

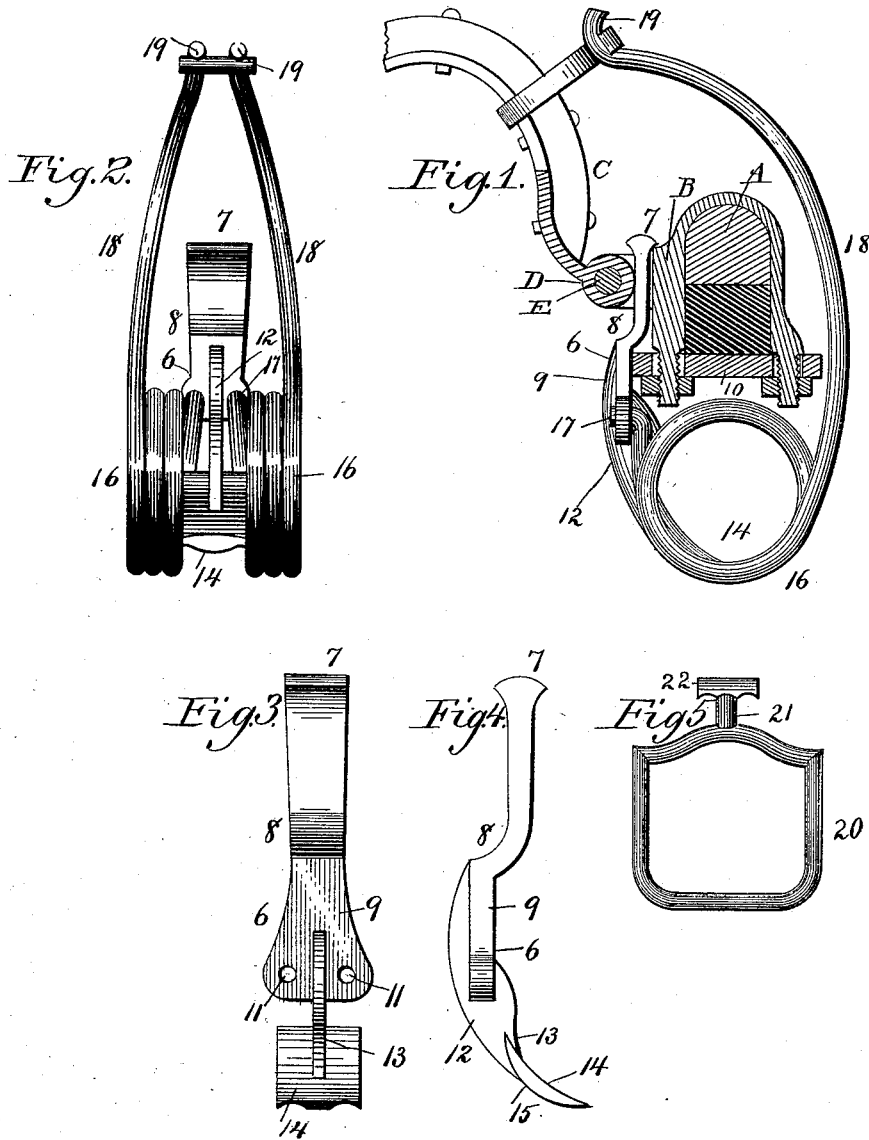
(No Model.)

H. CARPENTER.

COMBINED ANTI-RATTLER AND SHAFT SUPPORT.

No. 422,376.

Patented Mar. 4, 1890.



Witnesses
T. A. Murphy-
R. S. Gould

Inventor
Henry Carpenter
per Wm H White
Attorney

UNITED STATES PATENT OFFICE.

HENRY CARPENTER, OF DAVENPORT, IOWA.

COMBINED ANTI-RATTLER AND SHAFT-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 422,376, dated March 4, 1890.

Application filed October 19, 1889. Serial No. 327,604. (No model.)

To all whom it may concern:

Be it known that I, HENRY CARPENTER, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Combined Anti-Rattler and Support for Spring Shaft Balance, of which the following is a specification.

My invention relates to a combined anti-rattler and support for spring shaft balance; and the objects of my improvements are, first, to provide means for holding and supporting the non-operative ends of the spring shaft balance, and, second, to provide an anti-rattler. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a cross-section of a vehicle-axle, clip-bolt, and end of a shaft with my device attached. Fig. 2 is a rear view of the springs, loop, and my device. Fig. 3 is a rear view of my combined anti-rattler and support for spring shaft balance. Fig. 4 is a side view of the same, and Fig. 5 is a front view of the shaft-loop.

Similar letters and figures refer to similar parts throughout the several views.

A is the axle; B, the clip-bolt; C, the rear end of a shaft; D, the shaft-eye, and E the eyebolt.

6 is the combined anti-rattler and support for spring shaft balance. The shank or upper end of the same is provided with the head 7, and each shank at its lower end is curved outward, as at 8, to permit the portion below the shank, as at 9, which I call the "plate," to rest against the front edge of the clip-bar 10. The plate 9 is provided with two perforations, as at 11, and said plate has also a central vertical projection on its front and rear face, as at 12, which extends below the plate, curved inwardly, as at 13, and terminates in a transverse bar 14, the under surface of which is oval, as at 15. The coiled spring 16 has one of its ends near the coil bent outwardly, as at 17, and which end is inserted in one of the perforations 11 of the plate, and the opposite end of such spring is extended so as to form an arm, as at 18, the end of which is curved to form a hook, as at 19. The loop 20 encircles the shaft, and its upper surface has an

upright post 21, with a cross-bar thereon, as at 22. The hook 19 is secured under the cross-bar 22. In the construction of my device I prefer to use two springs having the coils on the inner side of the arm 18, as shown in Fig. 2.

In using my device I pass a loop over or around each shaft and remove the eyebolts and shafts. I then insert the shank of my device between the shackle-bars of the clip so its head 7 protrudes slightly above the shackle-bars, and then replace the eye of the shaft between such shackle-bars so it presses against such shank, and I then secure the eye in position by inserting the eyebolt through such eye and the perforations in the shackle-bars. I then insert one of the ends 17 of each spring in one of the perforations 11 of the plate and place the lower part of the interior of the coil-spring against the lower surface of the transverse bar 14, placing a coil on one side of the projection and curved extension 12 and 13 and the other coil on the opposite side, as shown in Fig. 2. I force the arms 18 of the two coiled springs around the rear of the clip-bolt and over and forward of the same and hook their respective ends to the cross-bar 22 on the loop 20.

In operation the springs support or balance the shafts and the loop moves or slides forward and back on the shafts to accommodate the movement of the arms of the springs. The head 7 on the shank holds the plate in position and prevents it from falling, and such head and shank, together with the plate resting against the front edge of the clip-bar, prevents the plate and transverse bar from moving rearward and forms a substantial and rigid seating for the non-operating ends of the coiled springs.

I do not broadly claim the use of a loop and coiled springs for balancing or supporting vehicle-shafts; but

What I claim as new, and desire to secure by Letters Patent, is—

1. In a shaft balance or support, the combination, with a thill coupling and shaft having a recess between the shaft-eye and clip-bolt of such coupling, of the headed shank curved at its lower end, the plate provided with perforations and central vertical projections on its front and rear face and extended below

such plate and curved inwardly and terminating in a transverse bar oval on its under side, the coiled springs, each provided with an outwardly-bent end, and an arm and hook and
5 the loop encircling the shaft, substantially as described.

2. A combined anti-rattler and support for spring shaft balance, consisting of the headed shank outwardly curved at its base, the plate
10 attached thereto having perforations and cen-

tral vertical projections upon its front and rear face and extended below such plate, curving inwardly, and terminating in a transverse bar having its lower surface oval, substantially as described.

HENRY CARPENTER.

Witnesses:

CHARLES H. HARFORD,

CHAS. HIBBARD.