

(No Model.)

O. S. EBERT.
AXLE NUT LOCK.

No. 571,067.

Patented Nov. 10, 1896.

Fig. 1.

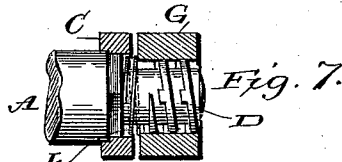
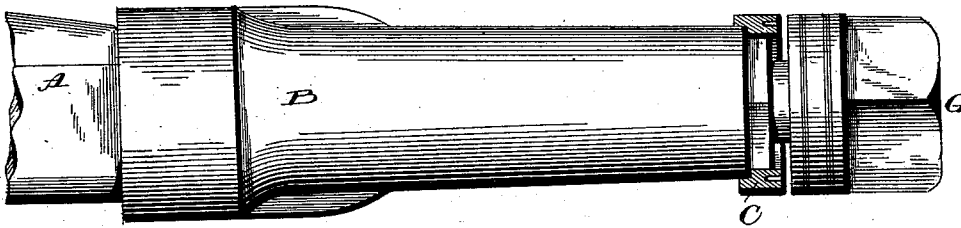


Fig. 2.

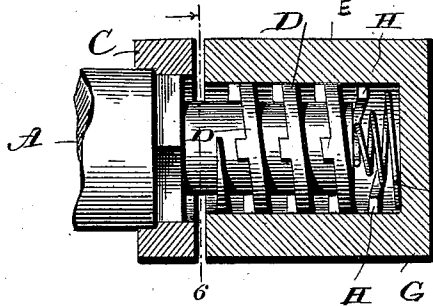


Fig. 3.

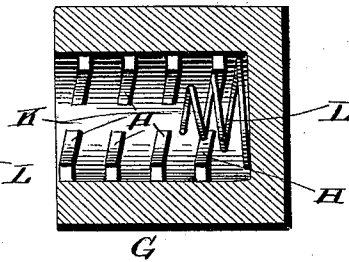


Fig. 4.

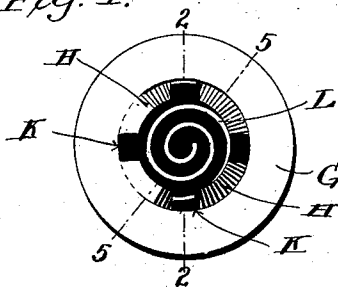


Fig. 5.

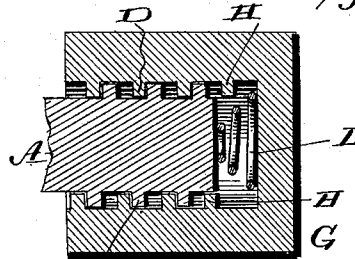
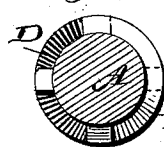


Fig. 6.



Inventor:

Octavio S. Ebert,

by Franklin H. Hough

Atty.

Witnesses:
L. C. Hilps
A. L. Hough

UNITED STATES PATENT OFFICE.

OCTAVIUS SUTTON EBERT, OF GALESBURG, ILLINOIS.

AXLE-NUT LOCK.

SPECIFICATION forming part of Letters Patent No. 571,067, dated November 10, 1896.

Application filed January 24, 1896. Serial No. 576,705. (No model.)

To all whom it may concern:

Be it known that I, OCTAVIUS SUTTON EBERT, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Axle-Nut Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in vehicle-axle nutlocks.

The invention consists, further, in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claims.

I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which figures similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of a nut as applied to an axle-skein, showing a hexagonal washer in section carried on a shoulder of the skein. Fig. 2 is a vertical central longitudinal sectional view through my improved nut carried on the threaded end of the spindle of the axle. Fig. 3 is a sectional view of the nut on a central longitudinal line, showing the concaved wall of the nut on one side having the broken threads. Fig. 4 is a view, looking into the bore of the nut, showing the coiled spring carried therein. Fig. 5 is a central vertical sectional view through the spindle and nut-cap. Fig. 6 is a sectional view on line 6 6 of Fig. 2, looking in the direction of the arrow. Fig. 7 is a view, partially in section, showing a nut without a cap and the spring interposed between the inner end of the nut and the washer carried on a shoulder of the spindle.

Reference now being had to the details of the drawings by letter, A designates an axle, and B an axle-box carried on the skein thereof.

C is a washer, which has a hexagonal-shaped

outline to its bore and is designed to rest on a shoulder of the spindle a portion of its width, and a portion of the washer to overlap the spindle, as will be readily seen in the drawings.

The threaded portion of the spindle D is provided with series of offsets or lugs E either integral with the threads or attached thereto, and these lugs may be produced on the spindle by running the end thereof through four rollers or revolving die-wheels, which are so placed on a movable iron frame that they can be drawn together by leverage when forming the toothed or lug portions. However, the process of making the thread forms no part of this application. These lugs are on the same side of the threads and in alinement in rows, and the upper ends are flush with the outer circumference of the thread.

The nut or cap G has a series of broken threads H, having recesses K at regular intervals about the circumference, the said recesses being in alinement and of the same distance apart as the lugs on the threads of the spindle, so that as the nut is screwed on the threads of the spindle the lugs offer no resistance until pressure is brought to bear against the spring L, which is interposed between the inner end wall of the bore of the nut and the end of the spindle, or between the washer C and the adjacent end of the nut, at which moment, when the line of lugs comes as to register with the said recesses K, the pressure on the end of the axle under tension of the spring causes the nut to be forced out, and the sectional portions of the broken thread fill the recesses in the threads, thus securely preventing the nut from being moved in either direction, either forward or backward, until the nut is forced in under the tension of the spring, forces the sections between the said recesses the width of the lugs, when the nut is allowed to move in either direction.

When it is desired to use a nut without a cap, it is my purpose to interpose the spring between inside face of the nut and the outer perpendicular face of the shoulder on the spindle, as illustrated in Fig. 7 of the drawings. If desirable, two springs may be utilized at the same time, as illustrated in the two different positions.

Owing to the peculiar construction of my

invention I can readily unscrew the nut from its engaging position, when it is holding the wheel on the spindle, without the use of a wrench, and the nut securely holds the wheel 5 until pressure is brought to bear upon the end thereof sufficient to relieve the broken sections of the threads of the nut from engagement with the lugs of the threads of the spindle, this principle of locking being the 10 gist of my invention.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

1. The combination with a bolt, cylinder 15 or other member having a threaded portion with lugs out of the plane of its threads of a headed cap-nut having broken threads, and a spring interposed between the outer end of the bolt and the inner end of the head of the 20 cap-nut, substantially as and for the purpose specified.

2. In an axle-nut lock, the combination with the spindle having a portion of its length screw-threaded with integral lugs on said 25 threads, a shouldered portion of the spindle hexagonal in outline, a washer having a simi-

larly-shaped aperture adapted to fit upon the said shoulder, an axle-box mounted on the spindle, and a nut having a series of broken-thread portions and a spring carried within 30 the nut and adapted to bear against the end of the spindle, substantially as shown and described.

3. In an axle-nut lock, the combination with a spindle, threaded a portion of its 35 length and having offsets or lugs on the same sides of the threads and in rows, a shouldered portion of the spindle, a washer having a hexagonal aperture therein, and a recessed portion adapted to be seated over the edge of 40 the shoulder, an axle-box, a nut having the broken threads as described and the spring interposed between the inner end of the nut and a portion of the spindle, all substantially as shown and described. 45

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

OCTAVIUS SUTTON EBERT.

Witnesses:

DANIEL E. ALLEN,
J. R. TRISSAL.