(No Model.)

D. THOMPSON.

THILL COUPLING.

No. 347,842. Patented Aug. 24, 1886.

Fig. 2.

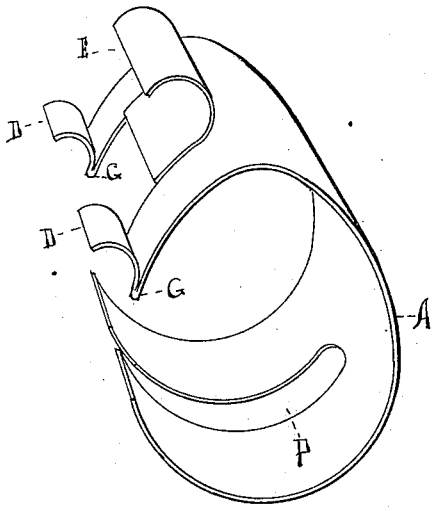
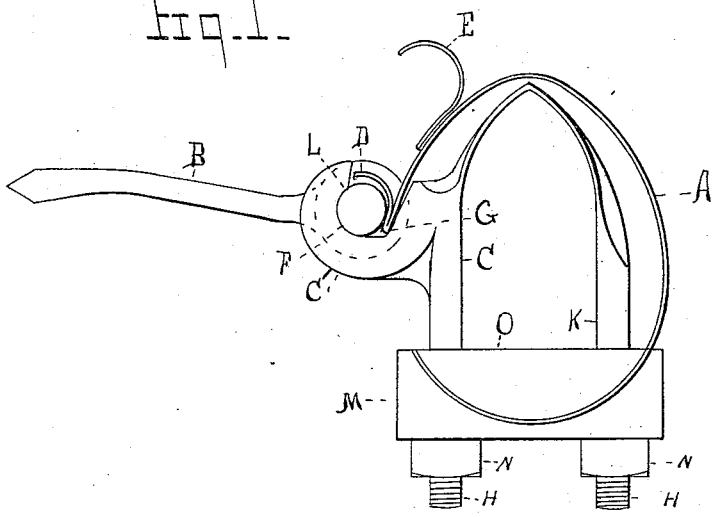


Fig. 1.



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UNITED STATES PATENT OFFICE.

DAVID THOMPSON, OF BYRON, KENT COUNTY, MICHIGAN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 347,842, dated August 24, 1886.

Application filed April 24, 1886. Serial No. 200,085. (No model.)

To all whom it may concern:

Be it known that I, DAVID THOMPSON, a citizen of the United States, residing in the township of Byron, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Thill-Couplings for Vehicles, of which the following is a specification.

My invention relates to a thill-coupling in which the bearings of the thill-irons rest in open slots, so constructed that the carriage thills or shafts may be readily attached and detached, and yet securely locked in position, so that they cannot be removed or thrown out in case of accident, the object being to securely hold the shaft in the coupling position by means of the slotted opening and a spring of suitable form, which spring serves the double purpose of preventing rattling and of locking the journals of the thill-irons in position, this invention being an improvement upon the invention patented to me by Letters Patent bearing date the 13th of April, 1886, and numbered 339,713. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 2 is a perspective view of the spring which holds the thill-coupling in position. Fig. 1 is a side elevation of the buggy-clip, with the spring attached thereto, showing the position of the thill-iron and spring when the thills are attached to the buggy or vehicle.

Similar letters refer to similar parts in both views.

C K represents the buggy-clip attached to the axle.

A represents the spring, the lower end of which is held between the convex follower O and a concave connecting-bar M.

The clip is provided with bolts having screw-threads H H and nuts N N. The follower O slips upon the bolts and rests against shoulders, so that by tightening the nuts N N the spring A is clasped securely between the follower O and the connecting-bar M.

The spring A is provided with a slot, P, through which the bolts H H pass. The spring passes backward, upward, and over the clip, and then downward in front, as shown in Fig. 2.

G G are angles in the spring, and D D are those portions of the spring which are bent up so as to fit over the journals F F of the thill-iron.

C′ C′ are ears of the clip, which are constructed in the ordinary manner, excepting the journal-box, which is slightly enlarged, so as to allow the angles G G of the spring to fit in back of the journals F F, thereby securely locking the journals into the journal-boxes L L. To the front of the spring I attach the hooked piece E, which I use for convenience in lifting the spring from the journals. This piece, however, may be dispensed with without affecting my invention.

B represents the thill-iron, constructed T-shaped and provided with the journals F F, already described.

In using my invention the operator places his finger in the hook E, raises the spring so that the parts D and G are lifted from the journal-box, when the journals can readily be lifted out of the journal-box. Whenever a stronger pressure is required upon the journals, the nuts N N are loosened slightly and the spring A adjusted by moving it or turning it so that the bent portions D D will press more heavily upon the journals, when the nuts are tightened, securing it in that position. By this construction I am able to adjust the spring so as to give any desired pressure upon the journals of the thill-iron, thereby preventing any rattling of the thills.

It will be seen that the angle G forms an elbow, which, when in position, as shown in Fig. 1, forms a key or lock for the journals F F, so that the journals cannot be removed from the clip until the spring shall have been lifted entirely out of the journal-box; that when the spring is lifted entirely out of the journal-box the journals can be pushed back slightly, when they will readily pass through the slots provided for that purpose in the ears C′ C′.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. In a thill-coupling device, a spring of sheet metal provided with a slot at its lower side, a clasp composed of a concave connecting-bar and a convex follower, a clip encircling the axle of the vehicle, provided with

slotted ears for the reception of the journal of the thill-iron, and a thill-iron provided with journals adapted to fit into the journal-boxes in said ears, said spring adapted to hold the journals of the thill-iron in position and to be adjusted so as to produce greater or less pressure, substantially as described.

2. In a thill-coupling device, a spring provided with an angle or shoulder adapted to fit behind the journal of the thill-iron, and an upward-curved portion adapted to press upon and hold the thill-iron in position, in combination with the clip having slotted ears, and in combination with the thill-iron, substantially as described.

3. The following parts in combination: the buggy-clip C K, the follower O, connecting-bar M, adjusting-nuts N N, the spring A, held in position between O and M, provided with the locking angle or elbow G G and the bent portions D D, and the thill-iron journals F F, all constructed substantially as described.

DAVID THOMPSON.

Witnesses:
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