

No. 830,366.

PATENTED SEPT. 4, 1906.

J. N. RICHARDS.
WHIFFLETREE.
APPLICATION FILED AUG. 30, 1905.

Fig. 1.

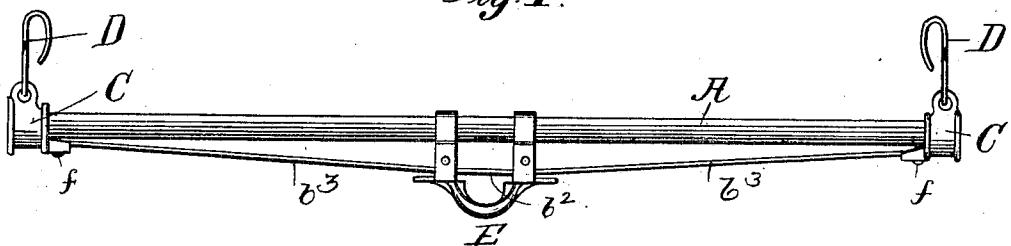


Fig. 2.

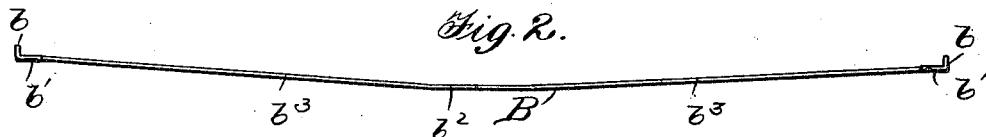


Fig. 3

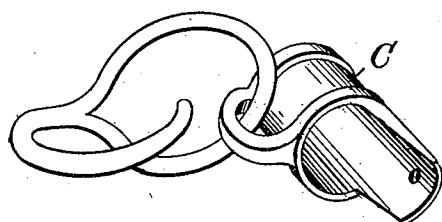


Fig. 4.

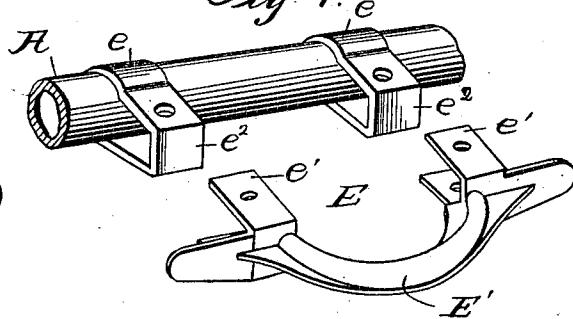


Fig. 5.

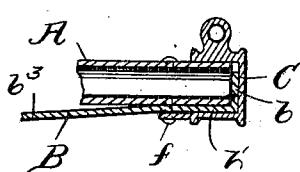
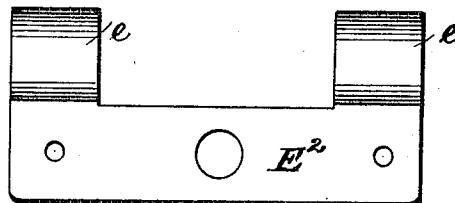


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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WHIFFLETREE.

No. 830,366.

Specification of Letters Patent.

Patented Sept. 4, 1906.

Application filed August 30, 1905. Serial No. 276,419.

To all whom it may concern:

Be it known that I, JAMES N. RICHARDS, a citizen of the Dominion of Canada, residing at Chatham, in the county of Kent and Province of Ontario, Canada, have invented certain new and useful Improvements in Whiffletrees; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in whiffletrees, and is also applicable to neck-yokes and similar articles, and especially to that kind of such articles in which a metallic tubular body or bar is provided with a truss-bar.

The chief object of this invention is to insure that the strain on the whiffletree shall be borne by the said parts to the best advantage, the extreme strain on the truss-bar not being applied until the more rigid body has been subjected to its greater proper share of stress.

I also aim to produce a simple, cheap, strong, durable, moderately-resilient article of the kind stated, easily taken apart for repairs, but securely held against accidental displacement of parts.

To these ends my said invention consists in the construction and combination of parts hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a plan view of a whiffletree embodying my invention, and Figs. 2, 3, and 4 represent, respectively, detail views of the truss-bar before it is applied, one of the end caps, and the center bracket, the two parts of the latter being slightly separated. Fig. 5 represents a detail longitudinal section of the end of the whiffletree, and Fig. 6 represents a modified form of part of the center bracket.

A designates a whiffletree body or bar consisting of a piece of metallic pipe and having end caps C driven on its ends, which are provided with trace-hooks D and also used to hold in place the bent ends b of the flat resilient truss-bar B. These ends, as shown in Fig. 4, are at first inclined outward beyond a position at right angles to the body of said truss-bar. When applied to the body or bar A, they extend across the ends of the latter and are hammered thereon, the end caps C being then tightly driven on the ends of both

parts and fastened to said body A, putting and holding said truss-bar under tension, since its bent ends are held in and its bent middle part is held out. A center bracket E is then applied to the middle of said body A and the outwardly-bent middle part of said truss-bar, such application being facilitated by the construction of said bracket in two or three parts or sections. The rear section E' of said bracket is provided with forwardly-extending bifurcated ends e', which straddle the truss-bar, and the middle of said section E' being bent out to afford a good means of attachment of the whiffletree to the double-tree or other part or attachment of the vehicle. The said forward-extending bifurcated ends, as indicated in Fig. 4, also straddle and are riveted to the rearwardly-extending lugs e² of straps or eyes e, encircling the tubular whiffletree-bar A. These eyes or straps constitute the forward part of the center bracket, either alone or with the addition of a connecting-plate E², as in Fig. 6. The latter is better suited to a double-tree and may have more than two straps or eyes e, if preferred. The truss-bar, as thus applied and as shown in Fig. 1, has its outer parts b' parallel with and against the body A, to which they are secured by rivets f. Its middle part b² is also parallel to said body, resting on the two arms of the U-shaped lower section E' of the center bracket. The parts b³ intervening between said outer parts b' and said middle part b² are inclined downward, giving the bar B as a whole the familiar truss-form. When thus secured, the truss-bar gives the rigid whiffletree-body A the benefit of a resilient brace, but cannot be put under extreme tension till such body has borne its greater share of the strain. The center bracket and end caps hold the bars A and B securely together and keep the latter in position, bracing it especially at the ends and in the middle; but by cutting away the rivets it is easy to separate the several parts of the whiffletree whenever repairs are needed. This whiffletree is easily made and put together at little cost, and there is no difficulty in replacing a damaged part.

As shown in Fig. 4, the said invention is applicable to neck-yokes, there being no substantial change, though the lower section E' of the center bracket may be enlarged, or a ring and links or any other convenient means of rearward attachment may be substituted.

Of course my construction is as applicable to a doubletree or draft-equalizer as to an ordinary swingletree. (Shown in Fig. 1.)

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metallic whiffletree-body in combination with a metallic truss-bar under tension, having its ends bent across the ends of said body, and caps fitting on the ends of said body over and inclosing the ends of said truss-bar and serving to fasten the said body and truss-bar together substantially as set forth.
2. A metallic bar for use in vehicles, whiffletrees and neck-yokes in combination with a truss-rod for bracing the same having integral parts which overlap the ends of said bars and closed caps which inclose these ends and overlapping parts and fasten the said bar and truss-rods together substantially as set forth.
3. A metallic body for a whiffletree or similar article, in combination with a continuous truss-bar bent out at the middle and having its ends bent over the ends of said body, means for holding the said ends in place and a center bracket in two or more parts, one part fitting on the said body and the other part or parts against the under side of the said brace-bar substantially as set forth.

4. A metallic body or bar for a whiffletree or similar article, in combination with a continuous truss-bar having ends that fit on the ends of said body, caps which fit on the latter ends and fasten the truss-bar ends in place and a center bracket which fits on the said body and holds the middle part of the said truss-bar, bracing the same substantially as set forth.

5. A section of pipe constituting a tubular body for a whiffletree or similar article in combination with trace-hook-carrying caps fitting on the ends thereof, a continuous truss-bar bent outward from said body in the middle but having its ends held by said caps and a center bracket consisting of two U-shaped sections, each having bifurcated ends, said sections being adapted to be fastened together, and holding between the bifurcations of their ends respectively the said body and the said truss-bar substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES N. RICHARDS.

Witnesses:

ETHEL WICKHAM,
T. J. RUTLEY.