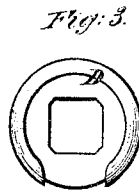
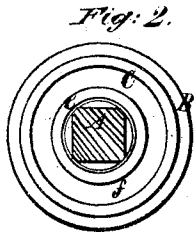
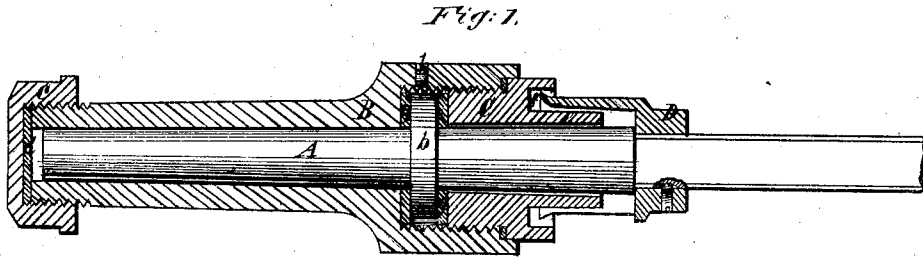


W. A. CLARK.  
Axle Box.

No. 101,097.

Patented March 22, 1870.



Witnesses:  
*Fred. Haynes*  
*R. A. Babcock*

*W. A. Clark*  
by Attorneys  
*Brown, Coombs & Co*

# United States Patent Office.

WILLIAM A. CLARK, OF WOODBRIDGE, CONNECTICUT.

Letters Patent No. 101,097, dated March 22, 1870.

## IMPROVEMENT IN CARRIAGE-AXLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM A. CLARK, of Woodbridge, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Axle-Boxes for Wagons and other Vehicles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification.

The object of my invention is to prevent more effectually dust and sand from entering the axle-box; and to this end

It consists—

First, in a sand-band, attached to the nut that secures the axle in its box;

Second, in a cap attached to the axle, which acts in combination with the said sand-band, to prevent more effectually the entrance of dirt to the box; and

Third, in a groove provided in the nut, for the reception and protection of the cap.

Referring to the accompanying drawing—

Figure 1 is a central longitudinal section of an axle, with a box constructed according to my invention;

Figure 2 is a transverse sectional view of the same, with the cap removed; and

Figure 3 is an end view of the cap.

Similar letters of reference indicate corresponding parts in the several figures.

A is the axle, which is formed as usual with a collar, *b*, and placed within its box B in the usual manner, said box having screwed on its outer end a cap, *c*, which is fitted with a leather washer, *d*.

The box is enlarged at its inner end for the reception of the collar *b* of the axle A and the nut C, by which the axle is secured in its place.

Between the collar and the end of said enlargement on one side and the nut C on the other are interposed the washers *g g*.

*h* is a screw-plug, which may be removed for the introduction of oil into the axle-box.

The nut C is formed with a sand-band, *e*, which projects from its face and surrounds the axle, and is further provided with a groove, *f*, for the reception of the end of the cap D.

This cap D overlaps and partially surrounds the sand-band *e*, thus preventing dust from entering under the edge of the sand-band.

The said cap is open at the bottom, to allow of the escape of any water which may get inside of it to drop out through this opening.

It is represented as secured to the axle A by a set-screw, *i*, but may be secured by a clip or in any other suitable manner.

The edge or mouth of this cap entering the groove *f* of the nut, and being made somewhat flaring, is thereby protected from the entrance of dirt.

I do not claim broadly the providing of an axle-box with a sand-band, but consider that my mode of applying it, namely, as a part of the nut, is more convenient than any other.

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

The nut C, formed with a sand-band, *e*, and groove *f*, in combination with the box B and cap D, substantially as and for the purpose specified.

WM. A. CLARK.

Witnesses:

HENRY T. BROWN,  
FRED. HAYNES.