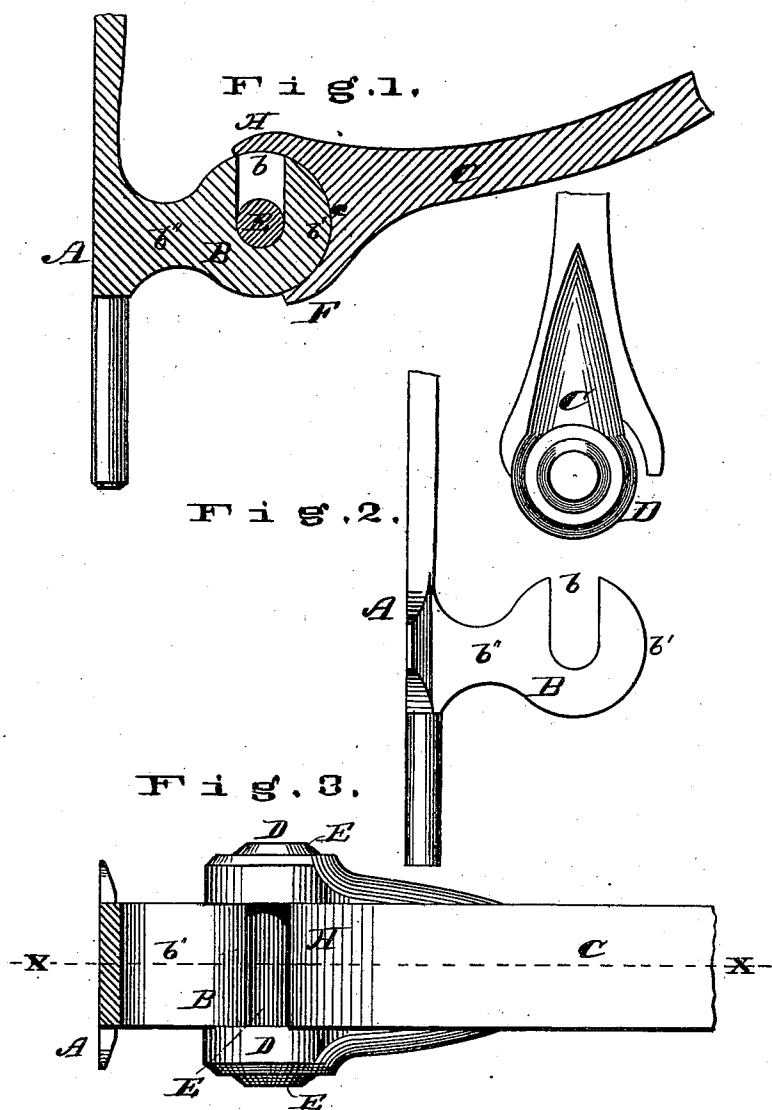


C. E. GILLESPIE & H. J. SPRINGER.
THILL-COUPLING.

No. 179,296.

Patented June 27, 1876.



ATTEST.

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INVENTOR

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UNITED STATES PATENT OFFICE.

CYRUS E. GILLESPIE AND HENRY J. SPRINGER, OF EDWARDSVILLE, ILL.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. **179,296**, dated June 27, 1876; application filed May 26, 1876.

To all whom it may concern:

Be it known that we, CYRUS E. GILLESPIE and HENRY J. SPRINGER, residents of Edwardsville, Madison county, State of Illinois, have invented a new and useful Improvement in Thill-Couplings, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a sectional side elevation of the invention, showing the parts of the coupling arranged relatively to each other, as when the thills are in use; Fig. 2, a side elevation, showing the parts detached and relatively arranged as when the thills are being withdrawn from the hooks; and Fig. 3, a plan, showing the coupling as when the thills are resting on the ground.

Similar letters refer to similar parts.

The principal aim of this invention is to provide means by which the thills of a carriage can be readily detached therefrom. It also relates to the provision for preventing the disengagement of the thills when in use. It further has reference to the means used to exclude dirt from the coupling.

Referring to the annexed drawing, A represents the clip, which is attached to the carriage-axle. Instead of being furnished with the usual jaws it is provided with a hook, B, and which is preferably arranged to bring the opening *b* thereto from above. The opening is preferably of uniform width, and at its bottom is rounded to form a bearing. The outer end *b'* is also preferably rounded. The neck *b''* of the hook (in a vertical direction) is smaller than the outer portion of the hook. C represents the shaft-iron, or the part corresponding to the eye of the ordinary coupling. It is furnished at its inner end, and at each side with a cheek, D D. These cheeks extend beyond the inner end *c* of the shaft-iron, and serve to hold a pin, E. The pin is preferably made of steel, and is fastened in the cheeks in any suitable manner, but in such way as to enable it to be taken out when worn, and another inserted in its place. When the parts of the coupling are put together the pin E rests in the bearing in the bottom of the opening *b* in the hook. The inner end *c* of the shaft-iron preferably conforms in shape to the

outer end *b'* of the hook, and the pin E is suitably arranged with reference to the inner end of the shaft-iron to enable the latter to come against and move upon the outer end of the hook when the pin is turning in its bearing. F represents what we term a "guard." It projects from the under side of the inner end of the shaft-iron, and far enough to prevent the disengagement of the coupling until the shaft-iron is turned upward into a vertical position, as indicated in Fig. 2. The guard is shaped suitably to enable the shaft-iron to be turned up and down in and upon the hook. H represents a shield, which projects from the upper side of the inner end of the shaft-iron, and far enough to cover the opening *b* of the hook when the shaft-iron is in the position it occupies when the carriage is in use. It also is shaped so that the shaft-iron can be turned in and upon the hook, and so as to exclude the entrance of dirt to the opening in the hook.

In practice, the hook proper, as shown in Fig. 1, is made round, at the center of which, when the shaft-iron is in place, the pin of the latter is arranged.

To engage the coupling the thills are turned directly upward, and into the position indicated in Fig. 2, when the pin E is passed down into the hook, and the thills turned downward into the position shown in Fig. 1. This movement brings the guard F sufficiently beneath the hook to prevent the dislodgement of the pin from its bearing in the hook, however much the coupling may be shaken or jolted. The shield prevents the entrance of dirt into the bearing when the carriage is in use; but as it is sometimes desirable to examine the coupling, and reach the interior of it without detaching the thills, we prefer to make the shield short enough to expose the opening in the hook, when the thills are turned entirely down, so as to rest upon the ground, as indicated in Fig. 3. To detach the thills they are raised upward to the original position, and then lifted out of the hooks. As this involves two movements, as well as the peculiar position, it is evident that it is impossible for the thills to become detached while attached to the horse; but with the horse removed from the thills the operation of detaching them is simple and easy, as above set forth.

A modification of the above-described construction is to make the hook in two parts, and to insert the shaft-iron between. In this case the shaft-iron, in place of the two cheeks, would have a single projection from its inner end. When desired, suitable rubber cushions can be inserted in the coupling to prevent rattling. Also, if preferred, a further modification may be made in the construction. The hook may be attached to the thill, and the other part of the coupling to the axle. In such case the hook would be turned so as to open downward.

What we claim is—

The thill-coupling described, consisting of the hook B having the opening *b* and the rounded outer end *b'*, the shaft-iron C having the guard F, the shield H, and the cheeks D D, and the pin E removably secured in the said cheeks, all constructed, arranged, and combined substantially as set forth and specified.

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Witnesses:

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