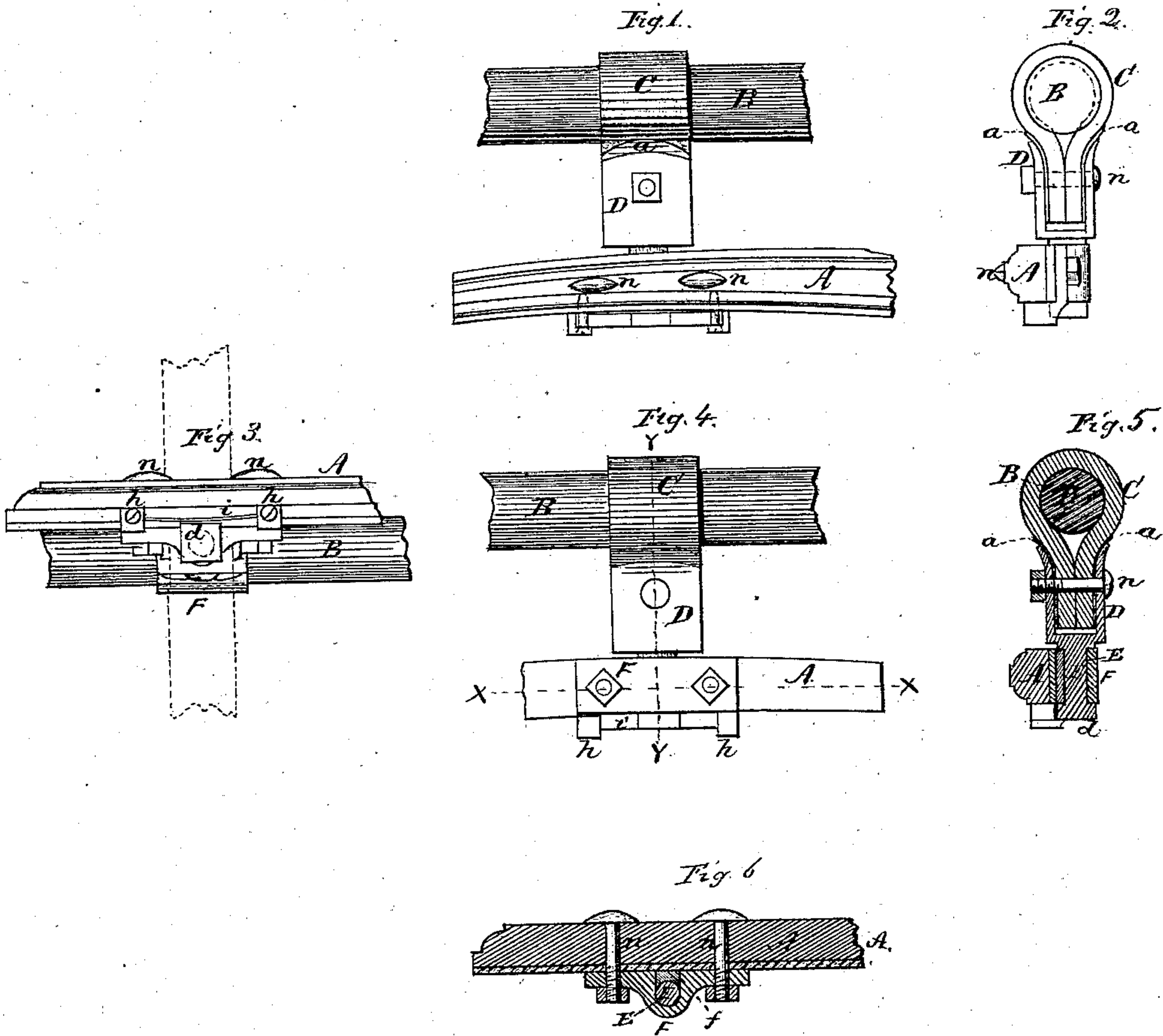


H. KILLAM.  
WHIFFLETREE COUPLING.

No. 98,779.

Patented Jan. 11, 1870.



Witnesses:  
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# United States Patent Office.

HENRY KILLAM, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 98,779, dated January 11, 1870.

## IMPROVEMENT IN WHIFFLETREE-COUPLING.

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, HENRY KILLAM, of New Haven, in the county of New Haven, and State of Connecticut, have invented a new Improvement in Whiffletree-Coupling; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

- Figure 1, a top view;
- Figure 2, a side view;
- Figure 3, a rear view;
- Figure 4, the reverse of fig. 1;
- Figure 5, a section on line *y y*; and
- Figure 6, a section on line *x x*.

This invention relates to an improvement in coupling whiffletrees to carriages, more particularly such as are furnished with whiffletrees for two horses. Heretofore these have been attached by a bolt passing through the whiffletree-bar or "eveners," with a nut upon the back side. This nut is liable to work off, and, consequently, allow the whiffletree to drop, and many serious accidents are traceable directly to this one fault.

My invention consists in the construction of a coupling with a bearing to set into a box upon the upper or under side of the whiffletree-bar, whereby I dispense with the nut, the head being a part of the shackle itself.

A is the whiffletree-bar or "eveners," of common construction.

B, the whiffletree, also of common construction.

C is a strap, of leather or other suitable material, forming a band around the whiffletree, and carried back into the head D of the coupling, where it is secured by a bolt in the usual manner, the coupling-head D being divided so as to receive the strap between its two sides.

To prevent the sides of the head from wearing the leather, I place upon, and fix to the surface of the strap, upon each side, a plate, *a*, of brass or other metal, so that the meeting-surfaces between the strap and head are metal.

On the head, I form a shank, E, in similar manner

as for forming the usual bolt, with this exception, that instead of preparing the end of the shank to receive the nut, I form solidly thereon a head, *d*, that portion of the shank between the said head and coupling forming a bearing to set into a box, F, as seen in figs. 5 and 6.

The said box F, as seen in fig. 6, is formed to receive the bearing E, and a block, F, above the bearing, the said block lying flush with the upper surface of the box, and this box F is secured to the whiffletree-bar by bolts, *n n*; thus I am enabled to plate the whiffletree-bar with a flat plate over its entire under surface.

I would here remark, that while I prefer the construction of the box as described, in consequence of its cheapness, yet, if preferred, a part of the box may be formed on the whiffletree-bar plate, but this would increase the expense of construction.

The head *d*, I make square, or any desirable number of sides, and construct the box with ears, *h*, (see figs. 3 and 4,) to support a flat spring, *i*, to rest on the head of the bearing, as seen in fig. 3. Therefore, when it is desirable to turn up the whiffletree, as denoted in broken lines, fig. 3, the spring will yield to permit the turning of the head, and when the whiffletree is turned up, the spring will aid in retaining it in that position, and will also hold the whiffletree in a horizontal position, allowing all the necessary play.

I claim, as my invention—

1. The arrangement of the plates *a* upon the ends of the straps C, to form the bearing between the two sides of the coupling and strap, substantially as and for the purpose specified.

2. The coupling D, constructed with the bearing E and head *d*, and combined with the box F, substantially in the manner described.

3. In combination with the coupling D, constructed with the bearing E and head *d*, the arrangement of the spring *i*, substantially as and for the purpose set forth.

HENRY KILLAM.

Witnesses:

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