No. 761,388. PATENTED MAY 31, 1904.

E. S. MORRIS.

NUT LOCK FOR AXLE SPINDLES.

APPLICATION FILED DEC. 5, 1903.

NO MODEL.

FIG. II.

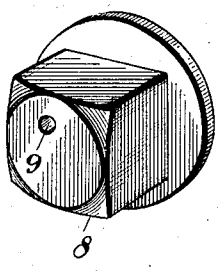


FIG. I.

FIG. III.

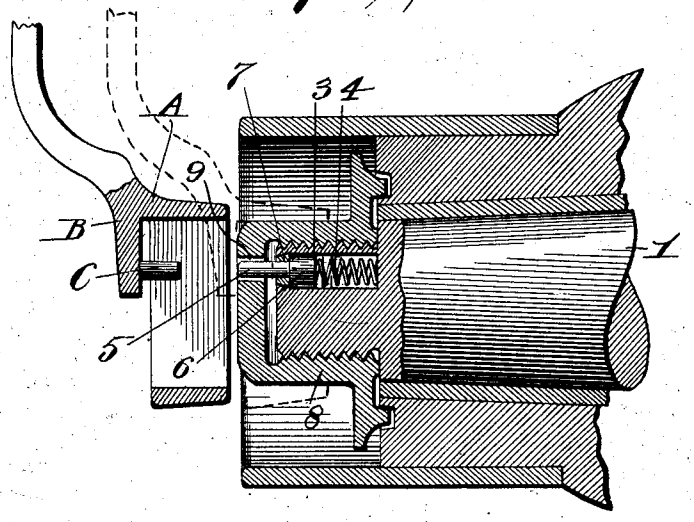
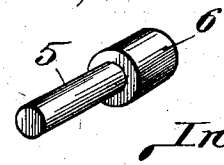


FIG. IV.



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No. 761,388. Patented May 31, 1904.

UNITED STATES PATENT OFFICE.

EMANUEL S. MORRIS, OF ST. LOUIS, MISSOURI.

NUT-LOCK FOR AXLE-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 761,388, dated May 31, 1904.

Application filed December 5, 1903. Serial No. 183,885. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL S. MORRIS, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Nut-Locks for Axle-Spindles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a nut-lock particularly intended for use to secure the nuts of axle-spindles in a manner that provides for the ready application or removal of the nut while at the same time furnishing a construction by which the nut is efficiently held from escape while in service.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of an axle-spindle embodying a part of my invention. Fig. II is a perspective view of the nut that is applied to the spindle shown in Fig. I. Fig. III is an enlarged longitudinal section of the outer end of a spindle and nut embodying my invention and illustrating a wrench by which the nut of my nut-lock may be applied and removed. Fig. IV is a perspective view of the locking-pin of my nut-lock.

1 designates a vehicle-axle spindle that is provided with the threaded outer end 2. In the outer end of the spindle is a pocket 3, that extends longitudinally of the threaded spindle end, as seen in Fig. III. In this pocket is a spiral spring 4.

5 is a locking-pin that is provided at its inner end with a head 6, that operates in the pocket 3 against the spring 4. This locking-pin is preferably held in place by a washer 7, that is swaged into the forward end of the pocket 3; but the pin may be held in any other suitable manner that will provide for the retention of its head in the pocket 3, while permitting outward projection of its shank.

8 designates a box-nut that is adapted to be fitted to the threaded spindle end 2 and is provided in its outer end with an aperture 9, that extends therethrough and is adapted to receive the shank or forward end of the locking-pin 5. The locking-pin is mounted in the end of the spindle in a position offset from its center, and the aperture in the nut 8 is likewise located in a position offset from the center of the end of the nut and that will correspond to the location of the locking-pin when the nut is applied to the axle-spindle. Any suitable means may be used for applying and removing the nut of my nut-lock. I prefer, however, to use the wrench illustrated in Fig. III, for the reason that it provides means for releasing the locking-pin from the nut at the same time for the rotation of the nut after it is free. This wrench has a head A, to be fitted to the nut 8, and is provided with an arm B, bearing a stud C, that is adapted to enter the aperture 9 in the nut 8 to press against the locking-pin 5 and force it forward.

When the nut of my nut-lock is to be applied, it is screwed onto the threaded end of the axle-spindle with readiness until the inner face of the end of the nut 8 comes into bearing with the locking-pin 5, thereby causing said pin to be receded against the action of the spring 4 that bears thereagainst. As a consequence, unless the locking-pin is repressed from outward movement, it will be projected forwardly and pass into the nut-aperture 9. Therefore to force the locking-pin rearwardly and maintain it out of said aperture I utilize any suitable implement, such as the wrench illustrated or a nail or other implement in connection with any ordinary wrench. Where the wrench illustrated is used, the stud C thereof enters the nut-aperture 9 and holds the locking-pin in receded position against the action of the spring 4, and therefore the nut may be screwed entirely home, and when this is accomplished and the locking-pin is relieved of restraint it will be forced outwardly by the spring 4 through the nut-aperture to engage and hold the nut. When the nut is to be removed, the same procedure as that described in connection with this application is gone through with to recede the locking-pin and hold it receded until the inner face of the end of the nut has been separated sufficiently from the end of the axle-spindle to prevent the entrance of the locking-pin into the nut-aperture, after

which the nut may be readily withdrawn without the necessity of holding the locking-pin retracted.

I claim as my invention—

1. In a nut-lock, the combination of a threaded member, a spring-pressed pin loosely seated in said member projecting from the end thereof, and a nut having an aperture in its end to receive said pin; said pin and aperture being offset from the centers of said threaded member and nut, substantially as set forth.

2. In a nut-lock, the combination of a threaded member having a pocket therein extending longitudinally of said member and offset from the axis of the member, a spring in said pocket, a locking-pin having a head seated in said pocket, and resting against said spring, and a box-nut having an aperture in its end offset from the axis of the nut to receive said locking-pin, substantially as set forth.

3. In a nut-lock, the combination of a threaded member provided with a pocket extending longitudinally of said member and offset from the axis of the member, a pin having a head loosely seated in said pocket to rest against said spring, a washer secured to said threaded member encircling said locking-pin, and a box-nut having an aperture in its end offset from the axis of the nut to receive said locking-pin, substantially as set forth.

EMANUEL S. MORRIS.

In presence of—

E. S. KNIGHT,

M. P. SMITH.