

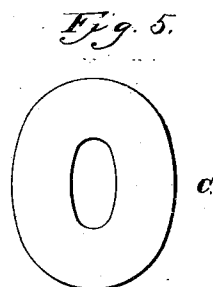
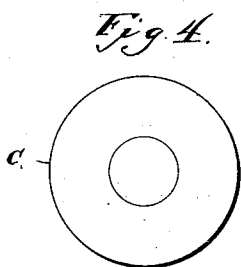
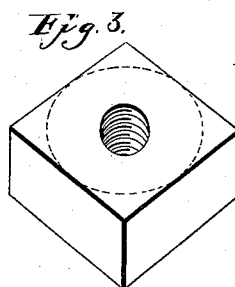
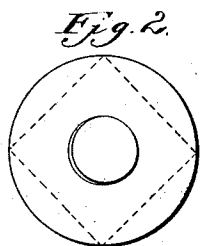
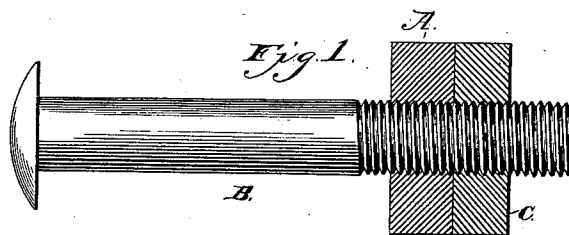
(No Model.)

J. C. JOHNS.

NUT LOCK.

No. 375,294.

Patented Dec. 20, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES C. JOHNS, OF BALTIMORE, MARYLAND.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 375,294, dated December 20, 1887.

Application filed January 13, 1887. Serial No. 224,278. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. JOHNS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Improvement in Nut-Locks, of which the following is a specification.

My invention relates to an improvement in nut-locks; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter and particularly pointed out in the claims.

In the drawings, Figure 1 is an elevation, partly in section, of a nut-locking device embodying my improvements, showing the same applied to a bolt and nut. Fig. 2 is an end elevation of the same. Figs. 3, 4, and 5 are detail views, illustrating the stages in the process of manufacturing the nut-locking device.

In the manufacture of my improved nut-locking device I first take a rectangular piece of steel of suitable size and thickness—such as shown at Fig. 3—and drill a hole of suitable diameter through the center of the same, and then round the outer edges thereof, to form a ring, such as shown in Fig. 4. The opening is then screw-threaded, and thereby adapted to fit on the threaded portion of a bolt, and the ring is then compressed into the form of an ellipse, as shown at Fig. 5, and while in this form it is tempered and thereby rendered elastic.

The operation of the device is as follows: A nut, A, is screwed home on the threaded end of the bolt B, as shown in Fig. 1, and the elastic nut-locking ring C is grasped at its ends with a pair of pinchers or other suitable device and compressed, so as to expand the sides from each other and force the ring into a circular shape, and while held by the pinchers the ring is then passed over the threaded end of the bolt and screwed home upon the same against the outer side of the nut. The pinchers are then caused to relax their pressure upon the locking-ring, and the latter, by its inherent resilience, tends to reassume its normal elliptical shape, and consequently its sides clamp firmly upon the threaded end of the bolt, and its interior threads impinge against the threads thereof with such force as to effectually prevent the nut from turning backward and working loose on the bolt.

If desired, the nut may be dispensed with, as the locking-ring is adapted to answer all the purposes of a nut, and is also self-locking when it is screwed upon the bolt.

It will be understood that as the outer faces of the metallic ring are entirely smooth there is no possibility of the ring being withdrawn by a wrench, since there are no projections on the ring for the wrench to catch against.

The essential feature of my invention resides in a ring constructed so as to be used either as a nut-lock or as a nut itself, said ring being compressed from a circular shape into the form of an ellipse, and while in its elliptical shape tempered, and thereby made elastic, so as to be capable of expansion back to its circular shape, and thus slip over the bolt, the walls of the opening in the ring being provided with a continuous thread to turn over the threads of the bolt to the proper point.

My invention does not relate, broadly, to an elastic nut; but it consists rather in an expansible metallic ring capable of expansion from an elliptical to a circular form, but while in the latter form to be screwed over the threads of a bolt, and which ring cannot be withdrawn until expanded to a circular form by a proper tool.

Having thus described my invention, I claim—

1. The herein-described process of manufacturing elastic elliptical metallic compression ring-nuts, the same consisting in compressing the ring from a circular shape into the form of an ellipse, and while in its elliptical form tempering and thereby making it elastic, so that upon compression the elliptical ring may be expanded back to its circular shape, for the purpose set forth, and when compression is relieved the ring will tend to assume its normal elliptical shape, as set forth.

2. As a new article of manufacture, a metallic ring-nut in the form of an ellipse and tempered in this form so as to be elastic, and thereby made capable of being expanded to slip over the bolt, the opening in the ring being provided with a continuous thread, as set forth.

3. As a new article of manufacture, a metallic ring-nut made in the form of an ellipse

and tempered, and thereby made elastic, the
outer faces of the ring being entirely smooth,
so that it can only be withdrawn by a tool
which will compress the ring back to its origi-
5 nal shape, the walls of the opening in the ring
being provided with a continuous thread,
which will allow the ring to be turned over
the threads of the bolt to the proper point, as
set forth.

In testimony that I claim the foregoing as 10
my own I have hereto affixed my signature in
presence of two witnesses.

JAMES C. JOHNS.

Witnesses:

JOHN F. GREEN,
GEO. THORPE.