

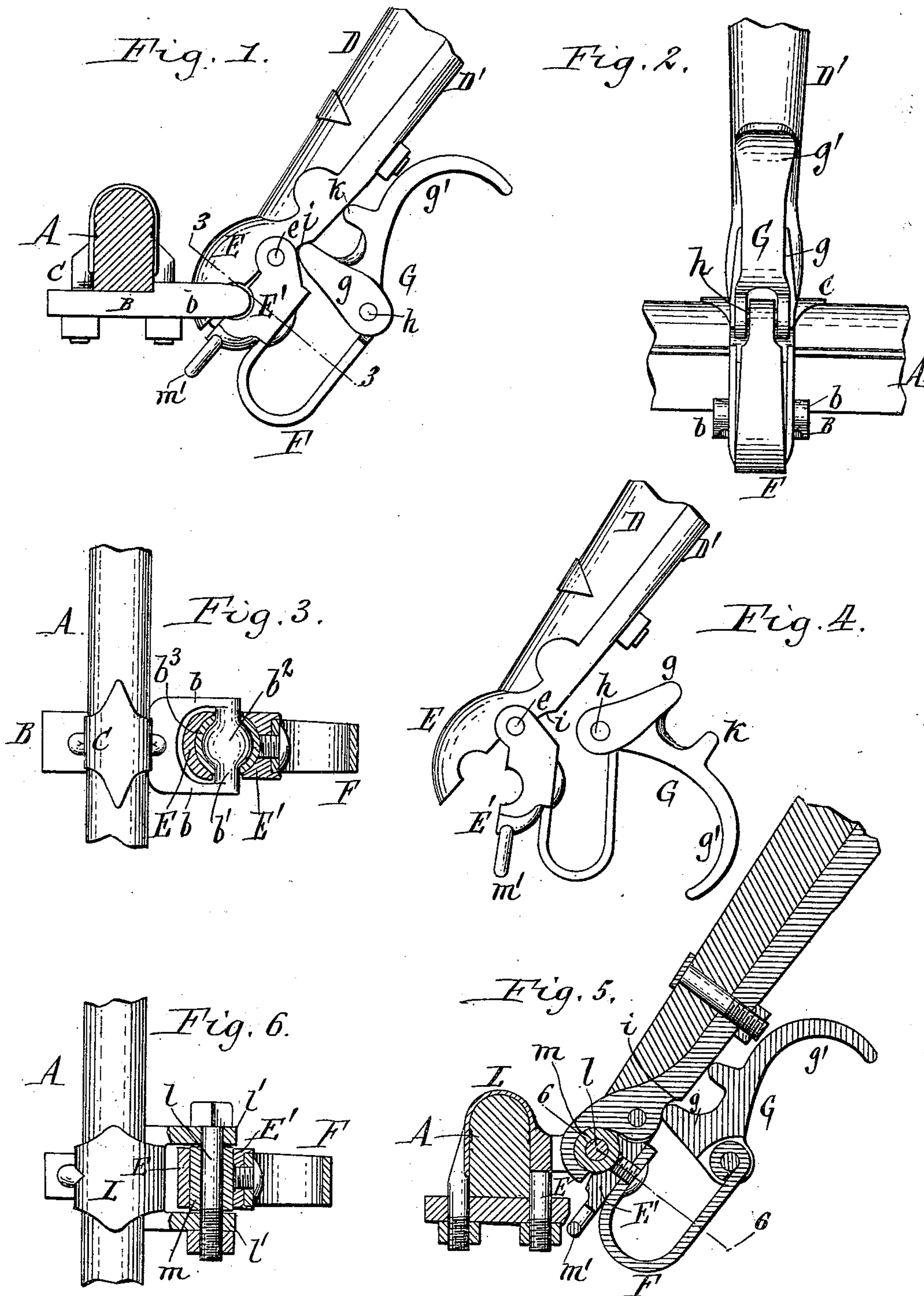
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C. C. BRADLEY.  
THILL COUPLING.

(No Model.)

(Application filed Aug. 28, 1899.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHRISTOPHER C. BRADLEY, OF SYRACUSE, NEW YORK.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,568, dated April 3, 1900.

Application filed August 28, 1899. Serial No. 728,703. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTOPHER C. BRADLEY, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to a thill-coupling of the kind in which the draft-eye is composed of a fixed jaw and a pivoted jaw and in which the movable jaw is closed by a spring device which permits the ready opening or closing of the jaw and which exerts a yielding pressure upon the movable jaw and causes the eye to tightly grasp the wrist of the thill or pole iron.

The object of this invention is the production of a simple and efficient coupling of this kind in which the divided draft-eye is attached to the thill or pole iron and which can be used, if desired, in connection with the ordinary draft clips and bolts with which buggies and other light vehicles are supplied, in which case the use of this coupling requires no change in the draft devices of the vehicles.

In the accompanying drawings, Figure 1 is a side elevation of my improved thill-coupling, showing the draft-eye closed. Fig. 2 is a front elevation thereof. Fig. 3 is a top plan view with the coupling in horizontal section, taken in line 3 3, Fig. 1. Fig. 4 is a side elevation showing the coupling open. Fig. 5 is a vertical section showing the coupling applied to an ordinary straight draft-bolt on the vehicle. Fig. 6 is a horizontal section in line 6 6, Fig. 5.

Like letters of reference refer to like parts in the several figures.

A represents the front axle of the vehicle.

B, Figs. 1 to 4, represents the draft-plate, which is secured to the lower side of the axle by a clip C and which is provided in front of the axle with forwardly-projecting jaws  $b$  and a transverse draft-bolt  $b'$ . The latter, which connects the front ends of the jaws  $b$ , is preferably formed in one piece therewith and is provided with a spherical enlargement or knuckle  $b^2$ , to which a leather washer  $b^3$  is applied.

D represents the end portion of the thill or pole, and  $D'$  the metallic strap which is secured to the under side thereof and carries at its lower end the jaws  $E$   $E'$  of the draft-eye.

The upper jaw  $E$  is stationary and formed in one piece with the strap or thill iron  $D'$ , while the lower jaw  $E'$  is pivoted at its front end to the stationary jaw by a hinge-pin  $e$ . These jaws are provided with spherical cavities and grasp the spherical knuckle and washer  $b^2$   $b^3$ . The rear ends of the jaws are sufficiently separated when closed upon the washer to allow for wear.

$F$  represents a bent or bow spring, which is secured at one end to the under side of the movable jaw  $E'$  and pivoted at its opposite end to a clamping elbow-lever  $G$ . The latter is composed of a short arm  $g$  and a long arm  $g'$ . The short arm  $g$  extends from the pivot  $h$  of the lever to the thill-iron, while the long arm  $g'$  extends from the pivot along the under side of the thill-iron, but at a distance therefrom, and is so shaped or curved that the lever can be conveniently manipulated. The lever rests with its short arm against the thill-iron, which is preferably constructed adjacent to the pivotal end of the movable jaw with a depression  $i$ , in which the short arm of the lever seats itself when the movable jaw is closed. When the thill or pole is applied to the draft-bolt and knuckle and the movable jaw is in its closed position, in which it is represented in Fig. 1, the short arm  $g$  of the clamping-lever bears against the thill-iron and presses the free end of the spring away from the fixed end, which is secured to the movable jaw. The spring therefore presses the movable jaw against the draft-bolt and knuckle, causing the jaws of the draft-eye to grasp the knuckle and its washer tightly. By pressing the free end of the clamping-lever away from the thill-iron the short arm of the lever is swung out of the recess of the thill-iron and away from the latter, whereby the movable jaw is released. The latter can now be turned on its hinge and opened, as represented in Fig. 4.

The clamping-lever is preferably provided at a short distance above its short arm with a projecting stop  $k$  for limiting the movement of the long arm of the lever toward the thill-arm.

In the construction represented in Figs. 5 and 6 my improved thill-coupling is applied to an ordinary straight draft-bolt  $l$ , such as is often used on buggies or other light vehi-



cles. As shown in these figures, this bolt is inserted transversely through the jaws *l'* of an ordinary draft-clip *L*, which is secured to the axle in the usual manner. The jaws of  
 5 the draft-eye are in this case constructed with straight semicylindrical cavities to fit the straight cylindrical washer *m*, which is applied to the draft-bolt in the usual manner.

My improved coupling can be used for connecting the thill or pole iron with the ordinary  
 10 straight draft-bolt of a vehicle, in which case no change is required in the draft devices which are secured to the vehicle; but when it is desired to avoid the lateral play and consequent rattling which is liable to occur in the  
 15 use of the ordinary straight draft-bolt the spherical draft-knuckle and correspondingly-shaped jaws of the draft-eye are employed.

*m'* represents a safety-loop, which may be  
 20 formed at the free end of the pivoted jaw *E'*.

I claim as my invention—

1. In a thill-coupling, the combination with the fixed jaw and the movable jaw pivoted at its front end to the fixed jaw, of a spring  
 25 secured to the free end of the movable jaw, and a clamping-lever pivoted to the free end of said spring and bearing against the fixed

jaw in closing the movable jaw, substantially as set forth.

2. The combination with the thill or pole iron provided with a rearwardly-projecting fixed jaw and a movable jaw pivoted at its front end thereto, of a bow-spring secured at one end to the movable jaw, and a clamping-lever pivoted to the opposite end of said  
 35 spring and adapted to bear against the thill or pole iron, substantially as set forth.

3. The combination with the thill or pole iron provided with a rearwardly-projecting fixed jaw, and a movable jaw pivoted at its front end to the thill or pole iron, which latter is provided with a depression in front of said movable jaw, of a bow-spring secured at one end to the movable jaw, and a clamping  
 45 elbow-lever pivoted to the opposite end of said spring and having its short arm adapted to engage in said depression when the movable jaw is closed, substantially as set forth.

Witness my hand this 24th day of August, 1899.

CHRISTOPHER C. BRADLEY.

Witnesses:

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