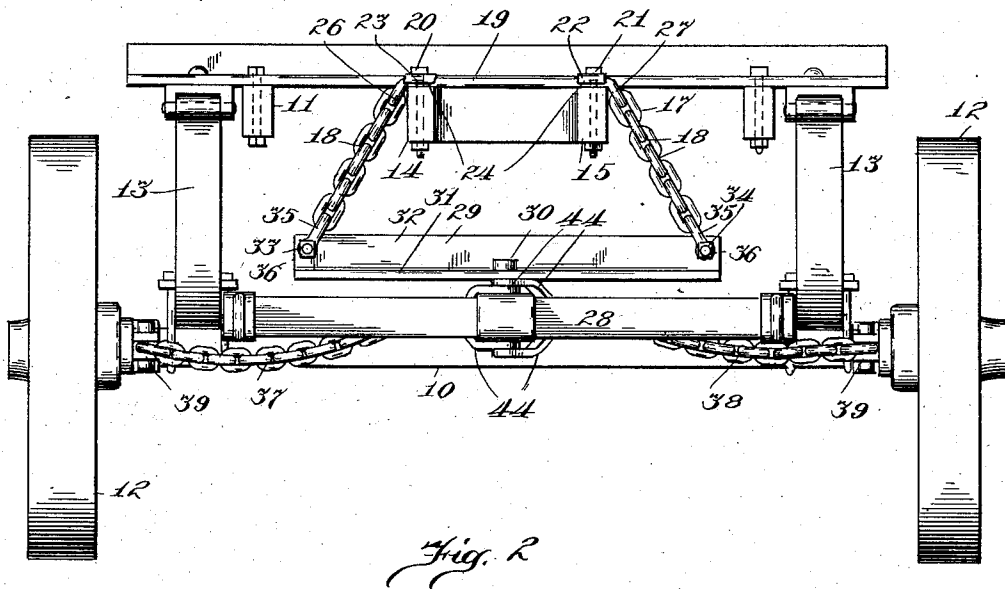
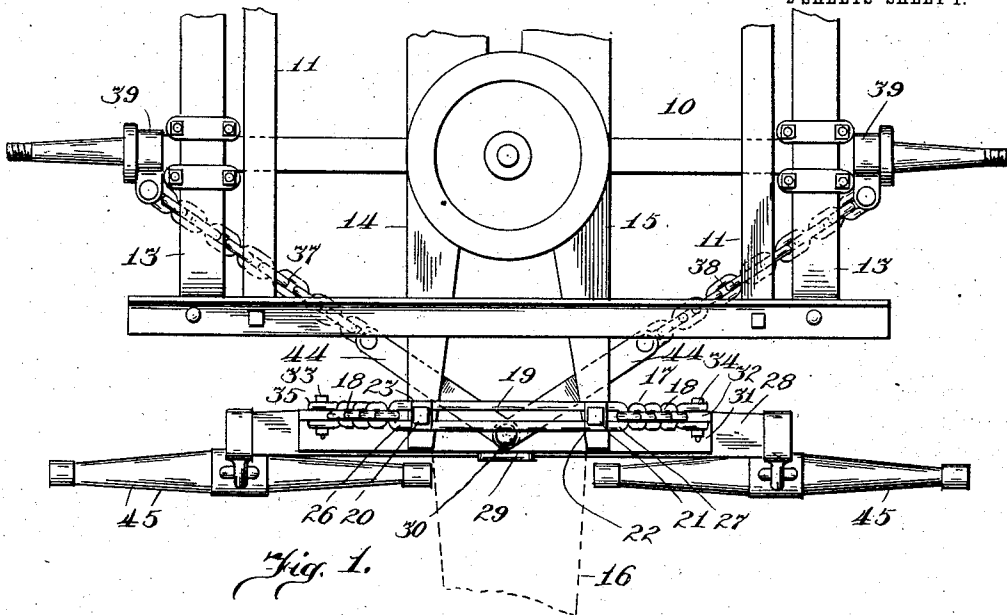


E. V. LAWRENCE.
WAGON HITCH.
APPLICATION FILED MAY 17, 1911.

1,010,926.

Patented Dec. 5, 1911.

2 SHEETS—SHEET 1.



Witnesses
Milton Lenoir
E. M. Klatchers

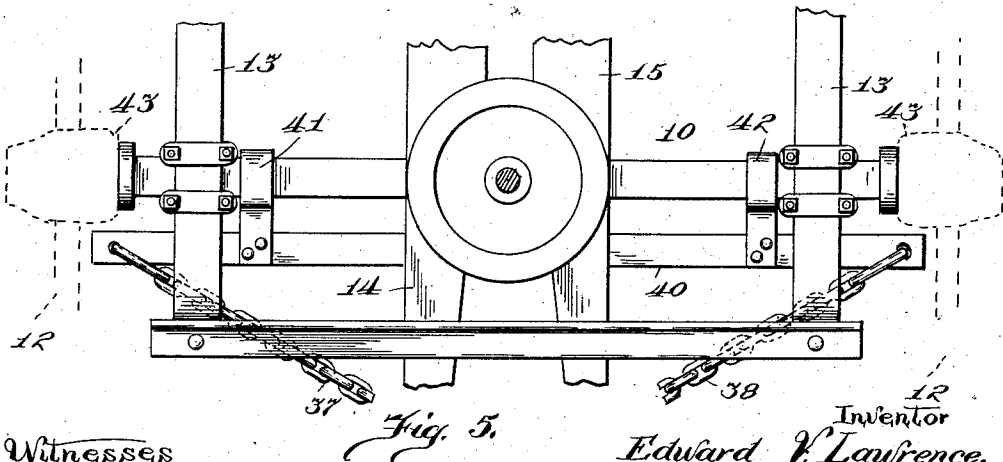
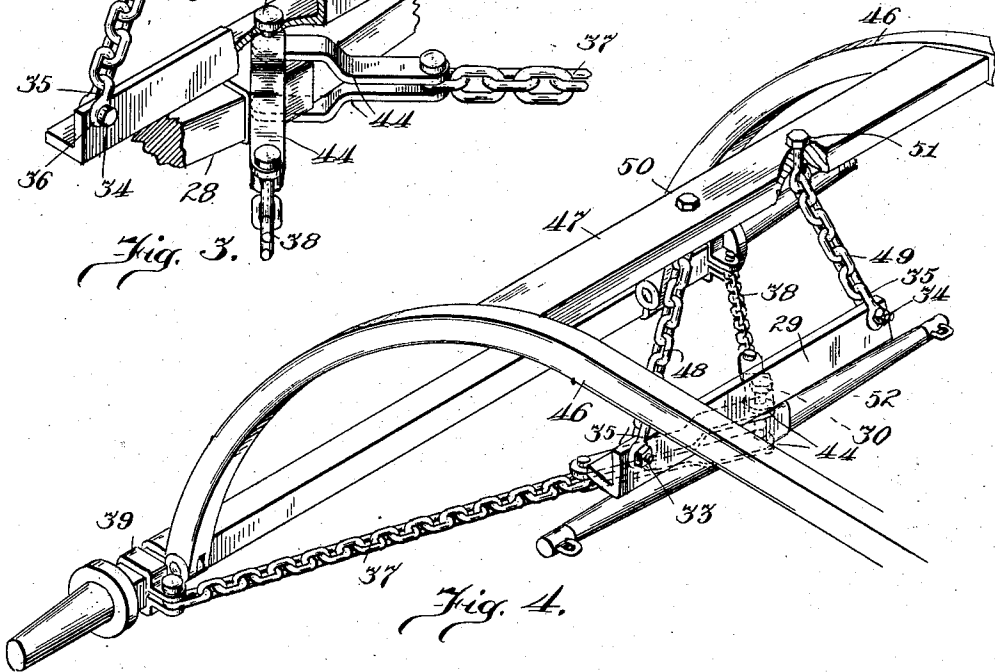
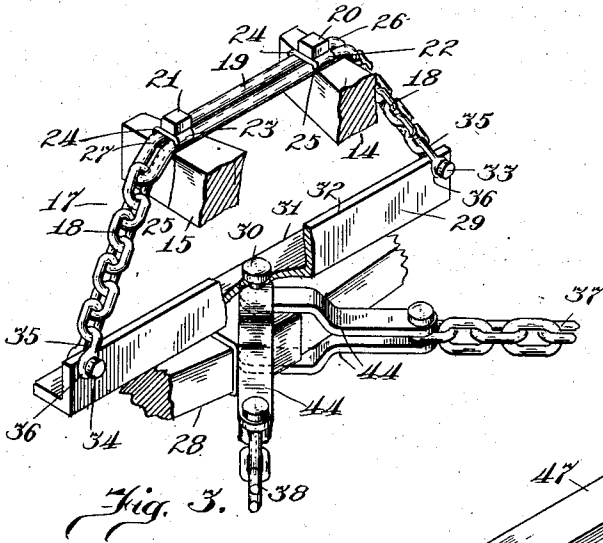
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UNITED STATES PATENT OFFICE.

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WAGON-HITCH.

1,010,926.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed May 17, 1911. Serial No. 627,831.

To all whom it may concern:

Be it known that I, EDWARD V. LAWRENCE, a citizen of the United States, and resident of Downers Grove, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wagon-Hitches, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to wagons, and more particularly to improved means for supporting and connecting the eveners or whiffletree to which the horses are attached.

The object of the invention is to provide draft connections for a wagon which shall permit free movement of the eveners in any direction, shall permit the eveners or whiffletree to be adjusted to different elevations and shall restrain the swaying of the front truck of the wagon whereby the lashing of the pole or shafts against the horses is prevented.

In the accompanying drawings, Figure 1 is a detail plan view showing the front truck of a wagon equipped with apparatus provided by the invention; Fig. 2 is a front elevation of the same; Fig. 3 is a detail perspective view of the same, some of the parts being broken away; Fig. 4 is a detail perspective view illustrating one manner of applying the apparatus provided by the invention to wagons adapted to be drawn by a single horse, and Fig. 5 is similar to Fig. 1 but illustrates a slight modification.

The front axle of a four-wheeled wagon is shown in the drawings at 10. In Figs. 1, 2, 3 and 5 of the drawings this axle is shown as being mounted in a frame generally designated 11, the frame 11 with the axle 10 and wheels 12 constituting the front truck of a wagon. Usually the frame 11 will include springs 13 resting on the axle 10 and hounds 14, 15 supported above the axle. The pole 16, indicated by dotted lines in Fig. 1, is received between the hounds 14, 15.

In carrying out the invention a chain, generally designated 17, is preferably laid transversely over the hounds 14, 15 in such manner that its end portions 18, depend obliquely from the hounds on opposite sides. As shown, the chain 17 is provided with an elongated intermediate link 19 of sufficient length to extend transversely over the hounds 14, 15 and pole 16 and to project laterally therefrom at each side of the hounds. This link is permanently secured

to the hounds 14, 15 as by bolts 20, and 21. Preferably washers, as 22, 23, each having depending front and rear flanges 24, 25 which embrace the link are applied to the bolts 20 and 21 directly over the link 19. In practice the link 19 will be of sufficient length to reach over the hounds of any wagon. The apparatus provided by the invention is thus made of standard construction and may be applied to any previously constructed wagon having hounds without modifying the construction of the wagon. When the width of the hounds of the particular wagon to which the apparatus is to be applied has been ascertained, the end portions as 26, 27 of the link 19, including as much of the length of the link as exceeds the width of the hounds, are bent downwardly, as most clearly shown in Fig. 2 of the drawings, in line with the end portions 18 of the chain.

In order that the eveners 28 may be free to move in any direction a bar 29 is supported horizontally beneath the hounds 14, 15 in the end portions 18 of the chain 17 and the eveners 28 is pivotally attached to the bar 29 by a bolt 30. Preferably the bar 29 takes the form of an angle-plate having a horizontal leaf 31 and vertical leaf 32. The vertical leaf 32 is apertured adjacent each end to receive a connecting bolt, as 33, 34, and the horizontal leaf 31 is apertured at its center to receive the bolt 30. In order that the elevation at which the eveners 28 is supported, may be readily adjusted, a clevis 35 is employed in conjunction with each of the bolts 33, 34 for securing the end portions 18 of the chain 17 to the bar 29. As most clearly shown in Fig. 3 of the patent drawings each clevis 35 is preferably of U shape with eyes, as 36, at the ends of the U for receiving the bolts, as 33, 34. In connecting the ends 18 of the chain 17 to the bar 29 each clevis 35 may be passed through any one of the several links comprised in the corresponding end portion 18 of the chain, whereby the elevation at which the bar 29 is supported is rendered adjustable.

For transmitting the draft from the eveners 28, chains as 37, 38 lead backward obliquely to the axle 10. In Figs. 1, 2 and 3, and in Fig. 4, these chains are shown as being secured directly to the axis adjacent its ends by means of clamps 39. In Fig. 5 a bar 40 is shown which extends across the truck frame 11 in front of the

axle 10 and is rigidly secured to the axle by clamps as 41 and 42. The bar 40 clears the hubs, as 43, of the wheels 12 and the chains 37 and 38 are connected to it adjacent its ends. A greater spread of the chains 37, 38 is thus obtained.

In order that a direct pull may be had through each of the chains 37, 38 from the pivot bolt 30 to the axle 10 or bar 40, a separate clevis 44 is provided at the forward end of each of the chains 37, 38. The end portions of each clevis 44 embrace the evener 28 and are engaged by the bolt 30 above and below the evener respectively.

The evener 28 may be of any usual form and is shown as equipped at its opposite ends with whiffletrees 45 for the attachment of two horses thereto. In this case the pivot bolt 30 will preferably pass centrally through the evener 28.

In Fig. 4 of the drawings a pair of shafts 46 are shown attached to the axle 10. These shafts are connected adjacent their rear ends by a cross-bar 47 and in this case separate chains 48 and 49 are employed for supporting the bar 29, these chains being most conveniently hung from bolts 50 and 51 respectively, which pass through the cross-bar 47 at opposite sides of its center. When a single horse is used a whiffletree 52 is mounted directly on the bolt 30 below the bar 29 between the ends of the clevises 44 to which the chains 37 and 38 are respectively attached. As in the arrangement shown in Figs. 1, 2, 3 and 5, an attaching bolt 34 and clevis 35 is provided at each end of the bar 29 for the connection thereto of the supporting chains, as 48, 49, in order that the elevation at which the bar 29 is supported may be adjusted.

In the arrangements described the swinging of the end portions 18 of the supporting chain 17, or of the chains 48, 49, permit a sufficient fore and aft movement of the evener 28 or whiffletree 52 for the draft to be received directly by the chains 37, 38. Furthermore the use of the bar 29 and the connection thereto of the evener 28 or whiffletree 52 by the pivot bolt 30 permits the evener or whiffletree to have its usual oscillating movement in a horizontal plane. The elevation at which the evener 28 or whiffletree 52 is supported may also be adjusted without the use of tools other than a wrench for removing and replacing the bolts 34.

By using a separate clevis 44 at the for-

ward end of each of the chains 37, 38, both of which are applied directly to the pivot bolt 30, the draft is transmitted upon a direct line from the pivot bolt 30 to the place where each of the chains 37, 38 is connected to the axle 10 or bar 40. This is particularly advantageous in restraining the side throw of the pole 16 or shafts 46 when either of the wheels strikes an obstruction, for by this arrangement the chain 37 or 38 leading to the remote end of the axle 10 is thereby immediately slackened and all of the draft transmitted through the chain leading toward that end of the axle adjacent the obstructed wheel to aid in restoring the axle to its proper transverse position beneath the wagon.

I claim as my invention—

1. In combination, a truck having hounds and an axle below the hounds, a link extending transversely over the hounds in front of the axle, a bar adjustably hung from the ends of the link, an evener, a pivot bolt extending centrally through the bar and through the evener to connect the evener with the bar, and independent flexible draft connections between the pivot bolt and the ends of the axle.

2. In combination, a truck having an axle, a bar flexibly supported at its ends in front of the axle and normally extending parallel with the axle, an evener, a pivot bolt extending centrally through the bar and through the evener to connect the evener with the bar and independent flexible draft connections between the pivot bolt and the ends of the axle.

3. In combination, a truck having an axle, a bar flexibly supported at its ends in front of the axle and normally extending parallel with the axle, an evener, a pivot bolt extending centrally through the bar and the evener to connect them and wide spreading draft connections between the pivot bolt and the axle.

4. In combination, a truck having an axle, a bar adjustably hung at its ends in front of the axle and extending parallel therewith, an evener, a pivot bolt extending centrally through the bar and the evener to connect them and wide spreading draft connections between the evener and the axle.

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Witnesses:

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