W. H. SHONDELL.

ANTIRATTLER FOR AUTOMOBILES.

APPLICATION FILED APR. 16, 1917.

1,330,285.

Patented Feb. 10, 1920.

FIG. 1.

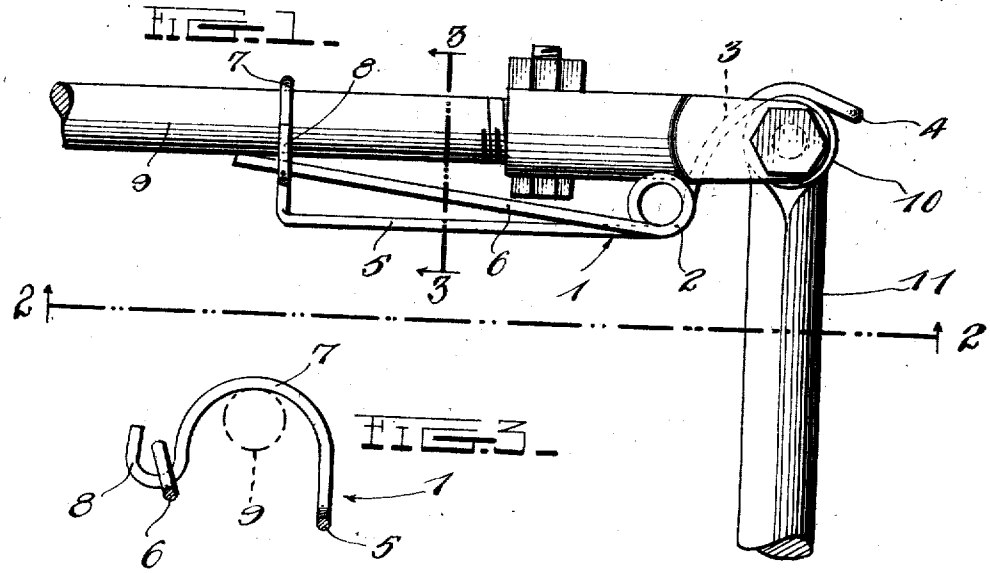


FIG. 3.

FIG. 2.

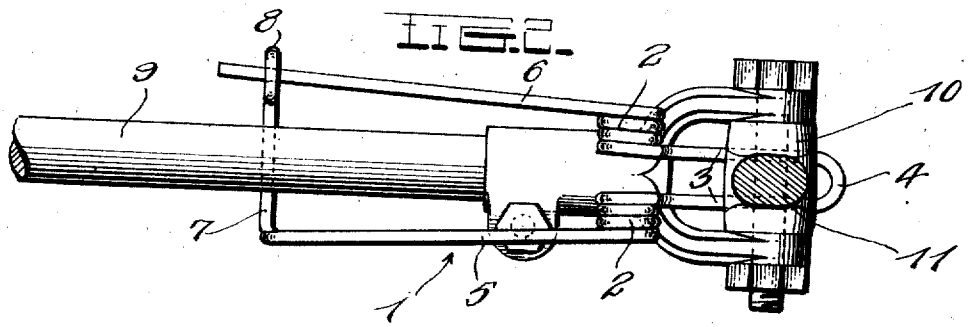


FIG. 4.

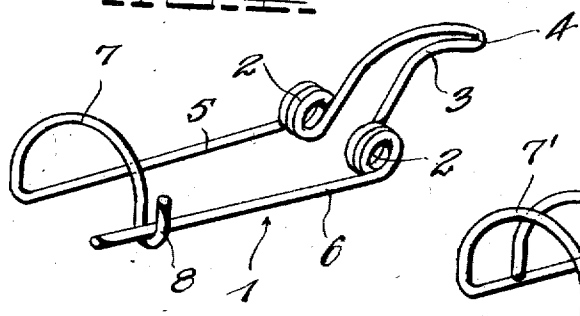
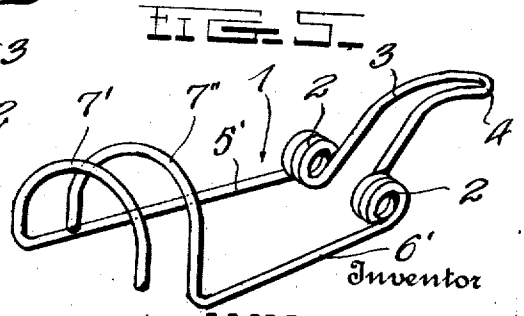


FIG. 5.



Witness

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ANTIRATTLER FOR AUTOMOBILES.

1,330,285. Specification of Letters Patent. Patented Feb. 10, 1920.

Application filed April 16, 1917. Serial No. 162,437.

To all whom it may concern:

Be it known that I, WILLIAM H. SHONDELL, a citizen of the United States, residing at Napoleon, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Anti-rattlers for Automobiles; and I do 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 anti-rattler devices and more particularly to that class of anti-rattlers which are designed to be applied upon automobiles to eliminate loose connections between the steering rod and the steering arm.

The principal object of my invention is to provide an anti-rattler of this character which is constructed so as to be readily applied and which is adapted to be detachably engaged over the steering rod and its connection with the steering arm.

Another object of my invention is to provide a device of this character which is easy to operate and inexpensive to manufacture and which will at all times produce the maximum of efficiency with the minimum of wear and derangement of the component parts.

To this end my invention resides in the novel construction, combination and arrangement of parts to be more fully hereinafter described and claimed and taken in connection with the accompanying drawings which form a part of this application and in which:—

Figure 1 is a top plan view showing my invention as applied;

Fig. 2 is a side elevation on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a perspective view of the anti-rattler; and

Fig. 5 is a perspective view of a slightly modified form.

I desire it to be understood that I do not wish to limit myself to the specific application of my anti-rattler to automobiles as it may be used upon any form of coupling where it is desired to prevent looseness and play of the parts.

As illustrated in the preferred embodiment of my invention, I have shown it as applied to the standard type of connection between the steering rod and steering arm of automobiles and referring to the invention in detail, with reference to the drawing in which like reference characters indicate corresponding parts, my invention comprises a single piece of heavy wire bent upon itself to form a coil spring having a looped central portion 3 projecting at one side therefrom and arcuately formed to provide a hooked end portion 4. Extending from the ends of the spring and at the opposite side thereof, the remaining portion of the wire forms a pair of spaced parallel arms 5 and 6 extending for a considerable distance beyond the coil 2 of the spring. The end of the arm 5 is bent at right angles upon itself and continued to form an end portion 7 which is substantially U-shaped with the outer end of the arm 5 comprising one of the arms of the U. This arcuate U-shaped end portion 7 is extended transversely between the arms 5 and 6 with the free arm of the U disposed adjacent the arm 6. At this point the arm of the U-shaped portion 7 is bent upon itself to form a hook member 8 in which is normally engaged and retained the adjacent end of the arm 6.

In the application of my anti-rattler as illustrated in the accompanying drawing in which I have shown the device as applied to a steering rod 9 having a bifurcated end between the furcations of which is mounted a knuckle 10 carrying the steering arm spindle 11. When it is desired to apply my anti-rattler, the arm 6 is disengaged from the hook 8 formed on the transversely extending arcuate end portion 7 and the projecting hook member 4 is disposed between the furcations of the end of the steering rod 9 in engagement with the surface of the knuckle 10. This will dispose the coil spring 2 at one side of the steering rod 9 and adjacent the furcations at the end of the rod so that the arms 5 and 6 will extend along the rod. The arms 5 and 6 are then spread sufficiently as to permit the transversely extending arcuate portion 7 to be engaged over the opposite side of the rod 9 after which the arm 6 is allowed to spring into engagement with the hook member 8 which will secure the device in position. When it is desired to detach the same, it is merely necessary to disengage the arm 6 from the hook

8 and remove the device in the manner in which it was applied.

Owing to its construction and arrangement as clearly illustrated in the accompanying drawings supplementing this description, it will be seen that the hook member 4 under action of the coil spring 2 will bear against the surface of the knuckle 10 providing an effectual means for preventing looseness of its connection with the adjacent end of the steering rod to prevent rattling of the same.

In Fig. 5 I have illustrated a modified form of construction of the anti-rattler. The only change between the two forms resides in the formation of the ends of the arms, and as I have illustrated the modified form comprises an identical construction except that the arms 5′ and 6′ are each provided with arcuate end portions 7′ and 7″ respectively, with the bent end portion 7″ of the arm 6′ in a plane parallel with the bent portion 7′ of the arm 5′, projecting beyond the portion 7′ and in the same direction. The arm 6′ terminates short of the arm 5′ and the hook member 8 of the preferred form is dispensed with. When the device is applied the arm 5′ will be bent so as to engage the arcuate portion 7′ over the side of the rod having the portion 7″ engaged thereover.

While I have shown and described certain specific details and manner of construction as well as location of the component parts of my invention, I desire it to be understood that I do not wish to limit myself specifically to these details as described and shown, but that any changes may be made therein as may fall within the scope of the appended claims.

I claim:—

1. In combination with first and second members having a hinge pin joint therebetween, of a wire bent upon itself and engaging one member at the bent portion of the wire, said wire being fulcrumed on the second member adjacent the hinge joint, the free ends of the wire extending away from the joint and providing means coacting by springing the wire as its own integral unit to engage the second member and hold the wire assembled with the members at the joint.

2. In a device of the class described, a longitudinal spring formed from a single piece of resilient metal bent upon itself to form intermediate coils, said spring in its extent one way from said coils being offset to extend partially about a knuckle of a steering gear and receive the arm of said kunckle, and in its extent the other way from said coils being adapted to encircle partially a connecting rod of a steering device for maintaining the spring in place.

3. In combination with a spindle arm of a stub-axle, a steering rod having a forked end to which said spindle arm is pivoted, a wire bent upon itself at its longitudinal center and engaging at its bent portion the pivotal spindle end and extending between the forked part of the steering rod, said wire being fulcrumed over the edge of the forked portion and bent at right angles a short distance from its free ends, each end bent to form oppositely disposed hooks adapted to yieldingly engage the steering rod.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM H. SHONDELL.

Witnesses:

ERNEST N. WARDEN,

HENRY F. POHLMAN.