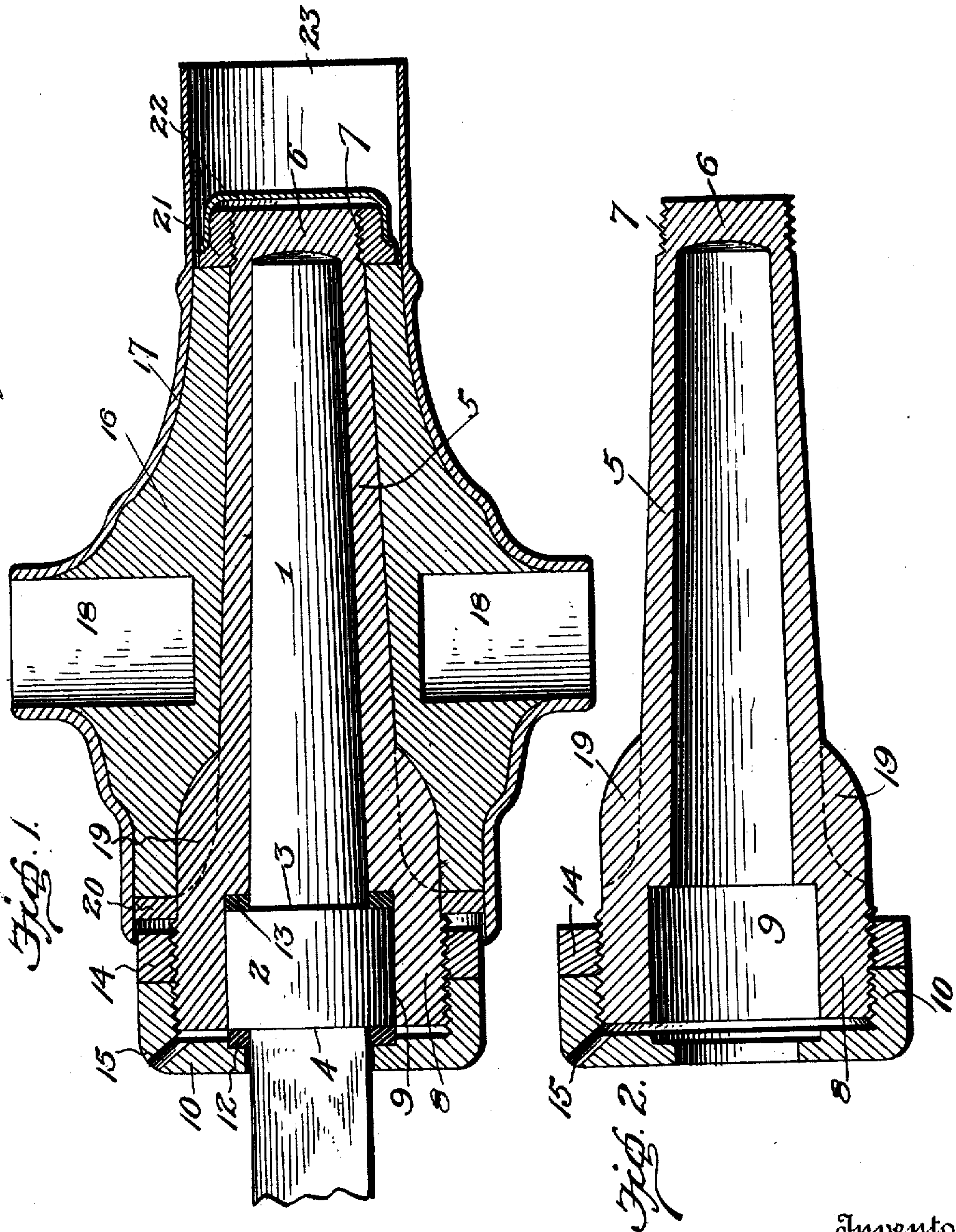


B. E. & M. E. STEVENSON.
 AXLE BOX AND SPINDLE.
 APPLICATION FILED APR. 6, 1908.

916,213.

Patented Mar. 23, 1909.



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UNITED STATES PATENT OFFICE.

BENJAMIN E. STEVENSON AND MARY E. STEVENSON, OF REDDING, CALIFORNIA.

AXLE BOX AND SPINDLE.

No. 916,213.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed April 6, 1908. Serial No. 425,539.

To all whom it may concern:

Be it known that we, BENJAMIN E. STEVENSON and MARY E. STEVENSON, citizens of the United States, residing at Redding, in the
5 county of Shasta and State of California, have invented certain new and useful Improvements in Axle Boxes and Spindles; and we do declare the following to be a full, clear, and exact description of the invention, such
10 as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved construction of axle box and spindle, having
15 means whereby the box is secured to the spindle in such manner as to prevent the entrance of dust or dirt, and to prevent the escape of the lubricating oils applied to the spindle.

20 A further object of the invention is to provide means to take up the wear of the parts, and to facilitate the application of the lubricating oil to the spindle.

With these and other objects in view, the
25 invention consists of certain novel features of construction, combination and arrangement of parts as will be described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1
30 is a longitudinal vertical sectional view of the box and hub showing the same applied to the spindle of an axle; and Fig. 2 is a longitudinal sectional view of the box and the attaching nut.

35 Referring more particularly to the drawings, 1 denotes the spindle, which is provided at its inner end with an annular flange, 2, which provides inner and outer shoulders, 3 and 4. Adapted to be engaged with the
40 spindle 1, is a box, 5, said box having a closed outer end, 6, and is provided at its end with exterior screw-threads, 7. The inner end of the box is enlarged as shown at 8, and in said enlargement is formed an annular recess, 9,
45 of greater diameter than the bore of the box. The enlarged portion of the box is provided with exterior screw-threads and on said threaded end of the box is adapted to be screwed a retaining nut, 10, which is in the
50 form of a cap, and is engaged with an axle of the vehicle immediately in rear of the flange, 2, of the spindle.

Between the inner shoulder, 4, formed by the flange, 2, and the inner side of the retaining nut, 10, is arranged a washer, 12, a similar washer, 13, being arranged between the

shoulder, 3, and the adjacent shoulder formed by the recessed portion of the enlargement, 8. By keeping the nut 10
screwed up tightly on the end of the en- 60
larged portion of the spindle, all wear of the parts may be taken up and the endwise movement of the wheel prevented. Also on the threaded portion of the enlarged end, 8, of the box, is arranged a jam nut, 11, 65
which, when the retaining nut, 10, is screwed up in position, may be locked by screwing the jam nut into engagement therewith. In the retaining nut, 10, is formed an oil
hole, 15, through which lubricating oil may 70
be readily introduced to the spindle. The box, 5, is fitted into a hub, 16, which may be of any suitable shape or construction, and is here shown as formed of wood and provided
with an outer shell or casing, 17, of thin 75
metal. The hub is provided with a series of radially projecting sockets, 18, to receive the spokes of the wheel. The hub is held against rotation on the box, 5, by means of radially
projecting lugs, 19, which are formed on the 80
outer side of the box adjacent to the enlarged inner end of the same. At the inner end of the hub is arranged an end plate or collar, 20, and the inner end of the casing, 17,
is extended beyond the collar, 20, to project 85
over and cover the space between the collar and the jam nut, 14, thus preventing the entrance of dirt between these parts. Adapted to be screwed onto the threaded
outer end, 7, of the box, is a nut, 21, on 90
which is preferably arranged an ornamental cap, 22. The forward end of the shell, 17, is extended and projects a suitable distance beyond the end of the box and the cap, 22,
and provides a ferrule or annular guard, 23, 95
for the end of the hub.

A box closed at its outer end and constructed at its inner end as herein shown and described, will positively prevent the entrance of dust or dirt to the bearing portion 100
of the spindle, and will also prevent the loss or waste of the lubricating oil which is introduced to the box through the retaining nut, 10, as hereinbefore described.

From the foregoing description, taken in 105
connection with the accompanying drawing, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion 110
and the minor details of construction may be resorted to without departing from the

principle or sacrificing any of the advantages of the invention as defined in the appended claims.

Having thus described our invention, what we claim as new, and desire to secure by Letters-Patent, is:

1. The combination with an axle spindle, of a box revolubly mounted thereon, said box having a closed and threaded outer end, a cap nut screwed onto the threaded outer end, an exteriorly threaded recessed enlargement on the inner end of the box, a cup-shaped retaining nut adapted to be screwed onto the said threaded enlargement to cover and inclose the same, said nut having formed therein an oil hole whereby lubricating oil is introduced into the spindle, a jam nut to lock said retaining nut in its adjusted position, a hub arranged on said box, and means to cover the space between said jam nut and the inner end of the hub.

2. The combination with an axle spindle having an annular flange at its inner end, of a box revolubly mounted on said spindle, said

box having a closed threaded outer end, and an enlarged exteriorly threaded inner end, a cup-shaped retaining nut arranged on the axle and adapted to be screwed into engagement with said enlarged end of the box whereby the latter is covered and whereby the endwise wear of the parts may be taken up, a jam nut to lock said retaining nut in its adjusted position, a hub arranged on said box, an end plate on the inner end of said hub, a shell or casing arranged around said hub and projecting beyond the inner ends of the same and over the space between said end plate and said jam nut to prevent the entrance of dirt between said parts.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

BENJAMIN E. STEVENSON.
MARY E. STEVENSON.

Witnesses:

AGNES E. REES,
W. H. BICKFORD.