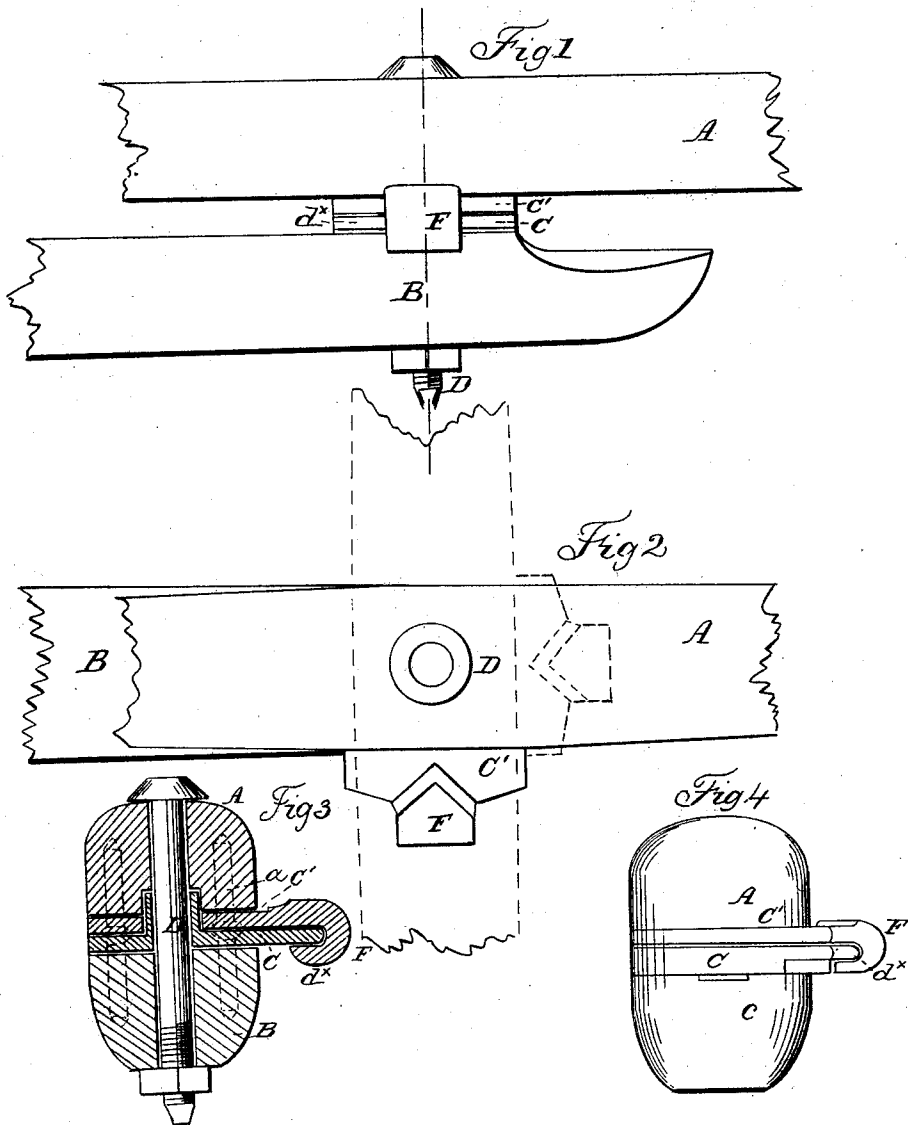


E. SOPER.

Whiffletree.

No. 41,329.

Patented Jan. 19, 1864



Witnesses
Wm. H. Douglas
J. Robertson

Inventor
E. Soper

UNITED STATES PATENT OFFICE.

EPHRAIM SOPER, OF NEW YORK, N. Y.

IMPROVEMENT IN WHIFFLETREE ATTACHMENTS.

Specification forming part of Letters Patent No. **41,329**, dated January 19, 1864.

To all whom it may concern:

Be it known that I, EPHRAIM SOPER, of the city, county, and State of New York, have invented a new and useful Improvement in Whiffletree Attachments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a back view of my invention applied to a double-tree; Fig. 2, a plan or top view of the same; Fig. 3, a transverse vertical section of the same, taken in the line *x x*, Fig. 2; Fig. 4, a transverse vertical section of a modification of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved attachment for whiffletrees, whereby the bolt which connects the whiffletree to the double-tree or to the cross-bar of a pair of shafts or thills is protected from the pull or strain to which it is commonly subjected under the draft of the animal, and the whiffletree at the same time rendered capable of being turned nearly or entirely around and applied to or detached from the double-tree or thills with equally as great facility as with the ordinary bolt attachment.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a whiffletree, which may be constructed in the usual way, and B in Figs. 1, 2, and 3 represents one end of a double-tree, to which the whiffletree is attached. To the double-tree B, on its upper surface, there is secured by screws a metal plate, C, the front edge of which is flush with the front edge of the double-tree and the back edge, *d*^{*}, extending beyond the back of the double-tree and made in segment form, or forming a part of a circle of which the whiffletree-bolt D is the center. The plate C has a tubular vertical projection, *a*, which, when the plate C is attached to the double-tree, is about at the center of the width of the latter.

C' represents a metal plate, which is secured

to the under surface of the center of the whiffletree and has a circular opening in it to fit over the tubular projection *a* of the plate C, as shown in Fig. 3. At the back edge of the plate C' there is a hook, F, which fits over the back circular edge of the plate C, as shown clearly in Fig. 3.

The bolt D passes through the center of the whiffletree and through the tubular projection *a*, as shown in Fig. 3.

From the above description it will be seen that the hook F, in fitting over the back edge of the plate C, serves to relieve the bolt D from the usual pull or strain under the draft of the animal, and the whiffletree at the same time is allowed to turn freely on the bolt D to a position at right angles with the double-tree, as shown in red outline in Fig. 2, and in order to admit of this turning of the whiffletree the end of the double-tree is hollowed out at its upper surface, as shown at *b* in Fig. 1.

For whiffletrees that are attached to the cross-bars *c* of shafts of thills I have the plate C made thicker than those for double-trees, as shown in Fig. 4, and have a recess, *d*, made in the under side of the back part of the plate to receive the hook F. By this means the hook F is allowed to clear the cross-bar *c*, when the whiffletree is turned without cutting away any of the upper surface of said cross-bar. This turning of the whiffletrees is frequently necessary in order to economize in space in carriage-houses, the projecting whiffletrees being frequently in the way, and they require to be turned in detaching them in order to free the hook from the plate C.

Having thus described my invention, I claim and desire to secure by Letters Patent, as an improved article of manufacture—

A whiffletree attachment, composed of plates C C', hook F, extension-edge *d*^{*}, and tube *a*, made and applied as herein shown and described.

E. SOPER.

Witnesses:

THOS. L. J. DOUGLAS,
J. W. COOMBS.