No. 615,378. Patented Dec. 6, 1898.

J. A. YARGER.

THILL COUPLING.

(Application filed Sept. 4, 1897. Renewed July 9, 1898.)

(No Model.)

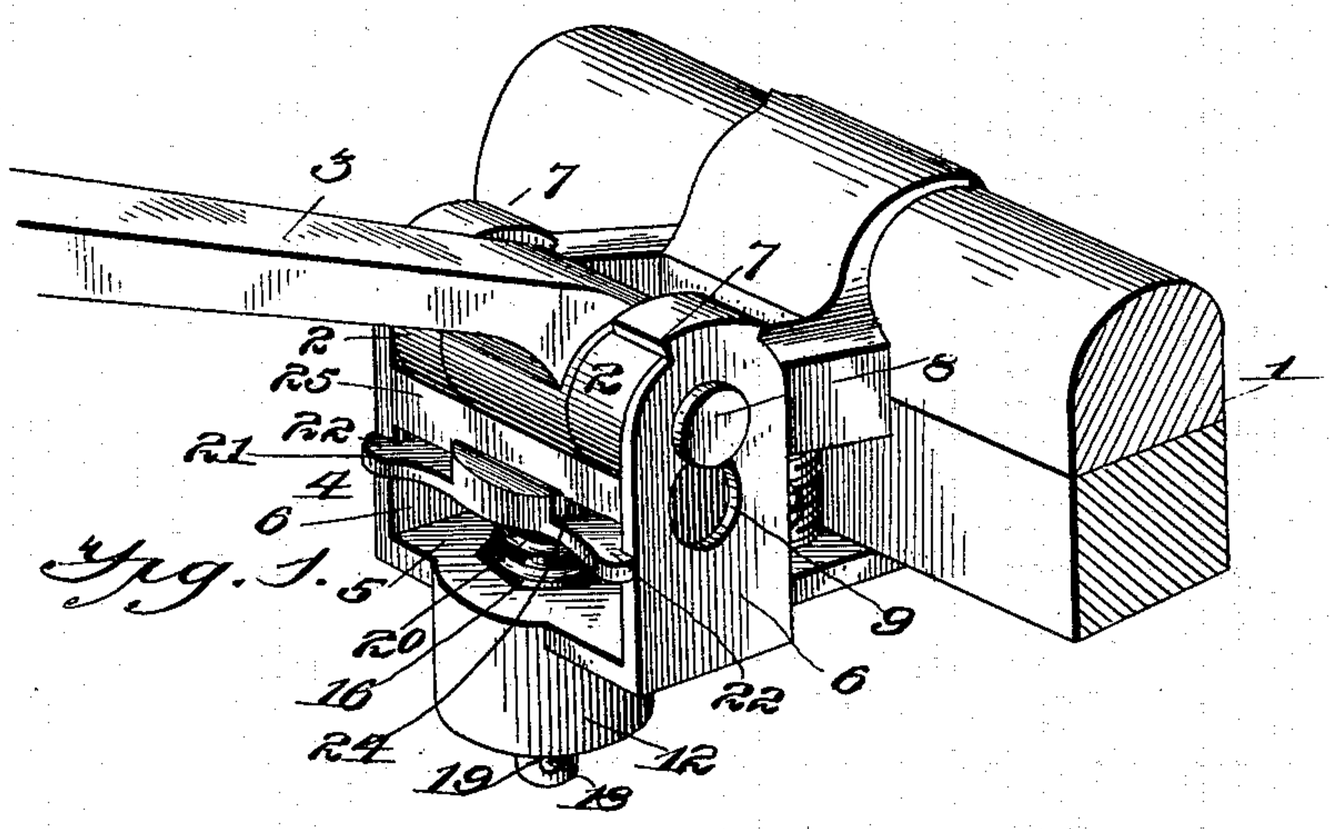

Fig. 1.

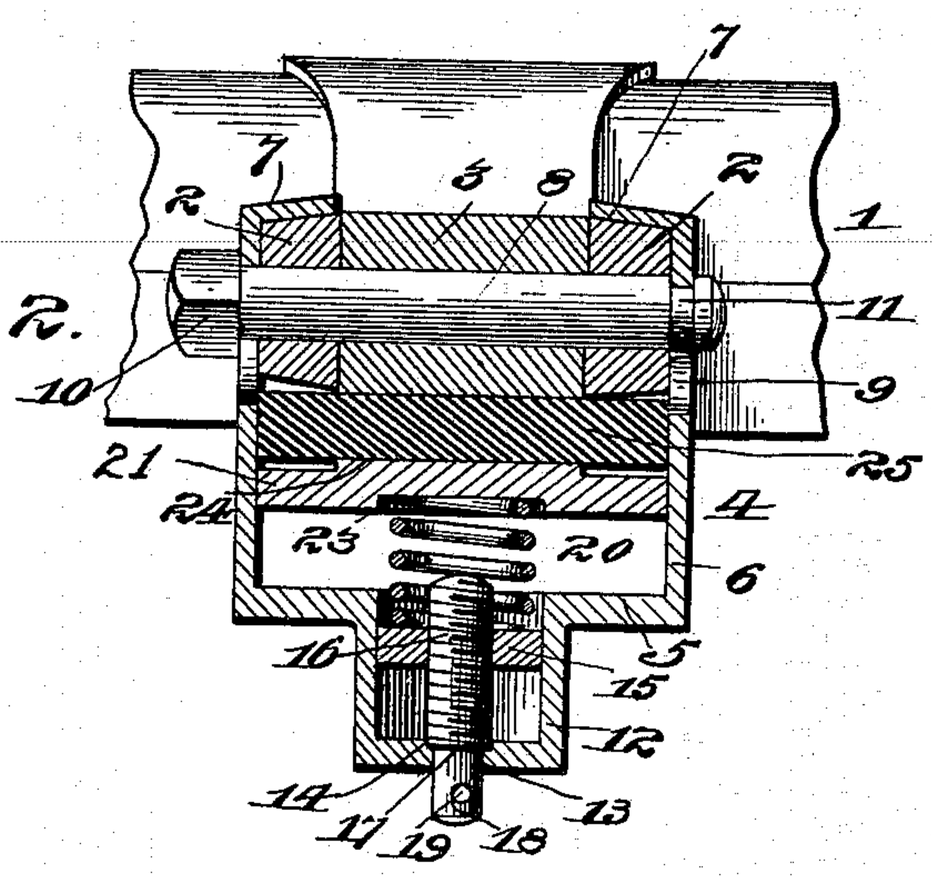

Fig. 2.

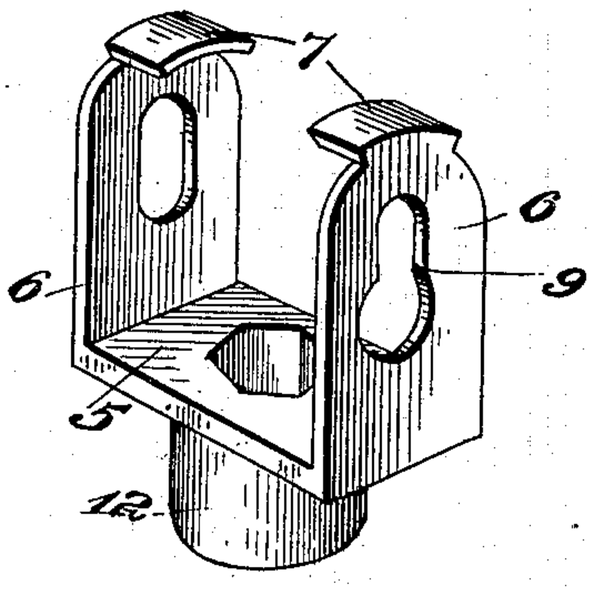

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN A. YARGER, OF NASHUA, IOWA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 615,378, dated December 6, 1898.

Application filed September 4, 1897. Renewed July 9, 1898. Serial No. 685,495. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. YARGER, a citizen of the United States, residing at Nashua, in the county of Chickasaw and State of Iowa, 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.

This invention has reference to a novel construction in a thill-coupling, and has for its object to provide a noiseless thill-coupling and also one which will permit the thill to be readily removed or coupled.

The invention consists in the features of construction hereinafter fully described and specifically claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a thill-coupling constructed in accordance with this invention. Fig. 2 is a vertical transverse section. Fig. 3 is a perspective view of the clip in detail.

In said drawings, 1 indicates the axle, and 2 the lugs of the axle-iron. The thill-iron 3 and said axle-iron are of ordinary construction, as shown. A clip (indicated as a whole by 4) comprises a cross-piece 5 and two end pieces 6. These end pieces receive between them the lugs of the axle-iron, and each is provided at its upper end with an inwardly-extending lug 7, that rests upon the upper face of the lugs 2 of the axle-iron and is curved to conform to the shape thereof. The said end pieces 6 are each slotted to receive the coupling-pin 8, the slot in one end being straight, while the slot at the other end is a key-slot 9, as shown. The pin 8 is provided with a head 10 at one end, while the other end has a groove 11, the distance between the groove and the head being such that when the inner face of the head rests upon the outer face of one of the end pieces of the clip said groove lies within the key-slot 9 of the other end piece. When the lugs 7 of the end pieces rest upon the lugs 2, the grooved portion of the pin lies within the small end of the key-slot and is thus in place.

Depending from the cross-piece 5 is a socket 12, having an opening 13 in the lower end thereof. The inner end of this opening 13 is countersunk, as shown at 14. Situated within the socket 12 is a nut 15, that is held against rotation therein, but capable of moving up and down, the construction for preventing the rotation of said nut conveniently consisting of an octagonal socket and correspondingly-shaped nut. Passing through the nut is an adjusting-pin 16, screw-threaded at its upper end portion and provided with a shoulder 17 at the lower end of the screw-threaded portion that rests within the countersunk portion 14 of the opening. The lower end 18 of the pin is reduced and extends through the opening of the socket. The pin can be turned by this projecting lower end portion 18, and for this purpose it is provided with an opening 19 to receive the end of a suitable implement. Situated within the socket and surrounding the pin 16 is a spring 20. The lower end of the spring rests upon the nut, while its upper end projects a little above the cross-piece 5. A follower 21 is situated between the end pieces 6 of the clip, being provided with lugs 22 at its corners to act as guides, said lugs being situated to engage the edges of the end pieces 6. The lower face of this follower 21 has a recess 23 to receive the upper end of the spring 20. The upper side of the follower is provided with a curved bearing-face 24 to receive a cushion or flexible piece 25. This cushion or flexible piece is to be forced tight against the end of the thill-iron.

It is seen that in use the clip is placed upon the lugs of the axle-iron and the pin 8 inserted in the manner referred to. The adjusting-pin 16 is then turned so as to force the nut 15 upwardly, which raises the spring 20 and holds the follower and the cushion under tension against the lower end of the thill-iron. This effectually holds the parts in their locked position and prevents rattling. To uncouple the thill, it is necessary only to turn the adjusting-pin 16 to lower the follower, after which, by raising the clip, the coupling-pin 8 can be readily removed. It is noted that the curvature of the lugs 7 at the upper end of the cross-piece serves to hold the clip upon the lugs of the axle-iron and against accidental removal.

Having thus described the invention, what is claimed as new is—

1. In a thill-coupling, a clip comprising a

cross-piece and end pieces, a socket upon said cross-piece having an opening in the end thereof, a follower guided between said end pieces and having a cushion, a nut situated within said socket and incapable of rotation therein, a screw-threaded pin situated within said socket, passing through said nut and having its end projecting through said opening, and a spring bearing at its opposite ends against said nut and said follower.

2. In a thill-coupling, a clip comprising a cross-piece and end pieces, a socket upon said cross-piece having an opening at its lower end, a nut situated within said socket and incapable of rotation therein, a follower guided between said end pieces and provided with a cushion at its upper face and a recess in its lower face, a screw-threaded pin passing through said nut, having a shoulder resting against the upper face of the cross-piece and a projecting end extending through the opening therein, and a spring bearing at its opposite ends against said nut and the wall of the recess of said follower.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN A. YARGER.

Witnesses:
FRANK SCHAFTALL,
E. W. HOWARD.