

(No Model.)

A. BOPP.  
CAR COUPLING.

No. 572,288.

Patented Dec. 1, 1896.

Fig. 1.

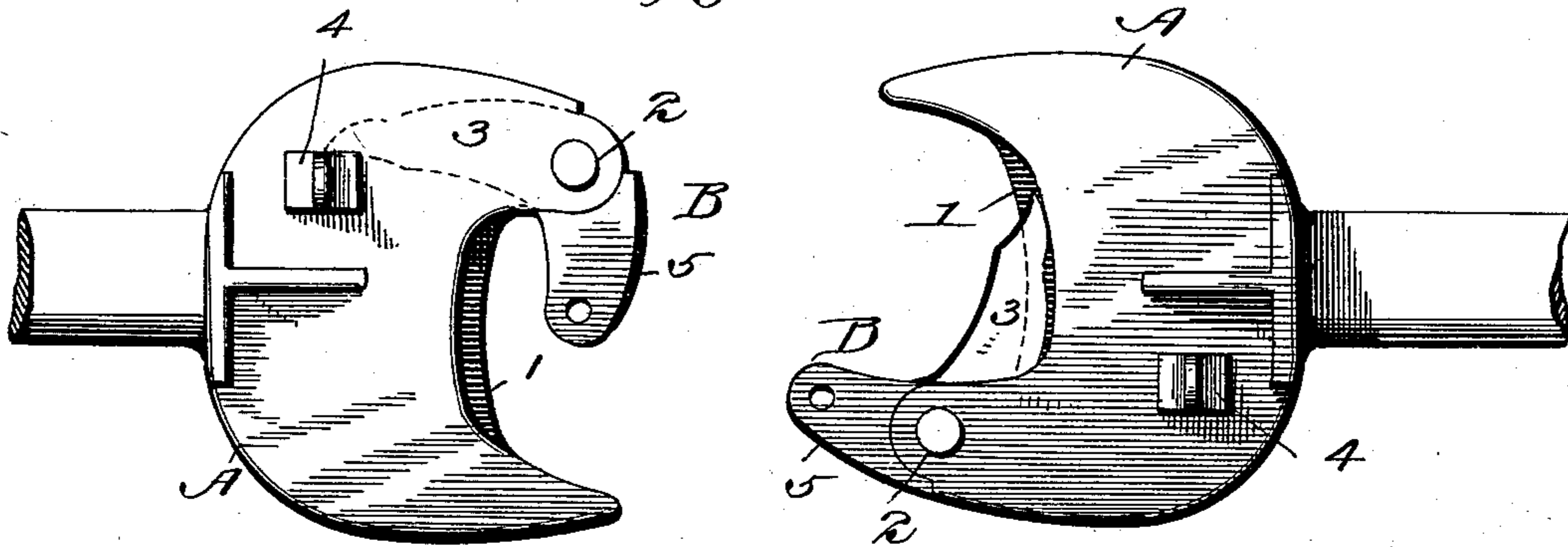


Fig. 2.

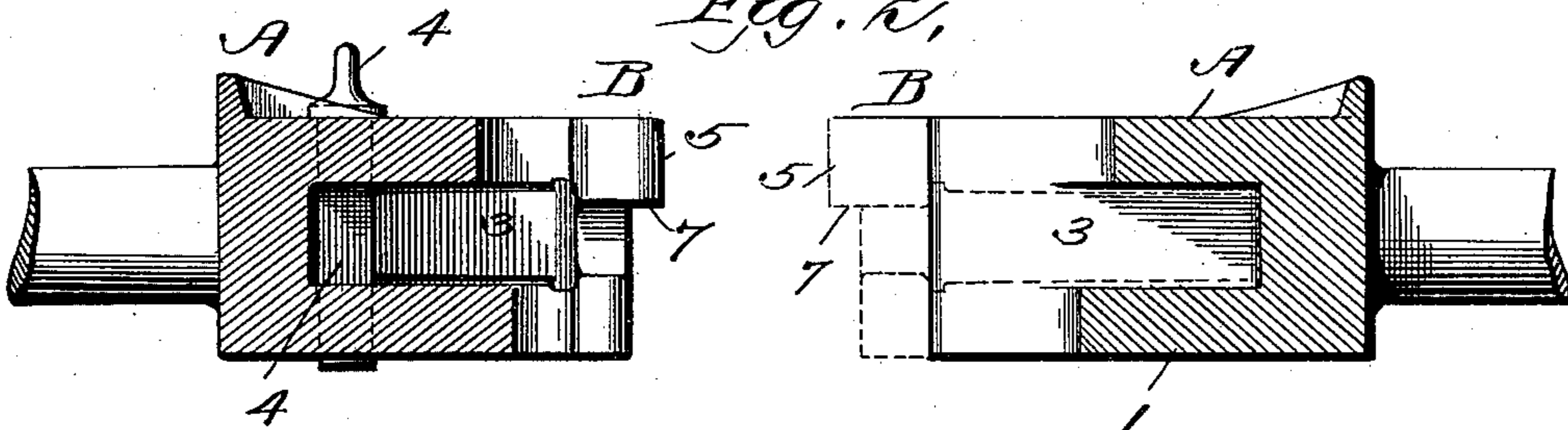


Fig. 3.

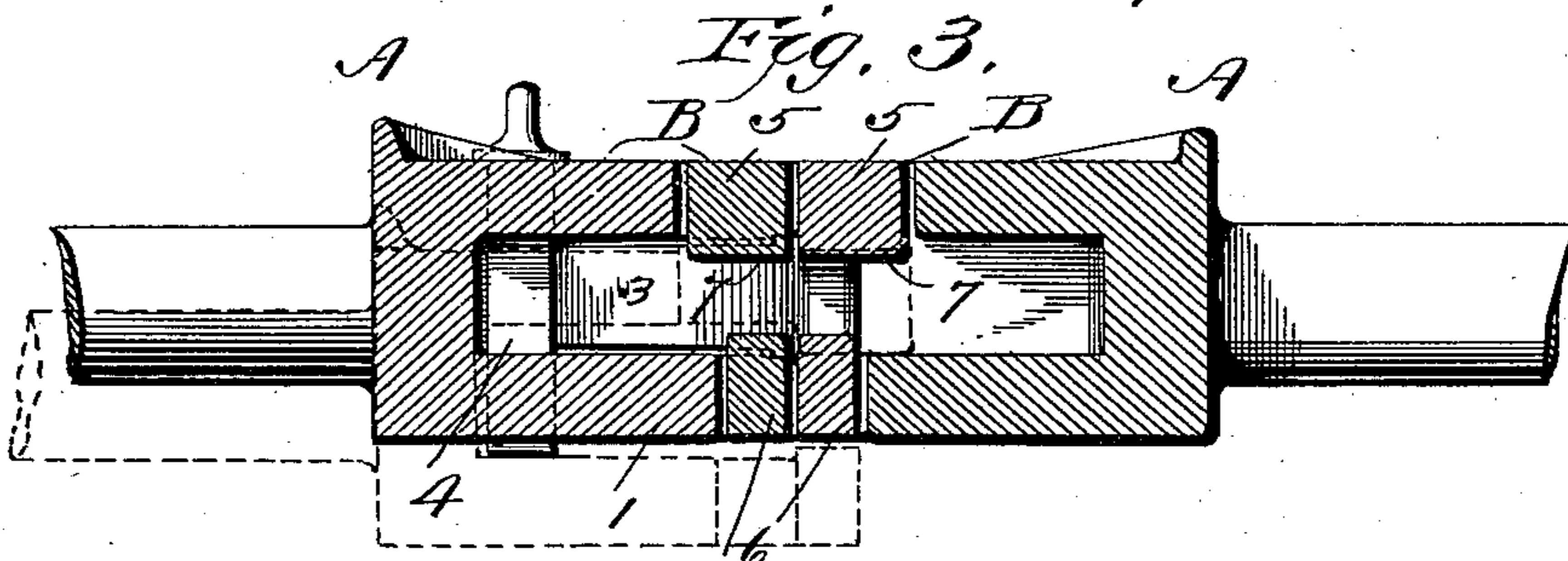
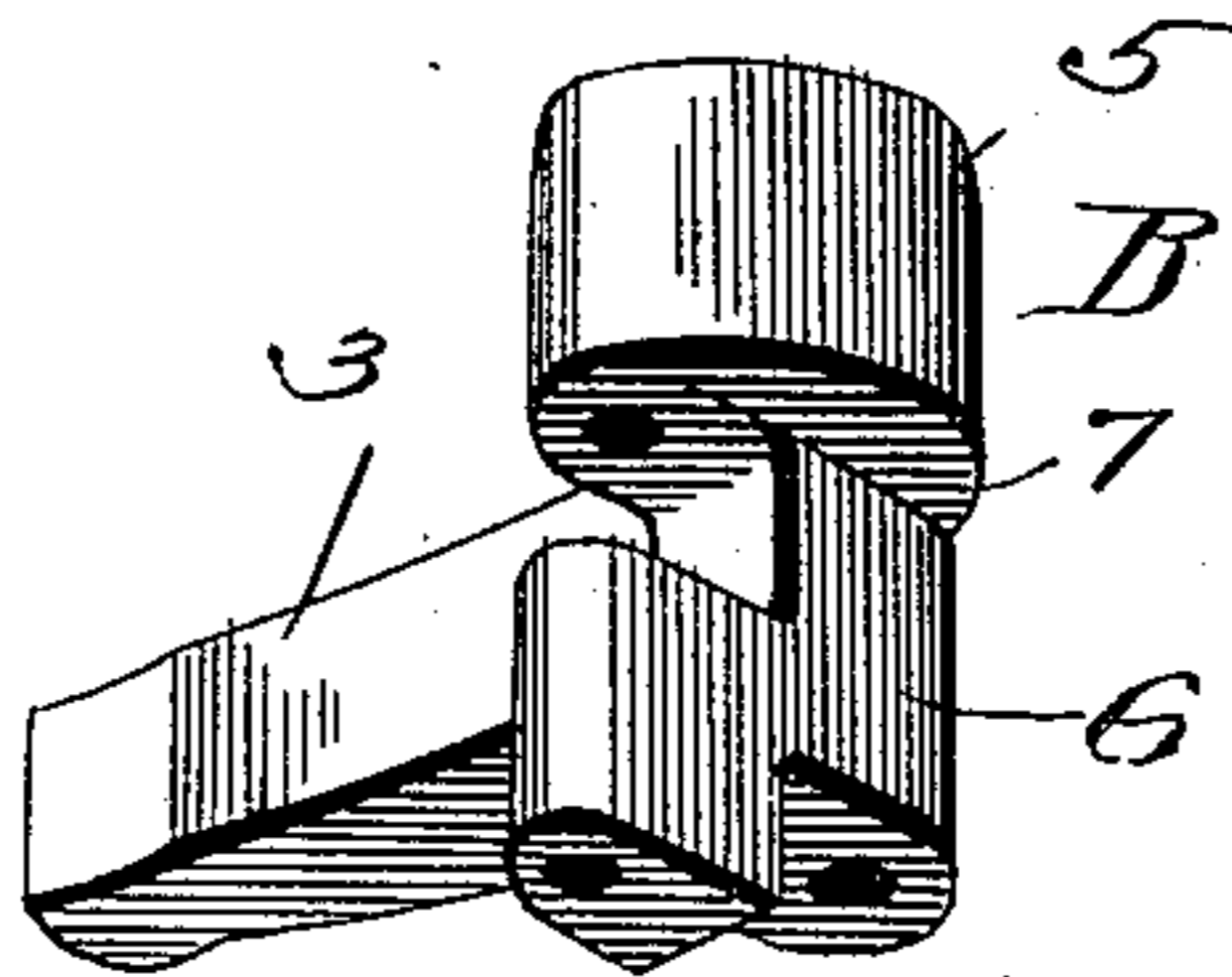


Fig. 4.



Witnesses  
"H. J. Scheiden"  
Geo. R. Haulin

Inventor  
Amos Bopp,  
per Chas. E. D. Boz, Attorney

# UNITED STATES PATENT OFFICE.

AMOS BOPP, OF HAGERSTOWN, MARYLAND.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 572,288, dated December 1, 1896.

Application filed February 19, 1896. Serial No. 579,851. (No model.)

*To all whom it may concern:*

Be it known that I, AMOS BOPP, a citizen of the United States, residing at Hagerstown, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Safety Car-Couplers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Car-couplers of the "Janney" type as generally constructed are liable to vertical displacement and become uncoupled when the train is passing over a rough road-bed, and for other reasons. Should a coupler break and fall on the track, it frequently causes derailment of one or more of the cars. A further objection to this type of coupler has arisen from the fact that cars provided with draw-heads of different heights cannot be satisfactorily coupled. More or less satisfactory improvements aiming to overcome these difficulties have heretofore been brought forth.

It is the object of the present invention to provide an improved and more satisfactory coupler which will better overcome the troubles heretofore generally incident to the Janney coupler by providing means whereby vertical play of the couplers is provided for without allowing uncoupling from that cause.

Having these objects in view, my invention consists in certain improvements and combinations more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a plan view of draw-heads or couplers provided with my improvements and shown uncoupled and in position for engagement; Fig. 2, a partially sectional side elevation of Fig. 1; Fig. 3, a sectional side elevation showing two draw-heads in full lines as coupled at the same height and in dotted lines to represent their vertical movement, and Fig. 4 a detail view of my improved knuckle.

Each of the two couplers generally used is provided with my improvements, and hence a description of one will suffice.

A represents the draw-head, which is of the

usual construction with the single exception that its lower jaw projects out considerably farther than the upper jaw, thereby providing a broad and strong ledge 1, whose office will appear later.

B represents my improved knuckle, which is pivoted at 2 and provided with a locking-arm 3, adapted to cooperate with a coupling-pin 4, as usual. The lower portion 6 of the knuckle is of the usual construction, but the upper portion 5 is broadened to make a shoulder 7, which overlaps the ledge 1 in such a manner that the ledge will catch and support the draw-head which pulls out.

Dotted lines in Fig. 3 clearly represent the relative action of a pair of coupled draw-heads. It is apparent that with my construction the draw-heads can move freely in a vertical direction at all times, and this movement is limited, so as to prevent uncoupling by the engagement of each shoulder 7 with the ledge 1 on the other coupler. Should one draw-head break, it would be supported by the other draw-head and prevented from dropping on the track. It is also obvious that draw-heads of different heights can be coupled by this means.

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

1. In a car-coupler, the combination with a draw-head member having an upper concavity provided with a vertical face to allow a free vertical movement in relation to the opposite draw-head and being provided with a lower ledge projecting beyond the upper concavity, of a knuckle having a vertical diameter equal to that of the head and provided with a broadened convex, upper portion having a vertical face projecting beyond the lower portion of the knuckle to form a shoulder arranged and adapted to enter the concavity and to engage the lower ledge, substantially as described.

2. In a car-coupler, the combination with a draw-head member provided with a concaved recess having a vertical face, of a lower opposing member provided with a ledge having a vertical face and projecting beyond the upper recessed portion thereof, a knuckle having its top flush with the top of the draw-head and being provided with a broadened portion 5,

having a shoulder 7, a rounded vertical face  
on the shoulder, the broadened portion being  
made to fit closely within the concaved recess  
of the opposing draw-head, whereby the two  
5 draw-heads have a free vertical up-and-down  
movement in relation to each other, substan-  
tially as described.

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

AMOS BOPP.

Witnesses:

SOLON C. KEMON,  
RHESA G. DUBOIS.