

(No Model.)

2 Sheets—Sheet 1.

J. C. BAILEY.
THILL COUPLING.

No. 480,648.

Patented Aug. 9, 1892.

Fig. 1.

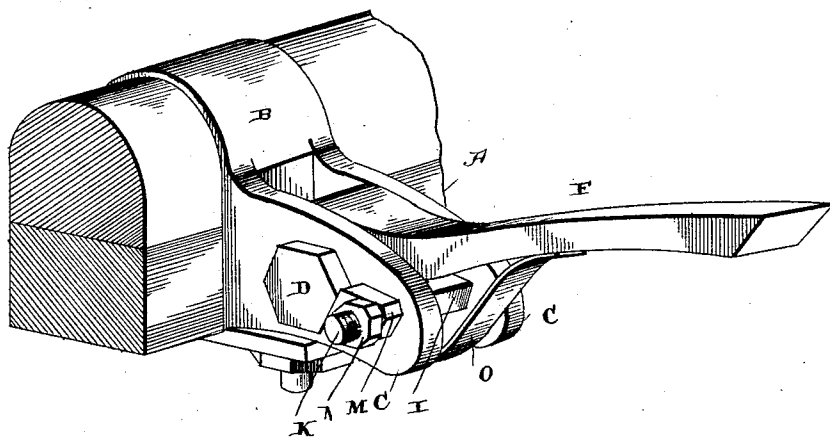
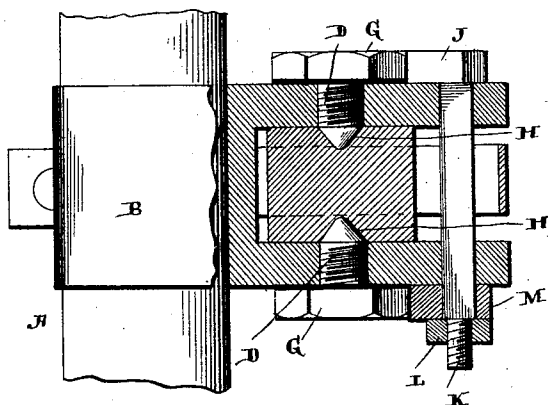


Fig. 2.



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Fig. 3.

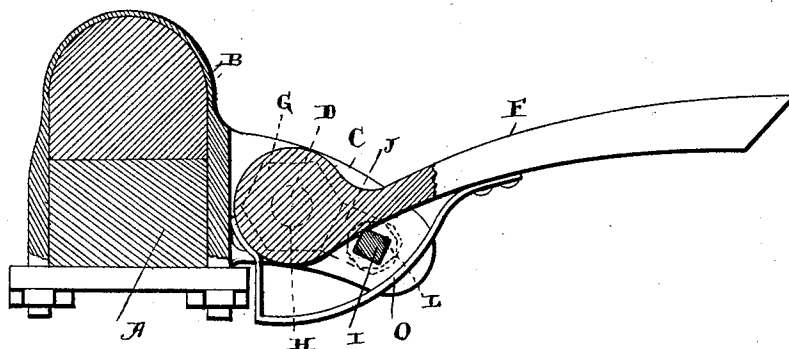
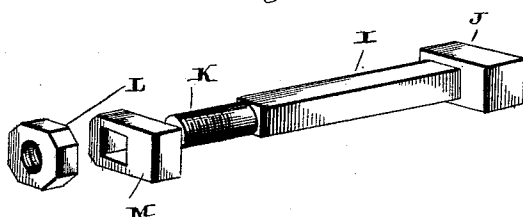


Fig. 4.



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UNITED STATES PATENT OFFICE,

JOHN C. BAILEY, OF FORD CITY, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 480,648, dated August 9, 1892.

Application filed March 28, 1892. Serial No. 426,782. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BAILEY, of Ford City, in the county of Armstrong and State of Pennsylvania, 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in thill-couplings; and it consists in the construction and combination of parts, which will be fully described hereinafter, and particularly pointed out in the claims.

The object of my invention is to provide a thill-coupling so constructed that all rattle and shake of the thill is prevented and in which any wear can be readily taken up, and which is also so constructed as to provide a means for catching and holding the shaft to the clip should the pivotal bolt or bolts of the thill become broken.

In the drawings, Figure 1 is a perspective view of a coupling which embodies my invention complete. Fig. 2 is a section thereof taken through the bolts and screws which form the coupling. Fig. 3 is a vertical section of the same. Fig. 4 is a detached perspective view of the front bolt.

A indicates the front axle of a vehicle, to which the clip B, of the ordinary construction, is applied in the usual manner. Extending forward from the front side of the said clip are two ears C, between which the thill-iron F of the shafts is pivoted. These ears C are provided each with screw-threaded openings at each side, which receive the screw-threaded pivotal bolts D, which are provided with angular heads G. The inner ends of these screw-threaded bolts, which pass through the ears C, are made cone-shaped, as shown, and these cone-shaped ends of the pivotal bolts enter cone-shaped cavities H, made in opposite sides of the said thill-irons F. In this manner the thill-irons of the shafts or of a pole can be tightly held by means of these screw-threaded pivotal bolts, so that no shake or rattle whatever can occur,

which is so usual in the ordinary thill-coupling and so extremely objectionable. By means of these screw-bolts, which enter from opposite sides of the ears between which the thill-irons are pivoted, the thill-iron can be tightened up at any time and always held against any rattle or shake, as will readily be understood. For the purpose of preventing these pivotal bolts from becoming unscrewed, as they would be liable to do by working, I provide the ears C with extended ends that reach beyond the inner pivotal end of the thill-iron, and pass through openings made in these ears a transverse bolt I. This transverse bolt I is provided with a square head J at one end and with a screw-threaded portion K at its opposite end to receive a nut or burr L. Between the screw-threaded end of the bolt and the square head J thereof it is made square or angular, and the openings in the ends of the ears are also made angular to suit the shape of the bolt, so that when the bolt is inserted through the said openings it cannot have any turning movement. One end of the bolt projects beyond the outer side of the ears C to allow an angular nut M to be placed upon the angular portion of the said bolt, and this angular nut is thereby held against any turning movement upon the bolt and the bolt held against any turning movement in the ears.

By means of the above-described construction the angular nut M engages an angular face or portion of the head of the adjacent pivotal bolt and the angular head upon the opposite side of the locking or transverse bolt I engages an angular face or portion of the pivotal bolt at the opposite side of the coupling. Thus it will be seen that the pivotal bolts are held by means of the locking-bolt I and the nut M and head J against any turning movement whatever after they have been adjusted properly against the thill-iron. These screw-threaded and pointed pivotal bolts after being adjusted will allow the thill-iron to turn in the ears, while at the same time it is prevented from having any shake or rattle whatever. Should the parts become worn any, even to the slightest degree, and it is desired to tighten them to take up the lost motion or shake, it is only necessary to unscrew the burr or nut L upon the trans-

verse locking-bolt I, remove the angular nut M, and push the locking-bolt endwise until the head J thereof is beyond the head of the adjacent screw-threaded pivotal bolt. After this is done either one or both of the pivotal bolts can be tightened against the shaft-thill until all wear is taken up, and then by placing the bolt I and its component parts in proper position again the pivotal bolts are held against becoming loose. After the parts have been once adjusted they need not be again touched until the parts become worn, which will under good care be many months.

A metal loop O is secured at its outer end to the under side of the thill-iron and is bent down under the locking-bolt I and has its inner end secured to the rear end of the thill-iron, as illustrated. The object of this construction is that should either one or both of the pivotal bolts become broken, and the thill-iron thereby left unsupported, this loop will prevent the shaft from being pulled out from between the ears C by engaging the said locking-bolt, as will be understood. In this way the locking-bolt serves a double function, and a simple means is provided for holding the thill-iron, and thereby the shaft, in place between the ears of the clip should the pivotal bolt become broken at any time, thus preventing the shafts from falling down and striking the heels of the horse, which will avoid many runaways which now occur.

By means of the construction hereinbefore set forth, I provide a very simple and cheap thill-coupling, which will prevent the rattling and shaking of shaft-thills and which provides for preventing the shafts from falling when the pivotal bolt or bolts become broken.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A thill-coupling comprising a clip having ears provided with screw-threaded apertures, a thill-iron having cavities in opposite sides thereof, screw-threaded pivotal bolts which pass through the said screw-threaded apertures and have their inner ends engage the said thill-cavities, the outer ends of the said bolts being made angular, and a locking-bolt which passes through the said ears and engages the said angular heads of the pivotal bolts and locks them against unscrewing, substantially as set forth.

2. A thill-coupling comprising a clip having ears, screw-threaded pivotal bolts, which pass through said ears from opposite sides, a thill-iron having cavities in opposite sides thereof, which the inner ends of the said pivotal bolts enter, the said ears having transverse angular openings outside of the pivotal bolts, an angular locking-bolt passing there-through, the said locking-bolt having angular portions which engage the said headed ends of the pivotal bolts, substantially as described.

3. A thill-coupling comprising a clip, ears extending therefrom, carrying a pivotal bolt, a thill-iron pivoted thereby, a transverse bolt in front of the said pivotal bolt, and a loop having opposite ends secured to the said thill and passing around the said transverse bolt, substantially as and for the purpose specified.

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

JOHN C. BAILEY.

Witnesses:

D. I. GIARTH,
J. SALISBURY.