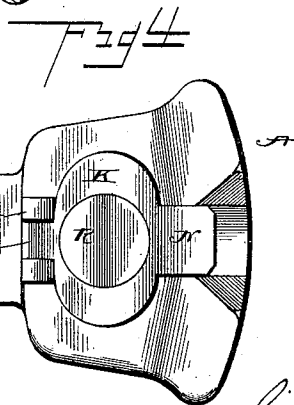
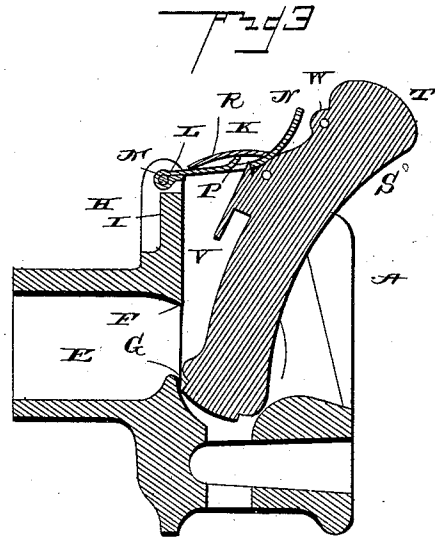
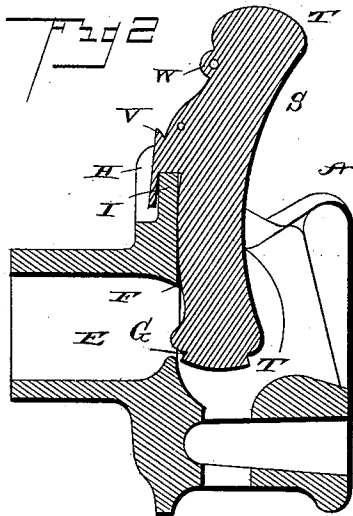
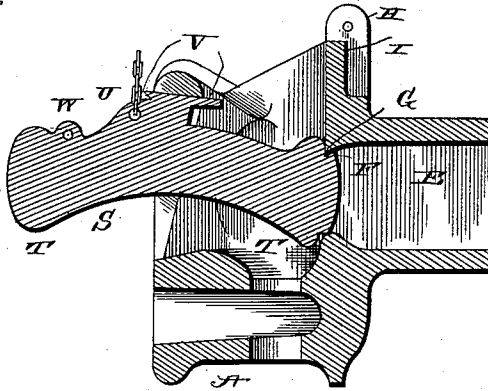
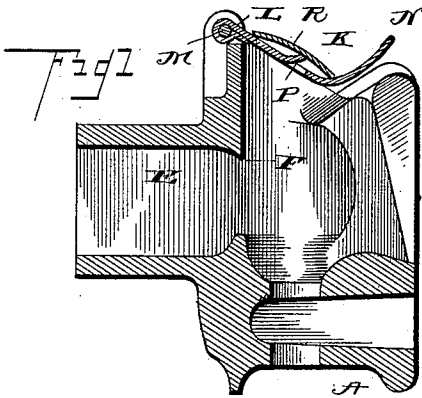


(No Model.)

G. E. NICHOLS.
CAR COUPLING.

No. 463,737.

Patented Nov. 24, 1891.



Witnesses

John Danie
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UNITED STATES PATENT OFFICE.

GEORGE E. NICHOLS, OF HUNTINGTON, WEST VIRGINIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 463,737, dated November 24, 1891.

Application filed April 11, 1891. Serial No. 388,586. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. NICHOLS, a citizen of the United States, residing at Huntington, in the county of Cabell and State of West Virginia, have invented certain new and useful Improvements in Car-Couplers; 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

10 which it appertains to make and use the same.

This invention relates to improvements in that class of car-couplers in which an automatically-operated draw or coupling bar is employed to connect the draw-heads of the cars to be coupled, and in which the cars are uncoupled without the necessity of going between them.

The objects of my invention are to hold the draw or coupling bar in an elevated position and to exclude rain, snow, dirt, and other objectionable matters from the draw-heads when the cars are uncoupled.

The invention further has for its objects to provide for holding the draw or coupling bar in position to be automatically coupled and to provide for such automatic coupling, as more fully hereinafter set forth.

The above-mentioned objects I attain by the means illustrated in the accompanying drawings, in which—

30 Figure 1 represents a longitudinal vertical sectional view of one of the draw-heads of a car, showing the draw-bar in position for coupling. Fig. 2 represents a longitudinal vertical sectional view of one of the draw-heads, showing the draw-bar held in an elevated position. Fig. 3 represents a similar view of one of the draw-heads, showing the fender and the draw-bar held in an elevated position thereby. Fig. 4 represents a top view of one of the draw-heads uncoupled, showing the fender down.

Referring to the drawings, the letter A indicates a draw-head, and the sides of the opening at the front are beveled outwardly, the bevel widening from the bottom to the top of the opening for the purpose hereinafter explained. At the rear of the socket the draw-head is provided with an opening E, shoulders F being provided at the upper and lower edges thereof, by means of which the draw-bar may be held in position for coupling, the draw-bar

at one extremity being provided with a dovetailed rib G, which is engaged and held by said shoulders, the upper edge of the rib setting behind the upper shoulder and the lower edge of the lower shoulder against the front of the lower shoulder. At the upper rear edge of the opening extending upward from the socket are located two lugs H, between which is shoulder I, for the purpose hereinafter set forth.

The letter K indicates a fender consisting of an approximately circular disk having a projection L at one side, which is hinged to a pin M, passing through the lugs H, before mentioned. The opposite side of disk is provided with an upwardly-curved lip N, for the purpose hereinafter described. The disk at its center has a rectangular lip P punched up from its lower surface, leaving a partially-covered opening, which serves as a catch for an offset on the draw-bar, as hereinafter set forth. To the top of the disk is secured a shield R, which covers the opening above mentioned to effectually exclude rain, snow, or dirt, the disk covering the opening to the socket for the same purpose.

The letter S indicates the draw or coupling bar, which is provided with approximately spherical balls T at its ends. Midway between the balls on the upper side of the bar is a projection U, having offsets V extending to the front and rear thereof, which are adapted to engage the opening in the fender-disk to retain the bar in an elevated position when desired. One of the said lugs, it will be observed, is longer than the other and serves to engage the shoulder I between the lugs H to hold the bar in an elevated position, as shown in Fig. 2 of the drawings.

The projection is provided with an opening and through which a chain extending above may be passed, so as to elevate the bar and uncouple the cars without going between them. The bar is provided, also, with a smaller perforated projection W for the same purpose.

The operation of my invention is as follows: When about to couple two cars, the ribbed ball of the draw-bar is inserted in the socket or cavity and then pushed back so that the upper edge of the rib will pass under the upper shoulder at the rear of the socket and the lower edge of the rib will rest against the front

of the lower shoulder. By this means the bar will be held in position ready for coupling. When the cars come together, the ball at the free end of the bar will strike the beveled sides of the opening at the front of the draw-head and will ride up between said sides and drop through the vertical opening into the socket, coupling the cars. In case the fender is employed the ball on its upward passage will strike the curved lip and raise the fender, so as to permit the ball to drop into the socket. When the coupler is not in use, the bar may be held in position by engaging the long offset with the shoulder at the upper rear edge of the vertical opening to the socket, as shown in Fig. 2, or in case the fender is employed by engaging either of the lugs with the opening in the same, as shown in Fig. 2 of the drawings. To uncouple the cars it is simply necessary to lift the ball at one end of the bar out of the socket by means of the chain before mentioned.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a car-coupler, a draw-head having a

spherical socket, an opening extending from the top to said socket, an opening at the front having beveled sides and vertical lugs, and an intermediate shoulder at the top and rear of the vertical opening, in combination with a draw-bar having approximately spherical balls at its ends, an intermediate projection, and an offset adapted to engage the shoulder and hold the bar in an elevated position, substantially as specified.

2. The combination, with the draw-head of a car-coupler, of a hinged fender having an opening at its center, a draw-bar having spherical balls at its ends, and an intermediate projection having offsets adapted to engage the edge of said opening when the bar may be held in an elevated position, substantially as specified.

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

GEORGE E. NICHOLS.

Witnesses:

A. B. WILLISON,
LENNA WEAVER.