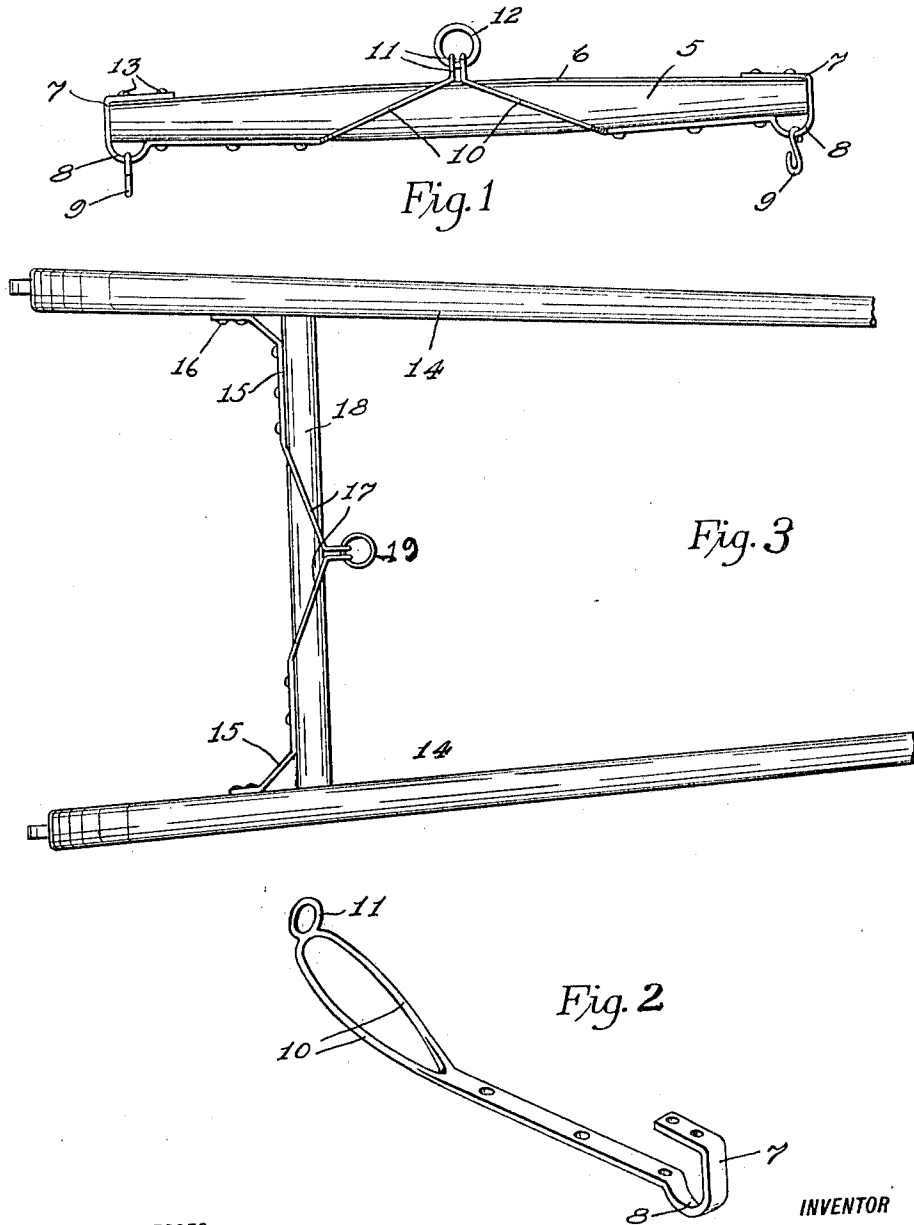


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WHIFFLETREE.
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1,117,495.

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GUSTAF JOHNSON, OF SEATTLE, WASHINGTON.

WHIFFLETREE.

1,117,495.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAF JOHNSON, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Whiffletrees, of which the following is a specification.

My invention relates to improvements in draft appliances such as whiffletrees, shafts and the like, that are commonly employed in connection with vehicles drawn by horses, and the object of my improvement is to provide a simple and efficient means for reinforcing wooden parts of such appliances whereby the strain to which such wooden parts may be subjected shall be widely distributed and shall be exerted more nearly in a direction that is lengthwise of the grain of the wood of which such parts are made.

In making whiffletrees and vehicle shafts I accomplish this object by devices illustrated in the accompanying drawings in which—

Figure 1 is a plan view of a whiffletree embodying my invention; Fig. 2 is a view in perspective of one of the metal reinforcing members and Fig. 3 is a plan view of a portion of a pair of thills to which my invention has been applied.

Referring to the drawings throughout which like reference numerals indicate like parts, 5 is a wooden bar to the back side of which may be fastened a longitudinally disposed metal strip 6 that extends throughout the length of said bar 5. Adjacent to each end of the bar 5 and on the back side thereof there is secured the end of metal tension members 7, 7 which extend across the ends of such bar 5 to the front side thereof and are there formed into forwardly projecting loops 8, 8, as shown in Figs. 1 and 2, which loops 8, 8 are adapted to have hooks 9, 9 secured thereto, to which hooks 9, 9 the rings of swingletrees or the tugs of a harness may be hooked, after forming the loops 8, 8 the metal tension members 7, 7 extend for a short distance inwardly along the front side of the bar 5 and are then formed into oval shaped links 10, 10 that straddle the bar 5 and extend diagonally backward to a point near the center of the back edge of such bar where they terminate in perforated portions 11, 11 that are connected by a ring 12, to which a load that is to be moved may be secured. The members 7, 7 may be secured to the bar 5

by bolts 13, 13 one of which may pass through that portion of each member 7 that lies along the front side of the bar 5 thence through such bar 5 and thence through the metal strip 6 and that part of the member 7 that lies along the back side of the bar 5.

In Fig. 3, wherein I have illustrated my invention as applied to the cross-bar of a pair of thills 14, 14, a portion of each one of a pair of tension members 15, which corresponds to that portion of the member 7 that forms the loops 8 and extends around the end and along the back side of the bar 5, is formed to extend diagonally rearward for a short distance and thence to extend along the inside portion of the rear end of each thill 14 to be secured thereto by rivets 16, 16, oval link portions 17, 17, of the members 15, 15, which are similar to the links 10, 10, being adapted to encircle the cross-bar 18 and extend diagonally forward thereabout to a point near the center of the front side of such bar where they may be connected by a ring 19 to which a swingle-tree (not shown) similar to the swingletree of Fig. 1 may be secured.

Obviously the structure shown in Fig. 1 may be used as a swingletree, or it may have a swingletree secured to each end thereof and be used as a doubletree, the action of the tension members 10, 10 being such that when a pull is exerted on the hooks 9, 9 the greater portion of the strain due to such pull will be transferred by the tension loops 10, 10 directly to the ring 12, thus producing an endwise compression in the central portion of the bar 5 and obviating the maximum bending movement about the medial point of the bar 5 which is usually found in like structures and tends to break such bar.

Obviously various changes in size and form of parts embodied in my device may be made without departing from the spirit thereof.

What I claim is:

A whiffletree embodying a whiffletree bar of suitable wood, two metal straps each disposed to extend along the front edge of a different end portion of said bar and secured thereto and each having its inner end provided with a loop connected therewith and disposed to extend obliquely to surround said bar and terminate in the form of an eye-ring near the central portion of the rear edge of said bar while the outer end

of each of said straps is curved to form a forwardly projecting semicircle and thence extended rearwardly across the adjacent end surface of said bar to engage therewith,
5 thence turned at a right angle and secured to the rear edge of its respective end portion of said bar, whereby a strain exerted between the eye-rings of said loop and the semicircular rings of said straps may be

communicated to the end surfaces of said 10 bar.

In witness whereof, I hereunto subscribe my name this twenty-second day of January A. D., 1914.

GUSTAF JOHNSON.

Witnesses:

A. HASKINS,

FRANK WARREN.

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