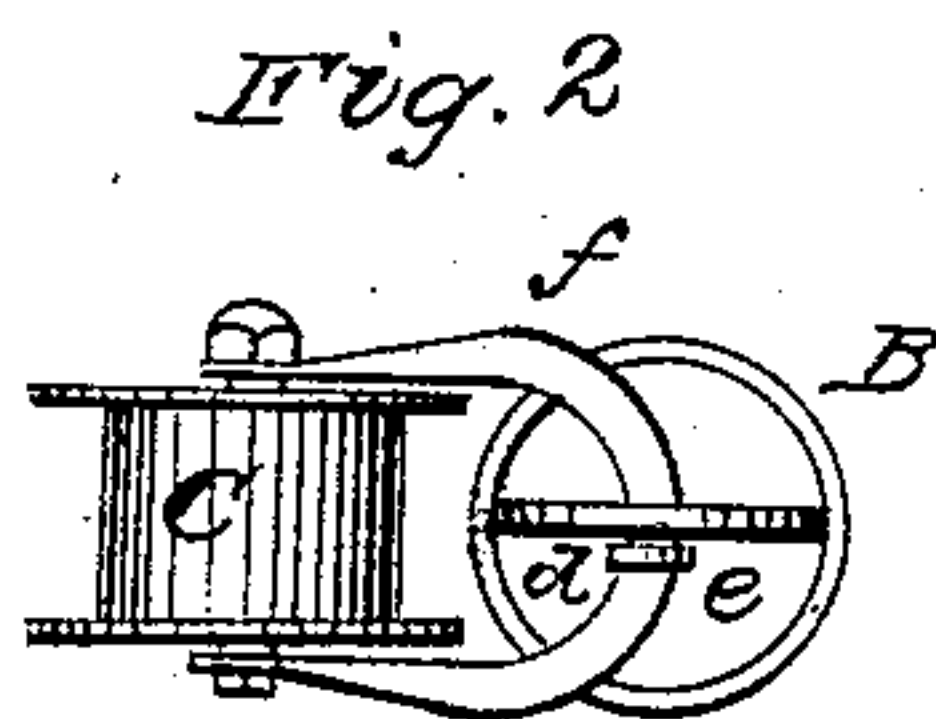


D. M. CASTLE.

Whiffletree.

No. 110,200.

Patented Dec. 20, 1870.



Witnesses
Chas. Kemper
Villette Anderson

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United States Patent Office.

DAVID M. CASTLE, OF CONSTANTINE, MICHIGAN.

Letters Patent No. 110,200, dated December 20, 1870.

IMPROVEMENT IN CLEVISES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID M. CASTLE, of Constantine, in the county of St. Joseph and State of Michigan, have invented a new and valuable Improvement in Equalizing 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 drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of my whiffletree in plan view, and

Figure 2 is an enlarged side view of the pulley at the inner end of each whiffletree.

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

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing.

A represents the doubletree, made in any of the known and usual ways, and having at each end a clevis, *a*, to which a whiffletree, B, is attached.

The point on the whiffletree at which the clevis *a* is connected is one-third the entire length from the inner end, making the outer end of each whiffletree exactly twice as long as the inner end.

At the outer end of each whiffletree is attached a hook, *b*, for attaching the outer trace of the outer

horse; while at the inner end is inserted a bolt or flat iron, *d*, with a hole through its outer end.

Through this hole is passed a clevis, *f*, in the ends of which is pivoted a horizontal pulley, C.

On the clevis *f*, immediately under the eye of the bolt *d*, is placed an expansion or collar, *e*, which holds the clevis and pulley out horizontally in proper position.

The pulley C is grooved for the reception of a chain, *h*, which passes around the same, and has a hook, *i*, at each end.

The inner traces of the outer horses are attached one to one end of each chain, while the middle horse is attached to the remaining ends of the two chains.

This forms a perfectly equalizing three-horse whiffletree, as is readily seen.

Having thus fully described my invention,

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

1. The collar *e* upon the clevis *f*, substantially as and for the purposes herein set forth.

2. In combination, the collar *e* and clevis *f* with a ring, *d*, substantially as and for the purpose specified.

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

DAVID M. CASTLE.

Witnesses:

JOHN H. EACKER,

SAMUEL R. ROCKWELL.