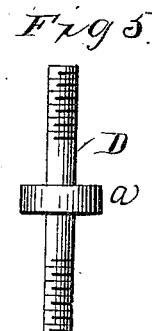
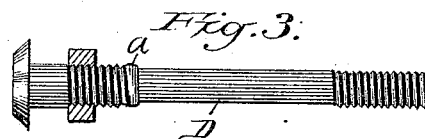
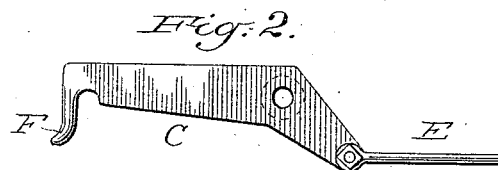
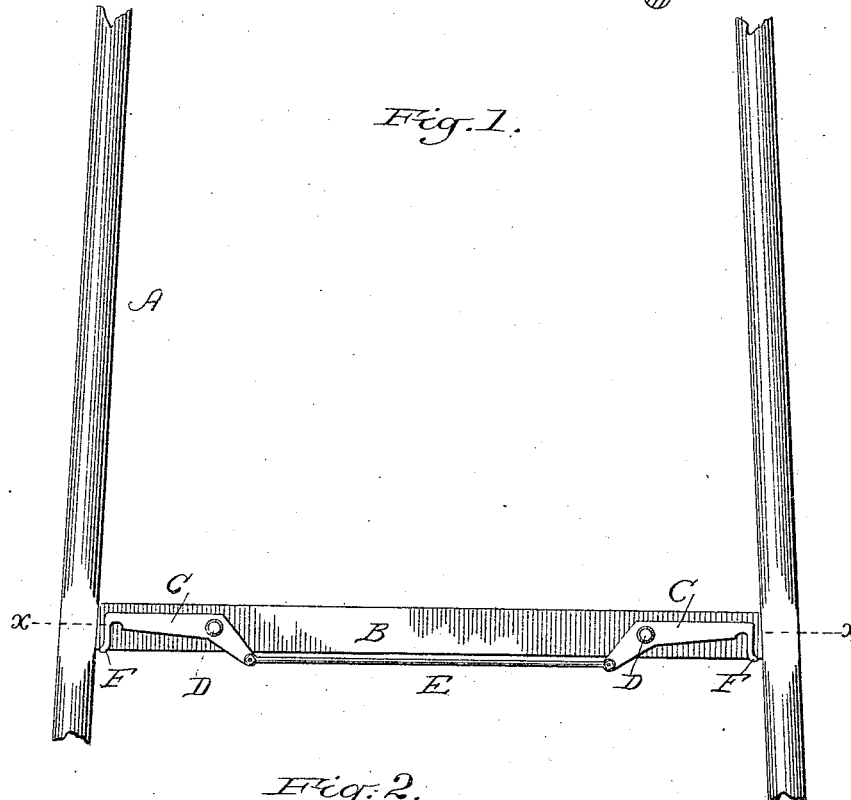
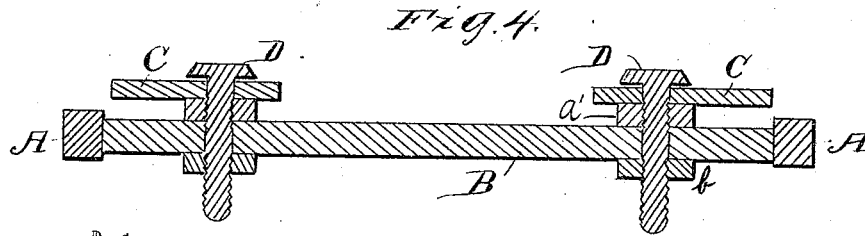


(No Model.)

O. OLNEY.
WHIFFLETREE.

No. 304,231.

Patented Aug. 26, 1884.



Witnesses:

Charles W. Stowe
P. W. Hodson

Inventor:

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UNITED STATES PATENT OFFICE.

OMAR OLNEY, OF McPHERSON, KANSAS.

WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 304,231, dated August 26, 1884.

Application filed April 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, OMAR OLNEY, of McPherson; in the county of McPherson and State of Kansas, have invented a new and valuable Improvement in Whiffletrees; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures marked thereon.

The invention consists in certain new and improved combinations of parts, as more fully hereinafter described, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 represents a view of my invention, showing the same applied to the shafts of a vehicle; Fig. 2, a detached view of the angle-levers, and Fig. 3 a detached view of one of the bolts. Fig. 4 is a sectional view taken on the lines *x x* of Fig. 1. Fig. 5 is a view of a bolt of the preferred construction.

In the said drawings, the letter A indicates the shafts of the vehicle, and B the cross-bar connecting the said shafts at their rear in the usual manner.

The letter C indicates two angle-levers, which are pivoted at their angles by the bolts D, secured to the cross-bar near each end, as indicated. These levers are precisely similar in construction, and their short arms are connected by means of the bar E, which is pivoted to the said arms at their ends. The long arms are provided with hooks F, to which the traces are attached. The bolts D are peculiar in construction, being formed with an enlarged bearing between their two ends, which are screw-threaded for the reception of screw-nuts, by which the said bolts are secured to the cross-bar, and the levers are secured to said bolts.

In securing the bolts to the cross-bar, one of the screw-threaded ends is passed through an aperture in said bar formed for the purpose, so that the enlarged bearing *a* will rest upon the top of the cross-bar, and the bolt is clamped in place by means of a screw-nut, *b*, applied below. The levers are placed upon the

bolts thus secured, the apertures at their angles being adapted to fit upon the enlarged bearings, as indicated. The screw-nuts are then applied, so as to securely hold the levers in place. As thus constructed, it will be perceived that the draft is as perfectly equalized as with the ordinary whiffletree, and an easy vibratory motion or whiffletree action obtained, by which the ordinary clumsy whiffletrees may be dispensed with, and the strain upon the cross-bar will be distributed to near each end of the same, instead of being at the center, which is the weakest part, as in the case of the ordinary whiffletrees; also, it will be seen that, by reason of the improved bolts with enlarged bearings, a firm and substantial connection is provided for the angle-levers, which will prevent them from lifting or working away, and provide for a true and easy movement of the parts. Moreover, the bolts, as thus constructed and applied, cannot possibly bend out of line, thus saving the expense of frequent removal, and permitting the levers always to work truly.

Instead of the enlarged bearing being formed integral with the bolts, as previously explained, the said bolts may be formed as shown in Figs. 3 and 4, in which case the nuts *a'* will serve the same purpose as the enlarged bearing *a*. The former construction is, however, preferred.

When applied to a two-horse vehicle, the levers are secured to the cross-bar at each side of the tongue, and ordinary whiffletrees are secured to these ends, to which the horses are hitched in the usual manner.

I am aware that angle-levers of different leverage have been connected and pivoted to the cross-bar of a vehicle to equalize the draft of one animal pulling against two others, and this I do not claim.

The gist of my invention consists in the arrangement of the levers, which are identically alike, to get an equal draft at each end, or a perfect whiffletree action, and the peculiar means of securing the levers to the cross-bar, so as to get an easy even action, to prevent wear, and to increase the durability of the device, as set forth.

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

5 The combination, with the cross-bar, of the bolts having enlarged bearings *a*, and screw-threads at opposite sides thereof, secured to said cross-bar by means of screw-nuts, and the connected angle-levers pivoted to said

bolts upon the enlarged bearings, and secured thereon by means of screw-nuts *b*, substantially as specified.

OMAR OLNEY.

Witnesses:

CHARLES W. STOWE,
P. W. HODSON.