

1,037,533.

Fig. 1.



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UNITED STATES PATENT OFFICE.

HARRY REID, OF CLINTON, INDIANA.

THILL-COUPLING.

1,037,533.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY REID, a citizen of the United States, residing at Clinton, in the county of Vermilion and State of Indiana, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to improvements in thill couplings, and has for one of its objects to provide a simply constructed device whereby a pair of thills or a tongue may be quickly attached to or detached from the forward axle and without disconnecting any of the parts.

Another object of the invention is to provide a device of this character which may be readily adapted to thills and thill clips of various forms and sizes without structural change in the thills or clips and without material structural change in the improved device.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

Two of the improved devices will be employed, one for each of the thill clips and shackle members, and are precisely alike except that they are rights and lefts, and one of the improved devices only is illustrated, and in the drawings thus employed: Figure 1 is a side elevation of a portion of a thill including the shackle bar and head and a clip in position upon the axle, the axle being in section; Fig. 2 is a plan view partly in section of the parts shown in Fig. 1; Fig. 3 is a plan view of the supporting member detached.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The improved device may be applied without material structural change to thills and tongues and to axles and axle clips of various sizes and forms, but for the purpose of illustration is shown applied to a conventional thill and its attachments in which 10 represents a portion of a thill, 11 the shackle bar having the head 12, 13 the axle, 14 the upper portion of the clip, 15 the clamp bar of the clip secured in place by the usual clamp nuts 16, and 17—18 the ears of the clip between which the shackle head 12 is

usually secured by the shackle pin, these parts being of the ordinary construction, except that the shackle pin is dispensed with and the improved device employed in its place.

Connected to the upper face of the thill 10 is a supporting member formed of a plurality of parts hingedly united to produce a flexible device to adapt it to conform to the curvature of the rear portion of any thill. The supporting device comprises a plurality of plates 19 hingedly united at 20 and adapted to be secured in any suitable manner, as for instance by screws 21, to the thill. By forming the base of the supporting member of a plurality of parts hingedly united, it will be obvious that the members may be closely applied to the thill no matter what its curvature may be, while at the same time the improved device is also readily adaptable to a flat face if such a face is encountered in applying the device.

Rising from one of the members 19, preferably the central one, is a stud 22 having a stop shoulder 23 and provided with a clamp nut 24. Mounted to swing upon the stud 22, are coacting arms 25—26, the arms having inwardly directed and overlapping lugs 27—28 which engage over the stud 22. At one end the arms 25—26 are provided respectively with inwardly directed studs 29—30 which are adapted to pass through the ears 17—18 and into the shackle head 12 and thus constitute the shackle pin of the improved device. At their forward ends the arms 25—26 are diverged as shown at 31—32, and are provided respectively with inwardly directed studs 33—34 which support a spring 35, the latter operating to maintain the arms distended at their forward diverging ends and to hold the pins 29—30 yieldably in position within the clip ears and the shackle head. Rising from one of the arms, preferably the arm 26, are spaced ears 36 between which a lock lever 37 is pivoted at 38. At its shorter end the lock lever is extended laterally as shown at 39, and with downwardly directed stop lugs 40—41 at its ends which engage over the arms 25—26 and thus lock the latter in closed position. A spring 42 is arranged between the lever 37, and the arm 26, to maintain the lock lever yieldably in elevated position with the lock lever 39—40 in engagement with the arms.

By this simple arrangement it will be obvious that the thill is firmly maintained in position relative to the axle clip, and will not be displaced by any jars or concussions to which it will be subjected when in use, while at the same time the thills or a tongue to which the device is attached may be readily disconnected by first compressing the lever 37 until the lock lugs 40—41 are elevated clear of the arms 25—26, and then compressing the spring-controlled portions 31—32 of the arms and correspondingly releasing the pins 29—30 from engagement with the ears and the shackle head. The compression of the lever 37 can be readily accomplished by the same hand which afterward compresses the rear ends 31—32 of the arms. As before stated one of the devices is employed upon each of the thills or upon each of the shackle portions of a tongue, and when the thills or a tongue are to be detached the operator places himself between the thills or at one side of the tongue as the case may be, and grasps the portions 31—32 of each of the devices, together with the lever 37, and then first compresses both levers 37 to release the locking lugs and then compresses the portions 31—32 of the arms, as before described, which movement entirely releases the thills or tongue which may then be readily removed. To couple the thills or a tongue to the vehicle, it is only necessary to repeat the same movements to distend the pins 29—30 and then place the shackle heads respectively between the ears 17—18 and release the arms and lock lever when the pins 29—30 will be forced into place through the ears and into the shackle head.

The device is simple in construction, can be readily applied and very quickly oper-

ated and requires no previous skill or knowledge to actuate the same.

Having thus described the invention, what is claimed as new is:

1. The combination with a thill coupling including an axle clip having spaced perforated ears, of a thill and shackle member including a perforated head engaging between the ears, coating arms swinging upon said thill and having studs adapted to engage through the ears and shackle head from opposite sides, and means for locking said arms in closed relations.

2. A device of the class described comprising a base formed of a plurality of sections hingedly united and with a pin extending from one of the sections, said hingedly united sections being adapted to be connected to a thill, coating arms pivoted to said pin and having inwardly directed studs adapted to engage through the ears of a thill clip and into the head of a thill shackle, and means for locking said arms in closed relations.

3. A device of the class described, comprising a base having a pin extending therefrom and adapted to be connected to a thill, coating arms pivoted to said pin and having inwardly directed studs adapted to engage through the ears of a thill clip and into the head of a thill shackle, and a lock lever pivoted to one of said arms and provided with lugs engaging over said arms and locking the same in closed position.

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

HARRY REID. [L. S.]

Witnesses:

GUY H. BRIGGS,
VALZAH REEDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."