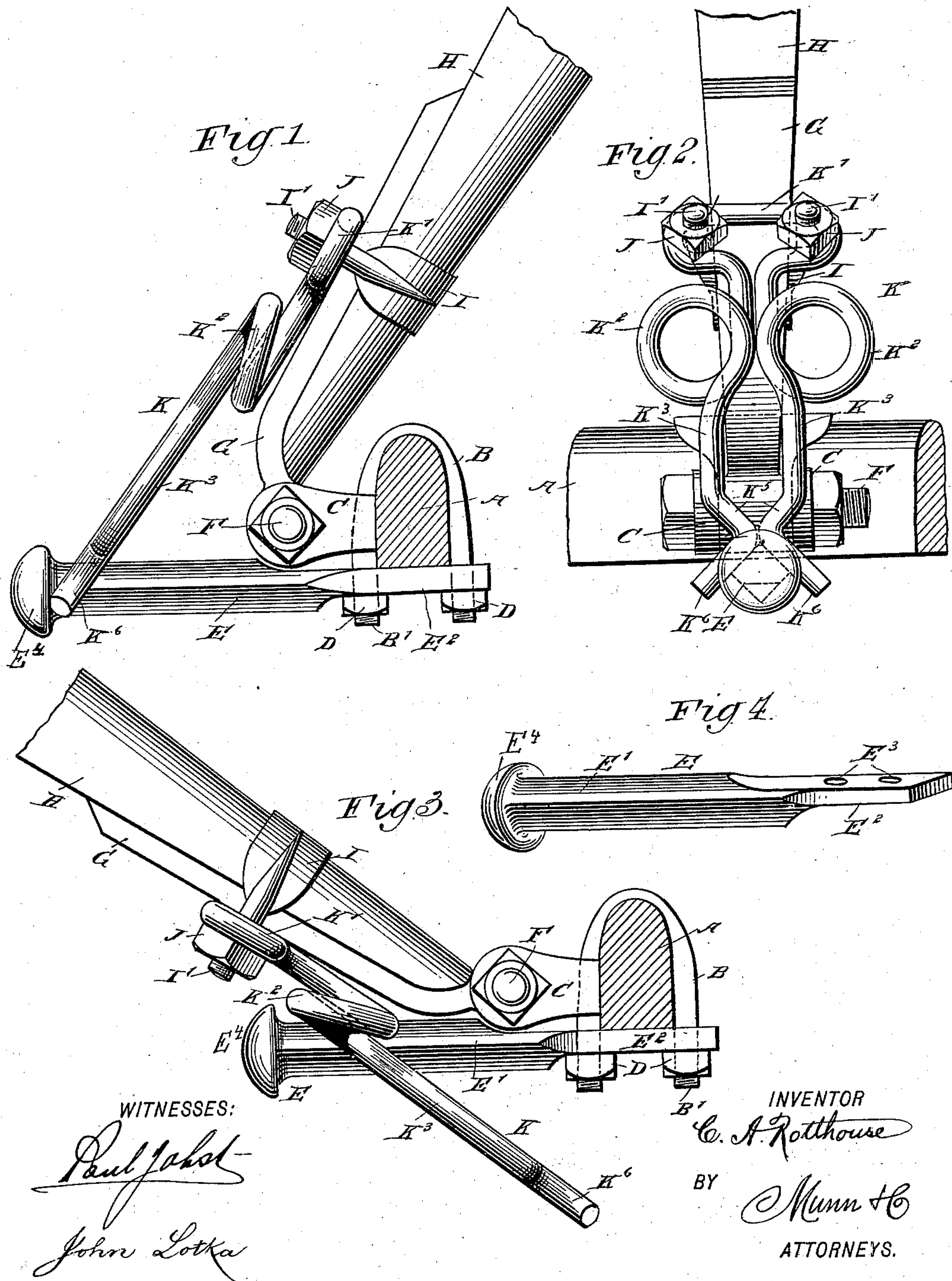


(No Model.)

C. A. ROTHHOUSE.  
THILL SUPPORT.

No. 547,291.

Patented Oct. 1, 1895.





# UNITED STATES PATENT OFFICE.

CHARLES A. ROTTHOUSE, OF BRANDYWINE HUNDRED, DELAWARE.

## THILL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 547,291, dated October 1, 1895.

Application filed March 18, 1895. Serial No. 542,211. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. ROTTHOUSE, of Brandywine Hundred, in the county of New Castle and State of Delaware, have invented a new and Improved Thill-Support, of which the following is a full, clear, and exact description.

The invention relates to devices for holding vehicle shafts or tongues when raised and thrown back.

The object of my invention is to provide a simple device of the above-indicated class, which will securely hold the shaft in the raised position, yet readily yield when it is desired to swing the shaft forward and downward.

To this end my invention consists in the novel construction and combination of parts that will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved holdback applied to a vehicle axle and shaft, the axle being shown in section, and the shaft being raised. Fig. 2 is a front elevation thereof. Fig. 3 is a view similar to Fig. 1, with the shaft lowered, and Fig. 4 is a detail view of a bolt used in connection with the axle-clip.

On the axle A is mounted the usual clip B, having screw-threaded ends B' and provided with brackets C. The screw-threaded ends B' are adapted to receive nuts D, which engage a bolt E forming a bottom plate for the clip. The said bolt, as shown in Fig. 4, consists of a square portion E', the sides of the square being inclined so as to converge upward and downward, respectively, (see Fig. 2,) and the rear end of the bolt is flattened, as shown at E<sup>2</sup>, and is provided with apertures E<sup>3</sup>, adapted to receive the ends of the clip B. In the brackets C is secured the pivot F of the thill-iron G, which is secured to the shaft or tongue H in the usual manner, by a clip I.

The clip I has screw-threaded ends I' for the reception of nuts J serving to fasten in position the holdback proper K. The said holdback consists of a looped central portion K', which embraces the two ends I' of the clip I (see Fig. 2) and side members extending from said central portion and having coils

K<sup>2</sup>, from which extend outwardly spring-shanks K<sup>3</sup>. The ends of the spring-shanks K<sup>3</sup> are formed with converging portions K<sup>5</sup> and diverging ends K<sup>6</sup>, the said portions being arranged approximately perpendicular to each other.

When the tongue H is raised and thrown back, as shown in Figs. 1 and 2, the diverging ends K<sup>6</sup> of the holdback K rest on the upper beveled faces of the bolt E, and thereby prevent the tongue H from swinging downward. When, however, it is desired to swing the tongue forwardly to the position shown in Fig. 3, the spring-shanks K<sup>3</sup> will readily yield, owing to the wedging action of the inclined sides on the bolt and on the ends of the shanks, and thus the said shank ends will spread sufficiently to slip off the bolt. A similar action will take place when the tongue is again swung up, as in that case the inclined converging faces K<sup>5</sup> will be forced apart by the lower inclined faces of the bolt E, and thus also slip off the said bolt.

It will be seen that the holdback proper K consists of one piece, and can be readily manufactured. I do not limit myself to the construction shown in the drawings and the improved holdback, and the clip-bolt which is used in connection therewith may be employed in conjunction with thill-couplings of any known or approved construction.

The head E<sup>4</sup>, at the front end of the bolt E, is made wider than the space between the spring-shanks K<sup>3</sup>, the object of this construction being to prevent the spring shanks from slipping off the bolt in case the pivot F should drop out accidentally. Thus in the event of the pivot becoming loose and detached, the shafts will not drop down on the horse's legs, but will remain connected to the bolt E.

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

1. A thill support, consisting of an integral spring rod bent at its middle to form two duplicate loops whereby bolts are received for rigidly securing the rod to the under side of a thill, the rod having its remaining portions bent to form two spring coils and having its extremities spread to form a longitudinally elongated loop terminating in divergent portions, the tendency of the rod being to keep



said divergent portions in forcible contact and to keep the elongated loop continually closed, and a bolt adapted to be rigidly secured to the under side of the axle and projecting forwardly therefrom, the said bolt having on its upper side inclined faces slanting away from each other and adapted to cooperate with the divergent ends of the rod whereby, as the said divergent ends engage with the inclined faces of the bolt, the ends are sprung apart and the bolt received in the elongated loop of the rod and whereby the thill may be supported by the divergent ends resting upon the said bolt, substantially as described.

2. A thill support, consisting of a spring rod formed with an elongated loop and divergent ends, the said divergent ends being directly adjacent to the elongated loop and having a normal tendency to bear forcibly against each other, and a bolt adapted to be rigidly secured to the under side of the axle and projecting forwardly from the same, the front end of the bolt being formed with a head incapable of passing through the elongated

loop of the rod, the divergent ends of said rod being capable of swinging apart to permit the entry of the rod into the said elongated loop, substantially as described.

3. A thill support, consisting of a spring rod bent to form an elongated loop and having its ends adjacent to one end of the loop, the said ends being spread or diverged from each other, the rod being adapted to be secured to the under side of the thill and a bolt adapted to be secured to the axle and to project forwardly therefrom and having its upper side formed with two outwardly and downwardly slanting faces, the divergent ends of the rod being capable of straddling the bolt and of supporting the shafts when under ordinary pressure and of passing around the bolt and receiving the same in the elongated loop when under the influence of extraordinary pressure, substantially as described.

CHARLES A. ROTTHOUSE.

Witnesses:

BENJAMIN FRAM.

WILLIAM ROTTHOUSE.