

(No Model.)

W. A. GOWEN.
THILL COUPLING.

No. 562,392.

Patented June 23, 1896.

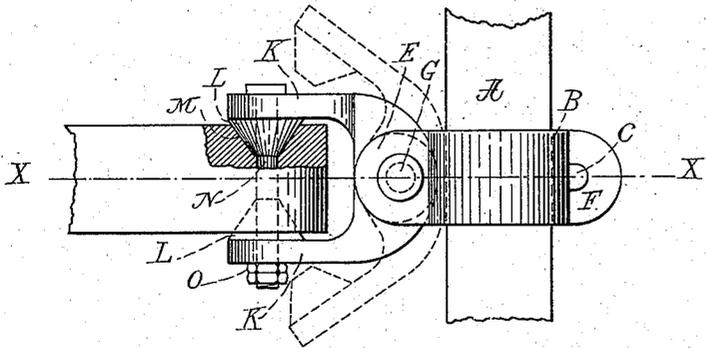


Fig. 1.

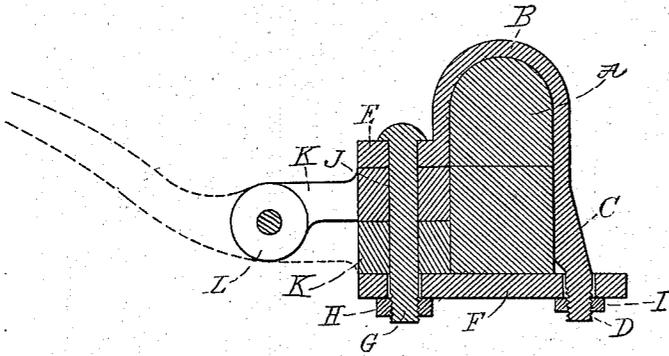


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM A. GOWEN, OF PORTLAND, MAINE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 562,392, dated June 23, 1896.

Application filed December 11, 1895. Serial No. 571,825. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. GOWEN, a citizen of the United States of America, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby 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.

My invention relates to improvements in thill-couplings, and more particularly to the construction of the axle-clip and the coupling-links; the method of securing said clip to the axle, and the coupling-links to said clip, and to the method of securing the shaft-iron to the coupling. It is designed to permit the coupling-link to move laterally, both in the same direction or in opposite directions, to obviate the necessity for the use of springs or rubbers, to prevent rattling and to enable the shaft-iron to be readily secured to the coupling-link, and to be readily adjusted to take up the wear on the shaft-coupling bolt. The lateral adjustability of the coupling-links enables the carriage-maker to attach the thill-iron to the coupling-links with ease, even when the socket in the thill-iron varies slightly from a right angle to said iron, it only being necessary to move the coupling-links laterally until they register with said socket when the thill-iron is placed between said coupling-links.

In the drawings herewith accompanying and forming a part of this application, Figure 1 is a top plan view of my improved thill-coupling, the dotted lines showing the pivoted trunnions open for the reception of the shaft-iron; and Fig. 2 is a vertical section of Fig. 1 on lines *x x*.

In said drawings, A represents a carriage-axle; B, a clip having its rear portion C extending downwardly to a point below the bottom of the axle and terminating in a thread D, and having its front portion terminating in a flange E for the purposes hereinafter described. Passing down through said flange and through a keeper F is a vertical coupling-bar G, the lower rear portion of the clip passing through the rear end of said keeper,

said keeper being secured in position by means of nuts H and I. Inserted between said flange and the front end of said keeper are two similar coupling-links K. Said links have a central bore J, through which the vertical bar passes and on which they may have lateral adjustment, either both in the same direction or in opposite directions. Said coupling-links K are placed one above the other, as seen in Fig. 2, and have their forward extremities, one turned upwardly and the other downwardly to permit the central bore L to register when they lie parallel with each other, as seen at Fig. 1. On the inner faces of said coupling-links are conical projections L, which are concentric with the bore in the ends of said coupling-links. The thill-iron has in the sides thereof, and near the end, conical sockets M to receive said conical projections, and a bore through which and through the bore in the ends of said coupling-links is passed a horizontal holding-bar N, threaded on one end and having a nut.

The operation of my improved coupling is as follows: To insert the thills in the coupling-links, if necessary, loosen nut H until the coupling-links may be turned freely on the vertical bar G. Move the links laterally until they are in position to receive the thills in their normal position relative to each other. Then bring the links together until the cones on the inner sides thereof engage the sockets in the sides of the thill-iron. Insert the holding-bar N and by means of nut O draw the coupling-links together until the cones fit closely in said sockets. It will be seen that the cones on the inside of the coupling-links and not bar N form the bearing for the thill-iron when the thills are placed in position in the coupling-links. Tighten the nut H sufficiently to hold the coupling-links in a rigid position against lateral movement. In case the cones wear in said sockets so as to rattle, it is only necessary to tighten the nut O, thus taking up the wear.

The advantages of my improved coupling are that it affords a strong and durable means of attaching the clip to the axle and the coupling-links to the clip. It permits lateral motion to the coupling-links to adjust them to receive the ends of the thills and obviates

the necessity of antirattling springs or rubbers.

Having thus described my invention and its use, I claim—

5 In a thill-coupling, a clip having a forwardly-extending flange, a keeper for said clip secured at one end to the rear lower extremity of the clip, two similar pivotally-mounted coupling-links superimposed and interposed between said flange and said keeper,
10 a vertical coupling-bar passing through said flange, coupling-links and keeper and provided with a tightening-nut, said coupling-links having on their adjacent faces conical

projections, in combination with a thill-iron 15 having conical sockets in the sides thereof adapted to receive said conical projections, and a bar passing horizontally through said coupling-links and thill-iron and provided with a tightening-nut, substantially as and 20 for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 5th day of December, A. D. 1895.

WILLIAM A. GOWEN.

Witnesses:

ELGIN C. VERRILL,
NATHAN CLIFFORD.