

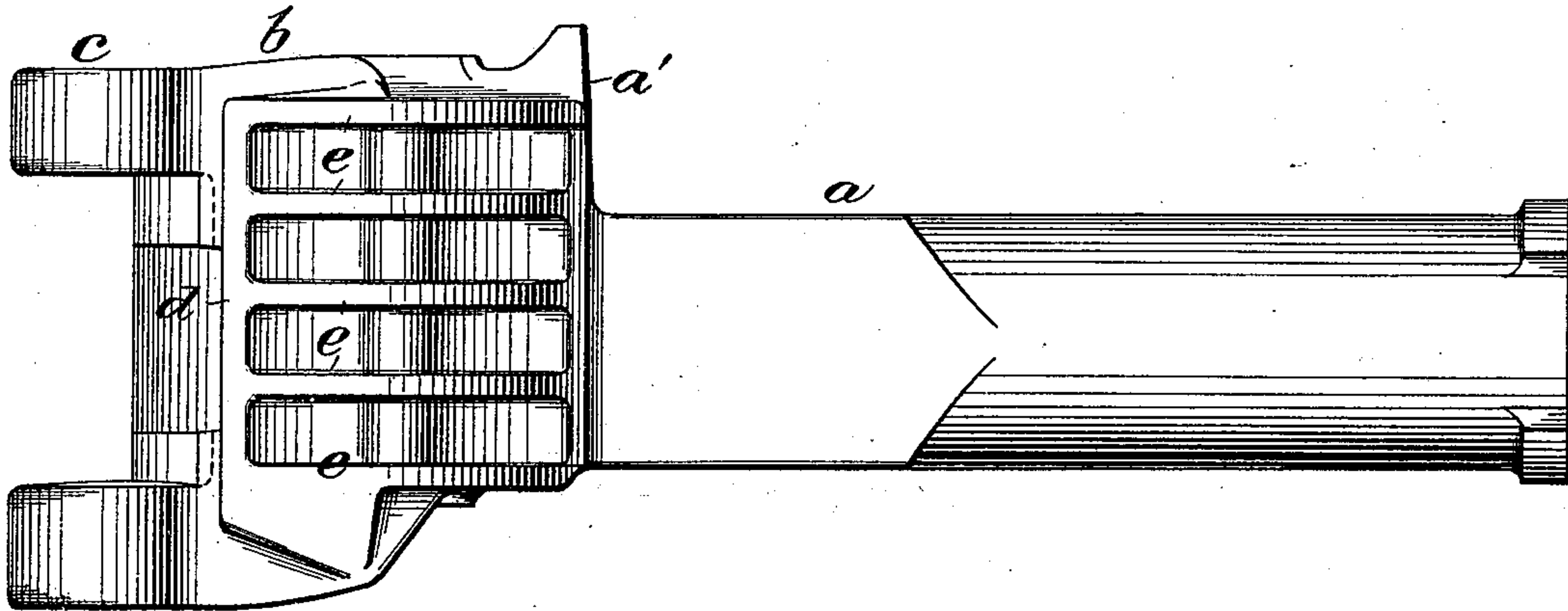
(No Model.)

S. J. MEEKER.  
CAR COUPLING.

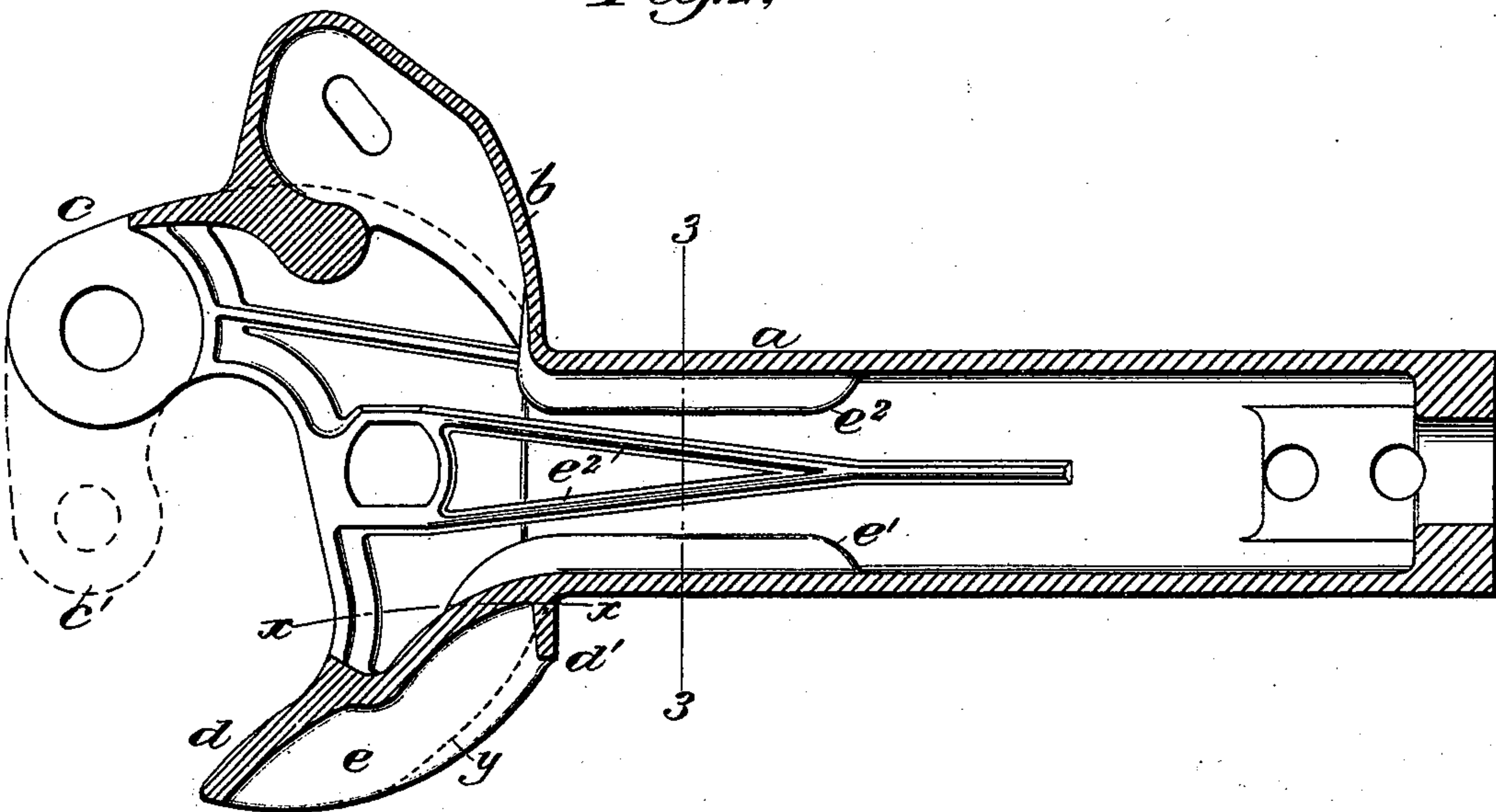
No. 545,604.

Patented Sept. 3, 1895.

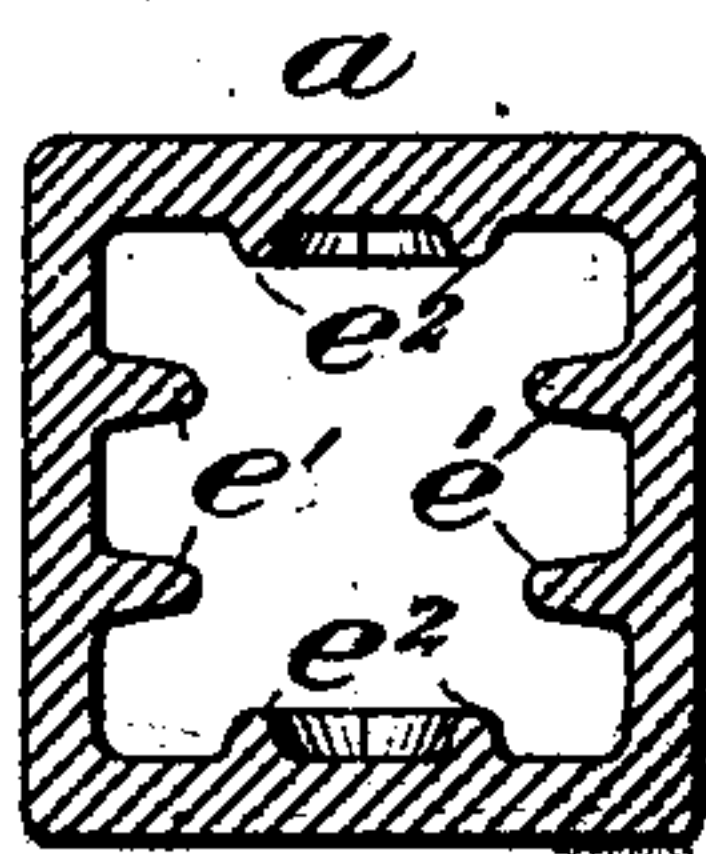
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:-

*N. K. Hayward*

*A. S. Hayes*

Inventor:-  
*Stephen J. Meeker*  
by *Chas. F. Darr*  
his atty.



# UNITED STATES PATENT OFFICE.

STEPHEN J. MEEKER, OF NEWARK, NEW JERSEY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 545,604, dated September 3, 1895.

Application filed July 1, 1893. Serial No. 479,334. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN J. MEEKER, a citizen of the United States, residing in the city of Newark, county of Essex, and State of New Jersey, have invented new and useful Improvements in Car-Couplers, of which the following description, taken in connection with the drawings herewith accompanying, is a specification.

My invention relates to car-couplers of the vertical-plane type. Heretofore in this class of couplers, when employed for connection or coupling with the ordinary link-and-pin style of draw-bar, the part most liable to breakage has been found to be the guard-arm, by reason of the opposing draw-head having a tendency to glance off from the end of the closed knuckle after being brought into contact with the latter with any considerable degree of force and strike upon the end of the guard-arm with sufficient force to break the same from the head, usually through the line indicated at  $x x$  in Fig. 2, and in some cases the head itself is broken from the shank at its line of union therewith; and it is the object of my present invention to obviate the liability of such breakage, which object I secure by means of the construction and arrangement of parts, as will hereinafter be set forth in detail, and pointed out in the claims.

Referring to the drawings, Figure 1 represents a side elevation of the coupler with the knuckle removed, showing the guard-arm. Fig. 2 represents a horizontal section of the same through the center, showing the knuckle connected therewith; and Fig. 3, a vertical section of the draw-bar through line 3 3 of Fig. 1.

To explain in detail,  $a$  represents the draw-bar;  $b$ , the head;  $c$ , the knuckle-supporting arm;  $c'$ , the knuckle, and  $d$  the guard-arm. The latter in the present instance shown and according to my invention is provided with a shoulder  $d'$  on its rear side adjacent to its line of union with the shank  $a$ , extending at substantially right angles to the latter. This shoulder is adapted to engage with an abutting surface on the car when the coupler is moved inwardly by the contact of an engaging coupler, and thus receive the force of the blow upon the arm and relieve the strain thereon. The arrangement of this shoulder

in combination with a series of ribs  $e$ , located or formed upon the outer surface of the arm, which extend from the forward end of the same to the outer edge of said shoulder, as shown, also serves to decrease the angle of the guard-arm in its relation to the draw-bar and cause the force of the blow to be received in a more direct line, and thus serve as an additional element to lessen the liability of breakage, as will be obvious.

Another feature of my invention also consists in extending the shoulder  $d'$  above the line of the shank  $a$  to a point about even with the forward end of the arm and in line with the buffer-surface  $a'$  of the draw-head and providing a connecting-rib between said points in order that such portion of the shoulder may act upon the same surface as said buffer, and thus support the guard-arm its entire depth. This construction is especially desirable for the reason that the forward ends of all couplers, as is well known, have a tendency to hang slightly below a horizontal line, and thus cause the upper end of the guard-arm to hang or extend forward of its lower end, and consequently receive the direct force of the blow of the engaging coupler or other body.

As a further and important means for supporting the guard-arm in addition to the means already described I have provided a series of ribs  $e'$  on the inner shell of the coupler, which extend to a point at either side of the line of union between the guard-arm and the shank of draw-bar, as clearly shown in Fig. 2, and act, in combination with the shoulder and ribs upon the opposite side of the guard-arm, as a double support to the latter, the advantage and importance of which are obvious. I have also provided a series of ribs  $e''$  on the other several inner walls of the draw-bar, as clearly shown in Figs. 2 and 3, which extend to a point at either side of the line of union between the head and shank and are adapted to prevent breakage between the latter at their point or line of union.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupler, the head of draw-bar provided with the guard-arm  $d$  and one or more ribs located on its inner shell extend-

ing to a point at either side of the line of union between the arm and the shank of draw-bar, substantially as described and for the purpose set forth.

- 5 2. In a car-coupler, the head of draw-bar provided with the guard-arm  $d$  having a shoulder on its rear side, a series of ribs extending from said shoulder to the forward end of the arm, and one or more ribs located on  
10 the inner shell of the draw-bar, extending to a point at either side of the line of union between the head and shank of draw-bar, sub-

stantially as described and for the purpose set forth.

3. In a car-coupler, the draw-bar provided 15 with a series of ribs located on its several inner walls extending to a point at either side of the line of union between its head and shank, substantially as described and for the purpose set forth.

STEPHEN J. MEEKER.

Witnesses:

JOHN DANE, Jr.,  
A. L. HAYES.