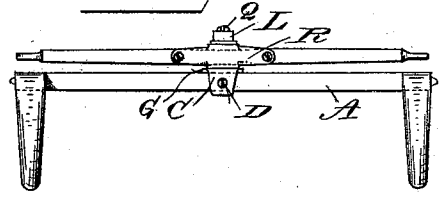
(No Model.)

A. W. MITCHELL.

WHIFFLETREE.

No. 522,611. Patented July 10, 1894.

Fig. 2.



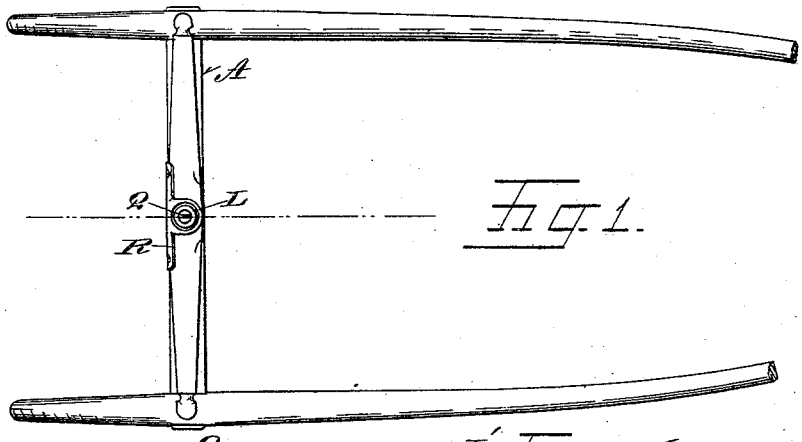


Fig. 1.

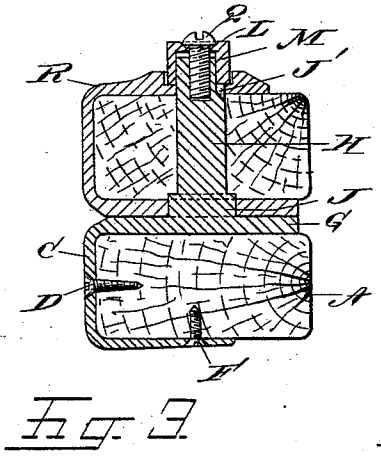
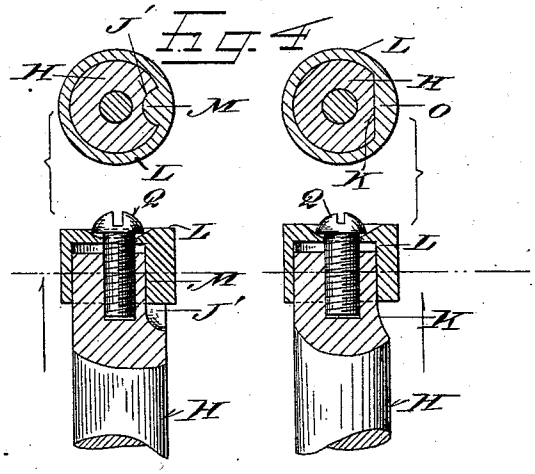


Fig. 3.

Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ADIN W. MITCHELL, OF DIALTON, OHIO.

WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 522,611, dated July 10, 1894.

Application filed October 30, 1893. Serial No. 489,435. (No model.)

To all whom it may concern:

Be it known that I, ADIN W. MITCHELL, a citizen of the United States, residing at Dialton, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Double and Single Tree Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in double and single tree attachments, and the object of my invention is to make a strong and perfectly secure pivotal connection between them and their supporting bar and at the same time prevent all noise due to rattling and to provide for taking up the lost motion resulting from wear.

With these objects in view my invention consists of the peculiarities hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings on which like reference letters indicate corresponding parts: Figure 1, represents a plan view of a pair of shafts with my improvements applied thereto; Fig. 2, a rear view of a single-tree and cross bar in connection with my invention; Fig. 3, a transverse vertical section taken through the joint; and Fig. 4, a detail view showing two constructions for preventing the post-cap from turning.

I have shown my invention as applied to a single-tree on the bar of a pair of shafts and will so describe it; but it is obvious and will accordingly be understood that it may be applied to the connection of single-trees and double-trees to the pole or hounds of vehicles.

The letter A designates the cross bar of a pair of shafts and the letter C a clamp or jaw constructed of metal, say malleable iron or cast steel. It has three sides and embraces the bar. A screw D secures the rear side and a screw F the lower side. The upper side G forms a plate upon which the single-tree iron turns. From this plate projects a post H, having a shoulder J near the base. The post is bored vertically and the hole is screw-threaded. In one form the post is shown provided with a groove J′ and in another with a flattened part K. The object of these constructions is to prevent the post-cap L from turning. This cap is shown at L and has a bead M to fit the groove J′ or a flat place O to fit the flat place K of the post. It fits down over the post and upon the upper plate of the single-tree iron. It is recessed at the upper end to receive the screw Q which enters the threaded opening in the post.

The letter R designates a single-tree iron which consists of a clamp or jaw adapted to embrace three sides, namely the back, the top and the bottom of the single-tree. The back piece is lengthened out to form a brace to increase the strength of the single-tree and is fastened by screws or rivets. The bottom plate is bored out to fit the shoulder of the post and the single-tree is bored to fit the post itself. The upper plate of the iron R is preferably slightly recessed to receive the lower end of the post cap L. When the parts are put together, as shown in the sectional view and the screw is screwed down into the post it enters the countersunk upper end of the cap and forces the cap down until the single-tree iron and cross-bar iron are in close contact, tight enough to prevent rattling and yet loose enough to allow slight motion. As the parts wear the screw is screwed farther down. As the screw enters the countersink in the cap the hair of the horse's tail cannot get caught on the screw-head.

It will be seen that as the post-cap is engaged by the post to prevent turning on the post the motions of the singletree, due to the action produced by the horse's shoulders, does not and cannot turn the cap and hence cannot loosen any screw device. In the use of nuts in the ordinary way trouble constantly arises in the nut being unscrewed by the action of the single-tree when the post is carried by the cross-bar or by the action of the post when it is carried by the singletree. When the nut is screwed tight enough to prevent coming off, the single-tree will not move to accommodate the horse's shoulders. If it is not screwed tight enough, the parts will rattle and the nut will lose off. With my construction the cap has no movement independent of the screw; the screw and the cap have a fixed relation and the cap is held from being turned on the post.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a single or double-tree, and its supporting bar, of a post carried by one member and pivotally supporting the other, a removable cap fitted to one end of the post so as to be adjustable lengthwise thereon, and engaging with the post so as to be non-rotatable, and a screw device engaging with the cap to adjust it down and hold it.

2. The combination with a single or double tree and its supporting bar, of a clamp or jaw carrying a post and secured to said bar, a clamp or jaw secured to the single or double tree, the post passing through the single or double tree and its clamp or jaw, a cap on the post and bearing down on the latter jaw and a screw-device engaging with the post and holding the cap down.

In testimony whereof I affix my signature in presence of two witnesses.

ADIN W. MITCHELL.

Witnesses:
OLIVER H. MILLER,
W. M. MCNAIR.