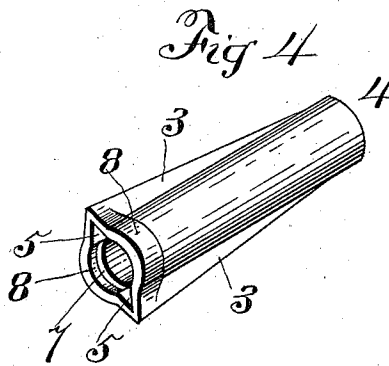
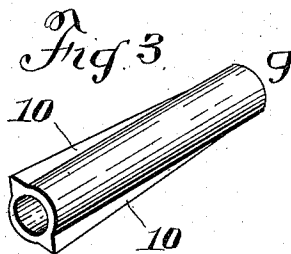
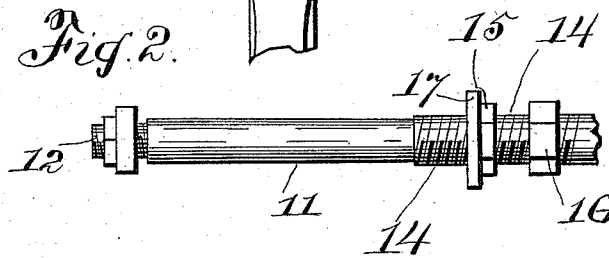
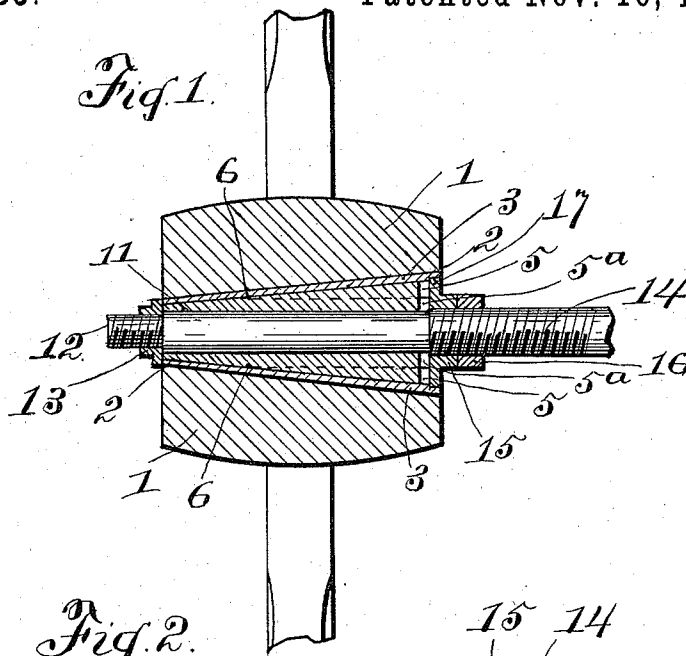


(No Model.)

W. J. McLEAN.
AXLE BOX.

No. 571,235.

Patented Nov. 10, 1896.



Witnesses,

John S. Stearns
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Inventor

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Atty.

UNITED STATES PATENT OFFICE.

WILLIAM JAMES McLEAN, OF GLOSTER, MISSISSIPPI.

AXLE-BOX.

SPECIFICATION forming part of Letters Patent No. 571,235, dated November 10, 1896.

Application filed April 14, 1896. Serial No. 587,463. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JAMES McLEAN, a citizen of the United States, residing at Gloster, in the county of Amite and State of Mississippi, have invented certain new and useful Improvements in Axle-Boxes, of which the following is a specification.

This invention relates to carriages and wagons, and particularly to an axle-box, and the novelty, purpose, and resultant effect of the same will be fully understood from the following description and claims, when taken in connection with the annexed drawings.

The object of the invention is to provide an axle-box of such peculiar construction and arrangement that the usual wear and tear on the axle-spindle as well as upon the said parts will be avoided.

A further object of the invention is to provide a combined axle-skein and box adaptable to any axle-spindle and adjustably secured thereon, as desired.

The invention consists in the novel construction and arrangement of parts, and essentially resides in an axle-box to warrant carriage-wheels to remain in perfect track.

In the accompanying drawings, Figure 1 is a longitudinal section of a wheel-hub, showing the invention applied to a carriage-axle. Fig. 2 is a side elevation of the carriage-spindle provided with a set of nuts. Fig. 3 is a perspective view of the axle-skein. Fig. 4 is a similar view of the axle-box.

The same numeral references denote the same parts throughout the several figures of the drawings.

It is a well-known fact that carriage and wagon axle-boxes soon become worn, even with ordinary usage, and in this condition give the wheel-hub too much play, which prevents it from running straight. It is to overcome this objection and disadvantage that the present invention is designed.

The invention is further intended to obviate the expense and difficulty of providing the wheels with new axle-boxes when the wheels will not track—that is, when the wheels run out of plumb in consequence of the worn condition of parts.

The wheel-hub 1 is of the ordinary construction, having longitudinal tapering grooves 2, into which is fitted the tapering

V-shaped tongues 3 of the axle-box 4. These tongues are formed upon the outside of the box and like the latter are hollow, such hollow being V-shaped and communicating with the inside of the box—that is, the tongues 3 have a V-shaped groove 5, which tapers from one end of the axle-box to a point 6 near the other end of the said box, where it merges into and flush with the inner surface of the box. In the inner end of the axle-box are formed a shoulder 7 and a flange 8, surrounding the shoulder, leaving a space 5^a, which may be used for oil, and leaving the tongues with more metal just at the deepest portion of the hollow or groove 5, rendering the tongues less liable to break or to be indented when the box is inserted into the wheel-hub.

The false box or axle-skein 9 has solid V-shaped tapering tongues 10, which fit the grooves 5 of the tongues 3, one end of the skein being flush with the one end of the axle-box and the other end flush with the shoulder.

The spindle 11 has the usual screw-threaded end 12, provided with a nut 13; but the end of the spindle nearest the axle has a screw-thread 14, somewhat larger than the spindle proper, and is provided with a flange-nut 15 and a jam or lock nut 16. The flange 17 of the nut 15 engages the shoulder 7 of the axle-box, and the latter with its skein is revolutely held between the nut 13 and the said flange-nut 16.

The axle-skein receives the actual wear of the spindle, and when the skein has become worn or otherwise impaired it is simply removed and replaced by a new one without dispensing with or replacing any other part of the box. Should a lateral play of the wheel occur, the flanged nut is made to further hug the axle-box shoulder and is held against the same by the jam-nut.

It will be observed that there are no washers or bushings here employed and that because of the taper of the tongues and grooves the skein cannot slip out of the box should the nut 13 be displaced or lost. It is further obvious that the box and skein may be made in nests of dimensions to suit vehicles of all sizes.

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

1. The combination with an axle-spindle having its outer end screw-threaded and provided with a nut, and its inner end enlarged and screw-threaded, a flange-nut and a lock-
5 nut upon the latter end, the axle-skein having V-shaped tongues, and the axle-box having V-shaped grooves engaged by said tongues, a shoulder and flange upon the inner end of the axle-box engaged by said flanged
10 nut to adjust the box and skein upon the axle-spindle, substantially as shown and described.

2. The combination with a straight axle-spindle having screw-threads upon each end, and a nut upon its outer end, and a flange-
15 nut upon its inner end, and lock-nut upon

the same end, an axle-box having V-shaped tapering grooves extending throughout its length, an interior shoulder surrounded by a flange having said grooves continued therein, an axle-skein having tongues to engage said
20 grooves and adjustably held against the outer end by said flanged nut housed by the flange of the axle-box, substantially as shown and described.

In witness whereof I hereunto set my hand 25
in the presence of two witnesses.

WILLIAM JAMES McLEAN.

Witnesses:

E. H. RATCLIFF,

B. H. DAY.