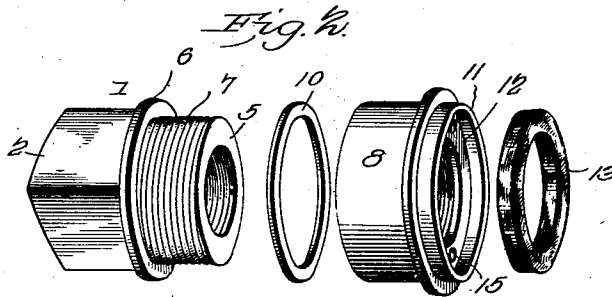
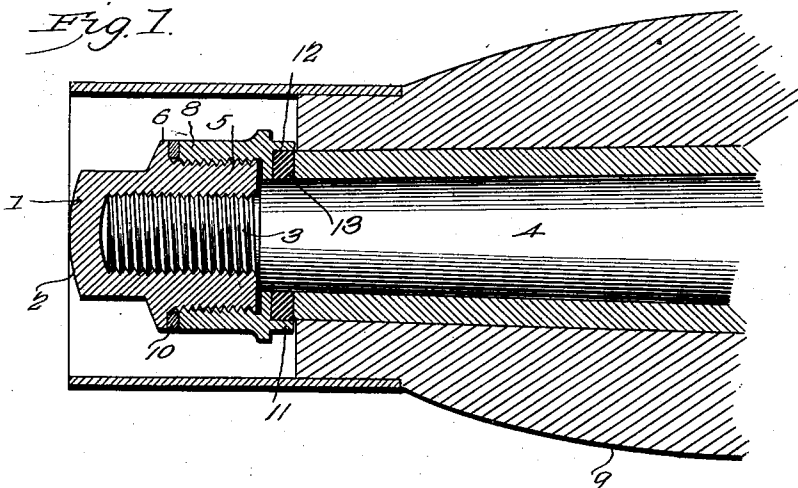


No. 703,643.

Patented July 1, 1902.

C. E. DAVIDSON.
HUB ATTACHING DEVICE.
(Application filed Aug. 26, 1901.)

(No Model.)



Witness
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UNITED STATES PATENT OFFICE.

CHARLES E. DAVIDSON, OF GREENVILLE, ILLINOIS.

HUB-ATTACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 703,643, dated July 1, 1902.

Application filed August 26, 1901. Serial No. 73,334. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. DAVIDSON, a citizen of the United States, residing at Greenville, in the county of Bond and State of Illinois, have invented a new and useful Hub-Attaching Device, of which the following is a specification.

The invention relates to improvements in hub-attaching devices.

The object of the present invention is to improve the construction of hub-attaching devices and to provide a simple, inexpensive, and efficient device adapted to be readily applied to an ordinary vehicle-axle and capable of enabling the wear to be readily taken up without trimming the axle.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a longitudinal sectional view of a hub-attaching device constructed in accordance with this invention and shown applied to an axle. Fig. 2 is a detail view of the device, the parts being separated.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates an axle-nut provided with a rectangular outer portion 2, adapted to receive an ordinary wrench to enable the axle-nut to be screwed on and off the threaded outer end 3 of a spindle 4 of an axle. The axle-nut, which is provided with interior screw-threads to engage the threads of the axle, is adapted to abut against the shoulder at the outer reduced end of the spindle and has an inner cylindrical extension 5 and is provided with an intermediate exterior annular flange or collar 6, forming a shoulder, as clearly shown in the drawings. The cylindrical extension 5 is provided with exterior screw-threads 7 and is adapted to receive an adjustable cylindrical part or sleeve 8, which engages the axle-box of the hub 9 of a wheel and which holds the same against the collar (not shown) of the axle. The sleeve 8, which is provided with interior screw-threads, is adapted to be moved inward and outward on the cylindrical extension of the

axle-nut, and its inner end abuts against a removable washer 10, which is adapted to be detached and replaced by a washer of greater thickness when the sleeve is adjusted to take up the wear of the axle or the hub. The axle-nut at the right-hand side of the vehicle will be provided with right-hand screw-threads in the usual manner, and the nut at the other side of the vehicle will have left-hand screw-threads, and the sleeves will be reversely threaded, the sleeve at the right-hand side of the vehicle being provided with left-hand screw-threads.

The sleeve is provided with an annular groove 12 for the reception of a washer 13, which abuts against the axle-box of the hub 9 and which may be constructed of leather or any other suitable material. The washer 13 is adapted to be removed and replaced by a new washer when it becomes worn, and the engaging portion or end of the sleeve is enlarged to form an interior annular flange, which extends inward beyond the interior screw-threads and which receives the outer end of the bearing portion of the spindle. The engaging end of the sleeve is provided with a pair of oppositely-disposed sockets 15, adapted to be engaged by a pair of projections or lugs of a spanner or similar tool for enabling the sleeve to be readily rotated to adjust it on the cylindrical extension of the axle-nut. The sockets 15 are arranged in the annular recess or groove 12, which is of a width equal to the thickness of the axle-box of the hub. The screw-threads may be of any desired size or pitch to enable the desired adjustment to be obtained, and when the parts are adjusted and a washer of the proper size interposed between the flange 6 and the sleeve a solid structure is provided.

It will be seen that the device is exceedingly simple and inexpensive in construction, that it is adapted to be readily applied to any ordinary axle as a substitute for the ordinary axle-nut, that it is capable of ready adjustment to take up the wear of the parts, and that when adjusted it presents a solid structure. It will also be apparent that the parts cannot become accidentally separated by the rotation of a vehicle-wheel.

What I claim is—

In a device of the class described, the com-

5 bination with an axle having a reduced portion at the outer end of the spindle, provided with screw-threads and forming a shoulder, and a hub having an axle-box, of an axle-nut
10 closed at its outer end and provided with interior screw-threads to engage those of the axle and abutting at its inner end against the shoulder of the said axle and being of greater diameter than the adjacent bearing portion
15 of the spindle, said axle-nut consisting of an outer polygonal wrench-receiving portion, an exteriorly-threaded cylindrical portion and an intermediate flange 6, the interiorly-threaded sleeve arranged on the cylindrical extension of the nut and provided with an enlarged end extending beyond the shoulder of the axle and arranged on the bearing portion of the latter and projecting inward be-

yond the exterior screw-threads of the axlenut to form a flange and provided with an
20 annular recess of a width substantially equal to the thickness of the axle-box of the hub, the washer 13 located within the recess beyond the shoulder against which the nut
25 abuts and supported by the bearing portion of the axle and fitting against the outer end of the axle-box, and an intermediate washer interposed between the flange 6 and the sleeve, substantially as described.

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

CHARLES E. DAVIDSON.

Witnesses:

LUELLA MERRICK,
ELVA VON FLEISCHBEIN.