(No Model.)

T. BRINSON.

THILL COUPLING.

No. 407,160. Patented July 16, 1889.

Fig. 1.

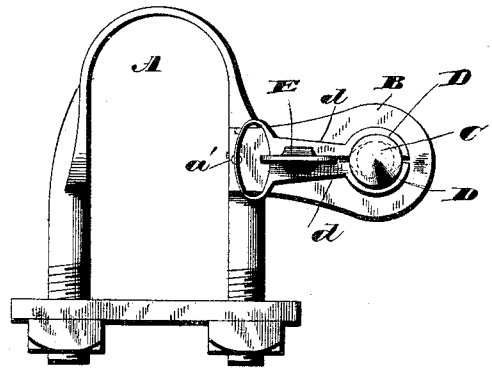


Fig. 4.

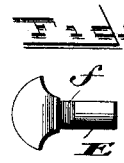


Fig. 2.

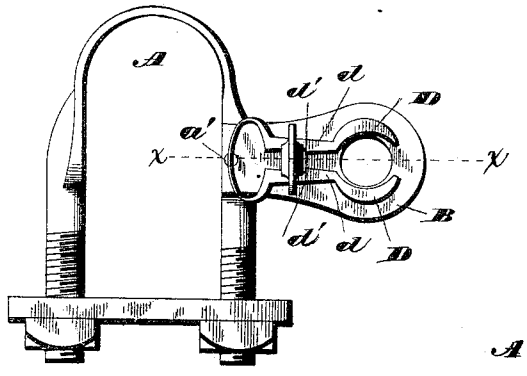
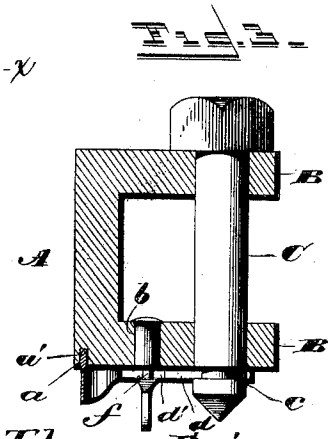


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 407,160, dated July 16, 1889.

Application filed February 28, 1889. Serial No. 301,467. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BRINSON, a citizen of the United States of America, residing at Eagle Rock, in the county of Bingham and Territory of Idaho, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in thill-couplings.

The object of my invention is to provide a cheap, simple, and effective means whereby the bolt can be readily inserted and held to the clip without the use of nuts; and my invention consists in providing an axle-clip of ordinary construction with spring clamping-jaws adapted to be opened by the thill-bolt or a key carried by the clip, the thill-bolt being provided with an annular recess with which the spring-jaws engage and with a rounded or pointed end, as will be hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a side view of a thill-coupling constructed in accordance with my invention, in which view the spring-jaws are shown closed and embracing the bolt. Fig. 2 is a side view showing the spring-jaws open. Fig. 3 is a sectional view taken through the line $x\ x$ of Fig. 2. Fig. 4 is a detail view of the key.

A refers to the axle-clip, which is provided with forwardly-projecting wings B B, having openings through which the bolt C passes to engage with the eye of the thill-iron. One of the forwardly-projecting wings is provided with a perforation a, and in front of said perforation is a larger perforation b, through which the key E passes, and is secured by upsetting the end thereof.

D refers to jaws, the forward ends of which are curved and rigidly connected to shanks or horizontal portions d, the inner sides of which are provided with recesses d'. The rear ends of these shanks have integrally formed therewith a spring portion provided with a pin a', which fits within the recess a.

To attach the spring-jaws, the key E, which is flattened or provided with a rectangular portion f adjacent to the head thereof, is passed between the shanks of the jaws and the inner end thereof upset. The projections adjacent to the head of the key will lie partially over the shanks d of the spring-jaws to hold the same against downward movement, and thus maintain them securely in position.

The bolt C is provided near the end opposite the head with an annular recess c, within which the spring-jaws will lie, and the end of this bolt is rounded or pointed, as shown. To remove the bolt from the clip to detach the thill-iron, it is only necessary to turn the key, which movement will separate the jaws, as shown in Fig. 2, so that the bolt or pin can be readily removed. In attaching the thill-iron to the clip it is not necessary that the jaws be separated by the key, as the pointed end of the bolt will spread them apart as it is passed through the openings in the projecting wings B B.

The parts composing the thill-coupling are securely attached, and by the use of the hereinbefore-described device nuts for securing the bolt are dispensed with.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a thill-coupler, the combination of the axle-clip having forwardly-projecting apertured arms B, the bolt C, provided with an annular groove, the spring secured at center to the outer face of one of the arms and provided at its ends with jaws designed to engage the groove of the bolt, and a key E, secured to rotate in said arm and provided with a flattened shank to engage the shanks of the jaws and with shoulders or projections to overlap the outer faces of said shanks, substantially as described.

2. The combination, in a thill-coupling constructed substantially as shown, of a bolt or pin having a recess c, the spring-actu-

ated jaws D D, curved to lie within the recess of the bolt, said jaws being connected by members *d*, the inner sides of which are provided with recesses *d'* and spring portion *e*, and a key E, having a flattened portion *f*, said key being secured to the clip, substantially as shown, and for the purpose set forth.

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

THOMAS BRINSON.

Witnesses:
H. L. ROGERS,
GEO. H. STORER.