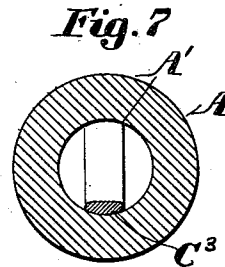
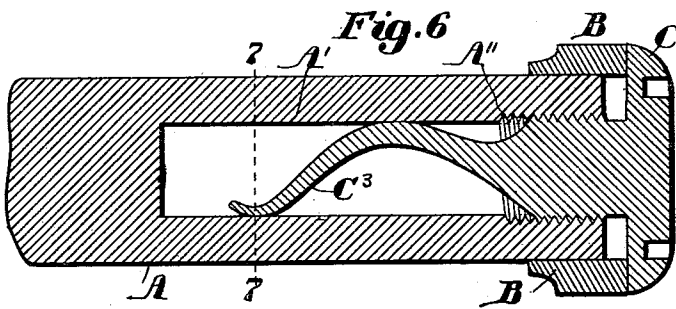
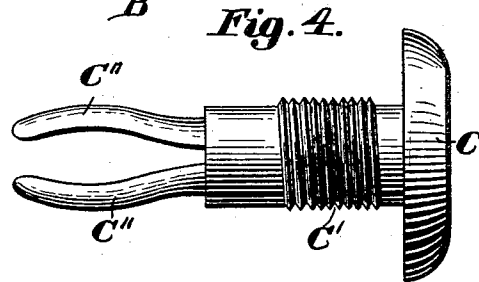
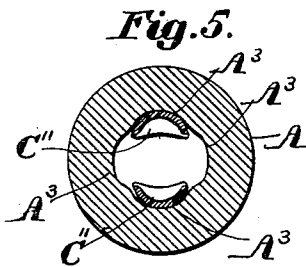
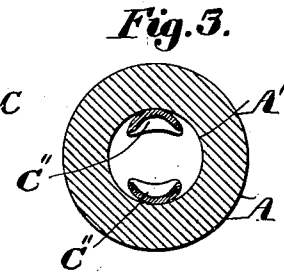
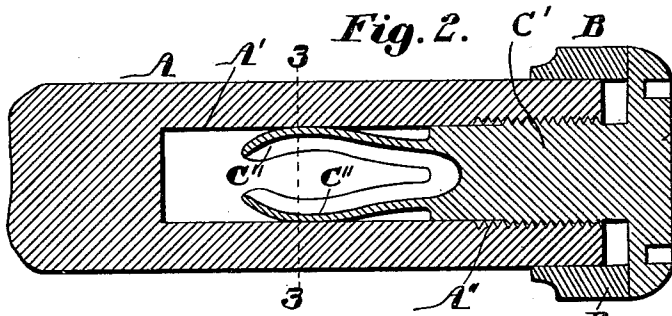
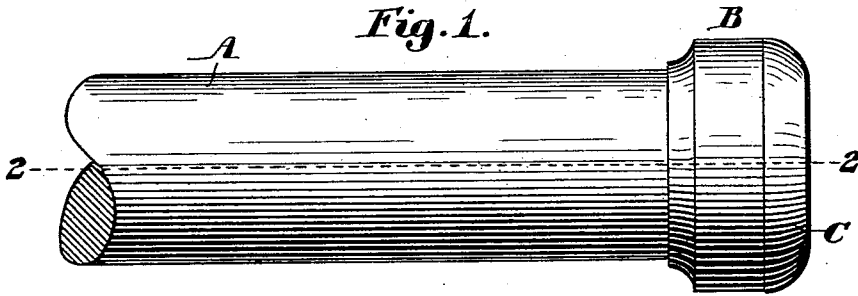


S. R. BAILEY.
AXLE NUT.

APPLICATION FILED JAN. 8, 1903.

NO MODEL.



Witnesses:

Nathan C. Lombard 2nd.
Josiah E. Reid.

Inventor:

Samuel R. Bailey,
by Alban Andren
Atty.

UNITED STATES PATENT OFFICE.

SAMUEL R. BAILEY, OF AMESBURY, MASSACHUSETTS.

AXLE-NUT.

SPECIFICATION forming part of Letters Patent No. 733,532, dated July 14, 1903.

Application filed January 8, 1903. Serial No. 138,249. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL R. BAILEY, a citizen of the United States, and a resident of Amesbury, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Axle-Nuts, of which the following is a specification.

This invention relates to improvements on the patent granted to me for adjustable axle-nuts April 18, 1899, No. 623,124, and is especially designed for carriage-axles, either with or without ball-bearings, for the purpose of setting up from time to time and adjusting the position of the axle-nut relative to the end of the wheel-hub, its washer, or cone-bearing and holding said nut securely in its adjusted position without the employment of check-nuts, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 is a side elevation of the invention. Fig. 2 is a longitudinal section on the line 2 2 shown in Fig. 1. Fig. 3 is a cross-section on the line 3 3 shown in Fig. 2. Fig. 4 is a detail side elevation of the adjustable axle-nut, showing it detached from the axle. Fig. 5 is a cross-section similar to Fig. 3, showing the interior bore of the axle grooved longitudinally for additionally retaining the axle-nut in its adjusted position. Fig. 6 is a longitudinal section of a modified form of the frictionally-adjustable axle-nut device, and Fig. 7 is a cross-section on the line 7 7 shown in Fig. 6.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, A represents the outer end portion of a carriage-axle, and B represents the washer or cone-bearing longitudinally adjustable on said axle end, as usual.

Centrally within the outer end of the axle A is made a cylindrical bore or recess A', as shown in Figs. 2, 3, 6, and 7, which is made of an equal diameter throughout its entire length, as shown in the drawings. The outer end of said longitudinal recess is provided with an internal female screw-thread A'', as shown in Figs. 2 and 6.

C represents the head of the axle-nut, which may be adjusted by means of a suit-

able spanner or wrench, as may be most practical and convenient. Integral with the head C is made a screw-threaded shank C', which is adjustable within the female screw-thread A'', as shown. Preferably integral with the inner end of the screw-threaded shank C' is made a friction-retaining device, which may be made in the form of yielding bifurcated prongs C'' C'' (shown in Figs. 2, 3, and 4) or as a single curved yielding tongue C³. (Shown in Figs. 6 and 7.) It will thus be noticed that the axle-nut is held frictionally in position within the axle during and after being adjusted therein by the frictional engagement of the expansive prong or prongs with the interior surface of the cylindrical recess A', as shown in the drawings.

In my aforesaid patent the inner end of the recess A' is shown as being tapered for the compression of the yielding prong or prongs on the axle-nut; but in practice I have found it desirable to hold the axle-nut frictionally secured within the recess of the axle with equal pressure throughout the whole range of its longitudinal adjustment, and therefore I have made such recess A' of equal diameter throughout its entire length, so as to cause the expansive prong or prongs on the axle-nut to be held frictionally with equal pressure against the interior cylindrical bore A' throughout the length of adjustment of the axle-nut.

In devices of this kind it may be desirable to still further hold the expansive prong or prongs on the axle-nut secured within the bore of the axle after adjustment, and for such purpose I may to advantage provide the interior bore of the axle with a series of longitudinal fluted recesses or undulations A³ A³, (shown in Fig. 5,) adapted to receive the expansive ends of the axle-nut prongs, so as to provide a positive lock between the axle-nut and the axle after said axle-nut has been adjusted.

By the construction as hereinabove shown and described the axle-nut may be readily adjusted, thus effectually preventing it from working loose by the jarring of the vehicle.

By this arrangement I dispense entirely with the ordinary set-nut usually employed in devices of this kind, and by the arrangement as shown and described the axle-nut

can be most easily and quickly adjusted simply by turning a single piece—namely, the head of the device.

5 Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. The herein-described adjustable axle-nut device, consisting in combination with an axle having a cylindrical recess of even size
10 throughout its length, and screw-threaded at its outer end, a screw-threaded shank adjustable within the screw-threaded portion of the axle and having expansive yielding prong or prongs adapted to be held frictionally against
15 the cylindrical recess with equal pressure during the entire range of its adjustment substantially as and for the purpose set forth.

2. The herein-described adjustable axle-

nut device, consisting in combination with an axle, having a longitudinal recess of even size
20 throughout its length, screw-threaded at its outer end, and having longitudinal grooves or undulations, a screw-threaded shank adjustable within the screw-threaded portion of the axle and having expansive yielding prong
25 or prongs adapted to interlock with the longitudinal grooves on the interior of the recess in the axle substantially as and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

SAMUEL R. BAILEY.

Witnesses:

ALBAN ANDRÉN,
NATHAN C. LOMBARD, 2d.