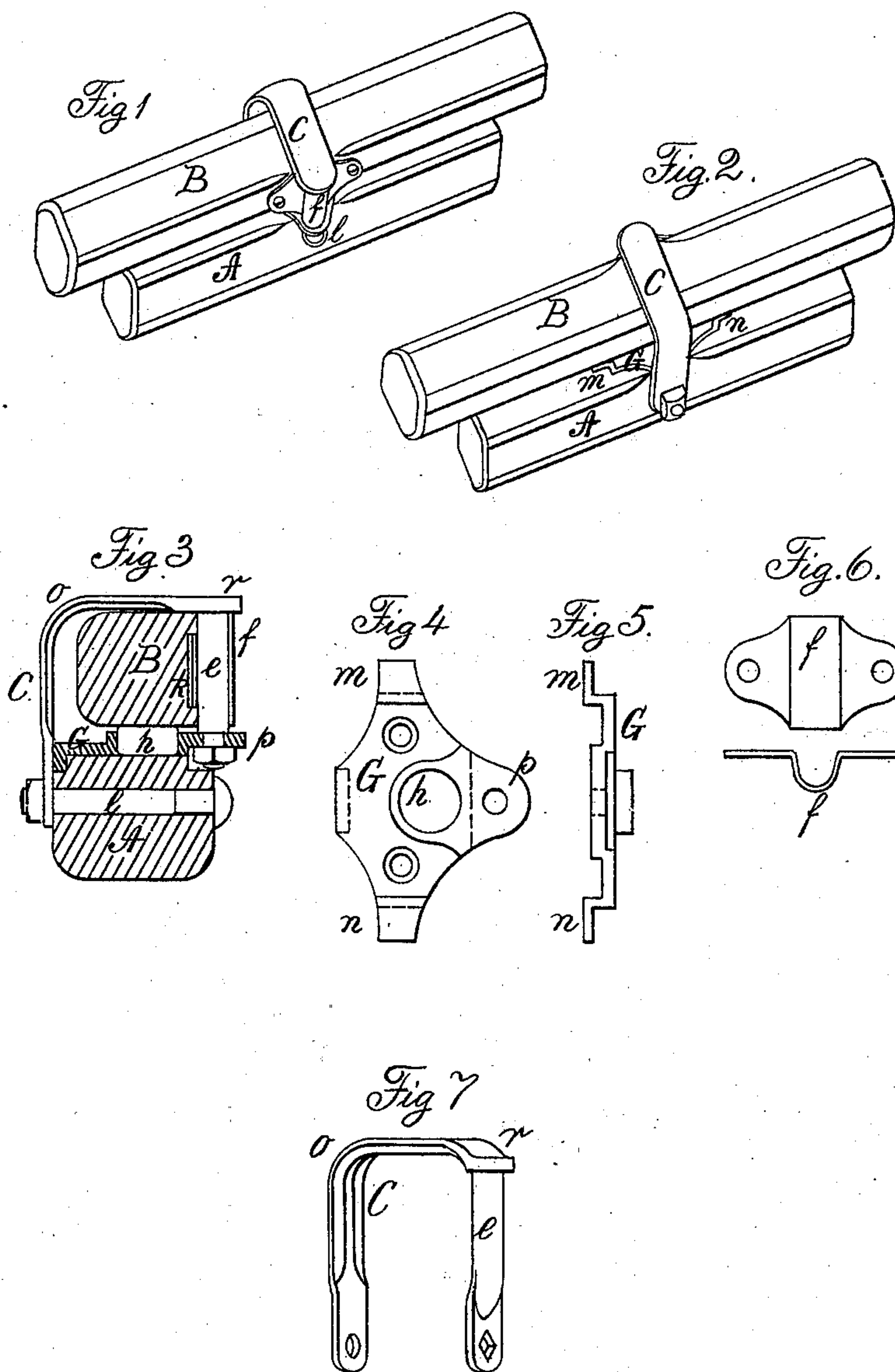


H. A. LUTTGENS.  
Whiffletree Plate and Clevis.

No. 198,771.

Patented Jan. 1, 1878.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HENRY A. LUTTGENS, OF PATERSON, NEW JERSEY.

## IMPROVEMENT IN WHIFFLETREE PLATES AND CLEVISES.

Specification forming part of Letters Patent No. **198,771**, dated January 1, 1878; application filed February 5, 1877.

*To all whom it may concern:*

Be it known that I, HENRY A. LUTTGENS, of Paterson, New Jersey, have invented certain Improvements in Whiffletree Plates and Clevises, of which the following is a specification:

My invention is an improvement upon the ordinary whiffletree plate, bolt, and clevis of carriage-shafts.

It consists in placing a clevis in a manner so that one limb or side thereof is used for the whiffletree pin or bolt. The clevis is placed vertically, and the ends of its sides are secured to the cross-bar, either directly by a bolt, or one end of the clevis is secured to the cross-bar by means of a plate fastened to the top of the cross-bar. The plate is provided with a hole, which contains rubber packing, supporting the whiffletree and pressing the same to the under side of the clevis. The opening of the clevis is made sufficiently large to enable the whiffletree to move freely within the clevis, and the whiffletree is held in contact with the pin-formed side of the clevis by means of a clasp, which is fastened to the face of the whiffletree. The opening between the top of the plate and the under side of the clevis is equal to the thickness of the whiffletree, and the plate is lengthened by projecting ears, which serve to preserve the whiffletree in a horizontal position or parallel with the cross-bar. A wearing-plate is inserted into the face of the whiffletree.

In the accompanying drawings, Figures 1 and 2 are perspective views of portions of a whiffletree and cross-bar, with the improvements attached. Fig. 3 is a vertical section of the same. Figs. 4 and 5 are plan and elevation, representing the plate. Fig. 6 shows the clasp; and Fig. 7 an elevation of the clevis, with both limbs extended for bolting to the cross-bar.

B represents a portion of a whiffletree, and A a portion of the cross-bar of a shaft, to which the whiffletree is secured. Clevis C is secured by bolt *l* to the cross-bar, and also by the end of pin *e*, which latter is part of the clevis. The pin *e* is formed with a shoulder and threaded end, and it passes through a hole in a projection, *p*, of plate G, to which it is secured

by a nut; or the clevis C is extended, as shown in Fig. 7, and both ends of the same are secured directly to the cross-bar A by means of bolt *l*. If preferred, one or both ends of the clevis may be widened, so as to receive two bolts.

Plate G is secured to the top of cross-bar A. It is provided with a hole to receive packing or rubber *h*, which supports whiffletree B. The plate is also provided with ears *m n*, which reach to the under side of the whiffletree B. The projection *p* of plate G is omitted when the clevis C is made as shown in Fig. 7.

A wearing-plate, *k*, is inserted into the face of whiffletree B, which bears against pin *e*, and a clasp, *f*, is secured to the face of whiffletree B, which holds it in contact with pin *e*.

The connection between the whiffletree and cross-bar, as ordinarily constructed, consists of a bolt which passes through the center of, and which is secured to, the whiffletree, the bolt moving in a hole in the center of the cross-bar with the movements of the whiffletree. A mode of securing the bolt to the whiffletree in this position, by means of a clip, is shown in the patent to D. Wilcox, No. 172,537. The connection when so made places the bolt below the point of draft, and it is liable to wear so as to cause the whiffletree to lean forward. To insure safety, the bolt is often provided with a clevis placed horizontally, which is of a length to reach over the top of the whiffletree and below the bottom of the cross-bar, so that the top and bottom of the connecting-bolt pass through this clevis.

To provide a connection between the cross-bar A and whiffletree B which will maintain the whiffletree in its proper position without leaning is the object of the device herein described, and which is attained by placing a clevis, C, vertically, and by securing both ends of the clevis directly or by means of the plate G to the cross-bar A. The whiffletree B, which presses, when in use, against the pin-shaped side *e* of the clevis C, is not able to move or displace the same, and the clevis C offers equal resistance to bending at both of the corners *o* and *r*; therefore, the clevis when so placed will preserve the whiffletree B in its proper position, since the pin *e* is thereby brought directly in front of the whiffletree B,

and the liability to lean forward by wear does not exist.

The plate G, by being extended sidewise, and reaching, by means of ears *m n*, to the under side of the whiffletree B, preserves the whiffletree in a horizontal or parallel position with the cross-bar A, and the rubber packing *h* prevents jarring or rattling.

I do not claim an improvement in the clevis proper; but

What I claim as new is—

The combination of cross-bar A, the plate

G or equivalent, whiffletree B, and clevis C, when the latter is placed vertically and above the cross-bar A, so that one limb or side of the clevis C is used for the whiffletree pin or bolt.

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Witnesses:

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