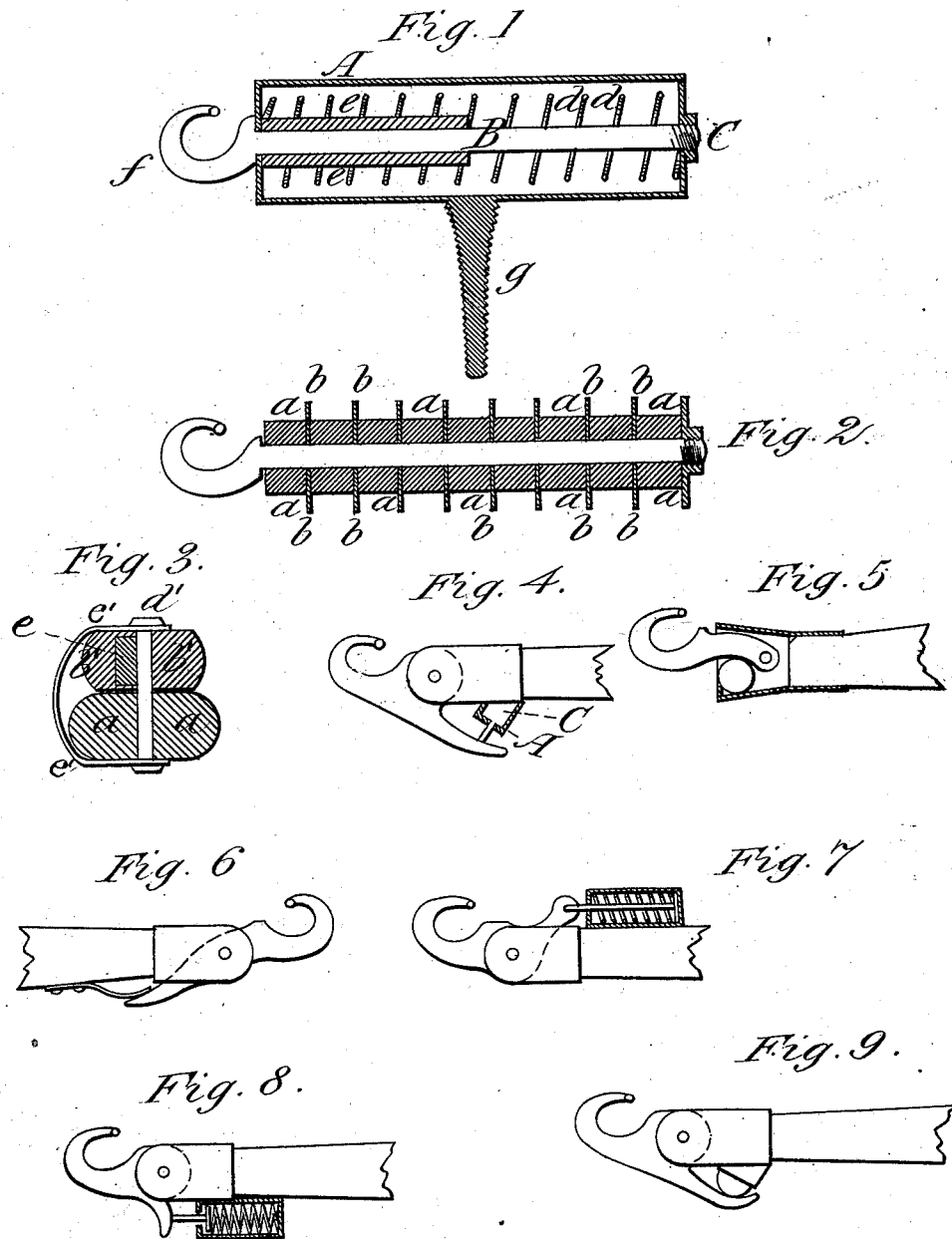


W. V. WALLACE.  
Whiffletree.

No. 216,069.

Patented June 3, 1879.



Attest:

*F. M. Bullen*  
*J. Carpenter*

Inventor:

*Wm V Wallace*

# UNITED STATES PATENT OFFICE.

WILLIAM V. WALLACE, OF DORSET, VERMONT, ASSIGNOR TO AUGUSTINE B. ARMSTRONG, OF SAME PLACE.

## IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. 216,069, dated June 3, 1879; application filed May 2, 1878.

*To all whom it may concern:*

Be it known that I, WM. V. WALLACE, of Dorset, in the county of Bennington and State of Vermont, have invented a new and useful Improvement in Whiffletrees, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a sectional view of the method of applying my invention, Figs. 2, 3, 4, 5, 6, 7, 8, and 9 being modifications of the same principle.

The object of my invention is to secure a method of attaching a horse or horses to a vehicle in a manner to avoid the usual shock or dead-pull at starting, as well as to ease the rigid position of the breast-collar, thereby lessening its liability to chafe, and by the spring movement starting a load much easier, also avoiding strain and breakage, and consequent accidents, when a horse, from fear or other causes, suddenly plunges forward, securing at the same time greater ease for the horse and driver.

By this method the horse is relieved from the continuous and exhaustive jar when drawing, especially over rough and stony roads, and will perform an increased amount of labor at a reduced expenditure of physical force. Economy is also secured in the diminished wear of harness and wagons by the avoidance of the constant jerking and straining.

In the drawings, Fig. 1, A is the inclosing-tube, with its front end pierced in the center to admit the draw-bar B. The cap C is firmly secured to the end of the draw-bar, and rests upon spring *d*, which is adjusted to a suitable tension.

Within the spiral spring *d*, and around the bar B, is placed a rubber cushion, *e*, which resists the pressure of the cap C before the spiral closes, making an elastic rest, and thus obviating breakage of the spiral spring. *f* is the hook to which the traces are attached.

The screw-shank *g* should bear at its outward point toward the hook, so that when it is screwed into the end of the whiffletree, in the ordinary way, it will give the right drawing-line to rod B.

The spring may be made entirely of rubber, as shown in Fig. 2, *a a* being sections of rubber tubing surrounding the draw-bar, and separated by movable metallic washers *b b*, which admit of independent action by each section of rubber, and prevents their being forced out of place and impeding the action of each other, as is the case without the washers.

I have also tried a corrugated cylinder and a round rubber tube, a smooth cylinder and a corrugated rubber tube, and have adjusted the spring movement to the center of the whiffletree and cross-bar, as shown in Fig. 3, *a* being a section of the cross-bar; *b'*, the whiffletree; *e*, rubber cushion; *d'*, bolt; *e'*, metallic guard, sustaining each end of bolt.

I also have tried an elastic attachment of the tug-buckles to the breast-collar, but find the method shown in Fig. 1 to be best adapted to the object required.

Reference is also made to the modifications of this principle shown in Figs. 4, 5, 6, 7, 8, and 9.

To the hook which is now rigidly attached to the ends of horse-cars, onto which the cross-bar of the whiffletrees or the pole is adjusted, I also apply this method.

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

The inclosing-tube A, provided with the screw-shank *g*, draw-bar B, cap C, spring *d*, cushion *e*, and hook *f*, when adapted to form an elastic connection of horses to vehicles, substantially as shown and specified.

WM. V. WALLACE.

Witnesses:

F. M. BUTLER,  
S. E. CARPENTER.