

J. F. & V. S. DURBIN.
CAR COUPLING.
APPLICATION FILED MAY 19, 1911.

1,037,459.

Patented Sept. 3, 1912.

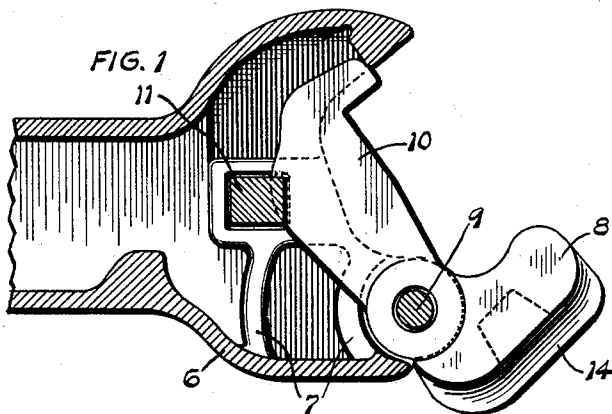


FIG. 2.

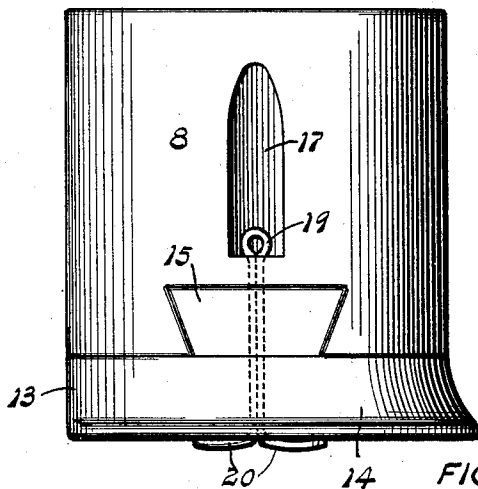


FIG. 3.

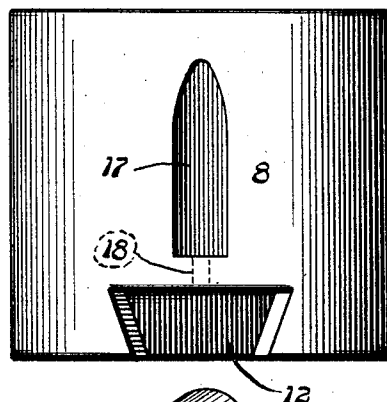


FIG. 5.

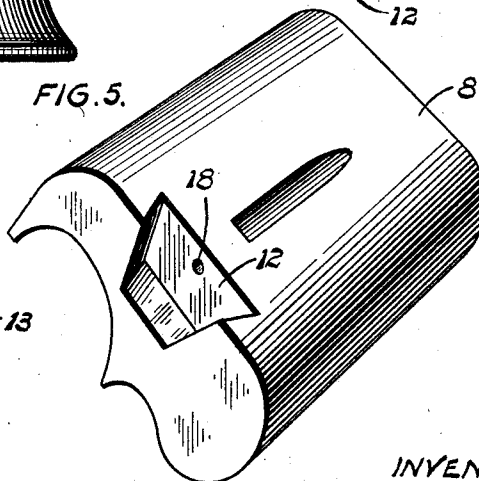
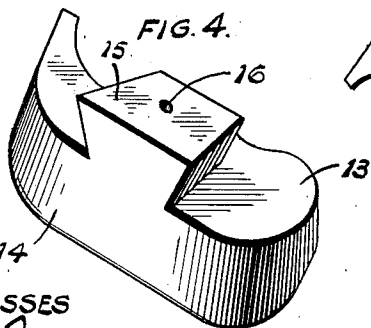


FIG. 4.



WITNESSES

Wm. Janus.
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INVENTORS

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UNITED STATES PATENT OFFICE.

JAMES F. DURBIN, OF DENVER, COLORADO, AND VOTAW S. DURBIN, OF ST. LOUIS, MISSOURI.

CAR-COUPLING.

1,037,459.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed May 19, 1911. Serial No. 628,180.

To all whom it may concern:

Be it known that we, JAMES F. DURBIN and VOTAW S. DURBIN, citizens of the United States, residing, respectively, in Denver, in the county of Denver and State of Colorado, and in the city of St. Louis and State of Missouri, have invented new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to certain new and useful improvements in car couplers, and particularly to that form of car coupler described and claimed in our allowed application for Letters-Patent of the United States, Serial Number 564,116, filed May 31st, 1910. In such application we have described a car coupler having a knuckle provided with a tongue, the coupler head being provided with inclines up and down which said tongue is adapted to ride, and the knuckle, as a whole, being loosely mounted on its pivot so as to allow a slight tilting thereof. At the bottom of the knuckle on its outer face there is provided a weight in the form of a lip, which, in operation, in the opening movement of the knuckle assists in tilting the knuckle forward to lift the tongue from one of said inclines and thereby decrease the friction and facilitate the rapid opening of the knuckle.

Our present invention consists in providing the lower portion of the knuckle containing the lip as a removable part of the knuckle, so that the same may be used or not as may be found desirable. In addition, this construction permits of the more economical manufacture of the knuckle as a whole, and particularly in that it facilitates the casting of the knuckle.

In the accompanying drawing—Figure 1 is a sectional plan view of a coupler head provided with a knuckle constructed according to our invention; Fig. 2 is a front view of the knuckle with the removable member secured thereon; Fig. 3 is a similar view with the removable member detached; Fig. 4 is a perspective view of the removable member; and Fig. 5 is a perspective view of the portion of the knuckle shown in Fig. 3.

Referring now to the drawing, 6 indicates the coupler head, 7 the inclines provided therein, 8 the knuckle, 9 the pivot-pin, by means of which the knuckle is pivotally mounted in the head 6, 10 the tail of the knuckle, and 11 the locking-pin. All of

these parts, with the exception of the knuckle 8, are constructed as described in our application above mentioned, and need not be referred to more in detail. The knuckle 8 is provided in its lower end with a dove-tailed recess 12 which extends part way through the knuckle and opens through the bottom thereof. As shown more clearly in Fig. 5, the sides of the recess 12 converge rearwardly.

The numeral 13 indicates the removable lower end of the knuckle, which is shaped to form, when on the knuckle, an outwardly projecting lip 14. The member 13 is provided with a dove-tail member or tongue 15 which, as shown more clearly in Fig. 4, converges toward its rear end to correspond with the convergence of the walls of the recess 12. The tongue 15 is provided with a central opening 16, which also extends through the bottom of the lip 14. The front face of the knuckle 8 is provided with a recess 17, from the bottom of which an opening 18 extends through the body of the knuckle into the recess 12. The size and convergence of the tongue 15 are accurately adjusted relative to the recess 12, so that when the tongue 15 is inserted in said recess it will jam therein with the front face of the tongue flush with the front face of the knuckle 8, and with the sides and rear of the tongue in contact with the sides and rear wall of the recess 12. When in such position the openings 18 and 16 will register, and the movable member 13 is securely held in position by means of a cotter-pin 19 which is inserted in the recess 17 and passed through the openings 18 and 16 through the bottom of the movable member 13 where its ends 20 are spread apart in the usual manner.

In addition to the function of the lip 14 described above, it is designed to be used in connection with a knuckle on the companion coupler head having a corresponding lip so that in the coupled relation each lip will engage the under side of the head of the opposite coupler, and thus prevent such coupler from falling to the ground in the event the draft rigging should be pulled or wrenched from connection with its truck. It may chance, however, that one car may be provided with our coupler and the car to which it is to be connected have a coupler of the ordinary type unprovided with our improve-

ment; or such latter coupler may occupy a relatively lower or higher position than our coupler occupies on its car. Under such circumstances it may be found desirable not to employ the lip portion 14, and in such case by removing the cotter-pin the portion 13 may be removed and the knuckle 8 will then be in condition to be used with any coupler of the standard type.

10 We claim:

1. A knuckle for a car coupler having its front face provided with a groove and its lower end with a dove-tailed recess, a removable member affording a projecting lip and having a tongue adapted to seat in said recess, said knuckle having an aperture extending from the bottom of the recess in its front face into said dove-tailed recess, and the removable portion having a corresponding aperture extending vertically through the same and through said tongue, and a pin for insertion in said openings.

2. A knuckle for a car coupler having one end provided with a dove-tailed recess hav-

ing rearwardly converging side walls and a back wall, a removable portion conforming in contour to the knuckle and having a tongue formed with converging sides adapted to fit snugly in said recess, and with a rear side adapted to engage the back wall thereof, said removable portion providing a projecting lip on its forward side, and means for securing said tongue in position in the recess of the knuckle.

In testimony whereof, we have hereunto set our hands in presence of two subscribing witnesses.

JAMES F. DURBIN.
VOTAW S. DURBIN.

Witnesses to signature of James F. Durbin:

MARY B. CAREY,
O. BELL HALEY.

Witnesses to signature of Votaw S. Durbin:

BRUCE S. ELLIOTT,
STELLA HILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."