No. 648,177. Patented Apr. 24, 1900.

F. PALECK & B. WALTER.

AXLE SPINDLE AND VEHICLE HUB BOX.

(Application filed Dec. 26, 1899.)

(No Model.)

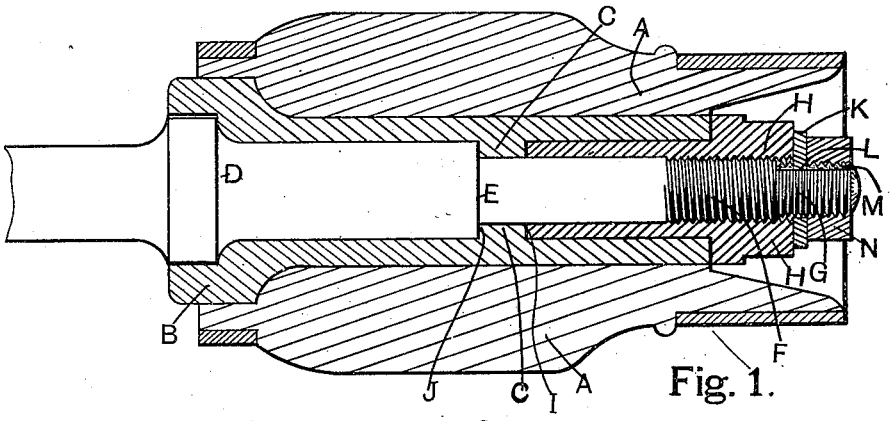


Fig. 1.

Fig. 2

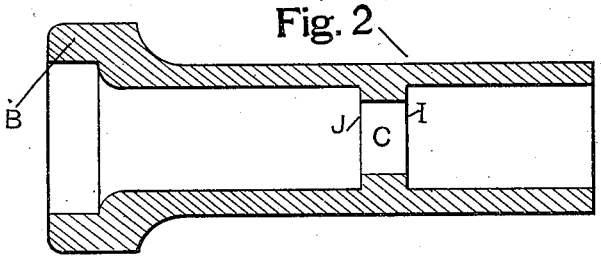


Fig. 3

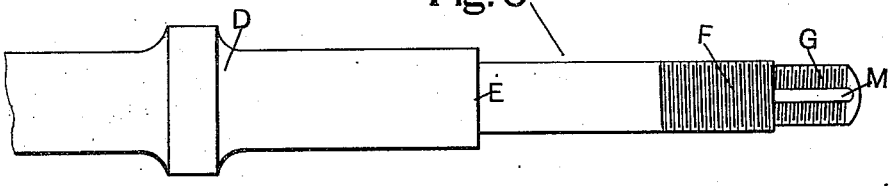


Fig. 4.

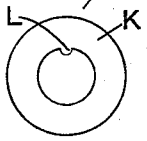
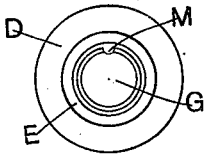


Fig. 5



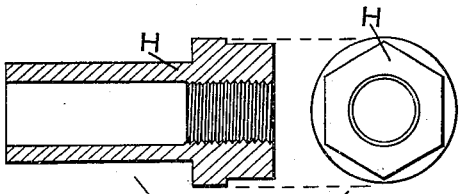


Fig. 6.

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UNITED STATES PATENT OFFICE.

FRANK PALECK AND BOHNMIL WALTER, OF CHICAGO, ILLINOIS.

AXLE-SPINDLE AND VEHICLE-HUB BOX.

SPECIFICATION forming part of Letters Patent No. 648,177, dated April 24, 1900.

Application filed December 26, 1899. Serial No. 741,629. (No model.)

To all whom it may concern:

Be it known that we, FRANK PALECK and BOHNMIL WALTER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Means for Adjustably Mounting Axle-Spindles in Vehicle-Wheel Hubs, of which the following is a specification.

Our invention relates to mounting axle-spindles within the hubs of vehicle-wheels; and our object is to provide a construction whereby the end shake of the hub-box upon the axle-spindle may be easily and quickly adjusted, and being adapted to greatly increase the bearing-surface the wear upon the collars is greatly reduced when compared with many kinds of axle-spindle bearings of the ordinary construction, the same being fully described hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is an axial section of a vehicle-hub with the box and adjusting parts on an axle-spindle, which latter is shown, together with a portion of the axle, in side elevation. Fig. 2 is an axial section of the hub-box to show a shoulder-ledge near the center of length inside. Fig. 3 is a side elevation of the axle-spindle and a portion of the axle with right and left screw-threads, indicated at the outer end of the spindle, and showing a short groove to receive an inward projection in a lock-washer, which is shown in side elevation in Fig. 4, with a central hole adapted to receive the outer end of the axle-spindle and the projection to engage in the groove therein. Fig. 5 is an outer end elevation of the axle. Fig. 6 shows, respectively, an axial section and an outer end elevation of a long combined collar and nut for adjusting the amount of end shake of the axle-box on the axle.

Similar letters indicate like parts throughout the several views.

A is a vehicle-hub of any desired construction, and within the hub is a box B, having a shoulder-ledge within it, near the center of length in this instance, as indicated at C. The axle-spindle is provided with a shoulder facing outwardly at D and at E, and the part of the spindle between these two shoulders is larger than between shoulder E and the outer end thereof, which latter portion is screw-threaded with oppositely-inclined threads at F and G, the screw-threads at F in this instance being right and the threads at G being left hand. Screwed upon the larger threaded portion F of the outer end of the axle-spindle is the long collar and nut H, whose inner end portion is not usually threaded, but projects inwardly along the outward end portion of the spindle far enough to contact the outer shoulder I of the box-ledge C, while the outer shoulder E of the axle-spindle contacts the opposite shoulder J of box-ledge C.

At K is a washer adapted to slide onto the small outer threaded portion of the axle-spindle, and the inwardly-projecting part L thereof engages within the groove M of the axle, and is thus free to slide in and out upon the spindle end, but cannot revolve.

At N is the outer nut, which screws upon the extreme outer end of the spindle against the washer K, which devices for holding the nut and collar H in proper position are in common use for a similar purpose.

It is obvious that any objectionable amount of end shake within the limits of the adjusting-nuts' movement on the axle-spindle may be quickly adjusted by loosening the outer nut N and turning the long collar and nut H to the desired position and then securing same in position by screwing up the outer nut, so that washer K is clamped closely between the two parts H and N.

We claim as our invention—

In a means for adjustably mounting axle-spindles within vehicle-wheel hubs, a box disposed axially through the hub, and having the usual shoulder-bearings at each end, in combination with an inwardly-projecting ledge forming shoulders facing toward opposite ends of the box, an axle-spindle mounted through the box, and partly in contact with the surface thereof, a collar at the axle end of the spindle in contact with the shoulder of the box, and a shoulder on the axle-spindle within the box in contact with the inner shoulder of the ledge, a collar adjustably secured around the outer end portion of the spindle and with the inner end portion thereof in contact with the outer shoulder of the ledge, the inside peripheral surface of the box, and the outer end bearing-shoulder thereof, for the purpose hereinbefore stated.

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