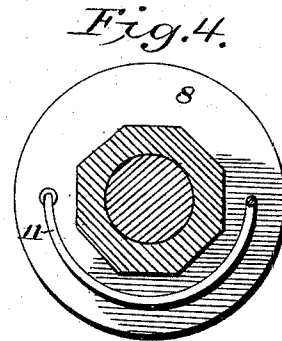
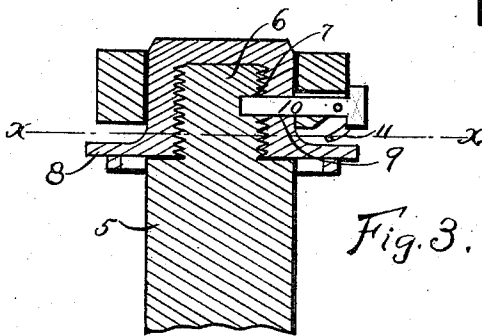
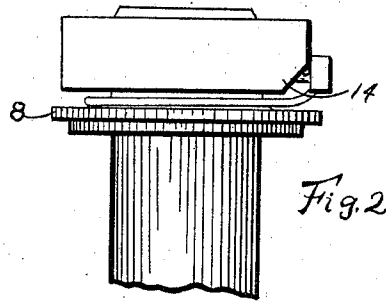
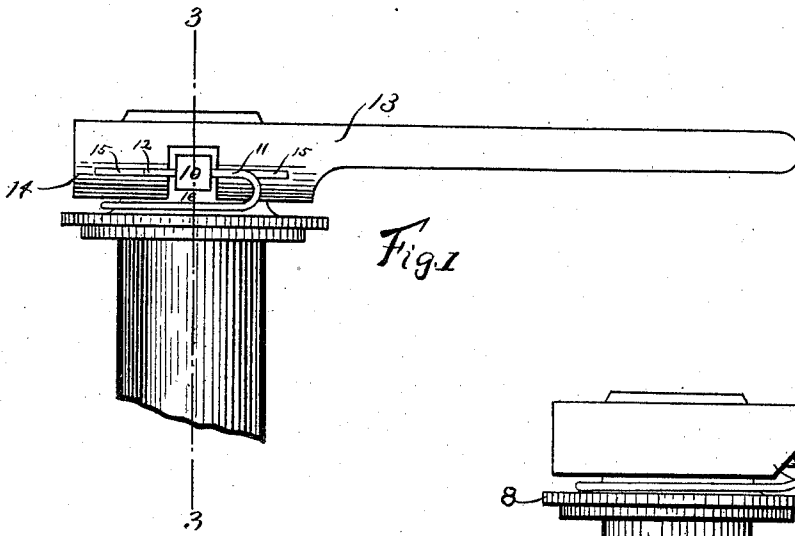


(No Model.)

D. F. ALLERTON,
NUT LOCK.

No. 582,032.

Patented May 4, 1897.



Witness
C. P. Jones,
Geo. M. Coppenhaver.

Inventor,
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att'y.

UNITED STATES PATENT OFFICE.

DUANE F. ALLERTON, OF BENTON HARBOR, MICHIGAN.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 582,032, dated May 4, 1897.

Application filed April 2, 1896. Serial No. 585,984. (No model.)

To all whom it may concern:

Be it known that I, DUANE F. ALLERTON, a citizen of the United States, residing at Benton Harbor, in the county of Berrien, State of Michigan, have invented certain new and useful Improvements in Nut-Locks; and I do hereby 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.

My invention relates to nuts, and has for its object to provide means for retaining a nut upon a screw and also means for automatically releasing said retaining means upon the application of a wrench to remove the nut.

With these objects in view my invention consists in providing an ordinary nut with a spring-pressed bolt operating in a transverse opening therein and adapted to be seated in a depression in the threaded body to which the nut is applied. A wrench is formed to be pressed over the nut and is provided with means for withdrawing the bolt from the said depression when the wrench is pressed into place.

In the drawings, Figure 1 is a side view of a section of carriage-axle or any other form of screw-threaded body provided with a nut and wrench constructed in accordance with my invention. Fig. 2 is a view of the general construction, looking at a right angle from Fig. 1. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a section on line *x x* of Fig. 3.

Referring now to the drawings, 5 is a screw-threaded body, such as a bolt or a wagon or carriage axle, having the usual screw-threaded extremity 6, which is provided with a transverse depression 7, preferably of cylindrical or frusto-conical form.

A nut 8 is adapted to engage the threads of body 5 and is provided with a transverse perforation 9, corresponding to depression 7, adapted to receive a sliding bolt 10, which is normally pressed inwardly through the medium of a spring 11, which I prefer to make in the form of a bent wire having one end inserted in a perforation in the nut 8, said wire passing part way around the nut, then upwardly, and then backwardly through a perforation in the bolt 10, the extremity 12 of said wire extending beyond the bolt-head.

Upon reference to Fig. 2 it will be seen that the left-hand end of the spring is turned downwardly, at which point it enters a perforation in the nut. This spring is moreover shown as passing to the right, then upwardly behind the head of the bolt 10, (shown also in Fig. 1,) from which point it is passed forward through the head of the bolt, as above mentioned. The point of engagement of the spring 11 with the nut is directly opposite the point of engagement with the head of the bolt 10. With this construction it will be readily seen that the spring is of such length and arrangement that it will readily allow the withdrawal of the bolt under the influence of the wrench.

In order to hold the bolt 10 retracted while applying and removing the nut, I provide a wrench 13, having the general form of the ordinary carriage-wrench, with the exception that the lower edge of one side 14 is formed wedge-shaped, the upper edge of the incline thereof terminating in a groove 15.

A transverse slot 16, extending part way through the side having the wedge-shaped portion is so located that when the wrench is applied to the nut the bolt 10 will press into this recess, allowing the edges of the wrench to pass beneath the spring 11 and press it outwardly, at the same time drawing the bolt 10 to the outward limit of its motion, which latter is such as to prevent the inner end of the bolt engaging the threads of the body 5. Thus it will be seen that when it is desired to apply the nut the wrench 13 is slipped into place, being held in such position by the engagement of the wire 11 with the groove 15, and that the nut 8 is then turned into position in the usual manner. When the nut is turned home, the perforation 9 and depression 7 are registering, so that when the wrench is removed the bolt will be pressed inwardly by the spring 11, and will thus prevent removal of the nut. Conversely, when it is desired to remove the nut the wrench is applied as before, and, engaging the spring-wire 11, moves the bolt outwardly through the perforation 9 and from the depression 7. The wrench may be then operated to remove the nut.

It will be readily understood that I may vary the particular construction herein set

forth and may use any desired material without departing from the spirit of my invention.

Having now described my invention, the method of construction and operation, what I claim is—

1. In combination with a threaded body having a depression, of a nut provided with a bolt adapted to engage said depression, and a spring secured at one end to the nut, the other end of the spring being passed beneath and beyond the bolt, then upwardly and backwardly through the end of the bolt, resulting in an interspace between the spring and nut to receive a wedge to withdraw the bolt.

2. The combination with a threaded body having a depression of a nut provided with a bolt adapted to engage said depression, a spring for maintaining the bolt normally in engagement with the depression and a wrench provided with a wedge and adapted to enter

between the nut and the spring and remove the bolt from said depression when the wrench is placed upon the nut.

3. In a device of the class described the combination with a threaded body provided with a depression, of a nut having a bolt arranged to enter the depression, and a spring encircling the nut to which it is secured at one end, the other end passing beneath and beyond the bolt, then upwardly and rearwardly through the protruding head of the bolt and forming means for withdrawing the bolt from said depression.

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

DUANE F. ALLERTON.

Witnesses:

SAMUEL H. KELLEY,
WM. SMITH.