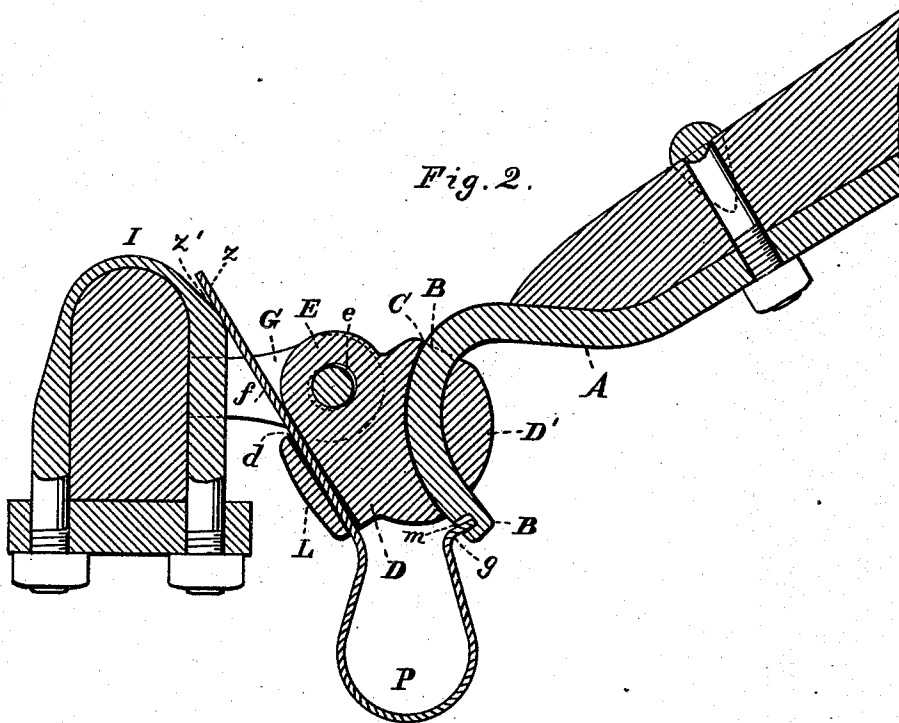
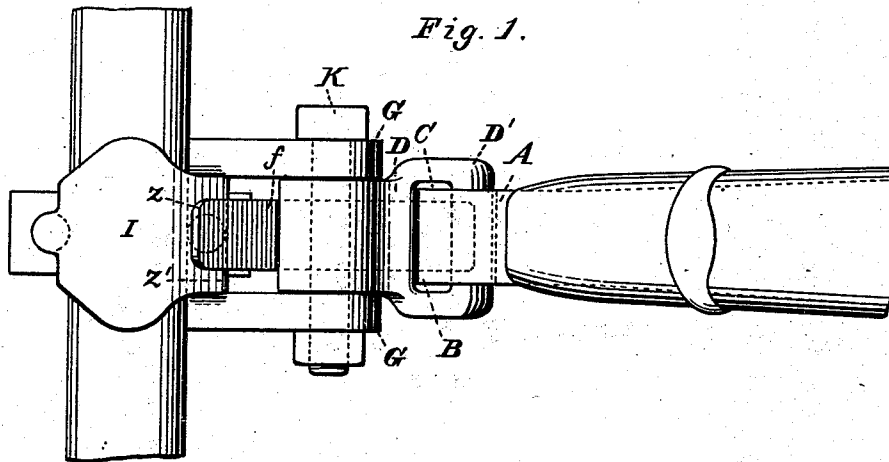


(No Model.)

C. M. HOOVER.
THILL COUPLING.

No. 416,619.

Patented Dec. 3, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES M. HOOVER, OF CROTON, OHIO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 416,619, dated December 3, 1889.

Application filed September 16, 1889. Serial No. 323,982. (No model.)

To all whom it may concern:

Be it known that CHARLES M. HOOVER, a citizen of the United States, and a resident of Croton, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Thill and Pole Couplings; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a top view. Fig. 2 is a vertical section.

This invention relates to thill and pole couplings; and it consists in the novel construction and combination of parts, as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, A indicates a thill-iron having a circularly-curved coupling end B, which engages in a correspondingly-curved passage C of an angular block or casting D, pivoted at its upper rear portion through a transverse opening *e* of a lug E, between the horizontal arms G of the clip I, by a bolt-and-nut connection K. The pivoted block or casting D is broader and thicker in front, this enlargement D' serving to provide for the curved passage or channel C for the curved end of the thill-iron. The rear of the block consists of a smaller rectangular projection L, having a narrow vertical passage or channel *d* extending upward through its back part to receive the straight branch *e* of a bow-spring P, which bears and is adjustable therein. The lower portion of the spring P has a rearwardly-curved extension as it departs from its vertical upper bearing branch *e*, and it continues downward and forward in the form of a loop or bow *t*, terminating in an angular forward flange *g*, which engages a transverse notch *m* at the ex-

trinity of the curved thill-iron B in order to secure the latter in close relation with the pivoted casting D. A transverse lug E is formed integral with the pivoted block D on its upper portion, and is pierced transversely to receive a pivot-bolt K, whereby it is hinged or pivoted between the forwardly-projecting arms D of the clip I, which is secured in the usual manner to the fore axle. The thill may be readily uncoupled from the pivoted block D by forcing back the forward end of the bow-spring, which releases the shelf or projection *g* from its engagement with the transverse notch at the extremity of the thill-iron. The upper end of the spring branch *f* projects obliquely rearward and upward, forming a spring-extension *z*, which engages a bearing *z'* of the clip and serves by its spring-pressure to hold the bearing of the block D and the pivot-bolt closely together, thereby preventing any rattling movement.

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

1. In a thill and pole coupling, the combination, with the iron A, having the curved notched end, and the bow-spring having the flanged end, of the pivoted block D, having the forward curved passage engaging said curved end, and the vertical rear passage receiving the bow-spring, substantially as shown and described.

2. In a thill and pole coupling, the combination, with the axle-clip and pivot-bolt, of the pivoted block having the forward curved passage and the rear passage, the curved iron A, having the rear notch in its end, and the flanged bow-spring having an upward branch *e* projecting beyond the block D, substantially as specified.

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

CHARLES M. HOOVER.

Witnesses:

J. A. BARR,
E. M. ROWE.