(No Model.) 2 Sheets—Sheet 1.

A. H. RENSHAW.

CAR COUPLING.

No. 489,233. Patented Jan. 3, 1893.

Fig. 1.

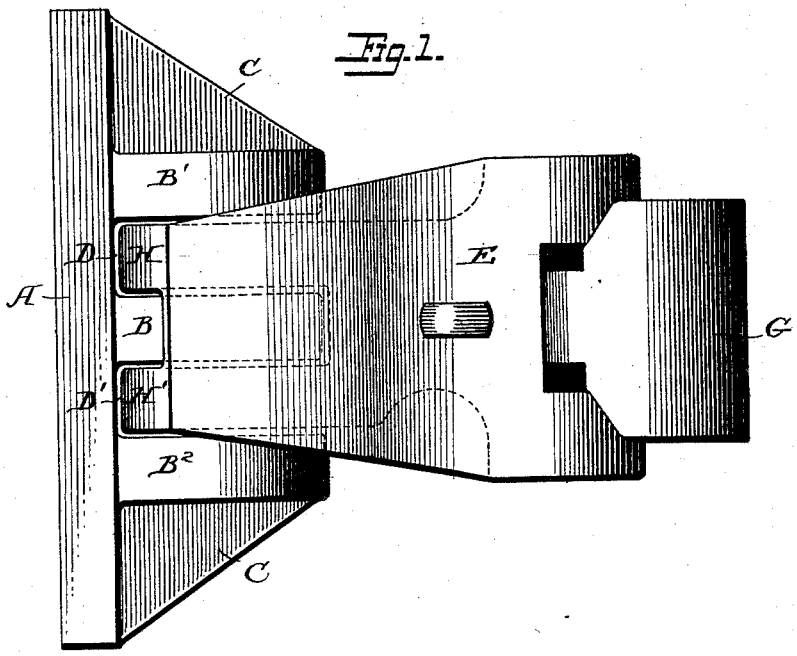
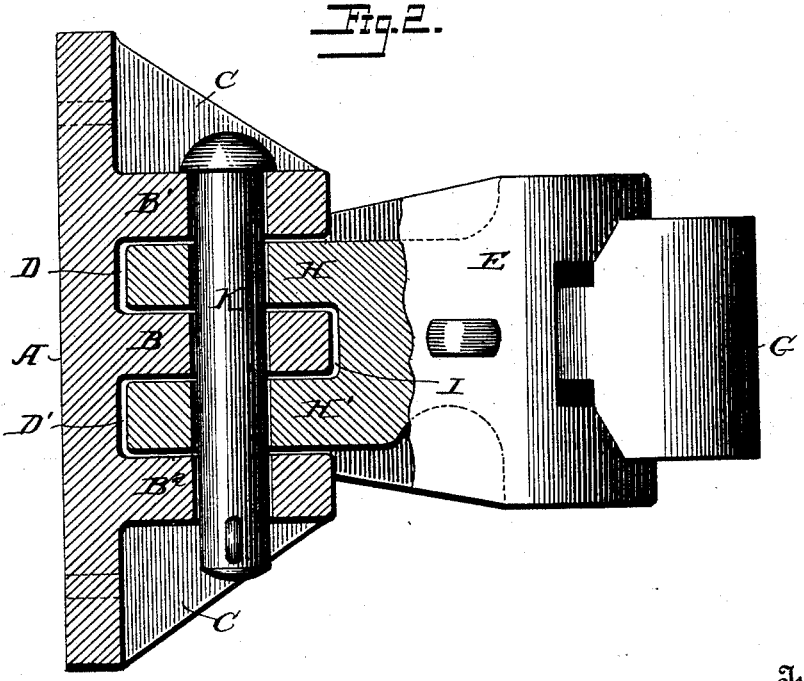


Fig. 2.



Witnesses
Jno. J. Hinkel
A. E. Hanemann

Inventor
Alfred H. Renshaw,
by Foster Freeman
Attorneys

(No Model.) 2 Sheets—Sheet 2.

A. H. RENSHAW.

CAR COUPLING.

No. 489,233. Patented Jan. 3, 1893.

Fig. 3.

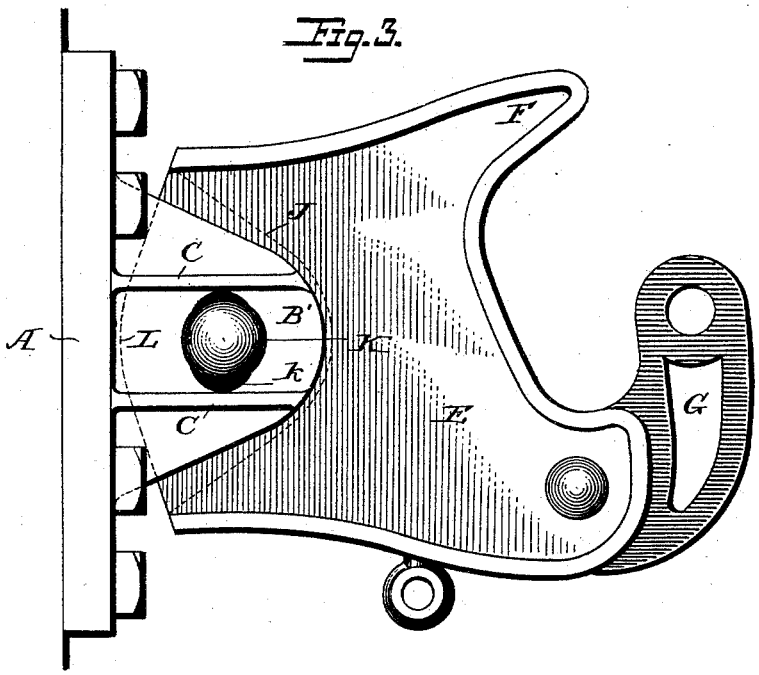
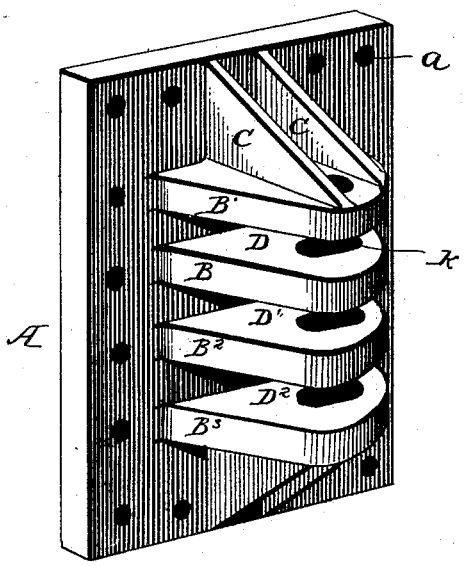


Fig. 4.



Witnesses
Jno. J. Hinkel
A. E. T. Fassmann

Inventor
Alfred H. Renshaw,
by Foster Freeman
Attorneys

UNITED STATES PATENT OFFICE.

ALFRED H. RENSHAW, OF TROY, NEW YORK, ASSIGNOR TO THE TROJAN CAR COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 489,233, dated January 3, 1893.

Application filed September 24, 1892. Serial No. 446,843. (No model.)

To all whom it may concern:

Be it known that I, ALFRED H. RENSHAW, a citizen of the United States, and a resident of Troy, Rensselaer county, New York, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates generally to car couplers, and more particularly to a coupler adapted to be used on the locomotive tender or in other similar position, and it has for its object to provide means whereby the coupler or drawhead may be connected to the tender in a manner so that it shall be simple and cheap of construction, strong and durable and capable of withstanding the shocks and strains to which it is subjected, and shall be efficient in operation.

To these ends my invention consists in a coupler having the general features of construction, arrangement and mode of operation, substantially as hereinafter set forth.

Referring to the accompanying drawings, Figure 1, is a side view of the coupler as arranged to be applied to a locomotive tender or in similar position; Fig. 2, is a similar view partially in section showing one form of coupler embodying the invention; Fig. 3, is a plan view; and Fig. 4, is a perspective view of the face plate.

In the use of the modern car coupler such as is ordinarily known as the "twin-jaw" or other similar type of automatically operating couplers, difficulty has been experienced in providing a proper coupler or drawhead to be applied to the tender or in similar position.

It is well known that it is usual to have one portion of the coupler device connected to the tender so that it will couple with any of the complementary portions of the couplers attached to the ends of the cars. It is also well known that in the ordinary use of such automatic couplers, it is common to propel the engine and tender against the car or cars of a train to accomplish the coupling, and in this operation, the face plate and coupler connected to the tender are subjected to comparatively severe shocks. Not only is this so, but as the whole burden of the train is connected to this portion of the coupler, it is subjected to greater or less shocks, jars or blows in the ordinary handling of the train, which are liable to derange the parts of the coupler, and it is with the object of providing a coupler or drawhead which is capable of withstanding the wear and tear to which it is ordinarily subjected, as well as to permit of freedom of movement between the tender and cars as in rounding curves and passing switches &c. that my present invention is made.

I have shown my invention as embodied in what I consider the preferable form adapted to be connected to the rear of the tender of the locomotive, but it will be understood that the invention is capable of other applications and uses, and that the details of construction and arrangement may be varied by those skilled in the art to meet the requirements of any particular use, without departing from the spirit of my invention, and while I have shown my invention applied to a well known form of coupler head which has heretofore been patented to me, it is evident that it may be applied to other forms and constructions, that shown being typical.

My invention comprises a face plate A, which is adapted to be permanently secured to the rear of the locomotive tender by suitable bolts passing through holes *a* or otherwise, and connected to and preferably forming part of the face plate, are one or more projecting lugs B, B′, B². These lugs are arranged parallel to each other and extend in horizontal planes, and in order to give additional strength to them, I provide the ridges or braces C, C, which project from the face plate, and are preferably formed integral with the lugs. Any desired number of lugs may be used, and I have shown the face plate as provided with three, forming two recesses D, D′ between their adjacent faces, and these recesses preferably have parallel sides, although substantially the same objects could be accomplished to a greater or less extent by having them otherwise shaped, as converging.

The coupler E may be variously formed as before indicated and may be an ordinary drawhead or a coupler head as shown in the drawings, and it is preferably provided with the ordinary guard arm F, and hook or jaw G,

which is shown as pivotally mounted in the body of the coupler head, although it is not always necessary or desirable that the jaw should be pivoted, but it may be made solid with the body, and in that case the usual recesses in the body of the coupler for the reception of the locking arm, and bolts may be dispensed with, but this feature of construction is a matter of no importance to my present invention.

This coupler head is provided with one or more projections H, H′, which are arranged to conform substantially with the shape of the recesses D, D′ in the face plate, and in the drawings they are shown as having parallel sides with a recess I between them so that when placed in position with the face plate, the projections H, H′ fit closely but loosely in the recesses D, D′ between the jaws B, B′, B^2 of the face plate. The rear end of the coupler head is recessed to receive the projecting lugs on the face plate, and I preferably make the recess somewhat wider than the width of the projecting lug or lugs as indicated at J, Fig. 3, so that when the parts are in position and secured by a suitable pin or bolt K, the coupler head can vibrate more or less laterally on the pin, and at the same time be maintained in proper position for operation. The rear end of the coupler head is also preferably curved as shown by the line L, so that the rear portion of the projections can fit closely in the recesses in the face plate, although of course it will be readily understood that they may be straight or otherwise shaped according to the requirements of each particular case. In order to allow further freedom of movement of translation to the coupler head I make the holes for the pin or bolt K, in the form of elongated slots *k* as clearly seen in Fig. 4, the longest diameter of the slots being at right angles to the direction of the draft of the train.

In order to provide for connecting the coupler head with cars of various heights, due to varying loads or otherwise, I provide the face plate A with a greater number of projecting lugs than is necessary to fit the coupler head. Thus while I have shown the plate as provided with three lugs in Figs. 1 and 2 and the head with two lugs fitting in the recesses of the plate lugs, in Fig. 4 I have shown the plate with four lugs and the coupler head may be fitted between the upper three or the lower three lugs to correspond with the height of the car to be connected to the tender.

It will be seen that a coupler constructed substantially as above described and embodying the essential features set forth is simple, exceedingly strong and durable, and capable of withstanding all ordinary shocks or jars, and at the same time the parts have a sufficient freedom of movement to prevent undue strain, and the metal of which the parts are composed is well arranged and disposed to secure the best results while at the same time the parts are simple of construction and easily and readily made, while the pin or bolt holding them together is provided with substantial bearings so that it can withstand the greatest strain without injury.

What I claim is:

1. A coupling device for locomotive tenders, comprising a base plate adapted to be secured to the tender and having a series of projections, and a coupling head also having a series of projections, arranged to interlock with the projections on the base plate, substantially as described.

2. A coupling device for locomotive tenders, comprising a base plate adapted to be secured to the tender and provided with a series of projections forming recesses between them, and a coupling head having a recessed or apertured end and provided with a series of projections extending into the recessed end and arranged to fit the recesses in the base plate, substantially as described.

3. A coupler device for locomotive tenders comprising a face plate provided with a series of projections having parallel faces forming recesses between the projections and strengthening ribs for the projections, and a coupler head having an enlarged recess, and provided with projections arranged to fit the recesses in the face plate and interlock therewith, substantially as described.

4. A coupler device for locomotive, comprising a face plate adapted to be secured to the tender and having a series of projections and a coupling head having one or more projections arranged to interlock with the projections on the face plate the projections being provided with elongated slots at right angles to the draft of the train, for the reception of the pin uniting the plate and head, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED H. RENSHAW.

Witnesses:
WILLIAM KEMP,
G. H. SAGENDORF.