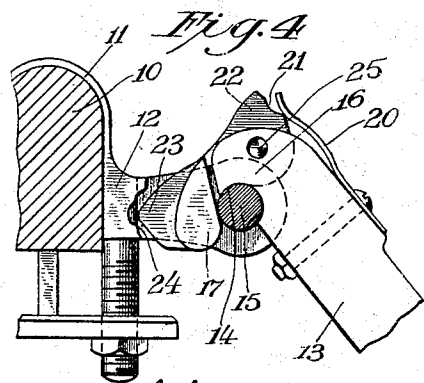
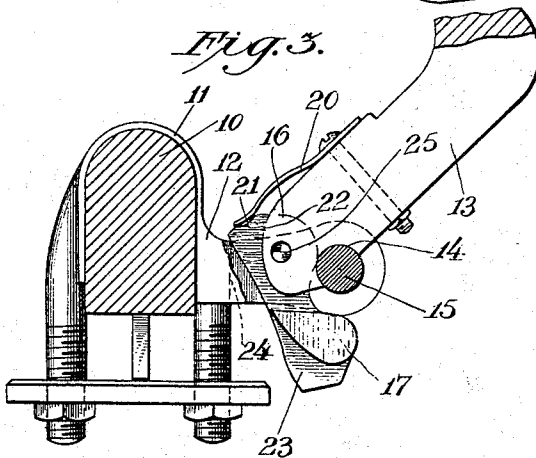
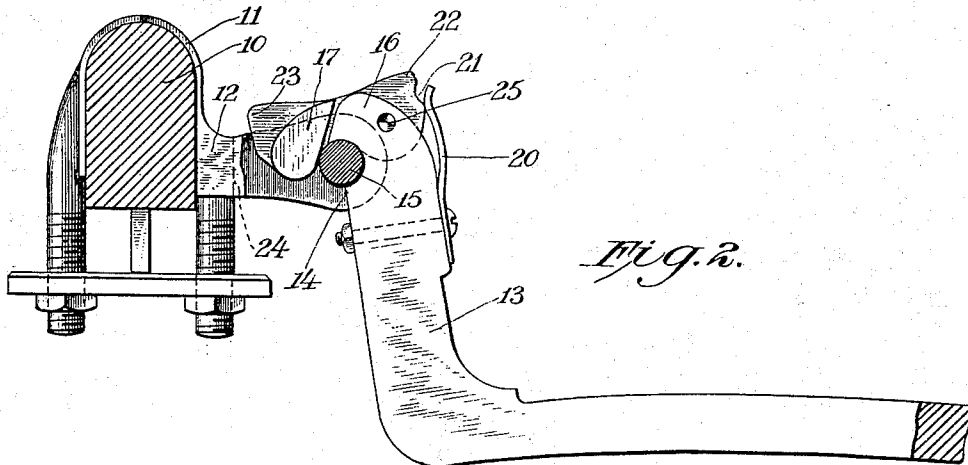
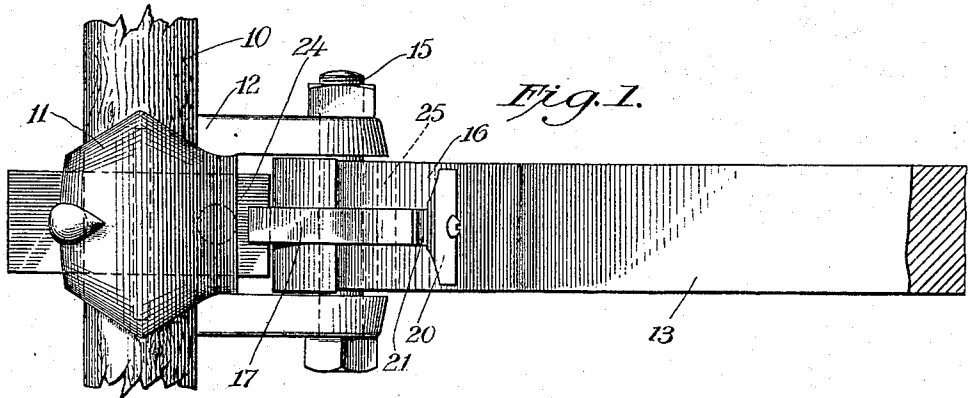


992,429.

Patented May 16, 1911.



Witnesses:
John E. Prager
William J. Walker.

Willis Johnston Inventor
By his Attorney *Deit P. Schuck*

UNITED STATES PATENT OFFICE.

WILLIS JOHNSTON, OF SCHENECTADY, NEW YORK, ASSIGNOR OF THREE-FOURTHS TO
NORTON WILLIS JOHNSTON, OF CHAPPAQUA, NEW YORK.

THILL-COUPLING.

992,429.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed January 25, 1910. Serial No. 539,928.

To all whom it may concern:

Be it known that I, WILLIS JOHNSTON, a citizen of the United States, and a resident of Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

My invention relates to improvements in thill couplings; and particularly to couplings in which the thill is adapted to be removably locked about the shackle bolt of a shackle of the usual construction, and which is secured to the front axle of the vehicle.

It has for its object to provide means whereby the thill may be respectively unlocked from and locked about the said shackle bolt by simply raising or lowering the thill.

The nature of my invention will be best understood when described in connection with the accompanying drawings, in which—

Figure 1 is a plan view of the shackle and thill in normal and locked position. Fig. 2 is a side elevation of the same, partly in section. Figs. 3 and 4 are views illustrating the unlocking and locking of the thill.

Similar characters of reference designate corresponding parts throughout the several views.

Referring now to the drawings—10 designates the front axle of a vehicle to which is secured in any well known manner, as by means of a clip 11, the shackle 12. A thill 13 is forked at its inner end, and is provided with a bearing or fixed jaw 14 adapted to partly surround (but not more than half-way) the shackle bolt 15. Pivottally secured to the fork 16 of the thill is a locking member or jaw 17, adapted to surround a portion of the shackle bolt 15 when the coupling is in normal and locked position, as shown in Figs. 1, 2 and 4. A flat spring 20 fixedly secured to the thill 13 bears upon the upper face of the said locking member 17 so as to yieldingly hold the said pivoted locking member in its closed position under a spring pressure. In the unlocked position, Fig. 3, the spring 20 registers with a notch 21 in the upper face of the pivoted locking member to yieldingly lock the same in this position.

An upper nose 22 and a lower nose 23 of

the said locking member 17 are adapted to make contact with the face 24 of the shackle 12 in respectively unlocking and locking the thill from and about the shackle bolt, as shown in Figs. 3 and 4, the spring 20 serving to maintain the said locking member in one or the other of the two said positions.

To lock the thill 13 to the shackle bolt 15, the thill is held in the raised position shown in Fig. 3 and the locking member inserted behind the bolt 15. The thill 13 is then lowered into normal position, Figs. 1 and 2, the nose 23 of the locking member 17 during the said lowering of the thill 13 making contact with the face 24 (Fig. 4) and rotating the locking member 17 slightly about its pivot 25 until it surrounds the bolt 15 sufficiently to prevent the thill from being uncoupled therefrom. In this position it is held by the flat spring 20.

To uncouple the thill 13 from the bolt 15, the same is raised until the nose 22 makes contact with the face 24 (Fig. 3) and is rotated about the pivot 25, in the opposite direction from the locking rotation, sufficiently to permit the thill to be lifted off the said bolt 15. In this position the notch 21 has slipped under the spring 20 and the locking member 17 is thus securely held.

I claim:—

1. The combination with a shackle and a shackle bolt, and a thill adapted to surround a portion of said bolt, of locking means carried by said thill and adapted to surround an additional portion of said shackle bolt sufficient to prevent the said thill from being withdrawn from said bolt, and means, actuated by raising the thill a predetermined degree, to unlock said locking means from said shackle bolt.

2. The combination with a shackle and a shackle bolt, and a thill forked at one end and adapted to surround a portion of said bolt, of locking means pivoted between the fork of said thill and adapted to surround an additional portion of said shackle bolt sufficient to prevent the said thill from being withdrawn from said bolt, and means, actuated by raising the thill a predetermined degree, to unlock said locking means from said shackle bolt.

3. The combination with a shackle and a shackle bolt, and a thill adapted to surround a portion of said bolt, of locking means

carried by said thill and adapted to surround an additional portion of said shackle bolt sufficient to prevent the said thill from being withdrawn from said bolt, and means, 5 actuated by raising the thill a predetermined degree, to unlock said locking means from said shackle bolt, and means, actuated by lowering the thill a predetermined degree, to lock said locking means.

10 4. The combination with a shackle and a shackle bolt, and a thill adapted to surround a portion of said bolt, of a locking member pivotally secured to said thill and adapted to surround an additional portion of said 15 shackle bolt sufficient to prevent the said thill from being withdrawn from said bolt, and means on said locking member to engage the face of said shackle to unlock and to lock said locking member respectively 20 from and about said shackle bolt upon respectively raising or lowering said thill a predetermined degree.

5. The combination with a shackle and a

shackle bolt, and a thill forked at one end and adapted to surround a portion of the 25 said bolt, of a locking member pivoted to the fork of said thill and adapted to surround an additional portion of said shackle bolt sufficient to prevent the said thill from being 30 withdrawn from said bolt, and provided with an upper and a lower nose to engage the face of said shackle to unlock and to lock said locking means respectively from and about said shackle bolt when the said 35 thill is respectively raised or lowered a predetermined degree, and a spring to hold the said pivoted locking member in unlocked and locked position.

Signed at Schenectady in the county of Schenectady and State of New York this 40 22d day of January A. D. 1910.

WILLIS JOHNSTON.

Witnesses:

JOHN SHAW EATON,
W. C. PIERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
