

(No Model.)

W. H. BYRNE.
THILL COUPLING.

No. 542,923.

Patented July 16, 1895.

Fig. 1.

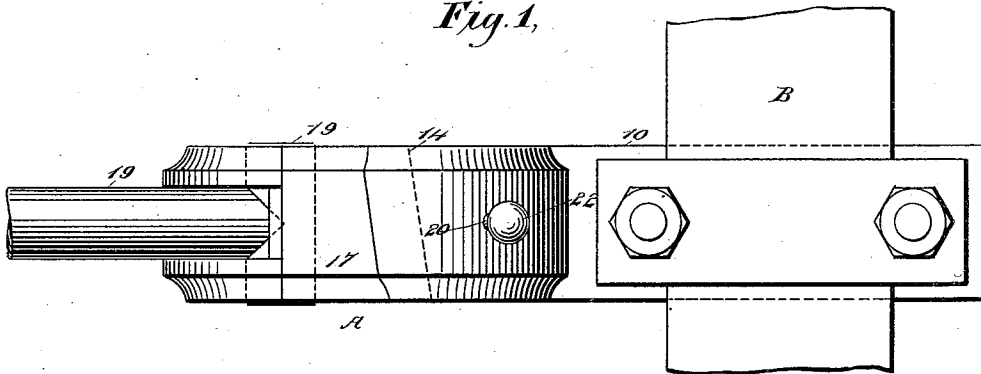


Fig. 2.

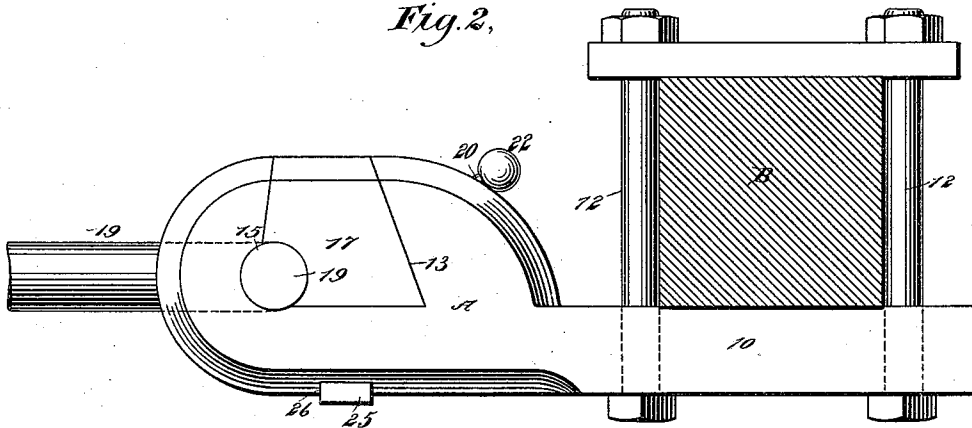
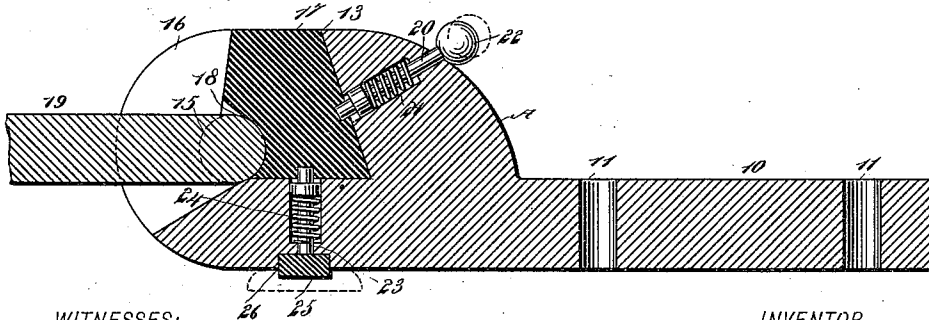


Fig. 3.



WITNESSES:

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 542,923, dated July 16, 1895.

Application filed April 15, 1895. Serial No. 545,751. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BYRNE, of Piedmont, in the county of Uinta and State of Wyoming, have invented a new and useful
5 Improvement in Pole and Thill Couplings, of which the following is a full, clear, and exact description.

My invention relates to an improvement in pole and thill couplings, and it has for its object to provide a coupling in which the thill or pole irons will be held in such manner that they cannot leave the coupling unless purposely removed, and a further object of this invention is to provide a thill-coupling by
10 means of which the thill-irons may be expeditiously placed in coupling position or be removed from engagement with the coupling, and, furthermore, to construct the coupling in a simple, durable, and economic manner.

20 The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying
25 drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improved
30 coupling. Fig. 2 is a side elevation thereof, and Fig. 3 is a longitudinal vertical section through the coupling.

In carrying out the invention the body A of the thill-coupling may be of any desired
35 shape. In the drawings it is shown as substantially elliptical, and the said body is provided with a horizontal arm 10, having openings 11 therein adapted to receive a clip 12, whereby the arm is secured to the axle B, engaging with the bottom thereof, as shown best
40 in Fig. 2.

The body A is provided with a horizontal transverse recess 13, extending through from side to side, and the said recess is more or less
45 undercut, its side walls being inclined downwardly and made to diverge at their lower ends, the rear walls being given a greater inclination than the forward one, and the said rear wall is likewise inclined transversely of
50 the body, as shown at 14 in Fig. 1, whereby this recess or opening is wedge-shaped not only vertically but likewise laterally.

In the bottom portion of the forward wall of the opening or recess 13 an auxiliary semi-circular recess 15 is produced, and in the forward end of the said body A a vertical opening 16 is made, which is in communication with the horizontal recess or opening 13 and likewise the auxiliary recess 15.

A block 17 is fitted to the opening or recess 60 13 in the body, being provided at the lower portion of its forward face with a semicircular recess 18, adapted to register with the auxiliary recess 15 in the body, and owing to the peculiar shape of the horizontal body recess 65 or opening 13 the block 17 is wider at one end than at the other, so that it will enter the opening or recess similar to a wedge, and will be firmly held in place when once introduced, since it cannot be lifted out vertically, and
70 provision is made, to be hereinafter described, for preventing its removal laterally.

The shank of the thill-iron 19 is made to enter and has movement in the vertical recess 16 of the body, while the head of the thill-iron is partially located in the auxiliary recess 15 of the body and the recess 18 of the block, and owing to the wedge-like shape of the block a packing of rubber or other material may be placed on the head of the thill-iron, and when the block is placed in position
80 in the body of the coupling it will hold this packing firmly in place and prevent any possible rattling on the part of the thill.

The means for preventing the block from
85 moving laterally consists in a bolt 20, placed in the upper rear portion of the body, a suitable opening being made to receive it, and the said bolt is adapted to enter a recess in the back of the block, and the opening in
90 which the bolt has play receives a spring 21, normally holding the bolt in locking position, and the bolt is usually provided with a head 22, or the equivalent thereof, for the purpose of readily withdrawing the bolt from engagement with the block. A like bolt 23 is placed
95 in the bottom of the body, entering a recess in the bottom of the block, and this bolt is likewise controlled by a spring 24, acting in the same manner as the aforesaid spring 21; but the head 25 of the lower bolt is preferably
100 made somewhat in the form of a nut and enters a recess 26 in the bottom of the body, preventing the bolt from turning or from catch-

ing in anything liable to throw it out from engagement with the block. By drawing the lower bolt downward out of its recess 26 and then turning the bolt longitudinally of the body, as shown in dotted lines in Fig. 3, this bolt will remain out of engagement with the block, permitting the operator to remove the upper bolt 20 at leisure.

When both bolts are disengaged from the block it is pressed outsidewise from its widest end, and the thill may then be readily removed from the coupling. It is evident that under this construction the thill-iron may not only be expeditiously and conveniently coupled or uncoupled from the coupling, but that when in coupled position the thill-iron will be held firmly in its place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A thill coupling, the same consisting of a body section, having a substantially dove-tail recess produced longitudinally therein, and a vertical recess in the front, meeting the dove-tail recess, a block adapted to be slid into the said dove-tail recess, conforming substantially to the shape thereof, and bolts engaging the said block to hold it against lateral displacement, as and for the purpose set forth.

2. In a thill coupling, a body section having a substantially dove-tail longitudinal recess or opening in its upper surface and a front vertical opening communicating with the dove-tail opening, the latter opening being provided with a semi-circular recess at the forward portion of its bottom, a block shaped

to slide in and to conform to the shape of the dove-tail recess, having a recess in its forward face registering with that in the front wall of the main recess, and bolts engaging the block and holding it against lateral displacement, as and for the purpose specified.

3. In a thill coupling, a body section provided with a substantially dove-tail recess made horizontally in its upper face, the rear wall of the recess being transversely inclined and the body being further provided with a vertical front opening meeting the dove-tail recess, a block held to slide in and fitted to the contour of the dove-tail recess, and spring-controlled bolts carried by the body and engaging with the said block, as and for the purpose specified.

4. In a thill coupling, a body section provided with an under-cut recess having one of its walls transversely inclined, the said body being provided also with an opening in its front communicating with the under-cut recess, a block held to slide in the under-cut recess, conforming to the contour thereof, a spring-controlled bolt carried by the upper portion of the body and entering the said block, and a spring controlled bolt located in the lower portion of the body, having a head adapted to enter a recess in the said bottom portion of the body, substantially as and for the purpose specified.

WILLIAM H. BYRNE.

Witnesses:

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