(No Model.)

P. J. HINDMARSH & W. H. GWINN.

THILL COUPLING.

No. 348,014. Patented Aug. 24, 1886.

Fig. 1

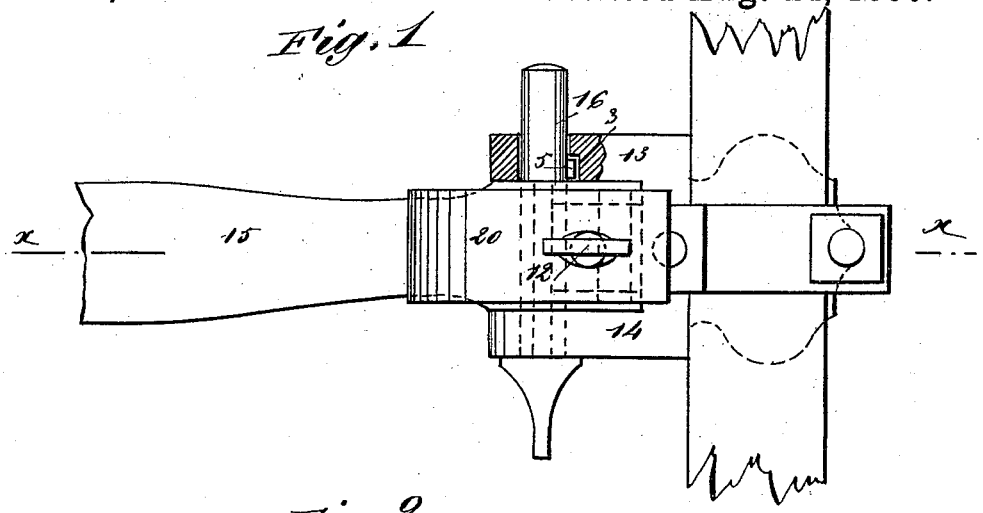


Fig. 2

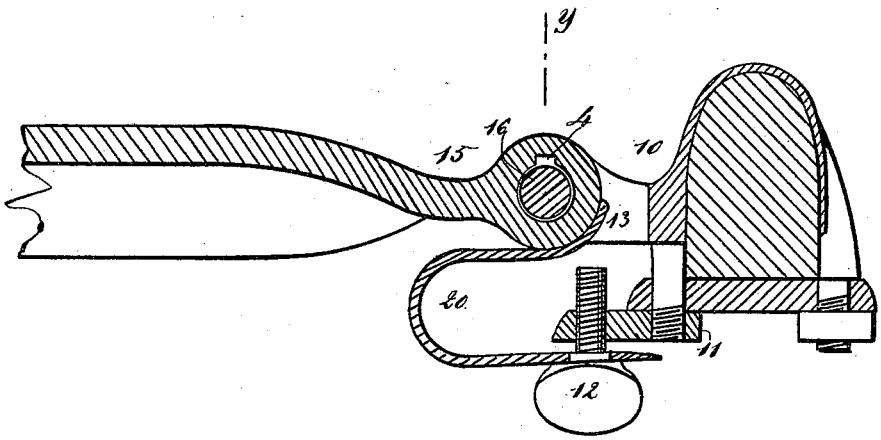
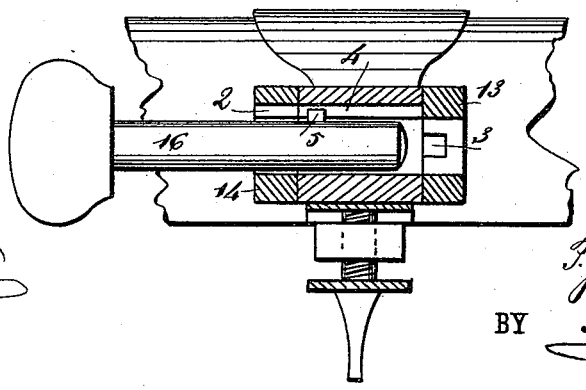


Fig. 3



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UNITED STATES PATENT OFFICE.

PERCY J. HINDMARSH AND WILLIAM H. GWINN, OF CENTRALIA, KANSAS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 348,014, dated August 24, 1886.

Application filed May 15, 1886. Serial No. 202,319. (No model.)

To all whom it may concern:

Be it known that we, PERCY J. HINDMARSH and WILLIAM H. GWINN, of Centralia, in the county of Nemaha and State of Kansas, have invented a new and Improved Thill-Coupling and Anti-Rattling Attachment, of which the following is a full, clear, and exact description.

Our invention relates to the construction of an improved form of thill coupling arranged to be used in connection with a novel form of attachment designed to prevent the rattling of the shackle, bolt, and thill-eye, the invention consisting of the constructions and combinations to be hereinafter described, and specifically pointed out in the claim.

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

Figure 1 is an inverted plan view of our improved form of thill-coupling and its attachment, a portion of one of the shackle-eyes being broken away and shown in section to disclose the construction of the bolt and shackle-eye. Fig. 2 is a longitudinal sectional view taken on line *x x* of Fig. 1, and Fig. 3 is a sectional view taken on line *y y* of Fig. 2.

In constructing the coupling and attachment forming the subject-matter of this application we employ the ordinary form of shackle—such as that shown at 10—said shackle being secured to the axle and its bolster in the ordinary manner, except that the forward retaining-nut, 11, is formed with two threaded apertures, in one of which there is fitted a set-screw, 12, the purpose of which will be presently described.

In the shackle-eye 14 there is a groove or way, 2, which groove or way is formed above the central aperture of the shackle-eye, while in the eye 13 there is a recess, 3, that is directly to the rear of the central aperture of the said eye 13. The thill-eye 15 employed in connection with such a shackle as has been described is provided with a groove, 4, said groove being above the central aperture of the eye.

In connection with such a thill-eye and shackle as has been described I employ a bolt, 16, that is formed with a projection or lug, 5, located in about the position shown in the drawings. Now, when it is desired to couple the shaft to the vehicle, the thill-eye is inserted between the shackle-eyes 13 and 14, so that its groove 4 will register with the groove 2 of the eye 14, and at this time the tips of the shackles or thills will be resting on the ground or floor. After the grooves 2 and 4 have been brought into register the bolt 16 is inserted, so that its lug 5 will pass within the said grooves 2 and 4, the bolt being shoved inward until the lug abuts against the inner face of the shackle eye 13. The tips of the thills are then raised to the full extent, and this movement of the thills will carry the groove 4, so that it will register with the recess 3, which recess is deep enough to receive the lug 5. When the groove 4 has been brought into register with the recess 3, the bolt 16 is shoved inward until its lug 5 enters the said recess, after which, if the thills are dropped to their normal position, the bolt cannot be withdrawn from engagement with the shackle; but if it is desired to uncouple the thills the operation just described is gone through with in reverse order, so that a single man can readily couple or uncouple the thills.

In order to prevent all rattling of the parts, we provide a U-shaped spring, 20, one end of which is bent up to impress the under side of the thill-eye, while the other end is slotted to receive the set-screw 12, as clearly shown in Fig. 2.

From this construction it will be seen that by imparting a proper tension to the spring 20 the thill-eye, bolt, and shackle-eye will be held together, so that they cannot possibly rattle.

By raising the shafts so that the grooves 4 and the recesses 3 register, and partly withdrawing the bolts, so that the lug 5 rests partially in each of them, the shafts will be held in the raised position.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a thill-coupling, the combination, with a shackle and thill-eye, of the double nut 11, secured on the front shackle-bolt, the spring 20, having one end slotted and its other end resting against the under side of the thill-eye, and the set-screw 12, passed through the slot of the spring into the screw-threaded aperture of the nut 11, substantially as herein shown and described.

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