No. 647,435. Patented Apr. 10, 1900.

J. J. BEAN.

NUT LOCK.

(Application filed Jan. 16, 1900.)

(No Model.)

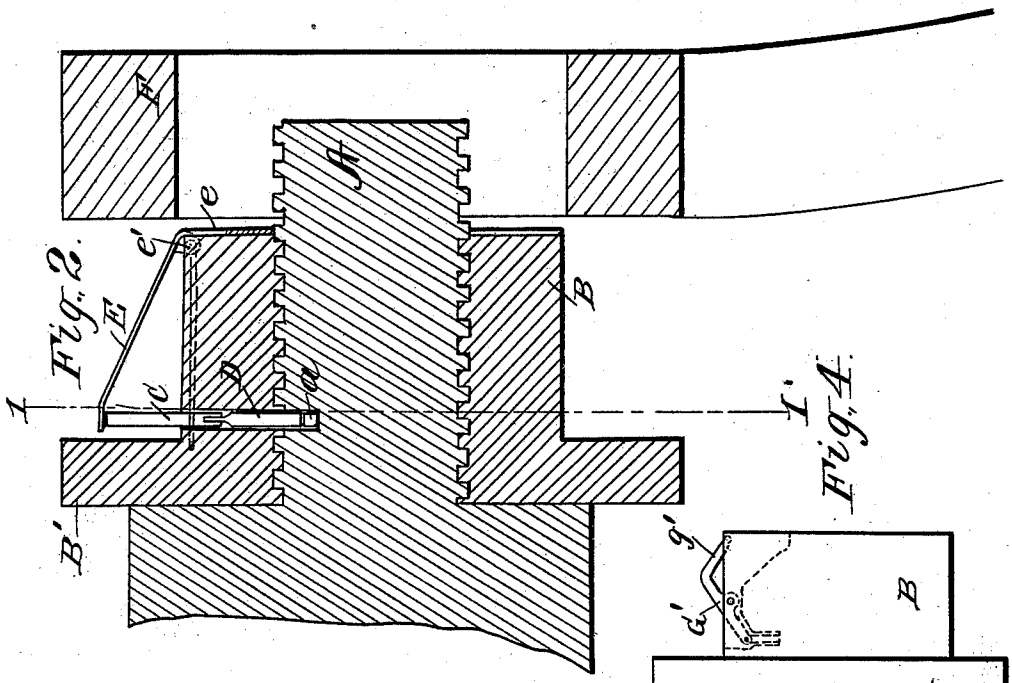


Fig. 2.

Fig. 4.

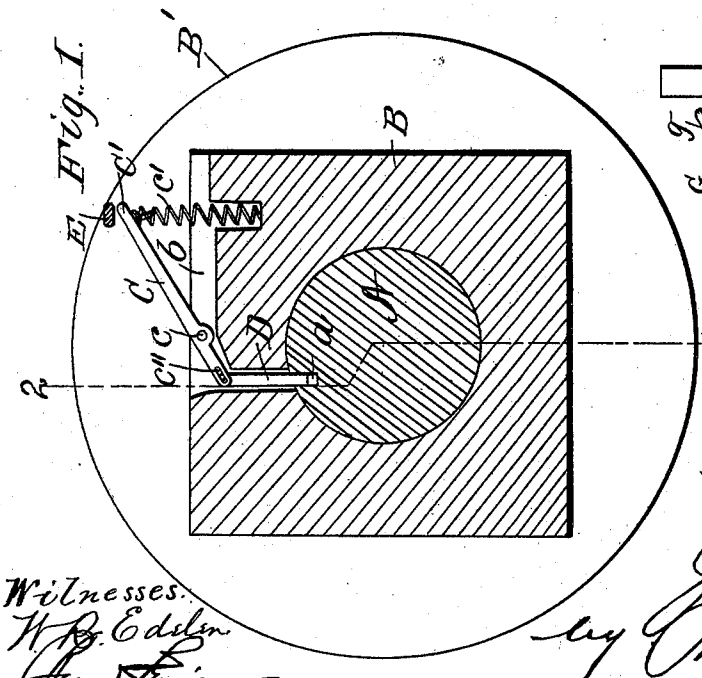


Fig. 1.

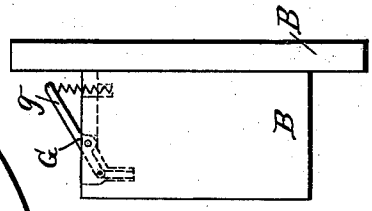


Fig. 3.

Witnesses:
W. B. Edelin
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Inventor.
John J. Bean
by Philip Mauro
his Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN J. BEAN, OF NEW YORK, N. Y., ASSIGNOR OF FIFTY-THREE ONE-HUNDREDTHS TO JOSIAH GEORGE KNOWLTON, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 647,435, dated April 10, 1900.

Application filed January 16, 1900. Serial No. 1,674. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BEAN, of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Nut-Locks, which is fully set forth in the following specification.

This invention consists of a nut-lock adapted to be released by the application of an ordinary wrench.

More particularly, it consists in the application to a nut-lock, that comprises a spring-pressed lever in the side of the nut whose inner arm carries a detent to engage a seat in the screw and whose outer arm entends above the surface of the nut, of a guide that extends from the surface of the nut above this projecting arm of the lever.

The invention consists, further, in certain details of construction, that will be more fully described.

In the drawings, Figures 1 and 2 show a preferred form of my invention, Fig. 1 being a transverse section of a nut, hub-cap, or the like, taken through dotted line 1 1 of Fig. 2, while Fig. 2 is a longitudinal section of the same through dotted line 2 2 of Fig. 1. Figs. 3 and 4 are side elevations showing modifications.

A represents a threaded bolt or screw upon which is screwed the threaded nut, that I have shown as consisting of the angular portion B and the flange B′. In a recess, as *b*, in the side of the nut is seated the lever C, pivoted at *c*. A detent on one end of the lever passes through the wall of the nut and is normally held depressed to engage a seat *a* in the screw A by a spring, as *c′*, while the other arm C′ of the lever projects above the surface of the nut. This detent may consist of the turned-down end of the lever, which would require a comparatively large seat in the screw A, with a corresponding weakening of the latter and an undue mutilation of its screw-threaded surface; but I prefer to employ a separate pin or bolt D, pivoted to the lever at slot *c″* and reciprocating freely in its own axial line. This construction requires a smaller seat in the screw A, with the attendant advantage of no lateral play of the pin D therein or of the nut on its screw.

The construction I have just described is an efficient nut-lock, but requires the projecting arm C′ to be pushed down either by hand or by a specially-constructed tool to screw the nut on or off or even to permit the application of an ordinary wrench. To avoid this difficulty, which is objectionable when the parts become stuck together or when the fingers are stiff with cold, I employ a guide, so that by merely applying an ordinary wrench upon the nut and with no other movement the projection C′ is depressed and the lock disengaged from its seat, after which the nut may be turned. This guide is represented by reference-letter E. It may be a spring secured to the nut at *e* or it may be an arm pivoted as indicated by dotted lines at *e′*. It extends above the projecting arm C′, as shown. A groove may be cut in the nut to permit the guide to lie flush therewith when depressed.

When the wrench F is applied, (moved to the left in Fig. 2,) guide E is forced down and arm C′ is carried down by it until the wrench is firmly seated ageinst flange B′. This of course withdraws the detent, and the nut may be turned on or off its screw. The wrench may in many cases be dispensed with and the guide pressed down and the nut turned by hand, the guide permitting a better hold to be obtained.

Figs. 3 and 4 show modifications in which the lever G or G′ is placed longitudinally of the nut. In these constructions the upper surface *g* or *g′* forms the guide, and no separate guide is needed.

Having thus described my invention, I claim—

1. The combination with a nut or the like and a nut-lock carried thereby and having an arm projecting beyond the surface thereof, of a separate guide extending from the surface of said nut to a point above said arm, whereby on the application of a wrench said lock will be released, substantially as described.

2. The combination of a nut, a lever pivoted in the side thereof and having one arm projecting above the surface of said nut, and a detent loosely pivoted upon the other end of said lever and adapted to reciprocate in its own axial line to engage a seat in the screw of said nut, substantially as described.

3. The combination of a nut, a lever pivoted in the side thereof and having one arm pro-

jecting above the surface of said nut, a detent pivoted upon the other end of said lever and adapted to engage a seat in the screw of said nut, a spring to hold said detent normally depressed, and a guide extending from the surface of said nut to a point above said projecting arm, whereby on the application of a wrench said detent will be retracted, substantially as described.

4. The combination of a nut, a lever pivoted in the side of said nut and transversely to the bore thereof, the inner arm of said lever carrying a detent normally held depressed while the outer arm thereof normally extends above the surface of said nut, and a guide extending from the surface of said nut at right angles to said lever and to a point above the outer arm of the same, whereby upon the application of a wrench said guide forces said outer arm down to retract said detent, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN J. BEAN.

Witnesses:
WILLIAM E. HILLS,
ELISHA K. CAMP.