(No Model.)

W. CAVERS.

COMBINED SHAFT SUPPORT AND ANTIRATTLER.

No. 522,824. Patented July 10, 1894.

Fig. 1.

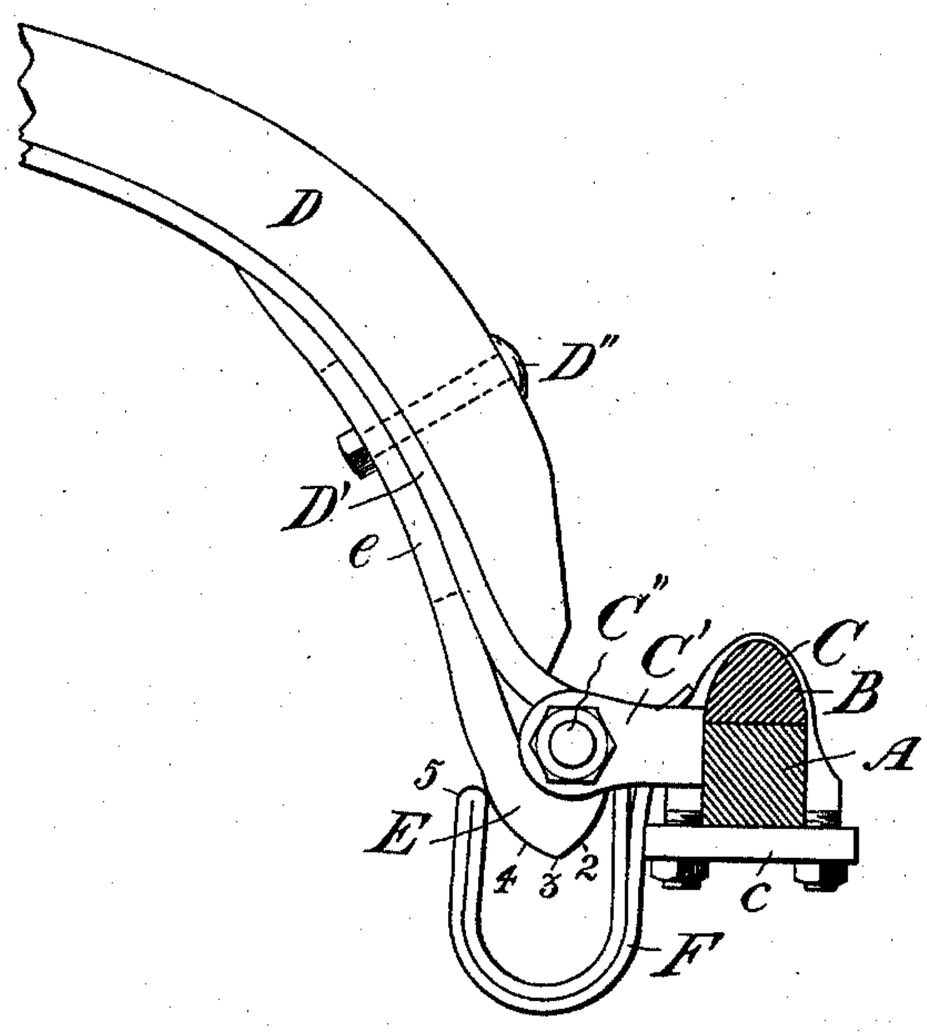
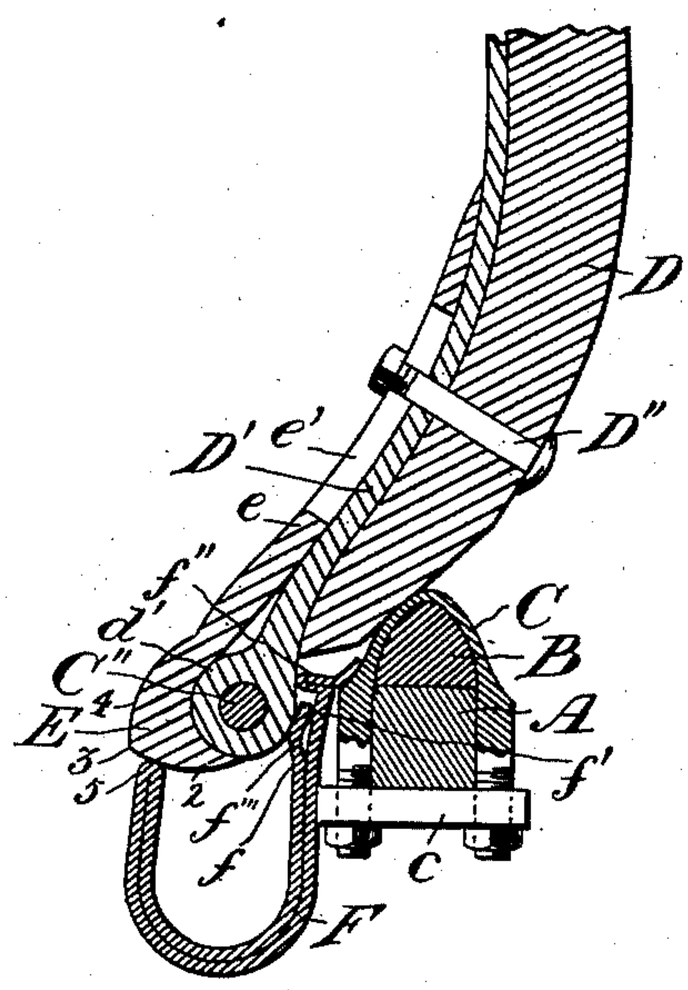


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM CAVERS, OF OWEN SOUND, CANADA.

COMBINED SHAFT-SUPPORT AND ANTIRATTLER.

SPECIFICATION forming part of Letters Patent No. 522,824, dated July 10, 1894.

Application filed November 20, 1893. Serial No. 491,499. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CAVERS, of Owen Sound, in the county of Grey, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in a Combined Shaft-Support and Antirattler; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

My invention, which will be hereinafter fully set forth and claimed, relates to devices for holding up the shafts of vehicles when unharnessed and also serving the purpose of anti-rattlers.

The object of my invention is a device for holding up or supporting the shafts of vehicles without extraneous means and which shall also act as an anti-rattler.

Figure 1 is an elevation of part of a shaft attached to an axle shown in its normal position and having my improved device attached. Fig. 2 is a section corresponding to Fig. 1 and showing the shaft raised and supported.

A is the axle, B the axle bed, C the clip or clevis with the clip tie *c*, coupling lugs C′ and coupling bolt C″ forming the thill coupling for the shaft or thill D and thill iron D′ with eye *d′*, all these being the ordinary and well known parts.

To the thill eye *d′* is fitted a shoulder, offset or nose E, provided with, or contained on, an extension, foot piece or bracket *e*, so formed that the structure fits the under side of the thill iron D′ and extends partly around the thill eye, being secured to the same by the same bolt, D″, made a little longer, which holds the thill iron to the thill or shaft, an eye, or preferably a slot, *e′*, being provided in said bracket for the purpose. The shoulder or nose E is so shaped that when the shaft is raised, as shown in Fig. 2, it presents an approximately horizontal, but convexly curved, surface, 2, projecting forward, from the lowest part of the thill eye, then forming an edge or angle 3 and an upwardly and inwardly drawn convex face 4, whence the extension *e* commences and tapers gradually away.

Between the lugs C′, clip C and thill eye *d′*, so as to press against the latter two, is inserted the split end of a spring F, its shank projecting downward and returning upward in the form of the letter U, the upper end 5 of the free or upward turned limb abutting on the surface 2 of the nose E when the shaft is in its raised position, as shown in Fig. 2. The split end, which is longer than the other, is formed into two tongues *f* and *f′* of which the rear one, *f′*, is longer and is formed with a head *f″* adapted to rest on the conical shoulders of the limb of the clip on one side and butt on the thill eye on the other, and thus form a suspension hook which prevents it from dropping out of position. The front tongue *f* is furnished with a bearing *f‴* on the lower part of the thill eye to prevent it sliding upward and, the two tongues being set to spring apart, thus form an anti-rattler.

The spring may be conveniently formed of a thin strip doubled up at 5 and having one end left open and set apart to form the tongues *f* and *f′*.

When the shaft is in the position shown in Fig. 2, the end 5 of the spring F bears on the face 2 of the nose or shoulder E and thus supports the shaft in its elevated position, the rear limb abutting on the clip tie *c*. If the shaft is to be lowered, a moderate downward pull causes the point 3 to force the end 5 of the spring F sufficiently down to allow said point to pass inside the spring, so as to cause said end to bear on the outside face 4, which, when lowered to its normal position, as shown in Fig. 1, allows the spring to bear on it without exerting any appreciable pressure. To hold up the shaft, it is only necessary to lift it high enough to allow the point 3 to pass the end 5 of the spring.

It is obvious that the shoulder E may, if desired, be formed integrally with the thill iron D′, instead of attaching it as a separate piece.

I claim as my invention—

1. A shaft support, consisting of a U shaped spring adapted to be held under the thill eye by having one limb provided with means of supporting it between said eye and the clip and a shoulder, offset or nose on said eye having two convex faces disposed at an angle to each other which projects forward from the said eye so that the lower face is even with the outside of the thill eye and is approximately horizontal when the shaft is raised

and bears on the upper end of the returned limb of the spring near said angle, substantially as set forth.

2. A combined shaft support and anti-rattler consisting of a U shaped spring F having the end of limb made longer and formed in two tongues *f* and *f'* of unequal length and provided with a bearing *f'''* and head *f''* respectively, and a shoulder or nose E having the surfaces 2 and 4 and angle 3 and secured by means of a slotted extension or bracket *e* to the thill iron, so as to bear with said faces on said spring when the split limb is inserted between the thill eye and clip, substantially as set sorth.

3. In a shaft support and anti-rattler spring, the combination of a U bent piece, of an extended limb split in two tongues *f* and *f'* of unequal length, the shorter one having a bearing *f'''* on the lower part of the thill eye and the longer one a suspension head *f''*, substantially as set forth.

4. The combination of an axle A, thill coupling C *c* C' C'', thill D, thill iron D' *d'*, shoulder or nose E on the eye of said thill iron and the U shaped spring F having one limb split and formed with bearing and head and inserted in said coupling, substantially as set forth.

In testimony whereof I have signed in the presence of the undersigned witnesses.

WILLIAM CAVERS.

Witnesses:
G. H. WEST,
R. J. WOODS.