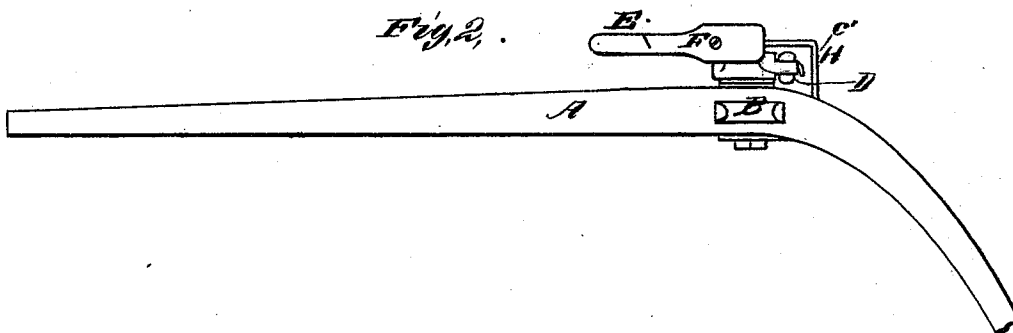
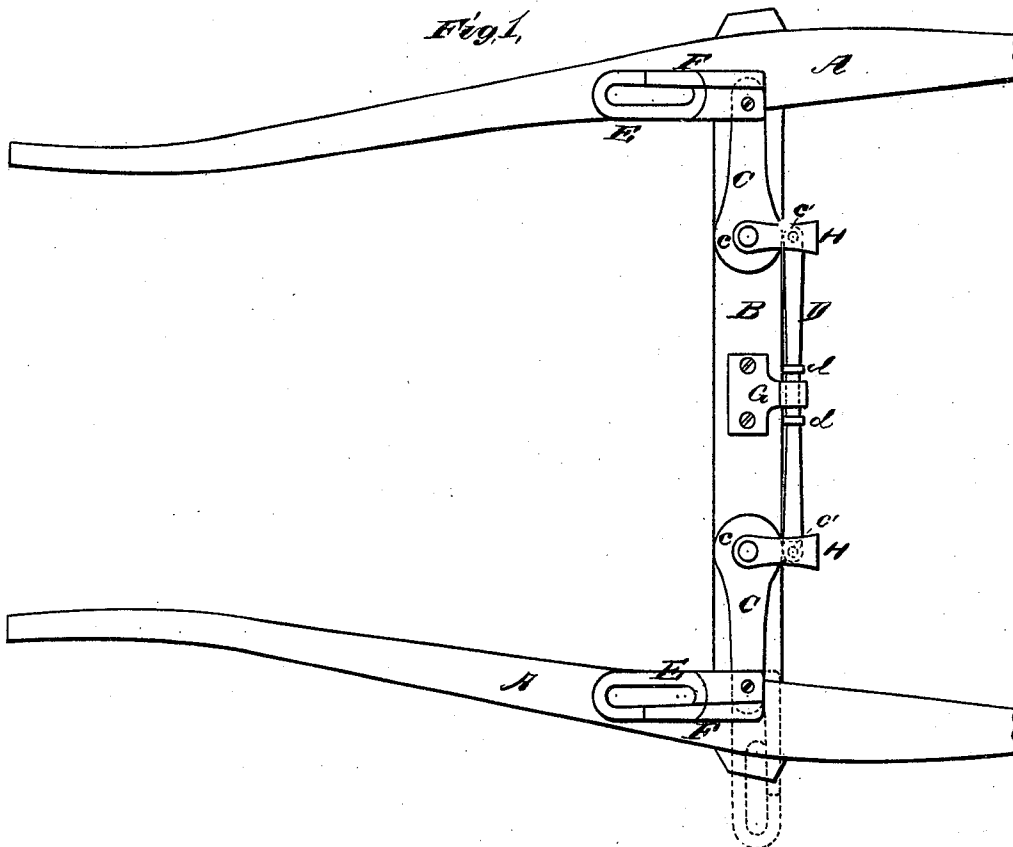


W. KIMBLE.
WHIFFLETREES.

No. 180,038.

Patented July 18, 1876.



WITNESSES

Mo. J. Wiley
E. H. Bates

INVENTOR,

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM KIMBLE, OF ALLIANCE, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT
TO M. A. DRIESBACH, OF SAME PLACE.

IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. **180,038**, dated July 18, 1876; application filed
June 17, 1876.

To all whom it may concern:

Be it known that I, WILLIAM KIMBLE, of Alliance, in the county of Stark and State of Ohio, have invented a new and valuable Improvement in Single-Tree and Trace-Fasteners; and do hereby declare that the following is 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 of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my single-tree and trace-fastener, and Fig. 2 is a side elevation of the same.

This invention relates to single-trees and trace-fasteners; and it consists in a rod which connects two pivoted arms, and in trace-fastening hooks, which are made into closed loops at will by turning down a pivoted piece, substantially as hereinafter set forth.

In the accompanying drawings, A A designate the shafts or thills of a carriage, and B the cross-bar of said shafts. On the top of cross-bar B arms C C are pivoted by their inner ends *c c*. These ends *c* are somewhat broadened and rounded, and provided with rear extensions or ears *c' c'*, on which are pivoted the divided ends of straight rod D. To the outer ends of arms C C, I pivot trace-fastening hooks E E, which may either form longitudinal extensions of said arms, or may be thrown forward at right angles therewith. On the back of each of said hooks I pivot a piece, F, which may be turned up to allow the insertion of the trace, and turned down to lock it in position. The contiguous ends of hooks E E and pieces F F in each pair are correspondingly beveled, so that a perfect loop may be formed in each case without any danger of hinged piece F falling below hook E. Rod D is constructed with fixed collars *d d*, which strike against a metal guide-hook, G, that is secured to cross-bar B, and thereby limit the

longitudinal motion of said rod. H H are protecting-plates, which are secured at both ends to the pivot-bolts of arms C C, and which extend back behind ears *c' c'* and the ends of rod D.

The devices, taken together, will perform the functions of an ordinary whiffletree, while they are incapable of being turned or twisted in any manner. In case the apparatus breaks in any part the horse will still be firmly held on one side at least; and if the connecting-rod breaks, he will still be held on both sides.

Many slight modifications may be made without departing from the spirit of my invention. For instance, a perforated tenon may be substituted for each of the divided ends of rod D, and each arm C may be provided with two ears instead of one, so that said tenon may be pivoted between them. The devices may also be used as a double-tree, each of hooks E E being employed as a holding-hook for a single-tree.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of rod D, arms C C, and trace-fastening devices, substantially as and for the purpose set forth.

2. The combination of rod D, having fixed collars *d d*, with arms C C, having ears *c' c'*, substantially as and for the purpose set forth.

3. The combination of arms C C, rod D, having fixed collars *d d*, and stop G, secured to the cross-bar, substantially as and for the purpose set forth.

4. Trace-fastening hook E, pivoted as shown, and provided with a pivoted piece, F, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM KIMBLE.

Witnesses:

M. R. SHALTERS,
J. C. MORGAN.