivotal pin G, and has a tendency to prevent fracture of the said pivotal pin. The tail-piece has an extension K, on which the latch L, is rotated, the said latch having a nose M, which engages the shoulder D, of the draw-head when the parts are in locked position and when the cars are coupled.

The latch is provided with an annular flange N, terminating in a shoulder O. The annular flange is utilized to engage the flexible operating means P, here shown in the form of a chain which has its end suitably secured to the latch. The chain or flexible connection lies in engagement with the annular flange and extends through the hole Q, in the top wall of the draw-head and is connected to a lever R, pivoted to the end of the car. As the lever is rocked, the chain is drawn through the hole in the draw-head and the latch is partially rotated on its pivot until its ends assume the position shown in Fig. 3, when the shoulder O, thereof comes into alinement with the detent S, which is slidably held in an aperture in the upper wall of the draw-head. The lower end of the detent is provided with a cam T, which falls into engagement with the shoulder O, and the latch is held in its elevated position until the cars are moved apart. When such movement

takes place, the knuckles are swung on their pivots and the tail-pieces thereof describe an arc of a circle traveling from one side of the draw-head to the other. When motion is communicated to the tail-pieces, the camming action of the shoulders O, on the cams P, suffices to lift the detent until it clears the upper edge of the shoulder and the latch is therefore free to swing from under the detent. With a return of the parts to the position shown in Fig. 2, the detent will again be elevated and will assume the position in Fig. 3, upon the partial rotation of the latch as heretofore described and the operation will be repeated.

As shown in Fig. 1, the nose M, of the latch is projecting into the opening E, and said latch swings from side to side as the tail-piece describes its arc in movement. When the tail-piece is returned to the position shown in Fig. 2, the nose thereof will gravitate to the position shown in dotted lines to Fig. 3, and the fact that the latch is in engagement with the detent S, will also act on the detent and cause it to rotate on its pivot. The detent is held in operative relation to the latch and through the medium of the cross pin s, which it engages, the upper wall of the

draw-head limits the downward movement of the said detent.

What I claim is:—

In a car coupler, a drawhead having an opening, the walls of which act as guides, said draw-head also having a shoulder, a knuckle pivoted to the draw-head and having a tail piece provided with an extension, a latch rotatable on the extension and having a nose adapted to engage the shoulder of the draw-head, means for rotating the latch, a shoulder on the latch, the nose of the shoulder when rotating being guided by the walls of the opening of the draw-head, a vertically slidable gravitating detent having a cam surface adapted to engage the latch for retaining the latch disengaged from the shoulder of the draw-head, the relation of the shoulder and the cam of the detent being such that the shoulder will elevate the cam when the tail piece is moved.

In testimony whereof I affix my signature in the presence of two witnesses, this 2nd day of May, 1907.

GEORGE C. HARLIN.

Witnesses:

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