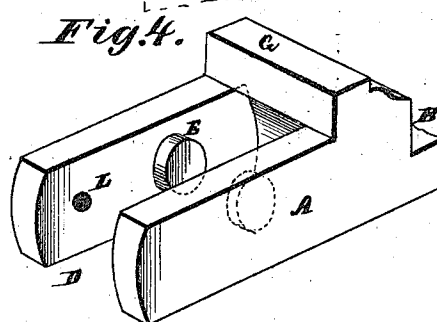
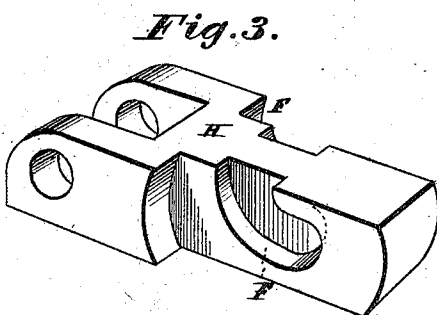
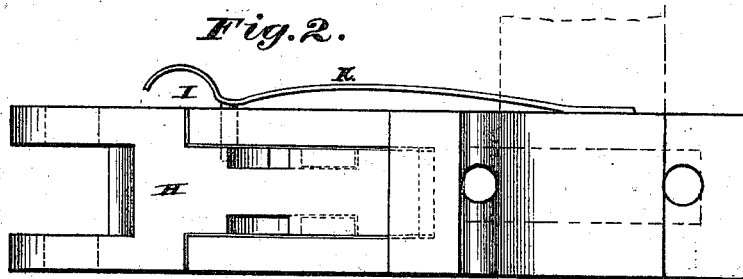
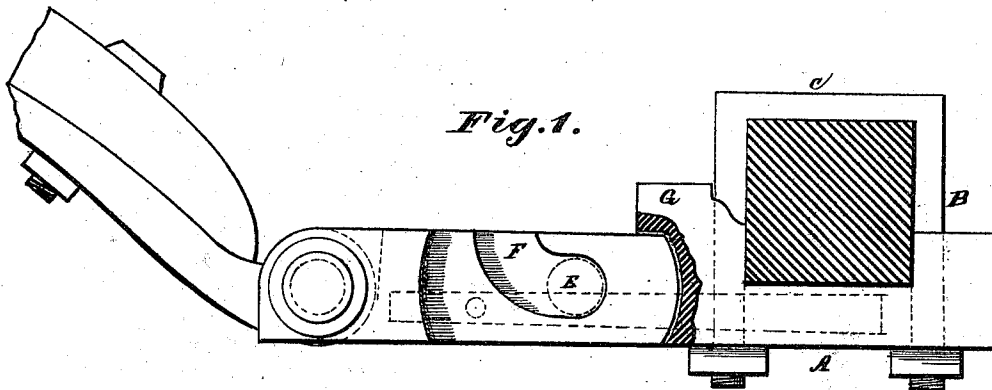


G. R. DAVIS.
Thill-Couplings.

No. 142,211.

Patented August 26, 1873.



Witnesses.
H. L. Denine
A. H. Norris.

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per. James L. Norris.
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE R. DAVIS, OF KINGSTON, MICHIGAN.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. 142,211, dated August 26, 1873; application filed June 13, 1873.

To all whom it may concern:

Be it known that I, GEORGE RILEY DAVIS, of Kingston, in the county of Tuscola and State of Michigan, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification:

This invention relates to an improved coupling device for attaching thills or poles to carriages in such a manner as to enable the same to be readily detached without necessitating the removal of the ordinary fulcrum or coupling bolt, on which the shafts turn; and to this end the invention consists of a coupling, consisting of a clip-plate attached to the axle of the vehicle and provided with a recessed or bifurcated front end, into which is inserted the rear end of a separate shackle-bar, to which the thill-iron is pivoted by an ordinary fulcrum-bolt, as heretofore, said shackle-bar being provided with lateral curved grooves or channels, which, when properly arranged in respect to projecting studs on the clip-bar, will enable the shackle-bar to be readily inserted, and then by moving the same downward, or in the arc of a circle, and inserting a spring-key, the shafts are retained firmly in position without liability of casual disengagement.

In the drawings, Figure 1 is a side view, partly in section; Fig. 2, a plan view; and Figs. 3 and 4, detached views.

The clip bar or plate A, for connecting the shafts to the axle, is provided with a seat, B, at its rear end, for the reception of the axle, to which it is secured by a clip or yoke, C, as shown. The front of said clip-bar A is recessed or bifurcated, as shown at D, and has formed on both of its inner-side surfaces studs or cylindrical projections E, which are adapted for insertion into grooves or channels F formed on the shank portion of a separate shackle-bar, H. The grooves F are made curved or arc-shaped, and their upper ends are so shaped that when the shackle-bar is in a vertical position and arranged in proper relation to the clip-plate the studs E on the latter are permitted to enter said groove, and then by turning the shackle-bar downward or into a horizontal position, the studs are moved to the lower or curved ends of the grooves.

The vertical movement of the shackle-bar, when thus connected, is prevented by an upper overhanging ledge, G, which acts as a supporting-surface, and the displacement in other directions avoided generally by a key or pin, I, which is applied to the outer end of a spring-tongue, K, and projected through an opening formed in the side of the thill-iron into a hole, L, made in the shackle-iron, as shown. The thill-iron on the rear end of the thill itself is connected to the shackle-bar by the usual jaw-clips, which are adapted for the reception of the thill-eye and transverse fulcrum-bolt.

A coupling device constructed as above described will permit thills and poles to be readily detached, and when connected to the axle presents a strong, durable, and reliable connection, dispensing with bolts and nuts liable to be broken or lost, and obviating the necessity of removing the fulcrum-bolts of the thills.

For detaching shafts or poles, which is generally desirable in stables on account of limited space, or for interchangeably using thills or poles, it is only necessary to release the spring-key when the shackle-iron can be turned into a vertical position, causing the open ends of the grooves or channels in the latter to pass the studs on the thill-iron by simply drawing the shackle-bar forward, when it can be readily detached.

Having thus fully described my invention, what I claim is—

1. The clip-plate A having an overhanging ledge, G, and studs E E, in combination with the slotted shackle-bar H having curved recesses F F on the sides of its reduced portion, all substantially as shown, for the purpose specified.

2. In combination with the detachable shackle-bar H and clip-plate A, the spring-rod K having a pin, I, at its front end, all substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of April, 1873.

GEORGE RILEY DAVIS.

Witnesses:

LAFAYETTE RANDALL,
G. K. WENTWORTH.