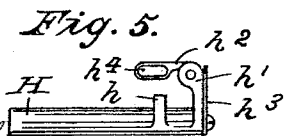
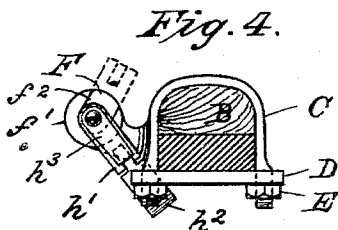
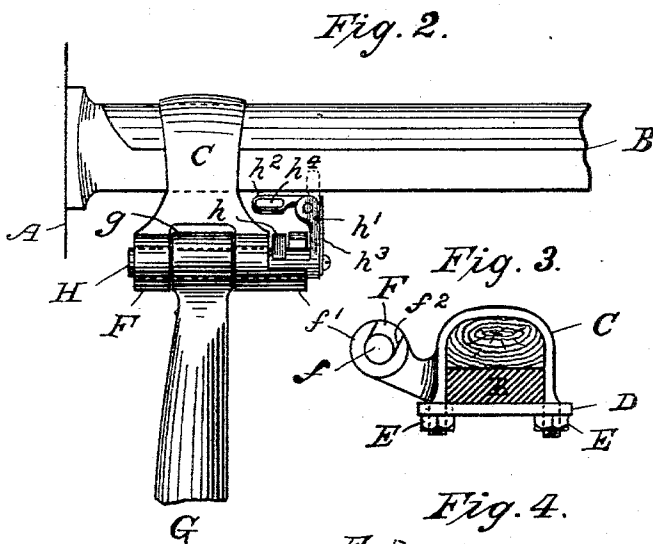
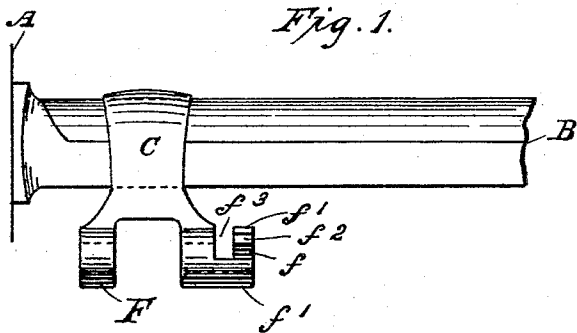


(No Model.)

M. P. FAVOR.
THILL COUPLING.

No. 569,577.

Patented Oct. 13, 1896.



Witnesses

Inventor

Wm J Jenkins
Mabel L Prescott.

Moses P. Favor.
By his Attorney J. R. Hurst

UNITED STATES PATENT OFFICE.

MOSES P. FAVOR, OF HILL, NEW HAMPSHIRE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 569,577, dated October 13, 1896.

Application filed November 29, 1895. Serial No. 570,425. (No model.)

To all whom it may concern:

Be it known that I, MOSES P. FAVOR, a citizen of the United States, residing at Hill, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

It is a well-known fact that the threads of bolts and nuts are more susceptible to atmospheric effects than are the other surfaces of the iron or steel of which they are composed. If allowed to remain long in a damp place, it will be quite difficult to move one upon the other, as intended, and if so situated that frequent applications of water cannot be avoided they will sometimes become so rusty that a soaking in oil will be found necessary before they can be loosened up.

The bolts and nuts of thill-couplings are no exception to this rule, and when substituting a pole for the thills of a carriage, and vice versa, considerable annoyance is occasioned from the necessity of removing the retaining-bolt and its nut, which, if not frequently changed, has become rusted. With relation to thill-couplings, however, rusting of the retaining bolt and nut does not constitute the only difficulties encountered in shifting, &c. On account of the close proximity of the wheel-hubs to the thill-couplings it frequently becomes necessary to remove the wheels from their axle in order to remove the thill-bolt. Hence the object of the present invention is to avoid all the foregoing difficulties and to dispense with the ordinary retaining bolt and nut in a thill-coupling.

The invention will be fully set forth in the following specification and claim and clearly illustrated in the accompanying drawings, which form a part of the same, of which—

Figure 1 is a plan view showing a portion of a wagon-axle and my improved thill-coupling in proper relative position thereon, as when the thill is removed, Fig. 2 being a similar view showing the same parts as when the thill is coupled in position for use. Fig. 3 is a cross-section of an axle, showing the thill-coupling in elevation thereon, having

the retaining-pin and thill removed. Fig. 4 is a similar view showing the same parts with the retaining-pin and a portion of the thill in position, Fig. 5 being a detached elevation of the retaining-pin.

Similar reference-letters designate corresponding parts.

A represents the line of the inner end of a wheel-hub. B is the axle; C, the strap portion of the thill-coupling; D, the clamping-plate. E are the retaining-nuts. F are ears formed upon the strap C, which receive the thill member *g* of the thill-coupling, attached in the ordinary manner to the thill G.

The ears F should be made right and left, that ear F which is farthest from a wheel having a projection which forms a sort of boss or hub extending in the direction of the central perforation *f* of each ear, the boss or hub *f'* being slotted in its top, as at *f*² and *f*³, the former cutting through to the perforation *f*, and in the direction thereof, and the latter running crosswise part way down that side of said hub *f'* which is nearest the axle B.

Instead of the ordinary retaining-bolt which has been passed through these ears and the thill and secured by a threaded nut, I provide the retaining-pin H, which has a lateral projection *h* near one end, which end is provided with an arm or head *h'*, formed integral or attached thereto, extending laterally at one side on a plane or in alinement with the projection *h*, and provided with a pivoted or hinged extension-arm *h*², movable in alinement with the said pin H. A suitable spring *h*³ may be attached to the head *h'*, adapted to bear against the pivoted extension *h*² in a manner which shall hold the same either in alinement with said head, as seen in Fig. 4, or at right angles therewith, as in Fig. 5.

By the foregoing construction the pin can be very readily inserted or removed, to wit: With the hinged extension *h*² at right angles, or as seen in full lines, Fig. 5, insert the pin H in the perforations *f*, and when the projection *h* is in alinement with the slot *f*² said pin may be pushed inward to its full limit. Then the projection *h* will have reached a position to enter the slot *f*³, and by rotating said pin in a direction toward the axle and opening out the extension-arm, as seen best in

Fig. 4, the pin will be found to be firmly secured. The said arm h^2 may, if desired, be provided with a rubber facing h^4 to form contact with the axle, and thus avoid any unpleasant rattling noise.

Having described my invention, what I claim is—

A thill-coupling strap having ears for receiving the eye of a thill said ears being perforated for the reception of a retaining-pin, one of said ears having a hub or projection provided with slots as at $f^2 f^3$ both cutting through to the said perforation, the former slot running in the direction thereof from the

outer end inward and the latter running cross-wise and intersecting at one end with the slot f^2 , a retaining-pin having a lateral projection near one end and at said end provided with an arm having a hinged extension, and a spring attached to said arm acting upon its hinged extension, substantially for the purpose set forth.

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

MOSES P. FAVOR.

Witnesses:

J. B. THURSTON,
JOHN H. ANDREWS.