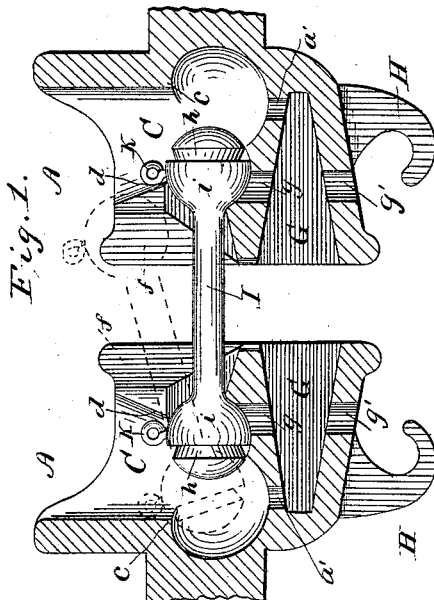
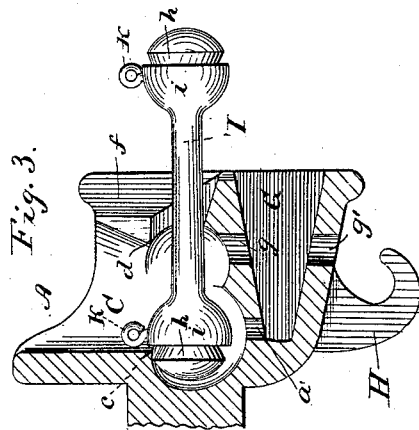


(No Model.)

G. E. NICHOLS.
CAR COUPLING.

No. 304,847.

Patented Sept. 9, 1884.



WITNESSES

Chas. R. Burr

Franklin A. Hough

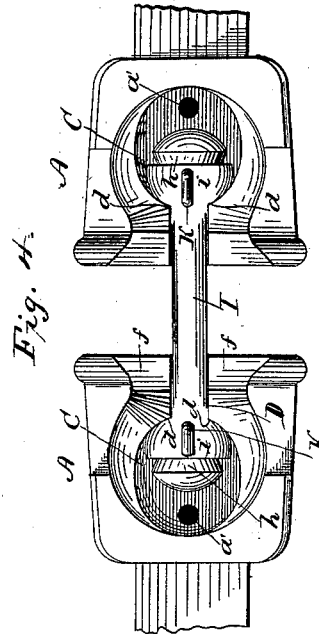
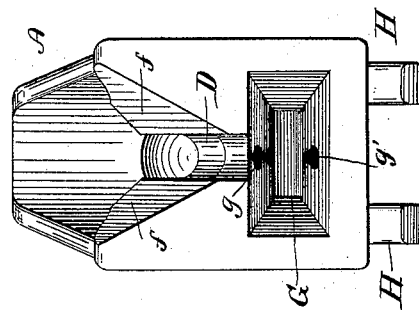


Fig. 2.



INVENTOR

George E. Nichols
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UNITED STATES PATENT OFFICE

GEORGE E. NICHOLS, OF ELMIRA, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 304,847, dated September 9, 1884.

Application filed June 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. NICHOLS, a citizen of the United States, residing at the city of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of car-couplings in which the cars are automatically coupled when brought together, and can be uncoupled without going between the platforms.

The object of the invention is to provide an automatic car-coupler which is certain and effective in its action, and can be readily and easily uncoupled either from the top or side of the cars, which is so simple in construction that it is impossible for it to get out of order, can be manufactured as cheaply as the ordinary coupler now in general use, and at the same time provides means whereby a link and pin can be used when coupling with cars using a link-and-pin coupler.

The particular construction and arrangement of the various parts of my invention I will now proceed to point out and describe, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section, showing the draw-heads coupled. Fig. 2 is a front elevation of the face of one of the draw-heads. Fig. 3 is a vertical longitudinal section of one draw-head with the draw-bar in position to couple. Fig. 4 is a top plan of the draw-heads.

Referring to said drawings, A is the draw-head, having the cavity or socket C for the reception of the spherical heads of the draw-bar, said socket opening at the top of the draw-head, and having its bottom sloping rearward, and provided with a drain-hole, *a*, by means of which the socket is at all times kept clear of water, snow, cinders, &c.

c is a shoulder on the upper rear part of the socket C, which engages with a groove in the draw-bar, hereinafter described, and holds the same in a position for coupling.

D is a slot extending from the socket C to the face of the draw-head.

d d are shoulders on either side of the slot D, which engage with the heads of the draw-bar and prevent the same from being drawn out when coupled. The face of the draw-head is cutaway, forming a V-shaped opening, having the slot D for a center, and is beveled inwardly toward the slot D, forming the inclines *f f*, for the purpose hereinafter set forth. In the lower part of the draw-head is an opening or chamber, G, provided with pin-holes *g g*. In this chamber can be used an ordinary link and pin when coupling with cars using the ordinary form of coupling, or when necessary for any other reason.

H are hooks under the draw-head, in which the draw-bar can be hung when not desired for use.

I is the draw-bar, composed of the straight bar, having on each end spherical heads *i i*.

h h are annular grooves on the outer part of the spherical heads *i*. Said grooves are concentric to a line drawn longitudinally through the center of the draw-bar.

K are staples inserted in the heads *i*, to which can be attached light chains which can be carried to the top or side of the car, and by means of which the draw-heads can be uncoupled without going between the platforms.

To use my invention, the draw-bar is placed in the socket C and pushed back until the shoulder or rest *c* engages with the groove *h* in the head *i*. The draw-bar is thus held in a position to couple, as shown in Fig. 3. When the draw-heads come together the free end of the draw-bar comes in contact with the inclines *f f* on the opposite draw-head, and slides up the same until it reaches the top of the slot D, when it drops into the socket C, thus automatically coupling the draw-heads. The bar portion of the draw-bar rests in the slot D, which is of sufficient size to allow it free lateral play when going around curves, but does not permit the heads *i* to be drawn through. When the train is in motion, the heads *i i* come in contact with the shoulders *d d* on each side of the slots D, and are held securely in place, thus forming a ball-joint coupler. To uncouple it is only necessary to raise one end of the draw-bar by the chain attached to the staple K.

For this purpose a hook may be used which can be inserted in the staple.

Having thus fully described my invention, I claim as new and desire to secure by Letters

5 Patent—

A draw-head having the socket C, shoulder c, slot D, shoulders *d d*, inclines *f f*, and drain-hole *d'*, in combination with a draw-bar having spherical heads *i i*, and annular grooves

h h, substantially as and for the purpose shown 10 and described.

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

GEORGE E. NICHOLS.

Witnesses:

DE B. GOODELL,
CHAS. H. SWEET.