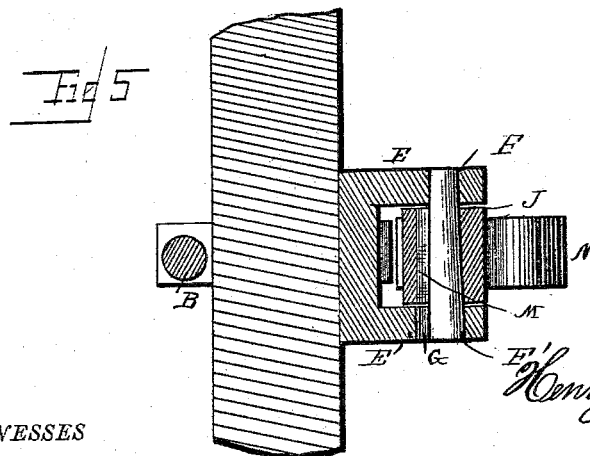
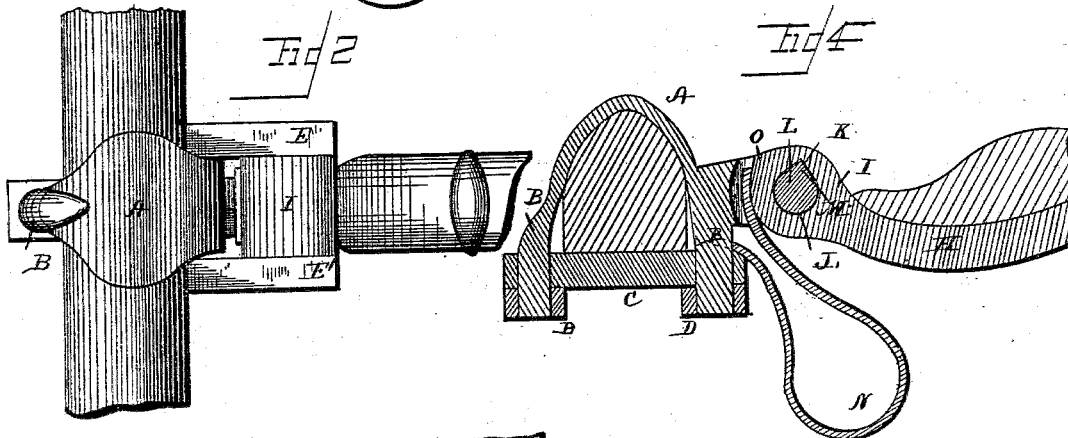
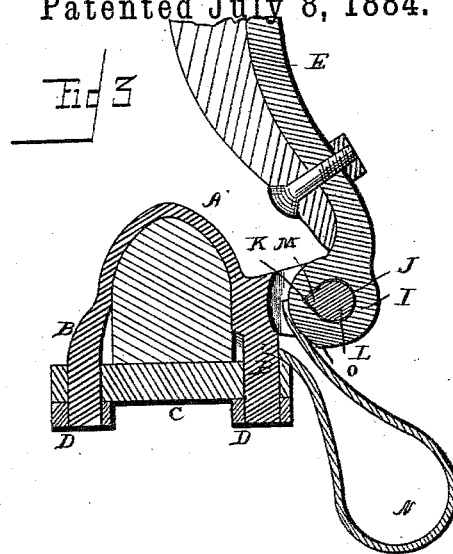


THILL COUPLING.

Patented July 8, 1884.



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UNITED STATES PATENT OFFICE.

HENRY HOYT STEVENS, OF COLORADO SPRINGS, COLORADO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 301,530, dated July 8, 1884.

Application filed March 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOYT STEVENS, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Thill-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to thill-couplings; and it has for its object to provide a device of this character, which will be simple and durable in its construction, and which can be applied with ease and rapidity.

The special objects of the invention are, first, to provide an improved thill-coupling in which the anti-rattler may be applied to the same without separating the parts, as is usually the case; second, to provide means for holding the shafts in the upright position; third, to provide an improved coupling which can only be uncoupled when the shafts are thrown back out of the way, so that there will be no danger of the coupling being separated while in use.

With these and other objects in view the said invention consists in certain details of construction and combination of parts, as hereinafter set forth, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side view of my improved thill-coupling, the thill being thrown back. Fig. 2 is a plan view of the same, the thill being in position for use. Fig. 3 is a longitudinal sectional view of Fig. 1. Fig. 4 is a longitudinal sectional view of Fig. 2. Fig. 5 is a horizontal section of Fig. 1 on the line *x x*.

Like letters refer to corresponding parts in the several figures.

Referring to the drawings, A designates the draw bar or iron, having the clip B formed therewith, said clip fitting around the axle, and a plate, C, connecting the lower ends of the clip, nuts DD being screwed onto the ends of the clip for the purpose of holding the parts in position. The draw bar or iron A is U-shaped, as shown, having arms E E', which are formed with eyes F F', the eye F' of the arm E' being provided with a transverse groove, G, for the purpose hereinafter described.

H designates the thill-iron, attached to the

ends of the thill in any suitable manner, and formed with a cam-shaped extension, I, at its front end, said extension being provided with a transverse eye, J, the latter having a pointed groove, K, extending transversely through the upper wall of the eye, said groove K being adapted to register with the groove G of the eye F' when the thill is thrown back in the position shown in Figs. 1 and 3.

L designates the circular pin or bolt arranged to connect the cam-shaped extension I to the arms E E' of the draw-iron, and formed with a pointed feather, M, at or near the middle of its length, said feather extending along only a portion of the length of the bolt, and adapted to engage with the groove G of the arm E', and the groove K of the thill iron in adjusting the parts in proper position. As shown, the bolt L slightly tapers from end to end, so that it will readily slip out when it is desired to separate the parts, the end fitting in the arm E' being larger than the opposite end.

The operation and advantages of my invention will be readily understood from the foregoing description, taken in connection with the annexed drawings.

In adjusting my improved thill-coupling, the thills are raised so that the groove K of the cam-shaped extension may register with the groove G of the arm E', when the bolt L may be slipped through the eyes F J F', the feather M of said bolt engaging with the grooves G K. The thill may then be dropped down into the position for use, the feather M fitting wholly within the groove K of the extension I, while the ends of the bolt work in the eyes F F' of the draw bar or iron. In the position shown in Figs. 2 and 4, when the coupling is in use the feather M of the bolt does not register with the groove G of the arm E', and consequently the parts cannot be separated or come apart until the thill is thrown back to the position shown in Figs. 1 and 3, and thus there will be no danger of the parts coming loose while in use. By raising the thill to the position shown in Figs. 1 and 3 the groove K of the extension I registers with the groove G of the arm E', so that the bolt L may be withdrawn for the purpose of separating the parts for cleaning and for other purposes.

As will be seen, by reason of the tapering construction of the bolt L, the latter can only be inserted through the eye F' of the arm E' in attaching the parts in proper position, and when once applied it will be held from accidental displacement.

The spring N, forming the anti-rattler of my improved thill-coupling, is slotted at one end to fit around the lower end of the clip, the cam-shaped extension I of the thill-iron bearing against the other end of the spring, and adapted to compress the same. Said spring may be readily inserted into the proper place without the necessity of separating the parts of the coupling, as is usually done in adjusting the anti-rattler in the ordinary coupling. The spring is inserted into the proper position while the thill is thrown back, and when the thill is drawn down to the position it assumes when in use the extension I bears against the free end of the spring and serves to hold it in place. The spring thus serves as an efficient anti-rattler, and may be readily applied without taking the thill off; but it will be obvious that I may substitute any suitable rubber or elastic cushion for the spring shown without departing from the spirit or scope of my invention. The largest point O of the cam-shaped extension I bears against the spring in elevating and lowering the thill, and allows these actions to be performed without the spring interfering with the same. The thill

may be thrown back to the position shown in Figs. 1 and 3, the point O of the cam bearing against the spring, preventing the return of the thill to the normal position. Thus the thills will be supported in the raised position, so that they will be out of the way, and yet be in no danger of accidentally falling down.

The advantages of my invention will be readily seen and appreciated. I employ no bolts or nuts to work loose, except such as are used to hold the clip in place, and thus the parts will be held securely in position, and will resist the wear and tear of use.

Having described my invention, I claim—

In a thill-coupling, the draw bar or iron having the clip B formed therewith, a plate, C, connecting the lower ends of the clip and secured in position by suitable nuts, said draw bar or iron having outwardly-extending parallel arms E E', in combination with the thill fitted in position between the arms, and the leaf-spring having one end slotted to fit around the clip, and the other end extending up and fitting around the end of the thill, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY HOYT STEVENS.

Witnesses:

H. HALL,
F. L. ROUSE.