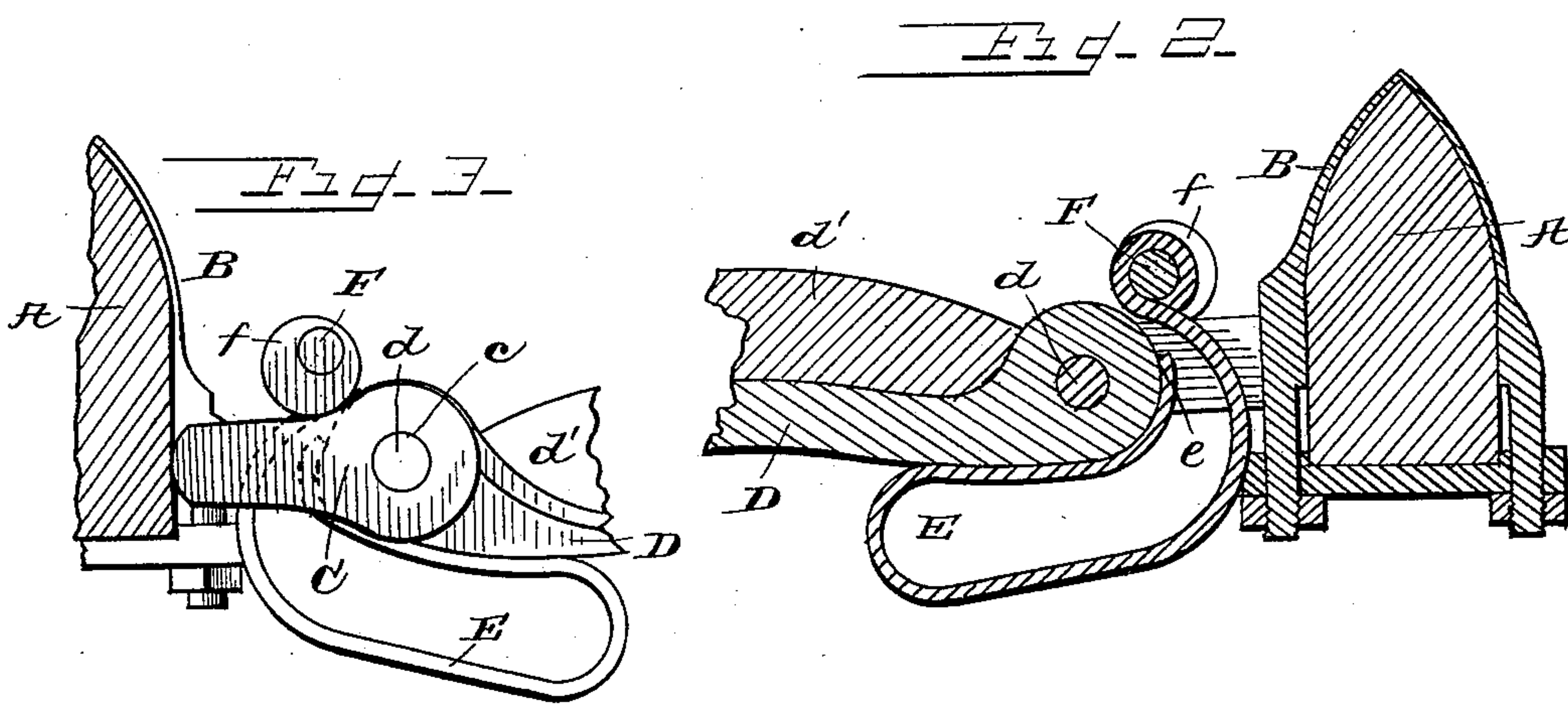
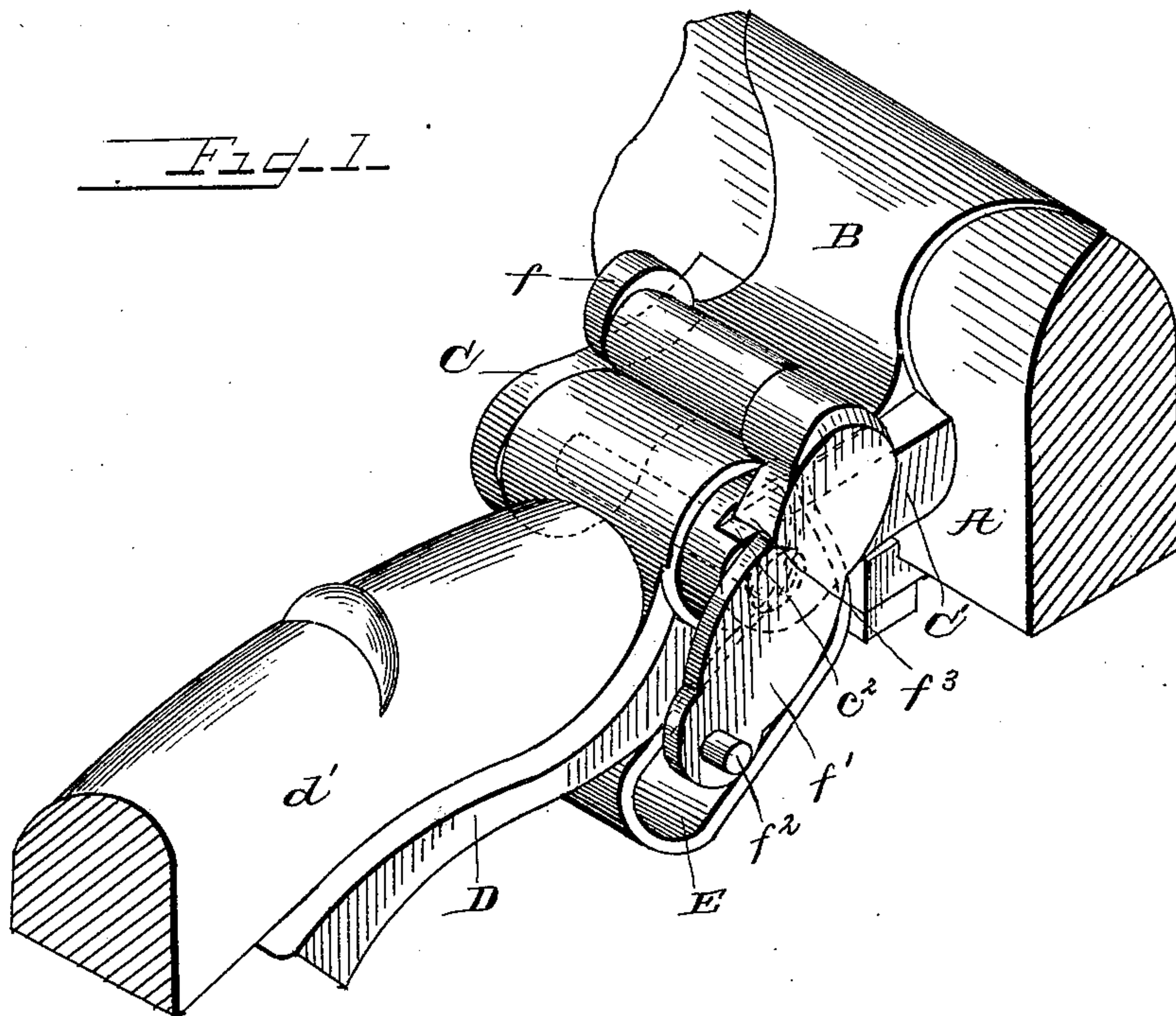


(No Model.)

H. L. CORDREY.  
THILL COUPLING.

No. 435,403.

Patented Sept. 2, 1890.



Witnesses

*G. A. Tautenschmidt,*  
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# UNITED STATES PATENT OFFICE.

HENRY L. CORDREY, OF MOUNT UNION, IOWA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 435,403, dated September 2, 1890.

Application filed May 2, 1890. Serial No. 350,331. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY L. CORDREY, a citizen of the United States, residing at Mount Union, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in an Anti-Rattler and Thill-Coupling; 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.

My invention relates to a combined thill-coupler and anti-rattler; and it consists of the ordinary axle-clip having two outwardly-extending supporting-arms, a flat spring one end of which abuts against the thill-iron and the other is secured to a tumbler having a cam at one end and an arm at the other, provided at or near its base with a lug or projection. This tumbler serves a double purpose—i. e., to take up the tension of the spring and make it bear against the bottom of the thill-iron, thus forming an anti-rattler, and also for holding in the loose pin that couples the thill-iron to the supporting-arms.

In the accompanying drawings, Figure 1 is a perspective view of my invention applied. Fig. 2 is a longitudinal central section of the same. Fig. 3 is a detail side elevation of the tumbler, showing the cam on the same.

In the said drawings, A represents the axle of a vehicle; B, the clip which is secured to the same by means of the clip-plate and nuts.

C and C' are outwardly-extending supporting-arms having suitable bolt-holes  $c$   $c'$ , said arms C and C' being cast integral with the clip A, thus forming a "jack-clip." The arm C' has a cut-away portion  $c^2$  on its upper surface.

D is a thill-iron, which is pivoted to arms C and C' by means of coupling-pin  $d$ , having a countersunk head.  $d'$  is a portion of a shaft secured to said thill-iron.

E is a flat anti-rattling spring, one end of which abuts against the eye of the thill-iron at  $e$ , the spring being bent in the form shown in the drawings. The other end of spring E is passed up between the eyebolt of the thill-iron and clip B and secured around the axle F of the tumbler. On one end of the said

axle F is secured a cam  $f$ , which works on the top of arm C. To the other end of this axle is secured an operating-arm  $f'$ , having at or near its free end a lug or pin  $f^2$ . This operating-arm has a cut-away portion  $f^3$ , which engages and works on the cut-away portion  $c^2$  on arm C'.

The operation of my device is as follows: It will, for purposes of illustration, be supposed that all the parts, except the jack-clip, are detached. I first place the anti-rattler spring E in position between the arms C and C'. I then place the eye of the thill-iron in position. The pin  $d$  is passed through the arms C and C' and the eye of the thill iron, thus securing the parts together, said arm C' having a countersunk portion, in which the head of pin  $d$  is countersunk. I now take hold of operating lever or arm  $f'$  and press it down over the countersunk pin, thus firmly securing it in place and preventing it from coming out, the cut-away portion  $f^3$  engaging and working in cut-away portion  $c^2$  on arm C'. In pressing this operating-lever down the tension of the anti-rattler spring E is taken up by means of cam  $f$ , which works on arm C, and said spring is pressed up against the eye of the thill-iron D. It will thus be seen that by my device a quick, ready, and perfect thill-coupling and anti-rattler is provided, thereby facilitating the change from pole to shafts, and vice versa.

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

1. An anti-rattler consisting of a spring located between the thill-iron and axle-clip, an axle or bearing secured to one end of said spring, and a cam-tension-regulating device secured to said axle or bearing, substantially as described.

2. An anti-rattler consisting of a spring, one end of which abuts against the eye of the thill-iron and the other end working between said iron and clip, a shaft or axle around which said end is secured, a tension device, and an operating-arm secured to said axle, said operating-arm extending down over the head of the thill-coupling pin, substantially as described.

3. In a combined anti-rattler and thill-



coupling, the combination of the axle-clip,  
arms extending from said clip, a cut-away  
portion on one of said arms, a countersunk  
coupling-pin, a spring one end of which abuts  
5 against the eye of the thill-iron and the other  
end being secured to an axle, the body of said  
spring extending out under the thill-iron, a  
cam secured to one end of said axle and  
working on one of the thill-supporting arms,  
10 an operating lever or arm secured to the other  
end of said axle, working on the other arm  
of the axle-clip, and extending over the head

of the coupling-pin, a cut-away portion on  
said operating-arm engaging the cut-away  
portion on one of the arms of the axle-clip, and 15  
a lug secured near the bottom of said operat-  
ing-arm, substantially as described.

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

HENRY L. CORDREY.

Witnesses:

WILLIAM SWARD,  
W. J. HAMILTON.