(No Model.)

M. TODD.

THILL COUPLING.

No. 501,115. Patented July 11, 1893.

Fig. 1.

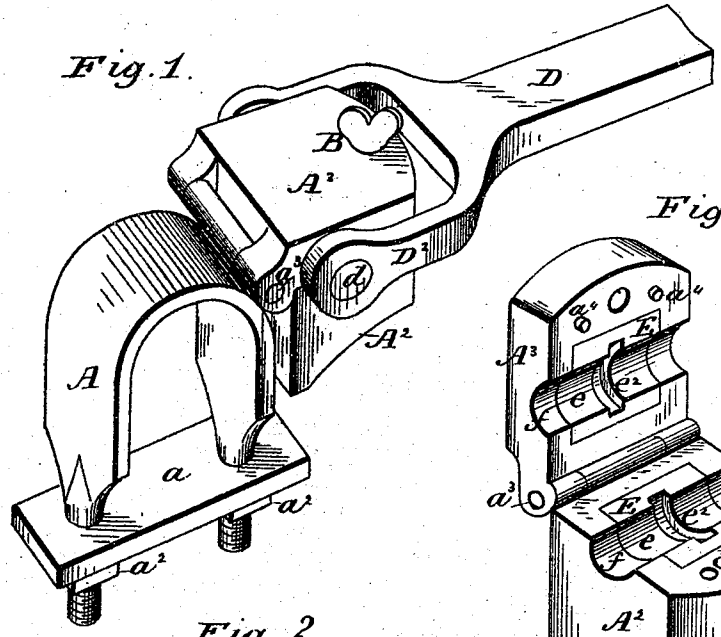


Fig. 3.

Fig. 2.

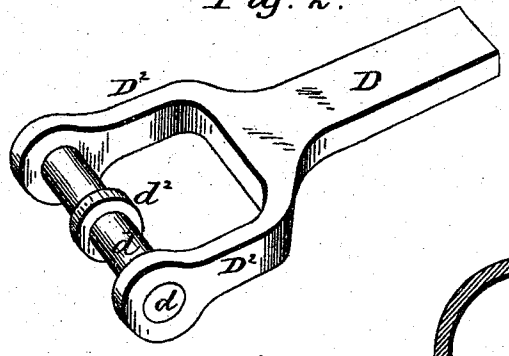


Fig. 4.

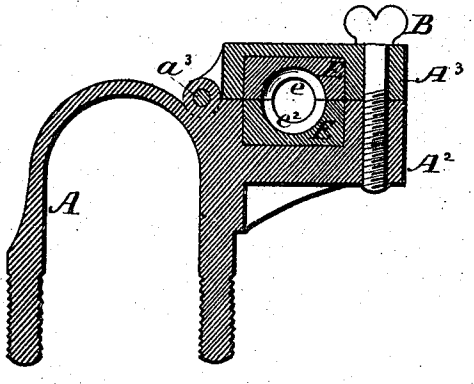
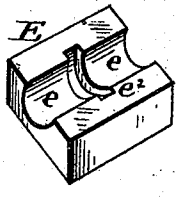


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

MATTHEW TODD, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO WILLIAM J. COWING AND CHARLES THOMPSON, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 501,115, dated July 11, 1893.

Application filed April 5, 1893. Serial No. 469,163. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW TODD, a citizen of the United States, residing at New Bedford, in the county of Bristol, State of Massachusetts, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of thill-couplings in which one half of the thill-iron pivot-box is secured to the axle-clip and the other half is hinged to the first stated half, and additionally secured thereto by means of a hand screw passing through their front portion; and the objects of my improvement are to secure in devices of this class, durability, simplicity and inexpensiveness, in addition to very effective anti-rattling capabilities. I attain these objects by the construction illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of a thill-coupling constructed in accordance with my invention. Fig. 2 is a perspective view of the inner end of the thill-iron. Fig. 3 is a perspective view of the thill-iron pivot-box open to show therein the vulcanized fiber bearing for the pivot-pin of said thill-iron. Fig. 4 is a longitudinal vertical section of the thill-iron pivot-box. Fig. 5 is a perspective view of one of the vulcanized fiber, vulcanized rubber, or raw hide bearings removed from the pivot-box.

In said drawings A represents the bow of the clip which is secured to the axle as usual by a tie plate a and nuts a^2. Upon the forward arm of the bow of the clip is formed the lower half A^2 of a substantially square box designed to receive the forward pivot-pin d carried by the forked inner end D^2 of the thill-iron D. To the rear upper portion of the half box A^2, is hinged at a^3 the upper half or cover A^3 of the box designed to receive the pivot-pin d. When said cover is down its front portion is kept from longitudinal or from lateral displacement by two dowel-pins or projections a^4 entering holes c correspondingly located in the half box A^2, on each side of a screw tapped perforation b made therein to receive the screw-threaded portion of the hand screw or bolt B that is first passed through a perforation in the cover A^3. Within the central portion of the half box A^2 and also of its cover A^3, rectangular bearing blocks E, are placed; said blocks consist of vulcanized rubber, or raw hide, or preferably of vulcanized fiber, that constitutes a reliable anti-rattling material. Each block has formed therein, lengthwise thereof a semi-cylindrical groove e substantially equal to a half segment of the cylindrical pin d of the thill-iron; and transversely of each block there is a narrow groove e^2 of larger diameter than the groove e to receive a cylindrical collar d^2 formed upon the pin d, centrally between the forks D^2 of the thill-iron. Said forks D^2 being slightly farther apart than the width of box A^2 A^3; the collar d^2 and a portion of the pin d that is embedded into the blocks E is well cushioned against end-thrust, although said blocks are also protected against undue lateral pressure by the metalic bearings f, for the pin d, formed at each end of said blocks in the boxes A^2 A^3.

Having now fully described my invention, I claim—

1. The combination of a thill-coupling clip having the lower half of a bearing box on its forward arm, a bearing box cover hinged to said lower half, a screw passing through said bearing box and cover, yielding bearing blocks E received into and protected on all sides by said box and cover, with a thill-iron having a pivot-pin provided with a central collar d^2 received within grooves e^2 in the blocks E substantially as described.

2. The combination of a thill-coupling clip having the lower half of a bearing-box on its forward arm, a bearing-box cover hinged to said lower half, a screw passing through said bearing box and cover, and dowel-pins on two sides of said screw, vulcanized fiber bearing blocks received into said box and cover, with a thill-iron having a pivot-pin provided with a central collar d^2 received within grooves e^2 in the bearing blocks substantially as described.

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

MATTHEW TODD.

Witnesses:
A. M. BIGELOW,
E. S. BARNEY, Jr.