No. 795,966. PATENTED AUG. 1, 1905.

W. H. GEORGE.

TRACTION ENGINE COUPLING.

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Fig. 1.

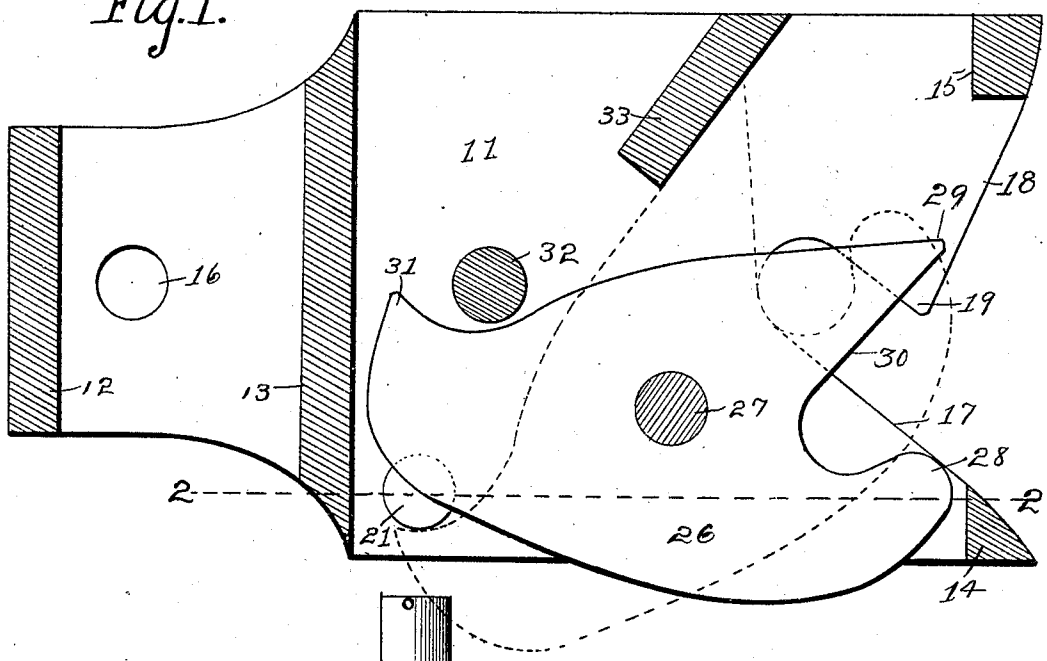


Fig. 2

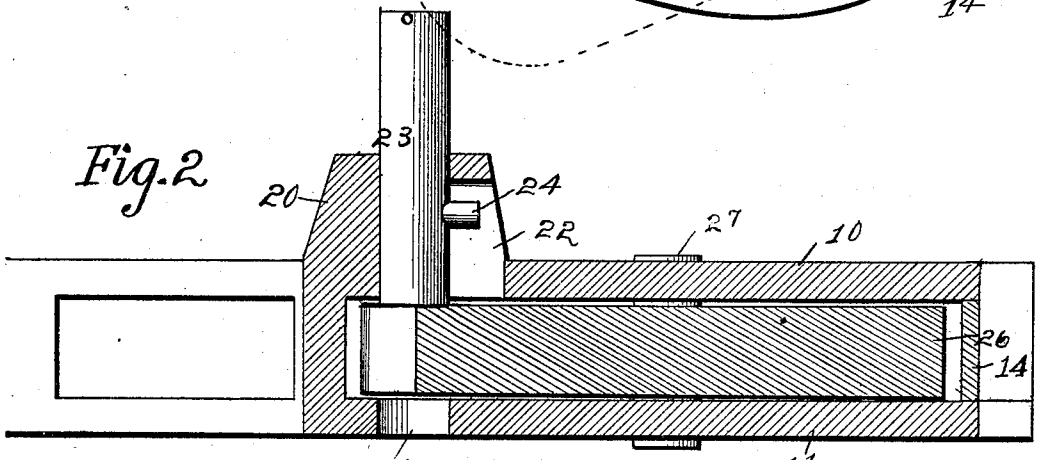
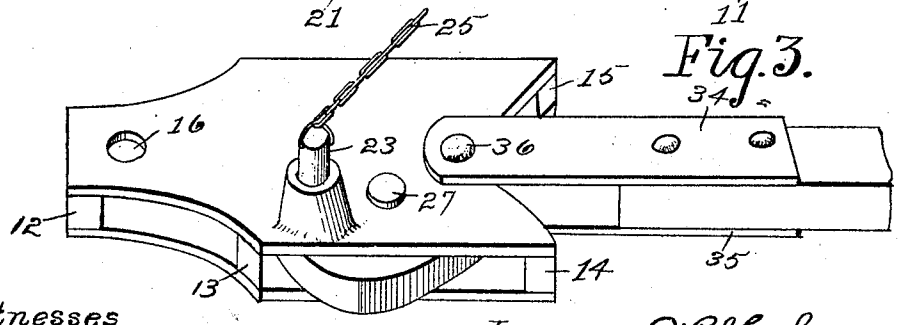


Fig. 3.



Witnesses

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TRACTION-ENGINE COUPLING.

No. 795,966. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed March 8, 1904. Serial No. 197,130.

To all whom it may concern:

Be it known that I, WILLIAM H. GEORGE, a citizen of the United States, residing at Dexter, in the county of Dallas and State of Iowa, have invented certain new and useful Improvements in Traction-Engine Couplers, of which the following is a specification.

The object of my invention is to provide a coupler of this class of simple, durable, and inexpensive construction.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a horizontal sectional view through the draw-bar above the pivoted locking-plate. Fig. 2 shows a vertical sectional view on the line 2 2 of Fig. 1; and Fig. 3 shows a perspective view of the coupler having a link inserted therein and held by the coupler.

Referring to the accompanying drawings, the draw-bar is seen to be composed of an upper and lower plate, (indicated by the numerals 10 and 11, respectively,) said plates spaced apart by the blocks 12 and 13 running across the rear end portion thereof and the blocks 14 and 15 at the forward corners thereof. These parts are all firmly united, and at the rear end of the draw-bar is a pin-opening 16, by which the draw-bar is attached to the engine.

The front face of the draw-bar is formed as follows: Beginning at the right forward corner, the said front face is inclined rearwardly and toward the center of the draw-bar at 17, and beginning at the opposite corner, the front of the draw-bar is inclined rearwardly and toward the center of the draw-bar at 18. At a point near the center of the draw-bar the face 18 is inclined rearwardly and away from the center of the draw-bar at 19, the faces 19 and 17 together forming a slot which inclines rearwardly and toward the left side of the draw-bar at an angle of about forty-five degrees relative to a fore-and-aft line through the draw-bar for purposes hereinafter made clear. Formed on the top piece 10, near the rear right corner thereof, is a boss 20, having a vertical pin-opening therein. The lower plate 11 is provided with a pin-opening 21 in line with the pin-opening of said boss, and one side of the boss is provided with a slot 22.

The numeral 23 indicates a pin mounted in the boss 20, capable of free vertical movement, and said pin is provided with a projection 24 in the slot 22 to prevent removal of the pin upwardly through the boss, said projection 24 also limiting the downward movement of the pin, as hereinafter described. A chain 25 is attached to the pin 23, by which it may be readily elevated.

The pivoted coupling-plate is indicated by the reference-numeral 26 and is supported on a pin 27, passed through the central portion of the plates 10 and 11 slightly to the right of a fore-and-aft line through the center of the plates. The front face of the pivoted coupling-plate is provided with a rounded projection 28 at the right side, and on the left side is a pointed projection 29, and the front face of the plate inclines rearwardly from the projection 29 and toward the right of the coupling. The said inclined face is indicated by the numeral 30, and when the pivoted plate 26 is in its uncoupled position the said inclined face 30 is substantially at right angles to the faces 17 and 19 of the draw-bar, as clearly shown in Fig. 1. The rear end of the pivoted plate is formed with an extension 31, projecting inwardly, for purposes hereinafter made clear.

The numeral 32 indicates a stationary pin supported in the plates 10 and 11 and arranged to engage the rear end of the pivoted plate 26 and limit the inward movement thereof. The movement of the pivoted plate 26 in the opposite direction is limited by a stop 33, arranged to engage the front end portion of the pivoted plate 26 when said plate is in its coupled position, as shown by dotted lines in Fig. 1.

The said coupler is intended to c nect with a link of the ordinary construction attached to an engine-tender and comprising the plates 34 and 35, connected by a pin 36.

In practical use and assuming that the pivoted plate is in the position shown in solid lines in Fig. 1 then the pin 23 rests upon the rear end of the pivoted plate and is prevented thereby from downward movement, and the rear end of the plate is held against farther inward movement by the stationary pin 32. Assuming that a link is introduced against the front face of the draw-bar, the inclined faces 17 and 18 will direct the pin 36 of such link into the slot formed by the inclined faces 17 and 19. This will cause the pin 36 to

slide rearwardly and to the left, and thereby engage the inclined face 30 of the pivoted plate 26 and force the forward end of the pivoted plate 26 rearwardly and to the left to the position shown by dotted lines in Fig. 1. When the rear end of the pivoted plate swings outwardly far enough, it will permit the pin 23 to drop on the inside of the projection 31 of the pivoted plate, and in this position the pivoted plate will be locked by the said pin, and when in this position the rounded projection 28 at the front of the pivoted plate will enter between the upper and lower plates of the draw-bar, between the faces 19 thereof, and thus firmly lock the pin 36 in the draw-bar, and the said pin 36 can only be released when the pin 23 is elevated enough to permit the pivoted plate 26 to swing freely, and when the said pin 23 is elevated a forward pull upon the link having the pin 36 will obviously swing the pivoted plate 26 to its open position and uncouple the link from the draw-bar.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved traction-engine coupler, comprising a draw-bar having its front end provided with a slot open at the front and inclined rearwardly and laterally, a pivoted coupling-plate provided at its front edge with a rounded projection and an inclined face, said pivoted plate in one position standing with the inclined face across the slot of the draw-bar and in its other position standing with the rounded projection extending across the slot.

2. An improved traction-engine coupler, comprising a draw-bar provided at its front face with a slot open in front and extended rearwardly and laterally, a pivoted coupling-plate connected with the draw-bar, provided at its front end with a rounded extension and an inclined face, and provided on its rear end with an extension projecting inwardly, a pin supported in the draw-bar, said pivoted plate in its uncoupled position standing with its inclined front face across the slot in the draw-bar and with the said pin resting on top of its rear end and in its coupled position standing with the rounded projection on its front end extended across the slot, and with the said extension on its rear end outside of the said pin.

3. An improved traction-engine coupler, comprising a draw-bar, having its front face formed with a slot extending rearwardly and laterally, said slot open at its front, a pin mounted at the rear of the draw-bar for vertical movement, a pivoted coupling-plate in its uncoupled position standing with its inclined face across the forward end of the slot and with its rounded projection at one side of the slot, the pivotal center of said plate being on the outside of a fore-and-aft line through the central portion of the said inclined face, said pivoted plate in its coupled position standing with the rounded end projected across the outer end of the slot and some distance beyond the slot, and means for locking the pivoted plate in its coupled position.

4. An improved traction-engine coupler, comprising a draw-bar, having upper and lower plates spaced apart, the forward faces of said plates provided with an inclined surface 17 extending inwardly and rearwardly, an inclined surface 18 extending inwardly and rearwardly and an inclined surface 19 extending from the inner end of the surface 18 rearwardly and outwardly, a coupling-plate pivoted between the plates of the draw-bar to the right of a fore-and-aft line through the draw-bar, said pivoted plate provided at its forward end with a rounded extension 28 and an inclined face 30, and at its rear end with a projection 31, a pin 32 for limiting the inward movement of the rear end of the pivoted plate, a stop 33 for limiting the movement of the forward end of the pivoted plate, and a pin 23 slidingly mounted in the draw-bar, means for limiting the up-and-down movement of said pin, said parts so arranged that the pin 23 rests on top of the pivoted plate when the pivoted plate is in its uncoupled position and drops downwardly beyond the extension 31 when the pivoted plate is in its coupled position, substantially as and for the purposes stated.

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Witnesses:
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