(No Model.)

H. D. BROWN.

THILL COUPLING.

No. 453,619. Patented June 9, 1891.

Fig. 1.

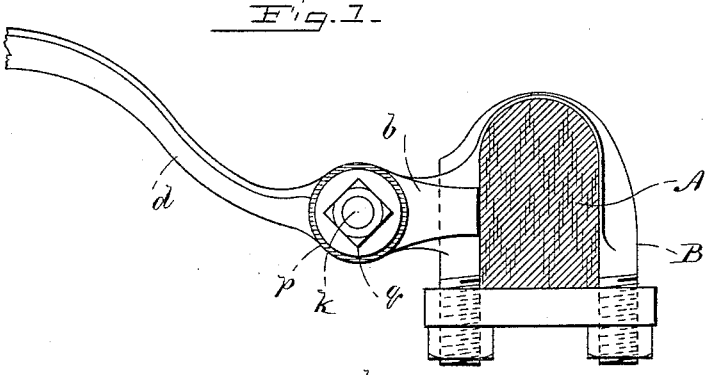


Fig. 2.

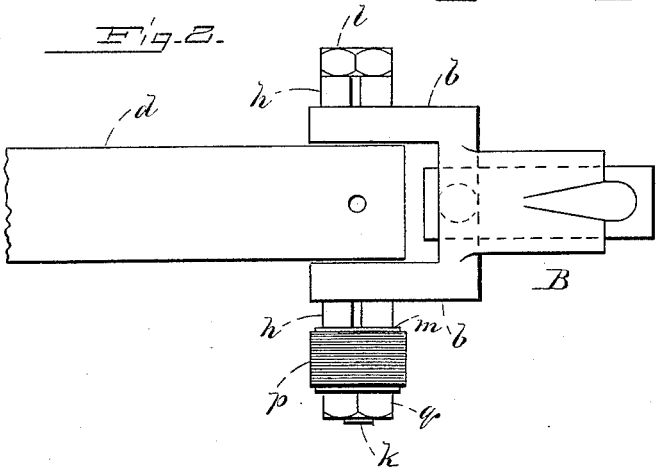


Fig. 3.

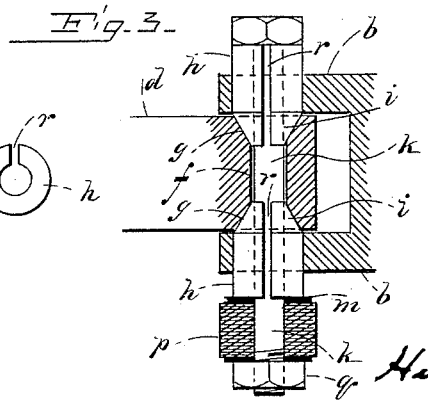
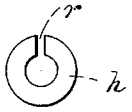


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY D. BROWN, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO CHARLES A. HOWARD, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 453,619, dated June 9, 1891.

Application filed January 13, 1891. Serial No. 377,589. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. BROWN, of Somerville, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation showing my improved thill-coupling in use; Fig. 2, a top plan view of the same; Fig. 3, a horizontal section, and Fig. 4 an end elevation of one of the split sleeves.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to a device for preventing thill-irons from working loose and rattling; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the axle-bar, and B the clip. The clip is mounted on the axle and is provided in the usual manner with lugs *b*, in which the thill-iron *d* is pivoted. Each end of the bolt-socket *f* of the thill-iron is countersunk at *g*. The bolt-openings in the lugs *b* are enlarged to the same diameter as the mouth of said socket.

A split sleeve or bushing *h* is inserted in each opening in the lug, and has a beveled inner end *i*, adapted to enter the countersunk socket in the thill-iron. A bolt *k* is passed through said bushings and through the head *d*, fitting loosely yet closely within the bores of all said members, its head *l* engaging the outer end of one bushing, and a washer *m* on the other end of said bolt engaging the opposite bushing. A rubber ring or cushion *p* is disposed on said bolt *k*, outside the washer *m*, and another washer may be disposed outside the cushion *p*, as shown, if desired. A nut *q* is turned onto the threaded end of the bolt and presses the cushion *p* and drives the split sleeves or bushings *h* into the sockets of the thill-iron, said sleeves being permitted to contract around the bolt by means of their slots *r* in a manner which will be readily understood by all conversant with such matters without a more explicit description. The tension of the sleeves on the thill-iron holds it firmly against rattling, while permitting it to move freely on the bolt as a pivot. The wear of the iron on said bushings is taken up by the elasticity of the cushion *p*.

Having thus explained my invention, what I claim is—

In a thill-coupling, the combination of the axle-clip having lugs provided with cylindrical eyes, the thill-iron inserted between said lugs and provided with a reduced transverse bolt-socket, whose ends are flared so that their outer extremities coincide in size with that of said eyes, longitudinally-slotted contractible bushings having cylindrical bodies disposed in said eyes and conical inner ends entering the flaring ends of said socket, a bolt extending through said socket and bushings, and a rubber cushion on said bolt, substantially as described.

HENRY D. BROWN.

Witnesses:
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