

(No Model.)

A. L. ROMANS & J. M. PEREGRINE.

THILL COUPLING.

No. 342,539.

Patented May 25, 1886.

Fig. 1.

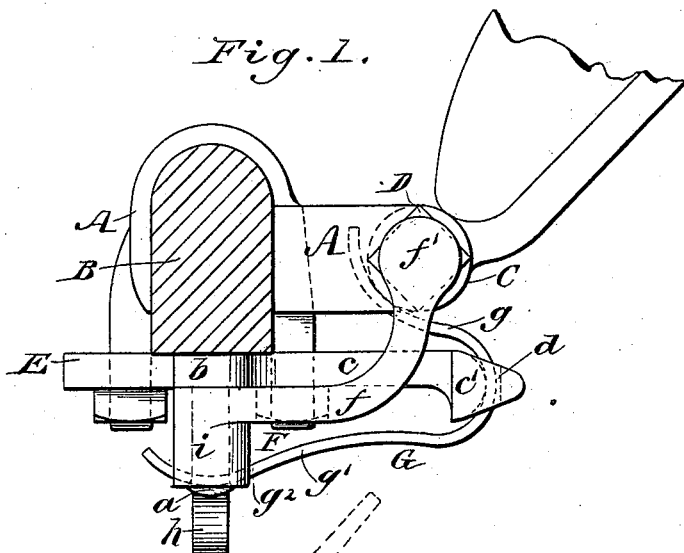


Fig. 2.

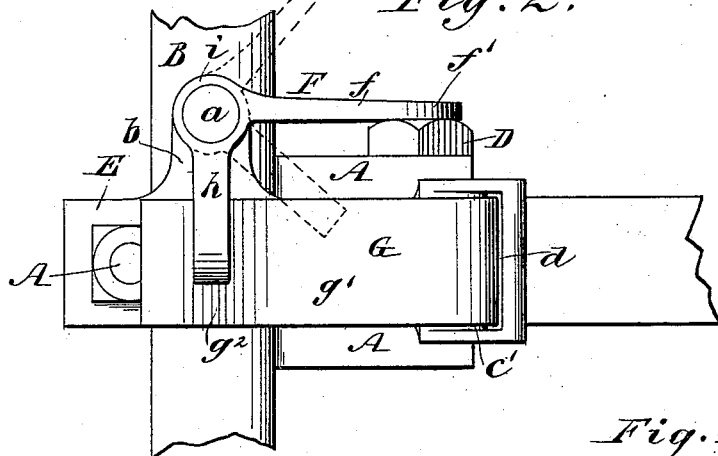


Fig. 3.

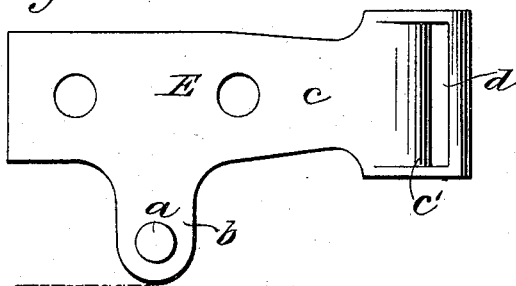
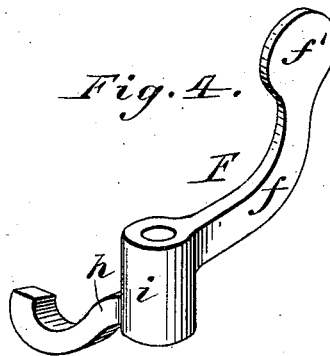


Fig. 4.



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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 342,539, dated May 25, 1886.

Application filed December 15, 1885. Serial No. 185,733. (No model.)

To all whom it may concern:

Be it known that we, ABIJAH L. ROMANS and JOHN M. PEREGRINE, both of Jamestown, in the county of Chautauqua and State of New York, have invented a new and Improved Combined Anti-Rattler and Thill-Bolt Holder, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of our invention, shown applied to the axle and thill, the axle being shown in section. Fig. 2 is an inverted plan view of the same. Fig. 3 is an enlarged plan view of the clip-plate removed, and Fig. 4 is a perspective view of the bolt-holding and tension lever removed.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A represents the thill-clip, constructed to be applied to the axle B and to receive the thill eye C and thill-bolt D in the ordinary manner. The clip-plate E has the bolt-holding and tension lever F pivoted to it, preferably upon the stud *a*, rigidly secured to or formed upon the side extension, *b*, of the plate. The forward part or extension, *c*, of the clip-plate E forms the fulcrum *c'* for the spring G, that prevents rattling, and for attaching the spring G to the clip-plate the loop *d* is formed at the forward end of the extension *c*, through which the spring passes, and in which it is held, as shown clearly in Fig. 1.

The spring G is formed with the upper extension, *g*, and with the lower or rear extension, *g'*. The upper extension, *g*, reaches from the fulcrum *c'* up to the thill-eye C, against which it is adapted to press for preventing the eye and bolt D from rattling. The rear extension, *g'*, reaches from the fulcrum *c'* back to and somewhat past the stud *a*, on which the lever F is pivoted, and in line with the stud *a*, or nearly in line therewith. The extension *g'* is formed with a cam-acting enlargement or curve, *g''*, for the purposes hereinafter described.

The lever F is for putting a tension upon the spring G, and also for holding the thill-bolt D in place. It is arranged in relation to the spring so that by simply swinging the

arm *f* of the lever toward the bolt D the arm *h* will put a tension upon the spring G, and the spring in turn will hold the plate portion *f'* of the arm *f* against the head of the bolt D, so that it cannot work out.

By simply swinging the lever F to the position shown in dotted lines in Fig. 2 the bolt D and spring G will be released, so that the bolt may be removed for detaching the thill. The arm *h* of the lever F stands at right angles, or nearly so, to the arm *f*, and projects slightly downward from the hub *i* of the lever, and its outer end is turned slightly upward, so that it will act against the enlargement or curve *g''* of the spring G, when the lever F is turned from the position shown in dotted lines to that shown in full lines in Fig. 2, and thus lift the rear or lower extension, *g'*, of the spring G. The spring being fulcrumed at *c'*, the upward movement of the rear extension, *g'*, caused by arm *h*, will throw the upward extension, *g*, forward, so that it will press with considerable force against the thill-eye C, and thus constitute an anti-rattler. The arm *h* is in such position relative to the arm *f* and to the cam enlargement or curve *g''* that when the plate portion *f'* comes against the head of the bolt D the extremity of the arm *h* will have passed the crest of the cam-curve *g''*, so that said curve acts to lock the lever F in the position shown in full lines, so that while the lever F serves to put a tension upon the spring G to prevent rattling the spring reacts upon the lever F and causes it to hold the bolt D securely in place in the clip and thill-eye.

To remove the bolt D for detaching the thill, the lever F has simply to be swung to the position shown in dotted lines in Fig. 2, which can be easily done by any small rod or lever, so that with this arrangement there are no keys or nuts to handle and get lost, and no separate anti-rattler to keep in place.

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

1. As a new article of manufacture, a combined anti-rattler and thill-bolt holder consisting of a fulcrumed spring and a bolt-holding and tension lever formed with two arms, one to act upon the spring, the other to press against the bolt, the spring being arranged to act upon the thill-eye and to react upon the

lever, and formed with a cam or curve to hold the lever in position against the bolt, substantially as shown and described.

2. The clip-plate E, formed with the fulcrum e' , in combination with the spring G and lever F, arranged substantially as and for the purposes set forth.

3. The lever F, formed with the arms f h at right angles to each other, in combination with the spring G, fulcrumed at e' , and bent to press against the thill-eye and to be acted upon by the arm h of the lever, substantially as and for the purposes set forth.

4. The spring G, formed with the two opposite extensions g g' , and curved at g^2 and fulcrumed at e' , in combination with the lever F,

having arms f and h , substantially as and for the purposes set forth.

5. The clip-plate E, formed with fulcrum e' , and stud a , in combination with the spring G, bent to form extensions g g' and cam-curve g^2 , and the lever F, pivoted on stud a , and formed with the arms f h , the former for holding the thill-bolt, the latter for putting a tension on the spring G, substantially as and for the purposes set forth.

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