

W. F. RICHARDS.
CAR COUPLING.
APPLICATION FILED JUNE 1, 1907.

964,883.

Patented July 19, 1910.

Fig. 1.

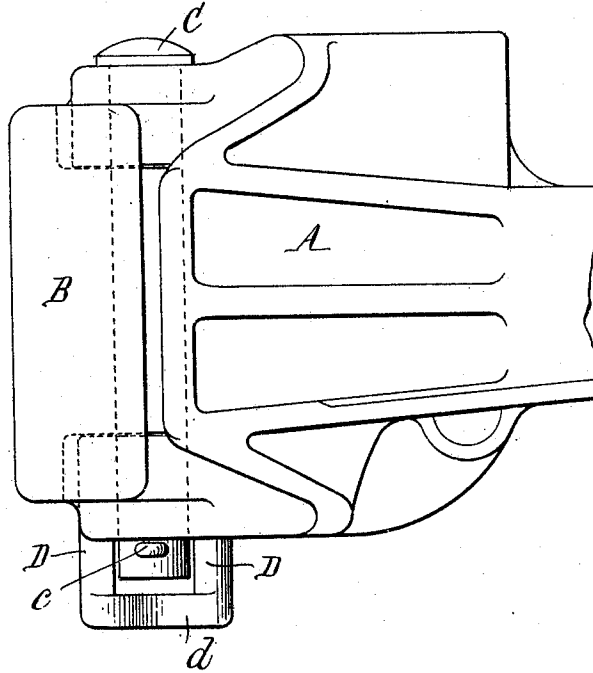


Fig. 2.

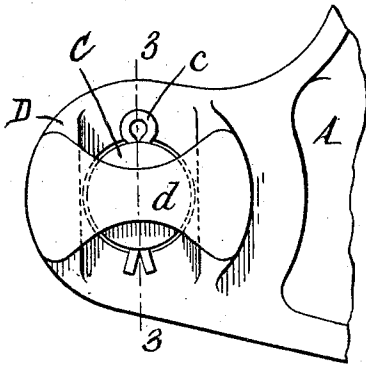
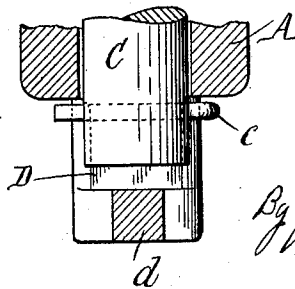


Fig. 3.



Witnesses:
A. F. Dimond.
E. A. Volk.

Inventor.
Willard F. Richards,
By Wm. H. Parker & Hard,
Attorneys.

UNITED STATES PATENT OFFICE.

WILLARD F. RICHARDS, OF BUFFALO, NEW YORK, ASSIGNOR TO GOULD COUPLER COMPANY, OF NEW YORK, N. Y.

CAR-COUPLING.

964,883.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed June 1, 1907. Serial No. 376,765.

To all whom it may concern:

Be it known that I, WILLARD F. RICHARDS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

This invention relates more particularly to car couplers of the Master Car Builders' type having a swinging knuckle which is pivoted to the coupler head by a vertical knuckle or hinge pin. The knuckle pins are frequently broken in service. If the broken lower portion of the pin falls out of the pin hole in the head, the knuckle, not being held at the bottom, is liable to tilt or swing more or less out of the vertical position, thereby throwing such strain on the remaining upper portion of the knuckle pin and the hinge lug at the top of the head as to often break this lug with the result of destroying the coupler head and possibly causing other damage. Various means have been heretofore proposed to prevent the falling of the knuckle pin or a part thereof out of the pin hole in the event of the pin being broken, but such prior devices have been objectionable for one reason or another. They either require a pin of special construction, which is more expensive to make, or one or more separate parts, liable to be detached, broken or lost, are required, or the head must be formed with a special part for supporting the pin, usually projecting from the body of the head. Now, if the head is made of cast steel, which does not flow readily in casting, it is very difficult to produce perfect castings in case the head is provided with a thin or slender projecting supporting part or protuberance.

The object of this invention is to provide the coupler head with an integral projecting pin support which does not add appreciably to the weight and cost of the head and which is of such construction as not to add to the difficulties of casting perfect heads. This object is accomplished by making the pin-supporting projection of the head of the novel construction hereinafter described and shown in the drawings.

In the accompanying drawings: Figure 1 is a side elevation of a car coupler provided with a knuckle pin support embodying the invention. Fig. 2 is a fragmentary bottom

plan view thereof, on an enlarged scale. Fig. 3 is a fragmentary sectional elevation thereof, in line 3—3, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A represents the coupler head, B the 60 swinging knuckle, and C the knuckle hinge pin passing vertically through the hinge lugs on the coupler head and knuckle. These parts may be of any usual or suitable construction. The knuckle pin has the usual 65 head or shoulder at its upper end resting on the upper hinge lug of the head, and a removable cotter pin or key *c* at its lower end for preventing the pin from falling or jumping out of its hole. The safety sup- 70 port for preventing the pin or a broken portion thereof from falling out of the pin hole is cast integrally with the coupler head and consists of side portions or walls D which depend from the bottom hinge lug of 75 the head at opposite sides of the pin hole therein and are connected at their lower ends by a bottom or cross-bar *d*. The side walls are relatively wide and thick, while the central part of the bottom cross-bar is 80 preferably of less width than the ends thereof and than the diameter of the pin hole, see Fig. 2. Wide openings are thus left at opposite sides of the knuckle pin for inserting and withdrawing the retaining cot- 85 ter pin or key *c*, and the narrow central part of the bottom or cross-bar also makes it possible to strike the lower end of the knuckle pin with a tool or implement to drive it out of its hole if this should be re- 90 quired by reason of the pin sticking in the hole. Another and important reason for this shape of the pin support is that it does not complicate the casting of the head. The head is cast bottom side up and the molten 95 metal readily rises in the cavities in the mold for forming the sides D of the pin support, and flows across from these cavities to meet and form the bottom or cross-bar. No special core is required for forming 100 the pin support.

I claim as my invention:

A car coupler head having a knuckle pin, and a knuckle pin support which is integral with the coupler head and comprising sepa- 105 rated opposite side portions which depend from the bottom of the coupler head at opposite sides of the knuckle pin hole and are

relatively wide and thick, and a bottom extending beneath the knuckle pin hole from the lower ends of said side portions, the middle portion of said bottom which is beneath
5 the center of the knuckle pin hole being of less width than the end portions thereof and of less width than the diameter of the knuckle pin, whereby the lower end of the knuckle pin is exposed and can be struck

with an implement to drive it out of its 10 hole, substantially as set forth.

Witness my hand, this 29th day of May, 1907.

WILLARD F. RICHARDS.

Witnesses:

C. W. PARKER,

C. B. HORNBECK.