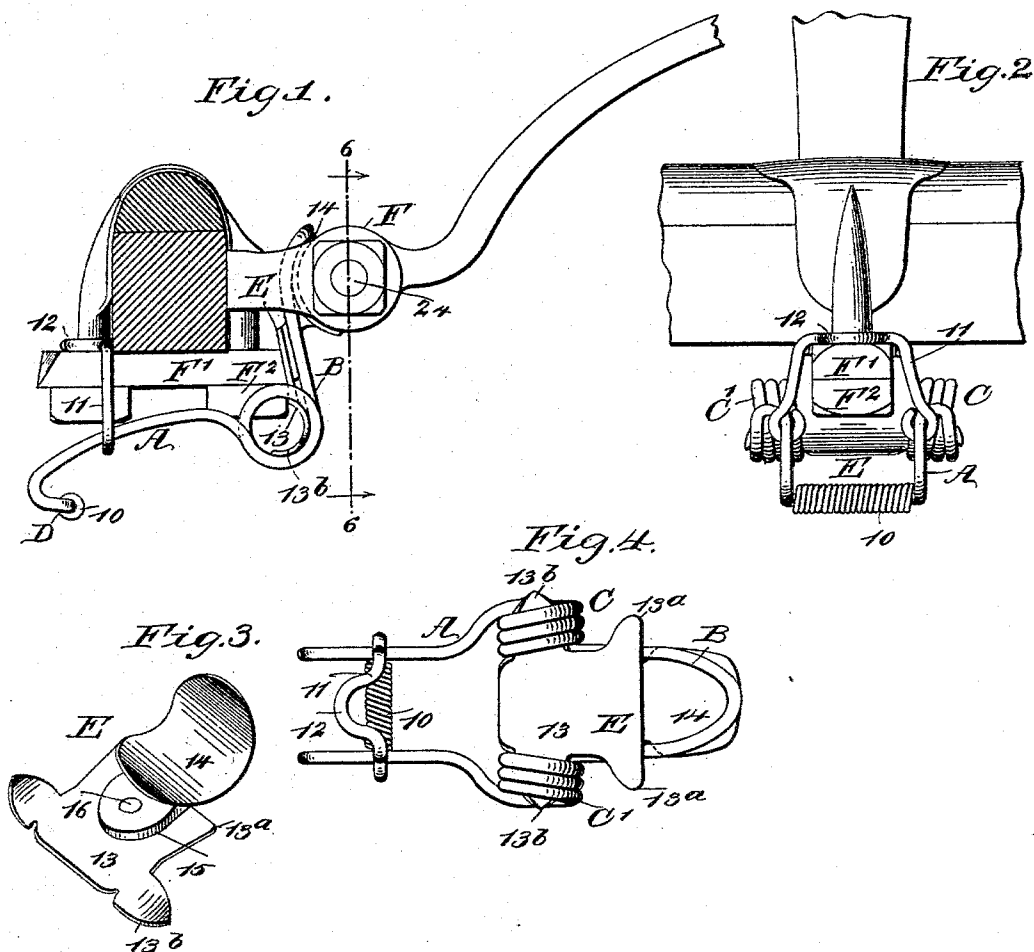


(No Model.)

F. P. JOHNSON.
ANTIRATTLER FOR THILL COUPLINGS.

No. 515,688.

Patented Feb. 27, 1894.



WITNESSES:

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FRANK P. JOHNSON, OF DANVILLE, PENNSYLVANIA.

ANTIRATTLER FOR THILL-COUPPLINGS.

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To all whom it may concern:

Be it known that I, FRANK P. JOHNSON, of Danville, in the county of Montour and State of Pennsylvania, have invented a new and
5 Improved Antirattling Attachment for Thill-Couplings, of which the following is a full, clear, and exact description.

My invention relates to an anti-rattling attachment for thill couplings, and it has for
10 its object to provide an attachment which will be simple, durable and economic in its construction, and which will be self-adjusting to all styles of coupling.

A further object of the invention is to provide means whereby the attachment may be
15 constructed of wire and the wire prevented from cutting into the thill or unduly chafing thereon.

Another feature of the invention is to provide an anti-rattling device for thill couplings which will have a maximum amount of bearing surface on the coupling, and which
20 will be so constructed that it will automatically take up wear.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed
25 out in the claims.

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

Figure 1 is a side elevation of a thill coupling and anti-rattling device applied thereto. Fig. 2 is a rear elevation of the coupling and the device located thereon. Fig. 3 is a detail
35 perspective view of the wear plate of the device, and Fig. 4 is a plan view of the device removed from a coupling, illustrating a slight difference in the construction of the wear plate.

In carrying out the invention the body of the device is usually and preferably made of
45 wire of proper size, the wire being bent upon itself to form two end loops A and B, the said loops being connected by coils C and C'. The loop B is usually made narrower than the loop A, and the inner ends of the said loop
50 are bent to form the inner spirals of the coils C and C', while the terminations of the outer spirals of the said coils are carried somewhat

around one end of the coils, and are shaped into the loop A. The outer extremity of the loop B, is outwardly curved to a predetermined extent, as shown in Fig. 1, while at the
55 outer extremity of the loop A the wire is carried downward below the body of the loop and the ends connected to form a cross bar surrounded by a spiral spring 10, the said
60 spring extending from side to side of the loop; or the spring may be utilized only to connect the outer extremities of the members of the said loop A. In this manner a spring stirrup D, is provided for the loop A, rendering it ex-
65 ceedingly elastic at its outer extremity.

The loop A, carries a bail 11, which bail has sliding movement upon the loop, and extends upward practically at a right angle therefrom; and the upper portion of the bail 11, is formed
70 with an outwardly or rearwardly extending central loop, or concaved section 12, as illustrated in Figs. 1 and 4.

In addition to the body and the bail 11, the device further comprises a wear plate E, which serves to prevent the body loop B from
75 cutting into or otherwise marring the thill against which it is practically to have a bearing. The wear plate is preferably made, as shown in Fig. 3, in which view it is shown as
80 comprising two sections 13 and 14, the section 14, being provided with one decided concaved inner face, the opposite face being convexed. In fact, the section 14 is in the nature
85 of a concaved shoe, and is provided upon its under surface with a shank 15, which extends downwardly therefrom, and then at right angles outwardly from the said downward bend. Thus the shank is more or less angular, and
90 its outwardly-extending member is attached to the upper face of the body section 13 of the wear plate, through the medium of a stud or rivet 16, or equivalent fastening device. The
95 end of the body section 13 of the wear plate which is contiguous to the shoe 14, and is really somewhat beneath the shoe, is wider than the shoe, so that lugs 13^a are formed, which extend beyond the sides of the shoe. At the opposite end of the body section of the wear plate, lugs 13^b are produced, which
100 lugs are preferably of a cylindrical character; and in attaching the wear plate to the body of the device, the cylindrical lugs 13^b, are loosely entered in the coils C and C'; and the

loop B of the body is made to extend across the under face of the body section 13 of the plate, over the lugs 13^a thereof, and over the upper surface of the shoe section 14 of the said plate, as shown in Fig. 4, and the curved extremity of the loop B, is made to conform practically to the curvature or convexed surface of the upper face of the said shoe.

In Fig. 4 I have illustrated a slight modification in the construction of the wear plate, consisting only in that the plate is made in one piece, and the shoe section is struck up, or offset from the body section 13, thus forming a step between them.

In the application of the attachment, the shoe section 14 of the wear plate at its concaved face is made to engage with the rear surface of the eye or socket portion F of the thill, while the body portion 13 of the plate is made to engage with the clip plate F' of the thill and the forward nut F² of the clip, the coils being located one at each side of the said nut. The loop A, is then carried beneath the said clip plate F' of the thills, and both of the nuts of the clip, and the bail 11 is slid over the upper rear portion of the clip plate F', and its loop, or concaved portion 12, may be engaged with the rear member of the clip. In this manner the shoe 14, is held in frictional engagement with the socket or eye of the thill by means of the spring body connected with and supported by the clip section of the thill. The said spring body, by reason of its peculiar formation, will cause the shoe to take up any lost motion that may possibly occur between the sections of the coupling, and at the same time will exert such pressure on the socket member of the coupling as to effectually prevent any rattling or movement of that member upon the clip member, and the attachment further acts to maintain the thills in whatever position they may be placed.

It will be readily observed that the anti-rattling attachment above set forth will accommodate itself to thill couplings of any size and practically of any shape, and that when wire is employed the wear plate will effectually prevent the wire from cutting into or injuring the coupling in the slightest degree.

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

1. An anti-rattling attachment for thill couplings the same consisting of a spring body provided with a shoe at one extremity, adapted for engagement with the socket member of the thill coupling, and a yoke at the opposite end of the body, adapted for engagement with the clip member of the coupling, as and for the purpose set forth.

2. An anti-rattling attachment for thill

couplings, the same consisting of a spring body capable of being bent to an angular form, one end of the body being provided with a shoe adapted for engagement with the eye or socket member of the thill coupling, and a yoke adjustably carried at the other or opposite end of the body, adapted for locking engagement with the clip section of the coupling, as and for the purpose specified.

3. An anti-rattling attachment for thill couplings, the same consisting of a body comprising two loops having a spring connection, a shoe carried by one of the loops, and a yoke carried by the opposite loop, as and for the purpose specified.

4. In an anti-friction attachment for thill couplings, a body constructed of wire and comprising spring-connected loops, a wear plate carried by one of the loops, said plate having a shoe formed thereon, and a yoke adjustably mounted upon the opposing loop, as and for the purpose specified.

5. In an anti-rattling attachment for thill couplings, a body constructed of spring wire, comprising two loops united by coils, one of the loops at one of its extremities beneath the body having its members spring-connected, a yoke movably mounted on the loop, having a spring end, and a shoe located upon the opposite side of the opposite loop, substantially as and for the purpose specified.

6. An anti-rattling attachment for thill couplings, the same consisting of a body constructed of wire and comprising two spring-connected loops, a wear plate extending the length of one of the loops, and a yoke movably located upon the opposite loop, as specified.

7. An anti-rattling attachment for thill couplings, comprising two loops connected by coils, and a wear plate having lugs for entering the coils of the loops and provided with a shoe against which one of the loops rests, substantially as described.

8. An anti-rattling attachment for thill couplings, comprising two loops connected by coils, and a wear plate having lugs fitting in the coils of the loops and provided with a shoe having a concaved inner face, substantially as described.

9. An anti-rattling attachment for thill couplings, consisting of two loops connected by coils, a wear plate formed of two sections secured together, one section being concave on its inner face and the other provided with lugs fitting in the coils of the loops, and a bail loosely connected with one of the said loops, substantially as herein shown and described.

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Witnesses:

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