

ROBERT W. McCLELLAND.
Improvement in Whiffletrees.

No. 115,078.

Patented May 23, 1871.

fig. 1.

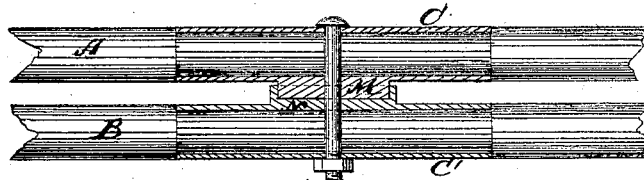


fig. 2.

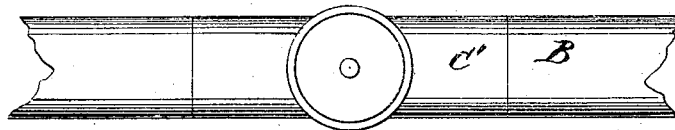


fig. 3.

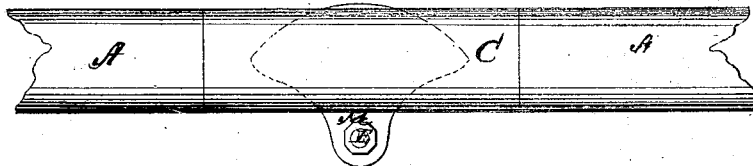


fig. 4.

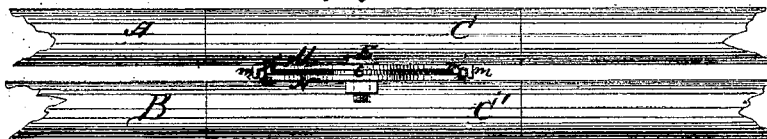
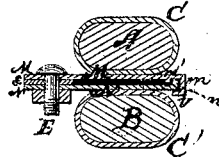


fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT W. McCLELLAND, OF SPRINGFIELD, ILLINOIS.

IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. 115,078, dated May 23, 1871.

To all whom it may concern:

Be it known that I, ROBERT W. McCLELLAND, of Springfield, in the county of Sangamon and State of Illinois, have invented certain Improvements in Whiffletrees; and I declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal vertical section of one modification of my invention, and Fig. 2 is a top view of the supporting-bar. Fig. 3 is a top view of another form of the apparatus; Fig. 4 is a rear elevation of the same; and Fig. 5, a cross-section in line *xx* of Fig. 3.

Similar letters of reference indicate like parts.

Whiffletrees as heretofore constructed have been defective in several particulars. In the first place, resting directly on the supporting-bar beneath, the friction of the two contiguous wooden surfaces is very great; in the second place, having nothing but the pivot-bolt or pin to guide and steady them in their movements, their ends have been liable to become inclined and knock against the bar beneath; in the third place, after a little wear they frequently break at the center, where they are weakened by the pivot-bolt; and in the fourth place, they often break the pivot-bolt itself, unless it is made very strong.

The method generally adopted heretofore to obviate these defects of construction has been to increase the thickness of the whiffletree at its center, so that it should be stout and strong in that vicinity, and by means of such greater diameter should be raised elsewhere away from the bar beneath. This method of construction only results in making the whiffletrees heavy and bungling, without obviating the difficulties complained of.

My invention has for its object to avoid these defects and to produce a neat, handsome whiffletree, which shall be cheaply made and shall combine the minimum of size with the maximum of strength; and to this end the invention consists in the employment of a metallic ferrule around the whiffletree in the vicinity of the pivot, in connection with metallic plates, which answer as bearings and guides for the whiffletree, as hereinafter more particularly described.

In the drawing, A indicates the whiffletree,

and B the bar upon which it is supported, whether such bar be movable or fixed. The whiffletree and bar B are surrounded by ferrules C C, about four inches long, the pivot being equidistant between the ends of the ferrule. Attached to the ferrule C of the whiffletree is a bearing-plate, M, which rests on another plate, N, fixed upon or forming a part of the ferrule C of the under bar.

The best practical form of these parts is that represented in Figs. 3, 4, and 5, where the two plates are nearly in the form of quadrants, their curved edges being in front and their angles projecting to the rear of the tree, and there connected by the pivot-bolt E, a washer, E, being employed between them. As thus constructed, the under plate is provided with a raised flange, *n*, around its front edge, which fits closely between two downward-projecting flanges, *m m*, of the upper plate, as seen in Figs. 4 and 5. The flange *m* may also be, at one or more points, turned in under the edge of the lower plate, as shown at *v*, Fig. 5, forming a kind of hook, which locks the plates together and prevents them from being separated by any vertical force.

This method of construction has three advantages over that illustrated in Figs. 1 and 2, namely: First, that it saves the necessity of weakening the whiffletree by passing the pivot-bolt through it; secondly, it enables the bearing-surface to be made broader without looking cumbersome and bungling; and thirdly, it diminishes the strain upon the bolt E, the latter effect being in consequence of the operation, first, of the guide-flanges *m m' n*, and secondly, of bringing close together the plates that apply the force to the pivot, so that there is no "leverage" upon it and no tendency to twist or wrench it off; in other words, the draft is always directly forward upon the pivot, and even this direct draft is divided between it and the flanges *m m' n*.

The great width of the plates in line with the longer axis of the whiffletree, together with the operation of the lip or hook *v*, which holds the plates closely together, prevent longitudinal working or tilting of the whiffletree upon its center. Here, again, the plates support and protect the pivot-bolt, guarding it against fracture and preventing it from wearing its socket rapidly.

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

1. The combination of two ferrules, C C', one constructed with a flat horizontal plate attached to its under side, and the other with a flat horizontal plate attached to its upper side, said plates being adapted to fit together, and being connected by a pivot-bolt, E, in rear of the ferrule, substantially as described, and for the purposes specified.

2. The ferrule C with its plate M, in combination with the ferrule C' with its plate N, said parts being constructed with the flanges *m m' n* and hook *v*, and connected by the pivot-bolt E, substantially as and for the purpose set forth.

ROBERT W. McCLELLAND.

Witnesses:

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