(No Model.)

C. A. CROSHAW.

THILL COUPLING.

No. 519,697. Patented May 15, 1894.

Fig. 1.

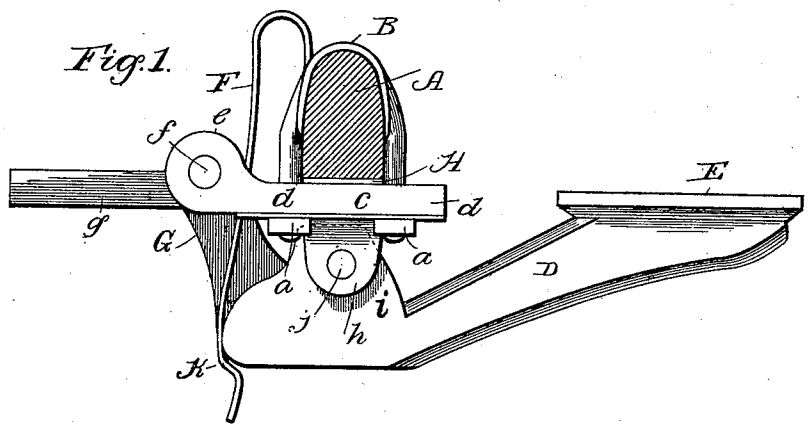


Fig. 2.

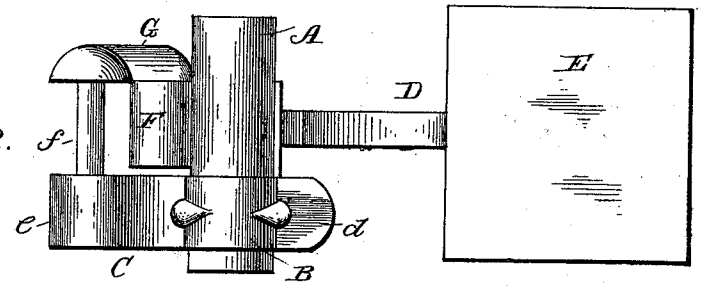


Fig. 3.

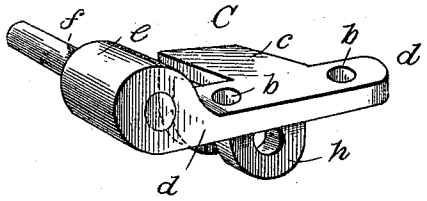
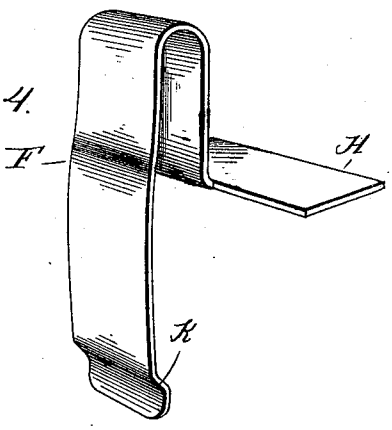


Fig. 4.



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CALVIN ARTHUR CROSHAW, OF CHICAGO, ILLINOIS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 519,697, dated May 15, 1894.

Application filed August 12, 1893. Serial No. 482,953. (No model.)

To all whom it may concern:

Be it known that I, CALVIN ARTHUR CROSHAW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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.

This invention relates to thill couplings and has for its object to provide a simple, durable, and comparatively inexpensive device for the purpose named adapted to prevent the rattling of the thills while the vehicle is in motion, to insure the retention in place of the thills, and to render the coupling and uncoupling of the thills to the vehicle more rapid and easy, and it consists, first, in providing a step the arm of which is pivotally secured to the axle and provided with a projection at one end adapted to form a guard for one side or edge of the thill iron when the step is in position for use; second, in providing a spring adapted to prevent rattling of the coupling and to act as a lock for the step arm, and, third in other details of construction and arrangements of parts as hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification—Figure 1 is a side elevation showing my invention in operative position on an axle; Fig. 2 a plan view; Fig. 3 a perspective view of the coupling iron; and Fig. 4 a perspective view of the spring.

Similar letters refer to similar parts throughout the several views.

A represents an axle and B a clip by which the coupling iron C is secured to the axle by means of nuts *a* which are run on the screw threaded ends of the clip after the same have been inserted in the perforations *b* formed therefor in said coupling iron. The coupling iron consists of the plate *c* formed with the extensions *d* at one end through which the perforations *b* are formed, one of said extensions terminating in the rounded portion *e* in which is secured a pin *f* which projects from one side of said portion at a right angle and on which the thill iron *g* is slipped in order to secure the thills or pole to the axle. On the under side of the plate *c* two perforated ears or lugs *h* are cast which project downwardly from said plate and are adapted to receive between them the perforated enlarged end *i* of the arm D of the step E which is pivotally secured therebetween by a pin *j* as clearly shown in Fig. 1. The enlarged portion of the arm D extends beyond the axle and its end is rounded off so as to slip easily past the curved end of a spring F and into a notch *k* formed by bending the spring which thus forms a rest and lock for the end of the arm and prevents the step being accidentally tilted and the upper part of the enlarged portion is flattened as indicated in dotted lines, Fig. 1, so as to bring it squarely against the under side of plate *c* when the step is in its proper position. At one side of the end of the arm D an upwardly and forwardly extending lug or projection G is cast the object of which is to form a guard, when the step is in its proper horizontal position, to prevent the thill iron slipping off the pin *f*. The spring F is formed of single piece of metal bent into the shape shown in Fig. 4, that is over on itself, which extends downwardly in rear of the pin *f* and between it and the axle and bears against the thill iron to prevent the rattling of the same, the other end of said spring terminating in a flat plate H which is inserted between under side of the axle and the plate *c* of the coupling iron, said plate H projecting laterally from the spring so as to extend between the ends of the thill and to be secured firmly in place thereby. It will be observed that the lower end of the spring bears on the end of the arm of the step and that the thill iron bears on said spring at about the center thereof, which construction and arrangement greatly increases the strength and durability of the spring as well as insures that it will bear at all times against said thill iron notwithstanding its constant use, as its strength, even if impaired by use, will be reinforced by the end of the step arm which will always hold said spring forward in the position shown in Fig. 1. It will also be observed that the mere act of stepping on

the step in getting in and out of the vehicle insures the safety of the coupling as the weight of the person thus imposed on the step will tend to raise, and keep in its raised position, the guard lug G which prevents the thill slipping off its pin *f*.

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

1. In a thill coupling, the combination, with a coupling iron having a laterally projecting pin, of a step pivotally secured to the coupling iron and provided with a lug adapted to cover one end of said pin, substantially as described.

2. In a thill coupling, the combination, with a coupling iron having a laterally projecting pin, of a step having an arm pivotally secured to said iron, and a spring interposed between said pin and the axle and bearing at one end on the end of the arm of said step, substantially as described.

3. In a thill coupling, the combination, of a coupling iron having a laterally projecting pin and perforated ears, a step having its arm pivoted between said ears, a spring having a laterally extending horizontal plate, and a clip for securing said iron and spring to an axle, substantially as described.

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

C. ARTHUR CROSHAW.

Witnesses:
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