

(No Model.)

S. H. ATKINS.  
THILL COUPLING.

No. 328,558.

Patented Oct. 20, 1885.

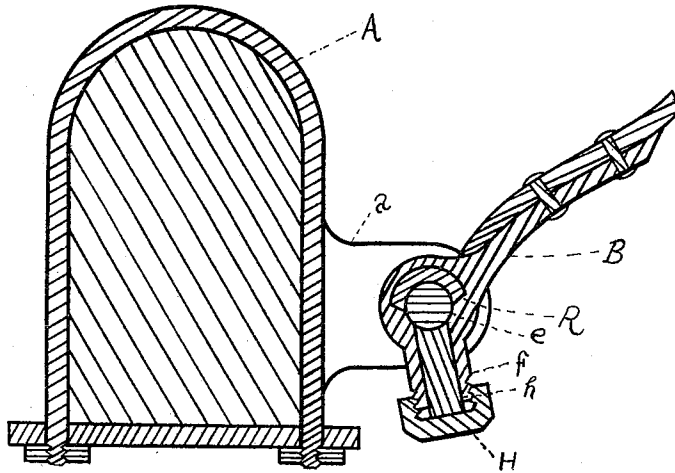


Fig: 1.

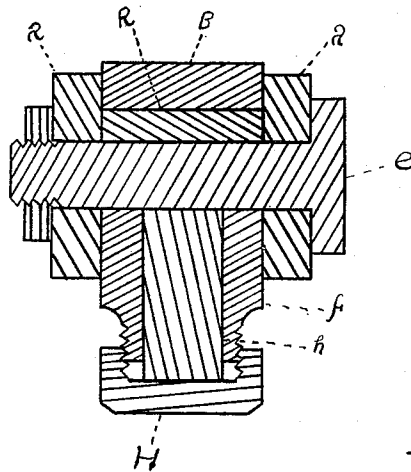


Fig: 2.

WITNESSES

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Att'y

# UNITED STATES PATENT OFFICE.

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THILL COUPLING COMPANY, OF SACO, MAINE.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 328,558, dated October 20, 1885.

Application filed January 27, 1885. Serial No. 154,181. (No model.)

*To all whom it may concern:*

Be it known that I, SULLIVAN H. ATKINS, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Thill-Couplings, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to thill-couplings, and has for its object to provide means for preventing the rattle incident to a thill-coupling after the same has become worn and loose, and, further, to provide an adjustable bushing for the purpose of compensating for the wear of the draw-arms, all of which, as also the nature of the invention, are hereinafter fully described, and specifically pointed out in the claim.

Referring to the drawings, Figure 1 is a longitudinal vertical section of my improved thill-coupling. Fig. 2 is a vertical cross-section of the same.

The axle-clip A may be of the usual and ordinary form, and is attached to the fore axle in the usual manner. It is provided with the customary draw arms or lugs, *a*, which are also constructed in the usual manner, and are adapted to hold the coupling-bolt *e*, on which is pivoted the thill-iron B, as represented in Fig. 1. Said thill-iron B is provided with a boss, *f*, which is provided with a central bore opening into the cross-bore of the thill-iron, and in this boss is fitted a packing or plunger, *h*, composed of rubber or some spring material having its inner end bearing against the coupling-bolt and its outer end extended outward through the boss *f*. This packing or plunger *h* is pressed inward by means of the cap-nut H, which screws onto the boss *f*, as shown, and thus a pressure is produced on the coupling-bolt that creates a tension of the parts, and thus prevents rattling.

Examination of a thill-iron which has been long in use will show that the wearing of the thill-iron in its play on the coupling-bolt is not evenly distributed over the inner walls of the iron, but, on the contrary, it is confined

almost wholly to that portion of the iron which is situated above the coupling-pin. This location of the wear is no doubt produced by reason of the weight of the thill being suspended from this point. The effect of the wear at this point is to dig away the iron and change the shape thereof at this point, and so give undue room to the coupling-bolt. To obviate this difficulty I provide a bushing, R, which is inserted into the cross-bore in the thill-iron, the bore in the iron being made irregular, to receive the bushing at one side, as shown, and the bushing being formed to complete the regularity of the bore in the iron, thus leaving a chamber fitted to receive the coupling-bolt *e*. This bushing R is made of any suitable material, and is easily removed when worn to allow a new one to be substituted. In this manner the hole for the coupling-bolt may be renewed without a new thill-iron and also without much expense.

I am aware that a thill-coupling has been heretofore constructed with a tubular extension screw-threaded internally and having a headed screw adapted thereto, with a bushing interposed between the end of said screw and the coupling-bolt; and I do not broadly claim such construction.

I claim—

In a thill-coupling, and in combination with the axle-clip A and coupling-bolt *e*, the thill-iron provided with the boss, said boss being externally screw-threaded and having a smooth interior bore, the flexible pad or plunger located in the boss and bearing at one end against the bolt and projecting at its other end slightly beyond the end of the boss, and the screw-cap H, adapted to bear upon the end of the pad, all substantially as described, and for the purpose set forth.

Signed at Lynn, Massachusetts, January 3, 1885.

SULLIVAN H. ATKINS.

Witnesses:

C. B. TUTTLE,  
C. C. TUTTLE.