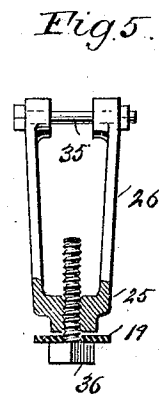
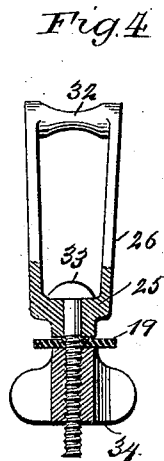
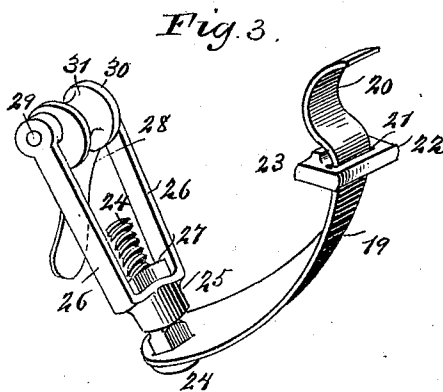
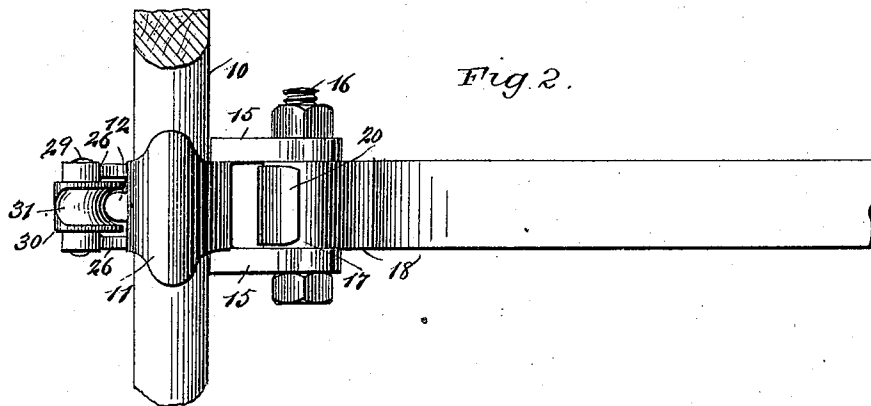
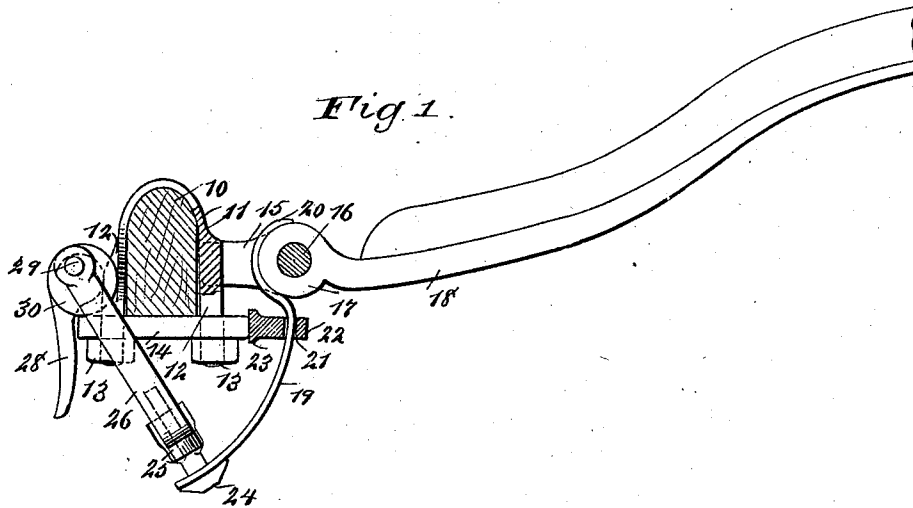


(No Model.)

W. H. PARDEE.
ANTI-RATTLER FOR THILL COUPLINGS.

No. 502,134.

Patented July 25, 1893.



WITNESSES:

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WILLIAM H. PARDEE, OF ANTIGO, WISCONSIN.

ANTI-RATTLER FOR THILL-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 502,134, dated July 25, 1893.

Application filed November 26, 1892. Serial No. 453,227. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PARDEE, of Antigo, in the county of Langlade and State of Wisconsin, have invented a new and Improved Anti-Rattler, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of anti-rattlers which are adapted to be applied to thill couplings so as to take up the lost motion and consequent rattle of said couplings.

The object of my invention is to produce an extremely simple, cheap and durable anti-rattler which may be applied without the use of tools to any ordinary thill coupling, which may be adjusted so as to bear with the requisite tension on the thill iron knuckle, and which has a constant pressure on the knuckle so as to take up all lost motion caused by inequalities in the bearings and prevent any possible rattling.

To these ends, my invention consists in an anti-rattler, the construction of which will be hereinafter described and claimed.

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

Figure 1 is a sectional elevation of the anti-rattler as applied to a common form of thill coupling and a carriage axle. Fig. 2 is a plan view of the same. Fig. 3 is a detail perspective view of the anti-rattler. Fig. 4 is a detail sectional view of a modified form of the anti-rattler; and Fig. 5 is a similar view of another modification of the anti-rattler.

The axle 10 is provided with the usual clip 11, which rests upon it and which has the customary bolts 12 extending beneath the axle and having nuts 13, by which they are fastened to the clip plate 14, which plate extends across the under side of the axle. The clip has the usual forwardly extending arms 15, in the front ends of which is held the usual coupling bolt 16, which is provided with the ordinary nut and head, and serves as a bearing for the thill iron knuckle 17, which is formed on the end of the thill iron 18, and turns between the arms 15.

The above construction represents the common form of thill coupling, and constitutes no part of my invention. An important fea-

ture of my invention is the spring lever 19, which is made in the form of a wide flat spring, and this has its upper end curved, as shown at 20, so as to fit between the arms 15, and against the back side of the thill iron knuckle 17. The spring lever 19 is fulcrumed in its upper end in a bearing block 22, through a slot 21 of which the lever extends, and the block has its back edge thickened slightly, as shown at 23, so that it may rest firmly against the front end of the plate 14. It will be understood, however, that this bearing block may be fastened rigidly to the plate, or the plate may be made long enough to itself serve the purpose of a bearing block.

Pivoted in the lower end of the spring lever 19 is a bolt 24, which extends through the thickened lower end 25 of a bail 26, the bolt being held in position in the bail by means of a nut 27. This bail extends upward and rearward diagonally, as shown in Fig. 1, and is hooked over the back end of the clip plate 14. Pivoted in the upper end of the bail is a lever 28, the lever being fulcrumed on a bearing pin 29, and the pivoted end of the lever is formed into a cam 30, having a groove 31 therein which fits the back bolt 12 of the clip 11. The anti-rattler is adjusted as shown in Fig. 1, the bearing block 22 being placed in position upon the front end of the clip 14 and the lever 19 having its curved end arranged behind the knuckle 17. The bail 26 is then turned round and round so as to tighten or loosen the bolt 24 and give the requisite tension to the spring, the position of the bolt being fixed after it is once adjusted, by the nut 27. After the bolt 24 is properly adjusted, the upper end of the bail 26 is hooked upon the back end of the plate 14, the lever 28 being turned up at the time so as to permit the easy hooking of the bail. After this, the lever is turned down and this brings the thicker portion of the cam 30 next the plate 14 and bolt 12, thus tightening the bail 26 and spring lever 19, and the upper end of the latter is caused to press firmly but yieldingly upon the knuckle 17. As a result, the pressure is constant without regard to the change of position of the knuckle, and consequently no rattling can take place. If desired, the cam lever may be dispensed with, and in this case, the bail may be made as shown in Figs.

4 and 5, the bail in Fig. 4 having its upper end connected by a cross bar 32, which is adapted to lie upon the back end of the clip plate 14. The free end of the spring lever 19 is in this case 5 secured to the lower end of the bail by a bolt 33, the head of which is held within the bail, and the tension of the spring is adjusted by a thumb nut 34 on the lower end of the bolt; or instead of this construction, the upper ends 10 of the bail may be connected by a bolt 35 (see Fig. 5) and an ordinary set screw 36 used to connect the free end of the lever 19 with the lower end of the bail 26.

It is obvious that still other forms of screw 15 mechanism may be used for adjusting and regulating the tension of the spring lever 19, and I do not limit myself to any particular form of adjustment, as I claim broadly the arrangement of the spring lever as my inven- 20 tion.

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

1. As an improved article of manufacture 25 an anti-rattler comprising a spring having a curved upper end to engage the thill iron, a fulcrum block 22, a bail adjustably connected at its lower end with the lower end of the spring and a cam lever pivoted within the 30 upper or free end of the bail, substantially as set forth.

2. The combination, with the thill coupling having the usual clip and knuckle, of a spring

lever fulcrumed beneath the knuckle and held to press against the same, and a bail ad- 35 justably secured to the lower end of the spring lever and adapted to engage the back end of the clip plate, substantially as described.

3. The combination, with a thill coupling having the usual clip and knuckle, of a spring 40 lever fulcrumed beneath the knuckle and adapted to press against the same, a bail carried by the axle clip, and a screw mechanism connecting the bail with the free end of the spring lever, substantially as described. 45

4. The combination, with the thill coupling having the usual clip and knuckle, of a spring lever fulcrumed beneath the knuckle and held to press against the same, a bail pivoted to the free end of the lever and held to hook 50 over the back end of the clip plate, and a cam mechanism for moving the bail and spring lever, substantially as described.

5. The combination, with a thill coupling having the usual clip and knuckle, of a bear- 55 ing block adapted to rest against the free end of the clip plate, a spring lever fulcrumed in the block and having its upper end fitted against the thill knuckle, and a bail pivoted to the lower end of the lever and adapted to 60 hook over the back end of the clip plate, substantially as described.

WILLIAM H. PARDEE.

Witnesses:

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