

(No Model.)

J. KEAGY & J. D. WISENBURGH.
AXLE SPINDLE AND BOX FOR VEHICLES.

No. 583,805.

Patented June 1, 1897.

Fig. 1.

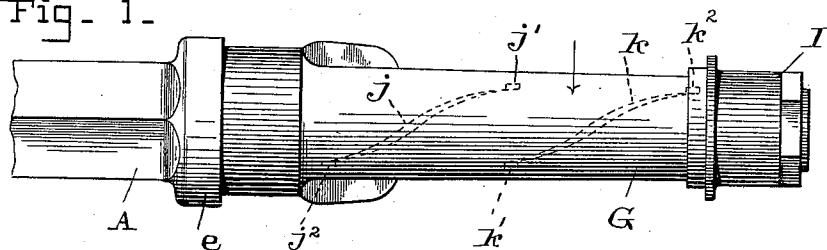


Fig. 2.

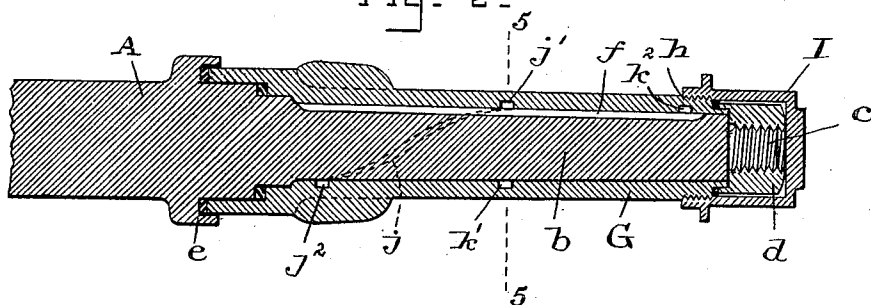


Fig. 3.

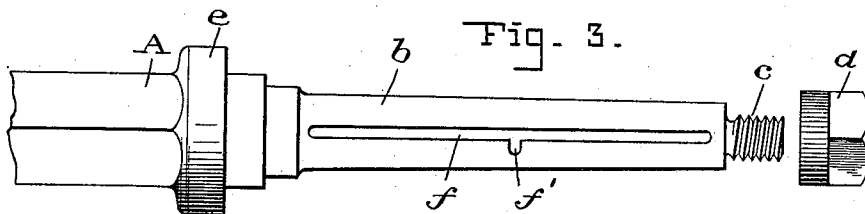


Fig. 5.

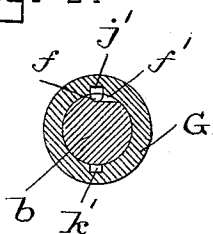
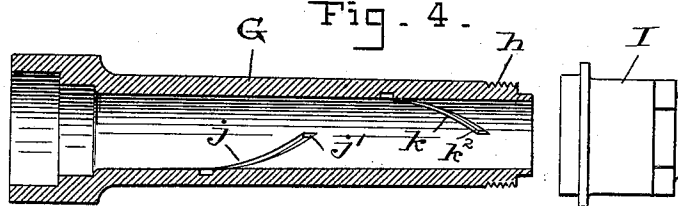


Fig. 4.



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JOSEPH KEAGY AND JOSEPH D. WISENBURGH, OF COSHOCTON, OHIO.

AXLE SPINDLE AND BOX FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 583,805, dated June 1, 1897.

Application filed September 3, 1895. Renewed December 12, 1896. Serial No. 615,538. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH KEAGY and JOSEPH D. WISENBURGH, citizens of the United States, residing at Coshocton, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Axle Spindles and Boxes for Vehicles, of which the following is a specification.

This invention relates to an improved axle spindle and box for vehicles, the object being to automatically distribute or circulate the oil.

The several features constituting our invention will first be described and then pointed out in the claim.

In the accompanying drawings, illustrating our invention, Figure 1 is a side view showing the end of the axle, the box, and cap-nut. Fig. 2 is a longitudinal section of the axle and parts seen in Fig. 1. Fig. 3 is a view of the axle-spindle and nut. Fig. 4 is a section view of the box and cap-nut which screws thereon. Fig. 5 is a cross-section of the spindle and box.

The letter A designates the axle; *b*, the axle-arm, provided with a screw end *c*, on which a nut *d* fits. The spindle has adjoining the axle a well-known bell-collar or cup-collar *e*, into which the end of the box fits. The spindle is provided on top with a groove *f*, extending nearly its entire length. We have provided this groove at its front side and at the center with a shallow lateral outlet *f'*, decreasing in depth from said groove until it disappears on the face of the spindle. The box G has at its end a screw-thread *h*, the threads of which are the reverse of those on the screw end *c* of the spindle, and a cap-nut I screws onto the end of the box and covers the nut *d* on the spindle.

The box contains two spiraled grooves *j k*, one being spiraled to the left and the other to the right. Each groove has its initial end *j' k'* commencing at the center or midway between the ends of the box. The said two initial ends are diametrically opposite each other. From these initial ends the grooves extend in opposite directions and have their terminal ends *j² k²* near the ends of the box. The initial ends of these spiral grooves, when the box revolves, pass over the lateral outlet *f'* in the spindle.

This device operates as follows: The spin-

dle and box (seen in the drawings) are intended for the left side of a vehicle. A box for the right side would have the spiral grooves in reverse direction. When the wheel revolves, the oil will pass along the two reversely-spiraled grooves *j k* until it reaches their terminal ends *j² k²*, and as those ends pass over the ends of the groove *f* on the spindle the oil will be deposited into said spindle-groove. The oil will then flow to the center of said spindle-groove, where it will pass out at the shallow lateral outlet *f'* to be again taken into the initial ends *j' k'* of the reversely-spiraled grooves. It will thus be seen a constant circulation of the oil is effected. Of course as the oil circulates in the grooves the revolution of the box also spreads it around the spindle. Should the box (shown in the drawings) be turned in the opposite direction from that here indicated—that is, as if it were on the right-hand side of a vehicle—the effect would be to cause the oil to flow in the spiral grooves in exactly the reverse direction—namely, from the ends *j² k²* to the ends *j' k'*—and then deposited into the center of the longitudinal groove *f*.

The nut *d* and cap I (which are reversely threaded) at one end and the bell-collar *e* at the other end of the spindle insure the exclusion of the dust.

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

The combination of an axle-spindle having a longitudinal top groove provided at the center with a lateral shallow groove outlet which gradually decreases from the said longitudinal groove until its terminal end disappears on the face of the spindle; and a box revolvable on said spindle and provided internally with two independent reversely-spiraled grooves each having its initial end midway between the ends of the box and diametrically opposite each other, and the grooves extending in opposite directions to near the ends of the box, as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

JOSEPH KEAGY.

JOSEPH D. WISENBURGH.

Witnesses:

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