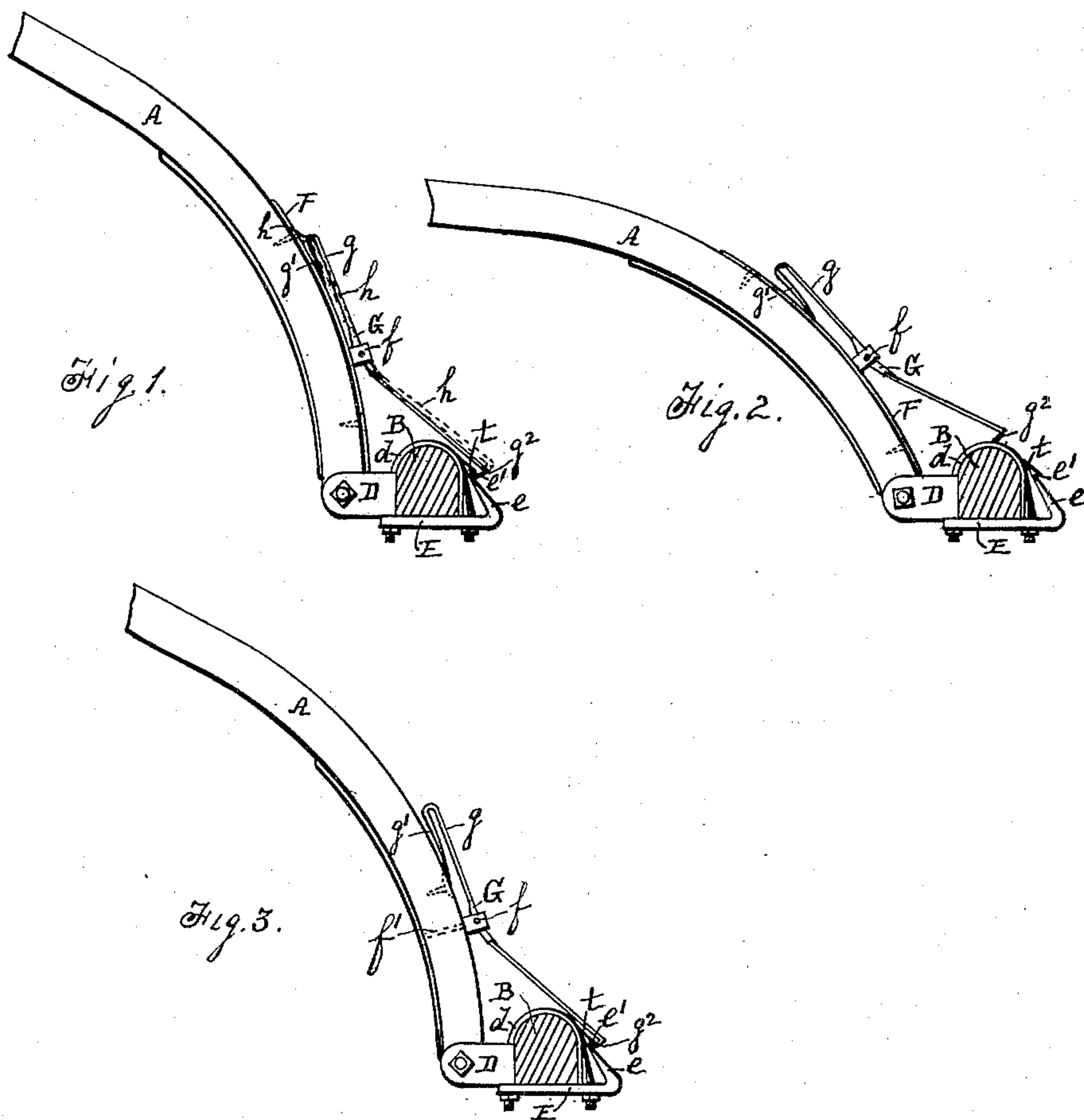


(No Model.)

G. W. KILLIAN.  
VEHICLE SHAFT HOLDER.

No. 468,565.

Patented Feb. 9, 1892.



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# UNITED STATES PATENT OFFICE.

GEORGE W. KILLIAN, OF LANCASTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE R. ERISMAN, OF SAME PLACE.

## VEHICLE-SHAFT HOLDER.

SPECIFICATION forming part of Letters Patent No. 468,565, dated February 9, 1892.

Application filed February 5, 1891. Serial No. 380,299. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. KILLIAN, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Shaft-Holders, of which the following is a specification.

This invention relates to improvements in that class of holders designed to secure the shafts of a vehicle in an elevated position when the animal is detached therefrom; and the object of my improvements is to produce an automatically-acting holder cheap and simple in construction and that can be secured to shafts regardless of the degree of the curvature of the ends connected with the axle.

The invention consists in the construction and combination of parts, as hereinafter fully described, and then specifically pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side view showing the shafts held in an elevated position; and Fig. 2 is a similar view, but with the shafts lowered. Fig. 3 is a side elevation showing a modified form of the holder.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates the shafts, B the axle, and D a thill-coupling connected with the axle by any ordinarily-constructed clip *d*. The bottom plate E of the clip has the rear part extended and bent upward to form a goose-neck *e*, with the tip thereof bearing against the back of the clip, and on the outer or back face of the neck there is formed a shoulder *e'*. From the edge of the shoulder to the tip the outer face of the goose-neck is beveled, as shown at *t*.

F indicates a plate of any suitable shape secured to the top of the shaft and having a post *f* formed on it about the center thereof. A lever G is pivoted in a slot in the post *f* and lies above the plate longitudinally therewith. The forward end *g* of this lever is formed of spring metal, and its extremity is bent backward under it, with the end resting on the plate F and forming an upwardly-acting spring *g'*. The other end of the lever is formed with a hook *g*<sup>2</sup>, adapted to engage the shoulder *e'* of the goose-neck.

As will be seen in Fig. 1, when the shafts are raised sufficiently the hook *g*<sup>2</sup> takes over the shoulder *e'*, being held in engagement therewith by the spring *g'*. The plate F must be so located on the shaft and the end of the lever carrying the hook *g*<sup>2</sup> must set at such an angle with the shaft that as the latter is raised the hook *g*<sup>2</sup> will, as it passes over it, press upon the upper end of the goose-neck with sufficient force to compress the spring *g'*, that the hook *g*<sup>2</sup> may form a positive engagement with the shoulder *e'*. To further insure such action, the goose-neck slopes backward from the free end to the base thereof. When the shafts are lowered, the end of the lever carrying the hook *g*<sup>2</sup> stands up at an angle from the plate F, as shown in Fig. 2, that it may pass over the top of the clip as the shafts are raised.

In Fig. 3 is illustrated a modification of my holder. In this construction the plate F is dispensed with and the post *f* is formed on the upper end of one of the bolts *f'*, securing the shaft-iron to the shaft. To form a bearing for the tip of the spring *g'*, I secure a dash-bolt in the top of the shaft at the point where the tip of the spring will rest, filing or dressing down the head thereof flush with the surface of the shaft. The head of the dash-bolt is found to answer for this purpose, as the longitudinal movement of the spring-tip is comparatively slight. This way of mounting the lever G is employed where the holder is attached to a new vehicle as it is being built, when it can be put on and properly adjusted by skilled workmen. The plate F is used principally with old vehicles, where it is necessary to test the adjustment of the lever or where the purchaser attaches the holder himself.

I prefer to make the lever G of tire-steel, as it is not only strong enough for the purpose, but is sufficiently flexible, when cold, to permit the end carrying the hook *g*<sup>2</sup> to be bent near the post to adjust the hook vertically, when necessary, to engage the shoulder *e'*.

To connect the hook and shoulder, the shafts are simply raised to a sufficient height, when those parts engage automatically. In lowering the shafts the spring end of the lever is pushed inward, as shown by dotted lines *h* in



Fig. 1, by grasping that end of the lever and the shaft with one hand, at the same time slightly raising the shafts with the other, as will be readily understood.

5 My holder possesses the advantages of lightness, strength, and cheapness, and it works with certainty and ease.

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

10 1. The combination, with a shaft-coupling having a shoulder formed on the rear thereof, of a plate secured to the shaft and having a post formed thereon, a lever pivoted in the  
15 post, the rear end thereof having a hook formed on it, adapted to engage said shoulder, the front end being turned back under

itself to form a spring, and a metal bearing on the shaft for the free end of the spring, substantially as and for the purpose specified. 20

2. The combination, with a shaft-coupling having a shoulder formed on the rear thereof, of a post secured to the shaft, a bolt set in the shaft in front of the post, and a lever pivoted in the post, the rear end having a hook 25 formed on it, adapted to engage said shoulder, the front being turned back to form a spring and having the end bearing on the head of said bolt, substantially as and for the purpose specified.

G. W. KILLIAN.

Witnesses:

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