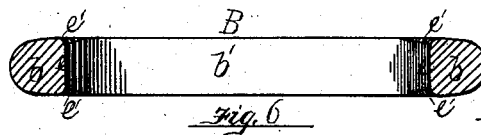
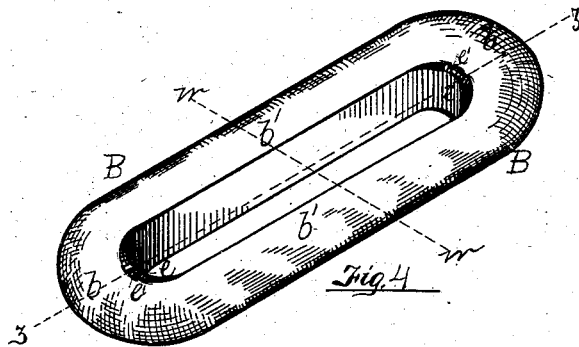
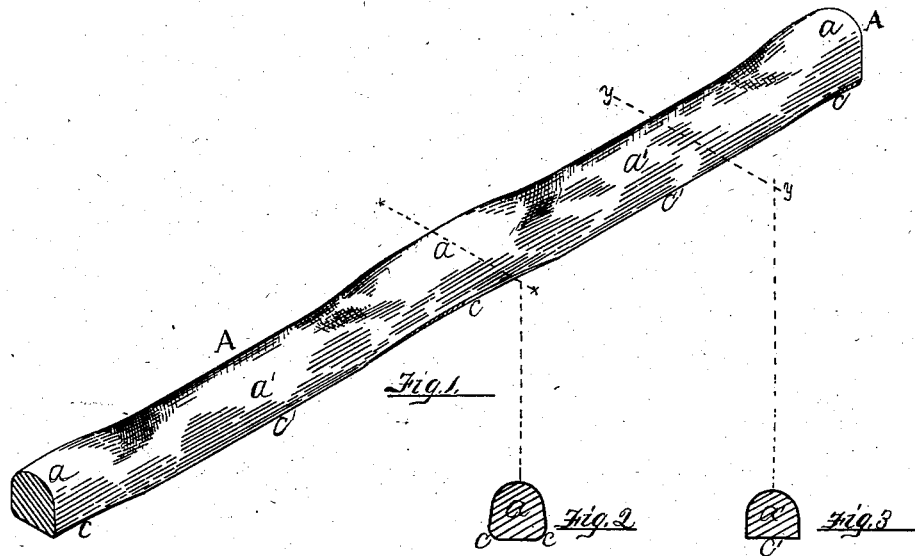


(No Model.)

J. T. WILSON.
CAR COUPLING LINK.

No. 259,959.

Patented June 20, 1882.



Witnesses.

C. L. Parker
R. N. Whittesey

Inventor

John T. Wilson
By George H. Christy
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UNITED STATES PATENT OFFICE.

JOHN T. WILSON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO WILSON,
WALKER & CO., (LIMITED,) OF SAME PLACE.

CAR-COUPLING LINK.

SPECIFICATION forming part of Letters Patent No. 259,959, dated June 20, 1882.

Application filed February 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. WILSON, a citizen of the United States, residing at Pittsburgh, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in Car-Coupling Links; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a perspective view of a rolled metal blank for car-coupling links illustrative of my invention. Figs. 2 and 3 are sectional views of such blank, taken in the planes of the lines *x x* and *y y* respectively. Fig. 4 is a perspective view of my improved car-coupling link as made from the blank, Fig. 1; and Figs. 5 and 6 are sectional views of the link, taken in the planes of the lines *w w* and *z z* respectively.

My present invention relates to the manufacture of car-coupling links having ends re-enforced or increased in area in the direction of draft, with flat inner faces, having rounded edges at the points of bearing of the pins, and with the metal in the sides of the link so disposed as to strengthen it both against bending and against longitudinal strain.

In carrying out my invention I form a blank, A, Fig. 1, having a **D** form in cross-section, (see Figs. 2 and 3,) with a succession of enlargements, *a*, on its rounded side at intervals corresponding to the length of the finished link B, made therefrom. These enlargements *a* are about equal in length to the width of the link, and by preference gradually decline to the surface of the connecting parts *a'*, which form the sides of the link. On the under or flat face of the blank the corners along the enlarged parts *a* are rounded a little, as represented at *c*, while the parts *a'* have a full flat face, as at *c'*, Fig. 3, in order to bring as much metal as possible into this part or side. Such blanks are rolled in continuous bars and cut for use at the center of alternate enlarged parts *a*, as represented at the ends of the blank, Fig. 1. In forming such blanks a bar or billet is reduced by a succession of passes through suitably-grooved rolls to a bar having a cross-section substantially like the part *a* of the blank, Fig.

2. Such bar is then given a finishing or shaping pass by preference between one plain-faced and one grooved roll, the groove being of **U** form. Parts of this groove corresponding to the parts *a* of the blank are made of sufficient depth and width to pass the bar with little or no reduction. Between these parts of the groove its bottom is raised, making it somewhat shallower, so that in passing the bar it is drawn or reduced in area somewhat, and its upper face is flattened by the upper roll to the full width of the groove, forming the parts *a'* of the blank with a full **D** form. Along the part *a* the corners or edges *c* remain rounded a little, substantially as in the bar before this final pass. The blank thus formed is bent into link form, the flat face being inward, and the open ends are welded by any suitable means, forming a link, B, Fig. 4, in which the ends *b* are re-enforced with metal from the enlargements *a* of the blank, and the metal therein is so disposed as to increase the diameter of its section in the direction of draft or longitudinal strain upon the link. The flattened inner faces, *e*, of these ends afford an extended surface-bearing for the pins, thereby lessening the danger of breaking or of bending them; also, the rounded corners *e'* prevent cutting the pins or working them upward out of the lower pin-hole by the vertical movements to which car-couplings are subjected. A **D**-link with sharp corners on its pin-bearings is peculiarly open to these difficulties, especially that of working the pin upward by the biting action of its edges.

The sides *b'* of the link being formed of the parts *a'* of the blank are reduced somewhat in sectional area from that of the full ends *b*, and owing to the full **D** form secured, as above described, a large proportion of the metal in these sides is disposed on and adjacent to the inner flat faces, close to the pins, thus, in effect, shortening the distance, measured laterally, from the pin-bearings to the heaviest part of the side bars. Such disposition of metal strengthens the link both as against longitudinal draft and also against bending.

I do not claim it to be new with myself to make a coupling-link having a **D**-shaped section, alone considered; but by re-enforcing such

a link at the ends and disposing the metal as described I strengthen the link in what has heretofore been the weakest parts; and, further, by securing such results by shaping the blank in the course of its construction, as described, I obtain a better product than heretofore, with economy both in the amount of metal employed to afford the requisite strength and in the labor and cost of manufacture.

The special form of blank herein shown and described is not claimed in this case, but will form the subject-matter of a separate application for patent.

I claim herein as my invention—
A car-coupling link having a D form in cross-section of its sides and ends, with re-enforcement of the ends on their outer surface and rounded corners on their inner sides, substantially as set forth.

In testimony whereof I have hereunto set my hand.

JOHN T. WILSON.

Witnesses:

R. H. WHITTLESEY,
C. L. PARKER.