C. J. VALENTINE.

WAGON-AXLE BOXES

No. 194,938. Patented Sept. 4, 1877.

Fig 1

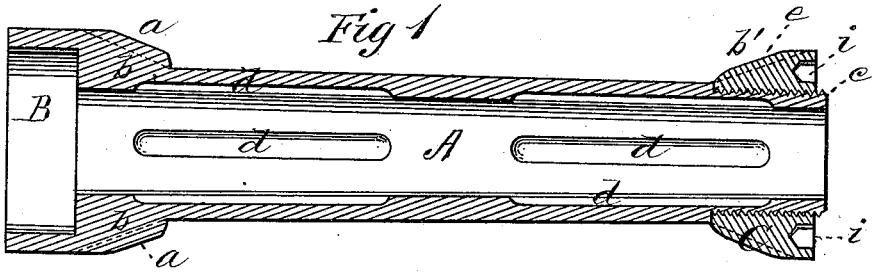


Fig 2

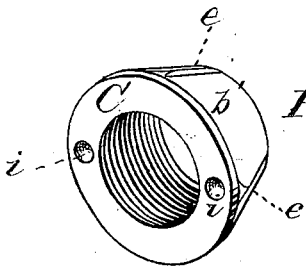
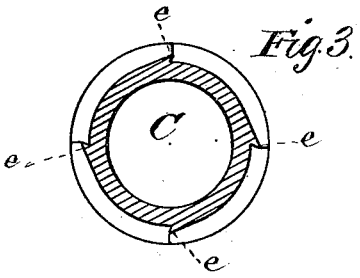


Fig 3.



WITNESSES

Villette Anderson

Francos. J. Masi

INVENTOR

Charles J. Valentine.

by E. W. Anderson

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES J. VALENTINE, OF BELVIDERE, NEW JERSEY.

IMPROVEMENT IN WAGON-AXLE BOXES.

Specification forming part of Letters Patent No. **194,938**, dated September 4, 1877; application filed July 7, 1877.

To all whom it may concern:

Be it known that I, CHARLES J. VALENTINE, of Belvidere, in the county of Warren and State of New Jersey, have invented a new and valuable Improvement in Axle-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal central section of my improved axle-box. Fig. 2 is a perspective view of the conical nut, and Fig. 3 is a cross-sectional view of said nut.

This invention has relation to improvements in axle-boxes; and it consists in the combination, with an axle-box having an enlargement at its inner end, and provided with a ribbed beveled shoulder, of a conical nut having a holding-rib upon its inclined face, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates my improved axle-box, having at its inner end an annular enlargement, B, that affords a seat for the usual butting ring or collar on the spindle. This annular portion is connected with the body of the box by means of a beveled shoulder, *b*, having raised ridges or ribs *a* formed thereon. When the box thus provided is forced into position the conical or beveled shoulder *b* serves to center the box in the hub, and the ribs, by burying themselves in the wood of said hub, hold the box rigidly against rotating independently thereof.

The outer end of the box is rabbeted and screw-threaded, as shown at *c*, and a conical nut, C, is applied thereon, with its beveled face *b'* facing the shoulder *b*. This nut is also provided with ribs *e*, which take upon the material of the hub, and effectually prevent the said nut from unscrewing when the vehicle is backed.

By vigorously applying the conical nut the hub is clamped between it and the shoulder annulus, and its turning independently thereof is effectually prevented.

During the operation of applying the nut the ribs upon the inclined shoulder *b* will hold the box stationary. The front face of the nut is provided with deep indentations *i*, diametrically opposite each other, in which are engaged the ends of a forked instrument, by means of which the nut is set up.

The interior of the box is provided with a number of grooves, *d*, in which the lubricating compound, when in excess, will accumulate, and from which it will be fed as required to the spindle. These grooves will be straight, curved, serpentine, or of any other form, or they may wind around the barrel after the manner of a helix, and, independent of saving the lubricant, have the additional function of gathering up any particles of foreign matter which may have gotten in the box.

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

The combination, with the axle-box A, having an enlargement, B, at its inner end, provided with a ribbed beveled shoulder, *b*, of the conical nut C, having holding-ribs *e* upon its inclined face, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES J. VALENTINE.

Witnesses:

ABRM. H. HARRIS,

E. G. WISE.