A. HAYES.

WHIFFLETREES.

No. 194,148. Patented Aug. 14, 1877.

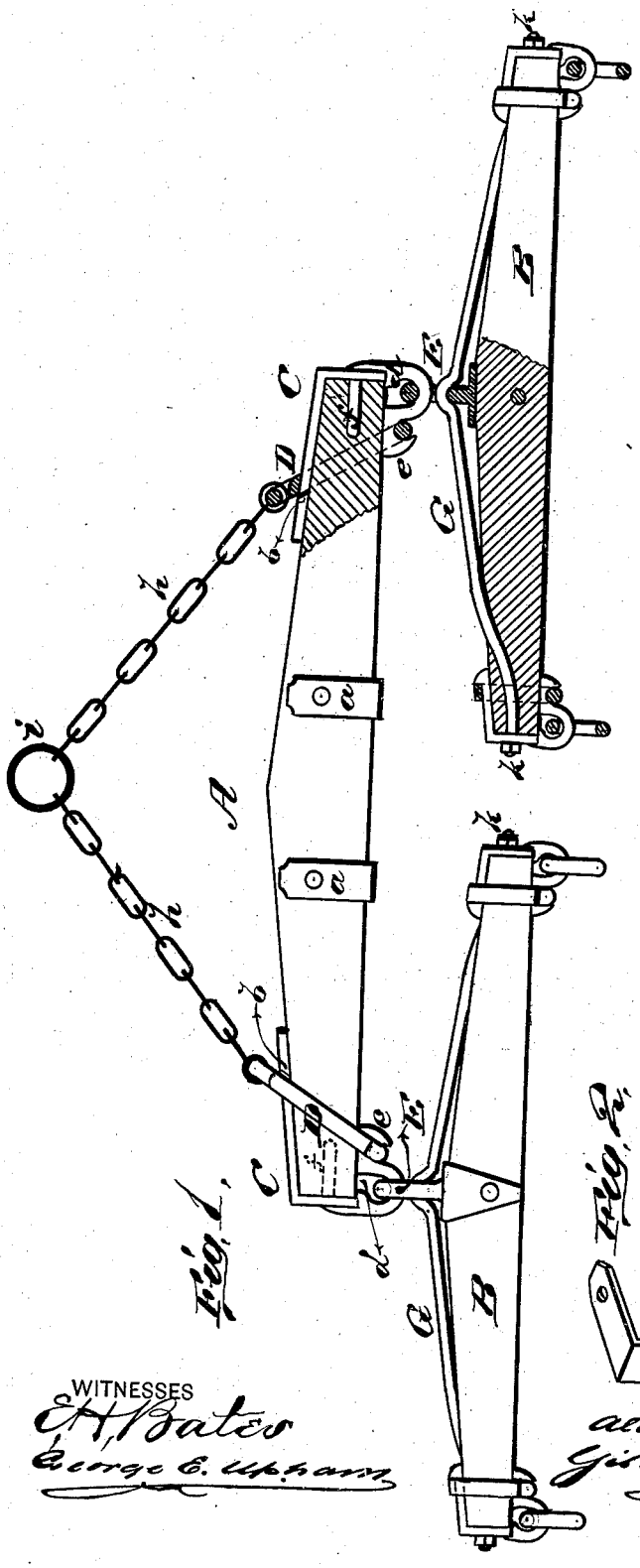

Fig. 1.

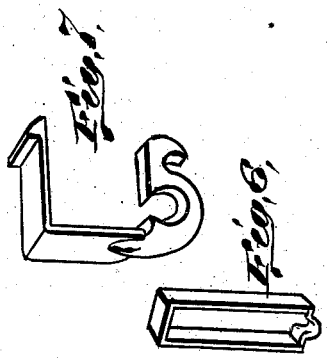

Fig. 2.

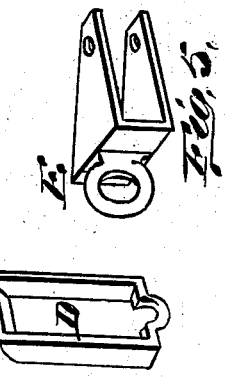

Fig. 4.

Fig. 5.

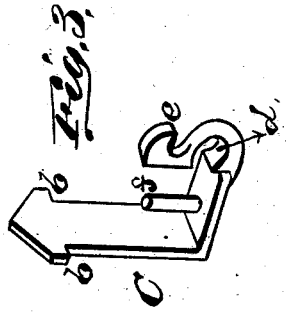

Fig. 3.

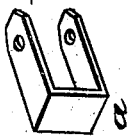

Fig. 6.

WITNESSES

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IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. **194,148**, dated August 14, 1877; application filed June 23, 1877.

To all whom it may concern:

Be it known that I, ALBERT HAYES, of Petaluma, in the county of Sonoma and State of California, have invented a new and valuable Improvement in Whiffletrees; and I 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 part-sectional plan view of my whiffletree-coupling. Figs. 2, 3, 4, 5, 6, and 7 are perspective details of the same.

The nature of my invention consists in the construction and arrangement of a whiffletree-coupling, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the double-tree, and B B the single-trees connected to the ends thereof. *a a* represent irons surrounding the top, bottom, and front of the double-tree A near the center, for strengthening the same. Each end of the double-tree A is provided with an iron, C, which covers the end of the double-tree, and extends inward along the rear side thereof for a suitable distance, and the extreme end of this part of the iron is formed with shoulders *b b* at the top and bottom edges, as shown. The front part of the iron C extends inward on the front side of the double-tree, and forms an eye, *d*, open at the rear, and a hook, *e*. In the hook *e* is placed a clevis, D, which surrounds the end of the double-tree and the iron C, and is inclined inward and rearward, its rear portion resting against the shoulders *b* on the iron. The rear ends of the clevises D D are formed with eyes, in which are fastened chains *h h;* and these chains are connected together by a link, *i*, which is to form the connection with the vehicle, so that there will be no hole through the double-tree for any connecting-bolt, thus preventing the weakening of the double-tree. From the main part of the iron C projects a pin, *f*, which extends inward longitudinally into the double-tree. In the eye *d* of the iron C is connected a clevis, E, fastened to the center of the single-tree B. Through the eye of this clevis is passed a rod, G, the ends of which are passed inward through the back of the single-tree, and out through the ends of the same. On the ends of the whiffletree B is placed an iron similar to those on the ends of the double-tree A, with the exception that they have no pins *f*, the ends of the rod G taking their places, and nuts *k*, screwed on the ends of said rod, keep the parts in place, and also stretch said rod to give it the proper tension on the single-tree.

The irons or bands *a* on the double-tree A are located in such places that the ends of the single-trees will come in contact with them, instead of with the double-tree itself, and thus prevent all wear thereon.

By my invention the wood of which the double and single trees are made is entirely protected and prevented from splitting, and making the entire whiffletree more strong and durable.

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

In combination with a double-tree, A, the end irons C C, constructed as described, with shoulders *b*, eye *d*, hook *e*, and pin *f*, the clevises D, chains *h*, and ring *i*, substantially as and for the purposes set forth.

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

ALBERT HAYES.

Witnesses:

FRANK W. SHATTUCK,

WILLIAM F. SHATTUCK.