(No Model.)

D. T. WILLIAMS.

THILL COUPLING.

No. 333,186. Patented Dec. 29, 1885.

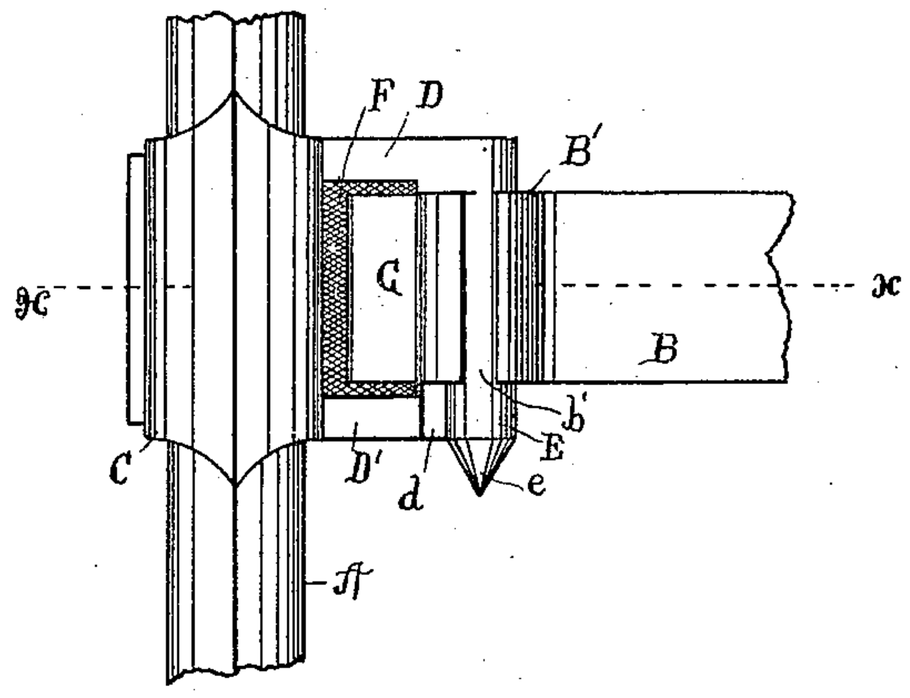

Fig 1.

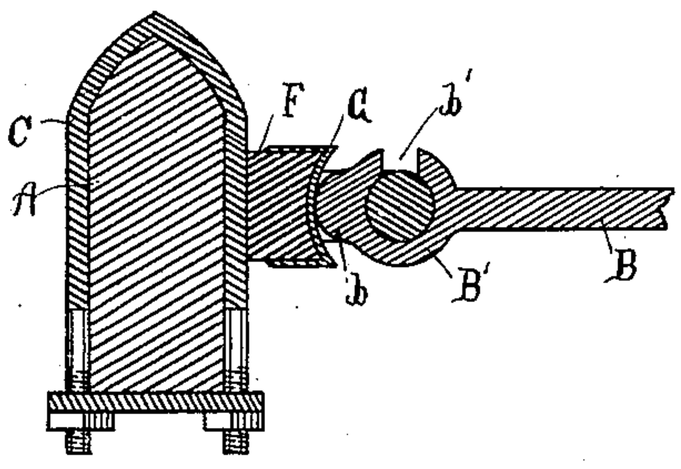

Fig 2.

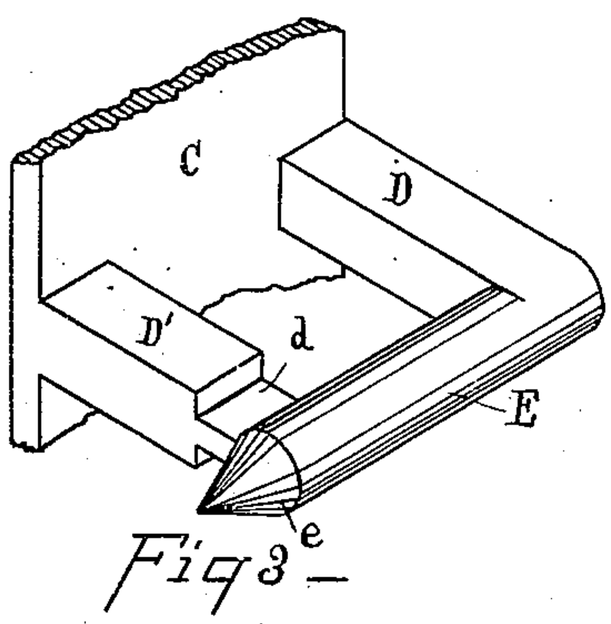

Fig 3.

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DAVID T. WILLIAMS, OF CINCINNATI, OHIO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 333,186, dated December 29, 1885

Application filed August 26, 1885. Serial No. 175,348. (No model.)

To all whom it may concern:

Be it known that I, DAVID T. WILLIAMS, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to that class of thill-couplings which may be readily coupled and uncoupled without the use of screw-bolts.

Its object is a thill-coupling so constructed that the thills may be readily attached to and detached from the vehicle, and when attached and turned to position for use all rattling is prevented.

In the accompanying drawings, forming part of this specification, in which like parts are represented by similar reference-letters wherever they occur, Figure 1 is a plan view of my improved coupling attached, ready for use. Fig. 2 is a vertical section of the same, taken through line *x x* of Fig. 1. Fig. 3 is a perspective view of the member of the coupling, which is attached to the axle-clip.

A represents the axle-bar, and B the thill strap or iron. The axle-clip C has secured to its forward end an open metal box, which forms one member of the coupling. This box consists of two side pieces, D D′, and the front cross journal or rod, E. The bar D′ is reduced to a narrow tenon, *d*, at its front end, where it is connected with the journal E. The end of the journal E, outside of the box, is tapered to a point, forming a cone, *e*. The strap B terminates at its rear end in a boss, B′, which has a cam-shaped projection, *b*, at the rear, and a slot, *b′*, entirely across the top, which is cut from the periphery into a transverse perforation, which snugly fits the journal E.

F is a rubber cushion, placed within the box C D D′ E, and G a metal casing for the front end of the rubber cushion. The boss B′ snugly fits within the box between the arms D D′, and the metal casing is also the same width, but the rubber cushion F is notched upon its edges, so as to overlap the bars D D′, as seen in Fig. 1, preventing it from working up or down. The slot *b′*, across the upper side of boss B′, is wide enough to pass the diminished portion *d* of the bar D′ when the thills are in a vertical position.

In practice the rubber F is first inserted in the part, Fig. 3, and pushed back against the clip C. The metal casing G is then inserted and pressed back upon the rubber, as seen in Fig. 2. The thills are held in a vertical position and pushed sidewise onto the bar or journal E, the cones *e* guiding them to their places. When the sides of the thill-irons are pushed against the bars D, the thills are turned down for use, and the cam *b*, pressing against the circular face of the metal casing G, compresses the rubber cushion against the clip C and prevents the thills rattling. Of course the metal casing G may be dispensed with and the device operate the same, but for durability its use is recommended. It is evident that when the shafts are lifted the elastic cushion is not under pressure, when the thills may be easily attached or detached.

Another advantage of this construction is that the cushion not being under pressure when the shafts are lifted, which is the position they usually occupy when the buggy is not in use, its elasticity is not destroyed so readily, and it will last much longer in use.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, substantially as specified, of clip C, journal E, and cone *e*, connected thereto by bars D D′ *d*, the perforated strap-iron B, and boss B′, said boss having cone-shaped projections *b* at its rear and slot *b′* entirely across its top, said slot being of a width to pass the diminished end *d* of the bar D′ when the shafts are elevated, and the cone *e* to guide the thills to their place.

DAVID T. WILLIAMS.

Witnesses:
S. T. WILLIAMS,
BEN. B. DALE.