

No. 687,857.

Patented Dec. 3, 1901.

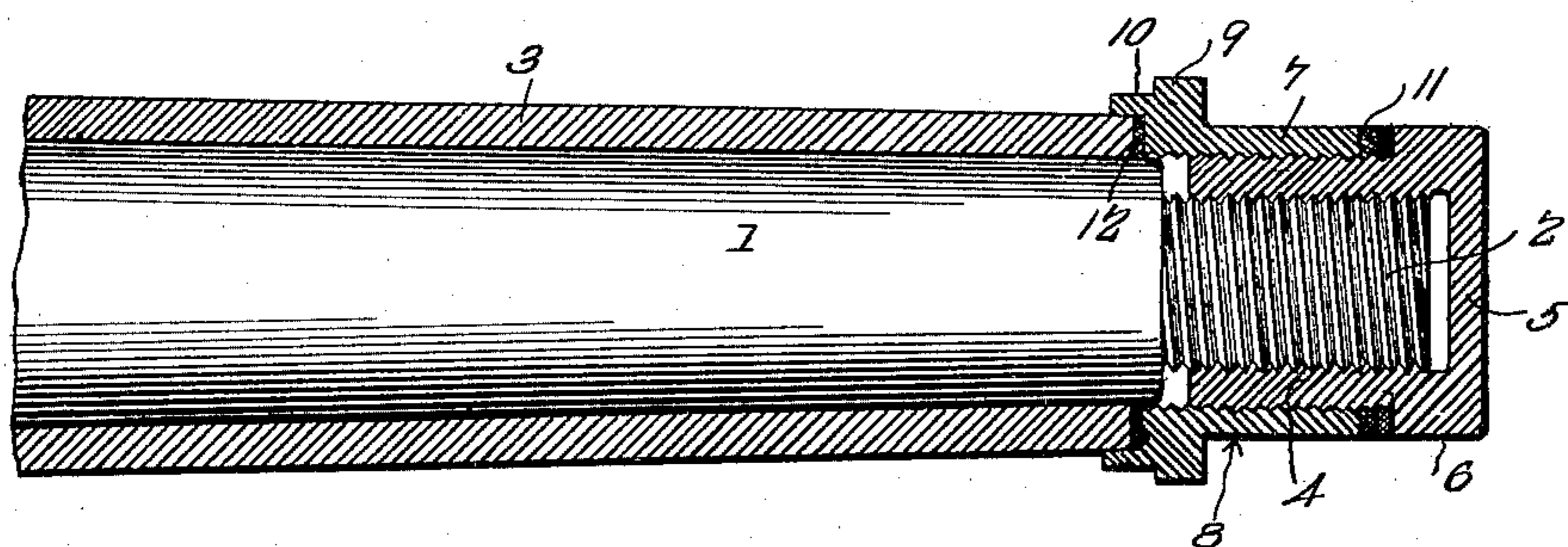
J. SEUFFERT.

AXLE NUT.

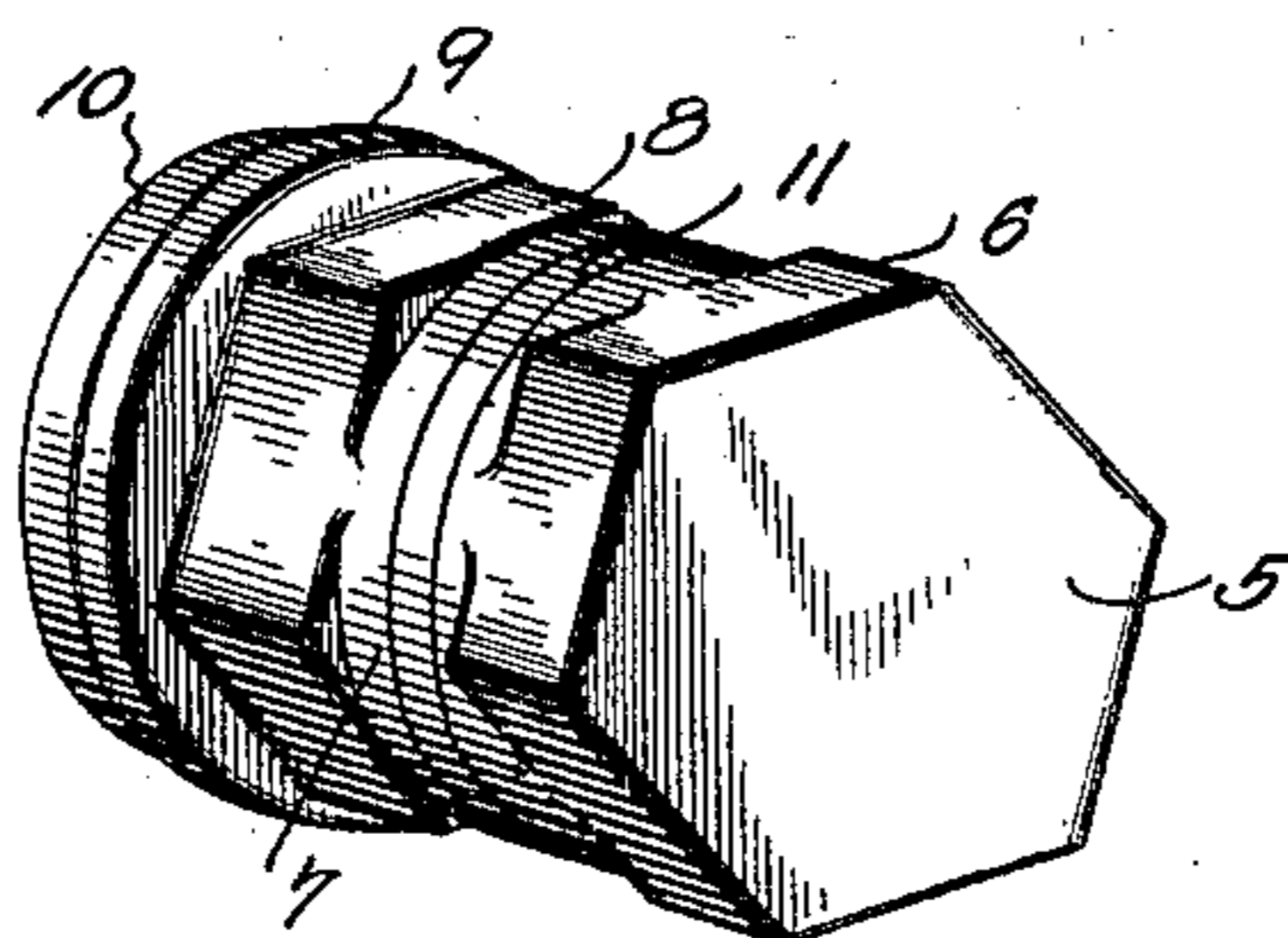
(Application filed Mar. 28, 1901.)

(No Model.)

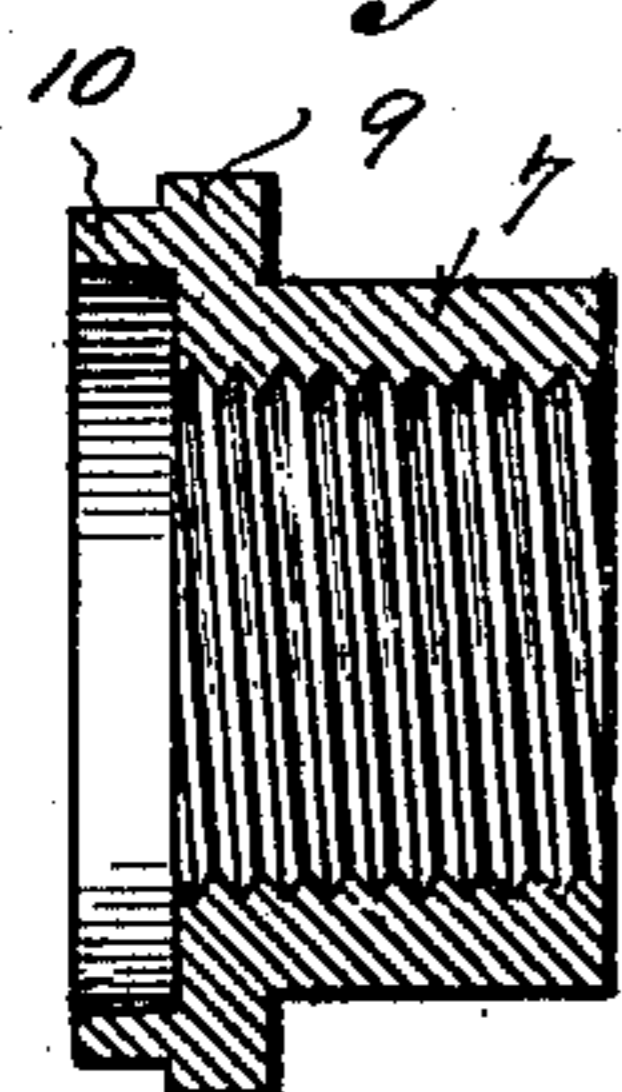
*Fig. 1.*



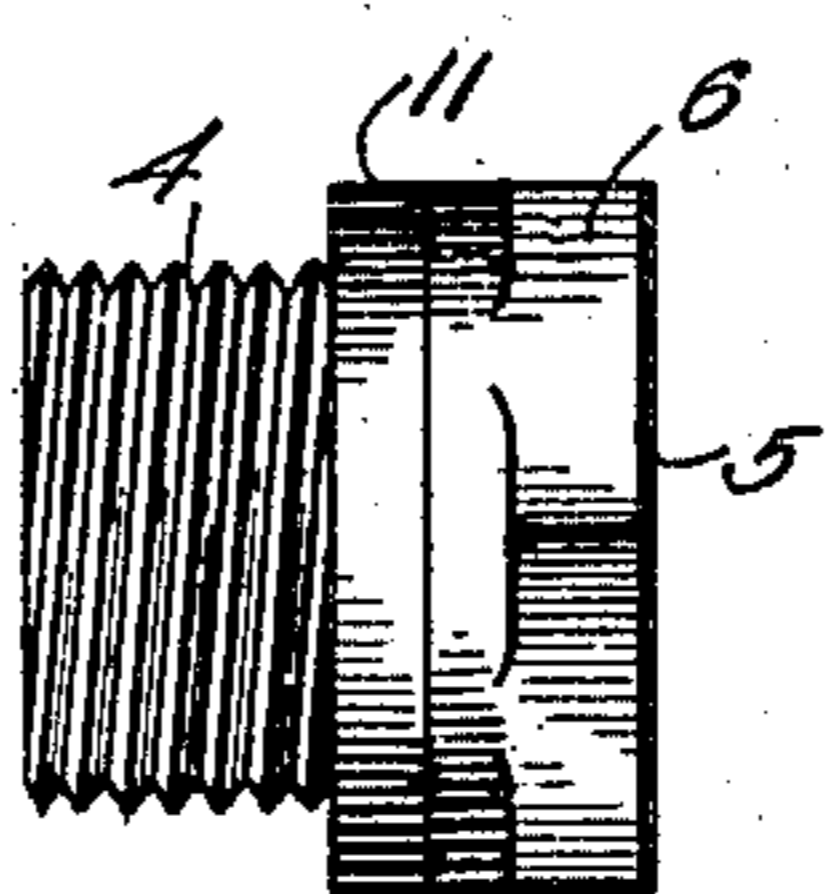
*Fig. 2.*



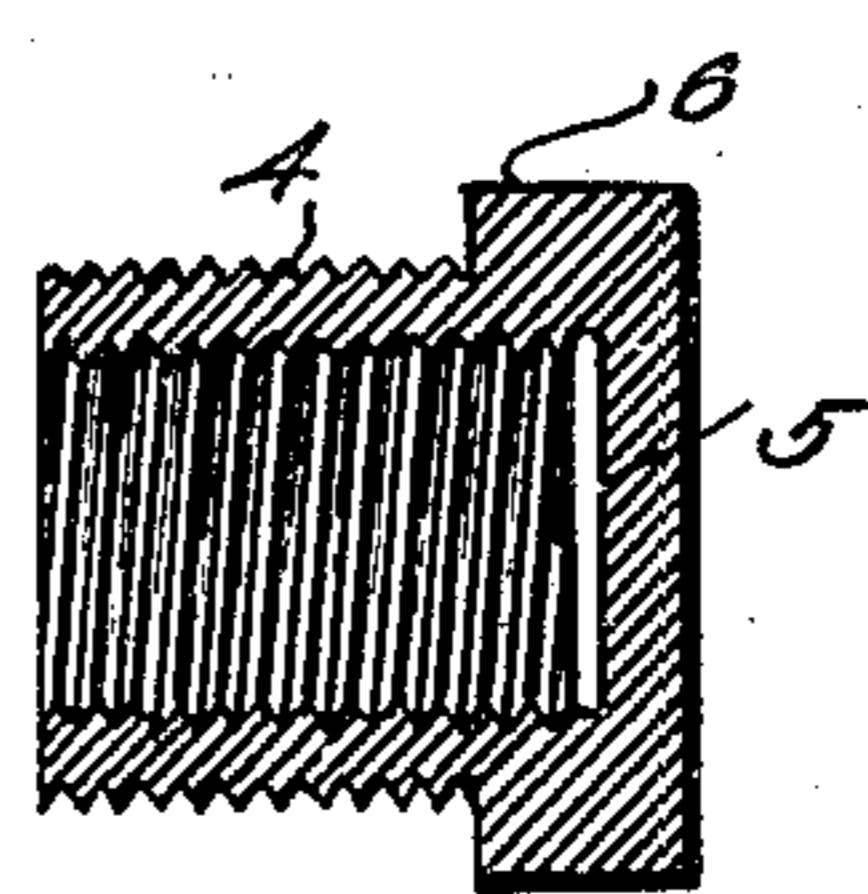
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses

*James F. Brown.*  
*W. F. Shepard.*

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# UNITED STATES PATENT OFFICE.

JOHN SEUFFERT, OF RYDE, CALIFORNIA.

## AXLE-NUT.

SPECIFICATION forming part of Letters Patent No. 687,857, dated December 3, 1901.

Application filed March 29, 1901. Serial No. 53,455. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SEUFFERT, a citizen of the United States, residing at Ryde, in the county of Sacramento and State of California, have invented a new and useful Axle-Nut, of which the following is a specification.

This invention relates to hub-attaching devices, and has for its object to provide an improved sectional axle-nut which is arranged for convenient adjustment, so as to take up wear and prevent looseness of the wheel. It is furthermore designed to arrange the parts of the device so as to be gripped all at the same time by a wrench in applying and removing the nut, so as to prevent separate turning of any of the parts, and thereby facilitate the application and removal of the nut.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of the outer end portion of an axle-spindle, having an axle skein or box in section and also the improved nut in section. Fig. 2 is a detail perspective view of the nut. Fig. 3 is a longitudinal sectional view of the adjustable sleeve member of the nut. Fig. 4 is a side elevation of the axle-engaging nut or cap member. Fig. 5 is a longitudinal sectional view thereof.

To fully illustrate the application and operation of the present device, there has been shown in Fig. 1 of the drawings an outer end portion of an axle-spindle 1, having the usual reduced and screw-threaded outer terminal 2 and an ordinary axle skein or box 3, mounted upon the spindle. These parts are common and well known and form no part of the invention.

In carrying out the invention there is provided a cap-shaped nut 4 in the shape of a cylinder, the inner end of which is open and the outer end closed by an end wall 5, there

being an external outwardly-directed marginal polygonal shoulder 6 formed at the closed end of the cap and designed for engagement by a wrench in applying and removing the nut.

As clearly shown by reference to Figs. 4 and 5 of the drawings, it will be apparent that the cylindrical body of the nut has its interior screw-threaded in one direction and its exterior screw-threaded in the opposite direction.

The adjustable sleeve member 7 is open at opposite ends and is interiorly screw-threaded to fit the external screw-threads of the cap member or nut proper, the inner external end portion being of polygonal shape, as indicated at 8 in Fig. 2 of the drawings, to correspond with the polygonal wrench-head portion of the cap member. At the outer end of the sleeve there is provided an outwardly-directed marginal flange 9, which has a circular outer periphery, and from the outer face of this flange there projects a cylindrical rim 10, which is both externally and internally smooth and of greater internal diameter than the internal diameter of the screw-threaded portion of the sleeve. When required, a washer 11 may be fitted against the inner side of the wrench-head 6 of the cap, so as to be gripped between the said head and the inner end of the adjustable sleeve, so as to project the latter beyond the open end of the cap.

As shown in the drawings, the internal screw-threads of the cap are arranged for a spindle having a right-hand screw-thread, whereby the external screw-threads run to the left. The sleeve is run up tightly against the wrench head or shoulder of the cap, so that the polygonal portions of both members correspond, as shown in Fig. 2, after which a wrench is applied to the polygonal portions of both members and the cap member screwed upon the screw-threaded portion of the spindle. As both members are gripped by the wrench they turn together, whereby the sleeve remains in its original position upon the cap. The cylindrical rim portion 10 of the sleeve takes over the outer end of the axle skein or box in the usual manner, while the outer end of the sleeve bears against the

outer marginal edge of the box, there being the usual washer 12 interposed between these two parts.

Should the sleeve bind upon the wheel-hub and be turned therewith in a forward direction, the sleeve will be backed off from the hub by reason of the screw-threads leading toward the outer end of the nut or cap, whereby it is impossible for the sleeve to become interlocked with the wheel sufficiently to also turn the nut proper with the wheel, and thereby bind the entire device upon the wheel and lock the latter against turning.

When the axle-box becomes worn at the end, the amount of adjustment may be determined by setting the sleeve up against the end of the box, whereby a space is formed between the inner end of the sleeve and the wrench-shoulder of the cap. The entire device is then removed from the spindle and one or more washers 11 fitted to the nut and against the inner side of the wrench-shoulder 6, after which the sleeve is replaced and the entire device fitted in place, as hereinbefore described.

It will be understood that it is designed to provide the nuts for both right and left hand spindles, and in any event the inner and outer screw-threads of the nut or cap are reversed, so that any movement of the sleeve, caused by the binding of the latter upon the wheel-hub, will back the sleeve away from the hub and bind the same against the wrench-shoulder of the nut or cap, thereby interlocking the two members against looseness, and thus preventing rattling of the

sleeve. By having a screw-threaded connection between the sleeve and the cap the former is held against loose sliding upon the cap, which would result in rattling of the sleeve and a consequent wear thereon.

What is claimed is—

A hub-attaching device or axle-nut, consisting of a hollow cap having its interior and exterior screw-threaded in opposite directions, and also provided with an externally-enlarged polygonal wrench-head at the outer end thereof, and an internally-screw-threaded adjustable sleeve fitted to the externally-screw-threaded portion of the cap, and that end of the sleeve which is adjacent to the wrench-head of the cap being provided with a corresponding wrench-head, the corresponding outer marginal portions of the wrench-heads being normally aligned to form a single wrench-head, whereby both members are interlocked against independent movement when a wrench is applied thereto, and the mutually-engaged screw-threaded portions of the cap and the sleeve being constructed to back the sleeve outwardly toward the head of the cap for frictionally interlocking therewith when the sleeve is turned independently in the direction of the tightening movement of the cap.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN SEUFFERT.

Witnesses:

W. A. KESNER,  
WM. H. JOHNSON.