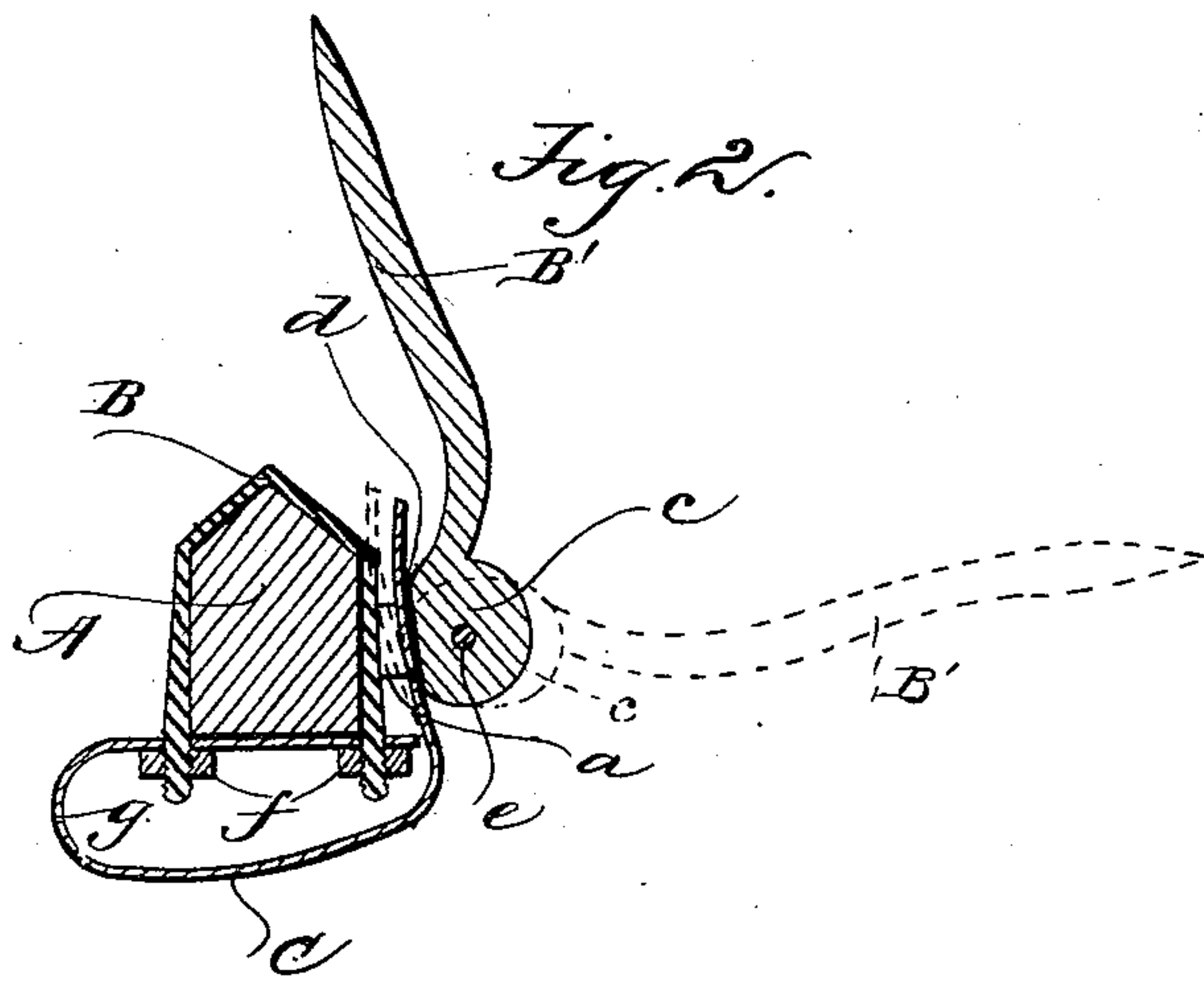
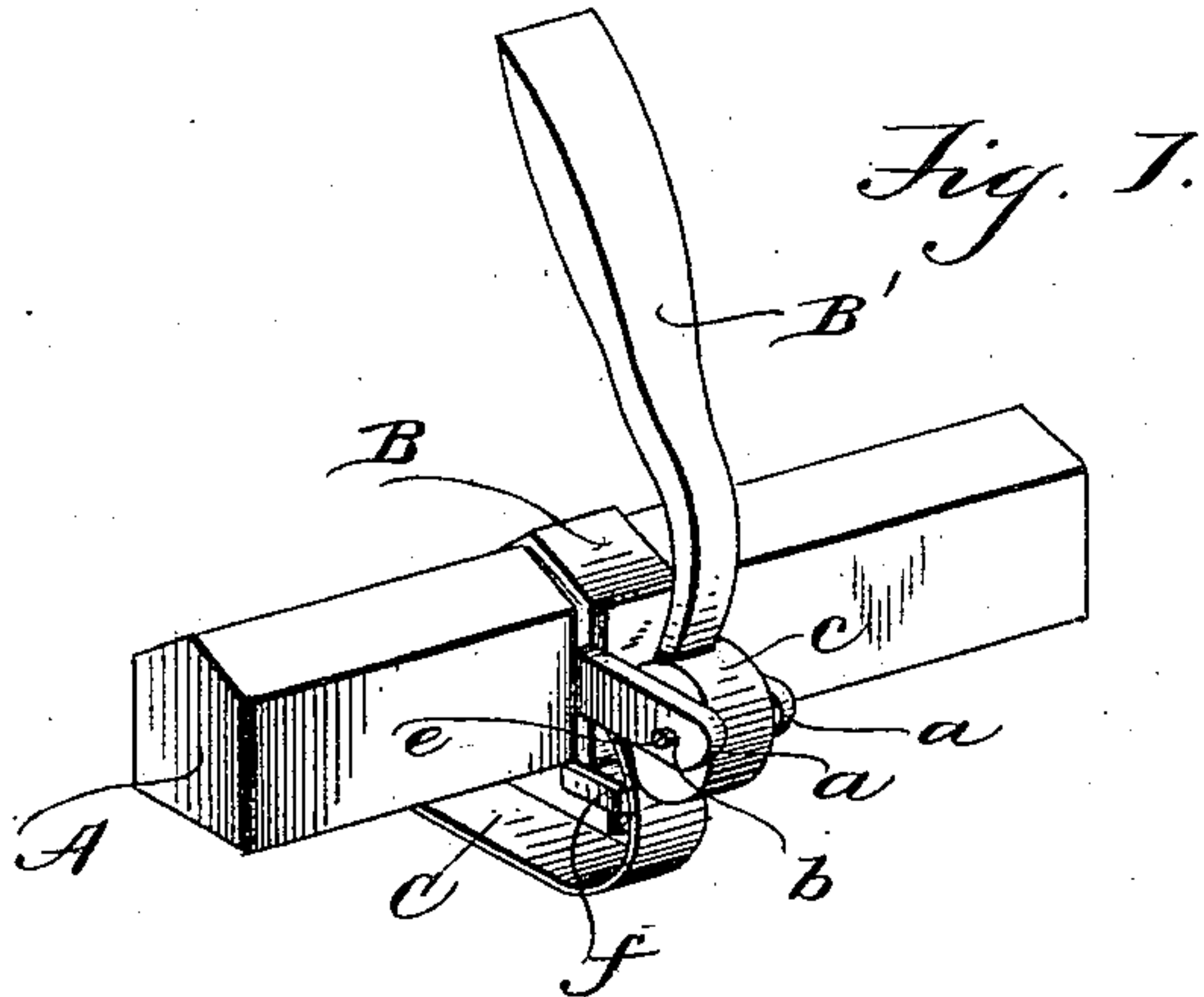


(No Model.)

J. H. KOONS.
THILL COUPLING.

No. 309,962.

Patented Dec. 30, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN H. KOONS, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO SIMON LESLIE LECRON, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 309,962, dated December 30, 1884.

Application filed October 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. KOONS, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Thill-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to thill-couplings, and it has for its object to provide the same with a spring which shall serve the triple purpose of a thill-supporter, an anti-rattler, and as a plate for connecting the ends of the clip to hold the same in place against detachment.

A further object of the invention is to provide a thill-coupling which shall be extremely simple in its construction, and one that will effectively serve the purpose for which it is intended.

With the above ends in view the invention consists in the combination, with the clip and thill-iron, of a flat spring connecting the ends of said clip and bearing against the rear end of the thill in such manner that when said thill is raised it will be held in such position by means of the spring.

The invention further consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claim.

In the drawings, Figure 1 is a perspective view of a thill-coupling constructed in accordance with my invention and showing the thill-iron raised to a vertical position. Fig. 2 is a longitudinal vertical section of the same.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in both the figures, A represents a portion of the forward axle of a vehicle, and B represents a clip. This clip is of the ordinary construction, and is provided on its front side with two forwardly-extending ears or lugs, *a*, provided with holes or openings *b*.

B' represents the thill-iron, formed at its rear end with a box, *c*, said box being flattened upon its upper surface or face, as shown at *d*. The thill-iron B' is pivoted between the two ears or lugs *a* of the clip B by means of a bolt, *e*.

C represents a spring, which connects the

ends of the clip B, and holds said clip against detachment. The spring is held upon the ends of said clip by means of nuts *f*, which fit the reduced screw-threaded ends of the clip, as shown. The other end of the spring C is doubled, as shown at *g*, and carried forwardly to a point on a vertical line with the rear end of the thill-iron. The end of this spring is then fitted between the end of thill-iron and the clip, so that said spring bears against the rear end of said thill-iron.

It will be seen from the above description that the spring C serves a triple purpose—namely, the keeping of the clip in place and preventing it from detachment, thus dispensing with the usual connecting-plate; preventing the rattling of the coupling by bearing against the thill-iron, and holding the thill in a raised position by bearing against the flattened upper face thereof.

The above-described improvements are very simple, easily applied, and may be manufactured at a slight cost; and, further, are more effective than the couplings now in ordinary use.

I am aware that previous to my invention means have been provided for holding the thills in a vertical position; hence I confine myself to the construction shown and described.

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

The combination, with a clip having forwardly-extending lugs or ears having openings, and a thill-iron pivoted between said ears or lugs and having a flattened upper face, of a flat spring fitting upon the ends of the clip and connecting the same, said spring being doubled upon itself and carried forwardly and then upwardly, its free end fitting between the thill-iron and clip, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN H. KOONS.

Witnesses:

S. LESLIE LECRON,
ALF. N. RUSSELL.