

(No Model.)

W. H. NEWTON.
THILL COUPLING.

No. 474,503.

Patented May 10, 1892.

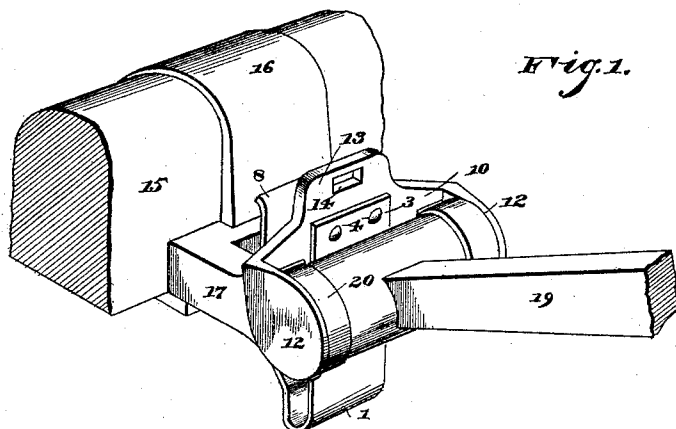


Fig. 1.

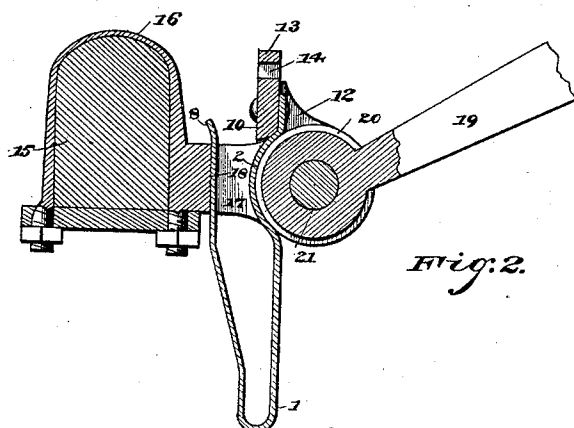


Fig. 2.

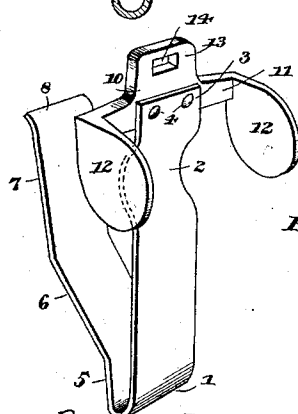


Fig. 3.

Witnesses:

B. S. Okey
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By *His Attorneys,*

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UNITED STATES PATENT OFFICE

WILLIAM HENRY NEWTON, OF DECATUR, ILLINOIS, ASSIGNOR OF ONE-HALF
TO ALBERT M. MCGEE, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 474,503, dated May 10, 1892.

Application filed November 24, 1891. Serial No. 412,914. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY NEWTON, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented a new and useful Thill-Coupling, of which the following is a specification.

This invention relates to improvements in thill-couplings; and the objects in view are to provide a cheap and simple device adapted to serve as a combined anti-rattler and coupling-pin lock; to so construct the device as to be readily withdrawn when it is desired to substitute a pole for the thills, or vice versa, and when in position to automatically lock against any accidental withdrawal.

With these objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective of a thill-coupling constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same, and, like Fig. 1, shown in position. Fig. 3 is a detail in perspective of the combined coupling-pin lock and anti-rattler.

Like numerals of reference indicate like parts in all the figures of the drawings.

In constructing the combined coupling-pin lock and anti-rattler I employ a piece of sheet-steel of suitable length and gage and of a width slightly less than the distance between the clip-ears. This blank of steel is bent a slight distance at one side of its center, as at 1, forming a V-shaped spring. The front terminal is extended in a straight line from the bend 1 to near its middle, where it is inwardly curved, as at 2, to adapt it to embrace and conform to the rear side of the shank or thill-eye, and beyond said bend it is again disposed in line with the lower straight portion of the terminal, thus forming a securing-plate 3, having two or more rivet-holes 4. The remaining terminal of the spring is for a portion of its length (in this instance about one-fourth) extended straight at an angle of about sixty degrees from the lower bent center of the spring, as indicated at 5. A short distance above the same is bent at a greater angle, (about forty-five degrees,) as indicated at 6, said latter por-

tion extending a little over one-half the length of the terminal, and beyond it said terminal is redispersed, as at 7, about in line with the portion 5, and finally terminates in a bent lip 8.

10 designates a cast-metal yoke, which is provided with an intermediate cross-bar 11, and at its ends with forwardly-disposed coupling-pin-embracing ears 12. From the center of the yoke there rises a lug 13, having an opening 14, the office of which will be hereinafter mentioned.

The axle 15 is embraced by the usual metal clip 16, provided at its front side with the pair of forwardly-disposed perforated ears 17, and between the same with the usual offset or flat breast 18.

19 designates the shank-iron connected with the thill and terminating at its rear end in the shank-eye 20, interposed between the ears 17, to which it is connected by a transversely-disposed and in this instance smooth pin 21.

In applying the thill the same is elevated to near a vertical position, the eye 20 passed into or between the perforated ears 17, and the smooth pin 21 passed transversely through the perforated ears and the eye. The anti-rattler is now inserted, which is accomplished by squeezing the two spring-terminals thereof together and introducing it between the thill-eye and the clip, so that the curved portion 2 of one terminal of the anti-rattler will embrace the thill-eye, while the straight portion 7 of the opposite terminal will lie against the flat breast 18 the entire length of the same. When in this position, it will be seen that the ears 12 will have passed at opposite sides of and embraced the perforated clip-ears 17 and the ends of the coupling-pin, and hence the latter will be prevented from any longitudinal movement whatever.

Heretofore in this class or particular form of anti-rattlers there has always been a more or less tendency upon the part of the same to work upwardly out of position, the shape of the spring augmenting such disposition. By my invention, however, I produce an exactly opposite effect—namely, the tendency to move downward, which is of course impossible by reason of the yoke 10 on the one hand and the bent lip 8 on the other hand. I secure this tendency by the disposition given to the rear

terminal of the spring, the theory being that the compression of the upper portion of the two terminals exerts a certain amount of tension upon said terminals, and the latter terminal being bent at a greater angle or incline, as at 6, below the point of compression exerts the strain in the rear terminal at said angle until it reaches the upper end of the bent portion 5, when it is converted to a downward strain, whereas an opposite effect is given if the portion 6 was not present. This I have discovered by practical experience and tests and consider it one of if not the material point of my invention.

15 In order to remove the combined anti-rattler and coupling-pin lock, it is simply necessary to insert a pin, nail, or other tool through the eye 14 of the lug 13 and draw upwardly, after which the coupling-pin may be moved 20 longitudinally from its position and the shank-iron, with the pole or thill, removed.

The yoke 10 I prefer to form of cast metal and secure the same to the upper securing end 3 of the anti-rattler by rivets 22, passed 25 through the perforations 4 and the cross-bar 11 of the yoke.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided a cheap and 30 simple device adapted to serve both as a coupling-pin lock and anti-rattler, and by its use I am enabled to employ an ordinary smooth coupling-pin, so that the change from thills

to pole, or vice versa, may be accomplished with dispatch and ease and without the employment of a wrench.

Having described my invention, what I claim is—

The herein-described improved anti-rattler, comprising a V-shaped spring bent near its center, as at 1, forming front and rear terminals, the front terminal being straight to near its middle and beyond the same provided with a curved portion 2, adapted to embrace the thill-eye, and beyond the curved portion extended to form a perforated securing-plate 45 and the rear terminal being extended above the bend 1 for a short distance, as at 5, at an angle of about sixty degrees, above the same bent at a greater angle rearwardly, as at 6, 50 and disposed at about forty-five degrees, beyond the same rebent to form a straight portion substantially in line with the lower portion 5, and finally terminating in a lip 8, and the transverse yoke consisting of the cross- 55 bar 11 and forwardly-disposed pin-embracing ears, and rivets passed through the transverse bar and the perforated end of the front terminal of the spring, substantially as specified.

In testimony that I claim the foregoing as 60 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM HENRY NEWTON.

Witnesses:

MAURICE LEE,
GEORGE HUNTER.